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Date of meeting **Wednesday, 27th June, 2018**

Time **7.00 pm**

Venue **Committee Room 1 - Civic Offices**

Contact G Durham 742222

NEWCASTLE UNDER LYME BOROUGH COUNCIL

Civic Offices
Merrial Street
Newcastle-under-Lyme
Staffordshire
ST5 2AG

Licensing & Public Protection Committee

AGENDA

1 **PART 1 - LICENSING (OPEN AGENDA)**

2 **APOLOGIES**

3 **DECLARATIONS OF INTEREST**

To receive declarations of interest from Members on items contained within the agenda

4 **MINUTES OF PREVIOUS MEETING** **(Pages 5 - 6)**

5 **LICENSING ANNUAL PERFORMANCE REPORT** **(Pages 7 - 10)**

6 **CUMULATIVE IMPACT POLICY** **(Pages 11 - 16)**

7 **MINUTES OF LICENSING SUB COMMITTEE MEETINGS** **(Pages 17 - 20)**

To consider the minutes of the Licensing Sub-Committees which have met since the previous Licensing and Public Protection Committee.

8 FIVE MINUTES BREAK

9 **PART 2 - PUBLIC PROTECTION (OPEN)**

10 **DECLARATIONS OF INTEREST**

To receive declarations of interest from Members on items contained within the agenda

11 **MINUTES OF PREVIOUS MEETING** **(Pages 21 - 24)**

Contacting the Council: Switchboard 01782 717717 . Text 07800 140048
Email webmaster@newcastle-staffs.gov.uk. www.newcastle-staffs.gov.uk

12 PUBLIC PROTECTION SUB-COMMITTEE PROGRAMME

13 AIR QUALITY ACTION PLAN (2018-2023) CONSULTATION DRAFT JULY 2018 **(Pages 25 - 118)**

A hard copy of the Action Plan can be printed upon request

14 AIR QUALITY ANNUAL STATUS REPORT 2018 **(Pages 119 - 224)**

A hard copy of the report can be printed upon request

15 FOOD SAFETY SERVICE PLAN **(Pages 225 - 244)**

16 ENVIRONMENTAL HEALTH ANNUAL PERFORMANCE AND ENFORCEMENT REPORT **(Pages 245 - 252)**

17 PUBLIC PROTECTION SUB COMMITTEE PROGRAMME **(Pages 253 - 254)**

18 PART 3 - PUBLIC PROTECTION (CLOSED)

19 DISCLOSURE OF EXEMPT INFORMATION

To resolve that the public be excluded from the meeting during consideration of the attached report, because it is likely that there will be disclosure of exempt information as defined in paragraphs 1, 2 and 7 in Part 1 of Schedule 12A of the Local Government Act 1972.

20 MINUTES OF PUBLIC PROTECTION SUB-COMMITTEE MEETINGS **(Pages 255 - 256)**

To consider the minutes of the Public Protection Sub-Committees which have met since the previous Licensing and Public Protection Committee.

21 URGENT BUSINESS

To consider any business which is urgent within the meaning of Section 100B (4) of the Local Government Act 1972

Members: Councillors John Cooper, Dymond, Johnson, Kearon, Olszewski (Chair), Parker, Robinson, Sweeney, J Tagg, Walklate, J Waring, S White (Vice-Chair), G Williams, J Williams and Wright

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Members of the Council: If you identify any personal training/development requirements from any of the items included in this agenda or through issues raised during the meeting, please bring them to the attention of the Democratic Services Officer at the close of the meeting.

Meeting Quorums :- 16+= 5 Members; 10-15=4 Members; 5-9=3 Members; 5 or less = 2 Members.

FIELD_TITLE

Officers will be in attendance prior to the meeting for informal discussions on agenda items.

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LICENSING COMMITTEE

Wednesday, 14th February, 2018
Time of Commencement: 7.00 pm

Present:- Councillor Joan Winfield – in the Chair

Councillors Frankish, S Hambleton, Johnson, Reddish, Simpson, Spence, S Tagg, S White, G Williams, J Williams and Woolley

Officers Nesta Barker - Head of Environmental Health Services, Matthew Burton - Licensing Administration Team Manager and Geoff Durham - Member Training and Development Officer

Apologies Councillor(s) Parker

1. **DECLARATIONS OF INTEREST**

There were no declarations of interest stated.

2. **MINUTES OF PREVIOUS MEETING**

Resolved: That the minutes of the meeting held on 19 June, 2017 be agreed as a correct record.

3. **MINUTES OF SUB COMMITTEE MEETINGS**

Resolved: That the minutes of the Licensing Sub-Committee(s) held on 12 and 20 September, 2017 be agreed as correct records.

4. **IMMIGRATION ACT 2016**

Consideration was given to a report notifying Members of amendments that had been made to the Licensing Act, 2003 following implementation of the Immigration Act, 2016.

Members attention was drawn to paragraph 1.2 of the report which listed the amendments.

The Chair queried paragraph 5.2 regarding the Council's duty to check that applicants had an entitlement to work in the UK. Mr Matt Burton, the Council's Licensing Manager advised Members that only new applicants from 6 April, 2017 onwards would need to be checked.

Councillor Tagg queried paragraphs 6.1 and 6.2 regarding entitlement to work checks and whether our officers had to go to them. Mr Burton stated that as they were multi-agency visits one of our officers did go out to check the licensing conditions.

Resolved: That Members note the amendments to the Licensing Act, 2003

5. **LICENSING FEES AND CHARGES 2018-19**

Consideration was given to a report regarding the fees to be charged in relation to the licensing of Scrap Metal dealers, Gambling and Sexual Entertainment Venues.

Members' attention was drawn to paragraph 2.3 of the report which detailed the proposed license fees and charges.

Resolved: That the fees to be charged for the licensing of Scrap Metal Dealers, Gambling and Sexual Entertainment Venues, for the 2018/19 financial year and as detailed in the report, be agreed.

6. **URGENT BUSINESS**

There was no urgent business.

COUNCILLOR JOAN WINFIELD
Chair

Meeting concluded at 7.20 pm

HEADING Licensing annual performance report

Submitted by: Head of Environmental Health Services

Portfolio: Finance & Resources

Ward(s) affected: All

Purpose of the Report
To inform Members of the key issues and activities undertaken by the Licensing Service in 2017-2018.

Recommendations

That Committee receives the report and supports the priorities for 2018-2019 work plan.

Reasons
To enable Committee to be informed of the nature and extent of routine and enforcement work undertaken by Licensing and endorse the priorities for 2018-2019.

1. **Background**

1.1 The Environmental Health Service makes a fundamental contribution to the maintenance and improvement of public health, quality of life and wellbeing. Our national priorities are to:

- Protect the public, businesses and the environment from harm
- Support the local economy to grow and prosper

We determine our activities each year by assessing the needs of local people and our local business community, and considering the risks that require addressing, in light of local needs and of national priorities.

1.2 The Environmental Health Service is divided into four teams: Food & Safety; Environmental Protection; Environmental Services and Licensing Administration. The Licensing Administration function was transferred to Environmental Health Services within 2016. The service also delivers the Food & Safety, Environmental Protection, Environmental Services and Corporate Health & Safety which are not included within this report, as this is reported separately to Public Protection Committee and Audit & Standards Committee respectively.

1.3 The work of the teams comprises both programmed planned activities and reactive work in response to service requests or complaints. The activities are diverse and wide ranging and therefore some activities are undertaken only a reactive or infrequent basis. This report details the principal activities and associated enforcement activities undertaken by the teams over the past year.

2. **Report**

2.1 Licensing Administration Team:

The team undertakes the following activities: The administration of all applications made under the Licensing Act 2003, Scrap Metal Dealers Act 2013, Sexual Entertainment venues, Charity Collections, and various licences and permits under the Gambling Act 2005.

The team acts as the Licensing Authority body under the provisions of the Licensing Act 2003 and Gambling Act 2005, and is responsible for developing, consulting upon and implementing the Council's Policy documents in relation to the licensing frameworks detailed above.

The team undertakes partnership working with a wide range of Responsible Authorities, including the Police, Fire and Rescue Service, Trading Standards, and the Council's Food Safety, Environmental Protection and the Partnerships teams.

The objectives of the service are:

- To ensure all applications are dealt with efficiently and within legislative timescales where necessary;
- To assist prospective and current licence holders, members of the public and partner organisations in all aspects of Licensing.

Activity	**2016-2017**	**2017-2018**
Number of licensing and gambling act applications received		
• Personal Licences	112	62
• Premises Licence	63	40
• New application for a premise	11	16
• Alcohol Licenced premises	11	16
• Pub Machine Notifications	40	3 new (62 active)
• Premises Licence Gambling Act	3	0
Number of hearings undertaken for Licensing Act	3	2
Number of Temporary Event Notices processed	292 issued	300 issued
Number of Scrap Metal Act licenses issued	16 issued	1 issued
Number of Lottery Applications processed	27 issued	16 issued
Number of House to House Collections processed	17 Issued	31 Issued
Number of Street Collections processed	29 Issued	20 issued

2.2 Licensing Enforcement:

The service undertakes the following activities in relation to licensing; Regulation and enforcement of the Licensing and Gambling Acts.

The service fulfils licensing enforcement and acts as the responsible body to the licensing authority.

The objectives of the service are:

- Prevention of public nuisance through licensable activities
- Protection of the public using taxis
- Ensure that anti-social activities are deterred.

Activity	2016-2017	2017-2018
Inspection licensed premises	104	154
Licensed premises complaints	80	116
Temporary event notice representations	152	285

3. Priorities for 2018-2019

3.1 The service plan has been created for the new financial year, the planned pre-programmed activities and reactive duties as detailed within this report are to continue. However in addition to the activities, the service is directed by a number of government departments as to priorities and work to be undertaken. In addition, some of the work, projects or enforcement action commenced in 2017-18 will continue in 2018-19.

3.2 The additional projects or priorities are listed below:

- Review, consult upon and issue a new Sex Establishments Policy
- Review, consult upon and issue a new Gambling Policy
- Develop, consult upon and issue Street Café Policy
- To undertake a review of the fees and charges that the Council has the power to determine.

4. Proposal

4.1 That Committee receives the report and supports the priorities for 2018-19 work plan.

5. Reasons for Preferred Solution

5.1 The service plan and priorities for 2018-19 supports both statutory requirements and also the national and local priorities for Environmental Health Services.

6. Outcomes Linked to Sustainable Community Strategy and Corporate Priorities

6.1 The proposals relate to the delivery of environmental health services which would contribute to the following:

A clean, safe and sustainable borough
- The negative impacts that the Council, residents and local businesses have on the environment will have reduced.

A borough of opportunity
- Fair, proportionate and consistent regulation and enforcement creates an equal opportunity for business to thrive.

A healthy and active community
- Fair, proportionate and consistent enforcement creates an environment for prevention, maintenance or improvement in health and well being.

A co-operative Council delivering high quality, community driven, services.
- High performing services will be delivered for all residents, businesses and customers.

7. Legal and Statutory Implications

7.1 All activities are in line with the statutory duty of the Council and in accordance with the advice and guidance of the relevant Government bodies.

8. Equality Impact Assessment

8.1 No issues have been identified.

9. Financial and Resource Implications

9.1 All the services fees and charges are published annually in the Councils fees and charges register.

10. Major Risks

10.1 Environmental Health services undertake statutory duties, failure to deliver these duties adequately, competently or thoroughly would be a risk to the Authority.

11. Background Papers

Environmental Health Service Plan 2017-2019
Environmental Health Service Plan 2018-2020

REPORT TITLE **Cumulative Impact Policy**

Submitted by: **Head of Environmental Health Services**

Portfolio: **Finance & Resources**

Ward(s) affected: **Town Ward**

Purpose of the Report

For Members to consider whether the Cumulative Impact Policy (known as Special Saturation Policy) - agreed at the Committee's meeting held on 19th June 2017 is still required. For Members to determine when the Council should review the Policy with a view to transition into a Cumulative Impact Assessment.

Staffordshire Police will be in attendance at the meeting to provide advice and guidance for the Committee, as well as relevant evidence.

Recommendations

The Committee must decide whether:

a) **The current Policy is still required.**

b) **The current Policy is still adequate.**

c) **The current Policy needs to be reviewed.**

If the Committee decide to retain the Policy then they must also determine when to review the current Policy in order that it can be transitioned into a Cumulative Impact Assessment in line with the new legislative provisions.

Reasons

Earlier versions of the guidance issued under section 182 of the Licensing Act 2003 stated that there should be an evidential basis for the decision to include a Special Saturation Policy within the Statement of Licensing Policy. In April 2018 changes were made to the legislation and the s182 guidance has been amended accordingly.

Previous guidance stated that once adopted, special policies should be reviewed regularly to assess whether they are still needed or whether they should be amended. The amended guidance states that the existing Policy should be reviewed at the earliest practical opportunity and recommends that it should take place within 3 years of the legislation coming into force, or when the Council's Statement of Licensing Policy is next due for review, whichever is sooner.

1. Background

1.1 On 6th April 2018 the Licensing Act 2003 (LA03) was amended by the Policing and Crime Act 2017 (PCA17). The PCA17 added s5A to the LA03 which details the provisions for implementing and reviewing Cumulative Impact Assessments (CIAs), which replaces Cumulative Impact Policies (CIPs). This addition has created a statutory footing for Local Authorities to implement CIAs.

1.2 Until recently Cumulative impact was not mentioned specifically in the 2003 Act but in the Section 182 Guidance to the Act it was taken to mean the potential impact on the promotion of the licensing objectives of a significant number of licenced premises concentrated in one area. The amended guidance defines Cumulative Impact as:

"the potential impact on the promotion of the licensing objectives of a number of licensed premises concentrated in one area"

1.3 The change from a CIP to a CIA has no practical effect as to how applications are to be dealt with when they are received. The differences are that there is a new requirement that the Council must review the CIA every 3 years, and there must be a full consultation before a CIA can be implemented.

1.4 The Council's Statement of Licensing Policy is currently due for review and consultation in 2020 with a view to implementation taking place in January 2021. It can be reviewed earlier and would run for a period of 5 years.

1.5 There are currently a number of licensed premises concentrated together in one area that together have a detrimental impact on levels of crime and disorder and public nuisance and in particular violent crime in the town centre. This being the case, the Council has previously satisfied itself that it is appropriate and necessary to include in its Licensing Policy a Cumulative Impact Policy.

1.6 The Policy allows the Council to refuse new licences whenever it receives relevant representations about the cumulative impact on the licensing objectives which can be substantiated by evidence. Where such representations are received, applications for new premises licences or club premises certificates or variations that are likely to add to the existing cumulative impact will normally be refused unless it can be demonstrated that the operation of the premises involved will not add to the cumulative impact already being experienced.

1.7 Where representations are supported by evidence, applicants will need to clearly demonstrate in their operating schedule measures to address the identified problem of drink-related violence in the town centre and in particular will need to demonstrate measures to prevent binge drinking on the premises. Where no relevant representations are received in this connection, the application will be granted.

1.8 Previous Guidance (at 14.32) stated that "once adopted special policies should be reviewed regularly to assess whether they are needed any longer or if those which are contained in the special policy should be amended."

1.9 In this respect, the Guidance at 14.29 provided that the steps to be followed in considering whether to adopt a special policy within the statement of licensing policy are:

(1) To identify concern about crime and disorder; public safety; publicly nuisance; or the protection of children from harm.
(2) To consider whether there is good evidence that crime and disorder or public nuisance are occurring, or whether there are activities which pose a threat to public safety or the protection of children from harm.
(3) If such problems are occurring, identify whether these problems are being caused by the customers of the licensed premises, or that the risk of cumulative impact is imminent.

(4) To identify the boundaries of the area where problems are occurring (this can involve mapping where the problems occur and identifying specific streets or localities where such problems arise).

(5) To consult with those specified in section 5(3) of the 2003 Act and, subject to the outcome of the consultation, include and publish details of the special policy in the licensing policy document.

2. Issues

2.1 At the meeting of the Licensing Committee held on 3rd July 2013 it was resolved that the cumulative impact policy be retained and reviewed on an annual basis.

2.2 Representatives from Staffordshire Police will be in attendance at the meeting to present evidence regarding the Special Saturation Policy.

3. Options

3.1 The Committee can:-

- Retain the area as it currently stands until the next Statement of Licensing Policy Review. .
- Retain the area as it currently stands and review on a twelve monthly basis until the next Statement of Licensing Policy Review.
- Retain the area as it currently stands and determine when to begin the transitional period to a CIA subject to the necessary consultation.
- Opt to consider expansion or reduction of the area covered by the current policy subject to the necessary consultation.
- Opt to remove the Cumulative Impact Policy

4. Outcomes Linked to Sustainable Community Strategy and Corporate Priorities

4.1 The contents of this report relate to the following corporate priorities:

- Creating a cleaner, safer and sustainable Borough
- Creating a healthy and active community

5. Legal and Statutory Implications

5.1 'Cumulative Impact' is now specifically mentioned in the 2003 Licensing Act but has been detailed at Section 14 of the guidance issued under section 182 of the Act for some time.

6. Financial and Resource Implications

6.1 There are no financial implications for the Council relating to the retention or not of a Cumulative Impact Policy.

7. Major Risks

7.1 Not designating a Cumulative Impact Policy within the Council's Licensing Policy could lead to:

- An increase in serious problems of nuisance and disorder outside licenced premises. Such problems generally occur as a result of large numbers of drinkers

being concentrated in an area, for example when leaving premises at peak times or when queuing at fast food outlets or for public transport. Queuing in itself may lead to conflict, disorder and anti-social behaviour.

- Large concentrations of people may also increase the incidence of other criminal activities. These conditions are more likely to take place in town centres.

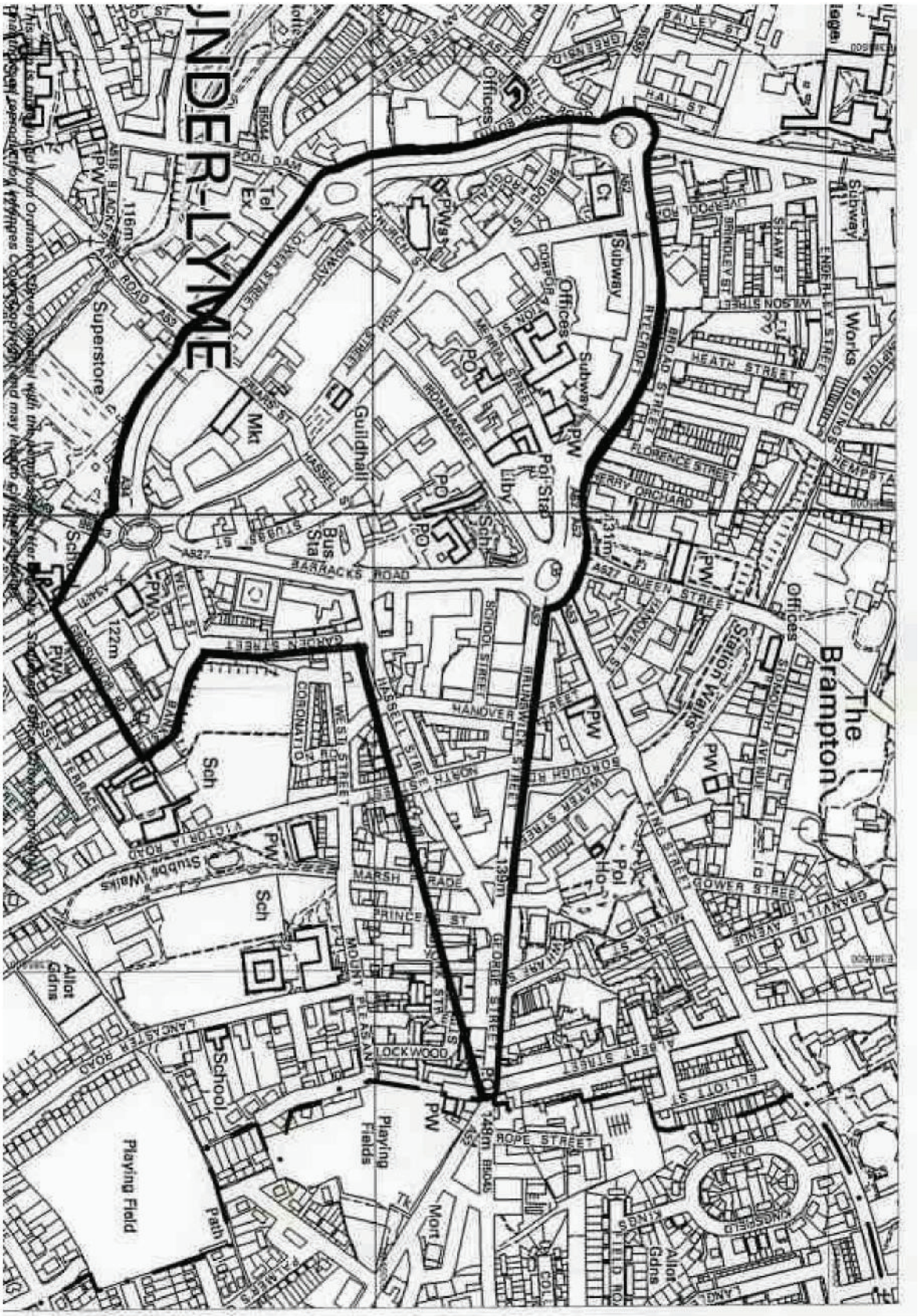
8. **Earlier Cabinet/Committee Resolutions**

8.1 Decision of the Licensing Committee on 19th June 2017

9. **List of Appendices**

9.1 Plan showing current cumulative impact zone

9.2 Presentation by Staffordshire Police – Newcastle cumulative Impact Zone Review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HIGH STREET
RYECROFT
BROAD STREET
MARSH PARADE
GEORGE STREET
ROPE STREET
LOCKWOOD
HASSELL STREET
NEWCASTLE ROAD
VICTORIA ROAD
GOWER STREET
KING STREET
HANOVER STREET
SCHOOL STREET
CORONATION WALK
WEST STREET
GARDEN STREET
BRIDGE STREET
CHURCH STREET
HALL STREET
POOL DAM
BLACKBROOK ROAD
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122m
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135m
148m

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DECISION RELATING TO CROSS HEATH NEWS, LIVERPOOL ROAD, NEWCASTLE-UNDER-LYME APPLICATION FOR REVIEW OF PREMISES LICENCE FROM HEARING ON 28TH MARCH 2018 AT 10:00AM

Having taken into account the Licensing Act 2003 and the guidance issued under Section 182 of the Act, the Council's statement of Licensing Policy and also the fact that Trading Standards have requested a review of the premises licence supported by Environmental Health due to concerns relating to the failure of the premises licence holder and designated premises supervisor to promote the licensing objectives relating to the Prevention of Crime and Disorder and the Protection of Children from Harm.

The Committee have considered those licensing objectives in the light of what has been said and have listened to the arguments and are persuaded that, in the light of the evidence before it, it is appropriate to take steps to ensure that the licensing objectives are promoted. In considering which of it powers to invoke the Committee had regard to the guidance at 11.19 and 11.20 which indicates that the Committee should seek to establish the cause of the concerns that the representations identify and that the remedial action taken should generally be directed at the causes and be no more than appropriate and proportionate. In particular, where the cause of the identified problem relates to poor managerial decision, the Committee may consider appropriate action.

Trading Standards brought the review on the basis that the Premises Licence Holder and the Designated Premises Supervisor had failed to take adequate steps at the premises to protect children from harm and prevent crime and disorder which it was alleged raised questions as to whether the business was being operated in accordance with the promotion of the licensing objectives as referred to in Section 4 of the Licensing Act 2003.

Offences under Section 146(1) of the Act, involving the sale of alcohol to an individual aged under 18 is a relevant offence when considering a personal licence and Trading Standards gave evidence that on the 21st August 2017 the premises had failed a test purchase, in that a 500ml bottle of cider was sold to a 16 year old and that the person who made the sale claimed under caution that he had not received any written staff training contrary to the conditions on the premises licence.

Trading Standards referred to the guidance at 2.23 which said that the Government believes that it was completely unacceptable to sell alcohol to children and at 2.29 where Licensing Authorities could give considerable weight to representations about Child Protection matters. Further that, 11.27 provided that certain criminal activity that arises in connection with licensed premises should be treated particularly seriously and that activity includes the illegal purchase and consumption of alcohol by minors.

Trading Standards concluded that new conditions should be attached to the operating schedule on the grounds that the Premises Licence Holder and the Designated Premises Supervisor had failed to take adequate steps at the premises to protect children from harm and prevent crime and disorder as referred to and also because their actions indicated an unequivocal disregard of the law by inter alia not providing formal training in connection with age restricted sales meaning that the seller should not have been authorised to sell alcohol during his employment with the business. Trading Standards further alleged that the DPS authorisation had not been supplied to them and that the Premises Licence Holder had failed to engage with them respond to reasonable requests to produce information and documentation.

Environmental Health, who supported Trading Standards application for review, referred to a number of visits to the premises between the 4th August 2016 and 1st February 2018 where it was ascertained that training records were not fully up to date, fire extinguishers were overdue for service and the accident book had not been completed. Although it was noted, that CCTV was functioning and Challenge 25 posters were on display. There was however, no DPS authorisation available and the refusals book was not accessible as it was locked away. Also, a premises licence fee had been outstanding. Subsequently, the fee had been paid and the refusals register produced but there was some inconsistency as to the records of exactly who was employed to work at the premises.

Having said that, following negotiation between the parties, agreement had been reached that the premises licence should be suspended for a period of 2 weeks to allow for their training to take place in view of the god track record of the premises in passing further test purchases and the fact that the Premises Licence Holder was proposing to put in place systems which would result in the mitigation of the possible further risks.

It was also agreed that the current 6 conditions under the protection of children from harm in Annex 2 on the Premises Licence should be removed and replaced by the new conditions set out on pages 23 and 24 of the report and detailed below:

Protection of Children from Harm

1. A Challenge 25 policy must be adopted and enforced at the premise where all persons who appear to be under the age of 25 must be challenged for acceptable identification to prove they are over the age of 18 prior to the purchase of alcohol.

2. The only acceptable forms of identification must be a valid photo driving licence, valid passport or a valid PASS approved proof of age card.

3. Challenge 25 posters must be displayed at all entrances to the premise, all areas where alcohol is displayed and at the cash till payment area.

4. Posters must be displayed prominently and in sight of customers and staff.

5. At each till there must be placed a date of birth check card which must be kept updated at all times with the current date at which a person must be born to be aged 18 or over.

6. A refusals register with details of all refusals must be maintained at the premise. The register must contain details of the staff member refusing the sale and must be checked on a 2 weekly basis by the Designated Premises Supervisor and signed and dated by the Designated Premises Supervisor.

7. The refusals register or, when on the till, a print out of refusals must be produced and made available for inspection at the time of the visit by any Responsible Authority.

8. Prior to selling alcohol, all persons involved in the sale of alcohol & age restricted products who are not the holder of a Personal Licence must receive initial and regular 6 monthly refresher training by the Designated Premises Supervisor or external training provider with regards to the law in relation to the sale of alcohol and age restricted products and responsible retailing. Such training must be recorded and up to date training records of all such persons must be maintained at the premise and produced and made available for

inspection at the time of the visit by any Responsible Authority. Records for each person must be retained for a minimum of 12 months.

9. Both initial and subsequent refresher training in relation to the sale of alcohol & age restricted products must contain a test to be undertaken by the staff member and this test or online certificate must be made available at the time of the visit to any Responsible Authority.

The counsel for the Licence Holder also confirmed that an agent would be employed to assist in liaising with the Licence Holder and DPS to ensure that appropriate training was carried out.

The Committee considered the agreement reached but concluded that in view of the severity of the breach but taking into account 11.22 and 11.23 of the guidance the Premises Licence should be suspended for a period of one month and the new conditions would be imposed on the licence as set out on pages 23 and 24 of the report as agreed by the parties.

In view of the assurances given by the Counsel for the Licence Holder concerning training to be given to include the licence holder's daughters who are fluent in English the Committee were minded not to remove the DPS from the licence.

Accordingly a notice will be issued to that effect.

Dated: 29th March 2018

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PUBLIC PROTECTION COMMITTEE

Monday, 23rd April, 2018
Time of Commencement: 6.30 pm

Present:-	Councillor Ian Matthews – in the Chair
Councillors	Dymond, Olszewski, Robinson, J Tagg, Walklate and P Waring
Officers	Nesta Barker - Head of Environmental Health Services, Matthew Burton - Licensing Administration Team Manager and Anne-Marie Pollard
Apologies	Councillor(s) L Hailstones, P Hailstones, S Hambleton, Spence and G White

1. **APOLOGIES**

Apologies were received from Councillors' L Hailstones, P Hailstones, Hambleton, Spence and G White.

2. **DECLARATIONS OF INTEREST**

There were no declarations of interest stated.

3. **MINUTES OF PREVIOUS MEETING**

Resolved: That the minutes of the meeting held on 13 March, 2018 be agreed as a correct record.

4. **DISCLOSURE OF EXEMPT INFORMATION**

Resolved:- That the public be excluded from the meeting during consideration if the following matter because it is likely that there will be disclosure of exempt information as defined in paragraphs 1,2, and 7 in Part 1 of Schedule 12A of the Local Government Act, 1972

5. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

Members were advised that Mr FH's application had been withdrawn.

6. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

The Committee considered a report regarding an application for renewal of a Dual Driver's Licence by Mr JM.

Mr JM was given the opportunity to address the Committee.

Resolved: That the application submitted by Mr JM be approved for a limited period of twelve months, together with a written warning as to his future conduct. After twelve months, and subject to no further offences, Mr JM could apply for a full licence.

7. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

The Committee considered a report regarding an incident involving Miss SJP.

Miss SJP was given the opportunity to address the Committee.

Resolved: That a written warning be issued as to future conduct. Upon renewal of the licence (if there are no changes) that it be granted for a period of twelve months.

8. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

The Committee considered a report regarding a new driver application for a Dual Hackney Carriage and Private Hire Driver's Licence by Mr SKM.

Mr SKM was accompanied by a legal representative who addressed the Committee.

Resolved: That, in view of the number and nature of convictions, the Committee, having considered those circumstances and taken into account its policy guidelines, refused Mr SKM's application.

9. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

The Committee considered a report regarding an incident involving Mr GH.

Mr GH was accompanied by a legal representative who addressed the Committee.

Resolved: That a written warning as to his future conduct be issued to Mr GH.

10. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

The Committee considered a report regarding a new driver application for a Dual Hackney Carriage and Private Hire Driver's Licence by Mr MJC.

Mr MJC was given the opportunity to address the Committee.

Resolved: That, in view of the nature and seriousness of the offences, the Committee, having considered those circumstances and taken into account its policy guidelines, refused the application.

11. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

Mr SAH was not in attendance for the meeting. The Committee therefore agreed to defer the application until the next meeting.

12. **LOCAL GOVERNMENT (MISCELLANEOUS PROVISIONS) ACT - 1976**

The Committee considered a report regarding a number of incidents involving Mr AM.

Mr AM was given the opportunity to address the Committee.

Resolved: That a written warning be issued as to his future conduct with reference made to warn that, should the two allegations of an offence be followed by a third, Mr AM would be called back to this Committee.

13. **ENVIRONMENTAL PROTECTION ACT 1990, SECTION 33**

A report was submitted advising the Committee of action taken in respect of a fly tipping offence within the Borough and seeking authorisation to institute legal proceedings.

Resolved: That subject to review by the legal section, legal proceedings be instituted

14. **ENVIRONMENTAL PROTECTION ACT 1990, SECTION 33**

A report was submitted advising the Committee of action taken in respect of a fly tipping offence within the Borough and seeking authorisation to institute legal proceedings.

Resolved: That subject to review by the legal section, legal proceedings be instituted

15. **11 CLEAN NEIGHBOURHOODS AND ENVIRONMENT ACT 2005 FIXED PENALTY NOTICES**

A report was submitted advising the Committee of action taken in respect of littering offences within the Borough and seeking authorisation to institute legal proceedings.

Resolved: That subject to review by the legal section, legal proceedings be instituted

16. **RESOLVED:APPEAL OUTCOME MR ABDUL HAKIM BAIG**

Resolved: That the report be received.

17. **APPEAL OUTCOME MR MOHAMMED SAJJAD MIAH**

Resolved: That the report be received.

18. **URGENT BUSINESS**

There was no Urgent Business.

COUNCILLOR IAN MATTHEWS
Chair

Meeting concluded at 9.15 pm

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REPORT TITLE **Environment Act 1995 - Part IV**
Air Quality Action Plan Consultation Draft

Submitted by: **Head of Environmental Health Services & Environmental Protection Team Manager**

Portfolio **Environment & Recycling**

Ward(s) affected **All**

Purpose of the Report

To inform committee of the contents of the consultation draft Air Quality Action Plan (AQAP) which contains air quality action plans for four Air Quality Management Areas within the Borough and to detail the proposed consultation arrangements for the AQAP.

Recommendations

1. **To receive the report**
2. **To approve the draft AQAP**
3. **To approve the commencement of the consultation.**

Reasons
Under Part IV of the Environment Act 1995, local authorities are required to assess air quality in their area against a range of statutory air quality objectives. Where exceedances are identified, air quality management areas must be declared and air quality action plans developed to improve air quality. The action plans must be formally consulted on, with relevant comments taken into account before they are formally adopted.

1 Background

1.1 In January 2015, the Borough Council's Public Protection Committee declared four air quality management areas (AQMA's) in the Borough due to exceedances of the annual mean objective concerned with nitrogen dioxide ($N0_2$) at a number of "relevant locations".

1.2 Appendix A gives the locations of these AQMA's.

1.3 As a result of declaring the AQMA's, the Borough Council is required to develop Air Quality Action Plans (AQAP's) which are designed to reduce levels of Nitrogen Dioxide to below the statutory objective level at relevant locations.

1.4 Working with a number of key stakeholders and a specialist consultancy, your officers have developed air quality action plans for the four air quality management areas. These plans contain measures which if implemented are hoped to reduce nitrogen dioxide exposure at relevant locations.

1.5 As nitrogen dioxide levels within the Borough are heavily influenced by road traffic emissions, the identified action plan measures seek to reduce levels of $N0_2$ principally by focusing on traffic and congestion management supported by a range of complementary measures.

1.6 Once the Action Plan is formally adopted it will become a material consideration in the development of the emerging local plan and in the determination of planning applications. It must also be taken account in the preparation of the County Council Local Transport Plan for the Borough and by Highways England for any major projects relating to the strategic highway network.

2. Options Considered

2.1 The action plan document has started by identifying existing policies and strategies which are considered to support improvements in air quality, not only in the AQMA's but also across the wider Borough. These polices range from planning and development polices across the Borough, some of which are shared with the city and implemented through the Local Planning Authority, through to highways and transport planning polices which are implemented via the County Council and Highways England as the respective Highways Authority's.

2.2 Staffordshire County Council's Public Health Directorate have also provided health based data to support the development of action plan measures. This information will also assist with applications for potential future funding opportunities to support improvements in air quality.

2.3 The individual air quality action plan measures have been developed based on data obtained from monitoring by the Council, source apportionment which identifies which sources are contributing towards nitrogen dioxide levels, trends in nitrogen dioxide and narrative on the issues considered to be contributing towards excessive levels of nitrogen dioxide. This information has then been used to formulate the action plan measures in the DEFRA required template and are shown in Appendices B to E.

2.4 The Council is now required to consult on its draft action plan prior to it being formally adopted. To this end as well as the statutory consultees identified by DEFRA, it is proposed to consult as widely as reasonably possible across the Borough with residents, businesses, landowners via a range of media in accordance with the Councils Consultation Strategy. The consultation window will be open for a minimum of 8 weeks.

2.5 Following closure of the consultation window all comments received will be reviewed and the action plans amended as appropriate, before a further report is brought back to committee.

3 Recommendation

3.1 To receive the report
3.2 To approve the draft AQAP
3.3 To approve the commencement of the consultation.

4 Outcomes Linked to a Sustainable Community Strategy and Corproate Priorities

4.1 The report supports the following corporate priorities:

1. A clean, safe and sustainable borough
2. The negative impacts that the Council, residents and local businesses have on the environment will have reduced.
3. A healthy and active community

5 Legal and Statutory Implications

5.1 Under the provisions of the Part IV of the Environment Act 1995, as the Borough Council has declared four AQMA's it is required to produce and consult on the AQAP's and to consider any representations prior to them being formally adopted.

5.2 Borough Council Officers will be responsible for monitoring the delivery of the identified action plan measures, with the responsibility for implementation resting with the relevant identified body.

5.3 By virtue of paragraph 123 of the National Planning Policy Framework, the action plans, once formally adopted, will become a material planning consideration in the determination of future planning applications by both the Borough Council as the Local Planning Authority and also the County Council in its dual roles as the Waste Planning Authority and the Mineral Planning Authority.

5.4 Both Highways Authorities for the Borough (Staffordshire County Council and Highways England) are expected to have regard to the AQAP in developing and updating their transport plans for the Borough.

6 Financial and Resource Implications

6.1 Progress on delivering the action plans will be reported in the statutory Annual Status Reports which are presented to DEFRA. This will also be the subject of future reports to this committee.

6.2 Funding of action plan measures rests with the action owner. Where appropriate, grant funding applications may be made to DEFRA to help deliver action plan measures. Current planning policies may also assist the delivery of some of the measures.

6.3 Progress on delivering the action plans will be reported in the statutory Annual Status Reports which are presented to DEFRA. This will also be the subject of future reports to this committee. Existing staff and budgets within Environmental Health will be used for this purpose.

7 Major Risks

7.1 Failure to make satisfactory progress on improving local air quality may leave the Council open to legal action by affected individuals and representative organisations as well as to formal intervention by Central Government under part IV of the Environment Act 1995 and for central government to pass down any court fines to local authorities Localism Act 2011.

Links to documents

1. Link to Consultation Draft Air Quality Action Plan

Background Papers

Statutory Air Quality reports for Newcastle under Lyme since 2012 available from Air Quality in Newcastle-under-Lyme | Newcastle-Under-Lyme Borough Council
Environment Act 1995 Part IV
Local Air Quality Management Technical Guidance TG16
Local Air Quality Management Policy Guidance PG16

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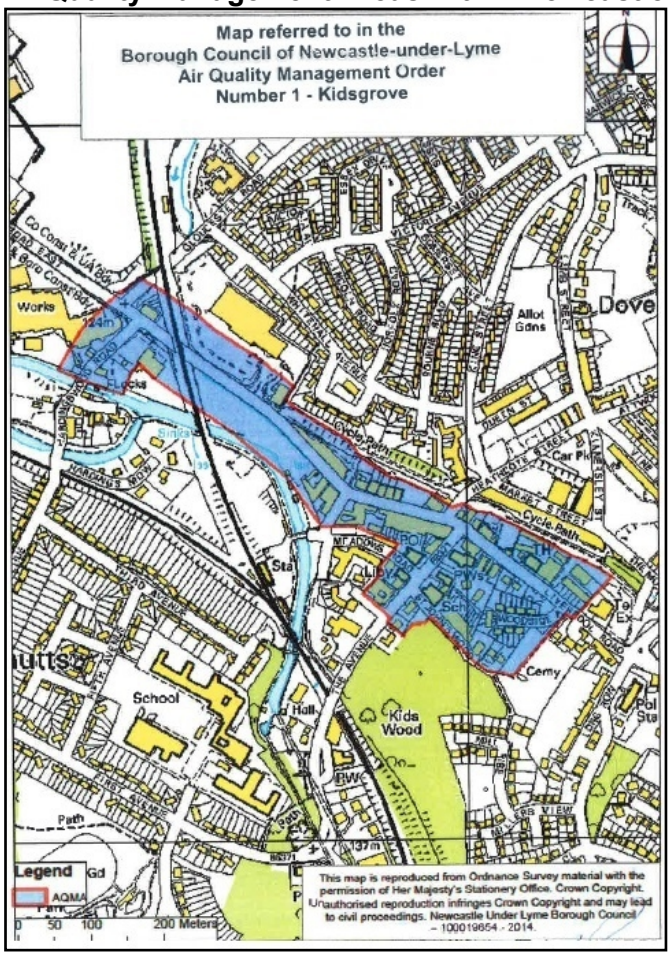
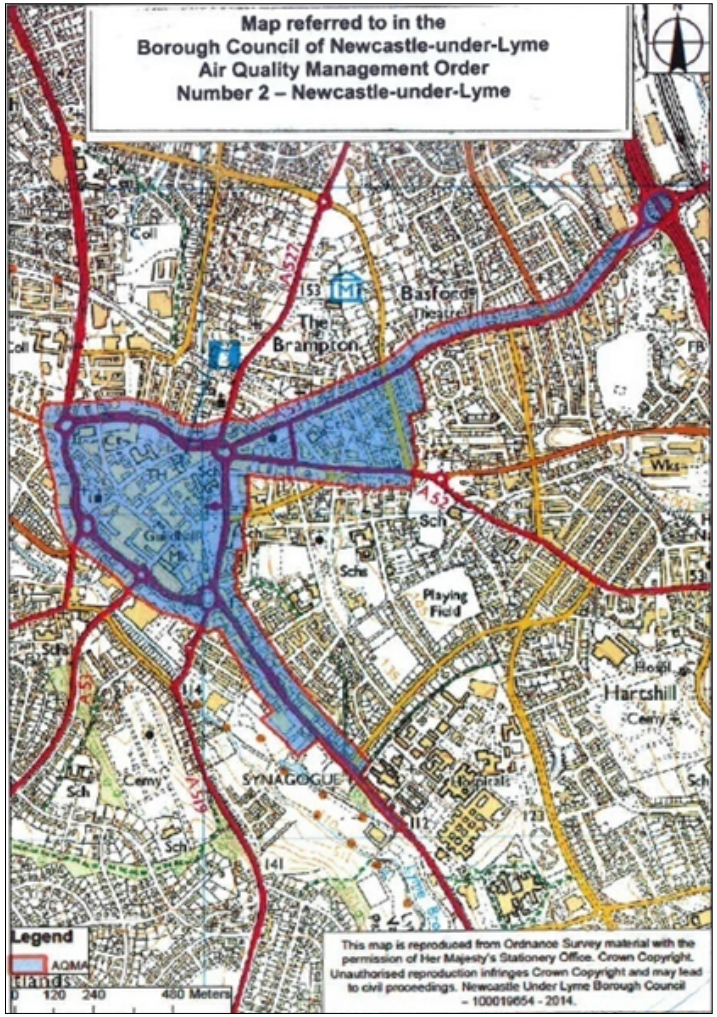
Appendix A

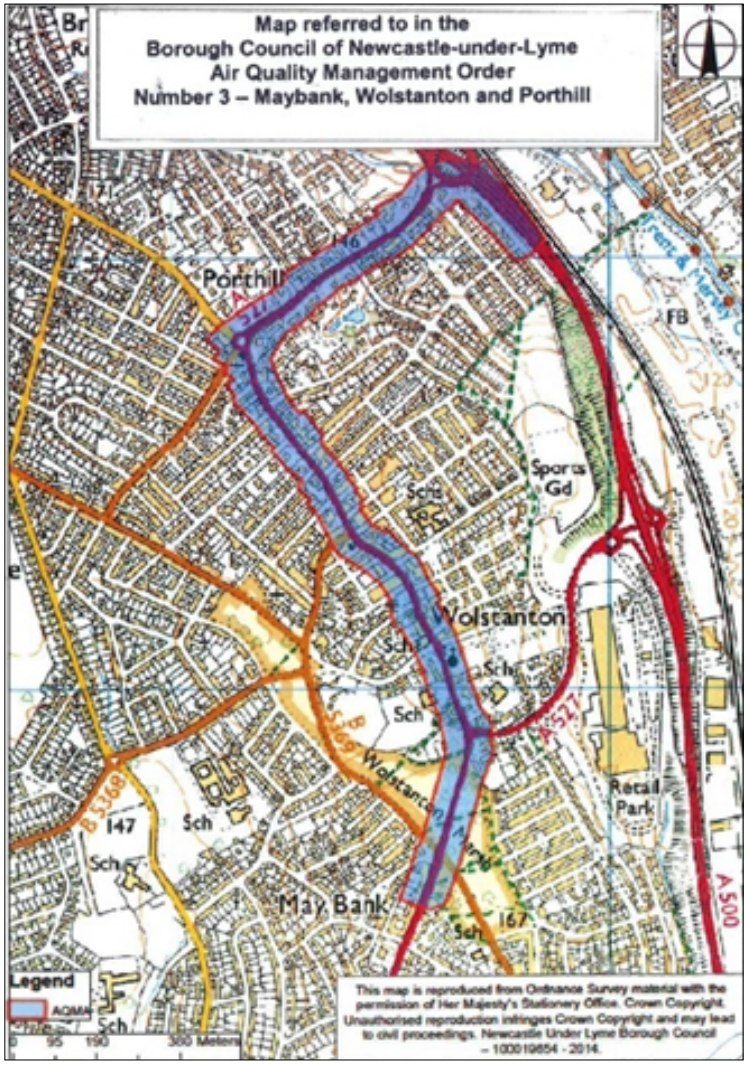
Location of Air Quality Management Areas within Newcastle under Lyme



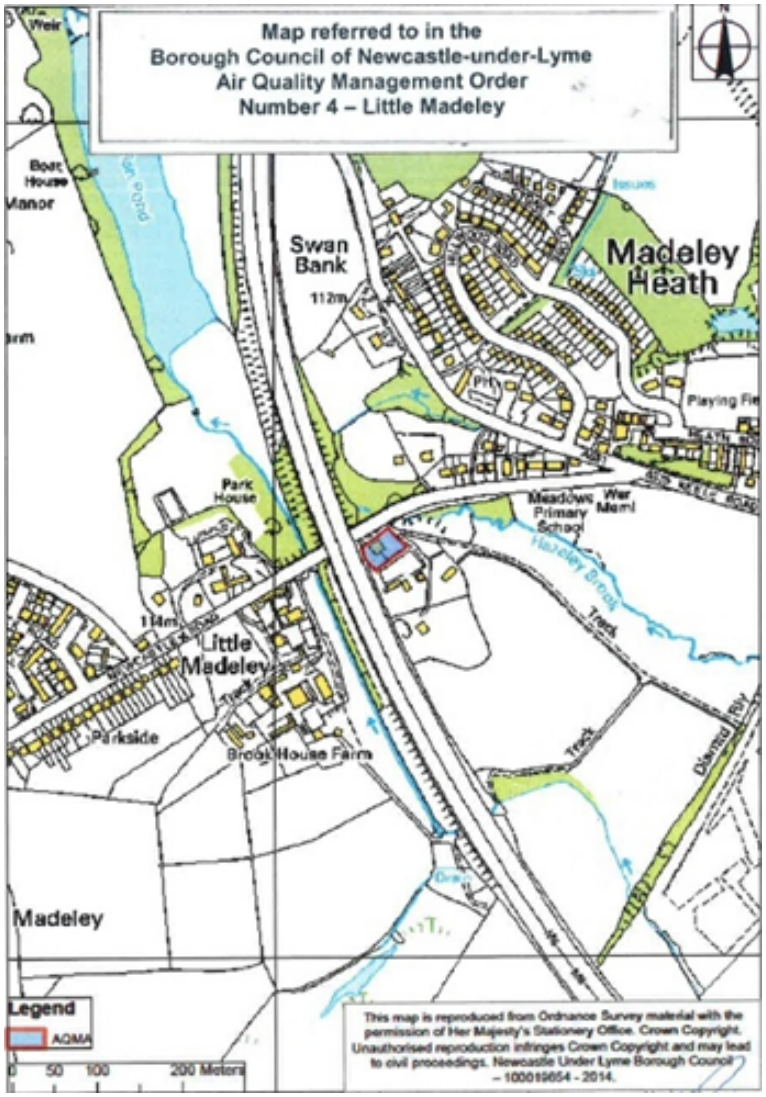
Kidsgrove AQMA



Newcastle Town Centre AQMA



Maybank, Wolstanton & Porthill AQMA



Little Madeley AQMA

Appendix B

Air Quality Action Plan – Kidsgrove AQMA											
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**
K1	Kidsgrove Railway Station Transport hub including parking and improved bus/rail interchange with new bus facilities closer to the station, Real Time Passenger Information provided at Kidsgrove station and at the bus stops, disabled/cycle parking, drop off and taxi facilities, and safer pedestrian and cycle access routes to the station	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	East Midlands Trains	2015	2018/19	Delivery of measure	Has potential to increase patronage / increase use of public transport and private car	In planning phase	2020	Funding priorities and reliant on completion by East Midlands Trains

Air Quality Action Plan – Kidsgrove AQMA											
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**
K2	Traffic light optimisation to reduce congestion ALONG Liverpool Road and prevention of right turn into Heathcote Street from A50	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	2017	2018	Delivery of measure	Reduced vehicle emissions		2017/18	Funding
K3	Review location of bus stops to facilitate traffic flow around Liverpool Road / The Avenue	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	2017	2018	Delivery of measure	Reduced vehicle emissions		2017/18	

Appendix C

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
N1	Ensure that effects of additional traffic generated by Ryecroft mixed retail / student development are properly understood	Other	Other	Henry Davidson Developments / Planning Application to Newcastle under Lyme B.C.	Aug-17	18/19	Monitoring	Not calculated	Planning Permission Granted	2019	Application made to Newcastle under Lyme B.C green travel infrastructure and EV charging sought
N2	Ensure that effects of emissions from plant associated with Ryecroft mixed retail / student development are properly understood	Other	Other	Henry Davidson Developments / Planning Application to Newcastle under Lyme B.C.		Nov-17	Emissions modelled and quantified	Not yet quantified	Planning condition awaiting discharge	2019	Conditions imposed on permission. Hours of use of plant to be limited to minimise effects on AQ
N3	Wayfinding strategy Newcastle under Lyme	Promoting Travel Alternatives	Promotion of walking	Lead by Newcastle under Lyme Borough	2017/18	2019/20	Delivery of strategy	Not quantified			Strategy awaiting public consultation

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
	Town Centre and outlying areas for walking and cycling			Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District							
N4	Cycle route improvements on A34 North (Cedar Road to Lower Milehouse Lane and Milehouse) and A527 (Town to Keele University)	Promoting Travel Alternatives	Promotion of cycling	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District		2018/19	Cycle routes installed	Reduced vehicle emissions	Routes identified		Options identified for consultation
N5	Local Transport Package Managing Peak Hour Congestion	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	Complete	Complete	Measurment of journey times between reference	Reduced vehicle emissions	System optimised	Completed	UTC optimised on network around ring road and King Street / Etruria Road (A53) Limited

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
	and C-emissions on local roads and at junctions with the trunk road network						points				capacity for physical works as network is heavily congested and constrained by local geography. Borough lies at centre of major road network for cross-country freight.
N6	LSTF funding of cycling walking and bus links between N-u-L and Stoke	Alternatives to private vehicle use	Other	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District	2017/18	2019 onwards	Funding secured and links in place	Reduced vehicle emissions			Options identified for consultation
N7	Ring-Road enhanced signage &	Traffic Management	UTC, Congestion management,	Lead by Newcastle under Lyme	2017	2018/19		Reduced vehicle			Options identified for

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
	subway		traffic reduction	Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District				emissions			consultation Potential funding constraints
N8	Car Park Variable Message Signing Street parking restrictions	Traffic Management	Other	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District	2017	2018/19	VMS signs in place and street parking restrictions enforced	Reduced vehicle emissions			Options identified for consultation / Potential funding constraints

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
N9	Promotion of public transport Real Time Passenger Information upgrades	Public Information	Other	Staffordshire County Council with support via conditions on planning applications for inclusion in high occupancy student / keyworker accommodation	2017	Ongoing		Reduced vehicle emissions			RTPI and subsidised bus travel / green travel plans sought for large-scale multi occupancy residential accommodation. Town centre expected to accommodate 3000 students for local universities

Appendix D

Air Quality Action Plan - Maybank, Wolstanton, Porthill AQMA											
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**
W1	Improvements to Wolstanton and Porthill Junctions on A500 to reduce congestion	Traffic Management	UTC, Congestion management, traffic reduction	Highways England	Scheme achieved RIS approval for delivery by 2020	Commencement by 2020	Modelling of air quality impacts and monitoring	Reduction in congestion / improved journey times	Scheme being revised prior to tender	To be delivered in current Roads Investment Strategy window by March 2020	Funding identified by HE. Project flagged as high risk for air quality along A500 due to exceedance of EU action level
W2	Short term routing strategy to mitigate impact of congestion associated with works to A500	Traffic Management	UTC, Congestion management, traffic reduction	Highways England / Staffs County Council / Stoke on Trent City Council and NULBC Environmental Health	Issue raised with HE at stakeholder meetings	from commencement of works and for upto 3 years	Modelling of air quality impacts and monitoring	Potential short term -ve impact during build	Impacts not yet quantified	2020	Off network effects on AQ awaiting assessment by HE. Concerns about impact on Town Centre AQMA and Maybank, Wolstanton Porthill AQMA's as potential alternative route during two year build programme
W3	Evaluate the impact of the Etruria Valley	Traffic Management	Strategic highway improvements,	Lead by Stoke on Trent City Council with	Issued flagged with Stoke	Commencement by 2020	Modelling of air quality impacts and	unclear	Minor advserse impact but	Application winter 2017	Planning application to Newcastle under

Air Quality Action Plan - Maybank, Wolstanton, Porthill AQMA											
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**
	Link Road in the May Bank, Porthill, Wolstanton area and provide appropriate mitigation		Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	planning application to Newcastle under Lyme Borough Council/ Staffordshire County Council involved	on Trent City Council		monitoring		no exceedances identified		Lyme Borough Council. Potential -ve effects on Maybank Porthill, Wolstanton AQMA. Potential to improve AQ in Stoke on Trent at Basford Bank where hourly mean N02 is being exceeded.

Appendix E

Air Quality Action Plan – Little Madeley AQMA

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
M1	Continue to monitor N02 at relevant location in Little Madeley	Other	Other	Newcastle under Lyme Borough Council Environmental Health		Ongoing	Monitoring	As per reported results	Ongoing	To at least 2020 to determine trends	Nil
M2	Engage with HE concerning proposals to introduce smart managed motorway / hard shoulder running in Madeley area between junctions 15 and 16 of the M6 motorway	Traffic Management	Other	Lead by Highways England	Scheme not identified in current HE RIS window up to 2020	Unknown	Project delivered	Has potential to reduce congestion and vehicle emissions	Not yet commenced	Unknown	Scheme not yet identified. Sections either side of junctions 15 and 16 of the M6 are being smart managed with hard shoulder running. Local geography is an issue to identifying appropriate solutions

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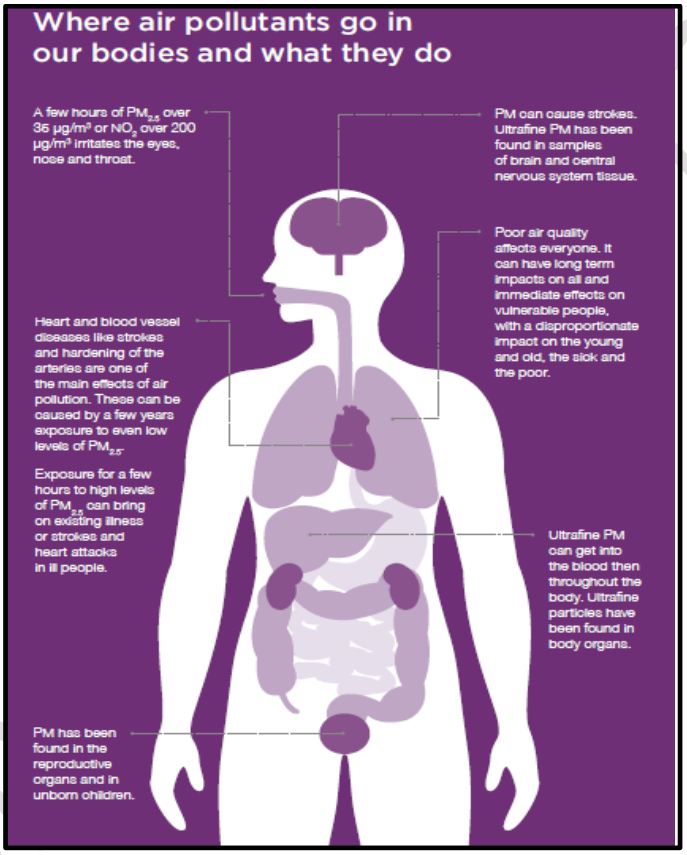
BOROUGH CO

Air quality Action Plan (2018 - 2023) Consultation Draft July 2018



Darren Walters
darren.walters@newcastle-staffs.gov.uk

NEWCASTLE UNDER LYME BOROUGH COUNCIL

Contents

Tables

Figures

1 Summary

Under Part IV of the Environment Act 1995, Local Authorities have a legal duty to review and assess air quality in their areas and to report against objectives for specified pollutants of concern, to the Department for Environment, Food and Rural Affairs (DEFRA). Air Quality Objectives are defined in European Directives that are incorporated within UK Air Quality Strategies and Regulations.

Air quality within the borough has been closely monitored since 1997, and pollutant levels have largely remained within the recommended UK national objectives for air quality. The review of air quality 2014 by Newcastle-under-Lyme Borough Council (NULBC), with the support of consultants TRL, identified four distinct areas within the Borough where due to traffic issues, air pollution exceeds the objective levels for nitrogen dioxide.

When a Council identifies an exceedance and there is a risk to public health from exposure, the council have to create what is known as an Air Quality Management Area (AQMA).

The four AQMAs within NULBC are: Newcastle Town Centre, Maybank, Kidsgrove and Little Madeley. These AQMA's were declared following detailed and further assessment reports. The further assessment report was based upon monitoring and modelling carried out using data for 2012. We now have four further years' worth of monitoring data as a means of verifying the continued status of these AQMA's which are reviewed within this report.

As a consequence of declaring the AQMA's, the Council is legally required to develop and implement an Air Quality Action Plan, with help from other organisations and the public, which deliver a set of measures that are designed to reduce the level of pollution to within the boundaries that are acceptable levels within the European Union (EU) limit values and the UK's national objectives for air quality.

Working with partner stakeholders, this draft Air Quality Action Plan has been produced to provide measures that are specific for each AQMA area, which will contribute towards reducing levels of nitrogen dioxide across the 4 AQMA's and the wider Borough.

Progress on delivering the adopted AQAP will be reviewed annually in the Annual Status Report (ASR) which details the status of air quality in the Borough in the preceding calendar year.

Comments on the suggested measures are invited and will be taken into account in developing the final air quality action plans.

2 Introduction

Newcastle-under-Lyme is a well-connected town in the centre of England, located close to the city of Stoke-on-Trent. The borough has around 123,000 residents and is the location of Keele University, which was ranked in the top 40 universities in the UK by the Sunday Times University Guide.

Under Part IV of the Environment Act 1995, Local Authorities have a legal duty to review and assess air quality in their areas and to report against objectives for specified pollutants of concern, to the Department for Environment, Food and Rural Affairs (DEFRA). Air Quality Objectives are defined in European Directives that are incorporated within UK Air Quality Strategies and Regulations.

Air quality within the borough has been closely monitored since 1997, and pollutant levels have largely remained within the recommended UK national objectives for air quality. The review of air quality 2014 by Newcastle-under-Lyme Borough Council (NULBC), with the support of consultants TRL, identified four distinct areas within the Borough where due to traffic issues, air pollution exceeds the objective levels for nitrogen dioxide.

When a Council identifies an exceedance and there is a risk to public health from exposure, the council have to create what is known as an Air Quality Management Area (AQMA). Once the AQMA has been established the Council have to develop an action plan that shows how NULBC, with help from other organisations and the public, will deliver a set of measures that are designed to reduce the level of pollution to within the boundaries that are acceptable levels within the European Union (EU) limit values and the UK's national objectives for air quality.

The four AQMAs within NULBC are: Newcastle Town Centre, Maybank, Kidsgrove and Little Madeley. These AQMA's were declared following detailed and further assessment reports. The further assessment report was based upon monitoring and modelling carried out using data for 2012. We now have four further years' worth of monitoring data as a means of verifying the continued status of these AQMA's which are reviewed within this report.

The Action Plan is designed to provide measures that are specific for each AQMA area, as well as measures that will be implemented across the borough through a wide range of plans and strategies.

Newcastle-under-Lyme is part of the North Staffordshire Conurbation, closely linked to Stoke-on-Trent City Council as expressed by the development of a joint local plan, and is developing its own district integrated transport strategy within the framework of the Staffordshire Local Transport Plan.

The district profile described within the draft integrated strategy highlights the connectivity of Newcastle-under-Lyme with the national transport network, including the M6 and the A500 trunk road, together with local trunk routes including the A34, A53 and A50. It is generally accepted that at peak times the Newcastle-under-Lyme highway network, particularly the ring road, displays symptoms of congestion resulting in delays and variable journey times.

It is recognised that North Staffordshire is an area engaging on a process of economic regeneration, involving developing plans to stimulate growth and prosperity that begin with city centre developments and improving the internal transport links in the region. Further investment in strengthening transport interconnectivity between central Stoke, railway station, Newcastle-under-Lyme, Universities of Keele, and Staffordshire, with key employment sites notably the Science Park and the hospital are considered priorities.

The planned Etruria Valley Highways scheme funded by the Staffordshire Growth deal is expected to link with plans to increase capacity on the A500 funded by Highways England, with improved links to the A500 at Wolstanton. Plans for additional housing in central

Newcastle, additional employment on the sites of Keele University and the Science Park will add to pressures on the local transport network.

The neighbouring authority, Stoke on Trent City Council, have developed the North Staffs Multi Modal (NSMM) Transport Model which is being used to produce traffic forecasts to inform the development of the Transport Business Case for the Etruria Valley Link Road Project (EVLR) and also the delivery of the emerging Newcastle under Lyme and Stoke on Trent Joint Local Plan (JLP). Once the JLP is formally adopted, it will be used to inform development across the two local authority areas. It will also contain policies to guide appropriate development, including polices relating to air quality and health.

Monitoring of congestion across the key district transport routes has been recognised as a key indicator by Staffordshire County Council, and may be an important indicator for future impact on local air quality.

This document is a Draft Action Plan for Consultation, and does not attempt at this stage to provide final solutions to all the areas that are currently defined as AQMA's in Newcastle under Lyme.

However this document is aimed at key stakeholder groups, and aims to highlight where there are challenges to be faced, focussing on the main sources of emissions, and asks questions in relation to developing appropriate measures to address the local air pollution hotspots, in the knowledge wide ranging planned developments.

It is clear that in order to provide meaningful solutions a significant degree of co-ordination will be required across a range of departments responsible for highways, local transport, planning, economic development and regeneration, including liaison with neighbouring local authorities and County Councils.

It will be necessary to ensure that future planned schemes which may impact on transport links into and through Newcastle-under- Lyme are adequately assessed for impact on emissions and local air quality.

3 Steering Group and Consultation Process

The process so far has involved meetings with a core group of officers from Newcastle-under-Lyme Borough Council, Staffordshire County Council and Stoke-on-Trent City Council, representing Transport, Environment and Planning Departments with attendance from representatives of departments and organisations considered to have an integral role in improving air quality in the borough, including Highways England, Keele University. Meetings have taken place between 24th March 2015 and September 2017.

The meetings have engaged with considering the key issues of the potential impacts of planned developments in the areas declared as Air Quality Management Areas. These are discussed later within this report.

4 Compliance with EU Air Quality Standards

The EU Ambient Air Quality Directive sets legally binding limits for ambient concentrations of certain pollutants in the air.

For Nitrogen Dioxide (NO_2) there are two limit values for the protection of human health. These require Member States to ensure that:

(i) annual mean concentration levels of NO_2 do not exceed 40µg/m^3; and

(ii) hourly mean concentration levels of NO_2 do not exceed 200µg/m^3 more than 18 times a calendar year.

Member States were required to meet these limits by 1 January 2010 unless an extension was granted for up to 5 years to 1 January 2015.

There has been significant publicity over recent years in relation to the failure within the UK to deliver adequate plans to address areas where there are exceedances of European Air Quality Objectives, within specified timescales. The European Commission started infraction proceedings against the UK because the UK Supreme Court made a declaration that the UK was in breach of its obligations to comply with the limit values for Nitrogen Dioxide (NO_2) in the Air Quality Directive. The infraction covers 16 zones (out of 43) which are the subject of the declaration made by the UK Supreme Court.

These are zones for which the UK did not apply for a time extension under the Air Quality Directive because we could not demonstrate that they would meet the limit values by 2015. The Commission has stated that it would like to “to achieve full compliance with existing air quality standards by 2020 at the latest”

This ruling means that if the European Union were to fine the UK Government for failing to meet current air quality objectives, there is a discretionary power in Part 2 of the Localism Act under which means the UK Government could require responsible authorities to pay all or part of an infraction fine.

In heavily trafficked urban areas and close to major trunk routes and motorways across the UK we see raised levels of the two main traffic generated pollutants, Nitrogen Dioxide and Particulate Matter. To a large extent, these two pollutants represent the majority of all exceedances of air quality objectives in the UK and elsewhere in Europe. There are currently approximately 600 AQMA’s in the UK, with 580 declared with road transport as the main source of pollution.

The latest estimates from DEFRA suggest that average roadside levels of nitrogen dioxide have reduced by 15% since 2010, but there are still more than 2,000km of roads across the UK exceeding the limit value for nitrogen dioxide. This is predicted to reduce to approximately 500km of roads in exceedance by 2020, the latest deadline for compliance.

For the purposes of reporting to the EU, the UK has been split into 43 zones and agglomerations for air quality monitoring and reporting purposes. 35 of these 43 zones are predicted to be in compliance by 2020 (based upon modelling from the UK Pollution Climate Mapping Model).

Newcastle-under-Lyme and Stoke-on-Trent fall within the Potteries Agglomeration Zone, where DEFRA estimate there are currently 19.9 km of exceedances, expected to reduce to 0 km by 2020, highlighting that exceedances are centred upon the A50/A500 Stoke arterial road, expected to be in compliance by 2020.

The Local Authorities included within the Potteries Agglomeration Zone are:

1. Cheshire East
2. Newcastle-under-Lyme Borough Council
3. Stafford Borough Council
4. Staffordshire Moorlands District Council
5. Stoke-on-Trent City Council

Exceedances within Newcastle-under-Lyme are not currently shown as exceedances within the National PCM Model predictions, which only accounts for the A50/A500 main trunk route, as being in breach of air quality objectives.

The UK Government currently remains in breach of the Ambient Air Quality Directive, such that the Secretary of State was required to prepare new air quality plans to deliver to the Commission by 31 December 2015. DEFRA requested all local authorities to submit their latest plans for improving air quality in their districts, prior to submission to the EU Commission.

Newcastle-under-Lyme Borough Council and Stoke-on-Trent City Council both submitted plans to DEFRA in 2015 and 2017, these are considered later in this report.

5 Air Pollution and Health

Public Health England provided evidence to the Government's Environmental Audit Committee on Air Quality in 2014, the evidence highlighted that:

- The World Health Organisation's International Agency for Research on Cancer finding diesel-engine exhaust and ambient air pollution to be carcinogenic.
- Ambient air pollution was associated with increased mortality from lung cancer.
- The WHO Review of evidence on health aspects of air pollution, confirmed evidence linking exposure to ambient air pollution with adverse effects on the respiratory and cardiovascular systems and suggested a possible association with the endocrine system (diabetes) and the nervous system.
- It also suggested ambient NO_2 having direct effects for respiratory outcomes. including effects on infant mortality rates, on pre-term birth and on cognitive performance in children.
- The evidence over the last three or four years that children growing up near traffic in areas with high NO_2 and primary particle emissions have stunted and impaired lung development is incredibly strong.
- There is evidence to suggest that the WHO research indicated that "there are significant health effects below our limit values, and so not attaining our limit values should be seen in a very negative light. They are not a magic barrier we have to cross. They are our minimum expectations to protect public health."
- In April 2014, Public Health England calculated the local impact of particulate matter pollution on premature mortality, ranging from 2.5% in some local authorities in rural Scotland and Northern Ireland to over 8% in some London boroughs.
- The Committee on the Medical Effects of Air Pollutants (COMEAP-March 2015) estimate that approximately 29,000 deaths per year in the UK could be attributable to man-made particulate matter pollution, equivalent to a loss of 340,000 life-years. It is estimated that the effects of NO_2 on mortality are equivalent to 23,500 deaths annually in the UK
- Defra estimates the cost to the economy to be about £16 billion per year.

6 Addressing Health within the LAQM Process

The latest Guidance documents (Policy Guidance PG16, and Technical Guidance TG16), for Local Authorities outlines the updates to the review of the process of annual reporting by Local Authorities. It has been designed to maximise the public health benefits of local authority action, in particular on priority pollutants such as NO_2 and Particulate Matter (PM_{10}/$PM_{2.5)}$, and streamlining the reporting process.

This guidance is statutory and all relevant Local Authorities (both district and county level) should have regard to it. The guidance applies to local authority action on air quality using available levers, including planning and transport responsibilities. In two tier authorities, it is directly relevant to both district and county councils who both have obligations under Part IV of the Environment Act.

The guidance makes clear why air quality matters, since by improving air quality we can reduce both the short term and the long term effects on people's health as described by the COMEAP report above. Tackling air pollution is a priority for Government. Action being taken to reduce NO_2 concentrations is set out in the Draft Plans to Improve Air Quality in the UK compiled from the submissions made by individual authorities.

Section 82 of the Environment Act 1995 provides that every local authority shall review the air quality within its area, both at the present time and the likely future air quality. Section 83 requires local authorities to designate an Air Quality Management Area (AQMA) where air quality objectives are not being achieved, or are not likely to be achieved, as set out in the Air Quality (England) Regulations 2000. Once the area has been designated, Section 84 requires the local authority to develop an Action Plan detailing remedial measures to tackle the problem within the AQMA.

For two-tier and unitary authorities, the guidance details that it is expected that all departments across the authorities should work together to identify suitable measures to address air quality. This includes measures in relation to local transport, highways, land use planning, environmental health and public health. Although district councils prepare the annual reports and Action Plans under LAQM, the Secretary of State expects lower and upper tier councils to work together to develop their content and, with respect to Action Plans, ensure that all necessary measures to address air pollution in their local area are included.

There is now very strong evidence on the significant contribution of transport emissions to air pollution in urban areas and the Government expects county councils to bring forward measures in relation to addressing the transport impacts in its area for inclusion in any Action Plan.

The importance of the effect of air pollution on public health is reflected by the inclusion of an indicator of mortality associated with air pollution in the Public Health Outcomes Framework for England.

The indicator is defined as the Fraction of all-cause adult mortality attributable to anthropogenic particulate air pollution (measured as fine particulate matter, $PM_{2.5}$). Within UK towns and cities, emissions of $PM_{2.5}$ from road vehicles are an important source. Consequently, levels of $PM_{2.5}$, and population exposure, close to roadsides are often much higher than those in background locations.

Inclusion of this indicator in the Public Health Outcomes Framework will enable Directors of Public Health to prioritise action on air quality in their local area to help reduce the health burden from air pollution.

7 Health and air quality impacts in Newcastle under Lyme

The information in this section has been provided by Staffordshire County Council Public Health Directorate to support Newcastle-under-Lyme Borough Council in their local air quality management duties under Part IV of the Environment Act 1995. The analysis will help officers evaluate the link between health and poor air quality in Air Quality Management Areas (AQMAs), and provide a benchmark to evaluate the effectiveness of measures implemented to address air quality. It will also provide supporting evidence in bids to access external funding streams to implement such measures.

To help officers evaluate the link between health and poor air quality in AQMAs a number of indicators were identified:

- Prevalence of related conditions from GP disease registers. These are asthma, chronic obstructive pulmonary disease (COPD) and coronary heart disease (CHD).
- Air pollution attributable mortality
- Incidence of lung cancer
- Cardiovascular disease (CVD) emergency hospital admissions
- Respiratory disease emergency hospital admissions (including a breakdown of asthma and COPD)

7.1 Disease prevalence

The QOF registers only tells us about the conditions which are diagnosed and recorded on GP patient registers. The increases seen in prevalence are thought to be primarily due to improvements in awareness, early diagnosis and recording over time.

Table 1 to Table 3 displays the numbers and prevalence of patients recorded with a diagnosis of asthma, COPD and CHD in Newcastle practices between 2015/16 and 2017/18

TABLE 1: RECORDED PREVALENCE OF ASTHMA IN NEWCASTLE PRACTICES, 2011/12-2013/14

Practice Name	2014/15	2015/16	2016/17
Heathcote Street Surgery	**265 (4.6%)**	**249 (4.6%)**	**243 (4.7%)**
The Village Surgery	435 (6.6%)	**452 (6.7%)**	**470 (6.8%)**
Moss Lane Surgery	**476 (6.9%)**	**451 (6.5%)**	452 (6.4%)
Ashley Surgery	**313 (7.9%)**	**284 (7.1%)**	**296 (7.3%)**
Dr Harbidge's Surgery	575 (5.9%)	543 (5.7%)	525 (5.6%)
Miller Street Surgery	**359 (5.1%)**	**357 (5.2%)**	375 (5.5%)
Silverdale Medical Centre	**926 (7.6%)**	**926 (7.6%)**	**934 (7.5%)**
Audley Health Centre	**715 (7.4%)**	**715 (7.3%)**	**749 (7.5%)**
Wolstanton Medical Centre	**728 (6.6%)**	698 (6.2%)	**742 (6.6%)**
Lyme Valley Practice	370 (6.1%)	380 (6.3%)	342 (5.9%)
Dr J Holland's Practice	442 (6.3%)	416 (6.0%)	407 (5.9%)
Higherland Surgery	245 (6.1%)	241 (5.9%)	247 (5.9%)
Kingsbridge Medical Centre	530 (6.3%)	531 (6.3%)	**562 (6.5%)**
R J Mitchell Medical Centre	**296 (6.7%)**	278 (6.3%)	272 (6.2%)
University Medical Centre Keele	**234 (3.5%)**	**263 (3.7%)**	**276 (3.6%)**
Betley Surgery	96 (5.2%)	93 (5.0%)	95 (5.1%)
Milehouse Medical Practice	131 (6.0%)	140 (6.1%)	134 (5.6%)
Talke Pits Clinic	226 (6.1%)	222 (5.8%)	228 (5.9%)
Loomer Road Surgery	**414 (5.2%)**	429 (5.5%)	444 (5.7%)
Midway Medical Centre	183 (5.9%)	175 (5.3%)	199 (5.8%)
Newcastle-under-Lyme	**7,959 (6.2%)**	**7,843 (6.1%)**	**7,992 (6.2%)**
Staffordshire	**51,358 (6.1%)**	**51,243 (6.0%)**	**52,459 (6.0%)**
West Midlands	**368,115 (6.2%)**	**368,727 (6.1%)**	**423,475 (6.1%)**
England	**3,402,437 (6.0%)**	**3,400,679 (5.9%)**	**3,444,218 (5.9%)**

Key: Statistically lower than England; statistically higher than England

TABLE 2: RECORDED PREVALENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN NEWCASTLE PRACTICES, 2011/12-2013/14

Practice Name	2014/15	2015/16	2016/17
Heathcote Street Surgery	**157 (2.8%)**	**151 (2.8%)**	**153 (2.9%)**
The Village Surgery	120 (1.8%)	124 (1.8%)	136 (2.0%)
Moss Lane Surgery	**179 (2.6%)**	**183 (2.7%)**	**188 (2.7%)**
Ashley Surgery	**135 (3.4%)**	**135 (3.4%)**	**129 (3.2%)**
Dr Harbidge's Surgery	**263 (2.7%)**	**271 (2.8%)**	**277 (3.0%)**
Miller Street Surgery	111 (1.6%)	113 (1.7%)	119 (1.8%)
Silverdale Medical Centre	**334 (2.7%)**	**346 (2.8%)**	**358 (2.9%)**
Audley Health Centre	**239 (2.5%)**	**259 (2.6%)**	**271 (2.7%)**
Wolstanton Medical Centre	**238 (2.1%)**	**237 (2.1%)**	**248 (2.2%)**
Lyme Valley Practice	106 (1.7%)	102 (1.7%)	102 (1.8%)
Dr J Holland's Practice	**175 (2.5%)**	**178 (2.6%)**	**195 (2.8%)**
Higherland Surgery	**106 (2.7%)**	**103 (2.5%)**	**105 (2.5%)**
Kingsbridge Medical Centre	**177 (2.1%)**	**192 (2.3%)**	**200 (2.3%)**
R J Mitchell Medical Centre	67 (1.5%)	72 (1.6%)	91 (2.1%)
University Medical Centre Keele	**13 (0.2%)**	**12 (0.2%)**	**12 (0.2%)**
Betley Surgery	**20 (1.1%)**	**21 (1.1%)**	**19 (1.0%)**
Milehouse Medical Practice	**65 (3.0%)**	**68 (3.0%)**	**79 (3.3%)**
Talke Pits Clinic	**126 (3.4%)**	**132 (3.5%)**	**135 (3.5%)**
Loomer Road Surgery	**258 (3.2%)**	**283 (3.6%)**	**291 (3.7%)**
Midway Medical Centre	54 (1.7%)	59 (1.8%)	60 (1.7%)

Newcastle-under-Lyme	**2,943 (2.3%)**	**3,041 (2.4%)**	**3,168 (2.4%)**
Staffordshire	**15,851 (1.9%)**	**16,348 (1.9%)**	**17,080 (2.0%)**
West Midlands	**108,367 (1.8%)**	**111,222 (1.8%)**	**130,445 (1.9%)**
England	**1,034,578 (1.8%)**	**1,066,471 (1.9%)**	**1,087,908 (1.9%)**

Key: Statistically lower than England; statistically higher than England

TABLE 3: RECORDED PREVALENCE OF CORONARY HEART DISEASE IN NEWCASTLE PRACTICES, 2014/15-2016/17

Key: Statistically lower than England; statistically higher than England

Practice Name	2014/15	2015/16	2016/17
Heathcote Street Surgery	**263 (4.6%)**	**246 (4.5%)**	**242 (4.7%)**
The Village Surgery	233 (3.5%)	231 (3.4%)	232 (3.3%)
Moss Lane Surgery	**284 (4.1%)**	**282 (4.1%)**	**297 (4.2%)**
Ashley Surgery	**177 (4.5%)**	**172 (4.3%)**	**171 (4.2%)**
Dr Harbidge's Surgery	**402 (4.1%)**	**381 (4.0%)**	**373 (4.0%)**
Miller Street Surgery	**281 (4.0%)**	**274 (4.0%)**	**275 (4.1%)**
Silverdale Medical Centre	**551 (4.5%)**	**544 (4.4%)**	**556 (4.5%)**
Audley Health Centre	**350 (3.6%)**	341 (3.5%)	349 (3.5%)
Wolstanton Medical Centre	**456 (4.1%)**	**453 (4.0%)**	**456 (4.0%)**
Lyme Valley Practice	211 (3.5%)	194 (3.2%)	189 (3.3%)
Dr J Holland's Practice	233 (3.3%)	231 (3.3%)	239 (3.5%)
Higherland Surgery	**153 (3.8%)**	147 (3.6%)	154 (3.7%)
Kingsbridge Medical Centre	**322 (3.8%)**	**327 (3.9%)**	**319 (3.7%)**
R J Mitchell Medical Centre	137 (3.1%)	140 (3.2%)	147 (3.3%)
University Medical Centre Keele	**33 (0.5%)**	**27 (0.4%)**	**33 (0.4%)**
Betley Surgery	**75 (4.1%)**	72 (3.8%)	67 (3.6%)
Milehouse Medical Practice	**95 (4.4%)**	**94 (4.1%)**	**97 (4.1%)**
Talke Pits Clinic	**163 (4.4%)**	**166 (4.4%)**	**166 (4.3%)**
Loomer Road Surgery	**311 (3.9%)**	**285 (3.7%)**	**294 (3.8%)**
Midway Medical Centre	**61**	**59**	**60**

	(2.0%)	(1.8%)	(1.7%)
Newcastle-under-Lyme	4,791 (3.7%)	4,666 (3.6%)	4,716 (3.6%)
Staffordshire	31,433 (3.7%)	31,117 (3.7%)	31,204 (3.6%)
West Midlands	199,913 (3.4%)	199,488 (3.3%)	227,340 (3.3%)
England	1,843,813 (3.2%)	1,839,330 (3.2%)	1,829,777 (3.2%)

Source: Quality and Outcomes Framework (QOF), Quality Management and Analysis System (QMAS) and GPES databases, Copyright, The Health and Social Care Information Centre, Prescribing and Primary Care Services. All rights reserved.

7.2 Air pollution attributable mortality

Poor air quality is a significant public health issue. The burden of particulate air pollution in the UK in 2008 was estimated to be equivalent to nearly 29,000 deaths at typical ages and an associated loss of population life of 340,000 life years lost.

Inclusion of this indicator in the Public Health Outcomes Framework (PHOF) will enable local health and wellbeing groups to prioritise action on air quality in their area to help reduce the health burden from air pollution.

Table 4 displays the fraction of annual all-cause adult mortality attributable to anthropogenic (human-made) particulate air pollution (measured as fine particulate matter, PM2.5[1]). This suggests that around 5% of Newcastle's mortality is attributable to air pollution which is similar to the national picture.

TABLE 4: MORTALITY ATTRIBUTABLE TO AIR POLLUTION (ADULTS AGED 30 AND OVER)

	2011	2012	2013	2014	2015	2016
Cannock Chase	5.0%	4.8%	5.1%	5.1%	4.6%	5.4%
East Staffordshire	4.9%	4.8%	5.1%	5.1%	4.8%	5.6%
Lichfield	5.1%	5.0%	5.1%	5.0%	4.6%	5.5%
Newcastle-under-Lyme	4.8%	4.6%	4.9%	4.7%	4.2%	4.7%
South Staffordshire	4.9%	4.8%	5.1%	5.0%	4.7%	5.1%
Stafford	4.7%	4.6%	4.9%	4.8%	4.7%	4.8%
Staffordshire Moorlands	4.4%	4.2%	4.7%	4.5%	4.0%	4.6%
Tamworth	5.4%	5.2%	5.5%	5.4%	4.9%	6.0%
Staffordshire	**4.9%**	**4.7%**	**5.0%**	**4.9%**	**4.5%**	**5.2%**
West Midlands	**5.3%**	**5.1%**	**5.4%**	**5.2%**	**4.8%**	**5.5%**
England	**5.4%**	**5.1%**	**5.3%**	**5.1%**	**4.7%**	**5.3%**

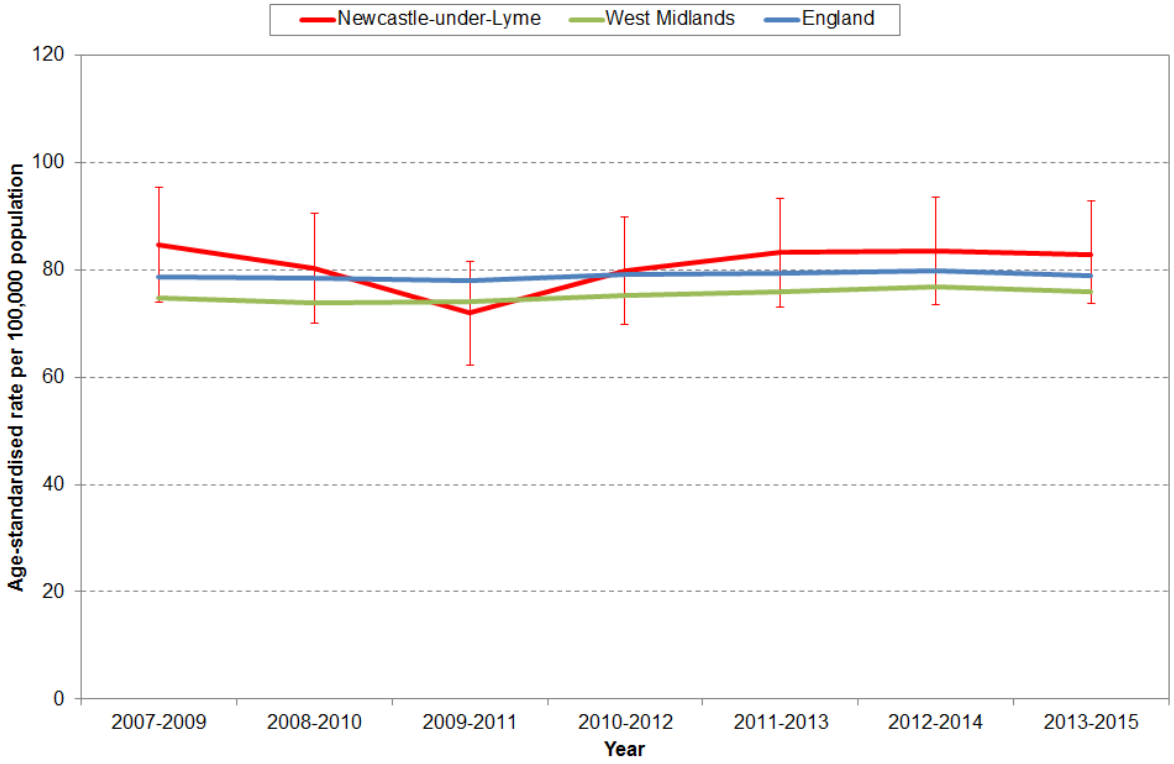
Source: Public Health Outcome Framework, Public Health England, http://www.phoutcomes.info/

7.3 Lung cancer

Around 100 people are diagnosed with lung cancer every year in Newcastle with incidence rates being similar to the England average. Incidence rates between 2007-2009 and 2013-2015 remained relatively stable (Figure 1).

[1] * PM2.5 means the mass (in micrograms) per cubic metre of air of individual particles with an aerodynamic diameter generally less than 2.5 micrometers. PM2.5 is also known as fine particulate matter.

FIGURE 1 TRENDS IN LUNG CANCER INCIDENCE



Source: http://fingertips.phe.org.uk/, Public Health England

Source: Health and Social Care Information Centre. © Crown Copyright.

7.4 Emergency hospital admissions

The analysis below explores emergency hospital admissions in Newcastle for cardiovascular disease, all respiratory diseases, asthma and chronic obstructive pulmonary disease. An emergency hospital admission is an unplanned hospital admission of a patient to hospital.

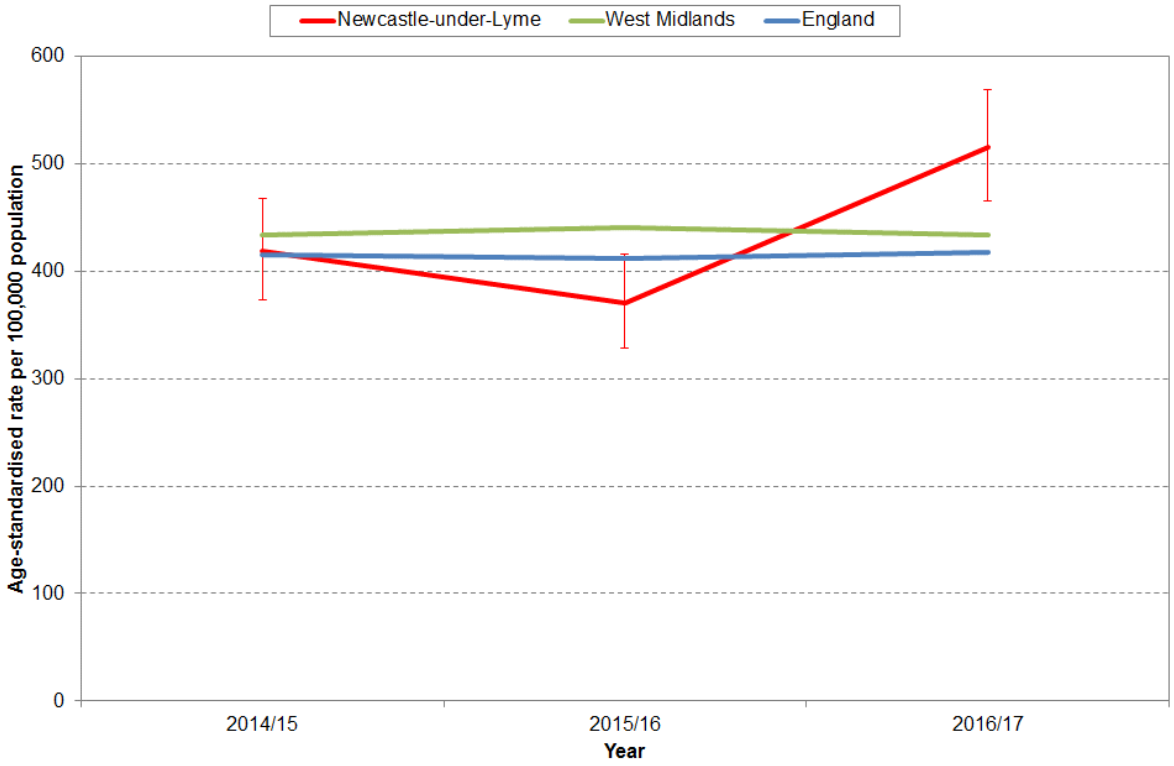
Air pollution is known to increase the chances of individuals being admitted to hospital. During 2016/17 there were almost 400 emergency (unplanned) admissions to hospital as a result of COPD for Newcastle residents aged 35 and over.

Between 2015/16 and 2016/17 there was a sharp increase in the number of Newcastle residents being admitted to hospital with rates now being higher than the national average (**Error! Reference source not found.**).

Hospital admissions from CVD and respiratory diseases in Newcastle are higher than the national average.

Table 5 and **Table 6**show ward level data for CVD and respiratory disease in Newcastle. There were 6 wards with rates of admissions for CVD higher than England and 14 wards with rates higher than England for respiratory disease admissions.

FIGURE 2: EMERGENCY HOSPITAL ADMISSIONS FOR CARDIOVASCULAR DISEASE IN NEWCASTLE, 2014/15- 2016/17



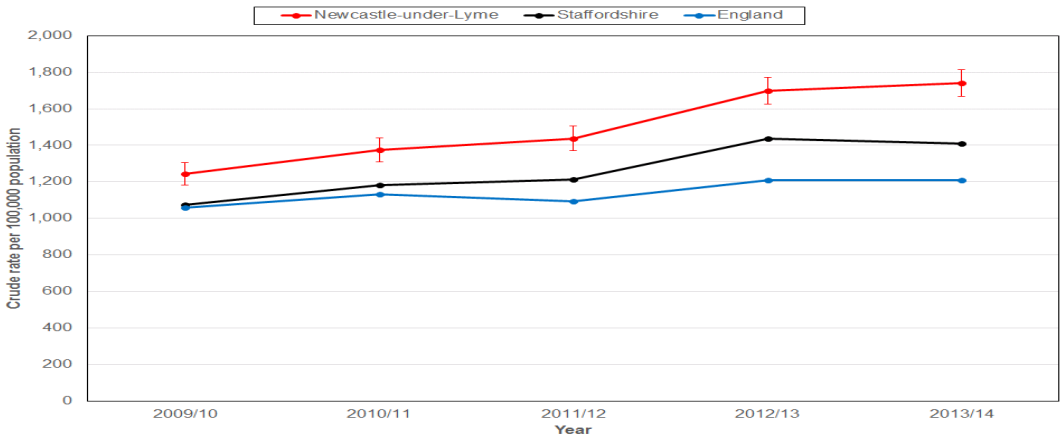
Source: Hospital In-patient Data Extract, Midlands and Lancashire Commissioning Support Unit and Mid-year population estimates, Office for National Statistics, Crown copyright.

TABLE 5: CARDIOVASCULAR DISEASE WARD LEVEL EMERGENCY HOSPITAL ADMISSIONS IN NEWCASTLE, ALL AGES, ALL PERSONS, 2013/14 (HIGHLIGHTED ARE IN AQMA's)

Ward name	Admissions	Crude rate per 100,000 population	Statistical difference to England
Audley and Bignall End	55	929	Similar
Bradwell	63	990	Similar
Butt Lane	**56**	**996**	**Similar**
Chesterton	72	989	Similar
Clayton	51	1,189	Similar
Cross Heath	81	1,383	Higher
Halmerend	58	1,537	Higher
Holditch	57	1,214	Similar
Keele	4	90	Lower
Kidsgrove	**56**	**818**	**Similar**
Knutton and Silverdale	48	1,094	Similar
Loggerheads and Whitmore	65	939	Similar
Madeley	40	937	Similar
May Bank	**60**	**956**	**Similar**
Newchapel	32	951	Similar
Porthill	**51**	**1,250**	**Higher**
Ravenscliffe	28	714	Similar
Seabridge	55	998	Similar
Silverdale and Parksite	43	1,153	Similar
Talke	65	1,683	Higher
Thistleberry	84	1,357	Higher
Town	**75**	**1,474**	**Higher**
Westlands	58	1,029	Similar
Wolstanton	66	1,124	Similar
Newcastle-under-Lyme	**1,323**	**1,065**	**Higher**
Staffordshire	**8,495**	**997**	**Higher**
England	**498,497**	**925**	

Source: Hospital In-patient Data Extract, Midlands and Lancashire Commissioning Support Unit and Mid-year population estimates, Office for National Statistics, Crown copyright.

FIGURE 3: EMERGENCY HOSPITAL ADMISSIONS FOR ALL RESPIRATORY DISEASE IN NEWCASTLE, 2009/10 - 2013/14



Source: Hospital In-patient Data Extract, Midlands and Lancashire Commissioning Support Unit and Mid-year population estimates, Office for National Statistics, Crown copyright.

TABLE 6: RESPIRATORY DISEASE WARD LEVEL EMERGENCY HOSPITAL ADMISSIONS IN NEWCASTLE, ALL AGES, ALL PERSONS, 2013/14 (HIGHLIGHTED ARE IN AQMA'S

Ward name	Admissions	Crude rate per	Statistical
Audley and Bignall End	76	1,284	Similar
Bradwell	123	1,933	Higher
Butt Lane	112	1,991	Higher
Chesterton	120	1,649	Higher
Clayton	103	2,402	Higher
Cross Heath	154	2,630	Higher
Halmerend	57	1,510	Similar
Holditch	101	2,152	Higher
Keele	5	113	Lower
Kidsgrove	94	1,373	Similar
Knutton and Silverdale	98	2,234	Higher
Loggerheads and Whitmore	71	1,026	Similar
Madeley	78	1,826	Higher
May Bank	89	1,418	Similar
Newchapel	58	1,723	Higher
Porthill	63	1,544	Similar
Ravenscliffe	67	1,709	Higher
Seabridge	79	1,433	Similar
Silverdale and Parksite	92	2,467	Higher
Talke	77	1,994	Higher
Thistleberry	133	2,148	Higher
Town	96	1,887	Higher
Westlands	68	1,207	Similar
Wolstanton	91	1,550	Similar
Newcastle-under-Lyme	**2,105**	**1,695**	**Higher**
Staffordshire	**11,625**	**1,364**	**Higher**
England	**677,856**	**1,258**	

Source: Hospital In-patient Data Extract, Midlands and Lancashire Commissioning Support Unit and Mid-year population estimates, Office for National Statistics, Crown copyright.

7.5 Further information

Further information on the health and wellbeing of Newcastle-under Lyme residents is available on the Staffordshire Observatory website at:

- http://www.staffordshireobservatory.org.uk/publications/healthandwellbeing/districtsummaryprofiles.aspx
- http://www.staffordshireobservatory.org.uk/publications/healthandwellbeing/yourhealthinstaffordshire.aspx

For more advice or more in-depth profiling and assessment in any particular area, contact the Public Health Intelligence Team: Phillip.Steventon@staffordshire.gov.uk.

8 Newcastle-under-Lyme within local Transport networks

Newcastle under Lyme, together with Stoke-on-Trent and the Potteries towns of Tunstall, Burslem, Hanley, Fenton and Longton form the North Staffordshire conurbation. Within the context of regeneration in North Staffordshire, improved connectivity and accessibility to transport connections between the towns and local employment centres are seen as a vital element.

Newcastle-under-Lyme has the dual transport pressures due to its location as a link to the M6 motorway, and close links to Stoke-on-Trent, thus local transport issues have to be addressed alongside regional and shared issues with neighbouring Stoke-on-Trent.

8.1 The Local Highways England Managed Network Picture

Newcastle has good connections to the national Strategic Highway Network which is managed by Highways England. This includes the M6 and the A500 trunk road, and is also served by significant routes including the A34 and A53 that carry both local and inter urban traffic. Newcastle also constitutes a significant link between the M6 motorway and major trunk routes into the Midlands, for Stoke-on-Trent, Derby and Nottingham, via the A500 and A50, with links to the M1 via the A38, as illustrated in **Figure 4** which shows how the strategic highway network is impacted by delays and **Figure 5** which shows the challenges and opportunities to reduce congestion.

8.2 The Local Staffordshire County Council Managed network picture

Roads not managed by the Highways England are managed and maintained by Staffordshire County Council within the Borough of Newcastle under Lyme (NULBC) and Stoke on Trent City Council (SOTCC) where they fall within the city boundary.

With regards to congestion at the local network level, analysis of GPS Trafficmaster journey time data for term time dates of the academic years 2010/11 and2008/09 have been analysed and shows that the key roads linking Newcastle-under-Lyme, Stoke Town and the City Centre increasingly experience delay and variable journey times within the AM and PM peaks.

Delays occur across all routes in the corridor in the PM peak and journey times are less reliable in the PM peak than the AM peak. Comparing 2008/09 data with 2010/11 shows that journey time reliability, on average, has worsened on half of routes and delays occur more consistently across the PM peak.

It is generally accepted that at peak times the Newcastle-under-Lyme highway network, particularly the ring road (A34 Lower Street/A52 Ryecroft/A527 Barracks Road), displays symptoms of congestion resulting in delays and variable journey times. Journey time reliability is a concern for Newcastle town centre roads mainly in the AM peak and reliability has worsened overall since 2008/09.

A52 Hartshill Road (SOTCC), George Street (NULBC) and Brunswick Street (NULBC): AM peak average delay is 92 seconds per mile eastbound and 65 seconds westbound. In the PM peak, average delay is 80 seconds eastbound.

A53 Etruria Road (SOTCC & NULBC): both directions experience poor journey time reliability in the peaks. Average delay per mile in the PM peak is 203 seconds and peaks at 244 seconds

Journey time reliability is a concern for Newcastle town centre roads mainly in the AM peak and reliability has worsened overall since 2008/09. Journeys by car to schools and college

adjacent to the town centre contribute to the variable AM peak travel times. Average delay per mile was measured at 174 and 172 seconds for clockwise and anti-clockwise directions respectively. The highest delay recorded in the AM peak was 273 seconds measured in an anti-clockwise direction (0830-0845).

Traffic modelling finds that significant parts of the North Staffordshire highway network, are already approaching or at capacity and the problem of congestion will continue to get worse. Derived from the North Staffordshire Transport Study Phase III (NSTSIII) the location of AM peak link and junction based problems are shown in ***Figure 6*** for the 2016 modelled scenario. These problems will also reduce the upstream capacity of links and junctions which in turn will also become subject to efficiency problems and the location of congestion problems is likely to be even more prevalent than shown.

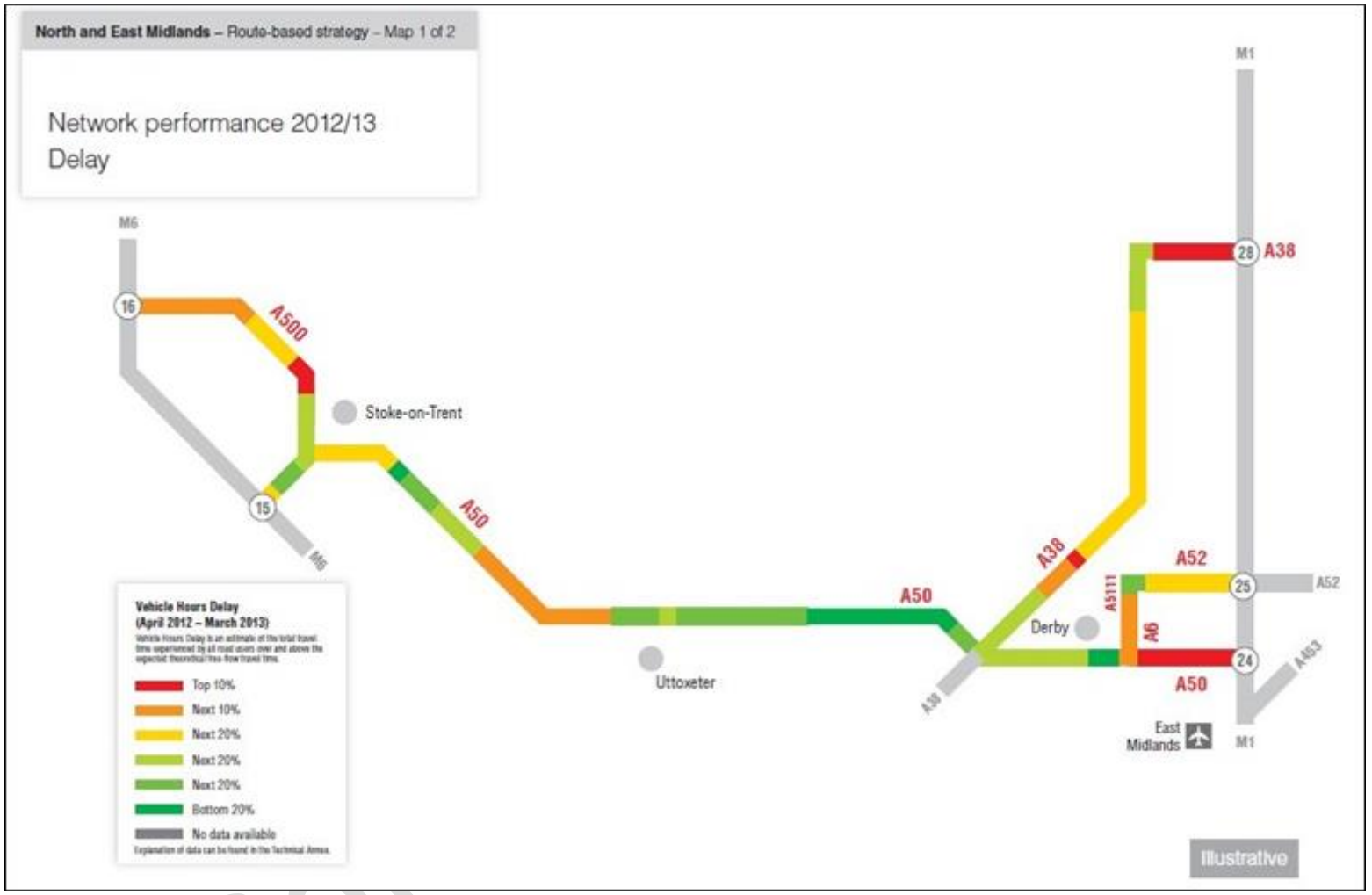


FIGURE 4:HIGHWAYS ENGLAND MANAGED NETWORK - VEHICLE HOURS DELAY APRIL 2012 TO MARCH 2013

[Ref: Highways England North and East Midlands Route Strategy Evidence Report April 2014]

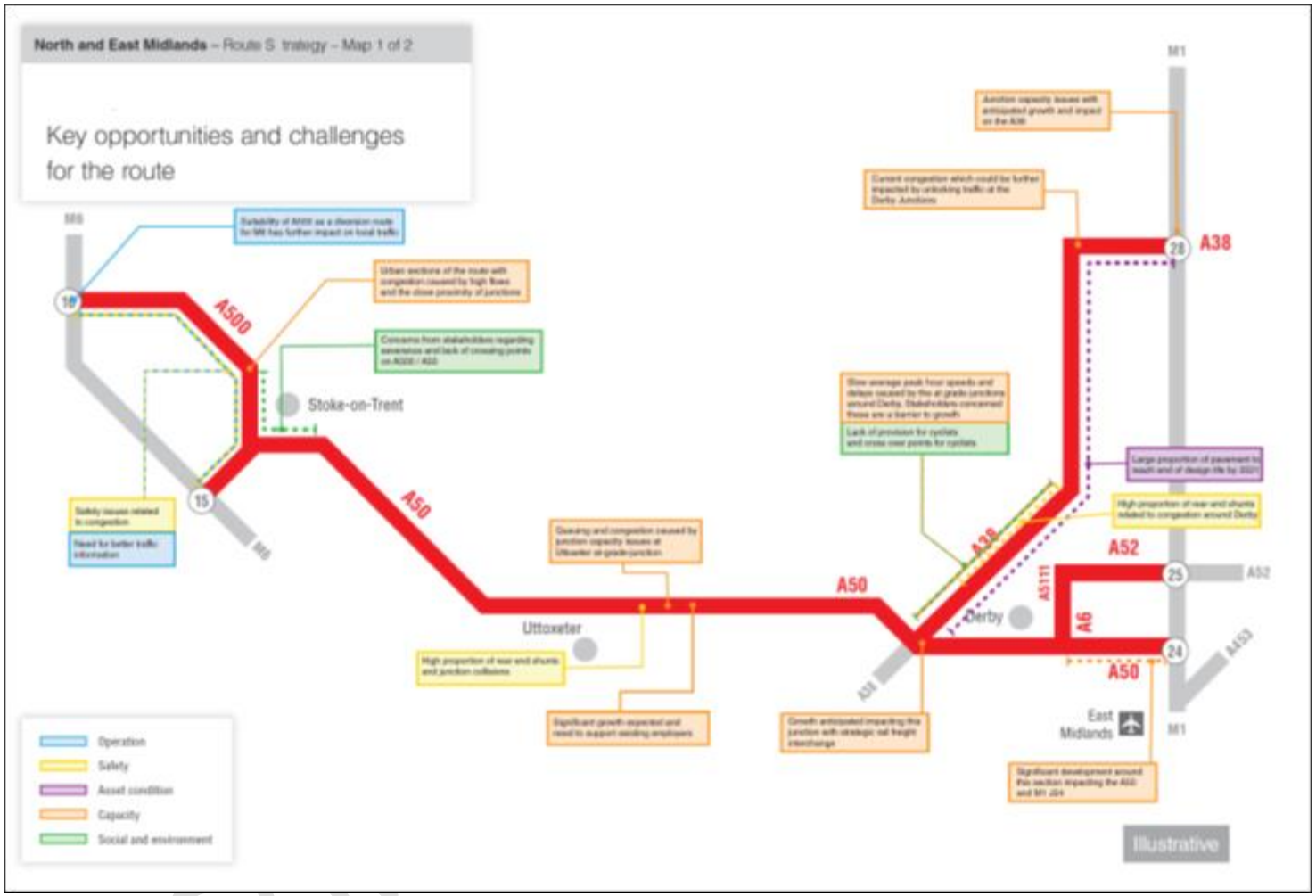


FIGURE 5: HIGHWAYS ENGLAND MANAGED NETWORK OPPORTUNITIES AND CHALLENGES

[Ref: Highways England North and East Midlands Route Strategy April 2015]

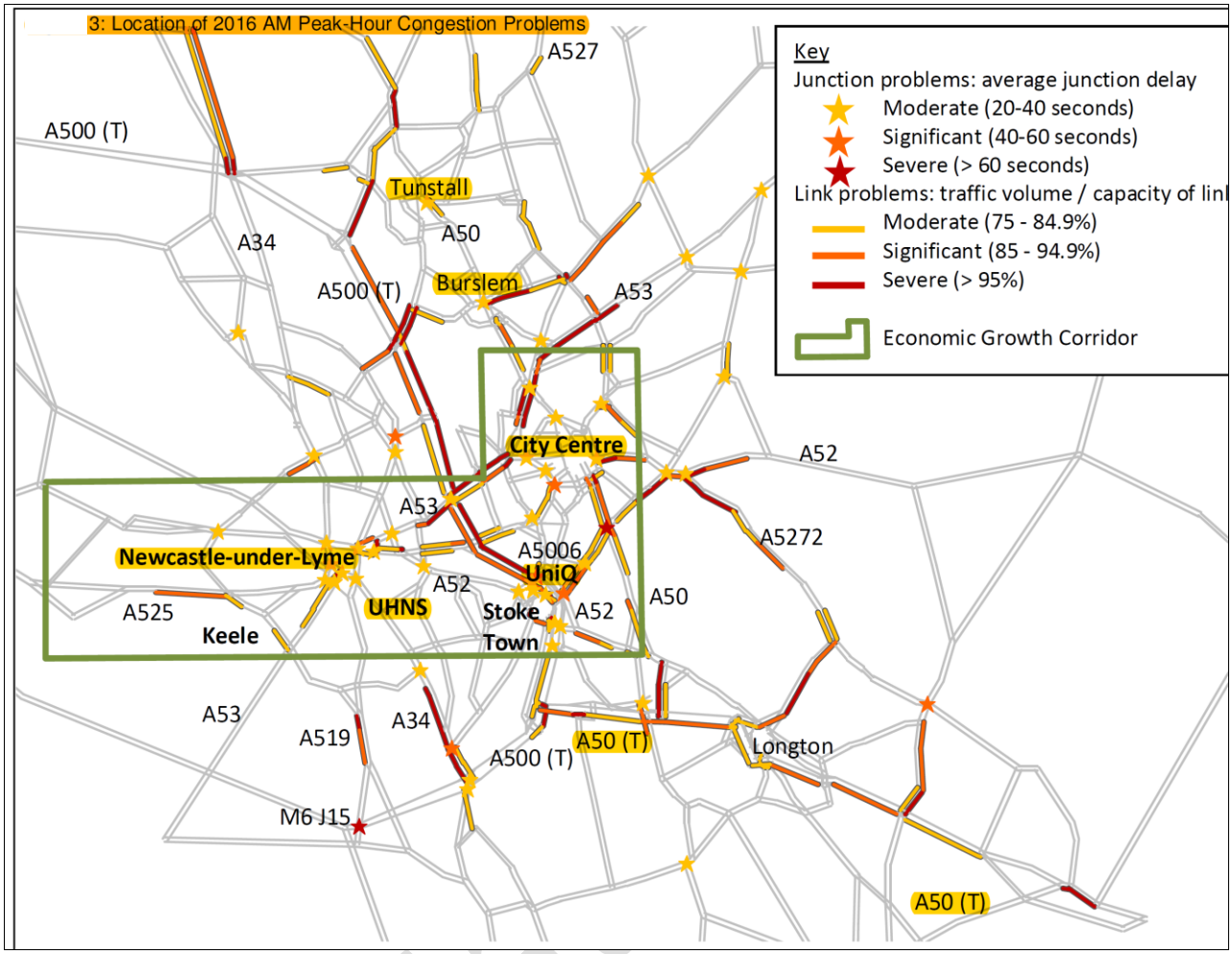


FIGURE 6: 2016 NETWORK AM PEAK HOUR CONGESTION IN NEWCASTLE UNDER LYME AND STOKE ON TRENT

Staffordshire and Stoke-on-Trent are receiving transport funding under the UK Government Growth Deal Programme through the Local Enterprise partnership's Strategic Economic Plan to promote sustainable transport in the region as a deliverer of local economic development. To improve connectivity and ease congestion in the North Staffordshire Conurbation the Growth Deal included provisional approval for Etruria Valley Link Road scheme. Additional funding is being sought to progress with planned improvements to the Leek Road city centre gateway, and work on the completion of the city's ring road. [Ref: Draft Newcastle Borough Integrated Transport Strategy]

By 2026 Staffordshire is expected to see significant growth, including a population increase of over 10,000 with 55,000 new homes being built.

It is estimated that traffic congestion in the region costs businesses around £20,000 a year, the County Council recognise there is a challenge to enable economic growth without causing congestion.

[Ref: Staffordshire Local Transport Plan]

9 Core Council Policies

The following documents represent the key policies and strategies under development that can expect to influence future developments within North Staffordshire. Air Quality related polices have been identified in current polices. It is also anticipated that there will be opportunities for inclusion of air quality support in emerging polices

9.1 Newcastle under Lyme and Stoke on Trent Core Spatial Strategy 2006 – 2026

The Newcastle-under-Lyme and Stoke-on-Trent Core Spatial Strategy has been prepared jointly with Stoke-on-Trent City Council it forms a part of the Local Development Framework and is often referred to in planning applications and decisions.

The Core Spatial Strategy sets out a broad framework for the future development of the whole of Newcastle-under-Lyme and Stoke-on-Trent. This approach helps to make sure that the two councils are working together to achieve the best results for both areas.

It contains a number of policies which have air quality benefits and support potential action plan measures. These are detailed in **Table 9**.

Newcastle-under-Lyme Borough Council and Stoke-on-Trent City Council are working together to prepare a new Joint Local Plan that will guide the future development of both areas up to 2033. This will replace the existing Core Spatial Strategy and the remaining saved policies from the Newcastle-under-Lyme Local Plan 2011 and Stoke-on-Trent City Plan 2001.

9.2 Newcastle under Lyme Local Plan saved polices beyond 2007

The saved policies continue to form part of the Development Plan for Newcastle under Lyme. These policies together with the Core Spatial Strategy and current polices in the National Planning Policy Framework form the basis for making planning development decisions within the Borough. A number of the polices identified in **Table 9** are considered to support improvements in air quality and potential action plan measures.

Newcastle-under-Lyme Borough Council and Stoke-on-Trent City Council are working together to prepare a new Joint Local Plan that will guide the future development of both areas up to 2033. This will replace the existing Core Spatial Strategy and the remaining saved policies from the Newcastle-under-Lyme Local Plan 2011 and Stoke-on-Trent City Plan 2001.

9.3 Staffordshire Local Transport Plan 2011

Local Transport Plans (LTPs) are prepared by local authorities under the Transport Act 2000 and the Local Transport Act 2008.

Staffordshire's LTP sets out policy and strategy for walking, cycling, vehicular and public transport in the county and the management and maintenance of local roads and footways for the period up to 2026.

The Staffordshire LTP3 prioritises objectives of Supporting Growth and Regeneration, Maintaining the Highway Network, and Making Transport Easier to Use and Places Easier to Get to, whilst also meeting the objectives of Improving Safety and Security, Reducing Road

Transport Emissions and Effects on the Highway Network, Improving Health and Quality of Life, and Respecting the Environment.

In achieving these objectives, the LTP sets out many policies that Staffordshire County Council will implement in decision-making. Examples of policies which will be relevant at a strategic level to the Joint Local Plan include those relating **to accessibility (improving bus services, supporting mobility for those are impaired or have no access to a private motor vehicle), efficient transport networks (operation of the road network, increasing capacity on existing roads, improved efficiency of freight transport, reducing the negative impact of development on the highway network, integrating transport services),** social issues (community cohesion, supporting areas of deprivation, helping residents to access services and supporting rural communities), **environmental issues (resilience of the transport network to changing climatic conditions; reducing emissions from road transport**; minimising the risk of flooding, soil erosion and pollutants entering watercourses; minimising the risk of soil contamination; enhancing biodiversity and landscape) and wider sustainability issues (stimulating regeneration, supporting the adoption of sustainable land-use policies, improving the image of townscapes)

9.4 Draft Newcastle-under-Lyme Borough Integrated Transport Strategy 2015 - 2026

This delivers the Staffordshire LTP by prioritising investment and expenditure on transport improvements in the borough and informing local planning policies.

It identifies that Newcastle borough has good access to the Strategic Highway Network (M6 and A500) but that at peak times the A34/A52/A527 ring road displays symptoms of congestion. The ring road also presents a significant barrier for pedestrians and cyclists to negotiate. In general, western access routes to Newcastle town centre are more reliable than eastern access routes towards Stoke and the A500. Kidsgrove railway station provides services on the West Coast Mainline, however access for the mobility impaired or those with heavy luggage and/or children has been a major issue. There is considered to be a good core bus network, however the 4.7%1[2] of the working age population that travel to work by bus is considered to be low for a largely urban area.

Amongst the transport improvements identified in the strategy are; the widening of the A500 between Porthill and Wolstanton in connection with the proposed Etruria Valley Link Road; improved viability, sustainability and usage of bus services with the borough and with surrounding areas; Investigating solutions to gaps in the cycle network at Chatterley Valley/Kidsgrove, A34 Cedar Road/Lower Milehouse Lane, Dark Wood and Keele/Newcastle; improvements in Newcastle town centre relating to public realm, bus facilities, pedestrian and cycle links across the ring road and the capacity and efficiency of the ring road, and; accessibility improvements at Kidsgrove railway station, including a replacement footbridge.

The Integrated Transport Strategy will be subject to review throughout the development of the Joint Local Plan as policies and development proposals are finalised. It also recognised that development proposed in the Cheshire East Local Plan may result in a need to review the Integrated Transport Strategy if there is an impact on the borough, for example through increased patronage at Kidsgrove railway station.

[2] Census 2011

9.5 Staffordshire Freight Strategy April 2011

The policy context for this Freight Strategy document comes from the Staffordshire Local Transport Plan (LTP3)1 and government policy Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen.

The freight transport and logistics industry is an important activity in Staffordshire in terms of the economy, the impact on the transport network and the local environment.

The M6 motorway through the County accommodates typical HGV flows of around 35,000-40,000 on a week day and is a key corridor from the south to the north of the country. Significant numbers of HGV's use the A38, A5, M54, A50 and A34. The West Coast Mainline through Staffordshire is one of the most significant rail freight routes in the country.

Below the trunk road the County network is generally much less heavily trafficked and the proportion of HGV traffic is much lower (typically 5-10% compared to the M6 25-30%) although the County does host some important sub-regional routes and some major freight destinations.

The prevalence of the logistics industry and storage and warehousing uses in the County is in part a reflection of good access and the central position in the country to serve a national distribution service. Employment in these industries is well above the national average. It is evident that there is strong market interest for major logistics operations.

9.6 Key Local Programmes with potential to impact on urban traffic levels in North Staffordshire

LEP Growth Deals[3] were announced in July 2014 with Stoke-on-Trent and Staffordshire LEP receiving a minimum of £82.3m over the 6 years of the SEP. To improve connectivity and ease congestion in the North Staffordshire Conurbation, the Growth Deal included **provisional approval for Etruria Valley Link Road**,[4] and a provisional £5m allocation of Local Sustainable Transport Fund funding to be spread across the LEP area.

Newcastle-under-Lyme Town Centre Regeneration

- NuL Public Sector Hub, containing the Borough Council, County Council, library and Registrar as well as the police
- Ryecroft Development• Up to 100,000 sq ft of new retail and leisure floor space. • Student accommodation hub • Retirement housing • Car Parking
- Student accommodation within the town centre

Highways England highlighted the A50 and A500 as key routes which need to be improved to facilitate future investment. Road Investment Strategy supports the widening of the A500 between Porthill and Wolstanton.[5]

Other key strategy

The Health and Wellbeing Agenda is a high priority for Staffordshire County Council and will be supported through capital investment in the walking and cycling network including the

[3] https://www.stokestaffslep.org.uk/delivering-growth/deals/growth-deal/

[4] ttps://www.stoke.gov.uk/news/article/39/consultation_starts_on_major_new_road_for_etruria_valley_and_a500_upgrade

[5] http://roads.highways.gov.uk/projects/a500-etruria-widening/

National Cycle Network and promotional activities delivered through Local Sustainable Transport Fund (LSTF) and other funding sources as they become available.

Table 7: Links to Existing Policies

Associated Strategy/Plan	Web Link	Key stakeholders	Date of publication
Stoke-on-Trent and Staffordshire Growth Deal. 2015-2021	https://www.gov.uk/government/publications/stoke-on-trent-and-staffordshire-growth-deal	Staffordshire CC, NULBC, Stoke-on-Trent CC.	2014
Newcastle-under-Lyme and Stoke-on-Trent Core Spatial Strategy. 2006-2026	https://www.newcastle-staffs.gov.uk/all-services/planning/planning-policy/current-development-plan/newcastle-under-lyme-and-stoke-trent	Staffordshire CC, NULBC, Stoke-on-Trent CC.	2009
Staffordshire Local Transport Plan 2011 to 2026 - Strategy Plan	http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/staffordshirelocaltransportplan2011strategyplan.pdf	Staffordshire CC, NULBC, Stoke-on-Trent CC.	2011
Staffordshire Transport Plan – Newcastle-under-Lyme Integrated Transport Strategy 2015-2026	https://www.staffordshire.gov.uk/transport/transportplanning/District-integrated-transport-strategies/districtintegratedtransportstrategies.aspx	Staffordshire CC, nulbc	2015
Staffordshire Freight Strategy April 2011	https://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/Appendices/appendixl-staffordshirefreightstrategy.pdf	Staffordshire CC, Highways England NULBC, Stoke-on-Trent CC.	2011

Table 8: Links to Future Policies

Associated Strategy/Plan	Web link	Key stakeholders	Date for draft	Date for publication
Joint Local Plan for N-u-Lyme and Stoke.	https://www.newcastle-staffs.gov.uk/all-services/planning/planning-policy/joint-local-plan	NULBC, Stoke-on-Trent CC.	2019	Late 2020

Table 9: High Level Strategies that can contribute to Improving Air Quality

Associated Strategy/Plan		Key stakeholders
Newcastle-under-Lyme and Stoke-on-Trent Core Spatial Strategy. 2006-2026 (Note this is due to be replaced in 2020 with a joint local plan between Newcastle under Lyme BC and Stoke on Trent CC)		
Policy SP1 Spatial Principles of Targeted Regeneration		
SP1	New development will be prioritised in favour of previously developed land where it can support sustainable patterns of development and provides access to services and service centres by foot, public transport and cycling.	Staffordshire CC, Stoke on Trent CC, NULBC
Policy SP3 Spatial Principles of Movement and Access		
SP3.1	Improving accessibility and social inclusion through providing for a compact sub region of sustainable linked communities, which have a range of services and facilities, and which are well connected to major employment and service centres and the network of green open space	Staffordshire CC, Stoke on Trent CC, NULBC
SP3.2	Maximising the accessibility of new residential, employment, retail, development, health and education centres, green open space, leisure and sport facilities as well as strategic transport interchanges, such as railway stations, by walking, cycling and public transport.	Staffordshire CC, Stoke on Trent CC, NULBC
SP3.4	Promoting travel awareness and encouraging the production of Green Travel Plans and the latest information and communication technologies.	Staffordshire CC, Stoke on Trent CC, NULBC
SP3.6	Progressive development of Park and Ride facilities	Staffordshire CC, Stoke on Trent CC
SP3.8	Addressing the environmental impacts of travel including congestion, air quality and noise pollution	Staffordshire CC, Stoke on Trent CC, NULBC
SP3.9	Secure developer contributions towards the delivery of schemes that support the key objectives of the Staffordshire and North Staffordshire Local Transport Plans	Staffordshire CC, Stoke on Trent CC, NULBC
Core Spatial Strategy Strategic Aims		
SA3	To reduce the need to travel, improve accessibility and increase the opportunities for development of sustainable and innovative modes of travel to support the regeneration of the plan area by securing improvements to public transport infrastructure; and the progressive provision of park and ride and facilities to promote walking and cycling	Staffordshire CC, Stoke on Trent CC, NULBC
SA17	To minimise the adverse impacts of climate change in the move towards zero carbon growth	Staffordshire CC, Stoke on Trent CC, NULBC
Area Spatial Policies		
ASP4	**Newcastle Town Centre Area Spatial Policy** relates to Newcastle town centre and seeks to improve connections to and within the area, particularly in regard to the severance created by the inner ring road.	Staffordshire CC, NULBC
ASP5	**Newcastle and Kidsgrove Urban Neighbourhoods Area Spatial Policy** seeks to improve accessibility, road safety and promote sustainable modes of transport in Newcastle and Kidsgrove urban areas, in accordance with the Local Transport Plan.	Staffordshire CC, NULBC
ASP6	**Rural Area Spatial Policy**	Staffordshire

	relates to the rural area of Newcastle-under-Lyme and seeks to facilitate the improved provision of off-road routes for horses and cyclists and integration with an enhanced public rights of way network, as part of the implementation of the Staffordshire Rights of Way Improvement Plan. In accordance with the Local Transport Plan, a positive approach is taken towards improving public transport accessibility through measures such as subsidised bus services, community transport schemes and assisting members of the community in special need to access employment opportunities.	CC,NULBC
Newcastle under Lyme Local Plan Saved polices beyond September 2007 (Note this is due to be replaced in 2020 with a joint local plan with Stoke on Trent City Council)		
Employment and Economic Development - Chatterley Valley		
Policy E2 (iv & v)	A site of 40 ha is proposed for employment development at this gateway location to North Staffordshire in the Chatterley Valley between the A500 and the London to Manchester railway line, (as shown on the Proposals Map). Development of the Premium Employment Site (PES), which forms the northern half of this site, will be restricted to light industrial uses, offices, hi-tec and research and development facilities (Class B1) and forms of manufacturing development (Class B2) which are demonstrably consistent with the role and objectives of this premium employment site. Outside the PES, on the southern half of the allocation, development for Class B uses will be supported in principle. An environmental assessment and an archaeological appraisal are needed and the following requirements must be met: iv) The potential for rail freight access to the site should be safeguarded and exploited. v) The potential for access to the site by non-car modes, including a rail passenger station, should be fully assessed and exploited.	Staffordshire CC,NULBC
Employment and Economic Development – London Road, Chesterton		
Policy E4 (v)	The redevelopment of this site, (as shown on the Proposals Map), for Class B uses will be permitted so long as the following requirements are met: v) The potential for access to the site by non-car modes should be fully assessed and exploited.	Staffordshire CC,NULBC
Employment and Economic Development Chemical Lane		
Policy E6	**The development of 2.8 ha of land off Chemical Lane (**as shown on the Proposals Map)**,** will be permitted for Class B uses provided The potential for access to the site by non-car modes should be fully assessed and exploited**.**	Staffordshire CC,NULBC
Employment and Economic Development – Kidsgrove Station Yard		
Policy E7 (i, iii, iii, iv)	The development of 0.8 ha of land at Kidsgrove Station Yard (as shown on the Proposals Map), for uses that exploit the potential offered by its canal/ railside location will be supported so long as the following requirements are met: i) The future car parking and other land needs of Kidsgrove station have been assessed and provision made for them. iii) Satisfactory access is provided and the potential for access to the site by non car modes should be fully assessed and exploited. iv) A suitable ramped pedestrian/cycle access to the canal towpath is provided. Class B1 use is, in principle, an acceptable use for the site. Other uses, particularly those related to tourism, may also be acceptable dependant on their local impact and the ability of any specific development scheme to meet normal planning standards.	Staffordshire CC,NULBC, East Midlands Trains

Employment and Economic Development – Keele University		
Policy E8	Development at Keele University and Keele Science Park, including the area formerly known as Home Farm, The potential for access to the site by non-car modes should be fully assessed and exploited	Keele University Staffordshire CC,NULBC
Retail and Town Centres – Development in Kidsgrove Town Centre		
Policy R12	Development for retail or leisure uses within or close to Kidsgrove Town Centre as shown on the Proposals Map, will be encouraged so long as the following ii) Any opportunities to improve conditions for pedestrians should be exploited.	Staffordshire CC,NULBC
Retail and Town Centres – Development in District Centres		
Policy R14	**New development or redevelopment for retail or leisure uses within or** close to the district centres of Chesterton, Silverdale and Wolstanton as defined on the Proposals Map, will be encouraged so long as the following requirements are met: iii) Any opportunities to improve conditions for pedestrians should be exploited.	Staffordshire CC,NULBC
Transport – Rail Freight		
Policy T9	Development of land that could be served by the three existing or potential rail connections, as shown on the Proposals Map, will not be permitted if this would jeopardise the reasonable prospect of the future use of these connections.	Staffordshire CC,NULBC
Policy T12	The Borough Council recognises the vital importance of good transport communications to the local business community including the upgrading of the West Coast Main Line. When formulating its views on any future proposals for the M6 corridor the Borough Council will consider the following: i) Their benefits to the local economy. ii) Their environmental and social impact. iii) Their impact on the local transport network. iv) Their potential to increase the use of sustainable transport modes.	NULBC
Development – General Parking Requirements		
Policy T16	Development will not be permitted to provide more parking than the maximum levelsspecified in Table 3.2 (appendix 3). Development may be required to provide less than these maximum levels in order to meet the requirements of other transport policies in this plan such as the implementation of a Green Transport Plan. Development which provides significantly less parking than the maximum specified levels will not be permitted if this would create or aggravate a local on street parking or traffic problem. Development may be permitted where local on street problems can be overcome by measures to improve non-car modes of travel to the site and/or measures to control parking and waiting in nearby streets. In such cases the development would be required to make an appropriate contribution towards the initial and ongoing costs of required schemes.	Staffordshire CC,NULBC
Parking in Town and District Centres		

Policy T17	Development in Newcastle town centre within the ring road will not be permitted to provide new private parking but will be required, where appropriate, to contribute to appropriate improvements to travel to the development. These improvements may include upgrading or expanding existing public parking, providing parking availability information, traffic management on approaches to the town centre, bus help schemes and facilities for public transport, walking and cycling, the provision and operation of CCTV, and mitigating the impact of any on street car parking attracted by the development by appropriate parking/waiting controls including resident parking schemes. Similar improvements may be sought in Kidsgrove town centre and the district centres.	Staffordshire CC,NULBC
Development – Servicing Requirements		
Policy T18	Development, not in use class C3 (residential), will be required to provide satisfactory arrangements for delivery vehicles to stand, manoeuvre, load and unload within the site and to enter and leave the site forwards except where this would prevent the implementation of developments important to the vitality and viability of town centres.	Staffordshire CC,NULBC
New Footpaths, Horse Routes and Cycleways		
Policy C11	The following new paths will be developed as and when opportunities arise along the following routes as shown on the Proposals Map, and their routes will be protected against development that would hinder their creation: i) Lower Milehouse Lane to Halmerend (footpath and cycleway). ii) Kidsgrove Town Centre to the Borough boundary through Birchenwood (footpath and cycleway). iii) Brindley Ford to Brown Lees (footpath, horse route and cycleway). iv) Minnie Pit to Leycett Country Park (footpath and horse route). v) Alongside Silverdale Road from the Lyme Brook path to opposite Cherry Hill Lane (footpath). vi) From the Lyme Brook path to Keele Road (footpath). vii) From Church Lane, Knutton to Silverdale (footpath and cycleway).	Staffordshire CC,NULBC
Provision of Essential Supporting Infrastructure and Community Facilities		
Policy IM1	Where a development proposal would require improvements to infrastructure or essential facilities to make it acceptable then the developer will be required to carry out or contribute to the funding of appropriate works.	Staffordshire CC,NULBC
DRAFT NuL INTEGRATED TRANSPORT STRATEGY - CHALLENGES		
	• Manage peak hour congestion and carbon emissions on local roads	Staffordshire CC, NULBC
	• Provide sustainable transport connectivity to jobs and services	Staffordshire CC, Local Bus Operators
	• Improve public transport connectivity and quality of life for local communities	Staffordshire CC, Local Bus Operators
	• Support the management of potential air quality issues in Newcastle and Kidsgrove	Staffordshire CC, NULBC
	• Raise awareness of environmental issues and encourage people to lead more sustainable lifestyles, helping to reduce carbon emissions	Staffordshire CC, NULBC
STAFFORDSHIRE FREIGHT STRATEGY APRIL 2011 – Actions and Priorities		
1	as part of a wider review of the function and performance of the highway	Staffordshire CC,

	network, taking account of all traffic flows, assess the designation of road hierarchy below the primary network with due regard to the economic efficiency of the haulage industry and the environmental and social impact on communities of HGV flows. The assessment will have particular regard to the potential impacts on air quality and significant habitats.	HGV operators
2	work with local communities and the freight industry to consider areas for weight restriction on individual merit having particular regard to the impact and quantum of HCV traffic, the sensitivity of the area, the population effected, the level of access required and the availability of suitable alternative routes. In considering the use of Traffic Regulation Orders particular attention will be given to the potential impact of displacement traffic a designation might create and the impact on the area where HCV flow would be likely to increase.	Staffordshire CC, Police
3	acting as mineral and waste planning authority and through consultation with partner district local planning authorities promote the use of 'routing agreements' in relation to major generators of freight to minimise the impact of HGV traffic on local communities	Staffordshire CC, Minerals operators
4	work with SATNAV system providers to improve the quality of information for the strategic routing of HGV's.	Staffordshire CC,
5	promote and advocate through government, trade and manufacturer organisations that HGV compatible SATNAV systems with full height and weight restrictions information become mandatory for all new HGV vehicles. [	Staffordshire CC,
6	ensure that freight and delivery issues are adequately addressed and prioritised in Travel Plans for major development proposals	Staffordshire CC, NULBC
7	with partner councils, the Highways Agency, the haulage industry and other organisations investigate and consider incentives to promote 'best practice' for freight operators in the County.	Staffordshire CC,Highways England, Staffordshire Councils', Industry
8	investigate, promote and encourage haulage and logistics operators to make best possible use of existing capacity, minimise empty vehicle running, and maximise co-operative working practices to reduce the unnecessary movement of freight traffic	Staffordshire CC, Industry
10	encourage and support the freight industry to promote best practice in HGV driver training, SAFED (DfT's Safe and Fuel Efficient Driving) and further fuel efficiency techniques.	Staffordshire CC, Councils
11	with relevant partners including Staffordshire Police, adjoining authorities and the haulage industry trade bodies investigate options for a freight operator recognition scheme.	Staffordshire CC, Councils, Police
12	with partner organisations, Staffordshire Police and the haulage industry encourage awareness raising and training for cyclists, pedestrians and other vulnerable road users in relation to the operation of HGV's	Staffordshire CC, NULBC
13	support and encourage the haulage industry to undertake innovative practice to increase awareness to cyclists, pedestrians and other vulnerable road users of the difficulties in the operation of HGV's and the limits to manoeuvring and driver visibility of other road users.	Staffordshire CC, NULBC
16	with local authority partners and the Highways Agency investigate and consider improvement of roadside signage across Staffordshire for HGV parking areas.	Staffordshire CC, Highways England, Staffordshire Councils

10 Air Quality Action Plans

The following details provide a summary of the current status of air quality as reported by Newcastle-under-Lyme Borough Council in 2017 and also traffic composition taken from the 2013 Detailed and Further Assessment together with trends in Nitrogen Dioxide from diffusion tube monitoring data in the four declared AQMA's. Newcastle-under-Lyme Town centre and Kidsgrove are the only AQMA's currently exhibiting exceedances of the annual mean objective for nitrogen dioxide. There are also a number of locations within the existing AQMA's which are showing levels of NO_2 within 10% of the annual mean objective.

The air quality action plans for each area are detailed.

10.1 AQMA Number 1 – Kidsgrove

The AQMA is centred on the Liverpool Road in Kidsgrove, with relevant receptors located at two junctions, one with Heathcote Street, and another with Gloucester Road. The location of the AQMA is shown in **Figure 7**. The AQMA was declared due to exceedances of the Nitrogen Dioxide Annual Mean Objective level of 40ug/m3 at a number of relevant locations principally along Liverpool Road (A50).

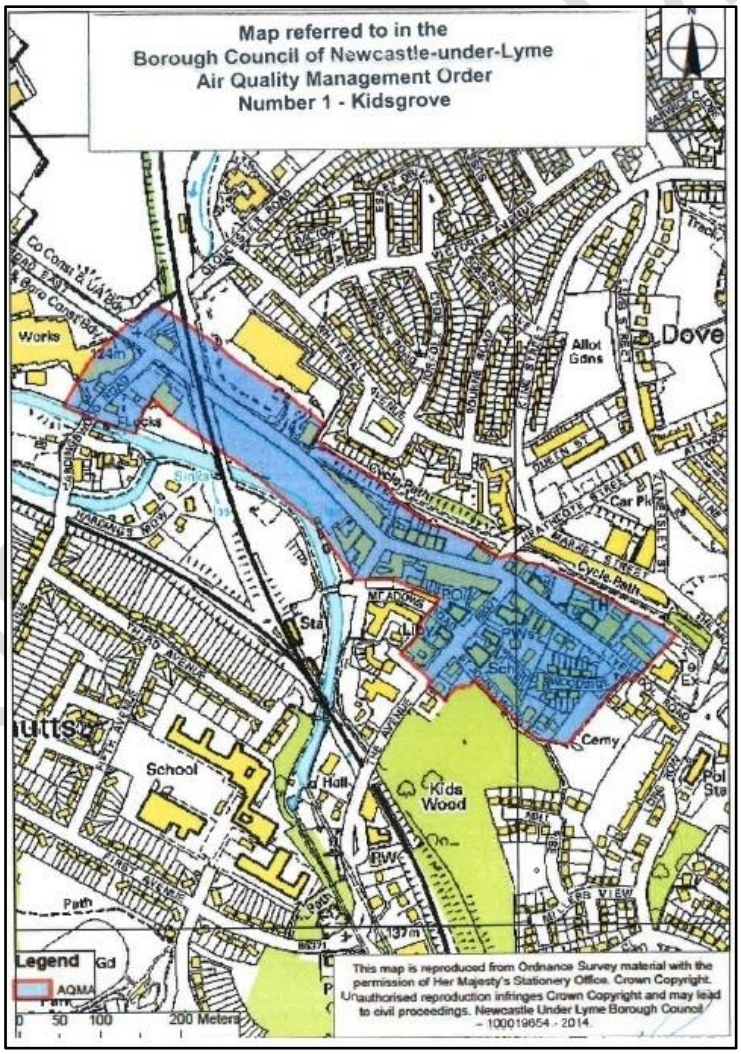


Figure 7: Location of Kidsgrove AQMA Number 1

10.1.1 Results from recent monitoring data – Kidsgrove AQMA

The latest monitoring from the 2017 ASR report which covers the 2016 calendar year, suggests that there may now only be a marginal exceedance within the Kidsgrove AQMA. A single result at a relevant receptor revealed a result of 41.8ug/m^3 for annual mean nitrogen dioxide concentration in 2016, whilst the 5 year average was 41.3ug/m^3. These results , if maintained, suggest a lower required reduction of road NOx to achieve the NO_2 objective than reported in the 2013 Detailed and Further Assessment Report (2013 DAFA Report).

10.1.2 Trends in nitrogen dioxide annual mean objective data – Kidsgrove AQMA

Nitrogen dioxide monitoring by passive diffusion tubes has taken place in this area for a number of years. The results of the diffusion tube monitoring show levels experienced at the façade of relevant locations (e.g. residential premises, schools) as defined in air quality technical guidance document LAQM TG16.

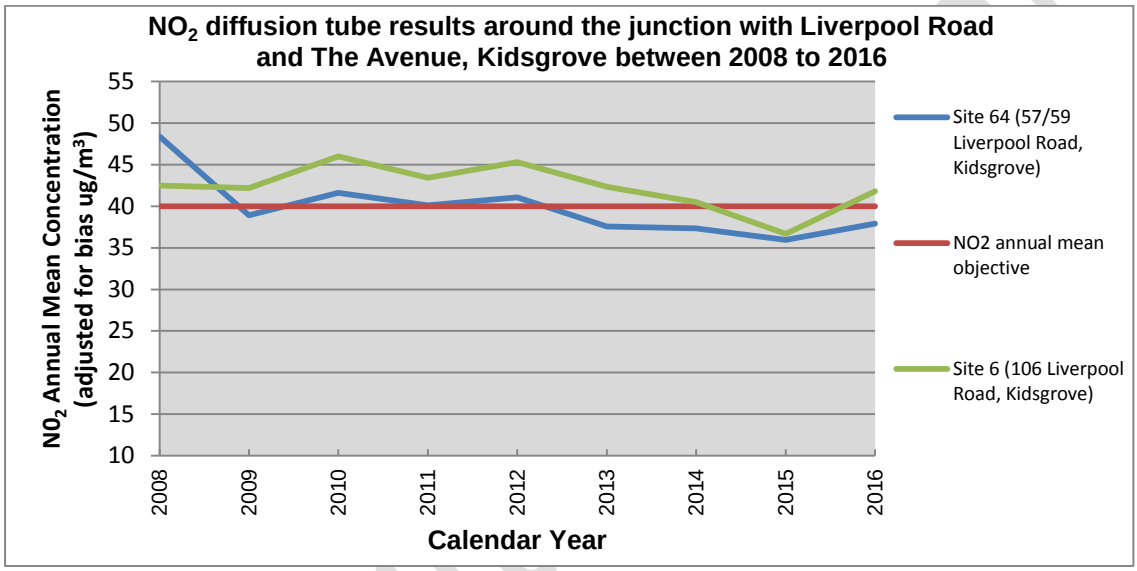


Figure 8: Trends in Nitrogen Dioxide Annual Mean Objective Data - Kidsgrove AQMA

10.1.3 How nitrogen dioxide levels are influenced in this area – Kidsgrove AQMA

Data from the 2013 Detailed and Further Assessment report , shown in **Figure 9** identified that greatest contribution to $N0_2$ levels in this area is derived from local traffic (60%) with nearly 30% of $N0_2$ being attributable to emissions from cars.

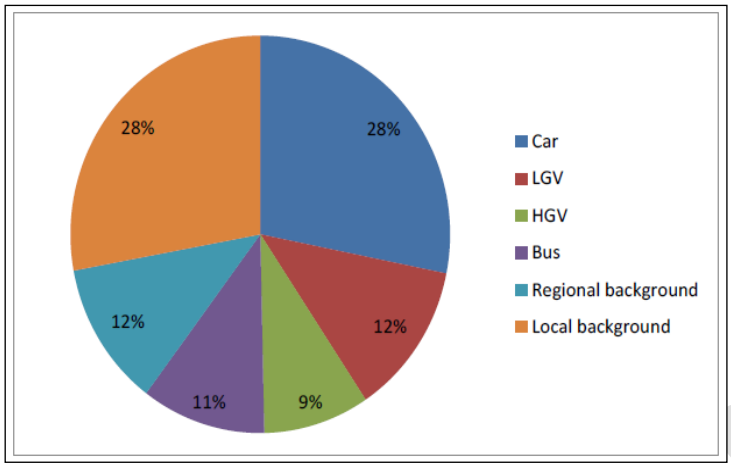


Figure 9: NO_2 Contributions by Source - Kidsgrove AQMA

10.1.4 Issues considered to be affecting nitrogen dioxide levels – Kidsgrove AQMA

The road network is single carriageway with properties located at the rear of the pavement. There is on street parking for the shops in Liverpool Road.

The exceedances are most likely due to higher emissions from slow moving and queuing traffic at peak times the traffic lights at Hardinsgwood Road at its junction with Liverpool Road, Liverpool Road at its junction with the Avenue which is also affected by a bus top situated near the junction and traffic turning right from Liverpool Road into the junction with Heathcote Street, which stops traffic behind and through the Avenue junction.

Kidsgrove Station is also showing an increase in patronage which is to be welcomed, however most journeys to this station are made by road. Development in nearby East Cheshire especially around the Alsager area is also considered to add to the increased rail patronage and car journeys to the station.

10.1.5 Air Quality Action Plan Measures – Kidsgrove AQMA

The Kidsgrove Local Transport Package in relation to improving access to the railway station at Kidsgrove, has received funding from Central and local Government and is awaiting implementation.

The County's integrated transport strategy (Staffordshire County Council, 2011) provides a local transport package for Kidsgrove. This includes measures such as developments around the station, which is south of Liverpool Road (including interchange improvements, parking and traffic management), introducing a one way system on Market Street/Heathcote Street and removing right turns into Heathcote Street from Liverpool Road and urban traffic control to improve traffic flow and air quality on Liverpool Road.

The local authority's action plan therefore focuses on measures to smooth traffic flow and reduce congestion such as optimisation of traffic signals. There are a few small businesses siding Liverpool Road which rely on passing trade, hence the need to retain the on road parking although it is noted that there is free parking close by. Being a strategic route, weight restrictions cannot be applied to the A50.

Table 10 details the air quality action plan measures identified by the steering group.

Table 10: Air Quality Action Plan - Kidsgrove AQMA

Air Quality Action Plan – Kidsgrove AQMA											
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**
K1	Kidsgrove Railway Station Transport hub including parking and improved bus/rail interchange with new bus facilities closer to the station, Real Time Passenger Information provided at Kidsgrove station and at the bus stops, disabled/cycle parking, drop off and taxi facilities, and safer pedestrian and cycle access routes to the station	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	East Midlands Trains	2015	2018/19	Delivery of measure	Has potential to increase patronage / increase use of public transport and private car	In planning phase	2020	Funding priorities and reliant on completion by East Midlands Trains
K2	Traffic light optimisation to reduce	Traffic Management	UTC, Congestion management,	Staffordshire County	2017	2018	Delivery of measure	Reduced vehicle		2018	Funding

Air Quality Action Plan – Kidsgrove AQMA											
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**
	congestion ALONG Liverpool Road and prevention of right turn into Heathcote Street from A50		traffic reduction	Council				emissions			
K3	Review location of bus stops to facilitate traffic flow around Liverpool Road / The Avenue	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	2017	2018	Delivery of measure	Reduced vehicle emissions		2018	

10.2 AQMA Number 2 – Newcastle-under-Lyme

The original suggested AQMA boundary for central Newcastle-under-Lyme has been extended to encompass the ring-road and sites of future planned development in the centre of the town. It covers Newcastle-under-Lyme Town Centre including the ring road A53, King Street, George Street and London Road to the boundary with the City of Stoke-on-Trent City Council's AQMA, and a section of the A34 Newcastle Road.

The location of this AQMA is shown in **Figure 10**.

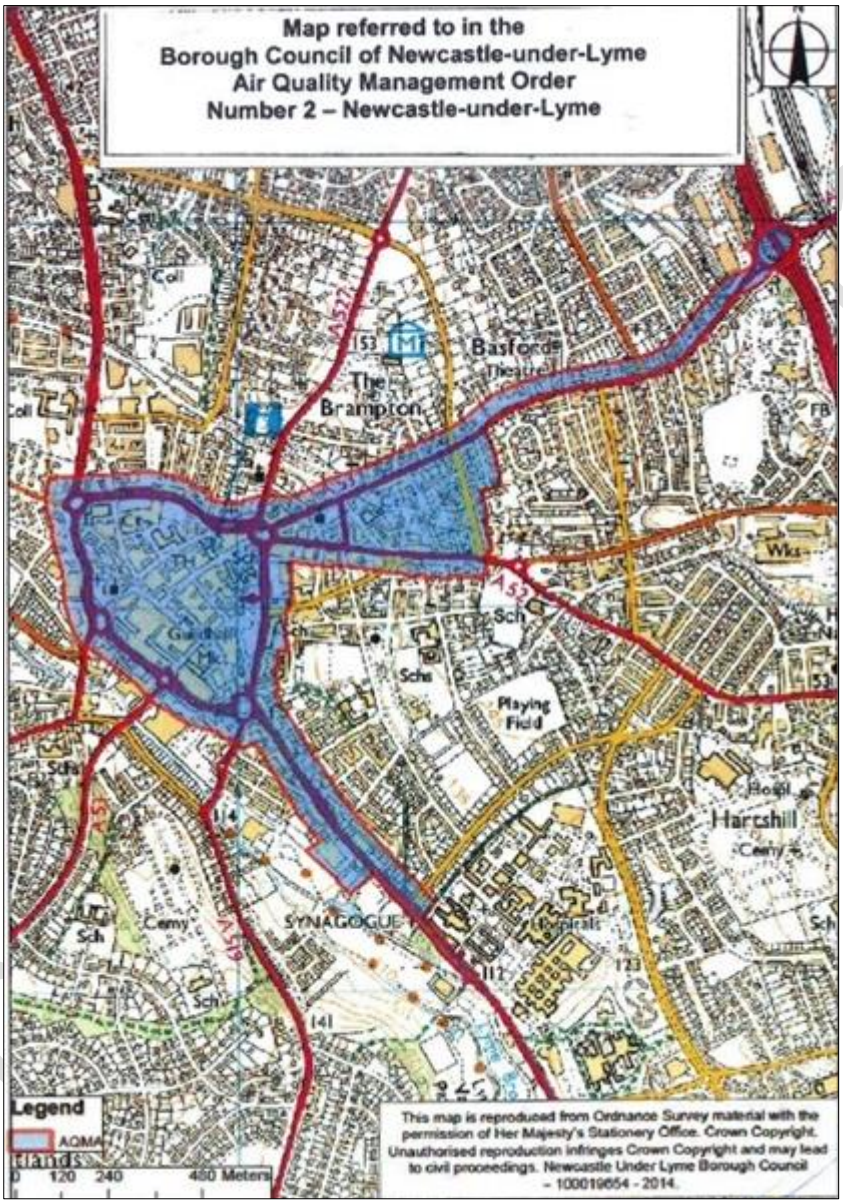


Figure 10: Location of Newcastle-under-Lyme AQMA Number 2

10.2.1 Results from recent monitoring data – Newcastle under Lyme AQMA

The results from the latest monitoring data for 2017, continue to show that the annual mean concentrations were highest within the town centre, with five sites exceeding the annual mean objective for nitrogen dioxide in 2017, whilst there are currently 6 sites within 10% of the objective However a number of these sites have been above and below the objective limit over the past 5 years.

10.2.2 Trends in Nitrogen Dioxide annual mean objective data – Newcastle under Lyme AQMA

With regards to the King Street area, NO_2 levels appear to be showing a downward trend. NO_2 levels in the London Road area do not appear to be showing a sustained reduction with levels consistently above the annual mean objective. See Figure13.

Trend data is derived from diffusion tube sampling data gathered in this location for the five calendar years up to and including the latest reporting year for which complete bias adjusted data is available.

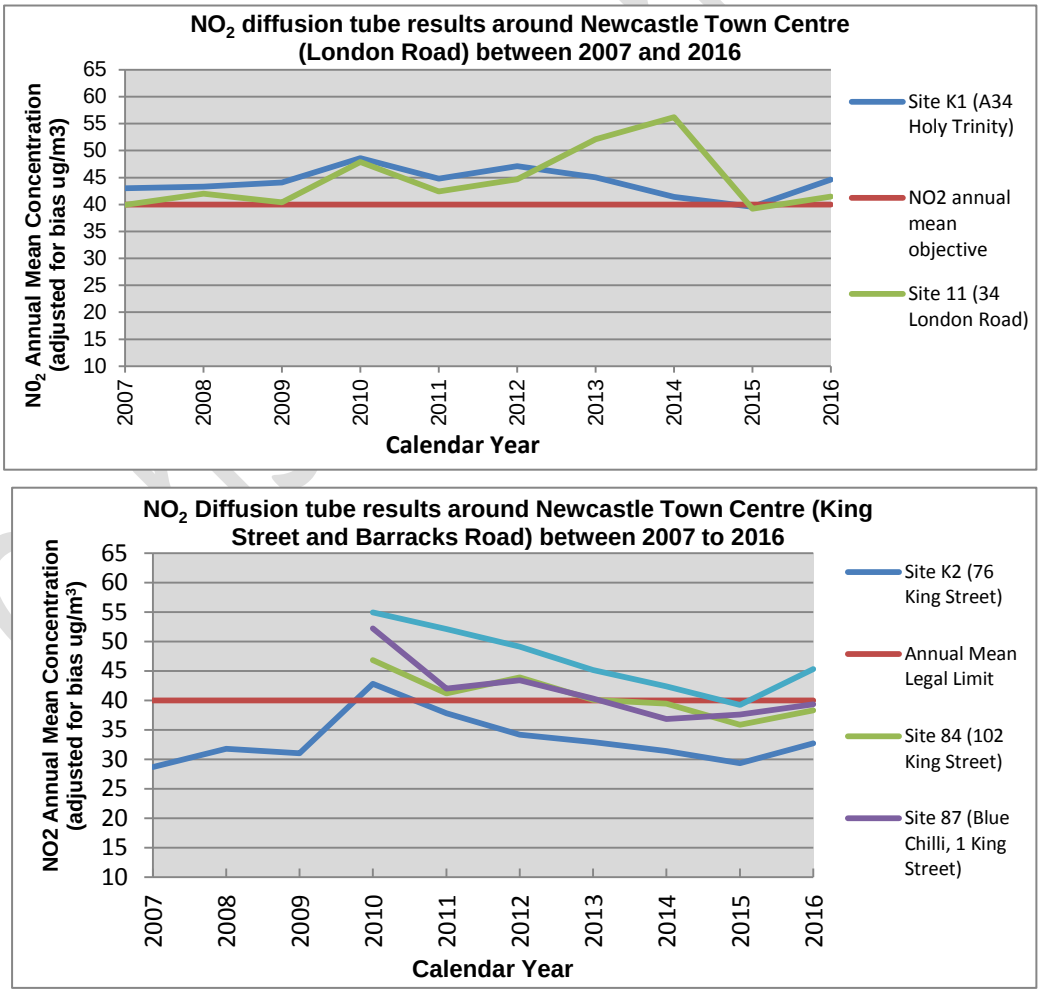


FIGURE 11: TRENDS IN NITROGEN DIOXIDE AROUND THE TOWN CENTRE

10.2.3 How nitrogen dioxide levels are influenced in this area – Newcastle under Lyme AQMA

The greatest contribution to $N0_2$ in this area is derived from local traffic (just over 50%) in particular from cars. Emissions from local buses and HGV's are also significant, particularly on King Street.

10.2.4 Issues considered to be affecting nitrogen dioxide levels – Newcastle under Lyme AQMA

The 2013 DAFA Report estimated that a reduction in NOx emissions from road traffic of 36-39 percent would be required to meet the objective at the worst case receptors. The 2017 ASR concluded for this location that the increased NO_2 concentration being measured (+8% from 2011 to 2017) may be attributed to a number of factors such as;

- This area of London Road being heavily congested – London Road is one of the main routes which join on to the Town Centre ring-road (A34)
- Peak Hour congestion especially between 8am and 9am
- London Road roundabout operating beyond design capacity
- Queuing across roundabouts which restricts the free flow of traffic
- Incidents on the network leading to gridlock
- The road having a high flow of buses/ HGVs
- This area of road meeting with a heavily trafficked junctions and roundabout
- The streets being narrow with residential properties close to the kerb on either side of the road

10.2.5 Air Quality Action Plan Measures – Newcastle under Lyme AQMA

Opportunities to improve the flow of traffic around and through the town centre network are limited by the physical constraints of the local geography. The measures identified in the action plan therefore target keeping the traffic flowing and alternatives to the use of the private motor car as well as minimising the effects of new developments within the town.

Table 11 details the air quality action plan measures identified by the steering group.

Table 11: Air Quality Action Plan - Newcastle-under-Lyme Town Centre AQMA

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
N1	Ensure that effects of additional traffic generated by Ryecroft mixed retail / student development are properly understood	Other	Other	Henry Davidson Developments / Planning Application to Newcastle under Lyme B.C.	Aμg-17	18/19	Monitoring	Not calculated	Planning Permission Granted	2019	Application made to Newcastle under Lyme B.C green travel infrastructure and EV charging sought
N2	Ensure that effects of emissions from plant associated with Ryecroft mixed retail / student development are properly understood	Other	Other	Henry Davidson Developments / Planning Application to Newcastle under Lyme B.C.		2018/19	Emissions modelled and quantified	Not yet quantified	Planning condition awaiting discharge	2019	Conditions imposed on permission. Hours of use of plant to be limited to minimise effects on AQ
N3	Wayfinding strategy Newcastle under Lyme Town Centre and outlying areas for	Promoting Travel Alternatives	Promotion of walking	Lead by Newcastle under Lyme Borough Council with support from Staffordshire	2017/18	2019/20	Delivery of strategy	Not quantified			Strategy awaiting public consultation

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
	walking and cycling			County Council, Sustrans and Town Centre Business Improvement District							
N4	Cycle route improvements on A34 North (Cedar Road to Lower Milehouse Lane and Milehouse) and A527 (Town to Keele University)	Promoting Travel Alternatives	Promotion of cycling	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District		2018/19	Cycle routes installed	Reduced vehicle emissions	Routes identified		Options identified for consultation
N5	Local Transport Package Managing Peak Hour Congestion and C-emissions on local roads and at junctions with the trunk road	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	Complete	Complete	Measurment of journey times between reference points	Reduced vehicle emissions	System optimised	Completed	UTC optimised on network around ring road and King Street / Etruria Road (A53) Limited capacity for physical works as network is heavily congested and constrained by

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
	network										local geography. Borough lies at centre of major road network for cross-country freight.
N6	LSTF funding of cycling walking and bus links between N-u-L and Stoke	Alternatives to private vehicle use	Other	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District	2017/18	2019 onwards	Funding secured and links in place	Reduced vehicle emissions			Options identified for consultation
N7	Ring-Road enhanced signage & subway	Traffic Management	UTC, Congestion management, traffic reduction	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement	2017	2018/19		Reduced vehicle emissions			Options identified for consultation Potential funding constraints

Air Quality Action Plan – Newcastle under Lyme Town AQMA											
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**
				District							
N8	Car Park Variable Message Signing Street parking restrictions	Traffic Management	Other	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustrans and Town Centre Business Improvement District	2017	2018/19	VMS signs in place and street parking restrictions enforced	Reduced vehicle emissions			Options identified for consultation / Potential funding constraints
N9	Promotion of public transport Real Time Passenger Information upgrades	Public Information	Other	Staffordshire County Council with support via conditions on planning applications for inclusion in high occupancy student / keyworker accommodation	2017	Ongoing		Reduced vehicle emissions			RTPI and subsidised bus travel / green travel plans sought for large-scale multi occupancy residential accommodation. Town centre expected to accommodate 3000 students for local universities

10.3 AQMA Number 3 – Maybank, Wolstanton, Porthill

This AQMA covers three areas covering Porthill Bank, the High Street and the A527 through Maybank. The AQMA focuses on the properties either side of the road. In Porthill the AQMA focuses on Porthill Bank and residential properties on Orford Street next to the A500. The Etruria Valley Development plan when implemented will be to the east of this site.

Figure 12 gives details of the location of this AQMA.

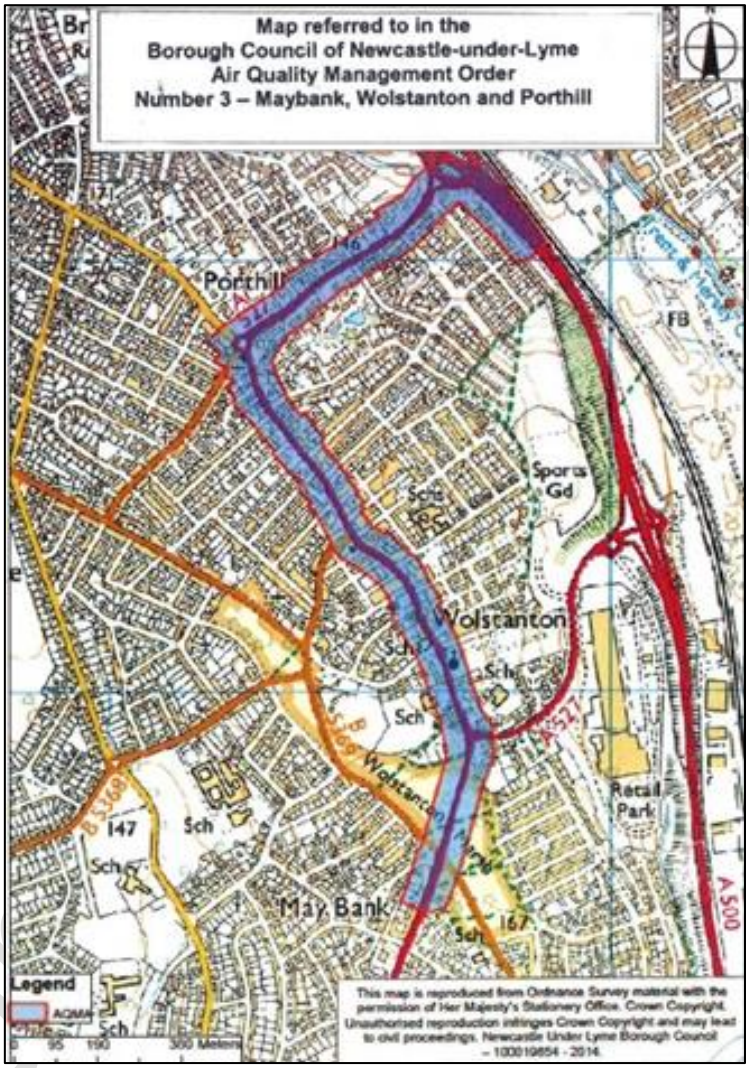


Figure 12: Location of AQMA Number 3, Maybank-Wolstanton-Porthill

10.3.1 Results from recent monitoring data - Maybank, Wolstanton, Porthill AQMA

The latest monitoring from the 2017 ASR Report highlighted no exceedances in this area. However, nitrogen dioxide concentrations remain within 10% of the objective, and this area is considered at risk from future exceedances based upon potential increases in traffic related to the Etruria Valley Scheme, A500 Highways England works, and other local developments although there are areas in Maybank and Porthill which remain with 10% of the annual mean nitrogen dioxide objective.

10.3.2 Trends in nitrogen dioxide annual mean objective data - Maybank, Wolstanton, Porthill AQMA

Trends in NO_2 exposure are showing an increase across all the sites monitored in this area with a slight exceedance of the relevant objective seen in High Street May Bank Porthill Bank.

Trend data is derived from diffusion tube sampling data gathered in this location for the five calendar years up to and including the latest reporting year for which complete bias adjusted data is available.

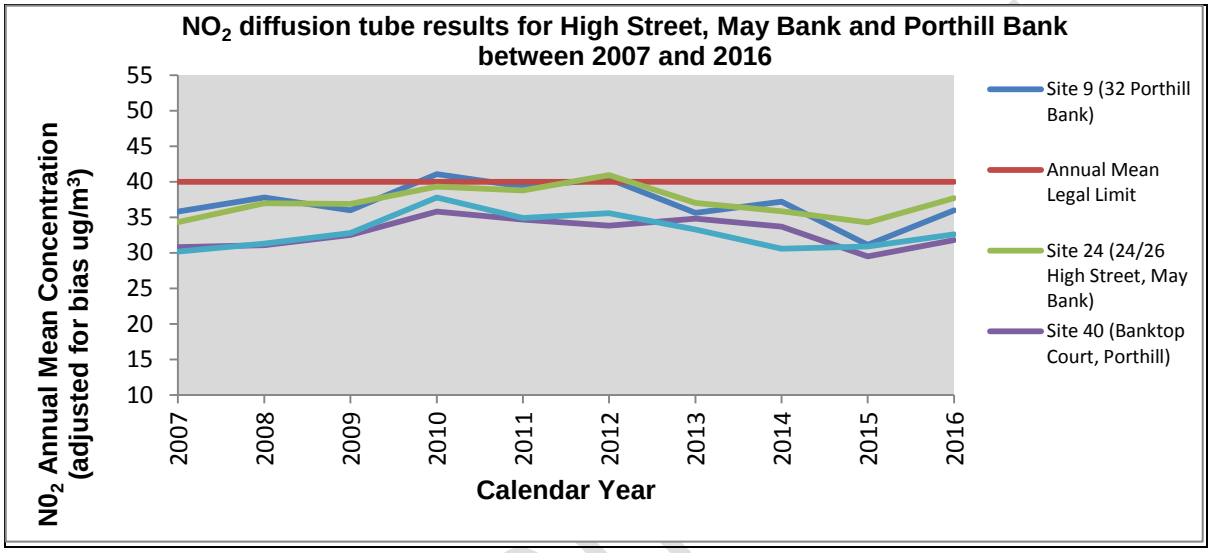


Figure 13: Trends in Annual Mean Nitrogen Dioxide Levels, Maybank-Wolstanton-Porthill AQMA

10.3.3 How nitrogen dioxide levels are influenced in this area - Maybank, Wolstanton, Porthill AQMA

The greatest contribution to NO_2 in this area is derived from local traffic (just over 45%) in particular from cars (22%) which make up the greatest percentage of the NO_2 contribution followed by buses (10-13%).

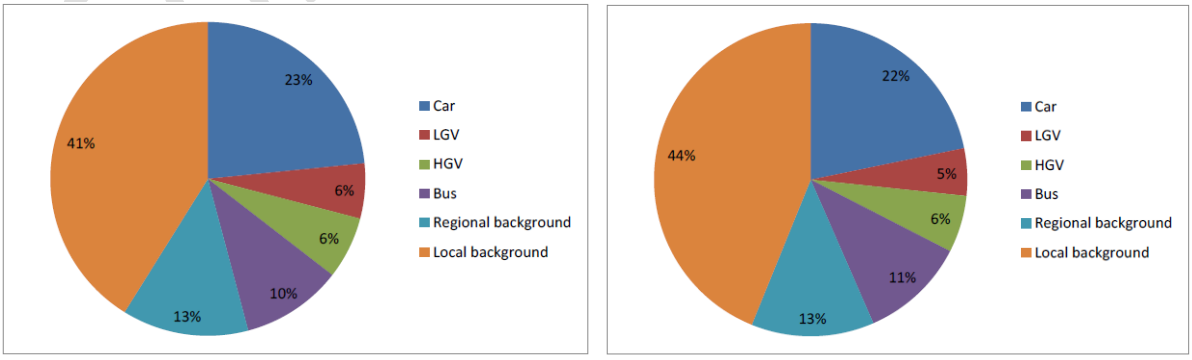


Figure 14: Nitrogen Dioxide Contribution by Source, Maybank-Wolstanton-Porthill

10.3.4 Issues considered to be affecting nitrogen dioxide levels - Maybank, Wolstanton, Porthill AQMA

The results of the modelling exercise show that the annual mean concentration has been exceeded at locations towards the bottom of Porthill Bank / Vale View and in May Bank, High Street. Current levels are within 10% of the statutory objective.

NO_2 levels in Porthill Bank and Vale View are influenced by traffic congestion particularly at peak periods, traffic volume, low road speeds as well as increased engine loading due to the terrain.

NO_2 levels in May Bank High Street arise due to the traffic lighted junction, the puffin crossing serving the shops and local car park as well as traffic volume and relatively low traffic speeds.

10.3.5 Air Quality Action Plan Measures - Maybank, Wolstanton, Porthill AQMA

The draft air quality action plan measurers for this area are detailed in **Table 12**.

Table 12: Air Quality Action Plan, Maybank-Wolstanton-Porthill AQMA

Air Quality Action Plan - Maybank, Wolstanton, Porthill AQMA											
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**
W1	Improvements to Wolstanton and Porthill Junctions on A500 to reduce congestion	Traffic Management	UTC, Congestion management, traffic reduction	Highways England	Scheme achieved RIS approval for delivery by 2020	Commencement by 2020	Modelling of air quality impacts and monitoring	Reduction in congestion / improved journey times	Scheme being revised prior to tender	To be delivered in current Roads Investment Strategy window by March 2020	Funding identified by HE. Project flagged as high risk for air quality along A500 due to exceedance of EU action level
W2	Short term routing strategy to mitigate impact of congestion associated with works to A500	Traffic Management	UTC, Congestion management, traffic reduction	Highways England / Staffs County Council / Stoke on Trent City Council and NULBC Environmental Health	Issue raised with HE at stakeholder meetings	from commencement of works and for upto 3 years	Modelling of air quality impacts and monitoring	Potential short term -ve impact during build	Impacts not yet quantified	2020	Off network effects on AQ awaiting assessment by HE. Concerns about impact on Town Centre AQMA and Maybank, Wolstanton Porthill AQMA's as potential alternative route during two year build programme
W3	Evaluate the impact of the Etruria Valley Link Road in the May Bank, Porthill,	Traffic Management	Strategic highway improvements, Re-prioritising road space away from	Lead by Stoke on Trent City Council with planning application to Newcastle	Issued flagged with Stoke on Trent City	Commencement by 2020	Modelling of air quality impacts and monitoring	unclear	Minor advserse impact but no exceedances	Application winter 2017	Planning application to Newcastle under Lyme Borough Council. Potential -ve

Air Quality Action Plan - Maybank, Wolstanton, Porthill AQMA											
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**
	Wolstanton area and provide appropriate mitigation		cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	under Lyme Borough Council/ Staffordshire County Council involved	Council				identified		effects on Maybank Porthill, Wolstanton AQMA. Potential to improve AQ in Stoke on Trent at Basford Bank where hourly mean N02 is being exceeded.

10.4 AQMA Number 4 – Little Madeley

The AQMA is based upon a single dwelling adjacent to the southbound carriageway of the M6 motorway. The latest monitoring results for 2017 indicate that levels have fallen to 31.4ug/m^3 and does not currently exceed to objective level. However, given the proximity to the motorway and potential future works which may see congestion management works to the adjacent section of the M6, this AQMA will be maintained.

The stretches of the M6 motorway from junction 16 to the north and junction 15 to the south of this area currently undergoing upgrade works to introduce smart managed motorways and hard shoulder running.

Figure 15: AQMA 4 - Little Madeley gives details of the AQMA location for Little Madeley.

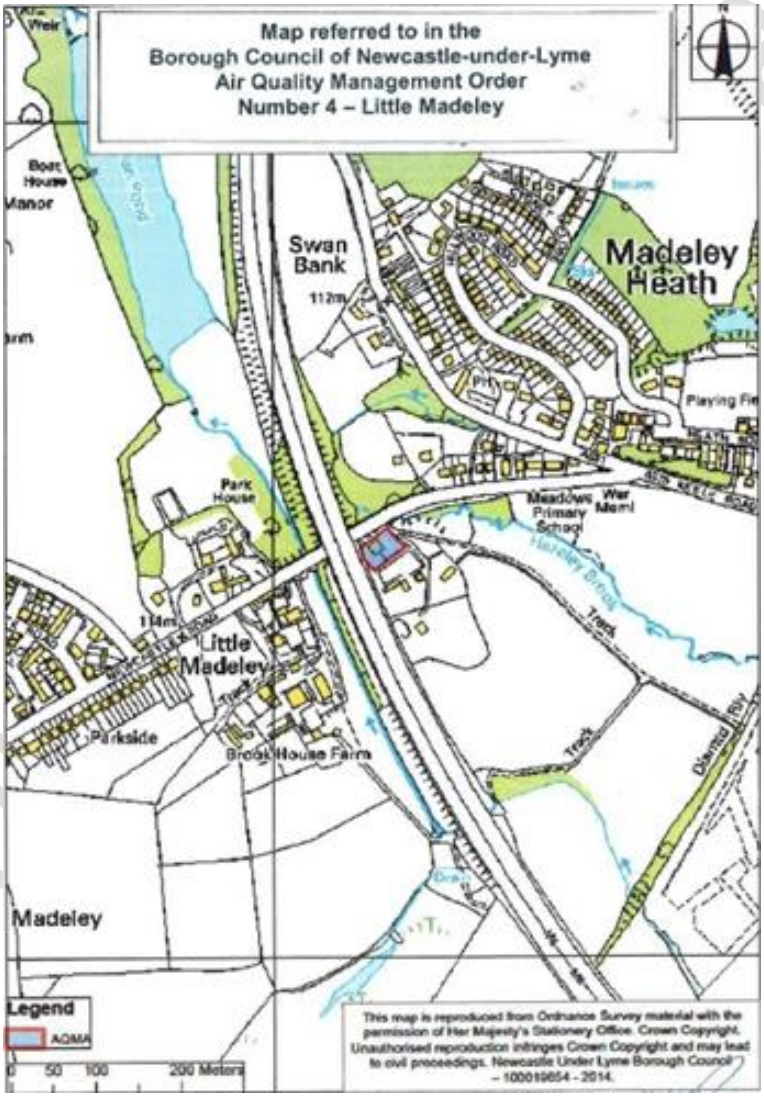


Figure 15: AQMA 4 - Little Madeley

Table 13 represents the Action Plan Measures for this area.

10.4.1 Results from recent monitoring data – Little Madeley AQMA

The results from the latest monitoring data for 2017 continue to show that the annual mean concentrations are below the annual mean objective for nitrogen dioxide.

10.4.2 Trends in Nitrogen Dioxide annual mean objective data – Little Madeley AQMA

With regards to the Little Madeley Area, trends in NO_2 are showing a steady fall.

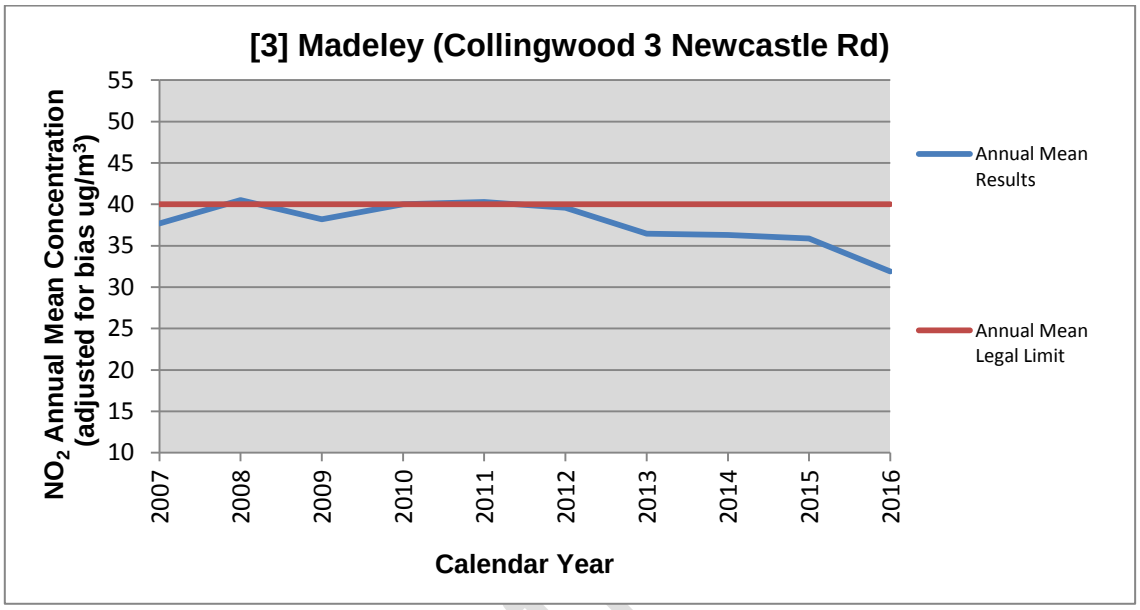


Figure 16: Trends in Nitrogen Dioxide in the Little Madeley AQMA

10.4.3 How nitrogen dioxide levels are influenced in this area – Little Madeley AQMA

The largest NO_2 source is derived from the local background (i.e. other roads, industry, domestic and rail). Local traffic emissions, principally form the M6 motorway make up the next greatest contribution with the greatest source of emissions being attributed to HDV's (lorries and buses) which make up more than 16% of the traffic flow on the M6. This is shown in

Figure 17.

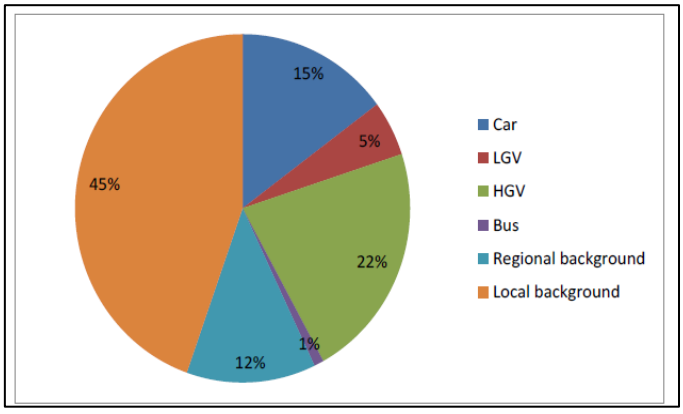


Figure 17: Contribution to NO2 Levels by Source - Little Madeley AQMA

10.4.4 Issues considered to be affecting nitrogen dioxide levels –Little Madeley AQMA

The 2013 DAFA Report estimated that a reduction in NOx emissions from road traffic of 36-39 percent would be required to meet the objective at the worst case receptors. The 2017 ASR concluded for this location that the increased NO_2 concentration being measured (+8% from 2011 to 2017) may be attributed to a number of factors such as;

10.4.5 Air Quality Action Plan Measures – Little Madeley

Air Quality in this area is influenced by the emissions associated with the M6 Motorway which is managed by Highways England. Although levels of NO_2 are currently complaint and below the objective level, there is a risk that traffic growth and future plans for this section of the M6 may see emissions creep up. There are currently no confirmed plans for the introduction of smart managed motorway in this area it is therefore necessary to continue to engage with Highways England and to continue monitoring in this area.

The Madeley area will also see significant infrastructure works associated with the build HS2 Phase 2A. There is the potential for significant traffic movements associated with HGV's and construction traffic through the Madeley area. HS2 are currently assessing the impact of vehicle and construction emissions on this area.

Table 13 details the air quality action plan measures identified by the steering group.

Table 13: Air Quality Action Plan - Little Madeley AQMA

Air Quality Action Plan – Little Madeley AQMA											
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**
M1	Continue to monitor N02 at relevant location in Little Madeley	Other	Other	Newcastle under Lyme Borough Council Environmental Health		Ongoing	Monitoring	As per reported results	Ongoing	To at least 2020 to determine trends	Nil
M2	Engage with HE concerning proposals to introduce smart managed motorway / hard shoulder running in Madeley area between junctions 15 and 16 of the M6 motorway	Traffic Management	Other	Lead by Highways England	Scheme not identified in current HE RIS window up to 2020	Unknown	Project delivered	Has potential to reduce congestion and vehicle emissions	Not yet commenced	Unknown	Scheme not yet identified. Sections either side of junctions 15 and 16 of the M6 are being smart managed with hard shoulder running. Local geography is an issue to identifying appropriate solutions

11 What has been done so far

Local Authorities providing routine LAQM reports to DEFRA have provided lists of actions that have been developed to date in relation to the AQMA's in their areas. The actions submitted for Newcastle-under-Lyme and Stoke-on-Trent are detailed in the Appendix 1, using a colour coded index as follows:-

Measures under development : Amber
Measures in progress : Green
Measures Completed : Blue

12 District Wide Actions

12.1 General Issues in the Borough

Table 14 outlines the borough wide suggested measures issues relating to poor air quality, identified by the steering group.

Table 14: Borough Wide Air Quality Improvement Measures

Borough Wide Air Quality Improvement Measures											
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	Borough Wide Air Quality Strategy	Policy Guidance and Development Control	Other policy	Lead and Funded: LA Environmental Health.	In progress			Reduction in emissions	Funding secured, planning phase	Autumn 2018	Requires formal consultation and committee approval
2	Air Quality Planning Guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Lead + Funded: LA Environmental Health	In progress			Reduction in emissions	Funding secured, planning phase	Autumn 2018	Requires formal consultation and committee approval
3	Inclusion of air quality related policies in the joint Newcastle under Lyme and Stoke on Trent Local Plan	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	LA Environmental Health and Planning (Joint project with Stoke on Trent City Council)	In progress			Reduction in emissions	Implementation on-going	Winter 2020	
4	Staffordshire and Stoke on Trent Eco-Stars	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	Staffordshire Local Authorities (Lead by Cannock Chase DC)	Completed	Active	Target 20 HGV /HDV operators per LA area	Reduced vehicle emissions	Implementation on-going	2018	Slow take up by operators across County
5	Eco Stars award for Council Streetscene and Waste fleet	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	NULBC Streetscene Division	Completed	Active	Fleet achieves 5* rating	Reduced vehicle emissions	Implementation on-going	2018	4* Ecostars award with action plan to move to 5*
6	Green Travel Plan for new Civic Hub	Promoting Travel	Workplace Travel	Lead by Staffordshire County Council	Completed	Awaiting implementation		reduced vehicle	Completed	Completed	Progress on implementation requires

Borough Wide Air Quality Improvement Measures											
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
	development in Town Centre	Alternatives	Planning	as building owner in conjunction with Borough Council, Police, Library Service, Social Services, Aspire Housing		and monitoring		emissions			monitoring
7	Voluntary Quality Network Partnership with bus operators	Alternatives to private vehicle use	Other	Staffordshire County Council / Stoke on Trent City Council/ Local Bus Companies	Not yet started	Not yet started	Voluntary quality network operative across area	Reduced vehicle emissions /	Not yet commenced. Identified in Newcastle under Lyme LTP	?	Requires commitment from bus operators and councils. Decline in bus passenger numbers and services affects financial viability for improvements. Local operators use older fleet vehicles across area.
8	Review potential for Clean Air Zone in Potteries Agglomeration	Congestion Management		Stoke on Trent City Council and Newcastle under Lyme BC / Staffordshire County Council	Not yet commenced	Not yet commenced	Clean Air Zone option appraised	Not yet quantified	Not yet commenced	Not yet commenced	Funding constraints / Political will / Impacts on local economy

13. County/ Highways England Actions

- Consider combined impacts of proposed improvements to A500 and other major developments on traffic and congestion in Newcastle under Lyme.
- Monitoring freight movements within the Borough.

14. Implementation

See tables in Appendix

15. Evaluation and Monitoring

See tables in Appendix

Appendix 1

Measures submitted to DEFRA for the Potteries Agglomeration and reported to the European Union for improving air quality.

Measure	Focus	Lead Auth	Planning Phase	Progress to Date	Progress in Last 12 Months	Estimated Completion Date	Comments Relating to Emission Reduction	Measure category	Measure classification	Measure implementation start date	Measure implementation planned end date	Emission source sector affected by measure	Spatial scale of measure	Implementation status of measure
Staffordshire ECO-Stars Scheme	Fleet operator	Cannock Chase DC	In progress	In progress		Mar-17	14 tonnes NOx / yr	Vehicle Fleet Efficiency	Driver training and ECO driving aids	2015	2017	Transport	Whole town or city	Preparation
Air Quality action plan - Newcastle-under-Lyme Town Centre	NOx, NO_2 reduction	Newcastle-under-Lyme B.C.	In development	In progress	AQMA formally declared Jan 2015	In place by Spring 2018	0.55 tonnes PM10 / yr	Traffic Management	UTC, Congestion management, traffic reduction	2015		Transport	Whole town or city	Preparation
Air Quality Action plan - Kidsgrove Town Centre	NO_xNO_2 reduction	Newcastle-under-Lyme B.C.	In progress	In progress	AQMA formally declared Jan 2015	In place by Spring 2018r	1428 tonnes CO2 /yr	Traffic Management	UTC, Congestion management, traffic reduction	2015		Transport	Whole town or city	Preparation
Air Quality action plan - Maybank, Wolstanton, Porthill	NO_2 reduction	Newcastle-under-Lyme B.C.	In progress	in progress	AQMA formally declared Jan 2015	In place by Spring 2018	Measures to be quantified where possible	Traffic Management	UTC, Congestion management, traffic reduction	2015		Transport	Whole town or city	Preparation
Air Quality action plan - Little Madeley	NO_2 reduction	Newcastle-under-Lyme B.C.	In progress	In progress	AQMA formally declared Jan 2015	In place by Spring 2018	Measures to be quantified where possible	Traffic Management	UTC, Congestion management, traffic reduction	2015		Transport	Whole town or city	Preparation
Identification of premises requiring an Environmental Permit	Compliance with statutory obligations	Newcastle-under-Lyme B.C.	in progress	ongoing	ongoing	ongoing		Environmental Permits	Other measure through permit systems and economic instruments	2015		Transport	National	Other
Development of Air Quality Strategy for Newcastle-under-Lyme	compliance and improvement and maintenance of aq	Newcastle-under-Lyme B.C.	in progress	In progress		In place by Spring 2018		Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2015		Transport	Whole town or city	Preparation
Supplementary planning guidance / developers guidance relating to AQ including potential damagae cost mitigation formula	Compliance	Newcastle-under-Lyme B.C.	In progress	In progress		In place by Spring 2018		Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2015		Transport	Whole town or city	Preparation

identification of AQ related policies supported by evidence for inclusion in New Newcastle-under-Lyme and Stoke-on-Trent City Council Stoke-on-Trent joint local plan	compliance and improvement and maintenance of aq	Newcastle-under-Lyme B.C.	In progress	in progress		2018		Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018		TransportAgriculture	Whole town or city	
Improving access to rail services at Kidsgrove by installing an accessible to all footbridge/ Improved Bus / Rail Interchange and waiting facilities with RTPI, safer pedestrian and cycle access routes and taxi facilities	Rail users	East Midlands Trains	In progress	In progress				Alternatives to private vehicle use	Rail based Park & Ride	2018		Transport	Local	Planning
Barracks Road Bus Priority	Bus users	Staffordshire C.C.	complete	complete				Public Information	via other mechanisms	2014		Transport	Local	
Improved bus facilities at Keele University		Staffordshire C.C.	complete	complete				Promoting Travel Alternatives	Other	2014	2014	Transport	Local	Implementation
SMART Bus Ticket Multi-operator)	Bus users	Staffordshire C.C.	complete	complete				Alternatives to private vehicle use	Other	2010		Transport	Whole town or city	Implementation
Real Time Passenger information system at Bus Stops on Keele to Hanley Route	Bus users	Staffordshire C.C.	complete	complete				Public Information	via other mechanisms	2014		Transport	Local	Implementation
Bus service improvements across the Borough	Bus users	Staffordshire C.C.	complete	complete	complete			Promoting Travel Alternatives	Other	2014		Transport	Whole town or city	Implementation

Seeking employment in North Staffordshire to improve sustainable transport in the major employment sites at Keele University Science and Business Park, Chatterley Valley and Etruria Valley including enhanced traffic management, bus priority, passenger information, safe pedestrian environments. LSTF funded measures	Sustainable transport choices	Staffordshire C.C.		In planning stage (awaiting planning application for link road across WCML)	funding secured /			Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	2015		Transport	Local	Planning
Availability of information and implementation of walking / cycling initiatives		Staffordshire C.C.										Transport		
Newcastle Greenway improvements to support and encourage walking and cycling along a connected network of walking and cycling routes		Staffordshire C.C.										Transport	Local	
Safer Routes to School - enforcement and engineering measures to reduce reliance on cars and encourage sustainable transport		Staffordshire C.C.		ongoing				Promoting Travel Alternatives	Promotion of cycling			Transport		
Discretionary Travel Allowance scheme free 24/7 bus transport to people of pensionable age or with a disability, plus carer and under 20's travel for £1 per journey	Bus users	Staffordshire C.C.		ongoing				Promoting Travel Alternatives	Other	2010		Transport	Whole town or city	Implementation

Etruria Valley Link Road and Etruria Valley Development Enterprise Zone which will in part reduce congestion on the local highway network and reduce severance for transport users. This will involve four phases 1. A new bridge over the west coast mainline from the Wolstanton Junction of the A500. 2. Improvements to existing roundabouts on the A500 at Wolstanton. 3. Widening the A500 to three lanes between Porthill and Wolstanton	Sustainable transport choices	Staffordshire C.C.		in planning stage						2015		Transport		
(Cycle Network : National and Local) Improving and closing gaps in the National Cycle Network 5 / 555 and links to employment and services around Keele University which currently forces people onto the A525 Keele Road and closing the gap North of Chatterley Valley employment area on Lowland's Road	Sustainable transport choices	Staffordshire C.C.						Transport Planning and Infrastructure	Other			Transport	Local	Implementation
Newcastle Town Centre Local Transport Package: Package of measures to improve the public realm and improve links to pedestrians and cyclists across the ring road and to accommodate residual traffic and improve bus links and bus priority measures.	sustainable transport choices	Staffordshire C.C.		partially complete				Alternatives to private vehicle use	Other	2013	2017	Transport	Local	Implementation

Chatterley Valley sustainable transport package: To utilise a developer funding pot once the Chatterley Valley site is developed, supported to improve access by cycle, walking and facilitate travel planning and smarter choice projects.		Staffordshire C.C.		partially complete				Alternatives to private vehicle use	Other	2010		Transport	Local	Implementation

Measures submitted to DEFRA by Stoke-on-Trent City Council and reported to the European Union for improving air quality

Measure	Focus	Lead Auth	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months	Estimated Completion Date	Comment Relating to Emission Reductions	Measure category	Measure classification	Measure implementation start date	Measure implementation planned end date	Emission source sector affected by measure	Spatial scale of measure	Implementation status of measure
Burslem Town Centre Traffic Management Improvements	Reduce unit emissions in the AQMA using traffic management improvements	SoTCC Technical Services Division	2013/14	2014-2017	Improved journey times. Improved mode share of journey. Improve average congestion (miles/minute)	Calculated Annual NOx Reductions 299 kg/yr	Preliminary design	Nil?	Mar-17	Expected emission reduction 7%	Traffic Management	UTC, Congestion management, traffic reduction	2014	2017	Transport	Local	Evaluation
Cobridge Traffic Management Improvements (including Waterloo Road Corridor)	Reduce unit emissions in the AQMA by improved traffic flow along a strategic road corridor.	SoTCC Technical Services Division	2011/12	2012/13	Improve journey times. Improved mode share of journey. Improve average congestion (miles/minute)	Calculated Annual NOx Reductions 389 kg/yr	Scheme complete	Completed Apr 2013	n/a	Expected emission reduction 2%	Traffic Management	UTC, Congestion management, traffic reduction	2012	2013	Transport	Local	Implementation
Victoria Road Corridor Improvements	Reduce unit emissions on Victoria Road, Fenton	SoTCC Technical Services Division	2011/12	2012/13	Improve journey times. Improve mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 297 kg/yr	Scheme completed	Completed Mar 2013	n/a	Expected emission reduction 4%	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2012	2013	Transport	Local	Implementation
Lichfield Street Improvements	Reduce unit emissions in the AQMA through improved traffic flow and improved sustainable transport offer.	SoTCC Technical Services Division	2013/14	Unknown	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 322 kg/yr	Proposals being assessed as part of the current City Centre Access Study	Preliminary discussions	Unknown	Expected emission reduction 3%	Transport Planning and Infrastructure	Bus route improvements	2015	2016	Transport	Local	Preparation
Leek Road / Victoria Road Junction - Safety Scheme	21 road traffic incidents in three years resulted in this scheme being assessed for possible intervention measures.	SoTCC Technical Services Division	2013/15	Unknown		Calculated Annual NOx Reductions 321 kg/yr	Proposals being assessed as part of the current City Centre Access Study	Preliminary discussions	Unknown	Expected emission reduction 3%	Promoting Travel Alternatives	Promotion of walking	2015	2016	Transport	Local	Evaluation
City Road Corridor Improvements	Reduce unit emissions in the AQMA by improved traffic flow, improved measures for walking/cyclin	SoTCC Technical Services Division	2014/15	2015/16	Improved journey times. Improved mode share of journey. Improved average congestion	Calculated Annual NOx Reductions 266 kg/yr	Preliminary discussions	Preliminary discussions	2016	Expected emission reduction 3%	Promoting Travel Alternatives	Promotion of cycling	2015	2016	Transport	Local	Evaluation

	g and improved road safety between Leek Road & Victoria Road.				(miles/minute)												
Station Gateway (Phase 1), University Quarter (Phase 2) and Uni Boulevard (Phase 3)		SoTCC Technical Services Division	2014/15	Unknown		Calculated Annual NOx Reductions 480 kg/yr	Proposals being assessed as part of the current City Centre Access Study	Currently bidding for funds	Unknown	Expected emission reduction 3%	Promoting Travel Alternatives	Promote use of rail and inland waterways			Transport	Local	Evaluation
Leek Road Traffic Management Improvements	Reduce unit emissions in the AQMA through improved vehicular flow. This project will complement the proposed improvements to the Investment Plan project for the Station Gateway.	SoTCC Technical Services Division	2014/15	2015 - 2017		Calculated Annual NOx Reductions 480 kg/yr	Proposals being assessed as part of the current City Centre Access Study	Preliminary discussions	Unknown	Expected emission reduction 3%	Traffic Management	UTC, Congestion management, traffic reduction			Transport	Local	Evaluation
Victoria Street / Shelton New Road Junction Improvement	Reduce unit emissions in the AQMA through a junction improvement scheme which introduces pedestrian crossing facilities & traffic management improvements including banned right turns on all arms.	SoTCC Technical Services Division	2011/12	2012/13	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 21 kg/yr	Scheme completed	Completed Mar 2013	n/a	Expected emission reduction 0.24%	Promoting Travel Alternatives	Promotion of walking	2012	2013	Transport	Local	Implementation
Parking restrictions outside schools	Reduce unit emissions in the AQMA by improving peak period traffic flows, average congestion (miles per minute), journey times, mode share of journey, access by public transport, bus punctuality times.	SoTCC Technical Services Division	2011/12	2012-14	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 272 kg/yr	Scheme completed	Scheme completed	n/a	Expected emission reduction 7%	Promoting Travel Alternatives	School Travel Plans	2012	2014	Transport	Whole town or city	Implementation
Walk to School Outreach– Living Streets	Reduce unit emissions in the AQMA by reducing negative impact of the 'school run' on	SoTCC Technical Services Division	2011/12	2012-15	Improved journey times. Improved mode share of journey. Improved average congestion	Calculated Annual NOx Reductions 272 kg/yr	Programme in Delivery	School communities engaged – increased modal share of walking maintained	Programme extended to 31/3/2016	Expected emission reduction 7%	Promoting Travel Alternatives	School Travel Plans	2012	2015	Transport	Whole town or city	Planning

	congestion, journey times and economic growth, by removing barriers to walking and delivery of proven school-based interventions for schools in the south and east of Stoke-on-Trent which have large numbers of children driven short distances to school by car.				(miles/minute)												
Access to Education - Sustrans	Reduce unit emissions in the AQMA through work with Sustrans to support economic growth by tackling local congestion problems caused by journeys to schools. It includes funding to promote walking and cycling to 21 primary schools and 7 secondary schools in the north and east of Stoke-on-Trent.	SoTCC Technical Services Division	2011/12	2012-15	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 272 kg/yr	Programme in Delivery	School communities engaged	Programme extended to 31/3/2016	Expected emission reduction 7%	Promoting Travel Alternatives	School Travel Plans	2012	2015	Transport	Whole town or city	Planning
Stoking Employment in North Staffordshire	Reduce unit emissions in the AQMA by assisting shift to sustainable transport modes on the existing and growing employment areas at Chatterley Valley, Etruria Valley, Trentham Lakes, the University Quarter (UniQ) and Keele University & Science and Business Park. These sites currently provide 13,700 jobs with the potential to	SoTCC Technical Services Division	2011/12	2012-15	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 17,750 kg/yr	Programme in Delivery	Businesses and educational establishments engaged in range of initiatives e.g. 7208.8kg of CO2 savings through cycle challenges	31/03/2015	Expected emission reduction 1%	Promoting Travel Alternatives	Workplace Travel Planning	2012	2015	Transport	Whole town or city	Implementation

	unlock a further 8,000 jobs by April 2015.																
Clean Air Grant	Reduce unit emissions in the AQMA by providing additional support to business for staff travel plans, growing the existing Workplace Travel Plan Grant into a local Clean Air Grant.	SoTCC Technical Services Division	2012	2013/14	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Calculated Annual NOx Reductions 57 kg/yr	In Delivery as per progress reports Project Reference 2622012	4 large employers assisted with their travel plan	2014	Expected emission reduction 14%	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2014	2014	Transport	Local	Implementation
Staffordshire ECO Stars Fleet Recognition Scheme	Reduce unit emissions in the conurbation – specifically targeting commercial vehicles (HGV, vans, buses and coaches) to reduce vehicle emissions and, ultimately, air quality problems that are directly related to their contribution to road traffic.	Cannock Chase District Council	2014	2015-16	Reduced emissions	Expected emission reduction 7 tonne NOx/yr, 2.22 tonne PM10/yr, 11615 tonne CO2/yr	Funding bid submitted	Funding bid successful	2016	Expected emission reduction 7 tonne NOx/yr, 2.22 tonne PM10/yr, 11615 tonne CO2/yr	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2015	2016	Transport	Whole agglomeration	Preparation
Real Time Bus Information	Reduce unit emissions in the AQMA by assisting shift to sustainable transport modes on the existing and growing employment areas	SoTCC Technical Services Division	2017/18	2017/18	Improved journey times. Improved mode share of journey.	Not calculated	Two new bus shelters with Real Time information Screens have been installed (LTP Funded)	Two new bus shelters with Real Time information Screens have been installed (LTP Funded)	31/03/2018	Not calculated	Promoting Travel Alternatives	Other	2014	2018	Transport	Whole town or city	Implementation
Improved Access to Health and Leisure facilities	Reduce unit emissions in the AQMA through improved pedestrian and cyclist accessibility to the City's Health & Leisure Facilities, e.g. Parks, Health Centres, Sports Centres, Museums, Libraries etc.	SoTCC Technical Services Division	2015/16/17/18	2015/16/17/18	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Not calculated	Ongoing annual programme of work which will encourage walking and cycling as a means of transport to key leisure / Health destinations. Improved access to Tunstall Park now completed incl pedestrian crossing & cycling facilities and road safety measures.	Improved access to Tunstall Park now completed	Ongoing Annual Programme	Not calculated	Transport Planning and Infrastructure	Other	2014	2018	Transport	Whole town or city	Implementation

Programme of Bus Stop Improvements	Reduce unit emissions in the AQMA through improved accessibility to public transport, higher quality infrastructure	SoTCC Technical Services Division	2015/16/17/19	2015/16/17/19	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Not calculated	Delivery of 3 Bus Stop Improvements incl Real Time information screens, new bus shelters & Raised kerbs		Ongoing Annual Programme	Not calculated	Transport Planning and Infrastructure	Bus route improvements	2014	2018	Transport	Whole town or city	Implementation
Wilson Road / New Inn Lane Junction Improvement	Reduce unit emissions in the AQMA through improved pedestrian and cyclist accessibility to the City's Health & Leisure Facilities, e.g. Parks, Health Centres, Sports Centres, Museums, Libraries etc.	SoTCC Technical Services Division	2015/16	2016/17	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Not calculated	Detailed Design Complete. 3rd Party Land to be acquired	Completion of Design	Mar-17	Not calculated	Traffic Management	UTC, Congestion management, traffic reduction	2015	2016	Transport	Local	Planning
Etruria Valley Major Highway & Transport Scheme	Reduce unit emissions in the AQMA through major new transport infrastructure scheme linking the A500 to the City Centre, reducing congestion on the A53, the A500 and the wider conurbation	SoTCC Technical Services Division	2013/14/15	2015/16/17/18/19	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Not calculated	Preliminary design complete	Completion of prelim design	Dec-18	Not calculated	Transport Planning and Infrastructure	Other	2015	2019	Transport	Local	Planning
Leek Road Corridor Improvements(Growth Deal)	Reduce unit emissions in the AQMA through a new junction improvement and traffic management measures along this arterial route through the City	SoTCC Technical Services Division	2015/16	2015/16/17/18	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Not calculated	Outline Design and costing	Outline Design and costing	Dec-18	Not calculated	Traffic Management	UTC, Congestion management, traffic reduction	2016	2018	Transport	Local	Planning
Etruria Road Corridor Improvements(Growth Deal)	Reduce unit emissions in the AQMA through re-allocation of road space, traffic management and public realm measures along this arterial route into the City Centre	SoTCC Technical Services Division	2015/16	2015/16/17/19	Improved journey times. Improved mode share of journey. Improved average congestion (miles/minute)	Not calculated	Outline Design and costing	Outline Design and costing	Jan-19	Not calculated	Traffic Management	UTC, Congestion management, traffic reduction	2016	2018	Transport	Local	Planning
City Centre Ring Road (completion)	Reduce unit emissions in the AQMA through the delivery of the final 'quarter' of	SoTCC Technical Services Division	2015/16/17	2017/18/19	Improved journey times. Improved average congestion (miles/minute)	Not calculated	Feasibility, outline design, initial costing	Feasibility, outline design, initial costing	2019	Not calculated	Traffic Management	Other	2017	2019	Transport	Local	Planning

	the City Centre Ring Road. This will reduce congestion on the routes into the City Centre by re-directing through traffic onto the Ring Road																
Arbourfield Drive / Dividy Rd Junction Improvement	Reduce unit emissions in the AQMA through a junction improvement scheme, with UTC measures aimed at reducing congestion on the approaches to this junction and traffic flow overall by linking existing traffic signal installations	SoTCC Technical Services Division	2013/14	2014/15	Improved journey times. Improved average congestion (miles/minute)	Not calculated	Scheme under construction	Design completed & construction underway	Apr-15	Not calculated	Transport Planning and Infrastructure	Other	2014	2015	Transport	Local	Implementation
Trentham Lakes / A50 Strategic Signing	Reduce unit emissions in the AQMA through a change to the Strategic Signing from the A50 Trunk Road, reducing HGV traffic using the local road network.	SoTCC Technical Services Division	2014/15	2015/16	Improved journey times. Improved average congestion (miles/minute)	Not calculated	Design underway	Design underway	Sep-15	Not calculated	Traffic Management	UTC, Congestion management, traffic reduction	2015	2015	Transport	Local	Planning
Potteries Way / Bucknall Rd Junction Improvement	Reduce unit emissions in the AQMA through a major new junction improvement on the Potteries Way City Centre Ring Road, updating the operation of the signalling arrangements, introduction of UTC and improved junction capacity.	SoTCC Technical Services Division	2017/18	2018/19	Improved journey times. Improved average congestion (miles/minute)	Not calculated	Nil	Nil	Mar-19	Not calculated	Traffic Management	UTC, Congestion management, traffic reduction	2017	2019	Transport	Local	Evaluation
Community Rail Partnership	Encouraging more use of local rail services by improving service and station quality, awareness and	Partnership of SOTCC, Staffs CC, Cheshire East Council, Derbyshire CC and East Midlands Trains	Commenced in 2005	ongoing	Increased use of local rail services	Not calculated		Continued passenger growth at all local stations	ongoing	Not calculated	Promoting Travel Alternatives	Promote use of rail and inland waterways			Transport	Whole town or city	

	promotion campaigns																
Concessionary Bus Pass Scheme	Providing free bus travel to those eligible	SOTCC	ongoing	ongoing	Maintaining use of local bus services	Not calculated			ongoing	Not calculated	Promoting Travel Alternatives	Other			Transport	Whole town or city	
Home to Work Scheme	Providing transport assistance to those with job offers	SOTCC	Commenced 2011	ongoing	Number of clients assisted	Not calculated		1500 clients provided with cycle hire, bus passes etc.	31/12/2015	Not calculated	Promoting Travel Alternatives	Personalised Travel Planning			Transport	Whole town or city	

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REPORT TITLE	**Environment Act 1995 – Part IV Local Air Quality Management – Annual Status Report 2018**
Submitted by:	**Environmental Protection Team Manager – Darren Walters**
Portfolio:	**Environment & Recycling**
Ward(s) affected:	**ALL**

Purpose of the Report

To advise Committee of the findings of the statutory Annual Status Report (ASR) for 2018 which covers the 2017 calendar year in respect of local air quality management within the Borough

Recommendations

That the report be received

1. Background

1.1. Local authorities in the UK have statutory duties for managing local air quality under Part IV of the Environment Act 1995. District Councils have been required to review and assess air quality within their areas since 1997 for compliance against a range of pollutant objectives.

1.2. The Council has been carrying out reviews of air quality since December 1997; these involve measuring air pollution and trying to predict how it will change over the next few years. The review process aims to make sure that the national air quality objectives prescribed in the Air Quality Regulations http://uk-air.defra.gov.uk/assets/documents/National_air_quality_objectives.pdf will be achieved throughout the UK by the relevant deadlines. These objectives have been put in place to protect people's health and the environment.

1.3. Nationally, air pollution is estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months with estimated equivalent health costs of up to £20 billion each year." *(Source The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 1), HMSO, 2007).*

1.4. The World Health Organisation, estimates that poor air quality within the UK costs the economy circa £54 billion which is equivalent to 3.7% of British GDP (based on 2010 data). It also accounts for 29,000 premature deaths annually. (Source: WHO Regional Office for Europe, OECD (2015).

1.5. Therefore local authorities have an important role in bringing about improvements in air quality and ensuring compliance with statutory requirements to reduce the impact on health and associated costs to the National Health Service and the wider economy.

1.6 The findings of the previous reviews and assessments undertaken by your Officers were last reported to committee in November 2017.

2. Issues

Annual Status Report 2018 (ASR)

2.1 In accordance with its statutory duties, the Borough Council has recently completed its Annual Status Report for 2018 which is concerned with air quality within the Borough during the 2017

calendar year. A copy of the report can be found on line at https://www.newcastle-staffs.gov.uk/all-services/environment/environmental-protection/air-quality-newcastle-under-lyme

2.2 Previous assessments have identified nitrogen dioxide as the pollutant of concern, with a number of locations within the Borough exceeding the nitrogen dioxide annual mean objective.

2.3 This Annual Status Report considers all new monitoring data and assesses the data against the Air Quality Strategy (AQS) objectives. It also considers any changes that may have an impact on air quality.

2.4 The review of new diffusion tube monitoring data has not identified any locations outside of the four existing AQMA's, declared in December 2014 within the Borough where the AQS annual NO_2 objective was exceeded in 2017.

2.5 Monitoring of NO_2 concentration in the Air Quality Management Areas (AQMAs) and at a variety of locations across the Borough during 2017 shows, that there has been a general decrease in NO_2, with the majority of areas now being under the annual mean objective. There are however a number of hotspots within the Town Centre and Kidsgrove AQMA's.

Town Centre AQMA

2.6 Air Quality in this area is influenced by local road traffic and traffic utilising the major arterial routes, which converge on the town centre. There are a number of relevant receptors located at the back of pavement. The network is heavily congested at peak times of the day with high volumes of low speed mixed traffic. The town centre is experiencing a period of regeneration with provision for developments to provide around 3000 student bed spaces over the next four years. The Civic Offices site located on the Rycroft is destined to contribute towards a significant amount of accommodation as well as providing a mixed retail / leisure development. A number of office spaces are able to covert to residential use without requiring consideration of air quality. This has resulted in significant increases in the numbers of relevant receptors within the area where the Council is unable to influence development. In addition, the rural areas of the Borough are facing increased demands for applications for residential development, with people in these areas heavily reliant on cars to access services and employment opportunities within the town centre and wider areas.

2.7 NO_2 concentrations have generally decreased each year from 2012 onwards within the Town Centre. In 2017, sites DTK1, DT85 and DT102 had annual mean NO_2 concentrations in excess of the annual mean objective, with DT102 producing the highest reading across all of the AQMA's, with an annual mean of 60.4µg/m^3. There are also a number of sites that remain within 10% of the annual mean, which are at risk of exceedance in future years.

2.8 This AQMA will remain in place until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal objective

Porthill-Wolstanton-Maybank AQMA

2.9 Air Quality in this area is influenced by local road traffic and traffic utilising the junctions associated with the A500 dual carriageway. Relevant receptors in this location are mainly located at the back of footway. The main route through the area is single carriageway with traffic lighted junctions, signal controlled crossings, on street bus stops and significant sections of on street parking. Porthill Bank and Grange Lane are on significant gradients.

2. 10 There has been a general decrease in NO_2 concentration at the diffusion tube monitoring sites within this AQMA. DT24 remains the highest annual mean NO_2 concentration within the Porthill-Wolstanton-Maybank AQMA, with the value for 2017 being 35.3µg/m^3.

2.11 There are a number of works planned which may affect upon this location, this includes the Etruria Valley Development scheme, which sees changes to the Church Lane / Grange Lane junction the junction near to this site and a new access from Grange Lane into the City Centre via Etruria Valley. There are also planned improvement works by Highways England to the A500 between Wolstanton and Porthill. Both schemes are planned for delivery by 2020. They have the potential to increase traffic flow through this AQMA. Traffic modelling and the associated air quality impacts are currently being assessed by Highways England and Stoke on Trent City Council for their respective schemes. It is anticipated that this information will be available for inclusion in the next ASR.

2.12 Accordingly, the diffusion tube-monitoring network in this area will remain in place until the highway schemes have become embedded and there is confidence that $N0_2$ annual mean levels are consistently below the statutory objective.

Kidsgrove AQMA

2.13 Air Quality in this location is heavily influenced by traffic using the A34 Liverpool Road and local traffic accessing side roads from Liverpool Road within the centre of Kidsgrove. Relevant receptors are located back of footway and in close proximity to junctions and areas of congestion.

2.14 NO_2 concentrations have generally decreased each year from 2012 onwards within this AQMA. DT6 had the highest annual NO_2 mean concentration for this AQMA in 2017, with a value of 37.7µg/m^3. DT64 had an annual mean which was within 10% of the annual mean objective.

2.15 The AQMA will remain in place until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal objective.

2.16 Staffordshire County Council are planning a number of works in this area which area aimed at reducing congestion on Liverpool Road and hopefully this will have a beneficial effect on air quality.

2.17 Accordingly, the diffusion tube-monitoring network in this area will remain in place to monitor the success of the highway improvement works and until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal limit.

Madeley AQMA

2.18 Air Qulaity in this location is heavily influenced by traffic using M6 motorway which runs within 20 metres of the nearest receptor at Collingwood 3 Newcastle Road.

2.19 The NO_2 concentration at this location in has been within 10% of the annual mean for the previous 4-year period between 2012 and 2015. N02 annual mean results at monitoring site DT3 (Collingwood 3 Newcastle Road) dropped dramatically in 2016 to 31.9 µg/m and was 31µg/m^3 in 2017. It is however too early to say if this is likely to remain the situation moving forward.

2.20 Highways England are introducing smart managed motorways and hard shoulder running up to Junction 15 of the M6 (Stoke on Trent South) and from junction 16 (Stoke on Trent North and Crewe) through to junction 22. The stretch of motorway between junctions 15 and 16, which runs past experiences congestion at peak periods and may become a candidate for hard shoulder running and smart managed motorways in the future.

2.21 Based on the results since 2012 to present and potential future works to the M6 motorway this location will continue to be monitored for the near future.

Across the Borough of Newcastle under Lyme

2.22 There has been a general decrease in the annual NO_2 concentrations across the Borough over the past three years. This indicates that the strategies currently in place are already helping to reduce the NO_2 concentration within these areas of the Borough. However, work needs to be done to ensure that any further developments, or changes to the road networks across the Borough do not lead to an increase in the annual NO_2 concentration above the annual mean objective of 40µg/m^3.

Particulate Matter (PM_{10} and $PM_{2.5}$)

2.23 Particulate matter, or PM, is the term use to describe particles found in the air, including dust, dirt and liquid droplets. PM comes from both natural and man-made sources, including traffic emissions and Saharan-Sahel dust. These particles can be suspended in the air for long periods of time, and can travel across large distances.

2.24 Particulate matter (PM_{10}) is measured using an automatic monitor located at Queens Gardens (Site CM1) within the Town Centre AQMA. Particulate matter (PM_{10}) levels within Newcastle-under-Lyme, continues to be well below the annual mean objective level of 40µg/m^3, with the annual mean concentration for 2016 being 26µg/m^3. Monitoring ceased at the end of 2016.

2.25 Based on data provided by the Public Health Directorate at Staffordshire County Council, manmade $PM_{2.5}$ is estimated cause some 60 deaths per annum for adults over 30 years of age within the Borough.

2.26 The Borough Council, along with the Staffordshire County Air Quality Group, is now looking at ways in which $PM_{2.5}$ concentrations can be reduced at both a local and regional level.

2.27 The Borough Council, along with the Staffordshire County Air Quality Group and Staffordshire Public Health, is now looking at ways in which $PM_{2.5}$ concentrations can be reduced at both a local and regional level.

2.28 **Proposed actions arising from the 2018 Annual Status Report are as follows:**

a) Continue the current network of NO2 diffusion tube monitoring in the District to identify future changes in pollutant concentrations;
b) Eco-Stars (Efficient and Cleaner Operations) Fleet Recognition Scheme
c) Involvement with planned road improvement works to the A500 at the Grange Lane junction, with Highways England
d) Managing planning applications pro-actively both at a County and Borough Planning level
e) Involvement in changes to traffic light sequencing, in conjunction with Staffordshire County Highways Department
f) Involvement with proposed changes to road layouts, with both Highways England and Staffordshire County Highways Department
g) Promotion of Health and Wellbeing Through liaising with Public Health colleagues
h) Developing an air quality strategy for the Borough
i) Developing air quality action plans for the four air quality management areas
j) Developing air quality planning guidance for developers looking to build within the Borough.
k) Inclusion of air quality related planning policies in the new Newcastle under Lyme and Stoke and on Trent local plan (scheduled for publication 2020)

3. **Reasons for Preferred Solution**

The Council is required to take the action outlined in this report in order to fulfil its statutory duties.

4. **Outcomes Linked to Sustainable Community Strategy and Corporate Priorities**

The action taken achieves the following priorities detailed within the Council Plan

- Priority 1 – A clean, safe and sustainable borough
- Priority 3 –A healthy and active community
- Council Plan Outcome 1.3 The negative impact that the Council, residents and local businesses have on the environment will have reduced

5. **Legal and Statutory Implications**

The Council is required to produce an annual status report in partial fulfilment of its duties under Environment Act 1995. Work is also progressing on the preparation of the statutory air quality action plans for the four Air Quality Management Areas. These will be the subject of a further report to this committee.

6. **Financial and Resource Implications**

Existing budgets will be utilised to fund the work identified in this report.

7. **Background Papers**

- Environment Act 1995 – Part IV
- Local Air Quality Management Technical Guidance (LAQM.TG.16) (available at http://laqm.defra.gov.uk/documents/LAQM-TG16-April-16-v1.pdf0
- Air Quality Reports completed since 1997 available from https://www.newcastle-staffs.gov.uk/all-services/environment/environmental-protection/air-quality-newcastle-under-lyme

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2018 Air Quality Annual Status Report (ASR)

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

June 2018

Local Authority Officer	Mr Darren Walters
Department	Environmental Protection Team
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Telephone	01782 717 717
E-mail	Environmental_health@newcastle-staffs.gov.uk
Report Reference number	LAQM / ASR 2018
Date	June 2018

Endorsement from the Director of Health and Care, Staffordshire County Council

Staffordshire County Council is committed to working with partners to ensure that Staffordshire will be a place where improved health and wellbeing is experienced by all.

Poor air quality has a negative impact on public health, with potentially serious consequences for individuals, families and communities. Identifying problem areas and ensuring that actions are taken to improve air quality forms an important element in protecting the health and wellbeing of Staffordshire residents. Improving air quality is often a complex issue, presenting a multi-agency challenge – so it is essential that all agencies work together effectively to deliver improvements where they are needed.

As Director of Health and Care across Staffordshire I endorse this Annual Status Report which sets out the position for all the District and Borough Council's across Staffordshire and we will support an ongoing work programme to address air quality issues.

Dr Richard Harling
Director of Health and Care
Staffordshire County Council
June 2018

Executive Summary: Air Quality in Our Area

Air Quality in Newcastle-under-Lyme

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 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 billion[3].

Air Quality in Newcastle-under-Lyme

Air quality has been monitored in the Borough of Newcastle-under-Lyme over the last 19 years, by using Nitrogen dioxide diffusion tubes and an automatic monitoring station, which monitors real time concentrations of Nitrogen dioxide (NO_2) in the air. This substance is monitored because it is found in vehicle exhaust fumes, which is the main source of pollution within the Borough.

Conclusions and Priorities

Local Priorities and Challenges

The Borough is located in North Staffordshire and covers an area of 21,096 hectares (81 square miles), with a population of approximately 123,000. Newcastle's strategic location at the important junction between the roads running north from London to Carlisle and west to Chester has ensured that transport has played a major part in its growth. In addition to these historical routes, modern trunk roads also pass Through the Borough. These include the M6, which is currently one of the most heavily trafficked and congested roads in the country along with the A500, which is a major route linking many areas of Newcastle under Lyme and Stoke on Trent with junctions

[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

15 and 16 of the M6. Both of these junctions are adjacent to the Borough boundary and thus contribute to the traffic congestion in the area. A number of main roads converge on the two main towns in the Borough, notably Newcastle under Lyme and Kidsgrove. The A34, A52, A525, A527 and the A53 pass Through Newcastle and the A50, A5011 and A34 pass through Kidsgrove.

Traffic on these roads is a significant source of air pollutants affecting the air quality of the Borough. The other sources are industry and domestic properties. Particular industries with the greatest potential to cause air pollution have been prescribed for air pollution control under the Environmental Permitting (England and Wales) Regulations 2016. Some processes are regulated by the Environment Agency (these are referred to as Part A1 processes) and others regulated by local authorities (these are referred to as Part A2 and Part B processes). Within the Borough there are two Part A1 processes, three Part A2 processes and 39 Part B processes holding a permit. Details of the processes regulated by the Borough Council can be found on our website at www.newcastle-staffs.gov.uk/airquality.

The priorities for the local authority in addressing air quality are therefore, centred around ways in which;

1. The amount of traffic on the road can be reduced
2. Assessing and improving the vehicles using the roads within the Borough
3. Road traffic can be better managed to reduced stop-start, idling and congestion.
4. Traffic light signalling systems can be improved to enable a more fluid movement of traffic, particularly around the Town Centre ring road.
5. Residents can be encouraged to take up other forms of transport, including public transport, cycling and walking

Nitrogen Dioxide (NO_2)

Nitrogen dioxide is a gas which poses a risk to health as it can irritate the lungs and lower resistance to respiratory infections such as influenza. Particulate matter also affects the respiratory system, as it is made up of fine small solid particles or liquid

droplets which are suspended in the air. The smaller the particles, the deeper they can penetrate into the respiratory system and the more harmful they can be.

Through monitoring Nitrogen dioxide (NO_2) over the last 19 years, we have been able to identify that NO_2 emissions from road traffic, exceed the limits set down in law, in four areas of the Borough.

Four geographic areas of the Borough were declared as Air Quality Management Areas (AQMA's) in 2015 due to exceedances of the Nitrogen Dioxide annual mean objective at relevant receptors. These are detailed in Table 1: Air Quality Management Areas in Newcastle-under-Lyme 2016 below.

Table 1: Air Quality Management Areas in Newcastle-under-Lyme 2016

AQMA	No.	Description	Date Declared	Date Amended	Date Revoked	Pollutants
Kidsgrove	1	Declared due to exceedance of the NO2 annual mean objective, along Liverpool Road A50, Kidsgrove	15/01/15	-	-	Nitrogen dioxide (NO_2)
Newcastle-under-Lyme Town Centre	2	Covers Newcastle-under-Lyme Town Centre including the ring road (A53), King Street, George Street and London Road to the boundary with the City of Stoke on Trent AQMA.	15/01/15	-	-	Nitrogen dioxide (NO_2)
Maybank, Wolstanton, Porthill	3	Covers the principle routes between Maybank, Wolstanton and Porthill. Declared due to exceedances of the NO2 annual mean in Maybank High Street and the Porthill area.	15/01/15	-	-	Nitrogen dioxide (NO_2)
Little Madeley	4	Declared around the two properties at Little Madeley due to an exceedance of the NO2 annual mean arising from the M6 motorway	15/01/15	-	-	Nitrogen dioxide (NO_2)

Declaring these areas as AQMA's, means that the Council must put in to place an action plan of how the air quality can be improved and brought back within legal limits.

Air Quality Action Plans (AQAP) for each AQMA and the Borough as a whole have now been completed. Development of these AQAPs has involved input from a number of different sectors including Highways England, neighbouring local authorities planning, highways, and environmental health departments, Public Health at Staffordshire County Council. The AQAPs address the different ways in which levels of pollution can be reduced by managing traffic more efficiently, and encouraging walking, cycling, and the use of public transport across the Borough. Since declaring the AQMA's no new major sources of emissions have been identified.

Further information about the AQMAs and Action Plan can be found at:

https://www.newcastle-staffs.gov.uk/airquality

http://uk-air.defra.gov.uk/aqma/list

The Borough of Newcastle under Lyme

Overall Nitrogen dioxide levels in the Borough are falling, with the majority of monitoring stes showing annual mean concentrations below the annual mean objective. This indicates that the strategies currently in place are already helping to reduce the NO_2 concentration within these areas of the Borough.

Of the 41 Nitrogen dioxide diffusion tube sites;

- 35 showed a decrease in nitrogen dioxide levels when compared wioth levels seenin 2016
- 10 of the 41 sites have annual mean concentrations of within 10% of the annual mean objective, with 3 of these measuring an annual mean concentration greater than the annual mean objective.

Work needs to be done to ensure that any further developments, and changes to the road networks across the Borough do not lead to an increase in the annual NO_2 concentration above the annual mean objective of 40µg/m^3.

Kidsgrove AQMA – No. 1

Air Quality in this location is heavily influenced by traffic using the A34 Liverpool Road and local traffic accessing side roads from Liverpool Road within the centre of Kidsgrove. Relevant receptors are located back of footway and in close proximity to junctions and areas of congestion.

NO_2 concentrations have generally decreased each year from 2012 onwards within this AQMA. DT6 had the highest annual NO_2 mean concentration for this AQMA in 2017, with a value of 37.7µg/m^3. DT64 had an annual mean which was within 10% of the annual mean objective.

This AQMA will remain in place until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal objective.

Staffordshire County Council are planning a number of works in this area which area aimed at reducing congestion on Liverpool Road and hopefully this will have a beneficial effect on air quality.

Accordingly, the diffusion tube-monitoring network in this area will remain in place to monitor the success of the highway improvement works and until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal limit.

Town Centre AQMA – No. 2

Air Quality in this area is influenced by traffic utilising the major arterial routes, which converge on the town centre. There are a number of relevant receptors located at the back of pavement. The network is heavily congested at peak times of the day with high volumes of low speed mixed traffic. The town centre is experiencing a period of regeneration with provision for developments to provide around 3000 student bed spaces over the next four years. The Civic Offices site located on the Rycroft is destined to contribute towards a significant amount of accommodation as well as providing a mixed retail / leisure development. A number of office spaces are able to

covert to residential use without requiring consideration of air quality. This has resulted in significant increases in the numbers of relevant receptors within the area where the Council is unable to influence development. In addition, the rural areas of the Borough are facing increased demands for applications for residential development, with people in these areas heavily reliant on cars to access services and employment opportunities within the town centre and wider areas.

NO_2 concentrations have generally decreased each year from 2012 onwards within the Town Centre. In 2017, sites DTK1, DT85 and DT102 had annual mean NO_2 concentrations in excess of the annual mean objective, with DT102 producing the highest reading across all of the AQMA's, with an annual mean of 60.4µg/m^3. There are also a number of sites that remain within 10% of the annual mean, which are at risk of exceedance in future years.

This AQMA will remain in place until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal objective

Maybank-Wolstanton-Porthill AQMA – No. 3

Air Quality in this area is influenced by local road traffic and traffic utilising the junctions associated with the A500 dual carriageway. Relevant receptors in this location are mainly located at the back of footway. The main route through the area is single carriageway with traffic lighted junctions, signal controlled crossings, on street bus stops and significant sections of on street parking. Porthill Bank and Grange Lane are on significant gradients.

There has been a general decrease in NO_2 concentration at the diffusion tube monitoring sites within this AQMA. DT24 remains the highest annual mean NO_2 concentration within the Porthill-Wolstanton-Maybank AQMA, with the value for 2017 remains being 35.3µg/m^3.

The diffusion tube sited at the junction with Grange Lane and Church Lane (DT103) will remain in place as there are a number of works planned which may affect upon

this location, this includes the Etruria Valley Development scheme, which sees changes to the junction, the junction near to this site, and a new access from Grange Lane into the City Centre via Etruria Valley. There are also planned improvement works by Highways England to the A500 between Wolstanton and Porthill. Both schemes are planned for delivery by 2020. These works have the potential to increase traffic flow through this AQMA. Traffic modelling and the associated air quality impacts are currently being assessed by Highways England and Stoke on Trent City Council for their respective schemes

Accordingly, the diffusion tube-monitoring network will remain in place in this AQMA, until the highway schemes have become embedded and there is confidence that $N0_2$ annual mean levels are consistently below the statutory objective.

Little Madeley AQMA – No. 4

Air Qulaity in this location is heavily influenced by traffic using M6 motorway which runs within 20 metres of the nearest receptor at Collingwood, 3 Newcastle Road, Little Madeley.

The NO_2 concentration at this location in has decreased over the past 6 years. The $N0_2$ annual mean result at DT3 for 2017 was 31µg/m^3.

Highways England are introducing smart managed motorways and hard shoulder running up to Junction 15 of the M6 (Stoke on Trent South) and from junction 16 (Stoke on Trent North and Crewe) through to junction 22. The stretch of motorway between junctions 15 and 16, which runs past the receptor experiences congestion at peak periods and may become a candidate for hard shoulder running and smart managed motorways in the future.

Due to the works to the M6 motorway, this location will continue to be monitored for the near future.

Particulate Matter (PM_{10} and $PM_{2.5}$)

Particulate matter, or PM, is the term use to describe particles found in the air, including dust, dirt and liquid droplets. PM comes from both natural and man-made sources, including traffic emissions and Saharan-Sahel dust. These particles can be suspended in the air for long periods of time, and can travel across large distances.

PM less than 10 micrometers in diameter (PM_{10}) pose a health concern because they can be inhaled into and accumulate in the respiratory system. PM less than 2.5 micrometers in diameter ($PM_{2.5}$) are referred to as "fine" particles and are believed to pose the greatest health risks, as they can lodge deeply into the lungs.

The Council ceased monitoring for PM_{10} at the start of 2016.

Based on data provided by the Public Health Directorate at Staffordshire County Council, manmade $PM_{2.5}$ is estimated cause some 60 deaths per annum for adults over 30 years of age within the Borough.

The Borough Council, along with the Staffordshire County Air Quality Group, is looking into ways in which $PM_{2.5}$ concentrations can be reduced at both a local and regional level.

Actions to Improve Air Quality

To ensure that air quality within the Borough continues to improve the following areas are currently being looked into and promoted;

1. Eco-Stars
2. Involvement with planned road improvement works to the A500 at the Grange Lane junction, with Highways England
3. Managing planning applications pro-actively both at a County and Borough Planning level
4. Involvement in changes to traffic light sequencing, in conjunction with Staffordshire County Highways Department
5. Involvement with proposed changes to road layouts, with both Highways England and Staffordshire County Highways Department

6. Promotion of Health and Wellbeing Through liaising with Public Health colleagues
7. Developing an air quality strategy for the Borough
8. Developing air quality action plans for the four air quality management areas
9. Developing air quality planning guidance for developers looking to build within the Borough.
10. Inclusion of air quality related planning policies in the new Newcastle under Lyme and Stoke and on Trent local plan (scheduled for publication 2020)

Local Engagement and How to get involved

How to Get Involved

If residents and businesses reduce the amount of fuel and chemicals used, it will improve air quality. The following ways can help:

Commute

- ✓ Leaving the car at home one day a week. Further information can be found at www.staffssaferroads.co.uk/
- ✓ Consider car sharing your journey Further guidance can be found at https://share-a-lift.co.uk/
- ✓ Using public transport whenever practicable will reduce traffic congestion and improve air quality. Travel planning APP's are available for most smart phones. You can also find information online at http://travelsmartns.co.uk/
- ✓ By avoiding idling engines and/or air conditioning running continuously - switch your engine off; to save fuel, money and improve local air quality.

School Run

- ✓ Walking or cycling to school is not only good for health but it will save on fuel costs and help reduce local air pollution. Further guidance can be found within Travel into School www.staffordshire.gov.uk/transport/Stafford/Schools/Schools.aspx

- ✓ Take turns with friends, neighbours or family to drive or walk the children to school. Check whether your school has a travel plan.

Energy Efficiency

- ✓ Improving the energy efficiency of your home / school / workplace will help reduce energy bills, as well reducing the air pollution associated with power generation. For further information, please visit the Energy Savings Trust (EST) website www.energysavingtrust.org.uk, which is a non-profit organisation that promotes energy savings, funded by the Government and private sector.

Workplace transport

- ✓ ECO Stars (Efficient and Cleaner Operations) Fleet Recognition Scheme encourages and helps operators of HGVs, buses, coaches, vans and taxis to run fleets in the most efficient and green way. The scheme provides recognition for best operational practices, and guidance for making improvements. The ultimate aim is to reduce fuel consumption, which naturally leads to fewer vehicle emissions and has the added benefit of saving money! ECO Stars is currently managed by specialist transport consultants, Transport and Travel Research Ltd (TTR).

  It is free and straightforward to join ECO Stars. Simply contact the ECO Stars team by phone or email. They can complete the application form with you. One of the team can visit you in person to take you through the application

  Phone: 01543416416
  Email: ecostars@ttr-ltd.com
  To find out more about ECO-Stars visit https://www.ecostars-uk.com/

- ✓ Grants may be available to support your business in becoming more energy efficient and towards the purchase of cleaner vehicles and support with charging infrastructure. Further information can be found at;

- Office for Low Emission Vehicles: https://www.gov.uk/government/organisations/office-for-low-emission-vehicles
- Energy Saving Trust: www.energysavingtrust.org.uk

Around The Home

- ✓ Use water-based or low solvent paints, glues, varnishes and wood preservatives, look for brands with a low VOC content.
- ✓ Make sure your home is well ventilated especially during DIY or cleaning.
- ✓ Have your central heating system checked regularly to avoid risking exposure to toxic carbon monoxide.
- ✓ Keep wood stoves and fireplaces well maintained, and make sure that wood burners are exempted for use in smoke control areas. See our webpage for further advice (https://www.newcastle-staffs.gov.uk/all-services/environment/environmental-protection/smoke-control-advice)
- ✓ Purchase "Green Power" for the electricity in your home. (Contact your energy supplier).
- ✓ Be energy efficient- make sure your house is well insulated and use energy efficient appliances. Your energy supplier may offer grants to insulate your home.
- ✓ Avoid using bonfires to dispose of waste and never burn household waste, especially plastics, rubber and treated timber. See our webpages for advice on disposal / recycling and composting, at www.newcastle-staffs.gov.uk/bonfires

Newcastle under Lyme Borough Council's air quality reports and action plan documents are accessible from the following link https://www.newcastle-staffs.gov.uk/airquality

For enquires or suggestions on how to improve air quality please feel free to contact us:

Write to:	The Environmental Protection Team, Newcastle under Lyme Borough Council Civic Offices Merrial Street Newcastle under Lyme ST5 2AG
Email:	environmental_health@newcastle-staffs.gov.uk
Telephone:	01782 717717

Further Information

More information about local and national air quality can be found at the following sites;

- **UK Air** – https://uk-air.defra.gov.uk/

  This site is maintained by the Department for Environment, Food and Rural Affairs (Defra). It has a wide range of information including daily pollution forecasts for the UK, as well as health information for people who suffer with conditions such as asthma, lung conditions and heart problems.

- **Friends of the Earth** - https://www.foe.co.uk/index

  This site contains information about how you can get involved in helping to tackle air pollution and climate change, including information about renewable energy, how to reduce waste and ways that you can help to reduce air pollution from day to day.

- **Air Quality England** - http://www.airqualityengland.co.uk/

  This site has air quality monitoring data and site/pollutant air quality statistics for a number of locations within England. It has clear summary statistics on all the relevant pollutants in the context of UK and European legislation. You are

also able to access the uBreathe app via this website, which provides air pollution health advice wherever you are in the UK.

Table of Contents

List of Tables

List of Figures

1 Local Air Quality Management

This report provides an overview of air quality in Newcastle-under-Lyme during 2017. 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 Newcastle-under-Lyme to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England can be found in Table E.1 in Appendix E.

AQMA Name	Date of Declaration	Pollutants and Air Quality Object	City / Town	One Line Description	Is air quality in the AQMA influenced by roads	Level of Exceedance (maximum monitored/modelled concentration at a	Action Plan

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.

A summary of AQMAs declared by Newcastle-under-Lyme can be found in

		ives			controlled by Highways England?	location of relevant exposure)			
						At Declaration (µg/m3)	Now (µg/m3)	Date of Publication	Link
Newcastle-under-Lyme Borough								**2018**	https://www.newcastle-staffs.gov.uk/airquality
Kidsgrove AQMA Number 1	Declared January 2015	NO2 Annual Mean	Kidsgrove	Declared due to exceedance of the N02 annual mean objective along Liverpool Road A50, Kidsgrove.	NO	47.99	58.02	**2018**	
Newcastle under Lyme Town Centre AQMA Number 2	Declared January 2015	NO2 Annual Mean	Newcastle under Lyme	Declared due to exceedance of the N02 annual mean objective. Covers Newcastle under Lyme Town Centre including the ring road A53, King Street, George Street and London Road to the boundary with the City of Stoke on Trent AQMA	NO	58.8	83.88	**2018**	
Maybank, Wolstanton and Porthill AQMA Number 3	Declared January 2015	NO2 Annual Mean	Newcastle under Lyme	Covers the principal routes between Maybank, Wolstanton and Porthill. Declared due to exceedances of the N02 annual mean in Maybank High Street and in the Porthill area	NO	46.5	52.27	**2018**	

Little Madeley AQMA Number 4	Declared January 2015	NO2 Annual Mean	Madeley	Declared around two properties at Little Madeley due to an exceedance of the NO2 annual mean arising from the M6 motorway.	YES	52.1	56.65	**2018**	

Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at https://www.newcastle-staffs.gov.uk/all-services/environment/environmental-protection/air-quality-newcastle-under-lyme

Alternatively, see Appendix D: Map(s) of Monitoring Locations and AQMAs, which provides for a map of air quality monitoring locations in relation to the AQMA(s).

Table 2.1 – Declared Air Quality Management Area

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	City / Town	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance (maximum monitored/modelled concentration at a location of relevant exposure)		Action Plan	
						At Declaration (µg/m3)	Now (µg/m3)	Date of Publication	Link
Newcastle-under-Lyme Borough								**2018**	https://www.newcastle-staffs.gov.uk/airquality
Kidsgrove AQMA Number 1	Declared January 2015	NO2 Annual Mean	Kidsgrove	Declared due to exceedance of the N02 annual mean objective along Liverpool Road A50, Kidsgrove.	NO	47.99	58.02	**2018**	
Newcastle under Lyme Town Centre AQMA Number 2	Declared January 2015	NO2 Annual Mean	Newcastle under Lyme	Declared due to exceedance of the N02 annual mean objective. Covers Newcastle under Lyme Town Centre including the ring road A53, King Street, George Street and London Road to the boundary with the City of Stoke on Trent AQMA	NO	58.8	83.88	**2018**	
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Little Madeley AQMA Number 4	Declared January 2015	NO2 Annual Mean	Madeley	Declared around two properties at Little Madeley due to an exceedance of the NO2 annual mean arising from the M6 motorway.	YES	52.1	56.65	**2018**	

☒Newcastle-under-Lyme Borough Council confirm the information on UK-Air regarding their AQMA(s) is up to date

2.2 Progress and Impact of Measures to address Air Quality in Newcastle-under-Lyme

Defra's appraisal of last year's ASR concluded

Points raised by DEFRA on last ASR	How this has been addressed over the past year
Publication of an Action Plan covering the four AQMAs is to be finalised as soon as possible.	The Air Quality Action Plan's have been completed and are due to be consulted on in Summer 2018
Assessment of the effectiveness of measures implemented to meet the nitrogen dioxide objective is to be undertaken, and additional measures are to be introduced if those in use are not having the desired effect.	The effectiveness of measures used in past years to bring the NO_2 levels within the Borough to below the objective limit have been reviewed. Improvements have been seen year-on-year with the measures currently in place.

Newcastle-under-Lyme Borough Council has taken forward a number of direct measures during the current reporting year of 2017 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2.

More detail on these measures can be found in their respective Action Plans;

1. Borough Wide Air Quality Strategy[4]
2. Air Quality Planning Guidance
3. Inclusion of air quality related policies in the joint Newcastle under Lyme and Stoke on Trent Local Plan[5]

[4] https://www.newcastle-staffs.gov.uk/airquality
[5] http://www.stoke.gov.uk/ccm/content/planning/planning-general/local-development-framework/joint-local-plan.en

Key completed measures are:

- Adoption of a Green Travel Plan for new Civic Hub ('Castle House') Development in the Town Centre

Newcastle-under-Lyme Borough Council expects the following measures to be completed over the course of the next reporting year:

- Adoption of an Air Quality Action Plan for Newcastle-under-Lyme
- Adoption of an Air Quality Developers Guide
- Details of impacts and mitigation measures for the Highways England works to the A500 and the Stoke on Trent City Council proposals for Etruria Valley to be understood.
- Measures to reduce traffic congestion in Kidsgrove to be completed.
- Continue to monitor existing sites for nitrogen dioxide and identify new locations
- Continue to screen and comment on planning applications for impacts on air quality
- Continue to ensure compliance with Environmental Permitting requirements for permitted installations or installations requiring a permit
- Provide education and advice and if necessary enforce the smoke control areas within the Borough
- Provide education and advice and if necessary enforce relevant legislation relating to burning of domestic and commercial waste
- Work with Staffordshire Air Quality Forum to reduce $PM_{2.5}$ exposure.
- Actively engage in the development of the new Newcastle under Lyme and Stoke on Trent Local Plan to ensure that it is air quality friendly

Newcastle-under-Lyme Borough Council's priorities for the coming year are;

- Finalise Air Quality Planning and Policy Guidance
- Inclusion of air quality related policies in the joint Newcastle under Lyme and Stoke on Trent Local Plan
- Development of the Voluntary Quality Network Partnership with bus operators
- Involvement in discussions regarding the potential for a Clean Air Zone (CAZ) in the Potteries agglomeration

The principal challenges and barriers to implementation that Newcastle-under-Lyme Borough Council anticipates facing are;

- Increase in traffic growth and consequent congestion caused by a geographically constrained highway network which is operating beyond maximum design capacity
- Development aspirations Newcastle Town Centre and Keele University campus potentially increasing exposure or use of private vehicles
- The lack of a 5 year sustainable housing supply which is seeing large scale housing being developed in the countryside and the need to rely on private vehicles to access services and employment opportunities within the town centre and beyond
- Reduction in the frequency of bus services across the Borough
- Cessation of financially unviable bus routes by operators or removal of subsidy

Progress on the following measures had been slower than expected due to available resources;

- Adoption of an Air Quality Strategy for Newcastle-under-Lyme
- Adoption of an Air Quality Developers Guide

Newcastle-under-Lyme Borough Council anticipates that the measures stated above and in Table 2.2 will achieve compliance in all four of the AQMA's.

Whilst the measures stated above and in Table 2.2 will help to contribute towards compliance, Newcastle-under-Lyme Borough Council anticipates that further additional measures not yet prescribed, will be required in subsequent years to achieve compliance and enable the revocation of all four of the AQMA's.

Table 2.2 – 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	Borough Wide Air Quality Strategy	Policy Guidance and Development Control	Other policy	Lead and Funded: LA Environmental Health.	In progress			Reduction in emissions	Funding secured, planning phase	Autumn 2018	Requires formal consultation and committee approval
2	Air Quality Planning Guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Lead + Funded: LA Environmental Health	In progress			Reduction in emissions	Funding secured, planning phase	Autumn 2018	Requires formal consultation and committee approval
3	Inclusion of air quality related policies in the joint Newcastle under Lyme and Stoke on Trent Local Plan	Transport Planning and Infrastructure	Other	LA Environmental Health and Planning (Joint project with Stoke on Trent City Council)	In progress			Reduction in emissions	Implementation on-going	Winter 2020	
4	Staffordshire and Stoke on Trent Eco-Stars	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	Staffordshire Local Authorities (Lead by Cannock Chase DC)	In progress	Active	Target 20 HGV /HDV operators per LA area	Reduced vehicle emissions	Implementation on-going	2018	Slow take up by operators across County
5	Eco Stars award for Council Streetscene and Waste fleet	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	NULBC Streetscene Division	In progress			Reduced vehicle emissions	Implementation on-going	2018	4* Ecostars award with action plan
6	Green Travel Plan for new Civic Hub development in Town Centre	Promoting Travel Alternatives	Workplace Travel Planning	Lead by Staffordshire County Council as building owner in conjunction with Borough Council, Police, Library Service, Social Services, Aspire Housing	Completed	Awaiting implementation and monitoring		reduced vehicle emissions	Completed	Completed	Progress on implementation requires monitoring
7	Voluntary Quality Network Partnership with bus operators	Alternatives to private vehicle use	Other	Staffordshire County Council / Stoke on Trent City Council/ Local Bus Companies	Not yet started			Reduced vehicle emissions /	Not yet commenced. Identified in Newcastle under Lyme LTP		Requires commitment from bus operators and councils. Decline in bus passenger numbers and services affects financial viability for improvements. Local operators use older fleet vehicles across area.

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
W1	Improvements to Wolstanton and Porthill Junctions on A500 to reduce congestion	Traffic Management	UTC, Congestion management, traffic reduction	Highways England	Scheme achieved RIS approval for delivery by 2020			Reduction in congestion / improved journey times	Scheme being revised prior to tender	To be delivered in current Roads Investment Strategy window by March 2020	Funding identified by HE. Project flagged as high risk for air quality along A500 due to exceedance of EU action level
W2	Short term routing strategy to mitigate impact of congestion associated with works to A500	Traffic Management	UTC, Congestion management, traffic reduction	Highways England / Staffs County Council / Stoke on Trent City Council and NULBC Environmental Health	Issue flagged with HE at stakeholder meetings			Potential short term negative impact during build	Impacts not yet quantified	2020	Off network effects on AQ awaiting assessment by HE. Concerns about impact on Town Centre AQMA and Maybank, Wolstanton Porthill AQMA's as potential alternative route during two year build programme
W3	Evaluate the impact of the Etruria Valley Link Road in the May Bank, Porthill, Wolstanton area and provide appropriate mitigation	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Lead by Stoke on Trent City Council with planning application to Newcastle under Lyme Borough Council/ Staffordshire County Council involved	Issued flagged with Stoke on Trent City Council			unclear	Impacts not yet quantified	Updated application with revised air quality assessment Application anticipated Summer 2018	Awaiting AQ assessment. EIA Project. Planning application to Newcastle under Lyme Borough Council. Potential negative effects on Maybank Porthill, Wolstanton AQMA. Potential to improve AQ in Stoke on Trent at Basford Bank here hourly mean N02 is being exceeded.

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
K1	Kidsgrove Railway Station Transport hub including parking and improved bus/rail interchange with new bus facilities closer to the station, Real Time Passenger Information provided at Kidsgrove station and at the bus stops, disabled/cycle parking, drop off and taxi facilities, and safer pedestrian and cycle access routes to the station	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	East Midlands Trains	2015	2018/19		Has potential to increase patronage / increase use of public transport and private cat		2020	
K2	Traffic light optimisation to reduce congestion ALONG Liverpool Road	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	2017	2018		Reduced vehicle emissions		2018	
K3	Review location of bus stops to facilitate traffic flow around Liverpool Road / The Avenue	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council	2017	2018		Reduced vehicle emissions		2018	
N1	Ensure that effects of additional traffic generated by Ryecroft mixed retail / student development are properly understood	Other	Other	Henry Davidson Developments / Planning Application to Newcastle under Lyme B.C.	Aug-17						Application made to Newcastle under Lyme B.C green travel infrastructure and EV charging sought
N2	Ensure that effects of emissions from plant associated with Ryecroft mixed retail / student development are properly understood	Other	Other	Henry Davidson Developments / Planning Application to Newcastle under Lyme B.C.		Nov-17					Conditions imposed on permission. Hours of use of plant to be limited to minimise effects on AQ

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
N3	Wayfinding strategy Newcastle under Lyme Town Centre and outlying areas for walking and cycling	Promoting Travel Alternatives	Promotion of walking	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustans and Town Centre Business Improvement District	2017	2018		Reduced vehicle emissions		In progress	Strategy awaiting public consultation
N4	Cycle route improvements on A34 North (Cedar Road to Lower Milehouse Lane and Milehouse) and A527 (Town to Keele University)	Promoting Travel Alternatives	Promotion of cycling	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustans and Town Centre Business Improvement District		2018/19		Reduced vehicle emissions		Completed in 2017/18	Options identified for consultation
N5	Local Transport Package Managing Peak Hour Congestion and C-emissions on local roads and at junctions with the trunk road network	Traffic Management	UTC, Congestion management, traffic reduction	Staffordshire County Council				Reduced vehicle emissions	System optimised	Completed	UTC optimised on network around ring road and King Street / Etruria Road (A53) Limited capacity for physical works as network is heavily congested and constrained by local geography. Borough lies at centre of major road network for cross country freight.
N6	LSTF funding of cycling walking and bus links between N-u-L and Stoke	Alternatives to private vehicle use	Other	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustans and Town Centre Business Improvement District				Reduced vehicle emissions			Options identified for consultation

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
N7	Ring-Road enhanced signage & subway	Traffic Management	UTC, Congestion management, traffic reduction	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustans and Town Centre Business Improvement District	2017	2018/19		Reduced vehicle emissions			Options identified for consultation
N8	Car Park VMS Street parking restrictions	Traffic Management	Other	Lead by Newcastle under Lyme Borough Council with support from Staffordshire County Council, Sustans and Town Centre Business Improvement District	2017	2018/19		Reduced vehicle emissions			Options identified for consultation / Potential funding constraints
N9	Promotion of public transport RTPI upgrades	Public Information	Other	Staffordshire County Council with support via conditions on planning applications for inclusion in high occupancy student / keyworker accommodation	2017	Ongoing		Reduced vehicle emissions			RTPI and subsidised bus travel / green travel plans sought for large scale multi occupancy residential accommodation. Town centre expected to accommodate 3000 students for local universities
M1	Continue to monitor N02 at relevant location in Little Madeley	Other	Other	Newcastle under Lyme Borough Council Environmental Health		Ongoing					
M2	Engage with HE concerning proposals to introduce smart managed motorway / hard shoulder running in Madeley area between junctions 15 and 16 of the M6 motorway	Traffic Management	Other	Lead by Highways England	Scheme not identified in current HE RIS window up to 2020			Has potential to reduce congestion and vehicle emissions			Scheme not yet identified. Sections where side of junctions 15 and 16 of the M6 are being smart managed with hard shoulder running. Local geography is an issue to identifying appropriate solutions

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.

Particulate matter, or PM, is the term used to describe particles found in the air, including dust, dirt and liquid droplets. PM comes from both natural and man-made sources, including traffic emissions and Saharan-Sahel dust. These particles can be suspended in the air for long periods of time, and can travel across large distances.

PM less than 10 micrometres in diameter (PM_{10}) pose a health concern because they can be inhaled into and accumulate in the respiratory system. PM less than 2.5 micrometres in diameter ($PM_{2.5}$) are referred to as "fine" particles and are believed to pose the greatest health risks, as they can lodge deeply into the lungs and also pass into the bloodstream.

$PM_{2.5}$ is the pollutant which has the biggest impact on public health and on which the Public Health Outcomes Framework (PHOF) indicator 3.01[6] is based.

The Royal College of Physicians (RCP) undertook a review in February 2016[7] where they found that long term exposure to air pollution impairs lung function growth in children, and that outdoor exposure is linked to lung cancer in adults. Within Staffordshire it is estimated that 4.8%of all deaths can be attributed to exposure to $PM_{2.5}$, compared to 5.1% across England (40,000 deaths annually)[8]. Overall, the estimated cost to individuals and society is more than £20 billion annually for the UK.

Table 3 details the measures that Newcastle-under-Lyme Borough Council is taking to address $PM_{2.5}$

[6] Public Health Outcomes Framework 2016 – 2019 indicator 3.01 Fraction of mortality attributable to particulate air pollution https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/6/par/E12000005/ati/102/are/E10000028/iid/30101/age/230/sex/4

[7] ['Every Breath we Take: The Lifelong Impact of Air Pollution; Report of a working Party, February 2016, ISBN 978-1-86016-567-2],

[8] Mortality attributable to particulate air pollution Public Health Outcomes Framework

Table 3: Measures taken by Newcastle-under-Lyme Borough Council to address PM $_{2.5}$ levels

Measure	New	Existing	Part of Action Plan Y/N	Action Plan Name	Date Implemented
Urban Traffic Control System in areas of Newcastle-under-Lyme Town Centre and Kidsgrove AQMAs.		✓	Y	Newcastle-under-Lyme Town Centre Air Quality Action Plan Kidsgrove Air Quality Action Plan	
Encouraging agile and home working by Newcastle-under-Lyme Borough Council Staff		✓			
Working in partnership to promote travel alternatives for school travel, cycling and walking campaigns and Staffordshire 'Share-a-Lift' schemes		✓			
Working in partnership to promote the use of rail and inland waterways		✓			
Updating local transport plans and district strategies		✓			
Kidsgrove Station Interchange – due to begin 2018		✓	Y	Kidsgrove Air Quality Action Plan	

Measure	New	Existing	Part of Action Plan Y/N	Action Plan Name	Date Implemented
RTPI routes 3 & 4 Newcastle Town Centre. Improved future bus services to Chatterley Valley		✓			
To influence policies to support improvements in emissions through the development of the 'Newcastle under Lyme Stoke-on-Trent Joint Local Plan'.		✓			
Continue to work in partnership in lobbying government concerning STOR Sites (Short Term Operating Reserve) Energy Generation. Regulation for this is via planning / permitting regime.		✓			
Working in partnership to improve route management plans, and develop strategic routing strategies for HGV's		✓			
Continuing to be part of ECO Stars to recognition for best operational practices and improvements to reduce vehicle emissions.		✓			
Continuing to reduce pollution through IPPC Permits going beyond BAT		✓			

Measure	New	Existing	Part of Action Plan Y/N	Action Plan Name	Date Implemented
Reporting 'smokey' vehicles via the gov.uk hotline		✓			
Continuing to be involved with multi agency working with Fire Service and Environment Agency for burning on trade premises		✓			
Continuing to be involved with multi agency working with Staffordshire Fire Service and Local Authority Building Control regarding chimney fires and complaints about DIY domestic heating systems.		✓			

2.3.1 Particulate Matter ($PM_{2.5}$) Levels in Staffordshire and Stoke-on-Trent

A number of the Staffordshire Authorities currently monitor locally for PM_{10}. Defra's Automatic Urban and Rural Network (AURN) site Stoke-on-Trent Centre has a dedicated $PM_{2.5}$ monitor. Table 2.3 presents data on the local level of $PM_{2.5}$ annual mean concentrations for the Staffordshire Authorities. Where the data is derived from PM_{10} monitoring this has been adjusted by applying a correction factor of 0.7 to derive the $PM_{2.5}$ component. The correction factor has been derived from the average of all ratios of $PM_{2.5}/PM_{10}$ for the years from 2010 to 2014 for forty sites within the Automatic Urban and Rural Network (AURN) where these substances are measured on an hourly basis and follows the guidance published in LAQM (TG16).

Table 4: Annual Mean PM_{10} and $PM_{2.5}$ Results of monitoring by Staffordshire Authorities 2011 to 2017

Annual Mean PM_{10} and $PM_{2.5}$

Results from monitoring Staffordshire Authorities 2013 - 2017

Authority	Site Type	Monitor Location	OS Grid Ref		Year				
					2013	2014	2015	2016	2017
Newcastle under Lyme	Roadside	Queen`s Gardens	E385057 N346137	PM_{10}	22.5	22	22.9	(2)	(2)
				$PM_{2.5}$	15.8 (1)	15.4 (1)	16 (1)		
Cannock Chase	Roadside	Watling St Bridgetown	SJ980086	PM_{10}	21	19.6	(3)	(3)	(3)
				$PM_{2.5}$	14.7 (1)	13.7 (1)			
	Roadside	Cannock A5190	E401392 N309954	PM_{10}	-	-	-	-	14
				$PM_{2.5}$	-	-	-	-	9.8
Stoke on Trent	Roadside	Basford	E386288 N346802	PM_{10}	-	-	-	-	23
				$PM_{2.5}$	-	-	-	-	16
	Roadside	A50 Meir Tunnel	E392548 N342572	PM_{10}	-	-	20(4)	20	18
				$PM_{2.5}$	-	-	14(4)	14	13
	Urban Background	Stoke on Trent Central	E388351 N347895	$PM_{2.5}$	10	10	12	12	9
	Roadside	Middleport	E385780 N349376	PM_{10}	25	24	22	(5)	(5)
				$PM_{2.5}$	18(1)	17(1)	15(1)		
East Staffordshire	Roadside	Derby Tum	E424671 N324019	PM_{10}	29	31	23	(6)	(6)
				$PM_{2.5}$	20.3(1)	21.7(1)	16.1(1)		

Notes:
(1) $PM_{2.5}$ results are derived from PM_{10} monitored results corrected with a 0.7 correction factor in accordance with TG16 Annex B: Derivation of $PM_{2.5}$ to PM_{10} Ratio. All other results are directly monitored.
(2) Newcastle-under-Lyme PM10 monitor decommissioned in 2016
(3) Cannock Chase Watling Street and Bridgetown PM_{10} monitors decommissioned
(4) A50 Meir Tunnel Valid data capture for 2015 was 59%. The site was commissioned on 22 May 2015.
(5) Middleport monitor was decommissioned at the end 2015.
(6) East Staffordshire`s monitors were decommissioned 2016.

As can be seen from the results, concentrations of $PM_{2.5}$ within the Staffordshire Authorities remain below the 2020 EU limit value of 25µg/m^3.

2.3.2 $PM_{2.5}$ and Mortality in Staffordshire & Stoke-on-Trent

Although the levels of $PM_{2.5}$ within the County and City of Stoke on Trent are below the 2020 EU Limit value, the impact on adult mortality directly attributable to $PM_{2.5}$ is nonetheless still an important public health issue within Staffordshire and Stoke-on-Trent. This is revealed in data obtained from Public Health England used to inform Public Health Outcomes Framework indicator 3.01[9], as shown in Table 5.

The percentage estimated number of deaths attributable to $PM_{2.5}$ in adults over 30 has been translated into the estimated number of attributable deaths for each local authority area within Staffordshire, and are shown in Table 6. The data presented to 2013 is the latest data available at time of publication of this report. Approximately 5% of deaths within the County can be attributed to $PM_{2.5}$.

Table 5: Mortality attributable to $PM_{2.5}$ air pollution, for adults aged 30 and over, by Local Authority Area within Staffordshire from 2012 to 2016[9]

Local Authority	2012	2013	2014	2015	2016
Cannock Chase	4.8%	5.1%	5.1%	4.6%	5.4%
East Staffordshire	4.8%	5.1%	5.1%	4.8%	5.6%
Lichfield	5.0%	5.1%	5.0%	4.6%	5.5%
Newcastle-under-Lyme	4.6%	4.9%	4.7%	4.2%	4.7%
South Staffordshire	4.8%	5.1%	5.0%	4.7%	5.1%
Stafford	4.6%	4.9%	4.8%	4.7%	4.8%
Staffordshire Moorlands	4.2%	4.7%	4.5%	4.0%	4.6%
Tamworth	5.2%	5.5%	5.4%	4.9%	6.0%
Staffordshire	**4.7%**	**5.0%**	**4.9%**	**4.5%**	**5.2%**
West Midlands	**5.1%**	**5.4%**	**5.2%**	**4.8%**	**5.5%**
England	**5.1%**	**5.3%**	**5.1%**	**4.7%**	**5.3%**

[9] *Source: Public Health Outcome Framework, Public Health England, http://www.phoutcomes.info/*

Table 6: Public Health Outcomes Framework Indicator 3.01- Fraction of annual all cause adult mortality attributable to anthropogenic (human made) particulate air pollution (measured as fine particulate matter, $PM_{2.5}$) for Staffordshire Authorities 2012 to 2016[10]

	YEAR														
	2012			2013			2014			2015			2016		
District/ County	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths	Deaths - all causes persons 30+	%*	Estimated attributable deaths
Newcastle-under-Lyme	**1218**	**4.6**	**60**	**1295**	**4.9**	**60**	**55**	**4.7**	**60**	**55**	**4.2**	**50**	**1291**	**4.7**	**60**
Stafford	1195	4.6	50	1261	4.9	60	65	4.8	60	60	4.7	60	1254	4.8	60
East Staffordshire	966	4.8	60	1097	5.1	60	55	5.1	50	55	4.8	50	1065	5.6	60
South Staffordshire	1162	4.8	60	1102	5.1	60	55	5	50	55	4.7	60	1128	5.1	60
Lichfield	953	5	50	1050	5.1	50	50	5	50	50	4.6	50	1044	5.5	60
Staffordshire Moorlands	1020	4.2	40	1085	4.7	50	45	4.5	50	45	4	40	1110	4.6	50
Cannock Chase	844	4.8	40	787	5.1	40	45	5.1	40	45	4.6	40	879	5.4	50
Tamworth	553	5.2	30	592	5.5	30	35	5.4	30	30		30	615	6	40
Stoke on Trent	2386	4.9	115	2412	5.2	125	2318	5.0	115	2479	4.9	110	2454	5.0	120
Staffordshire County	7911	4.7	372	8269	5	420	400	4.9	400	390	4.5	390	8386	5.2	430

[10] Source Public Health England https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/6/par/E12000005/ati/102/are/E10000028/iid/30101/age/230/sex/4

Air pollution is known to increase the chances of individuals being admitted to hospital. During 2016/17 there were almost 400 emergency (unplanned) admissions to hospital as a result of COPD for Newcastle residents aged 35 and over [6]. Between 2015/16 and 2016/17 there was an increase in the number of Newcastle residents being admitted to hospital with rates now being higher than the national average (Figure 1).

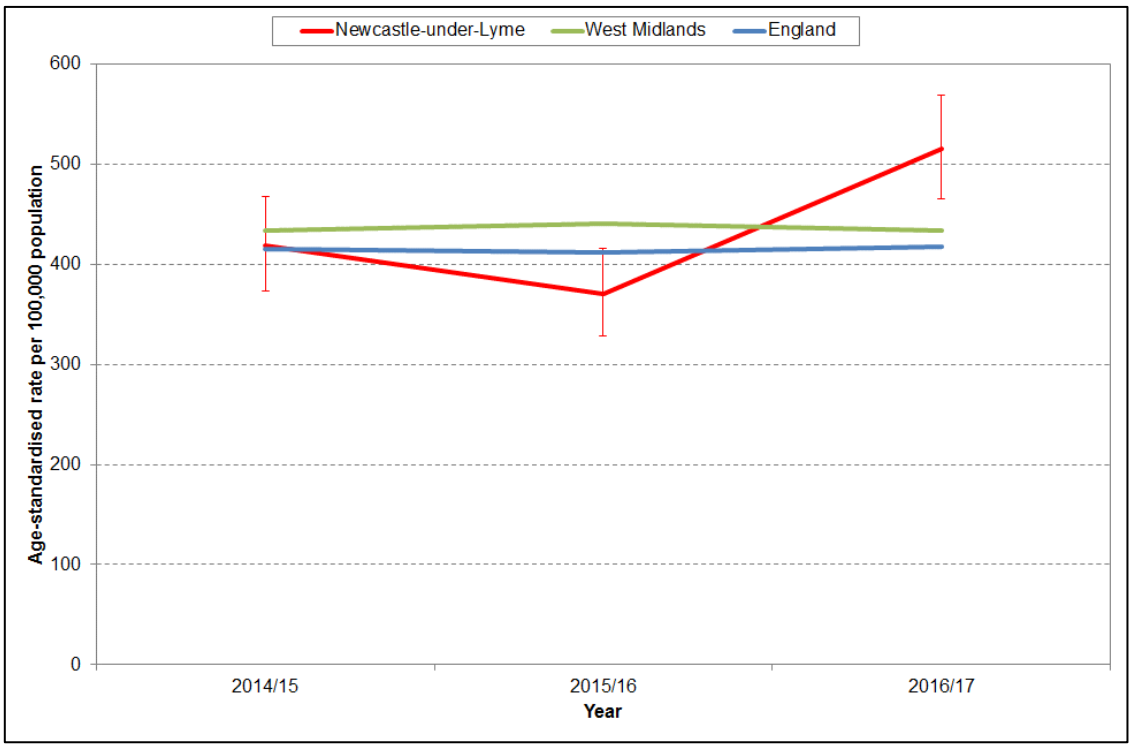


Figure 1: Emergency admissions from chronic obstructive pulmonary disease, adults aged 35 and over [11]

2.3.3 Actions being taken within Staffordshire to reduce $PM_{2.5}$

A number of the Staffordshire Authorities are currently involved in implementing measures to reduce levels of $N0_2$ within their areas, which are detailed elsewhere in this report. Whilst there is currently no statutory duty imposed on Local Authorities in England to reduce $PM_{2.5}$, a number of the measures are complementary. A mapping exercise completed by the Staffordshire Air Quality Forum members details the measures currently in place which are considered to have an impact in reducing $PM_{2.5}$ within the County. These are produced in Table 2.4 below;

[11] *Source: http://fingertips.phe.org.uk/, Public Health England*

2.4 Actions being taken within Staffordshire to reduce $PM_{2.5}$

A number of the Staffordshire Authorities are currently involved in implementing measures to reduce levels of NO2 within their areas, which are detailed elsewhere in this report. Whilst there is currently no statutory duty imposed on Local Authorities in England to reduce $PM_{2.5}$, a number of the measures are complementary. A mapping exercise completed by the Staffordshire Air Quality Forum members details the measures currently in place which are considered to have an impact in reducing $PM_{2.5}$ within the County. These are produced in Table 2.4 below;

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions(low, medium, high)	Reduces PM2.5 emissions Y/N	Local Authority								
				Stoke on Trent CC	Staffordshire Moorlands DC	Newcastle-under-Lyme BC	Stafford BC	Cannock Chase DC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
Traffic Management	Urban Traffic Control systems, Congestion management, traffic reduction	low	Y	✓	UTC in Leek Town Centre	UTC in areas of Newcastle Town Centre AQMA and Kidsgrove AQMA	UTC in Stafford Town Centre	UTC in Cannock Town Centre	UTC in Burton Town Centre. Planned A444 corridor study. Burton Town Centre regeneration. B5017 corridor improvements between Wellington Road/ Shobnall Road & Postern Road. Tatenhill and Rangemore improvements	Investigations ongoing into UTC in areas of Lichfield City Centre		UTC in Tamworth Town Centre at Ventura Park
	Reduction of speed limits, 20mph zones	low	Y	✓			20mph zones near some schools in residential areas	20mph zones in Brereton, Hednesford and Rugeley	20 mph zones near some schools in residential areas		20mph zones in Trysull, Bradley, Kinver and Bilbrook	
	Road User Charging (RUC)/ Congestion charging	low	Y					M6 Toll		M6 Toll	M6 Toll	
	Anti-idling enforcement	low	Y									
	Other		Y									
Promoting Travel Alternatives	Workplace Travel Planning	low	Y		Staffordshire County Council has successfully acquired funding for a 2 year work and school travel plan programme for work in the vicinity of AQMAs in Stafford and Stoke. **Staffordshire Sustainable Travel – Cycling maps, guides and Route Planner**							
	Encourage / Facilitate home-working	low	Y	Agile working adopted by Stoke-on-Trent CC		Agile working adopted by NULBC		Homeworking policy adopted	Homeworking policy adopted		Agile working policy adopted	Homeworking policy adopted
	School Travel Plans	low	Y	Modeshift STARS	Staffordshire School Active Travel							
	Promotion of cycling	low	Y	**Stoke Cycle Maps**	**Staffordshire Sustainable Travel – Cycling maps, guides and Route Planner**							
	Promotion of walking	low	Y	Travel Smart	Staffordshire Walking Routes							
	Staffordshire Share a Lift Scheme		N	Stoke-on-Trent Share a Lift Scheme	Staffordshire Car Share							
	Promote use of rail and inland waterways	medium	Y	North Staffordshire Community Rail Partnership	North Staffordshire Community Rail Partnership operating along the North Staffordshire Line, includes Blythe Bridge Rail Station. The County Council	North Staffordshire Community Rail Partnership operating along the North Staffordshire Line, includes Blythe Bridge Rail Station. The County Council	North Staffordshire Community Rail Partnership operating along the North Staffordshire Line, includes Blythe Bridge Rail Station. The County Council	SCC is a member of West Midlands Rail Ltd which will bring a change in the way that local rail services are managed and operated. The County Council Draft Rail Strategy is	Community Rail Partnership operating along the North Staffordshire Lineand includes Uttoxeter Rail Station. The County Council Draft Rail Strategy is			

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions(low, medium, high)	Reduces PM2.5 emissions Y/N	Local Authority								
				Stoke on Trent CC	Staffordshire Moorlands DC	Newcastle-under-Lyme BC	Stafford BC	Cannock Chase DC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
					Draft Rail Strategy is available HERE	Draft Rail Strategy is available HERE	Draft Rail Strategy is available HERE	available HERE	available HERE			
Transport Planning and Infrastructure	Local Transport Plans and District Strategies	high	Y	Local Transport Plan	Local Transport Plan							
	Public transport improvements- interchanges stations and services	low	Y	Improvements around Stoke-on-Trent railway station in development		Kidsgrove Station interchange planned 2018	Recent improvements completed at Stafford Rail Station	Planned improvements at Cannock Station as part of Mill Green development	Planned improvements at Burton Rail Station	Planned improvements at Lichfield City station as part of Friarsgate development. Lichfield Trent Valley improvements to make station accessible		Improvements at Tamworth station
	Public cycle hire scheme	low	Y	Stoke Railway Station 'Brompton Dock' Bike Hire & Cycle Hub				In house Cycle to work scheme				
	Cycle network	low	Y	Stoke-on-Trent Cycle Map & Guide	Staffordshire Sustainable Travel – Cycling maps, guides and Route Planner							
	Bus route improvements	high	Y	Improvements around Stoke-on-Trent railway station in development	Continued delivery of demand responsive public transport Moorlands Connect, bus infrastructure improvements to route 9 Biddulph-Hanley	RTPI routes 3 & 4 Newcastle Town Centre. Improved future bus services to Chatterley Valley	RTPI Stafford Town Centre, A34 RTPI and bus priority measures, Stafford. Improved bus priority and interchange on A518, Stafford post-SWAR	Proposed improvements to services 23,24 and 26 in Rugeley, service 2 Cannock-Walsall and service 32/33 Pye Green	Removal of obstructions on New Street	New central bus station. New or extended services to Fradley. New bus infrastructure Burntwood Town Centre. RTPI Lichfield City Centre.	Improved bus infrastructure Gt Wyrley to Bloxich corridor, & on routes 256 Wombourne to Stourbridge, 255 Wolverhampton to Merry Hill, 5 Codsall to Wolverhmapton, 1 Huntington to Walsall and 54 Stafford to Wolverhampton.	Improved bus infrastructure route 2 Tamworth-Perrycrofts. RTPI Tamworth Town Centre and Ventura Park. Victoria Road, Tamworth upgraded interchange.
Alternatives to private vehicle use	Bus based Park & Ride	medium	Y					Nil				
	Car Clubs	low	Y					Nil				
Policy Guidance and Development Control	Planning applications to require assessment of exposure / emissions for development requiring air quality impact assessment	high	Y				✓	Local plan - Policy CP16 - Climate Change and Sustainable Resource Use Cannock chase	http://www.eaststaffsbc.gov.uk/planning/planning-policy/local-plan-2012-2031			
	Air Quality Strategy		N	Local Air Quality Strategy - Stoke-on-Trent City Council		In progress. Due Autumn 2018	✓	nil	http://www.eaststaffsbc.gov.uk/environmental-health/pollution/bonfires			
	Planning Guidance for developers		N	To develop planning guidance for developers and to develop into SPD		In progress. Due Autumn 2018	✓	Supplementary Planning Policy Documents	http://www.eaststaffsbc.gov.uk/environmental-health/pollution/bonfires			

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions(low, medium, high)	Reduces PM2.5 emissions Y/N	Local Authority								
				Stoke on Trent CC	Staffordshire Moorlands DC	Newcastle-under-Lyme BC	Stafford BC	Cannock Chase DC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
				once Local Plan Policies in Place								
	Developer Contributions based on damage cost calculation		N	To develop policies to secure contributions to offset pollution					Yes			
	Planning Policies		N	To influence policies to support improvements in emissions Through development of Newcastle under Lyme Stoke-on-Trent Joint Local Plan		To influence policies to support improvements in emissions Through development of Newcastle under Lyme Stoke-on-Trent Joint Local Plan	✓	Local Plan	Air Quality Policy for Development Control.			
	STOR Sites (Short Term Operating Reserve) Energy Generation . Regulation via planning / permitting regime	high	Y	To lobby Central Government via appropriate forums (e.g. Staffordshire Air Quality Forum / Midlands Joint Advisory Council) for consideration of air quality implications at a national level and to support local authorities and developers with appropriate guidance.								
	Low Emissions Strategy	high	Y									
Freight and Delivery Management	Freight Consolidation Centre	medium	Y									
	Route Management Plans/ Strategic routing strategy for HGV's	high	Y	Staffordshire Local Transport Plan								
	Quiet & out of hours delivery	low	Y				✓	✓				
	Delivery and Service plans	medium	Y									
	Freight Partnerships for city centre deliveries	high	Y									
Vehicle Fleet Efficiency	Driver training and ECO driving aids	medium	Y				✓	✓	ESBC staff undertaken ECO driving			
	Promoting low emission public transport	high	Y									
	Vehicle retrofitting programmes	medium	Y									
	Fleet efficiency and recognition schemes	medium	Y	Staffordshire and Stoke-on-Trent Eco-Stars								
Promoting low emission transport	Low emission zone (LEZ) Clean Air Zone (CAZ)	high	Y									
	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	high	Y					Waste fleet vehicles comply with Euro VI.				
	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	high	Y				✓					

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions(low, medium, high)	Reduces PM2.5 emissions Y/N	Local Authority								
				Stoke on Trent CC	Staffordshire Moorlands DC	Newcastle-under-Lyme BC	Stafford BC	Cannock Chase DC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	high	Y				✓					
	Priority parking for LEV's	high	Y	Electric Vehicle charging spaces								
	Taxi Licensing conditions	medium	Y	Hackney Carriage & Private Hire Licensing Policy 2016-2019								
	Taxi emission incentives	medium	Y									
Environmental permits	Introduction/increase of environment charges through permit systems and economic instruments (Permit fees set centrally)	medium	Y				✓	Unable to achieve at a local level without central government approval				
	Measures to reduce pollution through IPPC Permits going beyond BAT	medium	Y	Environmental Permitting General Guidance Manual; Chapter 15								
	Large Combustion Plant Permits and National Plans going beyond BAT	high	Y									
	Other	Unknown	Y									
Other measures	Smoky Diesel Hotline			Report a Smoky Vehicle								
	A5 and M6 Partnership							A5 Partnership			Strategy for the A5 2011-2026	
	Domestic Smoke Control advice and Enforcement			Smoke control advice		Smoke control advice	✓	Smoke control advice	Smoke control advice		Smoke control advice	
	Garden Bonfires - Advice and nuisance enforcement			Garden bonfire advice		Garden bonfire advice	✓	Garden bonfire advice	Garden bonfire advice		Garden bonfire advice	Garden bonfire advice
	Commercial burning advice and enforcement			Bonfire advice		Bonfire advice	✓	Bonfire advice	Bonfire advice			Bonfire advice
	Multi agency working with Fire Service and Environment Agency for trade burning						✓	Information shared as appropriate				Information shared as appropriate
	Multi agency working with Staffordshire Fire Service and Local Authority Building Control regarding chimney fires and complaints about DIY domestic heating systems							Information shared as appropriate				

Measures category	Measure Classification	Effect on reducing NOx and PM10 emissions(low, medium, high)	Reduces PM2.5 emissions Y/N	Local Authority								
				Stoke on Trent CC	Staffordshire Moorlands DC	Newcastle-under-Lyme BC	Stafford BC	Cannock Chase DC	East Staffs BC	Lichfield DC	South Staffs DC	Tamworth BC
	Stoke-on-Trent Low Carbon District heat Network			Stoke on Trent Low Carbon District Heat Network								

2.5 $PM_{2.5}$ in Staffordshire & Stoke-on-Trent - Next steps

As $PM_{2.5}$ is an issue requiring collaboration between the district, county and city authorities within Staffordshire, the following actions are proposed in addition to those outlined in the action plan. Progress on these and the action plan will be detailed in the 2019 ASR.

- To agree a target for reducing Fraction of All Cause Mortality from $PM_{2.5}$ in each district, city and county authority by 2020
- To agree a target for reducing $PM_{2.5}$ exposure (calculated from PM_{10} exposure / background maps / local monitoring where available)
- To maintain compliance with the 2020 EU limit value of 25µg/m3
- To include Public Health Outcome Framework Indicator 3.01 in the Staffordshire and District Authority and City Council Joint Strategic Needs Assessment for 2018/2019 onwards and to report progress to the relevant Health and Wellbeing Boards.
- To continue to identify risks affecting $PM_{2.5}$ which need to be addressed at a national level e.g.
    - A number of authorities within Staffordshire are receiving applications for STOR (Short Term Operating Reserve) sites to supplement power to the National Electricity Grid at times of peak demand. These sites typically operate during the autumn / winter months and can be high emitters of PM. There is currently a conflict in national policy which is seeking security of energy supply and the drive to reduce anthropogenic $PM_{2.5}$. Recent approaches to DEFRA have revealed a lack of suitable guidance to local authorities and STOR operators.
    - To lobby for a suitable damage cost calculation to reflect the cost to society from $PM_{2.5}$ and to support this through local and national planning policies.

2.6 A53 PCM (Pollution Climate Mapping)

~~~ DARREN TO COMPLETE ~~~

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.

Newcastle-under-Lyme Borough Council undertook automatic (continuous) monitoring at one site (CM1) during 2017. Table A.1 in Appendix A shows the details of the site.

National monitoring results are available at www.newcastle-staffs.gov.uk/airquality.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

Newcastle-under-Lyme Borough Council undertook non- automatic (passive) monitoring of NO_2 at 41 sites during 2017.

Table A.2 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. “annualisation” and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, “annualisation” and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Table A.3 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3.

For diffusion tubes, the full 2017 dataset of monthly mean values is provided in Appendix B.

Table A.4 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past 5 years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year.

Nitrogen dioxide Levels Across the Borough of Newcastle-under-Lyme

Overall Nitrogen dioxide levels in the Borough are falling, with the majority of monitoring stes showing annual mean concentrations below the annual mean objective. Of the 41 Nitrogen dioxide diffusion tube sites situated across the borough;

- 35 showed a decrease in nitrogen dioxide levels when compared wioth levels seenin 2016
- 10 of the 41 sites have annual mean concentrations of within 10% of the annual mean objective, with 3 of these measuring an annual mean concentration greater than the annual mean objective.

Figure A.1 shows the annual mean NO_2 trends for all diffusion tube monitoring locations within the Borough. The annual mean NO_2 concentration for all 41 diffusion tubes across the Borough of Newcastle-under-Lyme in 2017 was 32.7µg/m^3.

Newcastle-under-Lyme Air Quality Management Areas

Four AQMAs were declared across the Borough of Newcastle-under-Lyme in 2015, relating to elevated levels of Nitrogen dioxide (NO_2). The results from diffusion tube monitoring within these AQMAs is as follows;

3.2.2 Kidsgrove - AQMA Number 1

Air Quality in this location is heavily influenced by traffic using the A34 Liverpool Road and local traffic accessing side roads from Liverpool Road within the centre of Kidsgrove. Relevant receptors are located back of footway and in close proximity to junctions and areas of congestion.

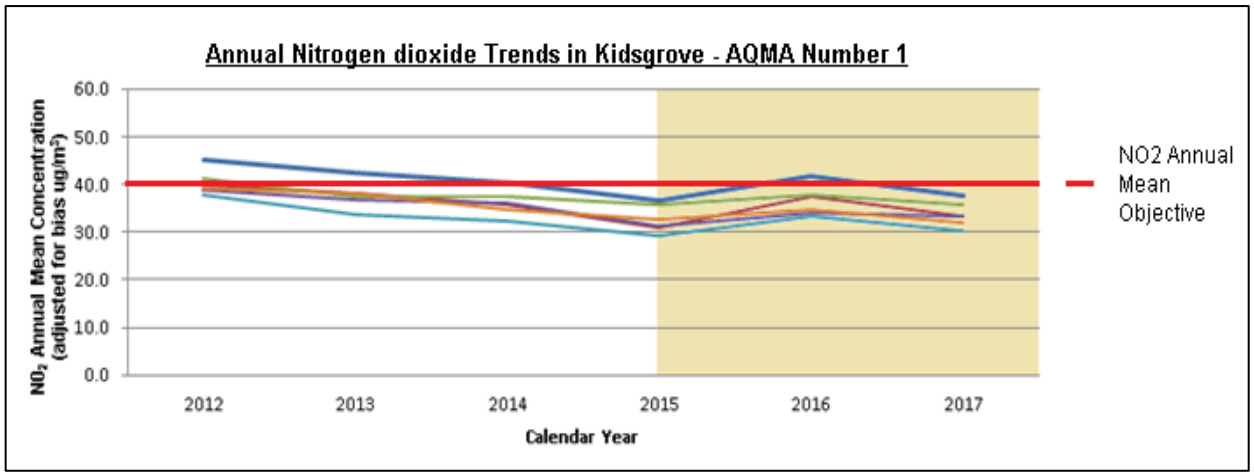


Figure 2 - Annual Mean NO_2 Concentrations from 2012 to 2017 of Kidsgrove AQMA Number 1

Figure 2 shows the annual Nitrogen dioxide trends in the Kidsgrove AQMA from 2012 to 2017. The highlighted section shows the changes in NO_2 concentrations from 2015, when the AQMA was declared, to 2017.

Over the past 6 years, there has been a general decrease in NO_2 concentrations each year from 2012 onwards within this AQMA.

In the year following the AQMA declaration, there was a slight increase in annual mean NO_2 concentration, however, over the past 12 months this has decreased and is almost back to the levels that were seen in 2015.

As shown in ***Figure 2***, during 2017 all monitoring sites measured an annual mean concentration below the annual mean objective, however Site DT6 is still measuring an annual concentration within 10% of the objective (DT6 has an annual mean NO_2 concentration of 37.7µg/m^3). Site DT64 had an annual mean concentration of 35.9µg/m^3 in 2017, which is just outside of the 10%.

As site DT6 was within 10% of the annual mean objective limit, a nitrogen dioxide distance correction calculation was conducted, which confirmed that although beneath the objective value, the predicted concentration at the receptor remained within 10% of the objective value (predicted concentration at receptor 37.3µg/m^3). Details of this calculation can be found in *Appendix D: 3.3 Distance Correction.*

Sites DT6 and DT64 are located on Liverpool Road, Kidsgrove, which becomes heavily congested at peak times. This results in vehicles idling while waiting for lights to change, and while vehicles turn onto 'The Avenue' and 'Heathcote Street'. Both DT6 and DT64 monitoring sites are representative of public exposure.

Staffordshire County Council are planning a number of works in this area which area aimed at reducing congestion on Liverpool Road, it is hoped that this will have a beneficial effect on air quality

The Kidsgrove AQMA will remain in place to monitor the success of the highway improvement works and until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean objective.

3.2.3 Town Centre AQMA Number 2

Air Quality in this area is influenced by road traffic utilising the major arterial routes which converge on the town centre. There are a number of relevant receptors located at the back of pavement. The network is heavily congested at peak times of the day with high volumes of low speed mixed traffic. The town centre is experiencing a period of regeneration with provision for developments to provide around 3000 student bed spaces over the next four years. The Civic Offices site located on the Rycroft is destined to contribute towards a significant amount of accommodation as well as providing a mixed retail / leisure development. A number of office spaces are able to covert to residential use without requiring consideration of air quality. This has resulted in significant increases in the numbers of relevant receptors within the area where the Council is unable to influence development. In addition, the rural areas of the Borough are facing increased demands for applications for residential development, with people in these areas heavily reliant on cars to access services and employment opportunities within the town centre and wider areas.

Figure 4 shows the annual Nitrogen dioxide trends in Newcastle Town Centre AQMA from 2012 to 2017. Within this AQMA, NO_2 concentrations have generally decreased each year from 2012 onwards. The highlighted section of ***Figure 4*** emphasizes the

difference in annual mean NO_2 concentrations since the AQMA was declared in 2015.

In the year following the AQMA declaration, there was a slight increase in annual mean NO_2 concentration across the monitoring sites within this AQMA, however, over the past 12 months the annual mean NO_2 concentration has fallen back to levels that were seen in 2015.

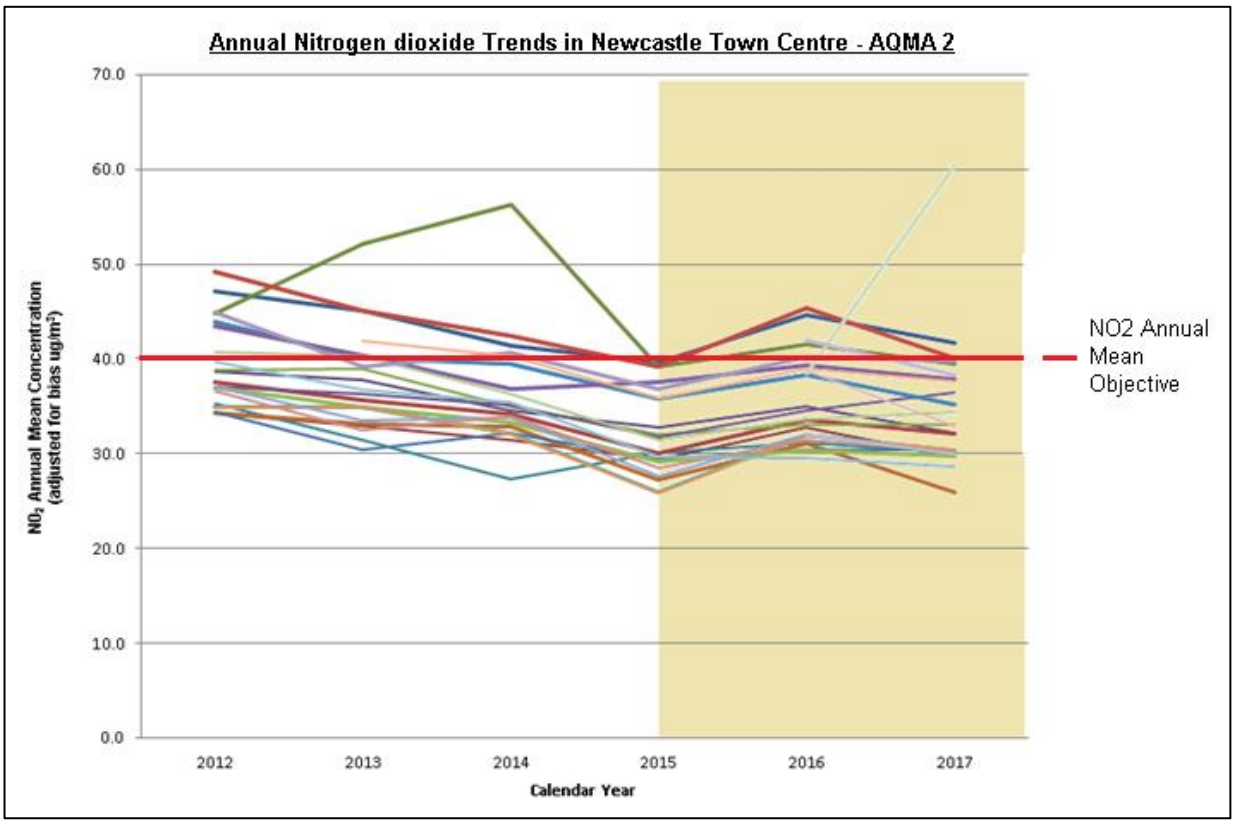


Figure 4 - Annual Mean NO_2 Concentrations from 2012 to 2017 of Newcastle Town Centre AQMA Number 2

In 2017 three of the monitoring sites within this AQMA measured an annual mean concentration which was higher than the previous year, these sites were;

- DT76 - Located at 11 Brunswick Street, Newcastle-under-Lyme
  - This site is representative of public exposure
  - Monitored value 36.5ug/m^3: Increase of 1.9 µg/m^3 on 2016 annual mean concentration

- DT95 - Located at 76 London Road, Newcastle-under-Lyme
  - This site is representative of public exposure
  - Monitored value 34.3ug/m3: Increase of 0.6 µg/m^3 on 2016 annual mean concentration

- DT102 - Located at 'Maxims', Lower Street, Newcastle-under-Lyme
  - This site is representative of public exposure
  - Monitored value of 60.4ug/m3: Increase of 21.9 µg/m^3 on 2016 annual mean concentration

Site DT102 had the most significant change in annual mean concentration, with a value of 60.4 µg/m^3 in 2017 (57% increase on 2016 concentration). This indicates that an exceedance of the 1 hour mean objective is likely at this location. Throughout 2017, the concentration of Nitrogen dioxide at this site was above the annual mean objective.

As the annual mean for Site DT102 was above the annual mean objective for Nitrogen dioxide, a distance correction calculation was conducted, which found that the predicted concentration at the receptor is likely to be above the AQS Objective (predicted concentration at receptor 52.9µg/m^3). Details of this calculation can be found in *Appendix D: 3.3 Distance Correction.*

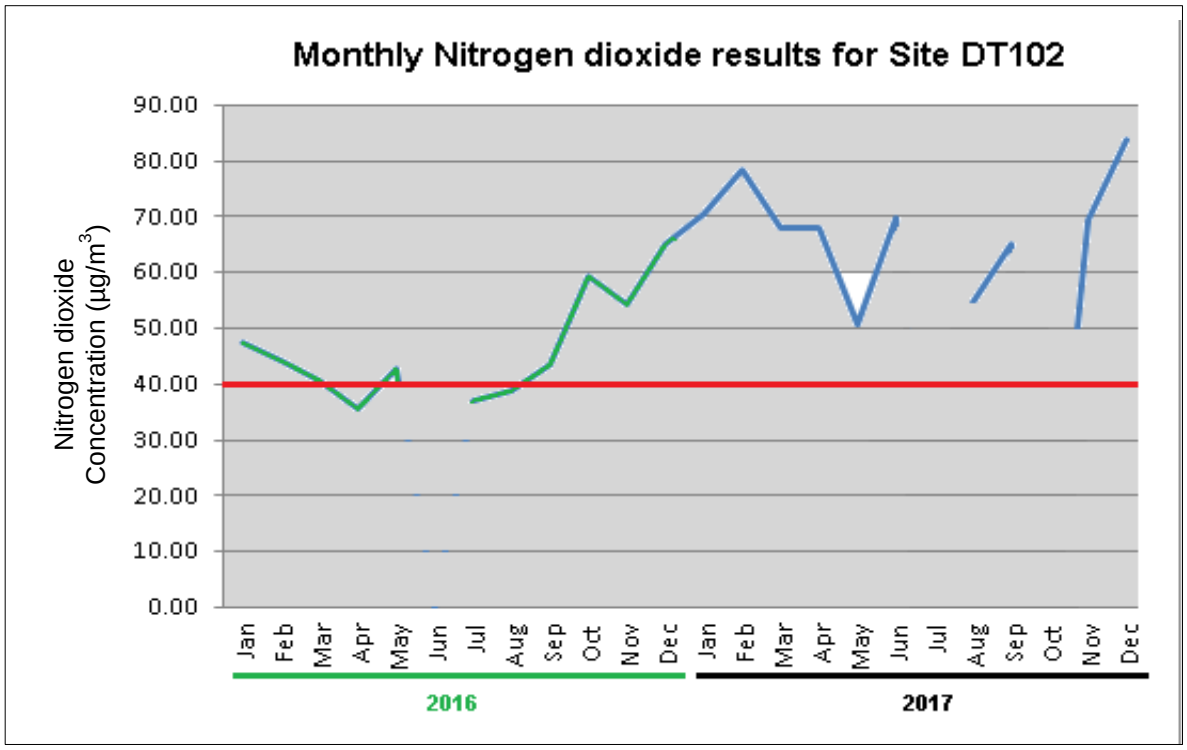


Figure 5: Graph showing the difference between monthly concentrations of Nitrogen dioxide at site DT102 in 2016 and 2017. Note: Diffusion tube results were not available for June 2016, and June and October 2017.

Figure 5, shows the NO_2 concentrations at site DT102 in 2016 and 2017. It is clear from this graph that there has been a steady increase in NO_2 concentration at this location over the past 2 years, with a marked difference between levels measured in 2016 and those seen in 2017. The largest difference was between February 2016 and February 2017, where the monthly concentration increased from 44.27µg/m^3 to 78.31µg/m^3.

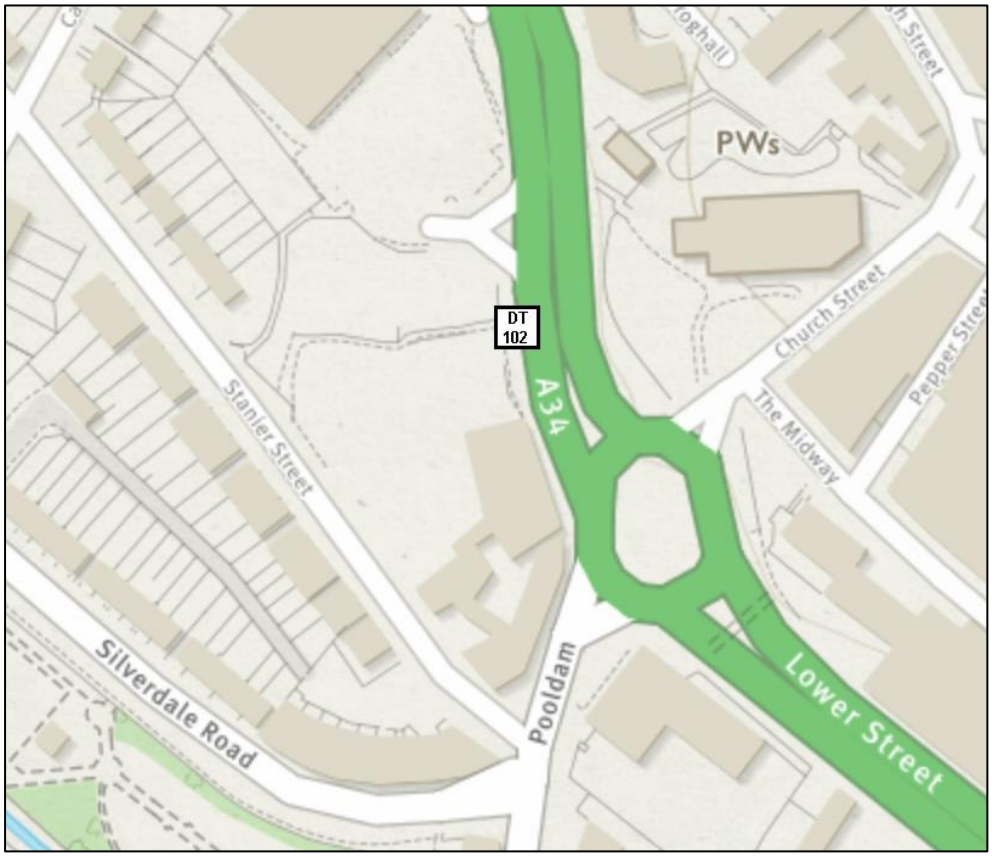


Figure 6: Location of Site DT102 on A34 (Lower Street), Newcastle-under-Lyme

The significant increase in annual mean NO_2 concentration at this site could be due to factors such as;

- Works involved in the conversion of the old 'Maxims' building into offices and training space

- Works involved in the construction of an elderly care village consisting of a three and four storey building containing a 74 bed care home with 28 care apartments, communal areas and offices, adjacent to the old 'Maxims' building.
- Installation of a number of boilers in these buildings.
- Roadworks taking place at other points along the Town Centre ring road leading to traffic idling for an increased period along this stretch of road.

As monitoring at site DT102 indicates that the an exceedance of the 1 hour mean objective is likely, the monitoring strategy for this area may need to be altered in order to more clearly identify the source contributions. This could be achieved by;

- Monitoring NO_2 concentrations upwind of site DT102, to allow a more accurate assessment of the contributions of the different sources to the measured values.
- Analysis of the type, speed and volume of traffic in this area at peak times and throughout the day. Congestion modelling may need to be undertaken to determine whether localised traffic around DT102 is a significant contributor to the elevated NO_2 concentrations.
- Details of the boiler systems installed and the height of the stack(s) serving the plant are required, as for certain types of installation, both seasonal and daily variations in emissions can be significant.

Persons living in this type 'assisted living' accommodation, are likely to suffer with pre-existing diseases which may make them more susceptible to health conditions associated with air pollution. Increased pollution exposures are associated with increased mortality and hospital admissions, due to exacerbations of chronic diseases or to respiratory tract infections. Chronic exposure to elevated levels of air pollution has been related to the incidence of chronic obstructive pulmonary disease (COPD), chronic bronchitis (CB), asthma, and emphysema. Research indicates that there are higher health risks in the elderly compared to the rest of the population due to poor air quality[12]. As high annual mean and monthly mean concentrations of Nitrogen dioxide in this area have been measured over the past 2 years, site DT102 will remain in place until levels a reduced to below the annual mean objective.

[12] Adverse effects of outdoor pollution in the elderly, Marzia Simoni et al. Journal of Thoracic Disease 2015 Jan; 7(1): 34–45. doi:10.3978/j.issn.2072-1439.2014.12.10,

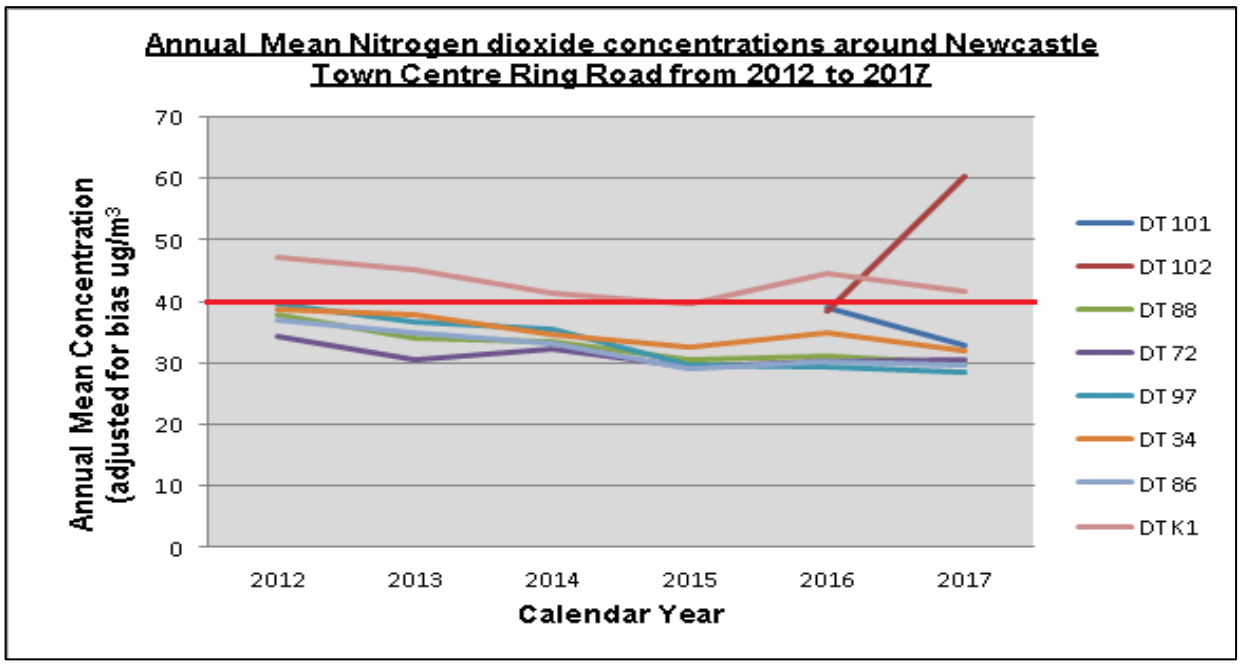


Figure 7 - Annual Mean Nitrogen dioxide concentrations around Newcastle Town Centre Ring Road from 2012 to 2017

Figure 7 shows the annual mean NO_2 trends for diffusion tubes located around the Town Centre ring road. Of the eight diffusion tubes located around the ring road, two (DT102 and DTK1) had annual mean concentrations which were above the annual mean objective, with only DT102 showing an increase in concentration when compared to 2016.

Of the twenty-six diffusion tube sites in the Town Centre AQMA, six remain within 10% of the annual mean, and are at risk of exceedance in future years. All other monitoring sites within this AQMA either remained static (DT72 and DT74), or showed a decrease on last years' annual mean concentrations.

The Newcastle-under-Lyme Town Centre AQMA will remain in place until all sites measure an annual mean NO_2 concentration that is consistently below the annual mean legal objective.

3.2.4 Porthill-Wolstanton-Maybank AQMA 3

Air Quality in this area is influenced by local road traffic and traffic utilising the junctions associated with the A500 dual carriageway. Relevant receptors in this location are mainly located at the back of footway. The main route through the area is single carriageway with traffic lighted junctions, signal controlled crossings, on street bus stops and significant sections of on street parking. Porthill Bank and Grange Lane are on significant gradients.

As shown in ***Figure 8***, there has been a steady decrease in NO_2 concentrations within this AQMA over the past 6 years. The highlighted section of the graph shows the change in annual mean NO_2 concentration since the AQMA was declared in 2015.

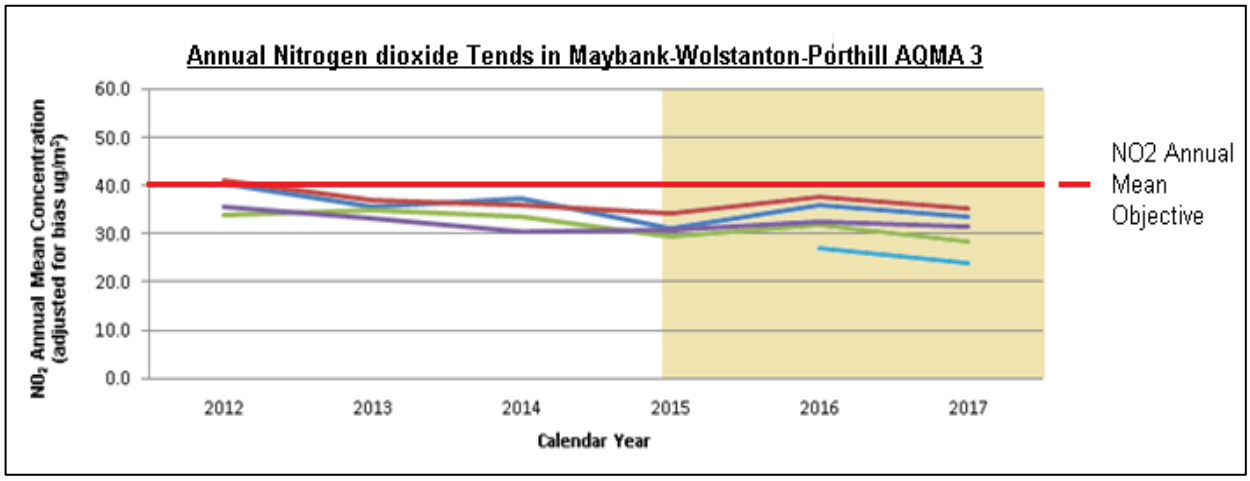


Figure 8 – Annual Mean NO_2 Concentrations from 2012 to 2017 of Maybank-Wolstanton-Porthill AQMA 3

All monitoring sites within this AQMA are now showing annual mean concentrations below the annual mean objective, with none of the sites being within 10% of the objective for 2017. The highest NO_2 concentration within the Porthill-Wolstanton-Maybank AQMA for 2017 was 35.3 µg/m^3 at site DT24.

There are a number of works planned which may affect this location, including the Etruria Valley Development scheme, which will see changes to the Church Lane / Grange Lane junction the junction near to this site and a new access from Grange Lane into the City Centre via Etruria Valley. There are also planned improvement

works by Highways England to the A500 between Wolstanton and Porthill. Both schemes are planned for delivery by 2020. They have the potential to increase traffic flow through this AQMA. Traffic modelling and the associated air quality impacts are currently being assessed by Highways England and Stoke on Trent City Council for their respective schemes. It is anticipated that this information will be available for inclusion in the next ASR due in June 2019.

The diffusion tube-monitoring network in this area will remain in place until the highway schemes have become embedded and there is confidence that NO_2 annual mean levels are consistently below the statutory objective.

3.2.5 Madeley AQMA 4

Air Qulaity in this location is heavily influenced by traffic using M6 motorway which runs within 20 metres of the nearest receptor at Collingwood 3 Newcastle Road.

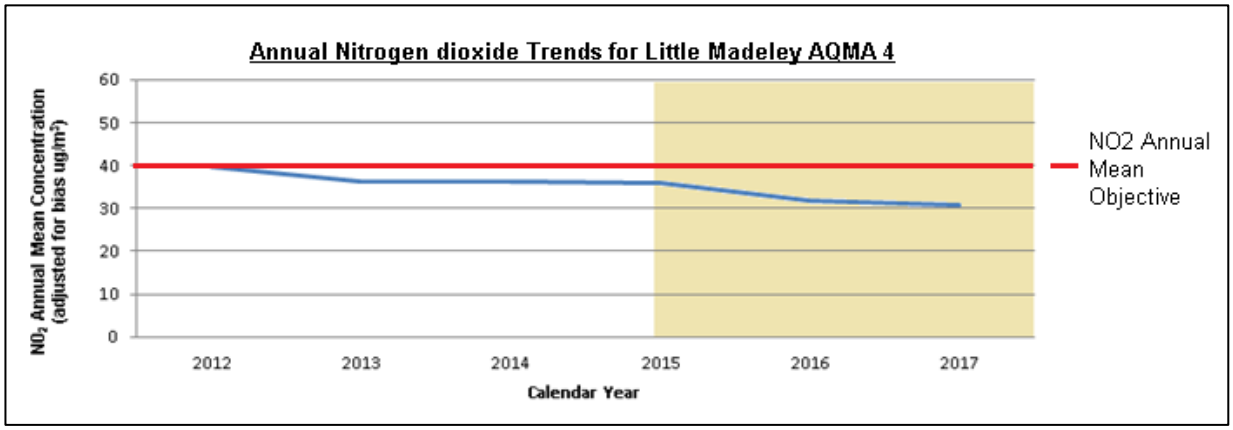


Figure 9 – Annual mean NO_2 Concentration from 2012 to 2017 of Little Madeley AQMA

As shown in ***Figure 9***Figure 8, there has been a decrease in NO_2 concentrations within this AQMA over the past 6 years. The highlighted section of the graph shows the change in annual mean NO_2 concentration since the AQMA was declared in 2015. The NO_2 concentration at this location in has been within 10% of the annual mean for the period between 2012 and 2015. NO_2 annual mean results at monitoring site DT3 have continued to fall, with annual concentration for 2017 being 30.7µg/m^3.

Highways England are introducing smart managed motorways and hard shoulder running up to Junction 15 of the M6 (Stoke on Trent South) and from junction 16 (Stoke on Trent North and Crewe) through to Junction 22. The stretch of motorway between junctions 15 and 16, which runs past experiences congestion at peak periods and may become a candidate for hard shoulder running and smart managed motorways in the future.

Based on the results since 2012 to present and potential future works to the M6 motorway this location will continue to be monitored for the near future.

3.2.6 Particulate Matter ($PM_{2.5}$)

Given the low levels of monitored PM_{10} in previous years which have been consistently below the relevant objective levels and that the monitoring equipment reached the end of its serviceable life early in 2016, the Council has decided to discontinue monitoring for this pollutant.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
CM1	Newcastle under Lyme Queen's Gardens	Roadside	385046	346147	NO_2	YES	Chemiluminescent	2	3	2

Notes:

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

(2) N/A if not applicable.

Table A.2 – 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)
DTK1	A34 Holy Trinity	Urban Background	385051	345726	NO_2	YES	22	3	NO	3
DTK2	76 King St, N/C	Urban Centre	385469	346362	NO_2	YES	0	3	NO	2
DTUB1	Wolstanton (Haritngton St)	Kerbside	384739	348326	NO_2	NO	7	2	NO	3
DTUB2	Westlands (4 Sneyd Crescent)	Kerbside	383916	345059	NO_2	NO	23	2	NO	3
DT3	(Collingwood 3 Newcastle Rd)	Rural	378116	345488	NO_2	YES	0	128	NO	-2
DT6	(106 Liverpool Rd)	Suburban	384014	354429	NO_2	YES	0	4	NO	3
DT9	32 Porthill Bank	Suburban	385519	349055	NO_2	YES	0	6	NO	3
DT11	34 London Road, N/C	Suburban	385112	345636	NO_2	YES	0	3	NO	3
DT24	26 High St, May Bank	Roadside	385574	347530	NO_2	YES	0	3	NO	3
DT28	Limbrick Cottage Shraleybrook	Rural	377994	350105	NO_2	NO	0	45	NO	6
DT34	15 Barracks Road	Urban Centre	385059	345840	NO_2	YES	1	4	NO	3
DT 39	4/6 Liverpool Road, Kidsgrove	Suburban	383560	354739	NO_2	YES	0	2	NO	3
DT40	Banktop Court, Porthill	Suburban	385128	348811	NO_2	YES	0	20	NO	5
DT46	1 London Road (Trinity Court)	Urban Centre	385086	346155	NO_2	YES	0	4	NO	3
DT47	1 London Rd (Brook La)	Urban Centre	385073	345685	NO_2	YES	0	5	NO	3
DT49	2 Vale View, Porthill	Urban Centre	385023	345678	NO_2	YES	0	6	NO	3
DT64	Kidsgrove Carpets 57 - 59 Liverpool Road	Urban Centre	385595	349129	NO_2	YES	0	10	NO	10
DT72	134 High Street Newcastle	Roadside	383950	354445	NO_2	YES	0	3	NO	3
DT73	21 London Road Newcastle	Roadside	384980	345787	NO_2	YES	0	4	NO	3
DT74	39 London Road Newcastle	Roadside	385070	345738	NO_2	YES	0	4	NO	3
DT76	11 Brunswick Street Newcastle	Roadside	385132	345640	NO_2	YES	0	2	NO	3
DT84	102 King Street Newcastle	Roadside	385226	346156	NO_2	YES	0	2	NO	3
DT85	106 King Street Newcastle	Urban Centre	385548	346400	NO_2	YES	0	5	NO	3

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)
DT86	Hassell C.P. School Barracks Road N/C	Urban Centre	385575	346413	NO_2	YES	0	5	NO	2
DT87	Blue Chilli 1 King Street Newcastle	Urban Centre	385075	345910	NO_2	YES	0	5	NO	3
DT88	27 Lower Street Newcastle	Urban Centre	385105	346225	NO_2	YES	0	5	NO	2
DT89	Queens Gardens Newcastle	Urban Centre	384709	345881	NO_2	YES	0	5	YES	3
DT90	Queens Gardens Newcastle	Urban Centre	385054	346134	NO_2	YES	1	5	YES	1
DT91	Queens Gardens, Newcastle	Urban Centre	385054	346134	NO_2	YES	1	5	YES	1
DT92	41/43 Liverpool Road Kidsgrove	Urban Centre	385054	346134	NO_2	YES	1	5	NO	1
DT93	118 Liverpool Road Kidsgrove	Urban Centre	383890	354461	NO_2	YES	0	2	NO	3
DT94	116 Liverpool Road Kidsgrove	Urban Centre	384056	354393	NO_2	YES	0	3	NO	4
DT95	76 London Road Newcastle	Urban Centre	384030	354416	NO_2	YES	0	4	NO	4
DT96	52/54 London Road Newcastle	Roadside	385171	345539	NO_2	YES	0	2	NO	4
DT97	Blackfriars/ Lower Street	Roadside	385131	345601	NO_2	YES	0	3	NO	3
DT98	Newcastle Taxis Brunswick Street	Roadside	384795	345796	NO_2	YES	0	2	NO	2
DT100	Sainbury's Carpark Near to Courts	Roadside	384784	342528	NO_2	YES	0	117	NO	2
DT101	Blackburn House Lower Street Newcastle	Roadside	384710	346282	NO_2	YES	5	4	NO	4
DT102	Maxims Lower Street Newcastle	Roadside	384806	345849	NO_2	YES	4	4	NO	4
DT103	Grange Lange/High Street Wolstanton	Roadside	384613	345999	NO_2	YES	20	5	NO	5
DT104	7 King Street Newcastle	Roadside	385216	346271	NO_2	YES	0	5	NO	5
DT105	The Avenue, Kidsgrove	Roadside	385213	346270	NO_2	YES	0.2	2	NO	2

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.3 – Annual Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2017 (%) [2]	NO_2 Annual Mean Concentration ($\mu g/m^3$) [3]				
					2013	2014	2015	2016	2017
CM1	Urban Centre	Automatic	100	100	28.8	33	25.7	37.5	23.1
DTK1	Kerbside	Diffusion Tube	100	100	**45.0**	**41.4**	39.6	**44.6**	**41.7**
DTK2	Urban Centre	Diffusion Tube	100	100	32.9	31.4	29.3	32.7	29.7
DTUB1	Kerbside	Diffusion Tube	100	100	21.4	18.3	18.4	19.7	19.0
DTUB2	Kerbside	Diffusion Tube	100	100	18.5	17.9	16.3	17.4	15.5
DT3	Rural	Diffusion Tube	100	100	36.4	36.3	35.9	31.9	30.7
DT6	Suburban	Diffusion Tube	100	100	**42.4**	**40.5**	36.7	**41.8**	37.7
DT9	Suburban	Diffusion Tube	100	100	35.6	37.2	31.1	36	33.4
DT11	Suburban	Diffusion Tube	100	100	**52.1**	**56.2**	39.2	**41.5**	39.5
DT24	Roadside	Diffusion Tube	100	100	37.0	35.9	34.3	37.7	35.3
DT28	Rural	Diffusion Tube	100	100	35.3	33.1	32.8	30.8	29.9
DT34	Urban Centre	Diffusion Tube	100	100	37.7	34.6	32.7	35	32.1
DT 39	Suburban	Diffusion Tube	100	100	38.3	35.9	30.8	37.4	33.4
DT40	Suburban	Diffusion Tube	100	100	34.8	33.7	29.5	31.8	28.3
DT46	Urban Centre	Diffusion Tube	100	100	31.5	27.2	30.0	31.1	30.1
DT47	Urban Centre	Diffusion Tube	100	100	33.1	32.9	27.2	31.1	25.8
DT49	Urban Centre	Diffusion Tube	100	100	33.3	30.6	30.9	32.6	31.5

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2017 (%) [2]	NO_2 Annual Mean Concentration ($\mu g/m^3$) [3]				
					2013	2014	2015	2016	2017
DT64	Urban Centre	Diffusion Tube	100	100	37.6	37.3	35.9	37.9	35.9
DT72	Roadside	Diffusion Tube	100	100	30.4	32.2	29.4	30.4	30.4
DT73	Roadside	Diffusion Tube	100	100	35.7	34.2	30.0	33.6	32.0
DT74	Roadside	Diffusion Tube	100	100	38.9	35.0	32.0	33	33
DT76	Roadside	Diffusion Tube	100	100	36.3	35.2	31.7	34.6	36.5
DT84	Roadside	Diffusion Tube	100	100	**40.1**	39.5	35.8	38.3	35.1
DT85	Urban Centre	Diffusion Tube	100	100	**45.1**	**42.4**	39.2	**45.3**	**40.0**
DT86	Urban Centre	Diffusion Tube	100	100	34.8	33.2	29.1	30.4	29.7
DT87	Urban Centre	Diffusion Tube	100	100	**40.3**	36.8	37.6	39.3	37.9
DT88	Urban Centre	Diffusion Tube	100	100	34.0	33.6	30.7	31.2	29.9
DT89	Urban Centre	Diffusion Tube	100	100	34.9	32.0	25.9	31.9	30.4
DT90	Urban Centre	Diffusion Tube	100	100	33.5	33.7	27.6	32.1	30.0
DT91	Urban Centre	Diffusion Tube	100	92	32.5	33.9	28.4	31.5	30.3
DT92	Urban Centre	Diffusion Tube	100	92	36.9	36.0	31.4	33.9	33.5
DT93	Urban Centre	Diffusion Tube	100	100	33.8	32.5	29.3	33.4	30.4
DT94	Urban Centre	Diffusion Tube	100	100	38.1	34.6	32.8	34.8	32.1
DT95	Urban Centre	Diffusion Tube	100	100	**40.3**	36.3	31.5	33.7	34.3
DT96	Roadside	Diffusion Tube	100	100	39.2	**40.6**	36.8	**40.2**	39.8
DT97	Roadside	Diffusion Tube	100	100	36.7	35.5	29.6	29.5	28.6

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2017 (%) (2)	NO_2 Annual Mean Concentration ($\mu g/m^3$) (3)				
					2013	2014	2015	2016	2017
DT98	Roadside	Diffusion Tube	100	100	**42.0**	**40.3**	35.8	39	37.7
DT100	Roadside	Diffusion Tube	100	100				32.05	30.0
DT101	Roadside	Diffusion Tube	100	100				38.88	33.0
DT102	Roadside	Diffusion Tube	100	83				38.5	**60.4**
DT103	Roadside	Diffusion Tube	100	100				27.09	24.1
DT104	Roadside	Diffusion Tube	100	100				**42**	38.2
DT105	Roadside	Diffusion Tube	100	42					28.38(3)

☒ **Diffusion tube data has been bias corrected**

☒ **Annualisation has been conducted where data capture is <75%**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

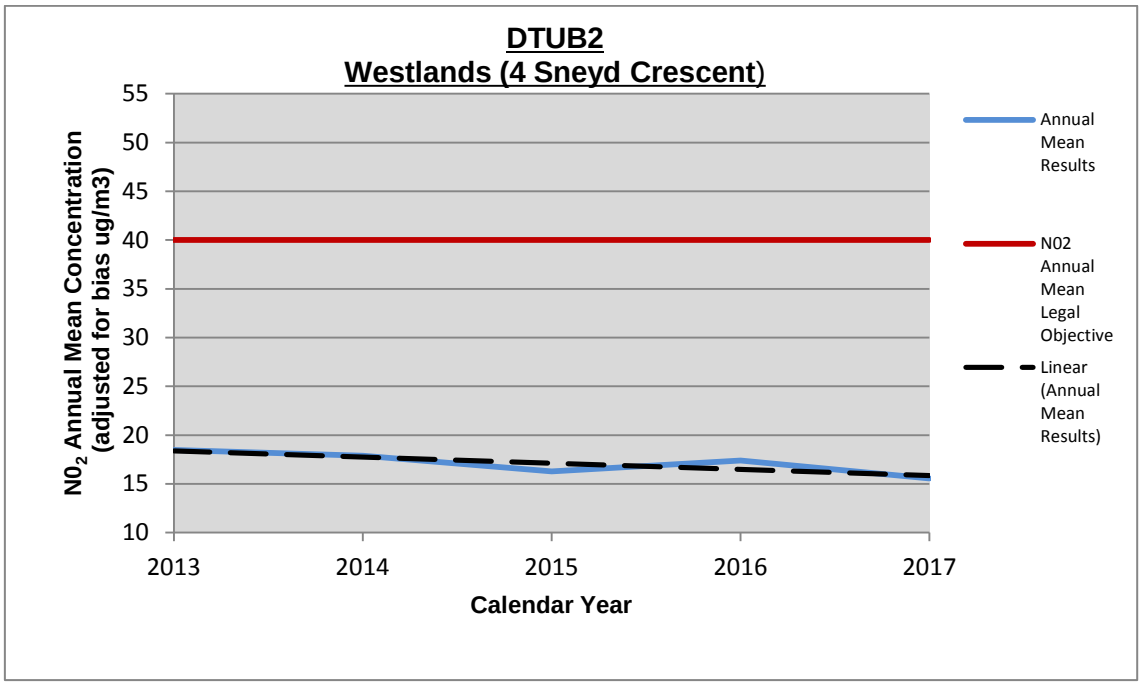
NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined.**

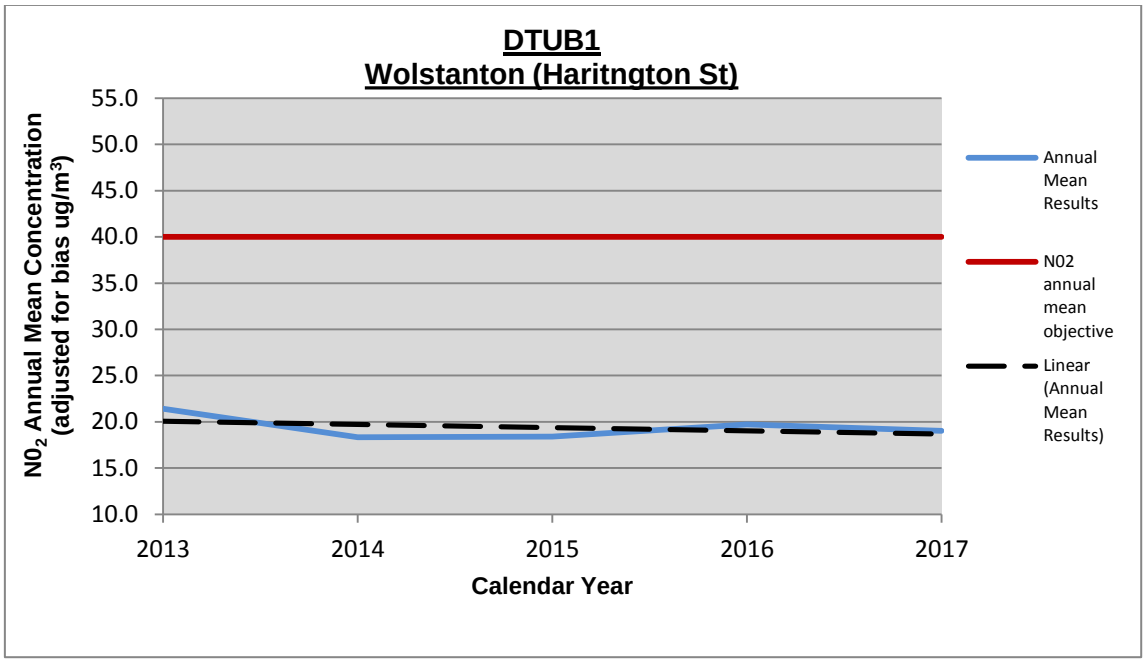
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

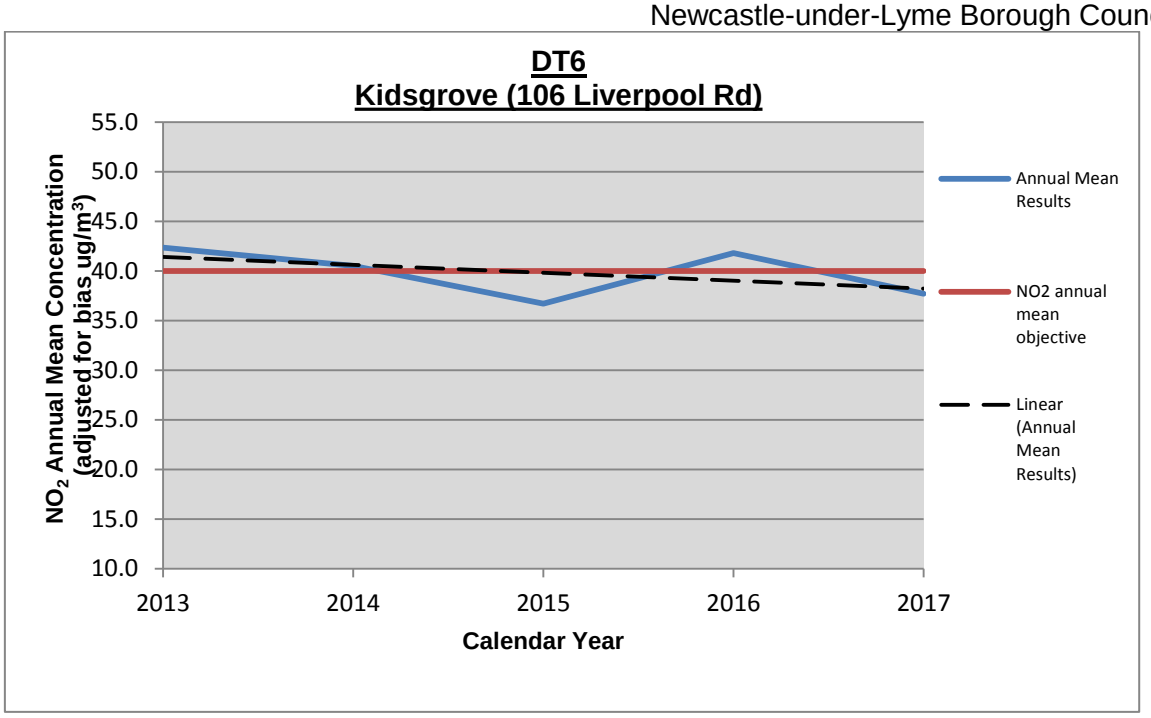
(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

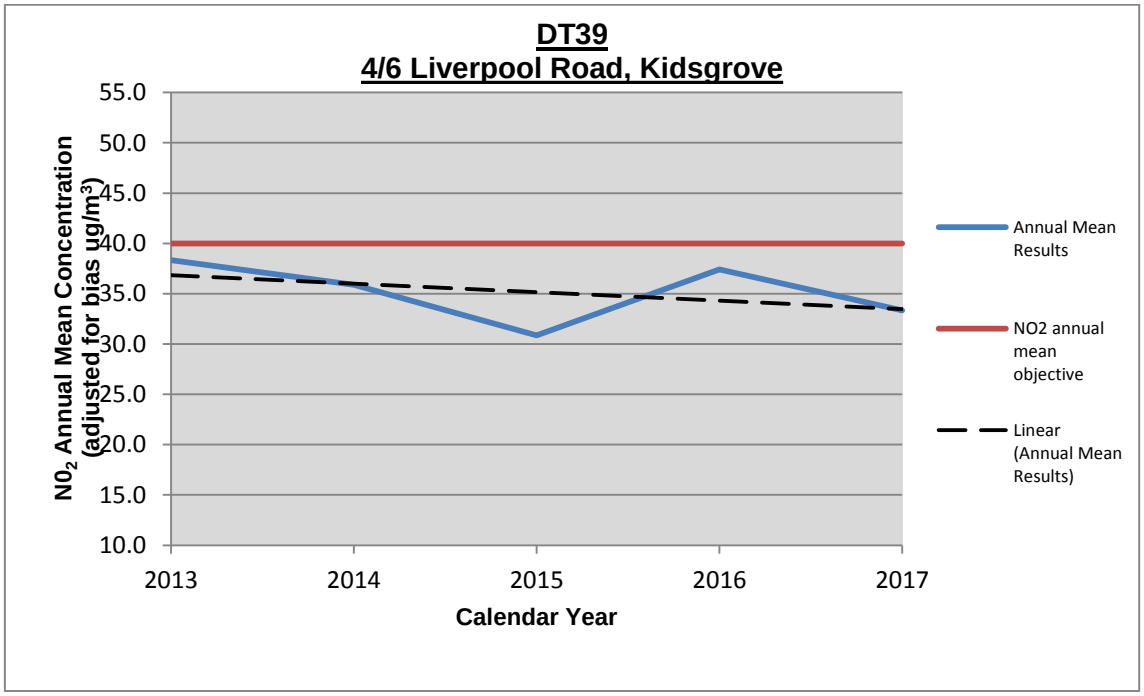
(3) Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per Boxes 7.9 and 7.10 in LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

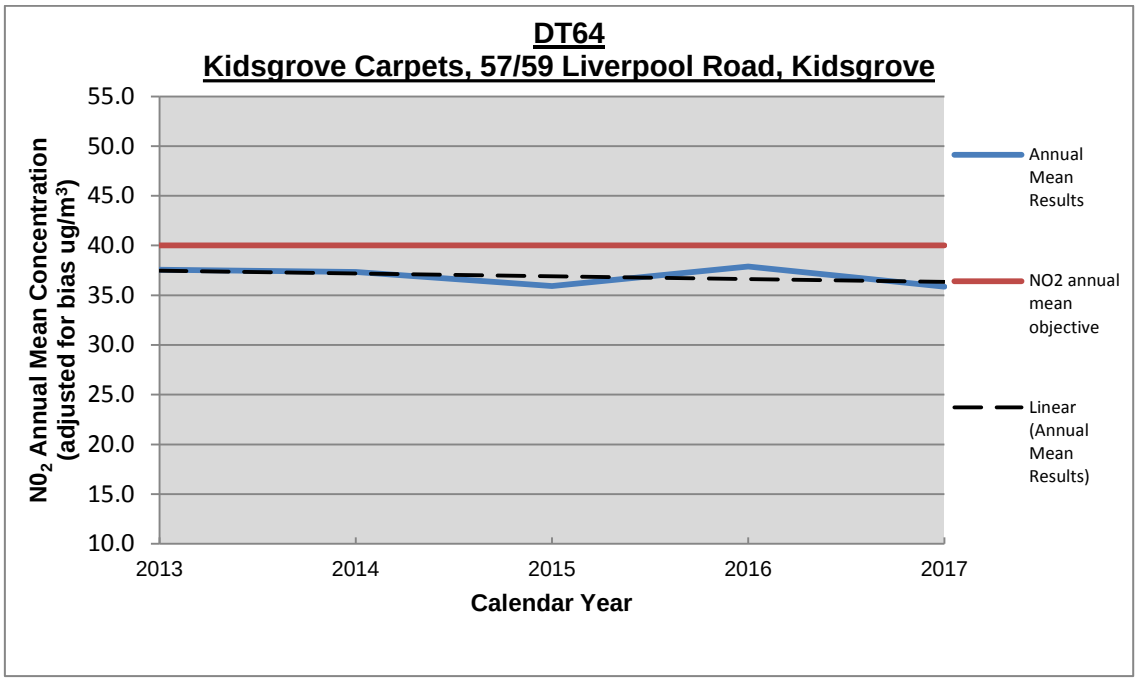
Figure A.1 – Trends in Annual Mean NO_2 Concentrations

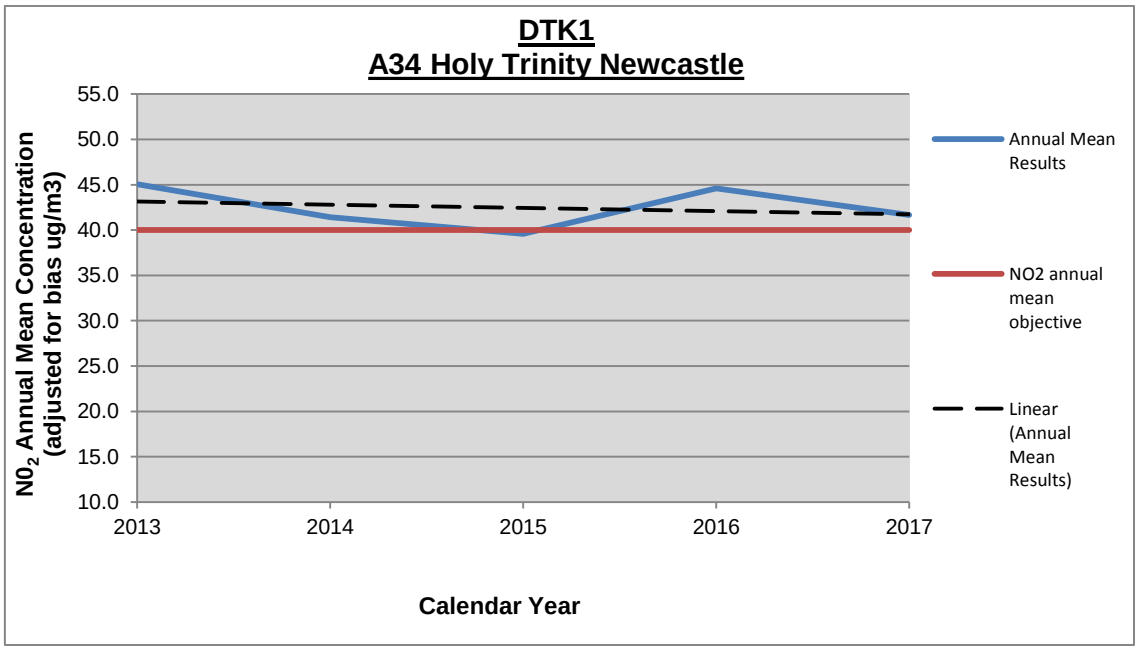


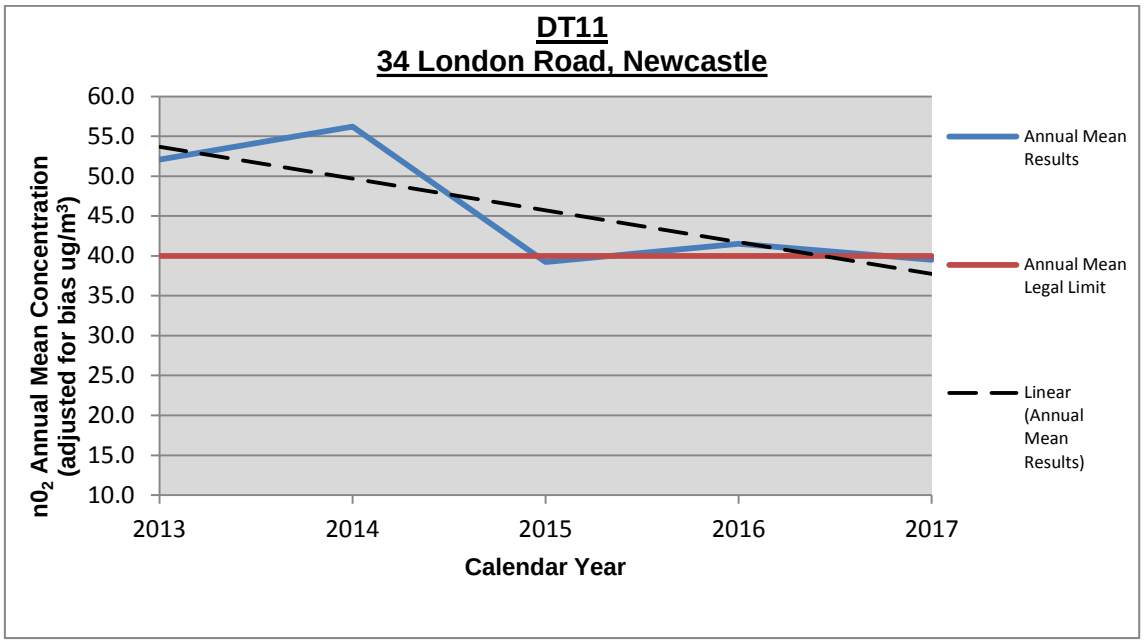


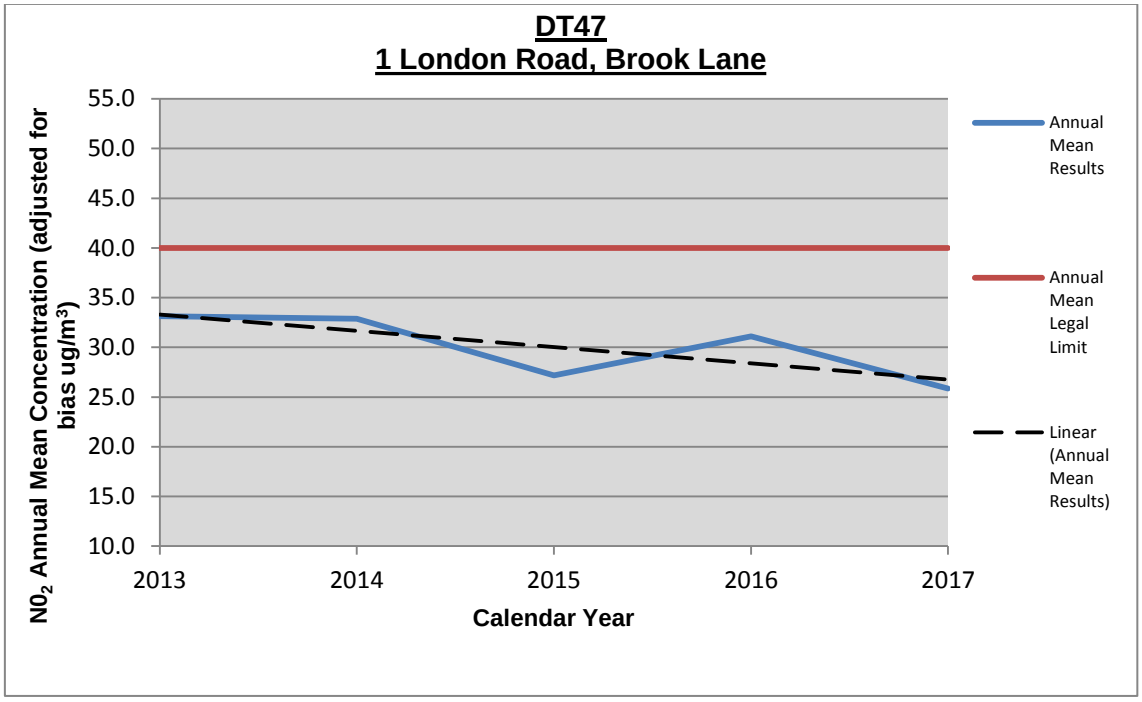

DT6
Kidsgrove (106 Liverpool Rd)
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
NO2 annual mean objective
Linear (Annual Mean Results)

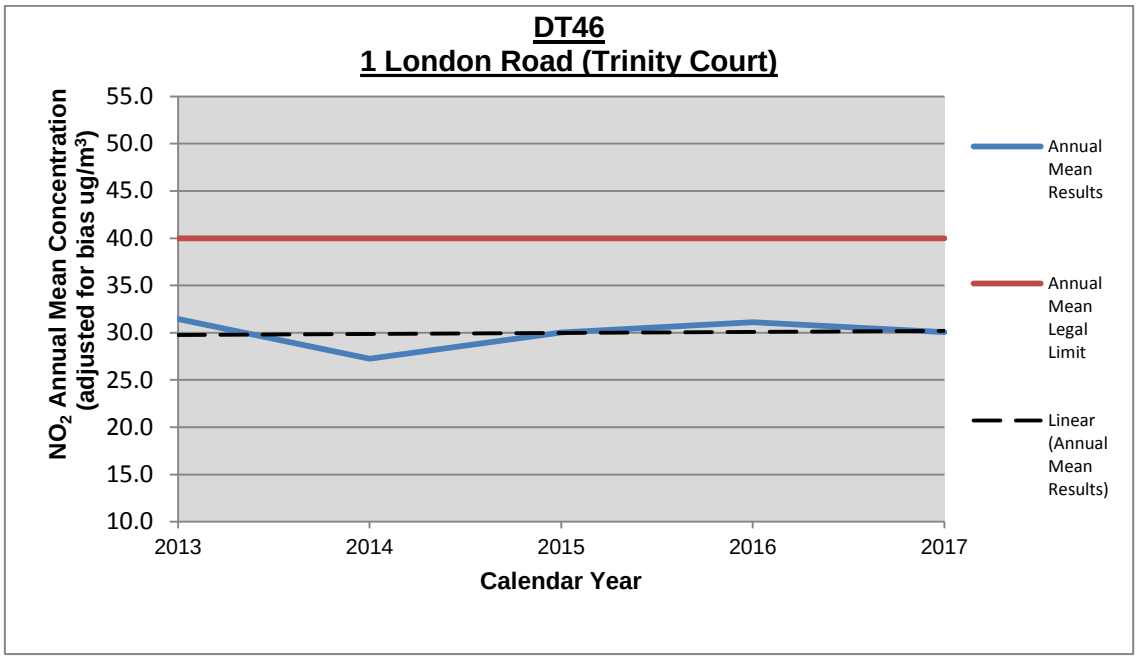

DT39
4/6 Liverpool Road, Kidsgrove
N02 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
NO2 annual mean objective
Linear (Annual Mean Results)

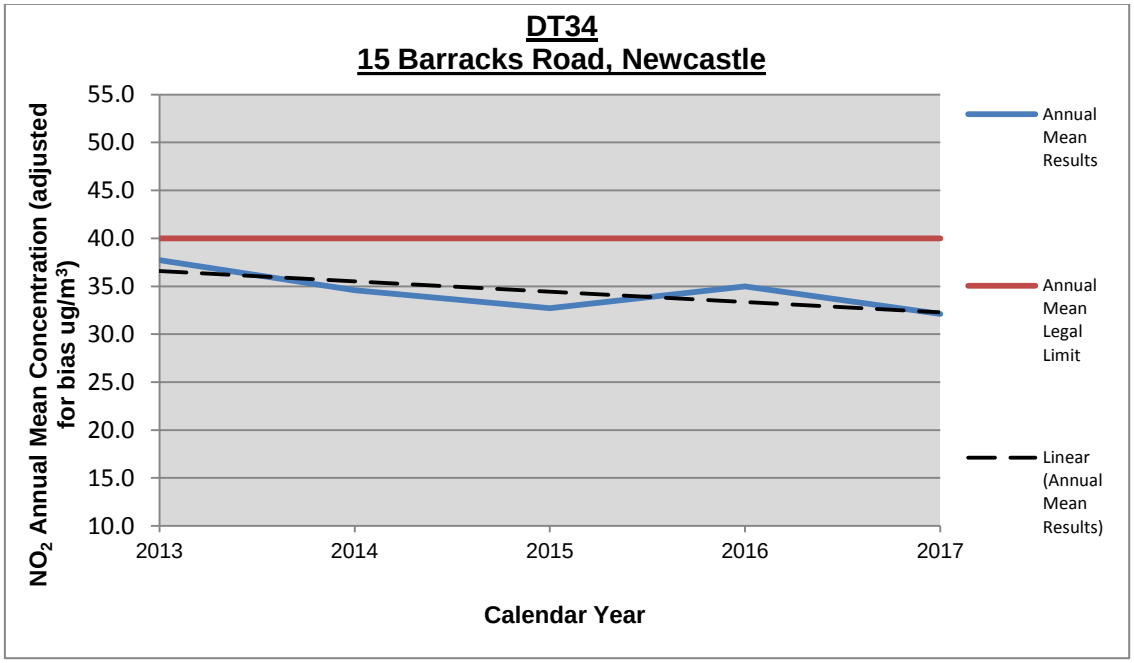

DT64
Kidsgrove Carpets, 57/59 Liverpool Road, Kidsgrove
NO_2 Annual Mean Concentration (adjusted for bias ug/m³)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
NO2 annual mean objective
Linear (Annual Mean Results)

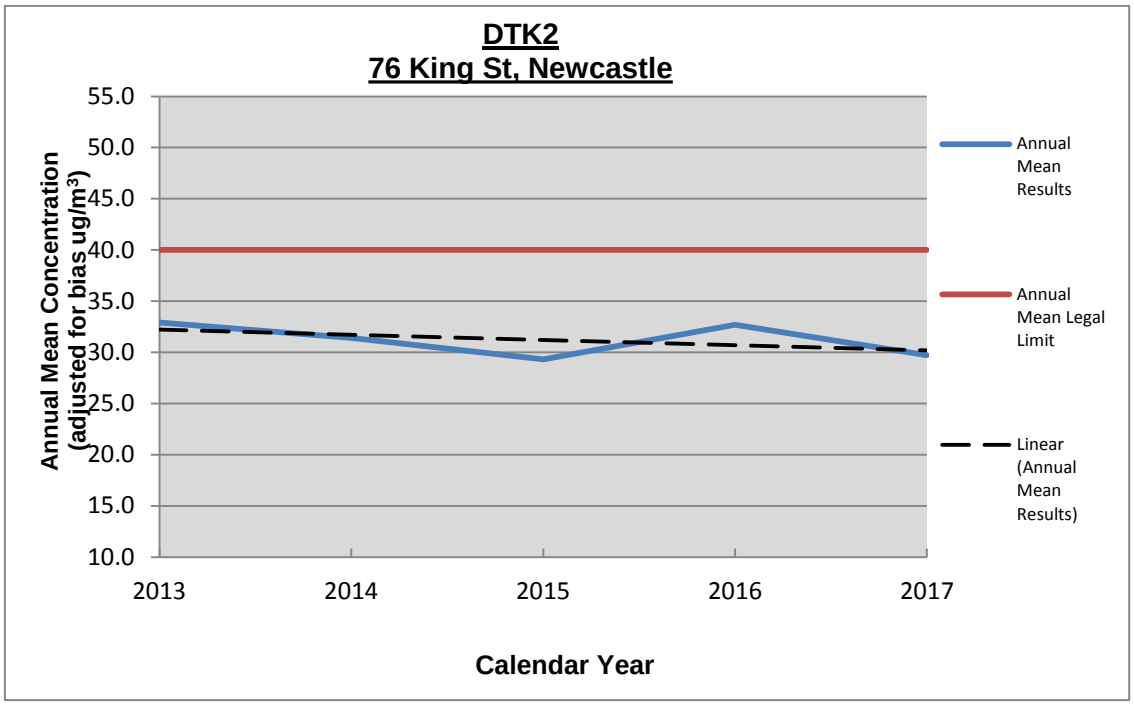

DTK1
A34 Holy Trinity Newcastle
NO_2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
NO2 annual mean objective
Linear (Annual Mean Results)

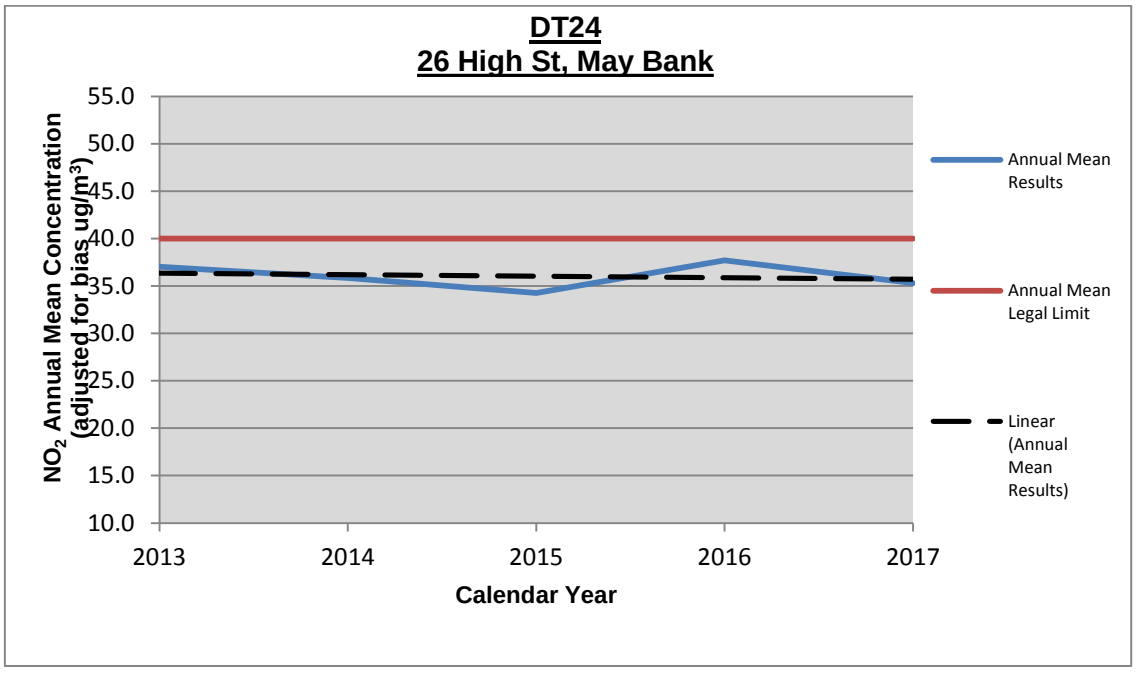

DT11
34 London Road, Newcastle
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
n0$_2$ Annual Mean Concentration (adjusted for bias ug/m^3)
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

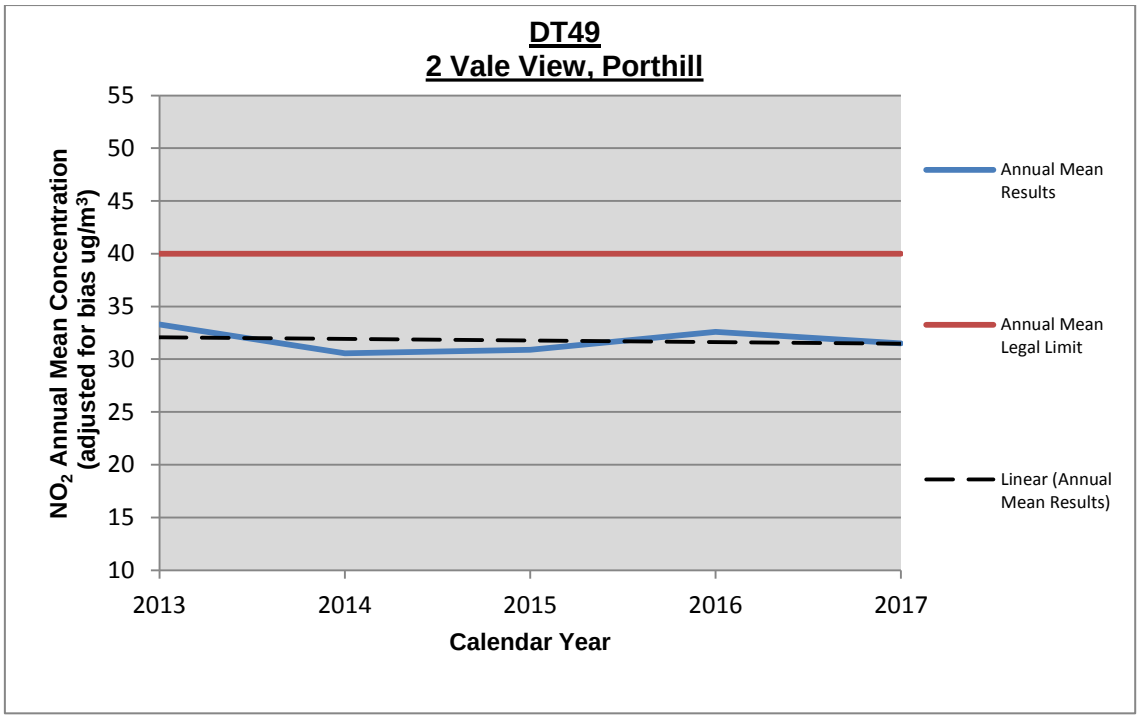

DT47
1 London Road, Brook Lane
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
N0$_2$ Annual Mean Concentration (adjusted for bias ug/m^3)
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

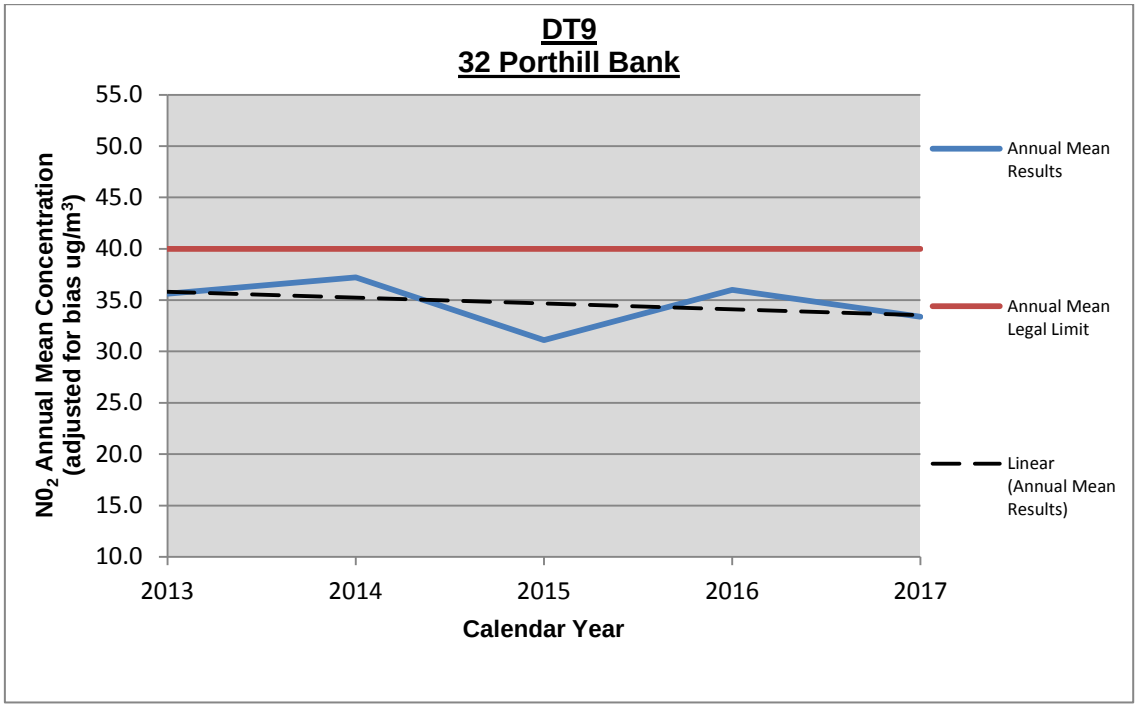

DT46
1 London Road (Trinity Court)
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

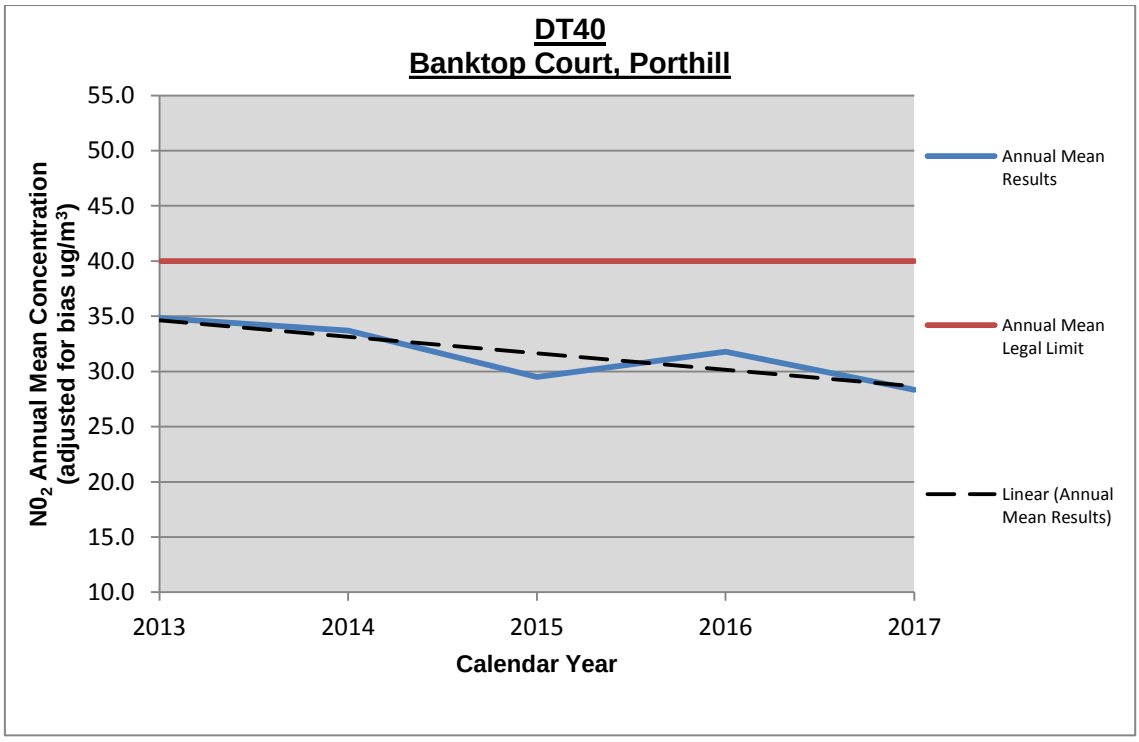

DT34
15 Barracks Road, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

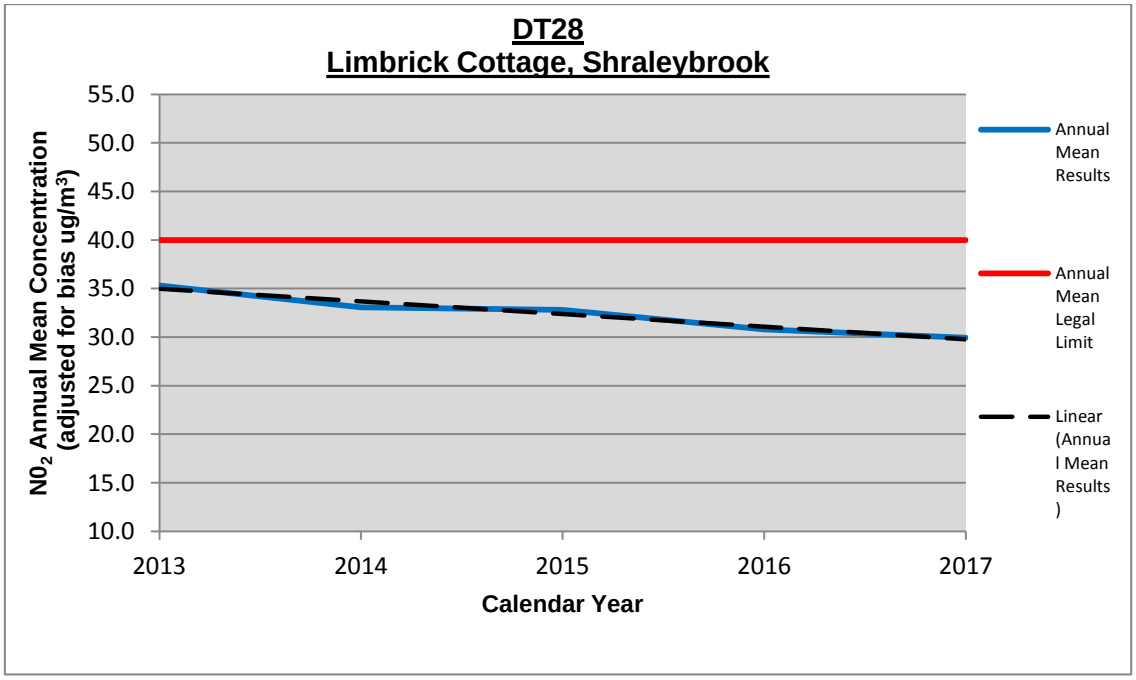

DTK2
76 King St, Newcastle
Annual Mean Concentration (adjusted for bias ug/m³)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

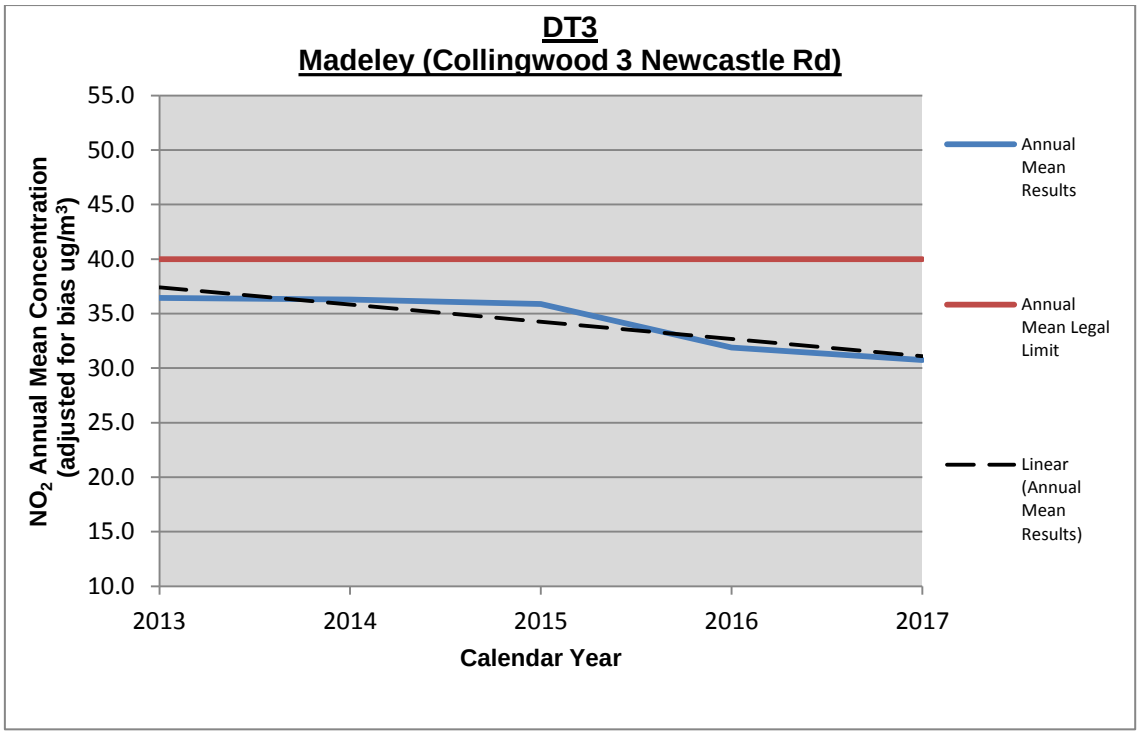

DT24
26 High St, May Bank
NO2 Annual Mean Concentration (adjusted for bias ug/m³)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

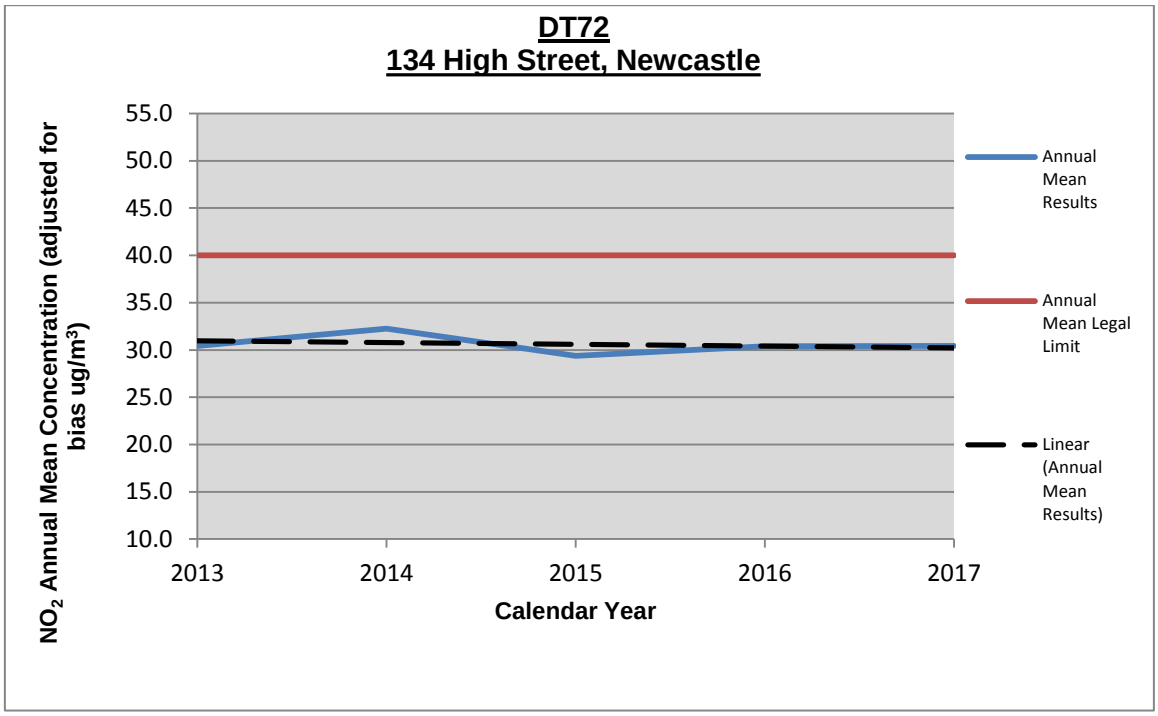

DT49
2 Vale View, Porthill
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55
50
45
40
35
30
25
20
15
10
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

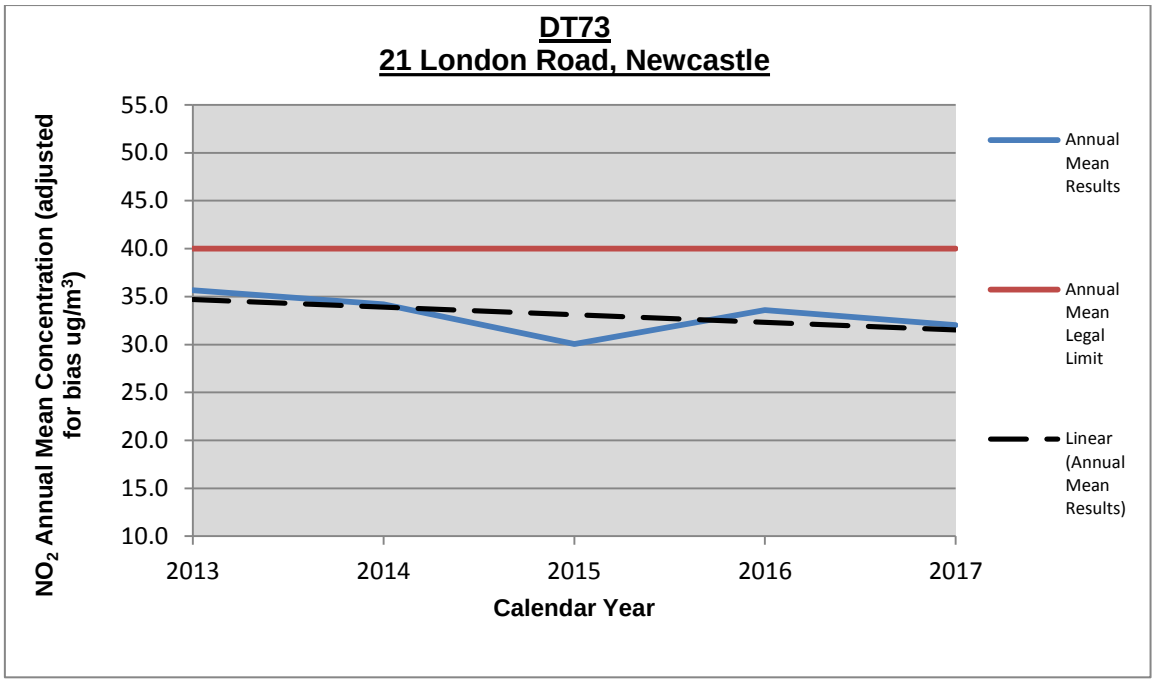

DT9
32 Porthill Bank
N02 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

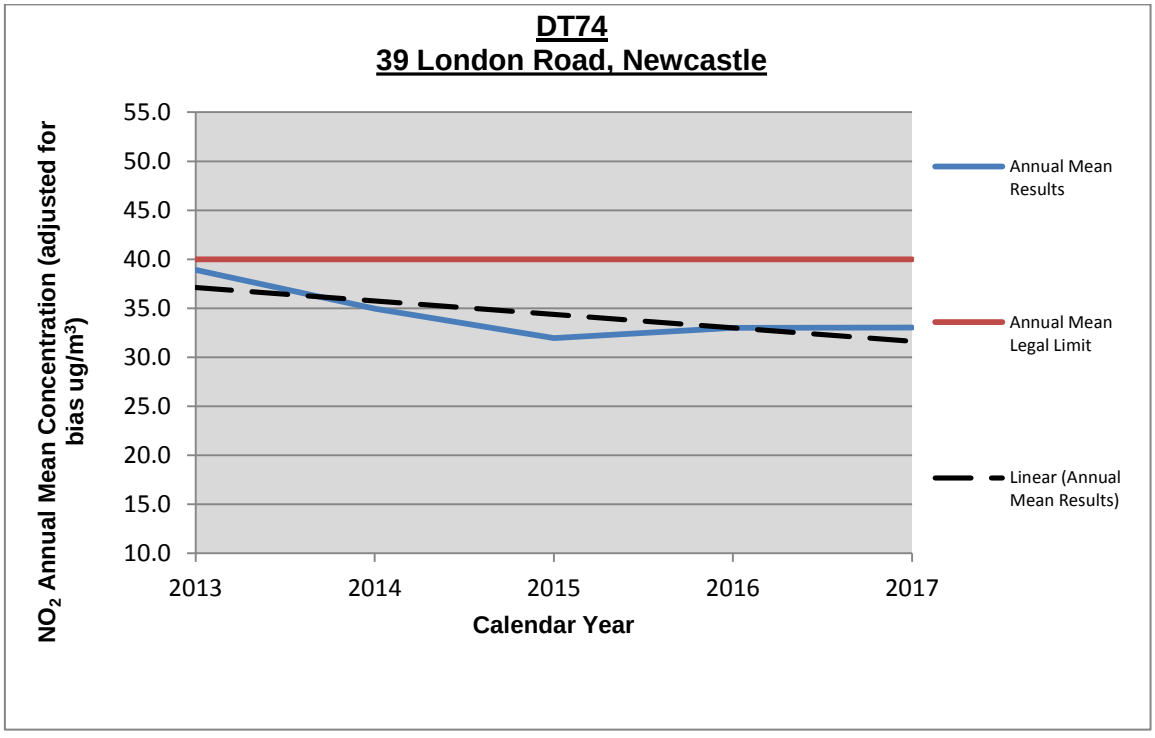

DT40
Banktop Court, Porthill
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

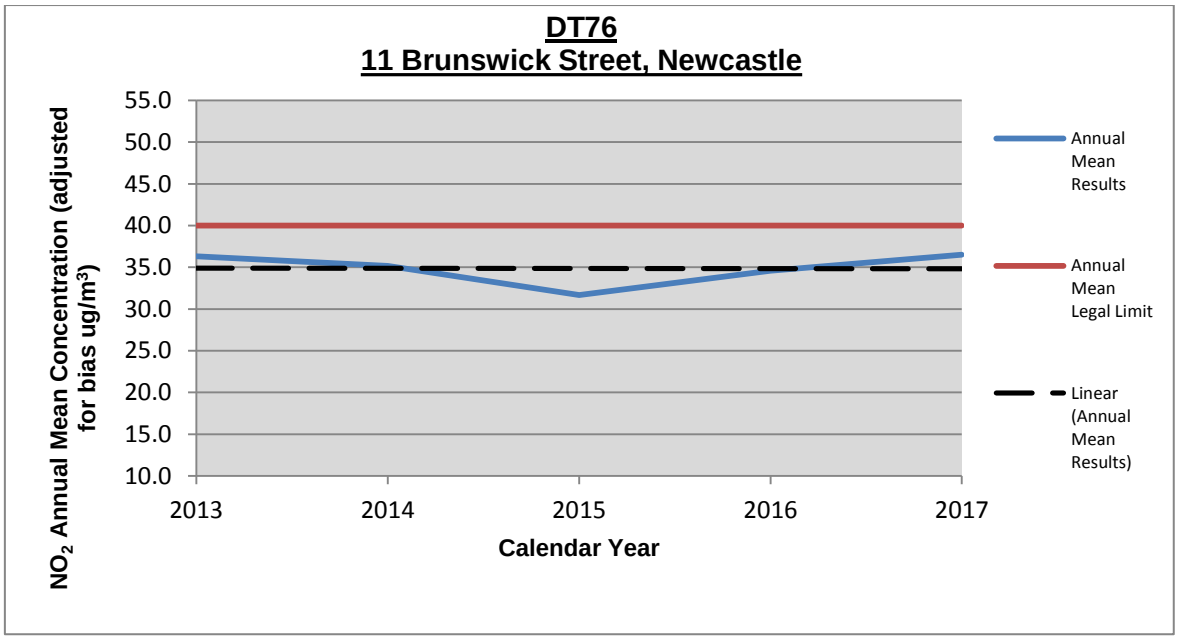

DT28
Limbrick Cottage, Shraleybrook
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

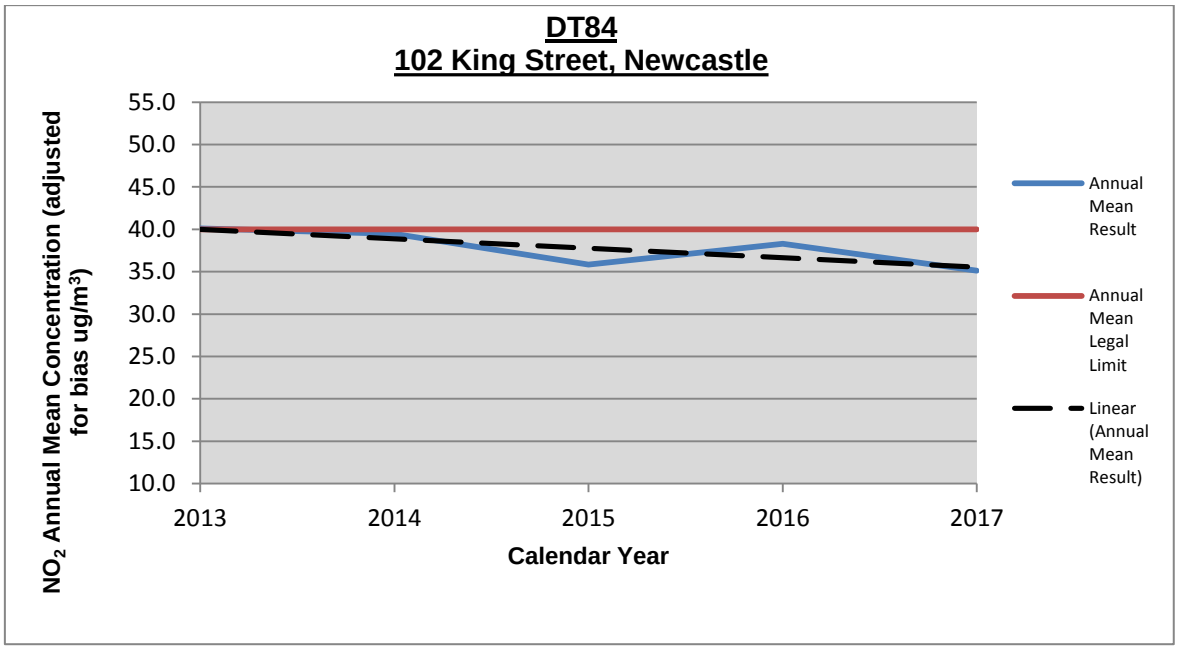

DT3
Madeley (Collingwood 3 Newcastle Rd)
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

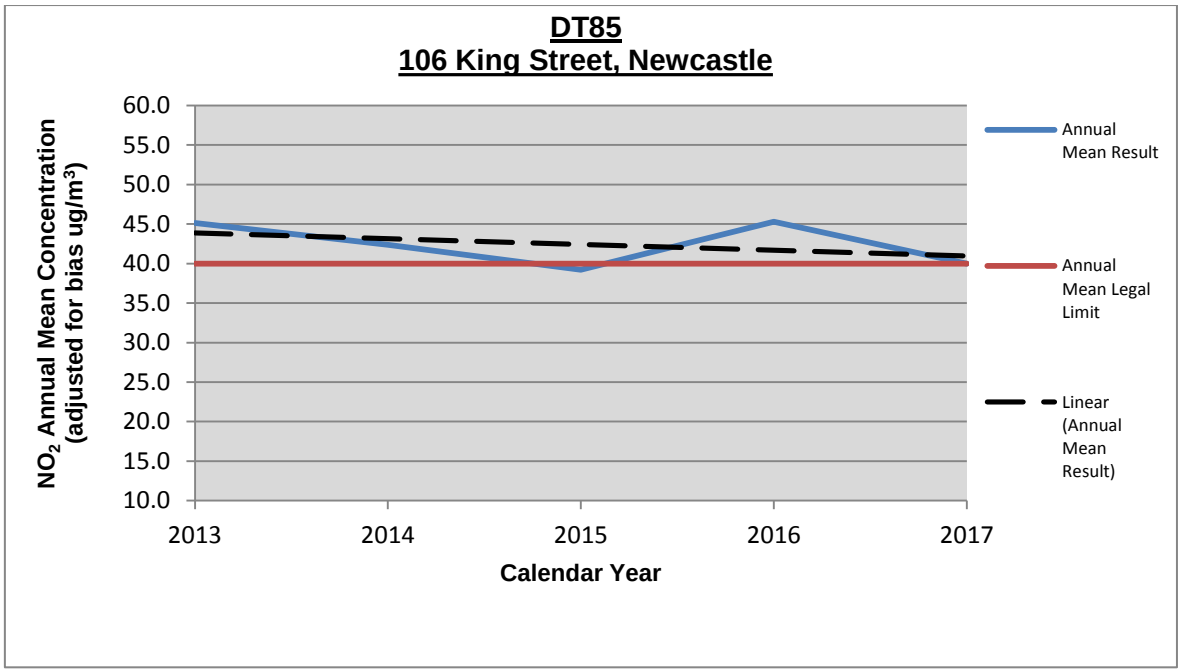

DT72
134 High Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

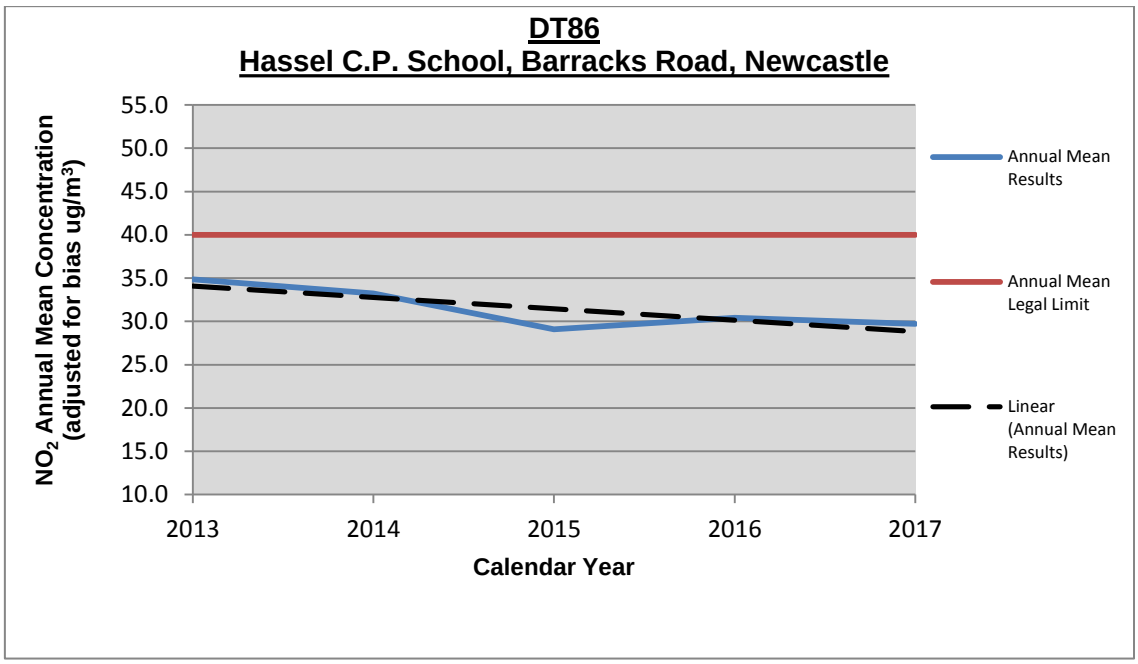

DT73
21 London Road, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

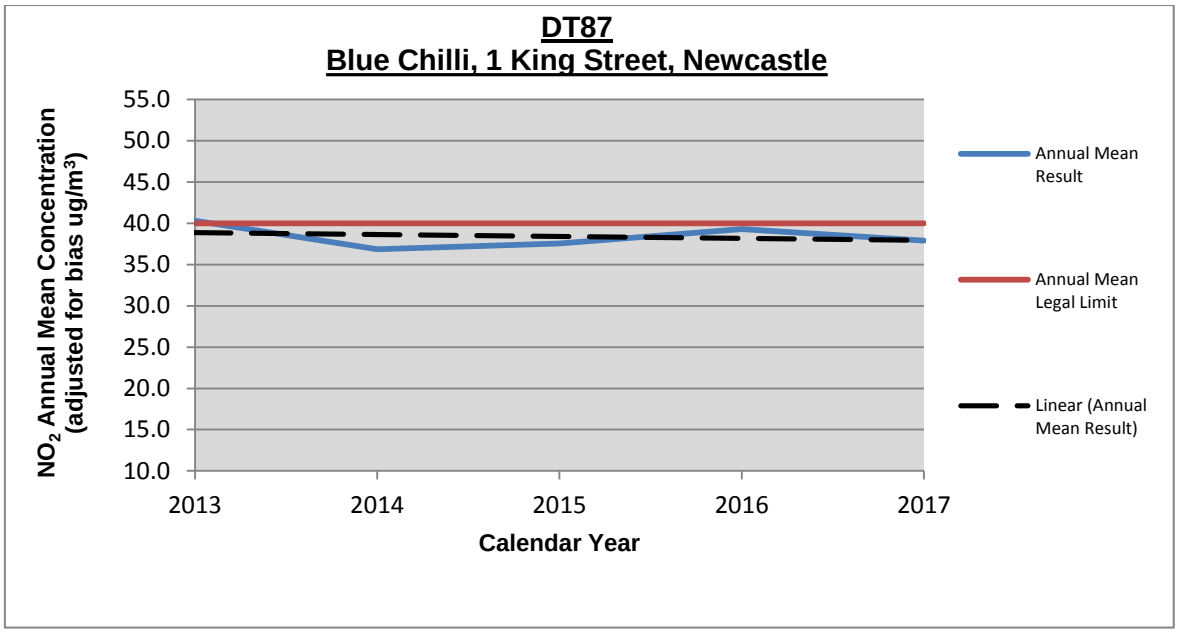

DT74
39 London Road, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

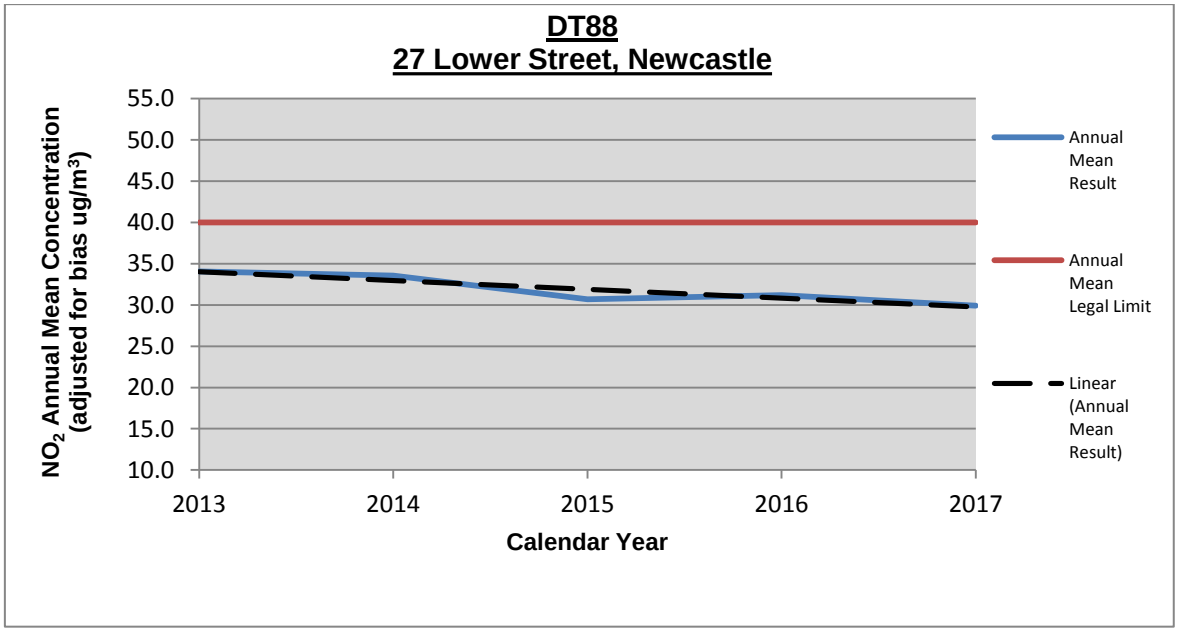

DT76
11 Brunswick Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

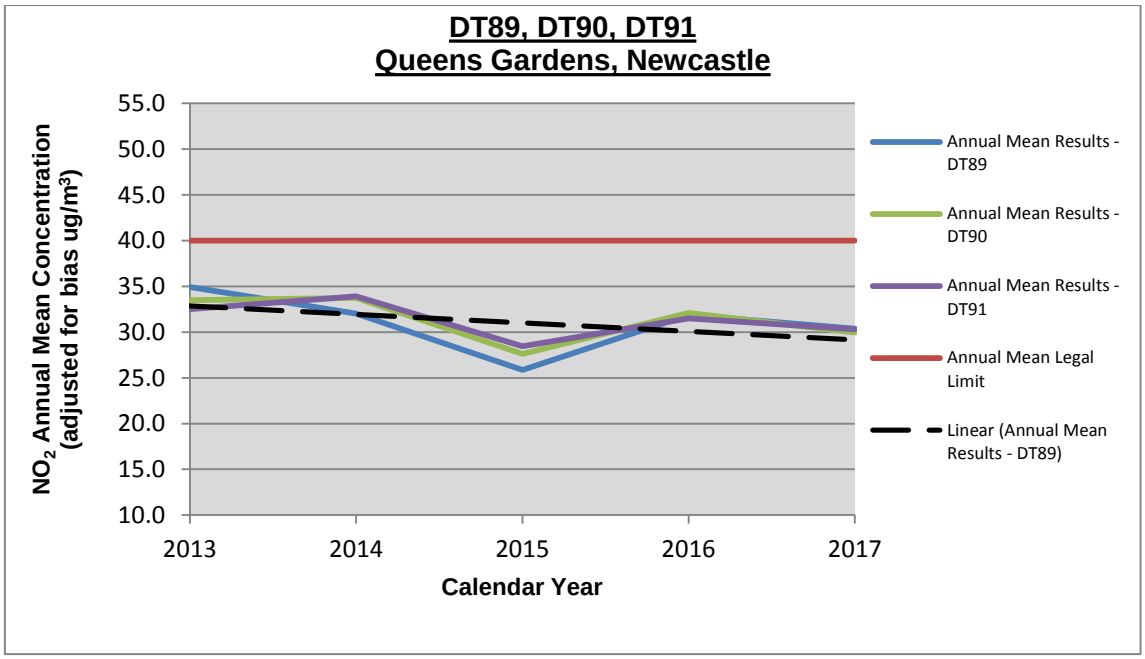

DT84
102 King Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Result
Annual Mean Legal Limit
Linear (Annual Mean Result)

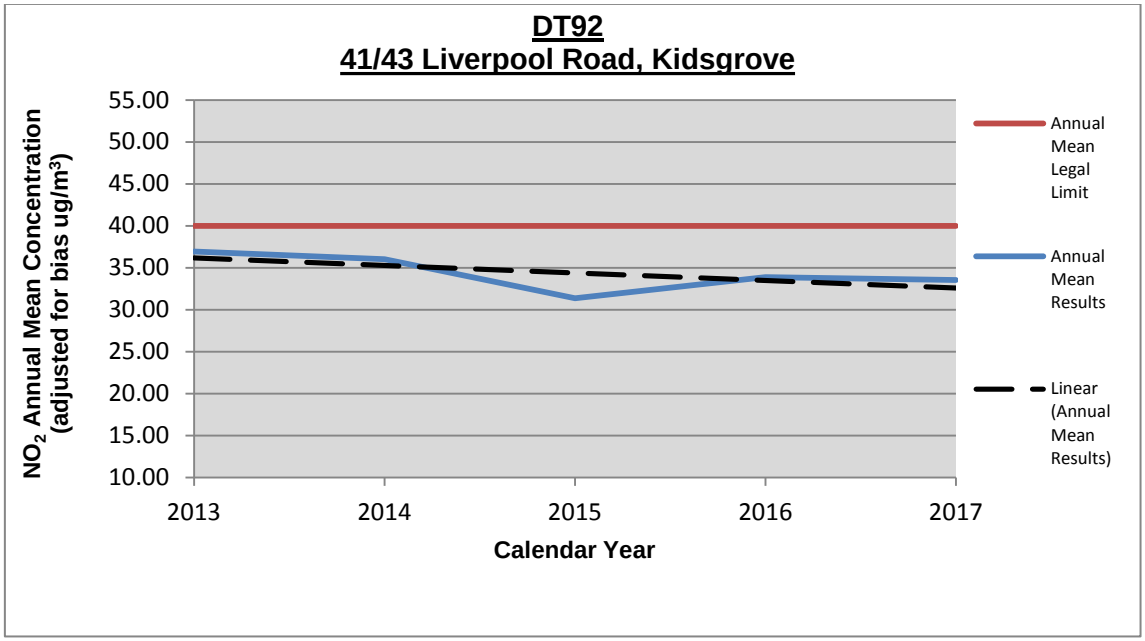

DT85
106 King Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Result
Annual Mean Legal Limit
Linear (Annual Mean Result)

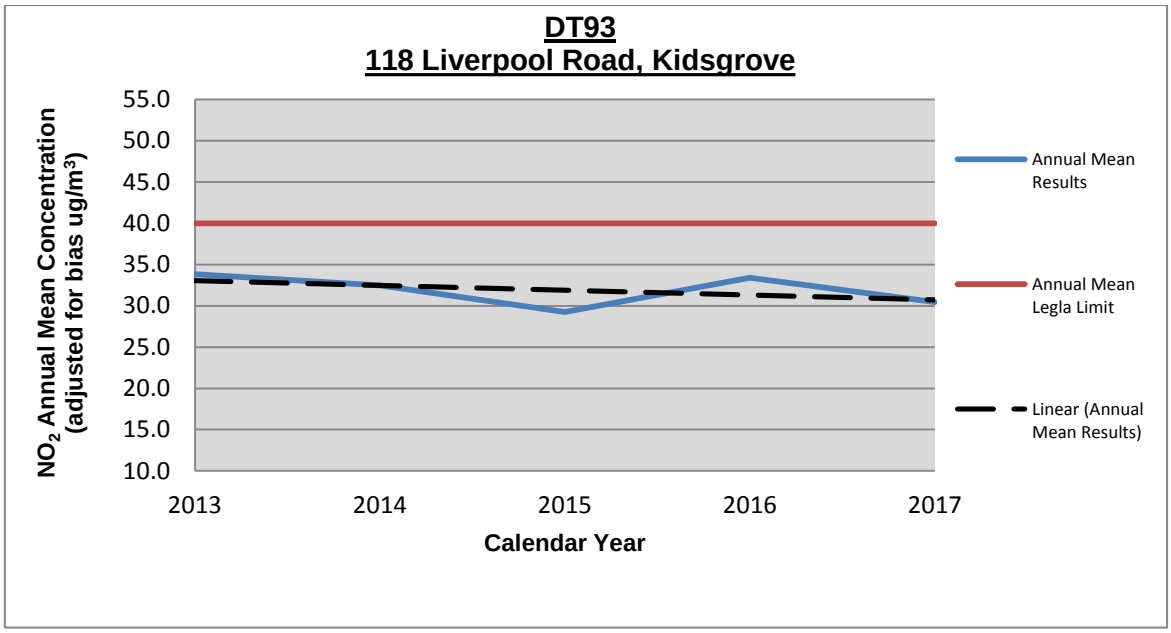

DT86
Hassel C.P. School, Barracks Road, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)

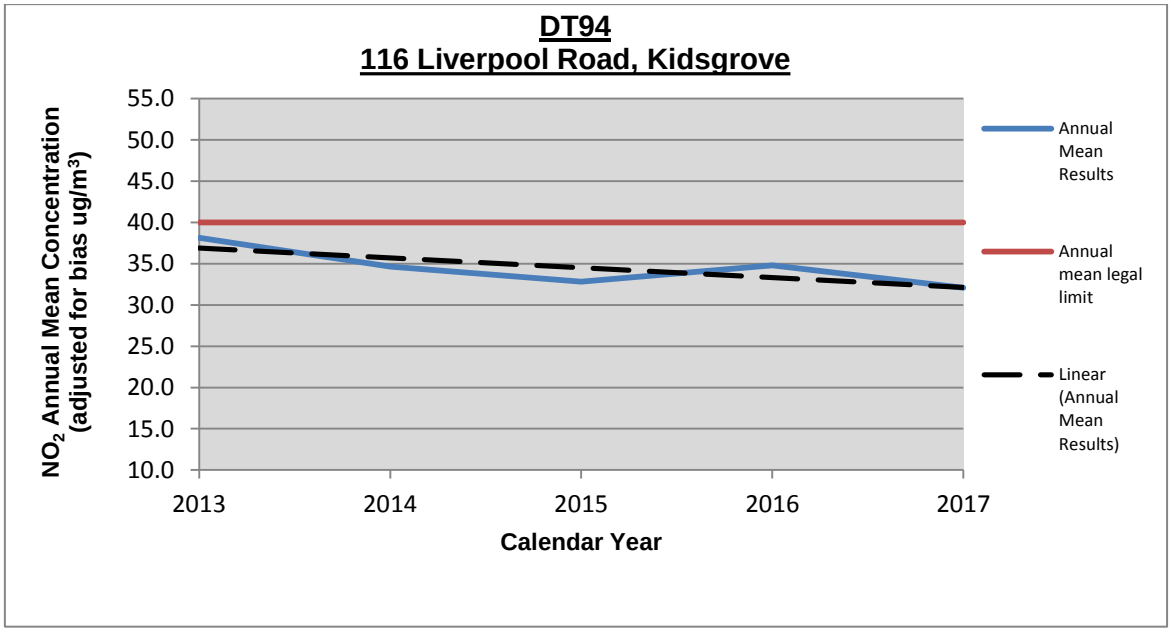

DT87
Blue Chilli, 1 King Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Result
Annual Mean Legal Limit
Linear (Annual Mean Result)

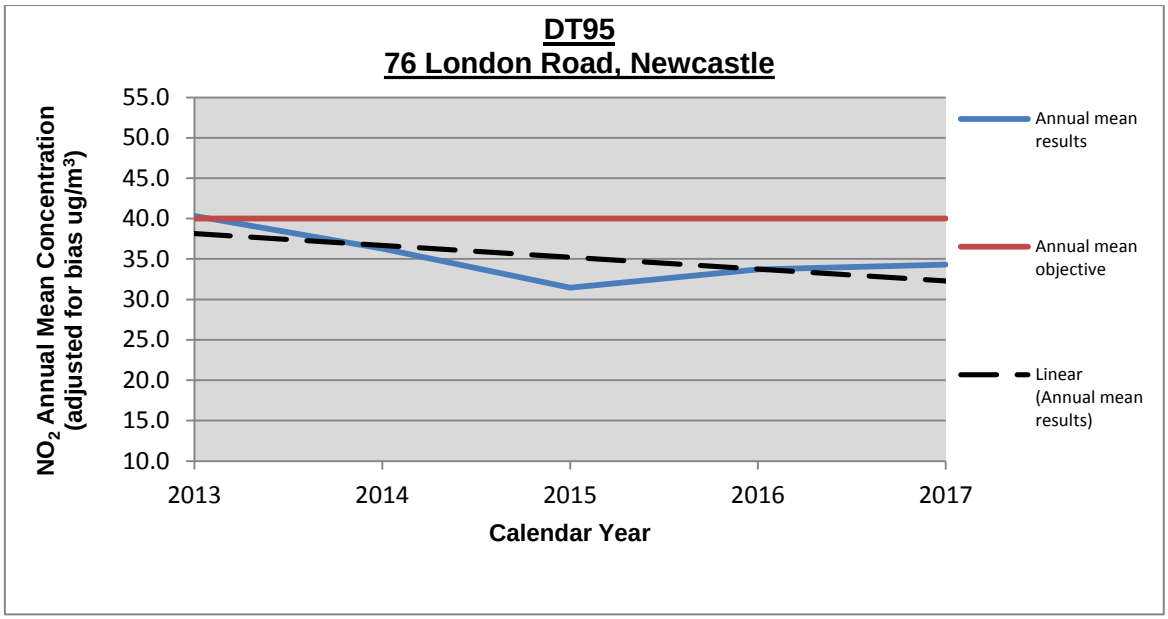

DT88
27 Lower Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Result
Annual Mean Legal Limit
Linear (Annual Mean Result)

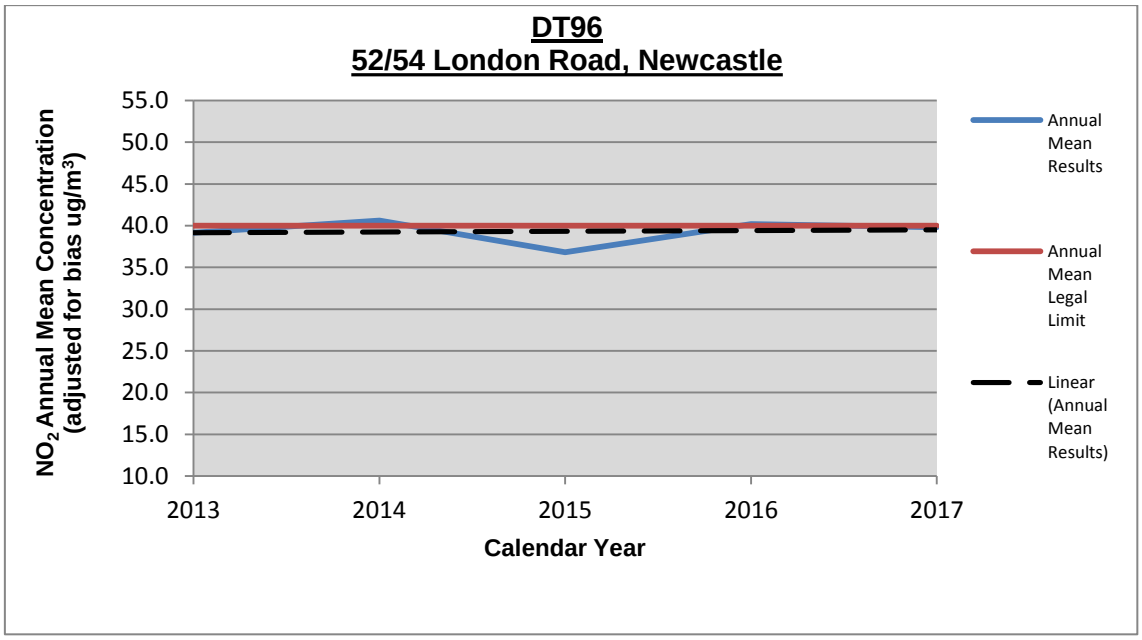

DT89, DT90, DT91
Queens Gardens, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results - DT89
Annual Mean Results - DT90
Annual Mean Results - DT91
Annual Mean Legal Limit
Linear (Annual Mean Results - DT89)

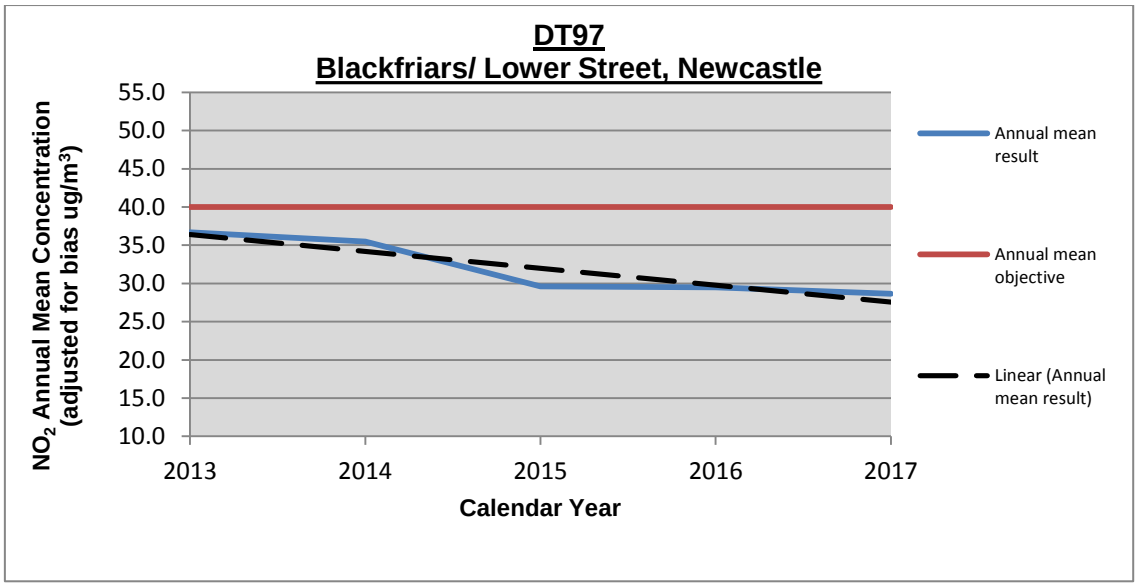

DT92
41/43 Liverpool Road, Kidsgrove
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Legal Limit
Annual Mean Results
Linear (Annual Mean Results)

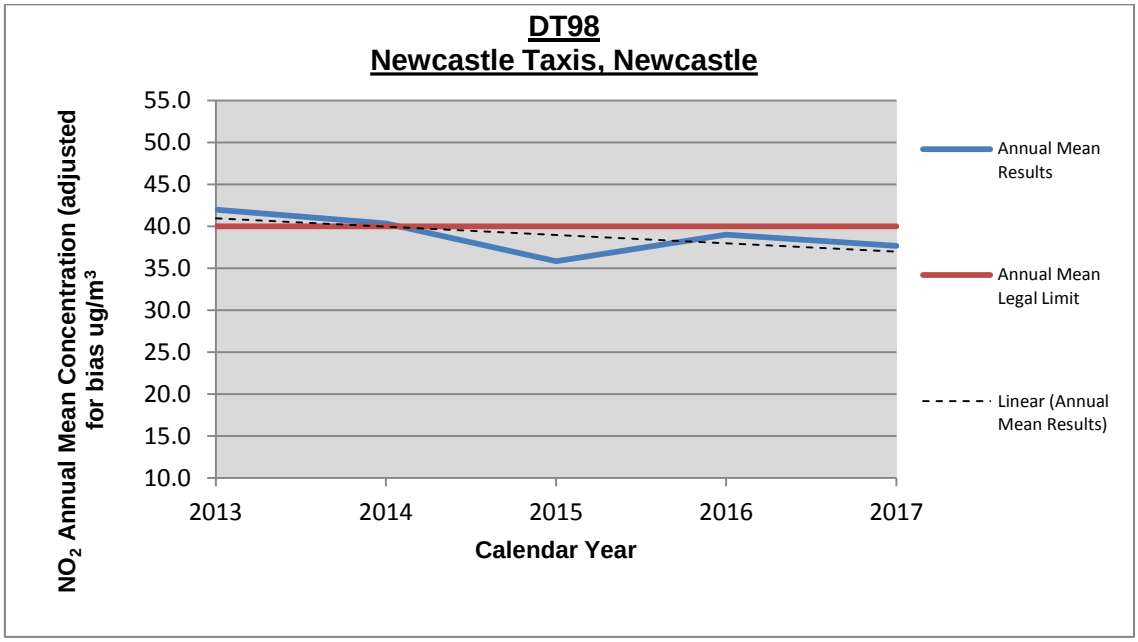

DT93
118 Liverpool Road, Kidsgrove
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legla Limit
Linear (Annual Mean Results)

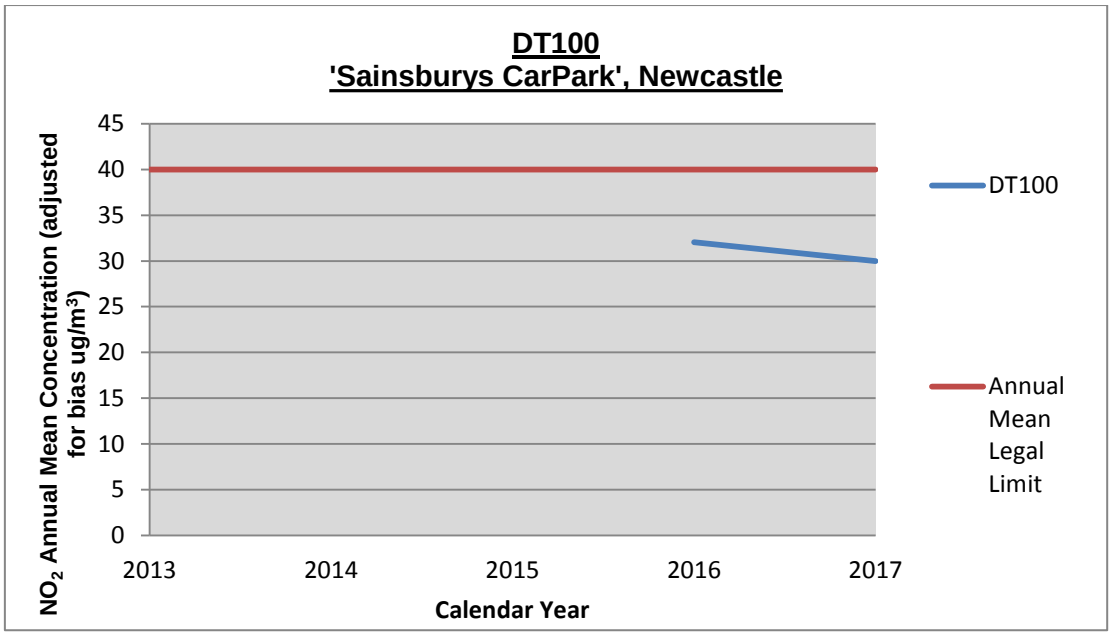

DT94
116 Liverpool Road, Kidsgrove
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual mean legal limit
Linear (Annual Mean Results)

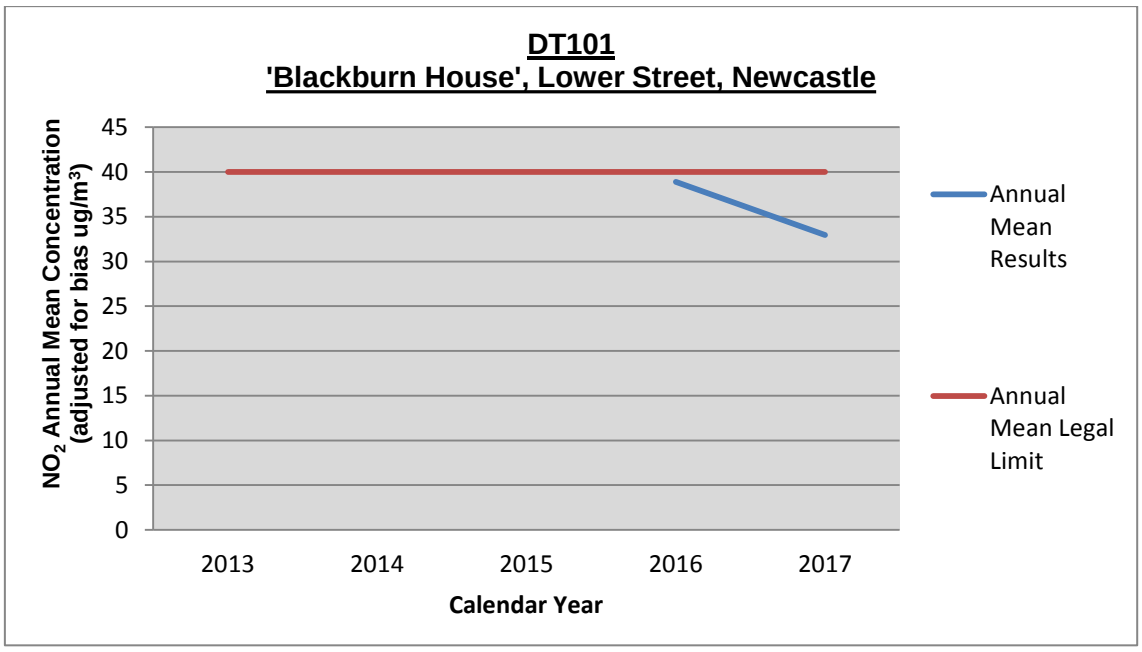

DT95
76 London Road, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual mean results
Annual mean objective
Linear (Annual mean results)


DT96
52/54 London Road, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)


DT97
Blackfriars/ Lower Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual mean result
Annual mean objective
Linear (Annual mean result)


DT98
Newcastle Taxis, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit
Linear (Annual Mean Results)


DT100
'Sainsburys CarPark', Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
45
40
35
30
25
20
15
10
5
0
2013
2014
2015
2016
2017
Calendar Year
DT100
Annual Mean Legal Limit


DT101
'Blackburn House', Lower Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
45
40
35
30
25
20
15
10
5
0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit

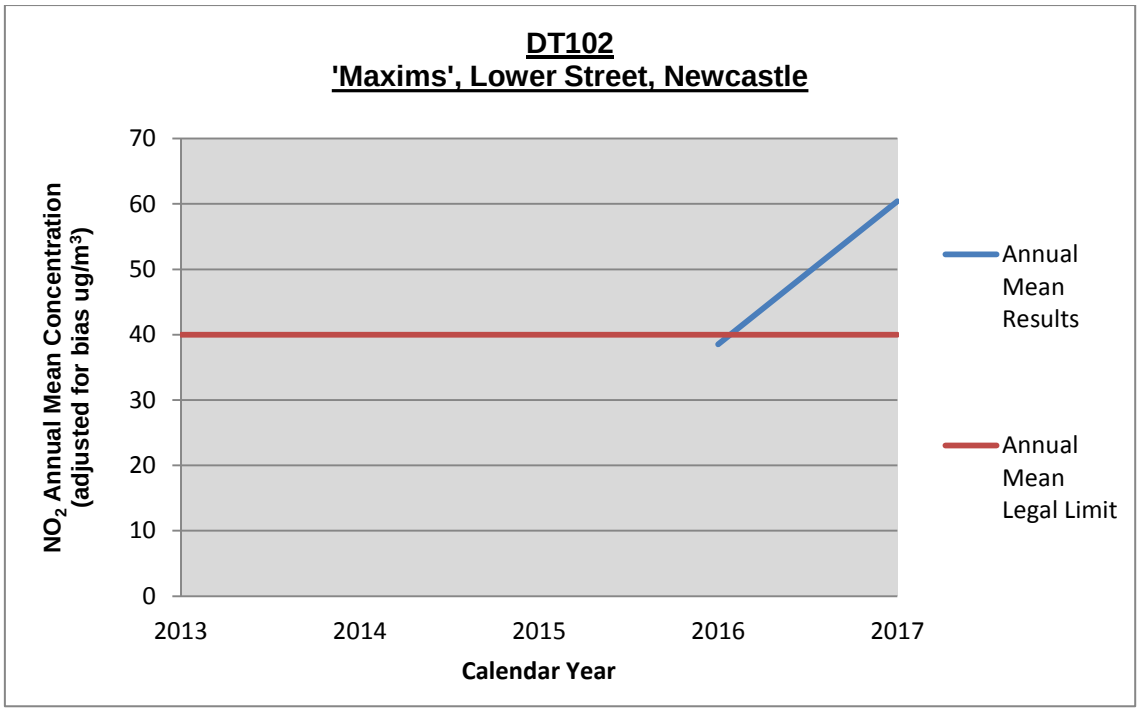

DT102
'Maxims', Lower Street, Newcastle
NO2 Annual Mean Concentration (adjusted for bias ug/m3)
70
60
50
40
30
20
10
0
2013
2014
2015
2016
2017
Calendar Year
Annual Mean Results
Annual Mean Legal Limit

Table A.4 – 1-Hour Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2017 (%) (2)	NO_2 1-Hour Means > 200µg/m^3 (3)				
					2013	2014	2015	2016	2017
CM1	Urban Centre	Automatic	100	92.21	0	0	0	0	0

Notes:

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in **bold.**

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

Appendix B: Full Monthly Diffusion Tube Results for 2017

Table B.1 – NO_2 Monthly Diffusion Tube Results - 2017

Site ID	NO_2 Mean Concentrations (µg/m^3)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (factor) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
DT K1	61.98	46.6	47.25	52.50	36.66	38.06	32.56	41.83	48.63	44.97	56.78	54.22	**46.8**	**41.7**	**28.3**
DT K2	46.07	44.4	38.03	26.48	30.30	28.43	22.60	25.71	33.30	27.63	39.10	38.84	33.4	29.7	
DT UB1	36.81	26.9	20.71	19.56	13.43	12.88	13.89	15.91	19.61	18.80	29.14	28.83	21.4	19.0	
DT UB2	34.00	23.4	17.46	15.21	11.66	10.94	11.40	12.90	15.49	14.82	20.28	21.99	17.5	15.5	
DT 3	43.61	32.3	39.10	47.22	22.86	32.31	26.78	28.42	27.68	29.76	45.45	38.93	34.5	30.7	
DT 6	56.65	42.3	50.68	45.95	37.41	38.61	28.03	36.69	44.45	36.01	51.32	40.31	**42.4**	37.7	37.3
DT 9	45.16	43.6	41.52	41.59	33.58	32.34	28.52	26.42	35.96	33.04	45.24	43.04	37.5	33.4	
DT 11	63.34	50.0	44.38	46.26	34.24	36.88	31.87	35.46	44.06	39.98	57.14	48.96	**44.4**	39.5	36.9
DT 24	52.27	40.1	38.36	44.53	30.60	33.65	28.95	32.87	39.26	37.95	48.97	48.46	39.7	35.3	
DT 28	44.01	37.2	36.21	42.32	23.28	31.03	26.72	29.94	29.31	27.65	39.63	36.37	33.6	29.9	
DT 34	48.59	39.8	36.79	37.80	33.49	30.45	27.57	29.01	37.89	30.02	43.70	37.74	36.1	32.1	
DT 39	53.37	42.3	37.52	37.62	39.59	32.70	27.74	30.50	37.51	28.42	44.18	38.24	37.5	33.4	
DT 40	48.25	39.4	34.02	28.06	26.54	26.89	22.54	25.10	29.18	26.82	37.08	38.05	31.8	28.3	
DT 46	44.65	34.52	36.55	37.49	25.51	28.98	26.22	29.10	36.98	30.82	38.60	36.08	33.8	30.1	
DT 47	33.39	35.8	30.79	30.75	29.77	23.26	21.04	23.56	30.56	22.90	34.71	32.06	29.0	25.8	

Site ID	NO_2 Mean Concentrations ($\mu g/m^3$)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (factor) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
DT 49	46.48	33.8	35.49	40.25	26.74	30.25	25.65	33.85	35.12	31.01	42.56	43.44	35.4	31.5	
DT 64	50.66	42.5	44.24	45.48	32.99	37.70	31.99	34.75	40.56	33.64	47.92	40.97	**40.3**	35.9	
DT 72	43.04	39.9	35.53	30.25	27.44	29.51	24.87	30.53	33.98	31.84	42.29	41.03	34.2	30.4	
DT 73	47.29	42.7	32.90	40.49	29.90	29.27	25.66	30.13	34.35	33.16	44.14	41.87	36.0	32.0	
DT 74	56.87	37.1	34.98	44.27	33.25	26.86	26.46	32.61	42.15	28.37	44.69	37.94	37.1	33.0	
DT 76	53.08	49.0	46.29	42.75	34.79	34.33	30.22	28.07	45.63	38.50	47.08	42.68	**41.0**	36.5	36.0
DT 84	54.60	48.2	40.37	37.31	33.88	37.73	23.32	34.99	40.37	36.51	41.41	44.98	39.5	35.1	
DT 85	58.85	47.4	42.25	42.28	43.05	42.74	37.34	38.44	48.07	34.79	59.19	44.90	**44.9**	**40.0**	30.7
DT 86	46.74	33.7	31.40	39.35	26.30	26.89	23.57	31.07	33.43	28.81	40.61	38.87	33.4	29.7	
DT 87	52.65	42.9	31.16	50.96	36.66	38.54	33.52	40.94	44.98	39.50	55.42	43.90	**42.6**	37.9	37.6
DT 88	46.63	33.8	33.12	38.19	25.43	27.90	21.17	31.86	35.80	30.28	41.76	37.51	33.6	29.9	
DT 89	50.51	38.7	33.80	31.84	30.08	26.61	26.39	30.18	37.69	29.72	37.18	36.81	34.1	30.4	
DT 90	48.71	39.4	34.25	32.30	30.59	28.70	22.39	27.09	35.45	28.13	39.17	37.69	33.7	30.0	
DT 91	46.21	41.6	36.35	31.54	29.10	28.21	25.97	29.24	37.59	30.48	38.35		34.1	30.3	
DT 92	58.02	46.2	40.64	26.68	30.40	31.40		31.92	36.67	31.61	41.47	39.43	37.7	33.5	
DT 93	52.66	37.4	36.10	38.37	30.99	30.37	23.91	28.03	34.84	27.71	33.87	36.19	34.2	30.4	
DT 94	52.23	35.2	30.67	48.01	31.60	0.37	45.41	30.48	37.84	32.24	48.18	40.50	36.1	32.1	
DT 95	57.65	41.9	35.67	46.63	27.72	29.44	26.83	30.46	39.28	32.51	51.57	43.05	38.6	34.3	
DT 96	65.25	51.4	41.43	55.09	33.44	33.82	32.66	36.34	44.68	36.81	55.37	50.31	**44.7**	39.8	39.3

Site ID	NO_2 Mean Concentrations (µg/m^3)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (factor) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
DT 97	48.96	37.6	41.93	31.69	28.11	24.97	22.38	24.84	32.35	25.67	35.43	32.27	32.2	28.6	
DT 98	55.87	48.6	42.39	42.75	34.27	39.29	31.93	32.72	44.88	39.76	48.21	47.24	**42.3**	37.7	37.2
DT 100	49.84	40.0	30.03	37.48	25.39	23.43	22.53	33.89	31.39	26.48	43.33	40.37	33.68	29.98	
DT 101	52.31	39.82	37.52	36.95	35.88	29.09	28.04	30.38	39.10	31.81	44.82	38.78	37.04	32.97	
DT 102	70.61	78.31	68.01	67.90	50.85	69.89	/	54.66	65.00	/	69.53	83.88	**<u>67.86</u>**	**<u>60.40</u>**	**52.9**
DT 103	47.69	41.04	29.12	21.93	25.94	19.82	16.82	21.58	23.91	22.59	24.14	29.98	27.05	24.07	
DT 104	55.04	46.61	40.08	45.71	32.21	34.75	31.20	33.73	43.30	37.85	72.41	42.51	**42.95**	38.23	37.7
DT 105	/	/	/	/	/	/	/	24.32	28.88	27.73	36.00	35.6	30.51	28.38	

☒ National bias adjustment factor used

☒ Annualisation has been conducted where data capture is <75%

☒ Where applicable, data has been distance corrected for relevant exposure

Page 113

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **<u>bold and underlined.</u>**

(1) See Appendix C for details on bias adjustment and annualisation.

(2) Distance corrected to nearest relevant public exposure.

National Diffusion Tube Bias Adjustment Factor Spreadsheet

Spreadsheet Version Number: 03/18

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies

Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods

Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet

This spreadhseet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2018

LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List

If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List

If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List

If a year is not shown, we have no data[2]

Step 4:

Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@uk.bureauveritas.com or 0800 0327953

Analysed By[1]	Method	Year[5]	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m^3)	Automatic Monitor Mean Conc. (Cm) (µg/m^3)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in water	2017	R	Borough Council of King's Lynn & West Norf	12	29	25	16.0%	G	**0.86**
Gradko	20% TEA in water	2017	R	Bath & North East Somerset	12	45	45	-0.2%	G	**1.00**
Gradko	20% TEA in water	2017	R	NOTTINGHAM CITY COUNCIL	12	38	41	-6.6%	G	**1.07**
Gradko	20% TEA in water	2017	R	Lancaster City Council	12	35	32	9.7%	G	**0.91**
Gradko	20% TEA in water	2017	R	Thurrock Borough Council	12	54	52	3.3%	S	**0.97**
Gradko	20% TEA in water	2017	R	Thurrock Borough Council	11	35	33	7.0%	G	**0.93**
Gradko	20% TEA in water	2017	R	Thurrock Borough Council	9	33	29	14.3%	G	**0.87**
Gradko	20% TEA in water	2017	UB	Thurrock Borough Council	11	30	28	8.0%	S	**0.93**
Gradko	20% TEA in water	2017	R	Dudley MBC	12	50	50	0.8%	G	**0.99**
Gradko	20% TEA in water	2017	UB	Dudley MBC	12	24	19	26.6%	G	**0.79**
Gradko	20% TEA in water	2017	R	City of Lincoln Council	12	42	31	33.2%	G	**0.75**
Gradko	20% TEA in water	2017	R	Gedling Borough Council	12	35	31	10.1%	G	**0.91**
Gradko	20% TEA in water	2017	R	Gateshead Council	12	36	37	-2.7%	G	**1.03**
Gradko	20% TEA in water	2017	R	Gateshead Council	12	29	25	17.5%	G	**0.85**
Gradko	20% TEA in water	2017	R	Gateshead Council	12	34	35	-5.3%	G	**1.06**
Gradko	20% TEA in water	2017	R	LB Hounslow	12	65	54	22.2%	G	**0.82**
Gradko	20% TEA in water	2017	R	LB Hounslow	12	59	53	10.6%	G	**0.90**
Gradko	20% TEA in water	2017	B	LB Hounslow	11	28	30	-6.0%	G	**1.06**
Gradko	20% TEA in water	2017	R	LB Hounslow	11	43	34	28.8%	G	**0.78**
Gradko	20% TEA in water	2017	B	LB Hounslow	9	38	33	14.9%	G	**0.87**
Gradko	20% TEA in water	2017	R	LB Hounslow	11	52	42	24.4%	G	**0.80**
Gradko	20% TEA in water	2017	UB	Liverpool	11	20	17	15.2%	G	**0.87**
Gradko	20% TEA in water	2017	R	North Ayrshire Council	12	26	21	23.2%	G	**0.81**
Gradko	20% TEA in water	2017	R	South Gloucestershire Council	12	25	23	10.3%	G	**0.91**
Gradko	20% TEA in water	2017	KS	Marylebone Road Intercomparison	12	101	79	28.6%	G	**0.78**
Gradko	20% TEA in water	2017		**Overall Factor[3] (34 studies)**				**Use**		**0.89**

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

C.1 QA/ QC on monitoring data

C.1.1. Calibration Checks

The Chemiluminescence nitrogen oxide analyser has fortnightly calibration checks and maintenance visits, which followed, documented procedures.

These procedures were drawn up in accordance with equipment manuals and the manufacturer's instructions. During the calibration checks, a two point calibration is carried out using a zero air scrubber and Nitric Oxide calibration gas, supplied by **BOC ,** to quantify the analyser 'zero' and 'span' response. The 'zero' response is the response of the analyser when the pollutant species being measured is not present in the sample air stream.

The 'span' response is the response of the analyser to a gas mixture of accurately known concentration. In addition to the fortnightly checks, **ESU1** carried out six monthly reference calibrations.

C.1.2. Equipment service and maintenance

The Council has an ongoing service and maintenance contract with **ESU1** for the analysers. The contract provides the following cover:

- Routine six monthly service visits in accordance with the manufacturers'
- instructions
- Guaranteed breakdown call out response
- Written report showing work carried out and status of instrumentation
- All work and documentation is carried out in accordance with a BS ISO 9002 accredited system
- Dedicated telephone support in normal working hours

C.1.3 Data processing

Data management and ratification is handled by **Air Quality Data Management (AQDM)** with regular data downloads during the day.

The raw data collected has to be converted to more useful pollutant concentrations and this conversion is achieved using the 'zero' and 'span' responses that are recorded during the fortnightly visits. The 'zero' response, Vz, is the response in measurement units of the analyser when the pollutant species being measured is not present in the sample air stream.

The 'span' response, Vs, is the response of the analyser to an accurately known concentration, c, in ppb (parts per billion) of the pollutant species. The instrument 'zero' and 'span' factors are then calculated using these data as follows:
Instrument zero = Vz

Instrument span, F = c/(Vs-Vz)

Ambient pollution data are then calculated by applying these factors to logged output signals as follows:
Pollutant concentration (ppb) = F(Va-Vz)
Where Va is the recorded signal from the analyser sampling ambient air. The fortnightly calibration factors applied to the raw data are then filed.

C.1.4. Data validation and ratification

Once the calibration factors have been applied to the raw data, the data is screened, by visual examination to see if they contain any spurious and/or unusual measurements. Any suspicious data, such as large spikes or spurious high concentrations can be 'flagged' and investigated more fully.

This process is known as validation. Data validation is followed by data ratification, which is carried out at 3 – 6 month intervals. Steps in the ratification process include:

- Examination of calibration records to ensure correct application of calibration factors
- Examination of data for other pollutants and monitoring sites to highlight any anomalies
- Deletion of data shown i.e. spikes generated by the analyser
- Correction of any baseline drift as indicated by examination of daily calibration records
- Examination of any local scale changes to the site environment

When data verification has been completed then the data is ready for further statistical and critical examination for reporting purposes.

C.2. Short-term to Long-term Data Adjustment

C.1.6.1 NO_2 annualisation for Queens Gardens Continuous Monitor

This was not necessary as data capture for the site was above 90%.

C.1.6.2 Annualisation of NO_2 diffusion tube data

Data adjustment for Site DT 105 has been required due to data capture being 41.6%, which is less than the 75% considered appropriate for a valid result.

Annualisation of the result from this diffusion tube, was undertaken using the method set out in Box 7.10 of TG(16) using the following data;

Table 7: Annualisation for Site DT 105

Start date	End Date	B1	D1	B1 when D1 is available
04.01.2017	01.02.2017	34.68		
01.02.2017	01.03.2017	28.40		
01.03.2017	29.03.2017	26.58		
29.03.2017	26.04.2017	19.81		
26.04.2017	31.05.2017	23.57		
31.05.2017	28.06.2017	14.57		
28.06.2017	02.08.2017	16.97		
02.08.2017	30.08.2017	16.63	24.32	16.63
30.08.2017	27.09.2017	22.52	28.22	22.52
27.09.2017	01.11.2017	18.28	27.73	18.28
01.11.2017	06.12.2017	27.49	36.00	27.49
06.12.2017	03.01.2018	25.06	35.60	25.06
Average		23.12	30.37	21.99
Ratio (A_m/P_m)		1.05		
Measured period mean x Ratio		30.37 x 1.05		
Annualised Value for Site DT 105		**31.89µg/m^3**		
Bias Adjusted		**28.38 µg/m^3**		

Appendix D: Map(s) of Monitoring Locations and AQMAs

3.3 Distance Correction

It has been necessary to undertake distance correction for the following sites, to ensure that results are representative of relevant exposure for the annual mean objective for NO_2. 'The NO_2 Fall off With Distance from Roads" calculator has been used for this purpose. (https://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html).

The relevant 1km grid square NO_2 background data for 2017 has been taken from https://uk-air.defra.gov.uk/data/laqm-background-home. The distance correction has been applied to the bias adjusted figure.

Table 8: Nitrogen Dioxide fall off with distance calculation for diffusion tube sites where measured annual mean values which were within 10% of, or exceeded the annual mean objective for Nitrogen dioxide.

Site Name/ID	Distance (m)		NO_2 Annual Mean Concentration ($\mu g/m^3$)			Comment
	Monitoring Site to Kerb	Receptor to Kerb	Background	Monitored at Site	Predicted at Receptor	
DT K1	3.0	22.0	15.8	41.7	28.3	Warning: your receptor is mo than 20m further from the ke than your monitor - treat resu with caution.
DT 85	5.0	5.2	16.8	40.0	*39.7*	Predicted concentration at Receptor within 10% the AQ objective.
DT 102	2.0	4.0	14.0	60.4	**52.9**	Predicted concentration at Receptor above AQS objectiv
DT 6	4.0	4.2	12.0	37.7	*37.3*	Predicted concentration at Receptor within 10% the AQ objective.
DT 11	3.0	3.3	15.8	39.5	*38.9*	Predicted concentration at Receptor within 10% the AQ objective.
DT 76	2.0	2.2	15.8	36.5	*36.0*	Predicted concentration at Receptor within 10% the AQ objective.
DT 87	5.0	5.2	15.8	37.9	*37.6*	Predicted concentration at Receptor within 10% the AQ objective.
DT 96	2.0	2.2	15.8	39.8	*39.3*	Predicted concentration at Receptor within 10% the AQ objective.

Site Name/ID	Distance (m)		NO_2 Annual Mean Concentration ($\mu g/m^3$)			Comment
	Monitoring Site to Kerb	Receptor to Kerb	Background	Monitored at Site	Predicted at Receptor	
DT 98	2.0	2.2	14.07	37.7	*37.2*	Predicted concentration at Receptor within 10% the AQ objective.
DT 104	2.0	2.2	16.8	38.2	*37.7*	Predicted concentration at Receptor within 10% the AQ objective.

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective[13]	
	Concentration	Measured as
Nitrogen Dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m^3	Annual mean
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

[13] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

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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2. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006 (https://uk-air.defra.gov.uk/assets/documents/reports/cat09/0701110944_AQinequalitiesFNL_AEAT_0506.pdf)
3. Department for Environment, Food and Rural Affairs: Abatement cost guidance for valuing changes in air quality, May 2013 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/197898/pb13912-airquality-abatement-cost-guide.pdf)
4. https://www.newcastle-staffs.gov.uk/airquality
5. http://www.stoke.gov.uk/ccm/content/planning/planning-general/local-development-framework/joint-local-plan.en
6. Public Health Outcomes Framework 2016 – 2019 indicator 3.01 Fraction of mortality attributable to particulate air pollution https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/6/par/E12000005/ati/102/are/E10000028/iid/30101/age/230/sex/4
7. Every Breath we Take: The Lifelong Impact of Air Pollution; Report of a working Party, February 2016, ISBN 978-1-86016-567-2
8. Mortality attributable to particulate air pollution Public Health Outcomes Framework
9. Public Health Outcome Framework, Public Health England, http://www.phoutcomes.info/
10. Public Health England https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/6/par/E12000005/ati/102/are/E10000028/iid/30101/age/230/sex/4
11. Public Health England http://fingertips.phe.org.uk/
12. Adverse effects of outdoor pollution in the elderly, Marzia Simoni et al. Journal of Thoracic Disease 2015 Jan; 7(1): 34–45. doi:10.3978/j.issn.2072-1439.2014.12.10
13. The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

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REPORT TITLE **Food Safety Service Plan 2018/19**

Submitted by: **Head of Environmental Health Services**

Portfolio: **Environment & Recycling**

Ward(s) affected: **All**

Purpose of the Report

An information report to make the committee aware of the work planned by the Food and Safety Team in 2018/19 along with a review of last year's performance.

Recommendations

That the committee receive and endorse the Food Safety Service Plan for 2018/19.

Reasons

To make the Public Protection committee aware of the work carried out by the Food and Safety Team, in accordance with the Food Standards Agency framework agreement and statutory Code of Practice on official food controls by local authorities.

1. Background

1.1 The Borough Council has a statutory duty to provide a Food Safety service that:

- Maintains a register of all food businesses operating within the Borough;
- Implements a risk based programme of inspections and interventions;
- Provides advice to local businesses about how they can comply with legal requirements;
- Investigates complaints about contaminated food, unhygienic premises and food poisoning outbreaks; and
- In the most serious cases takes enforcement action to protect public health.

2. Issues

2.1 The Food Standards Agency requires local authorities to produce a specific service plan for their Food Safety service using a specified format that can be reported to its' elected members.

2.2 Attached to this report in Appendix A is a Food Safety Service Plan for 2018/19 which outlines the work planned for the coming year as well as a review of last year's performance.

3. Options Considered

3.1 No other options are considered, the provision of this plan is a requirement of the Food Standards Agency under their framework agreement with local authorities.

4. Proposal

4.1 It is proposed that the committee note and endorse the content of the Service Plan.

5. Reasons for Preferred Solution

5.1 The Service Plan is for the information of the Public Protection Committee.

6. Outcomes Linked to Sustainable Community Strategy and Corporate Priorities

6.1 Creating a cleaner, safer and sustainable Borough.

- The community is not put at risk from poor hygiene standards in food premises.

7. Legal and Statutory Implications

7.1 The Council have a statutory duty to provide a Food Safety service and comply with the requirements of the Food Standards Agency.

8. Financial and Resource Implications

8.1 None, the Service Plan will be implemented within existing budgets.

FOOD SAFETY

SERVICE PLAN 2018/19

This document has been developed in accordance with guidance issued by the Food Standards Agency.

Introduction

The Council has a statutory duty to carry out Official Food Controls and enforce food hygiene regulations within the Borough. This ensures that all food sold within the Borough is safe and fit for human consumption.

This plan details the way in which Newcastle's Food and Health and Safety Team performed in 20017/18, and how the service was delivered.

Whilst highlighting achievements the plan also sets the standard for how the service will be delivered over the next financial year. The service will strive to continue providing a quality, customer focussed service in line with the Corporate priorities.

Nesta Barker
Head of Environmental Health Services

April 2018

Section 1 - Service Aims and Objectives

1.1 Service Aim

The Council recognises that its food safety regulatory function plays an important role in maintaining and improving public health within the district. It is committed to ensuring that all food sold within the borough is safe and without risk to health. The service also plays an important role by supporting compliant food businesses and taking action against those businesses that are gaining an economic advantage by not complying with the food hygiene regulations.

Service Objectives

Food Safety Enforcement

The Food & Safety Team has enforcement responsibilities in a wide number of areas affecting the public and businesses within the Borough. These include:

- Ensuring that food and drink intended for sale for human consumption is produced, manufactured, stored, distributed, and handled safely and in hygienic conditions.
- Ensuring that residents are provided with a supply of wholesome and potable water
- Investigating complaints about food and food premises.
- Responding to notifications of food alerts.
- Control and prevention of spread of infectious disease and food poisoning.

1.2 Links to corporate objectives and plans

The Borough's Council Plan 2015-2020 sets out the overall vision and priorities for the Council. These are then incorporated into specific service and financial plans.

Within this plan the Councils' four priorities are:-

- **A clean, safe and sustainable borough**
- **A borough of opportunity**
- **A healthy and active community**
- **A co-operative council which delivers high quality, community-driven services**

The work of the Food and Safety team can be linked to all of these priorities; however, it is perhaps more closely associated with:-

- **A clean, safe and sustainable borough**
- **A healthy and active community**

The team report on the following key performance indicator each quarter to the Council's Cabinet:

Outcome 1.1 Ensure high standards of safety and public health

1.1 Percentage of food premises that have a zero or one national food hygiene rating.

1.2 The percentage of food establishments which are broadly compliant with food hygiene law

Other priorities for inspection of food premises and workplaces are prescribed in guidance issued by the Food Standards Agency.

2 - Background

2.1 Profile of Newcastle – under – Lyme Borough Council

Newcastle-under-Lyme borough council is a local government district with borough status in Staffordshire, England. It is named after its main settlement, Newcastle-under-Lyme, where the council is based, but includes the town of Kidsgrove, the villages of Silverdale and Keele, and the rural area surrounding Audley. The Borough of Newcastle-under-Lyme forms part of the conurbation of North Staffordshire and covers some 81 square miles with a population of around 122,000.

The traditional industrial base of mining and pottery manufacture has changed significantly over the last century. The closure of local mines, and factories has seen the growth of hi tech and research industries within the area. The Borough has areas of considerable affluence, but also includes two wards that fall into the 10% most deprived in the country

Newcastle is an ancient market town and still maintains a vibrant market culture. Stallholders set up on a part of the town locally known as The 'Stones' and this area is used on an almost daily basis for events ranging from the regular market to specialist events such as Farmers and European markets and antique fairs. Due to the Boroughs central geographical location and the proximity to the M6 motorway, recent years have seen a significant increase in the numbers of distribution depots in the area. A large bakery supplying retailers nationally is based here, as is a large meat products manufacturer. The Borough also has the prestigious Keele University, medical school and conference facilities located within its' boundaries.

2.2 Organisational Structure

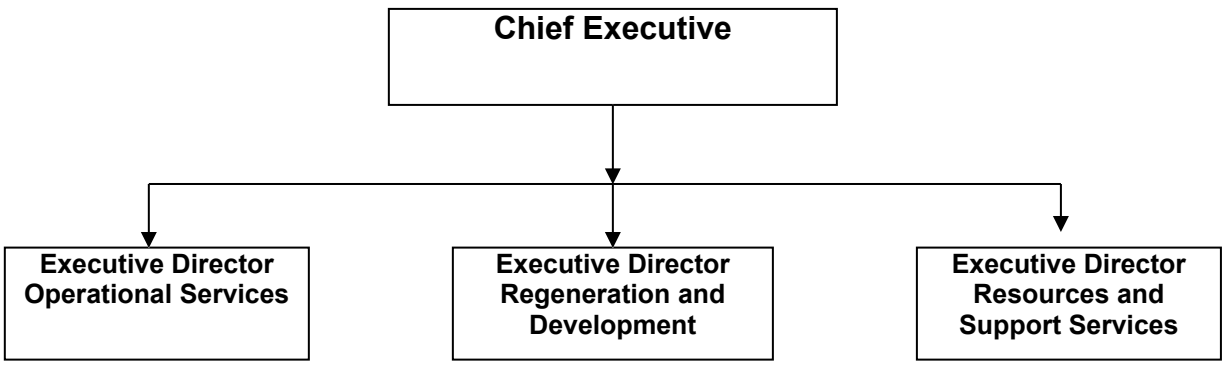
The Council is made up of 44 locally elected representatives, otherwise known as councillors or elected members.

The Council has a Leader who is elected by the members of the Council and is nominated by the largest group on the Council. The Council also has a Mayor, who presides over the Council meeting. The Mayor is a councillor who is appointed by all councillors to serve for one year as Chairman of the Council. The Council operates a Cabinet System consisting of a Leader and a small Cabinet. Members of the Cabinet oversee the following 'portfolios' or groups of services.

There are a number of other Council committees who have important roles to play in a variety of areas including Planning, Licensing, Scrutiny, Standards and Public Protection. Please refer to the Council's website for further details at: https://www.newcastle-staffs.gov.uk/

Executive Management

The Council's senior officer management structure comprises of the Executive Management Team:



The Food and Safety Team are in the Environmental Health Service area, within the Regeneration and Development Directorate.

Food and Safety Team

The Food and Safety team operate within the Environmental Health Service together with the Environmental Protection, Environmental Services and Licensing Administration teams.

The Food and Safety Service structure consists of:

The Head of Environmental Health Services (Reporting to the Executive Director Regeneration and Development)

Environmental Health Team Manager – Food and Safety
2 Environmental Health Officers
2 Technical Assistant
1 Food and Safety Assistant
1 Licensing Enforcement Officer
1 Support Assistant (Support staff)

The use of outside contractors will only be considered in the future if the following criteria are met:

- A backlog of inspections which cannot be completed by Officers;
- Agency contractors meeting the requirements of the Food Safety Act Code of Practice Qualifications and Experience of Authorised Officers; and
- The cost of the work being met within existing budgets.

Expert assistance is provided by the following outside organisations: -

- Food Examiner and Microbiology Department, Public Health England, London
- Consultant in Communicable Disease Control, Public Health England,

2.3 Scope of the Food and Safety Service

The food and safety team are responsible for enforcing food hygiene law within the borough. Issues relating to food standards and feed are dealt with by our colleagues in Staffordshire County Council's Trading Standards Department.

The Food and Safety team is responsible for the delivery of a number of regulatory services including:

- Food Safety and Hygiene
- Occupational health and safety (in premises where enforcement responsibility is allocated to the Local Authority)
- Prevention and control of infectious diseases
- Public health licensing – tattooing, piercing etc.
- Health promotion
- Licensing Enforcement (Premises only)

The service is provided in order to ensure that the Council meets its' legal obligations specified in primary legislation. The service uses a range of interventions to deliver the service which can be divided into three main areas:

- **Inspection/Audit:** Inspection of food businesses at a minimum frequency laid out in the Food Law Code of Practice.

- **Demand:** Investigation of complaints regarding food and food premises, accidents and notifications of food poisoning.

- **Business support:** Provision of advice and guidance to local businesses and consumers**.**

The following functions are provided by the service:

- Maintenance of a food premises registration database for all food businesses located within the borough;
- Provision of advice to local businesses to assist them in complying with their legal responsibilities and to promote good practice.
- Inspections and audits of food businesses to ensure they comply with food safety legislation.
- Approval of food manufacturers handling products of animal origin.
- Sampling and analysis of food and water to check their compliance with safety requirements.
- Investigation of complaints about illegal/unfit food and unlawful food businesses;
- Investigation of food poisoning outbreaks;
- Investigation of national Food Alerts (issued by the Food Standards Agency).
- Health and safety inspections where we are the enforcing authority.
- Investigation of complaints about occupational health and safety.
- Investigation of accidents, dangerous occurrences, and occupational diseases.
- Inspection of establishments carrying out tattooing, ear piercing and electrolysis and other beauty services.
- In the most serious cases, formal enforcement action is taken to protect public health including the seizure of food, service of notices, closure of premises and prosecution of offenders.
- Consultation with external agencies and internal services i.e. licensing, trading standards, planning;
- Enforcement of Smoke-Free legislation
- Enforcement of Alcohol Licensing legislation

Service Delivery Points

The team are based with their Environmental Health colleagues at the Central Depot, Knutton Lane, Newcastle-under-Lyme and the service operates between **9.00 a.m. - 5.00 p.m. Monday – Friday.**

Newcastle Borough has two dedicated Customer Service Centres, located in Castle House, Newcastle and The Town Hall, Kidsgrove both are open Monday - Friday 9am to 5pm.

The out of hours Emergency Call Centre service has been outsourced and is operated by Cannock Chase District Council. The Environmental Health Service operates an emergency stand-by rota so there is always a manager available to respond to the contact centre in the event of any emergencies or incidents.

2.4 Demands on the Food Service

In April 2018 there are 1096 registered food businesses in the Borough. These businesses were given a risk rating band between category A and E as shown in the table below. NB Please note the Food Standards Agency code of practice was revised in 2014 which resulted in changes to the category C & D bandings.

Food Premises Risk Band	2018/19	2017/18	2016/17	2015/16	2014/15
A	0	0	1	0	2
B	39	41	53	47	47
C	199	222	214	229	403
D	331	336	347	343	168
E	492	445	445	431	425
UNRATED	34	33	19	39	29
OUTSIDE	1	2	2	3	1
TOTAL REGISTERED	1096	1079	1081	1092	1075

The risk rating awarded is generated by the inspecting officer who scores the business based on the types and quantities of food produced and their compliance with food hygiene requirements. Businesses awaiting inspection are classified as Unrated and those registered with other council's and trading in our area are deemed 'Outside' the inspection programme.

The risk band awarded also determines how often the food business will be inspected as detailed in the table below:

Risk band	Minimum intervention frequency
A	At least every 6 months
B	At least every 12 months
C	At least every 18 months
D	At least every 24 months
E	A programme of alternative enforcement strategies or interventions every three years

Businesses can be rated as a category A or B if they carry out a high risk activity such as food manufacturing, or if they are found to have poor compliance such as a premises awarded a zero or 1 Food Hygiene Rating.

A number of specialist and complex food manufacturers are located within the district including

- A specialist cheese-maker
- Two Meat Product manufacturers

Officers responsible for inspecting/auditing these premises have received specialist training in the relevant fields.

2.5 Enforcement Policy

The Council has approved an Enforcement Policy and carries out its' regulatory functions in accordance with the Regulators Compliance Code. The importance of achieving a fair and consistent approach to enforcement is recognised by the council. The Enforcement Policy is followed for all enforcement action undertaken by the food service and is available on the council's website: Corporate Enforcement Policy | Newcastle-Under-Lyme Borough Council

3. Service Delivery

3.1 Interventions at Food Establishments

An annual risk-prioritised programme of inspections will be undertaken in accordance with the Food Safety Act 1990 Code of Practice. The Service will use the full range of interventions and enforcement options available to ensure that the highest standards of food hygiene and safety are achieved and maintained.

In 2018/19 there are 541 food premises due for a Food Hygiene Inspection, and these are broken down by Risk Band in the table below:

Food premises risk band	Total due in 2018-19	Total in 2017-18
A – Highest 'risk'	**0**	**0**
B	**37**	**40**
C	**136**	**153**
D	**148**	**182**
E – Lowest 'risk'	**180**	**176**
OUTSIDE	**1**	**2**
UNRATED	**39**	**34**
Grand Total	**541**	**587**

In 2018/19 the Service aims to achieve:

100% of High Risk food premises (categories A – B) using full inspections/audits.

100% of category C premises using full inspections/audits.

100% of category D premises using full inspections/audits.

100% of category E premises will be subject to an inspection or alternative enforcement strategy such as a self-inspection form, to help assess compliance and identify if there has been any change in operations that warrants an inspection.

100% of Unrated premises using full inspections/audits.

NB we received 112 new food premise registration forms in 2017/18 notifying us of new food businesses or changes in ownership. This area of work places a significant demand on our Service as these inspections should be carried out within 28 days. We have no control over this reactive type of work and will aim to achieve 100% of these inspections. However if demand becomes excessive, then resources will be diverted away from lower risk category E and D inspections.

National Food Hygiene Rating Scheme

Newcastle-under-Lyme Borough Council was the first Council in Staffordshire to launch the national Food Hygiene Rating Scheme in June 2011. This has allowed residents and visitors the opportunity to make an informed choice about where they eat based on the premises last Food Hygiene inspection.

After each inspection all food premises are given a score based on their compliance with food hygiene law and confidence in management. These scores are then converted into a Food Hygiene Rating based on the FSA's 'Brand Standard'. Businesses can receive a Rating between zero and five.

On 25th April 2018 the following profile of Food Hygiene Ratings were published:

FHRS	Total Premises April 2018	Total Premises April 2017
5 – Very Good	**668**	**599**
4 – Good	**139**	**157**
3 – Generally Satisfactory	**60**	**78**
2 – Improvement Necessary	**6**	**11**
1 – Major improvement necessary	**18**	**9**
0 – Urgent Improvement Necessary	**None**	**1**
Grand Total	**891**	**855**

Please note, certain categories of food businesses are exempt from the scheme if they do not sell direct to the public or are handling low risk food only e.g. newsagents.

Revisits

Revisits are only made where serious or ongoing contraventions are found during the initial inspection. Last year 27 Food Hygiene revisits were carried out and it is anticipated that a similar number will be required in future years.

Alternative Inspection/ Intervention Strategies

The Service uses an alternative enforcement strategy to deal with lower risk category E food premises. This approach is advocated by the Food Standards Agency as a means to target limited resources towards areas of greatest risk.

The strategy involves sending a food safety questionnaire to those low-risk businesses rated as an E. Proprietors must then self-assess the food safety risk posed by the business and return the questionnaire. Responses are assessed to determine whether any further action is required and non- respondents are targeted with follow up actions and visits if necessary.

Inland control of Imported food

Officers routinely check the traceability of all food during their interventions and this includes food that has been imported from outside the EU ('Third' countries). Officers within the team have received specialist training in Imported Food Control from the Food Standards Agency and support materials are available on the FSA website. Officers also monitor the microbiological quality of imported food as part of national and cross-regional sampling programmes.

3.2 Food Complaints

Food complaints received and investigated by the service fall into one of the following categories of Service Request:

- Food contamination
- Complaints about Hygiene of food businesses (hygiene, pests etc.)

Year	Food Complaints	Hygiene of Food Premises
2017/18	29	161
2016/17	80	232
2015/16	33	141
2014/15	42	135
2013/14	71	273
2012/13	62	432

We have no control over this reactive area of workload and will aim to respond to all service requests within the necessary timescales. Where the service receives excessive numbers of service requests then the Team Manager and Head of Service will make a decision on how these should be prioritised and whether resources need to be re-allocated.

Service requests are investigated in accordance with established procedures and policies. The initial response to complaints will be within five working days depending on the severity of the complaint, with more serious complaints receiving a more urgent response.

3.3 Home Authority Principle and Primary Authority Scheme

The Home Authority Principle is an arrangement where multi-national food businesses can enter into a formal arrangement with a single local authority (known as their Primary Authority), to agree on common standards and interpretation of the Regulations in their many premises with the aim of ensuring consistency of enforcement. Local Authorities dealing with the businesses other premises are then expected to have regard to any arrangement agreed by the Primary Authority before taking enforcement action.

Primary Authority Scheme

Regulatory Delivery's Primary Authority Scheme is the gateway to simpler, more successful local regulation. It gives businesses the right to form a statutory partnership with a single local authority, which then provides robust and reliable advice for other councils to take into account when carrying out inspections or dealing with non-compliance.

Newcastle BC is not currently acting as a Primary or Home Authority for any businesses within the borough. All of our officers are aware of the schemes and prior to any inspection of a food business that has a Primary Authority, our officers will check the Primary Authority website to review documentation and inspection plans.

3.4 Advice to Business

Wherever possible, our officers will try and work with new and existing food businesses to help them comply with the legislation. Officers will offer advice when requested, and will encourage food business operators through an educative approach to adopt good practice. This is achieved through a number of measures:

- On request, advisory visits to new and existing businesses who require guidance;
- Advice is routinely given during inspections and other visits to premises;
- Provision of information leaflets and signposting;
- Responding to service requests and enquiries;
- The Council's website;

3.5 Food Inspection and Sampling Programme

Our food sampling activity play an important role in monitoring the microbiological quality of food sold locally and helps us verify that the food business operators have effective food hygiene controls in place. Food is sampled according to a programme co-ordinated through the Staffordshire and Shropshire Food Liaison Group, together with colleagues at the regional Public Health England laboratory at in London. Members of the group implement national, cross-regional and local sampling initiatives based on national intelligence and incidents.

Additional food sampling is carried out as necessary to support food hygiene inspections, the investigation of food complaints and outbreaks of food borne disease.

Samples are currently sent for microbiological examination to the Public Health England UKAS accredited laboratory in London. The laboratory send a courier to collect samples from the Council offices on Tuesdays and Thursdays.

Samples requiring analysis for chemical or physical parameters are sent to the Public Analyst.

The following table outlines the number of food samples taken from food premises for microbiological examination in the last 5 years:

Year	Microbiological Food Samples
2017/18	120
2016/17	112
2015/16	117
2014/15	146
2013/14	142

3.6 Control and Investigation of Outbreaks and Food Related Infectious Disease

The Food and Safety team investigates all reported cases and outbreaks of food poisoning occurring within the borough in liaison with our colleagues at Public Health England.

The objectives of this service are to:

- Fulfil the Council's statutory responsibilities relating to the control of infectious disease;
- Identify the source and cause of reported infection;
- Implement measures to prevent further spread;
- Protect public health by providing cases and members of the public with advice on personal hygiene, safe food handling and control of infection;
- Exclude food handlers and people working with high-risk groups in consultation with the Consultant in Communicable Disease Control (CCDC);

Large outbreaks are resource intensive and place significant demands on the Service. In the event of a significant outbreak, the Team Manager and Head of Service will monitor the situation and re-allocate resources and staff from other areas as necessary.

During 2017/18 the Council received 196 reported cases of infectious disease (compared to 157 in 2016/17). Control of food related infectious disease is a priority area due to the possible health consequences for the individual and the risk of infection spreading within the community. This area of the service will therefore receive whatever resources are required to fulfil these duties.

3.7 Food Safety Incidents

Food Alerts, product withdrawals and recalls

The FSA issues information about product withdrawals and recalls to let consumers and local authorities know about problems associated with food. A Product Withdrawal Information Notice or a Product Recall Information Notice is issued where a solution to the problem has been put in place – the product has been, or is being, withdrawn from sale or recalled from consumers, for example. A Food Alert for Action is issued where intervention by enforcement authorities is required. These notices and alerts are often issued in conjunction with a product withdrawal or recall by a manufacturer, retailer or distributor.

When a Food Alert for Action is issued, the Council must carry out the specified actions within the alert which may include visiting food premises and removing contaminated food from sale.

The FSA also sometimes issues Allergy Alerts which are normally dealt with by our colleagues in Staffordshire County Council's Trading Standards department.

Food Alerts are sent to the Council via a designated e-mail address which are auto-forwarded to members of the Food and Safety team for their prompt attention. Outside normal working hours the Environmental Health Team Manager subscribes to the FSA's Food Alert text messaging service to alert them to any significant Food Alerts: For Action. The Environmental Health Service also operates an emergency out of hours standby rota so there is always a Manager available to respond in an emergency.

Given the reactive nature of Food Alerts it is not possible to predict the likely resources required.
A 'Food Alert: For Action' can have large resource implications as they sometimes involve the need for us visit a large number of food businesses. However due to the risk to Public Health, it is essential that adequate resources are provided to action these Alerts and this area of the service will receive whatever resources are required to fulfil these duties. In serious cases the Team Manager and Head of Service will reallocate, or obtain additional resources to deal with the incident and maintain other high risk workload.

In 2017/18 we received:

Food alert for action	80
Food alert for information	13
Food allergy alert	24
Food recall information notice	92

3.8 Liaison with Other Organisations

The Council is committed to ensuring that the enforcement approach it adopts is consistent with other enforcing authorities.

This is achieved through regular meetings of the Central Food Group North (Staffordshire & Shropshire) Food Liaison Group, which is attended by the Environmental Health Team Manager - Food and Safety. This group comprises of representatives from each of the 9 district and borough councils in the county, alongside Shropshire and Telford and Wrekin Council's, the County Council Trading Standards Department and the Public Health England laboratory and Health Protection teams.

This forum provides an opportunity for the authorities to discuss consistency issues both in their approach to enforcement and in the operation of the Food Hygiene Rating Scheme. The group holds regular training and consistency events and also implements an inter-authority auditing programme. The group also considers centrally issued guidance and consultations from the Food Standards Agency.

The Council also sends a representative to regular meetings with the Health protection team at Public Health England in Stafford, where communicable disease issues are discussed. These meetings are also attended by the Consultant in Communicable Disease Control (CCDC), local Water companies, DEFRA, AHVLA, Public Health nurses and the Microbiology department.

3.9 Food Safety Promotion

Officers routinely promote food safety issues during their day to day contact with Food Business Operators. We will also be participating in campaigns to promote awareness of the Food Hygiene Rating scheme as part of national Food Safety week.

4. Resources

Financial Allocation

The Food Safety and Environmental Health budget is published separately on the Council's website at www.newcastle-staffs.gov.uk/

4.2 Staffing Allocation

The Food Safety service within the Council employees the following officers:

Environmental Health Team Manager – Food and Safety
2 FTE Environmental Health Officers
2 Technical Assistant
1 Licensing Officer
1 Food and Safety Assistant
1 Support Assistant (Support staff)

NB These officers do not spend all of their time on Food Law enforcement as they are also responsible for a number of other professional functions such as Health and Safety enforcement, Infectious disease control, Corporate Health and Safety, Licensing etc.

4.3 Staff Development Plan

The council is committed to providing each officer responsible for Food Law enforcement with a minimum of 20 hours Continuing Professional Development (CPD) training each year.

All officers undertaking food safety work meet the qualifications and experience requirements detailed in the Food Safety Act Code of Practice.

Officers responsible for inspecting complex manufacturing and formally approved processes have previously received specialist training.

Professional and technical competence is also supported by:

- The council's annual Performance Appraisal system which helps identify training and development needs;
- Membership of the Staffordshire and Shropshire Food Safety Liaison Group;
- In–house training sessions/team briefings;

5. Quality Assessment

The Environmental Health service has systems in place to help ensure that food hygiene interventions are carried out consistently and in accordance with the Food Law Code of Practice. To assist this process a number of procedure notes and templates have been created that are available electronically to all Officers.

A procedure relating specifically to quality monitoring of inspections has been developed and this is further reinforced by:-

- The Food and Safety Manager carrying out a regular review of the paperwork, notices, and reports produced by officers following inspections;
- Consistency exercises
- Internal and inter-authority audits;
- Monthly team meetings;
- Monthly management meetings;
- Annual Performance Appraisal;

Conflicts of Interest

Article 4(2b) of Regulation 882/2004 requires that staff carrying out official controls are free from any conflict of interest.

All officers are aware of potential conflicts of interest that may arise in an enforcement situation through promotion of the Food Authority's services. Officers do not provide their own services, e.g. training, in their own time within the borough. We also ensure that potential or actual conflicts of interest do not arise as a result of Home or Originating Authority responsibilities and contracting in services for enforcement purposes.

Our officers do not promote the Borough Council's services exclusively if other providers of those services exist in the area. Pest control is an example of a Council service that may be provided in competition with those supplied by other organisations. In such circumstances customers will be made aware of the availability of alternative service providers.

Enforcement within local authority-run establishments

The Service has arrangements in place for ensuring compliance with food law in establishments where the Authority is itself the food business operator, and that steps are taken to ensure enforcement decisions are free from any conflict of interest.

If serious breaches of food law are detected in borough Council establishments, this will be brought to the attention of the Chief Executive, without delay.

Contract caterers that operate within local authority establishments will be registered and inspected in the normal way. In some Council buildings, café's, bars and vending machines are provided by outside contractors who register their businesses independently.

In some Council buildings small amounts of confectionary and ice cream are occasionally sold. In such circumstances the relevant Service Manager is responsible for registering the operation with the Food and Safety team and the operation will receive an inspection in the usual way.

6 Review

6.1 Review against the Service Plan

Each quarter performance data on key performance indicators is reported to Cabinet, as detailed below:

Indicator	2017/18 Result
Percentage of food premises that have a zero or one national food hygiene rating.	**2.3%**

This indicator measures the percentage of food premises that have a zero or one national food hygiene rating, where following each Food Hygiene Inspection, a food business is awarded a rating of between Zero (Urgent improvement necessary) and Five (Very good). These ratings are published on the website at https://www.food.gov.uk/ and http://ratings.food.gov.uk/ Those premises that are rated zero (urgent improvement necessary) or one (major improvement necessary) have been found to be not complying with Food Hygiene Regulations and will be subjected to enhanced business support visits/revisits (and in the most serious cases enforcement action) to help them raise their compliance and protect public health.

Local Authority Enforcement Monitoring System (LAEMS)

Each year we submit performance data to the Food Standards Agency via an online LAEMS return which is reviewed and then published on their website. Below is an extract of the performance data submitted for 2017/18:

Food Hygiene Interventions carried out in 2017/18

	Total interventions
Total Premises at 31 Mar 2018	1096
Inspections and audits	432
Verification and surveillance	92
Sampling visits	24
Advice and education	13
Information/intelligence gathering	197
Total premises subject to official control	408

Interventions in 2017/18 by risk rating

	Interventions Achieved	Due Interventions Outstanding
Premise Rating - A	8	0
Premise Rating - B	75	0
Premise Rating - C	187	1
Premise Rating - D	166	36
Premise Rating - E	177	1
Premise Rating - Unrated	145	0
Premise Rating - Outside	0	0
Totals	758	38

Premises risk rating profile on 1 April 2018

Premise Rating - A	0
Premise Rating - B	39
Premise Rating - C	199
Premise Rating - D	331
Premise Rating - E	492
Premise Rating - Unrated	34
Outside programme	1
Totals	1096

6.2 Identification of any variation from the Service Plan

Key performance indicators listed in the above tables are reviewed on a regular basis. Results are reported to the Head of Service along with reasons for any significant variation, and where necessary an action plan is agreed to prioritise workload.

HEADING Environmental Health annual performance and enforcement report

Submitted by: Head of Environmental Health Services

Portfolio: Environment & Recycling

Ward(s) affected: All

Purpose of the Report
To inform Members of the key issues and activities undertaken by the Environmental Health Service in 2017-2018.

Recommendations

That Committee receives the report and supports the priorities for 2018-2019 work plan.

Reasons
To enable Committee to be informed of the nature and extent of routine and enforcement work undertaken by environmental health services and endorse the priorities for 2018-2019.

1. Background

1.1 The Environmental Health Service makes a fundamental contribution to the maintenance and improvement of public health, quality of life and wellbeing. Our national priorities are to:

- Protect the public, businesses and the environment from harm
- Support the local economy to grow and prosper

We determine our activities each year by assessing the needs of local people and our local business community, and considering the risks that require addressing, in light of local needs and of national priorities.

1.2 The Environmental Health Service is divided into four teams: Food & Safety; Environmental Protection; Environmental Services and Licensing Administration. The Licensing Administration function was transferred to Environmental Health Services within 2016. The service also delivers the Corporate Health & Safety function. Some Licensing Admin and enforcement and Corporate Health & Safety are not included within this report, as this is reported separately to Licensing Committee and Audit & Standards Committee respectively.

1.3 Each Team undertake statutory enforcement activities and provides a range of regulatory and advisory services to the council, local businesses, members of the public, residents and visitors to the Borough.

1.4 The work of the teams comprises both programmed planned activities and reactive work in response to service requests or complaints. The activities are diverse and wide ranging and therefore some activities are undertaken only a reactive or infrequent basis. This report details the principal activities and associated enforcement activities undertaken by the teams over the past year.

1.5 Data for the previous year has been provided as a comparison. All activities or service requests that are reactive are marked with a *.

2. **Report**

2.1 **Food and Safety:**

The team undertakes the following activities: Inspection of food premises, Sampling of foodstuffs, Investigation of complaints regarding foodstuffs and food premises, Registration/licensing of food premises, organising and participating in Food Safety campaigns and giving advice. Investigation of infectious disease cases and outbreaks. Inspection and registration of tattooing, acupuncture, ear piercing, electrolysis, alcohol and late night refreshment premises. Sampling of swimming baths. Inspection of health and safety premises, investigation of serious accidents and complaints, health and safety advice and campaigns. Sunday trading, public health advice and advising on, and enforcement of smoke free legislation. The team fulfils licensing enforcement and acts as the responsible body to the licensing authority.

The team fulfils the Councils statutory role as a 'Food Authority' for the enforcement of food law. This work is carried out in partnership with the Governments Food Standard Agency (FSA) The team comprises 8fte.

The objectives of the service are:
• Ensure food produced and sold in Borough is fit for human consumption
• Reduce the incidence of food borne infectious disease
• Help consumers make informed choices about where they eat & shop

The team also fulfils the Council's role as a Health & Safety Enforcement Authority. This work is carried out in partnership with the Health & Safety Executive (HSE). While the Health & Safety team is the enforcing authority for retail, wholesale, warehousing, caterers, entertainment and leisure premises within the Borough, The HSE is the enforcing authority in higher risk workplaces such as construction, manufacturing and chemical industries. The objective of the service is to ensure business owners fulfil their duties to protect the health, safety & welfare of their employees and members of the public who may be affected by their activities.

Where advice and guidance has not been effective other enforcement options include statutory notices, seizure of food, closure of premises, prohibition of activities and/or prosecution.

Activity	**2015-16**	**2016-17**	**2017-18**
Food Safety			
Inspections Food premises	495	443	432
% high risk food premises inspected	100%	100%	100%
Supplementary Visits	258	157	129
Complaints about food / premises*	339	312	190
Total number of Service Requests/advice*	836	718	781
Samples taken • Food • Swimming pool	 117 117	 112 113	 90 98
Written warnings	503	434	419
Improvement notices	4	4	5
Prohibition / closure	0	0	0
Voluntary closure	1	2	0
Prosecution	0	0	0
Infectious disease notifications	131	157	196

Health & Safety			
RIDDOR accident notifications*	77	69	58
Complaints investigated*	71	98	71
Improvement notices	1	2	6
Prohibition notices	0	0	1

Some of the main projects or investigations undertaken in the previous year include:

- Participation and promotion of the National Food Hygiene Rating Scheme;
- Event safety inspections with a number of event organisers;
- Participation in local Health and Safety projects e.g. National Workplace Transport project

2.2 **Environmental Protection:**

The team undertakes the following activities; Monitoring smoke control areas, issuing, monitoring and regulating environmental permitted processes. Assessment and monitoring of local air quality, investigating atmospheric pollution complaints. Monitoring, investigating noise complaints, investigating other statutory nuisance complaints including premises, accumulations, smoke, fumes and gases, odour, noise, light, dust, fumes, animals or insects. Dealing with asbestos removal notifications and answering queries, or dealing with complaints of damaged asbestos in both commercial and residential premises. Consultee to borough council and county council planning departments for applications and enforcement including environmental impact assessments. Investigation and remediation of contaminated land. Investigation and sampling of private water supplies.

The team fulfils pollution control activities for maintaining and improving air quality and contaminated land. This work is carried out in partnership with DEFRA and Environment Agency (EA). The team comprises 6.5fte.

The objectives of the service are:

- Protection of the air and land within the Borough
- Maintain the health and wellbeing of residents within the Borough
- Monitor, Maintain and where needed reduce pollution and any adverse health affects
- Proactively prevent detriment to the amenity of the area of proposed new developments

Activity	**2015-16**	**2016-17**	**2017-18**
Risk based inspections of permitted processes	27	18	20
Notices to permitted processes	8	2	3
Complaints about noise*	721	783	600
Noise APP subscribers active during period (Application introduced Autumn 2015)	43	68	126
Number of noise incidents reported by Noise APP	364	1146	1464
Number of occasions sound monitoring equipment deployed	70	47	98
Complaints about dust*	7	2	6
Complaints about smoke*	106	28	146
Complaints about artificial light*	10	14	24
Number of abatement notices served for noise	9	9	12

Activity	2015-16	2016-17	2017-18
Number of deferred action notices for noise	1	1	1
Number of abatement and other notices served	17	18	20
Seizure of noise making equipment	1	2	2
Number of Community Protection Warning Notices served	9	3	3
Number of Community Protection Notices served	6	3	5
Number of fixed penalty notices served and paid for breach of community protection notice	5	0	0
Injunctions obtained under Anti-Social Behaviour Crime and Policing Act 2014	1	1	0
Prosecutions	0	1	3
Planning consultations*	613	525	499
Environmental Information Requests (fee paying)	20	22	25
Air Quality monitoring samples	480	480	480
Contaminated land - the amount of land that has been remediated and is now in use	5.9 Ha	8.6 Ha	8.26Ha
Contaminated Land – Phase 2 Investigations concluded and sites determined as NOT meeting statutory definition of Contaminated Land	3	2	3
Contaminated Land -sites determined as meeting statutory definition of Contaminated Land following investigation	0	0	0

Some of the main projects or investigations undertaken in the previous year include:

- Worked on developing Air Quality Action Plans for the Air Quality Management Area's.
- Undertook a number of contaminated land desk studies for land owned by the Council.
- Active involvement in HS2 Phase 2A meetings concerned with noise and environmental issues
- Active involvement with Highways England on A500 corridor improvements
- Active involvement with Stoke on Trent City Council on Etruria Valley proposals
- Continued to work with a number of partner organisations (Staffordshire Local Authorities, Aspire Housing, Staffordshire Housing, Staffordshire Police, Staffordshire Fire & Rescue, Mental Health, Social Services, Environment Agency, Health and Safety Executive, Victim Support, ADSIS)

2.3 **Licensing Administration Team**:

The team undertakes the following activities: The administration of all applications made for Private Hire and Hackney Carriage legislation and policy development.

The objectives of the service are:

- Protection of the public in relation to taxi licensing

- To ensure all applications are dealt with efficiently and within legislative timescales where necessary

Activity	2016-17	2017-18
Number of dual driver licenses issued.	355	274
Number of dual driver licenses referred to Committee	25	19
Number of hackney carriage vehicle licenses issued	198	186
Number of private hire vehicle licenses issued	465	595

Some of the main projects undertaken in the previous year include:

- To make Safeguarding Training compulsory for all existing and new taxi and private hire drivers
- To scan historic files in line with the Council's drive to be 'paperless'.

2.4 **Environmental Services:**

The team undertakes the following activities; Enforcement activities in relation to hackney carriage and private hire. Monitoring and regulation of Private Hire Marshalling Scheme. Investigation of fly tipping, fly posting, littering. Planning (Town and Country Planning Act) and building control enforcement including open to access, high hedges and untidy land complaints. Issuing fixed penalty notices and enforcement of clean neighbourhood legislation. Operation of the litter enforcement scheme. The team comprises 6.8fte.

The team delivers the councils Dog Warden and Pest Control functions
Dog Wardens are responsible for:

- Seizing stray dogs
- Enforcing dog fouling controls and other dog control orders
- Promoting responsible dog ownership – including microchipping
- Investigating dangerous dog related complaints
- Inspecting and licencing animal related businesses including Riding Establishments, Pet Shops, Animal Boarding and Dog Breeding Establishments.

Pest Control Officers deliver a variety of insect and rodent treatments to homes and businesses across the Borough. They also monitor and treat sewers to manage rodent populations. The team offers both advice and treatment services.

The objectives of the service are:

- Protection of the public using taxis
- Ensure that anti-social activities and littering is deterred.
- Protection of the public from public health pests
- Delivery of a high quality commercial and domestic pest control service
- Control of dogs throughout the Borough

Activity	2015-16	2016-17	2017-18
Taxi Inspections	163	161	208
Taxi/Driver Complaints*	106	134	161
Complaints about fly tipping*	298	326	328
Complaints about condition of land or property*	245	239	207
Complaints of illegal eviction*	4	0	0

Other complaints*	96	87	126
Prosecutions	177	73	27
Fixed Penalty notices	500	355	130
Pest Control clients served *			
• Rats & Mice (treatments)	744	467	366
• Insects treatments inc Wasps, ants, cockroaches, bedbugs, fleas	589	509	350
• Advice requests/complaints	330	357	385
• Other including 'commercial services'	137	112	113
Total Pest Control Requests	**1,800**	**1,441**	**1,214**
Pest Control commercial client retention	94%	87%	90%
Dog warden complaints*	1,205	1,049	848
Stray dogs seized*	134	105	80
Dog & Pest related enforcement notices			
• Fixed penalty notices issued	17	3	7
• Microchipping	0	41	15
• Other	13	5	4
Total Enforcement Notices	**30**	**49**	**26**
Pet Shop licensing	3	3	5
Riding establishment licensing	4	5	4
Dog breeding licences	3	3	3
Kennels & Cattery licences	20	26	26
Zoo / Dangerous wild animal licence	0	0	0

Some of the main projects or investigations undertaken in the previous year include:

- Taxi Rank Permit Project
- Investigation of taxi drivers to ensure protection of public
- Ceasing acceptance of cash payments and moving to electronic payment prior to service delivery
- Using Antisocial Behaviour powers to resolve dog related nuisance, through the issue of Community Protection Notices and fixed penalties on breach
- Enforcing microchipping requirements for dogs
- Consulting with businesses to revise licencing conditions for animal boarding establishments
- Taking enforcement actions where residents are not taking appropriate action to control infestations
- Revising working practices to follow the Campaign for Responsible Rodenticide Use (CRRU) code of practice to safeguard wildlife and implement new Stewardship obligations

2.5 **Customer Satisfaction & Corporate Complaints**

The Council operates a Corporate Complaints, Comments and Compliments policy. In 2017/18 a total of 8 stage 1 (investigated by Service) complaints were received. One of these progressed to a stage 2 complaint. The service also received 8 compliments.

3. **Priorities for 2018-2019**

3.1 The service plan has been created for the new financial year, the planned pre-programmed activities and reactive duties as detailed within this report are to continue. However in addition to the activities, the service is directed by a number of government department as to

priorities and work to be undertaken. In addition, some of the work, projects or enforcement action commenced in 2016-17 will continue in 2017-18.

3.2 The additional projects or priorities are listed below:

- Progress mobile and agile working, adopt corporate record retention policies and review business continuity arrangements
- Participate in public health agenda and undertake specific projects
- Taxi enforcement operations with partner agencies
- Development of Air Quality action plans and engagement with public health to achieve improvement in Newcastle's Air Quality.

4. Proposal

4.1 That Committee receives the report and supports the priorities for 2018-19 work plan.

5. Reasons for Preferred Solution

5.1 The service plan and priorities for 2018-19 supports both statutory requirements and also the national and local priorities for Environmental Health Services.

6. Outcomes Linked to Sustainable Community Strategy and Corporate Priorities

6.1 The proposals relate to the delivery of environmental health services which would contribute to the following:

A clean, safe and sustainable borough
- The negative impacts that the Council, residents and local businesses have on the environment will have reduced.

A borough of opportunity
- Fair, proportionate and consistent regulation and enforcement creates an equal opportunity for business to thrive.

A healthy and active community
- Fair, proportionate and consistent enforcement creates an environment for prevention, maintenance or improvement in health and well being.

A co-operative Council delivering high quality, community driven, services.
- High performing services will be delivered for all residents, businesses and customers.

7. Legal and Statutory Implications

7.1 All activities are in line with the statutory duty of the Council and in accordance with the advice and guidance of the relevant Government bodies.

8. Equality Impact Assessment

8.1 No issues have been identified.

9. Financial and Resource Implications

9.1 There is an income derived from Pest Control activities, environmental information requests, licensing and sampling activities. There are also statutory fees set in relation to fixed panality notices and permits for prescribed processes.

9.2 All the services fees and charges are published annually in the Councils fees and charges register.

10. Major Risks

10.1 Environmental Health services undertake statutory duties, failure to deliver these duties adequately, competently or thoroughly would be a risk to the Authority.

11. Background Papers

Environmental Health Service Plan 2014-2015
Environmental Health Service Plan 2015-2016
Environmental Health Service Plan 2016-2018
Environmental Health Service Plan 2017-2019
Environmental Health Service Plan 2018-2020

HEADING **Public Protection Sub-Committees**

Submitted by: **Head of Environmental Health Services**

Portfolio: **Finance & Resources**

Ward(s) affected: **All**

Purpose of the Report

To advise members of forthcoming Public Protection Sub Committee meetings.

Recommendations

That Members receive the report and note the date and time that their attendance at sub-committee is necessary.
And
Should members be unable to attend the sub-committee that they notify Democratic Services of an available substitute.

Reasons

To ensure that all members are aware of public protection sub-committee meetings and their required attendance.

1. Background

1.1. On 16th May 2018, Council approved the creation of Public Protection Sub-Committees to determine taxi driver applications and enforcement cases.

1.2. The constitution requires that 3 to 5 members sit on the sub-committee.

2. Issues

2.1. In consultation with the Chair, arrangements for the sub-committees have been developed, to include the following:

- Meeting will be held on a Tuesday, alternating between 10am and 2pm start times.
- Committees will be held about every 3 weeks.
- A maximum of 5 reports/cases will be on the agenda.
- Further meetings may be programmed, if needed.
- A programme of meetings and nominated members will be developed and reported to public protection committee.
- The sub-committee chair to be agreed between the sub-committee members.

2.2. A programme of meetings and members attendance, has been developed as follows:

Date	Time (am/pm)	Sub-Committee Members		
17/07/2018	10	John Cooper	Andrew Parker	Jill Waring
07/08/2018	2	Sylvia Dymond	Kyle Robinson	Simon White
21/08/2018	10	Trevor Johnson	Stephen Sweeney	John Williams
04/09/2018	2	Tony Kaeron	John Tagg	Gill Williams

18/09/2018	10	Mark Olszewski	June Walklate	Ruth Wright
02/10/2018	2	John Cooper	Andrew Parker	Jill Waring
23/10/2018	10	Sylvia Dymond	Kyle Robinson	Simon White
13/11/2018	2	Trevor Johnson	Stephen Sweeney	John Williams
04/12/2018	10	Tony Kaeron	John Tagg	Gill Williams
18/12/2018	2	Mark Olszewski	June Walklate	Ruth Wright
08/01/2019	10	John Cooper	Andrew Parker	Jill Waring
29/01/2019	2	Sylvia Dymond	Kyle Robinson	Simon White
19/02/2019	10	Trevor Johnson	Stephen Sweeney	John Williams
12/03/2019	2	Tony Kaeron	John Tagg	Gill Williams
02/04/2019	10	Mark Olszewski	June Walklate	Ruth Wright
23/04/2019	2	John Cooper	Andrew Parker	Jill Waring
14/05/2019	10	Sylvia Dymond	Kyle Robinson	Simon White
04/06/2019	2	Trevor Johnson	Stephen Sweeney	John Williams
25/06/2019	10	Tony Kaeron	John Tagg	Gill Williams
16/07/2019	2	Mark Olszewski	June Walklate	Ruth Wright

2.3. Should any additional meetings be required, members will be contacted to secure attendance at the sub-committee.

3. Recommendation

3.1. That Members receive the report and note the date and time that their attendance is necessary, and
Should members be unable to attend the sub-committee that they notify Democratic Services of an available substitute.

4. Outcomes Linked to Sustainable Community Strategy and Corporate Priorities

4.1 In line with the Council's objectives –

Promoting a cleaner, safer and sustainable Borough
Promoting a Borough of Opportunity

5. Legal and Statutory Implications

5.1. Sub-committees require at least 3 members to make decisions.

6. Financial and Resource Implications

6.1. There will be cost and resource implications to the Council and applicants should sub-committees not progress as planned.

7. Major Risks

7.1. That sub-committee are arranged and there are insufficient members in attendance to make a decision on the matters presented.

8. Earlier Cabinet/Committee Resolutions

8.1. Council 16th May 2018

By virtue of paragraph(s) 1, 2, 7 of Part 1 of Schedule 12A of the Local Government Act 1972.

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