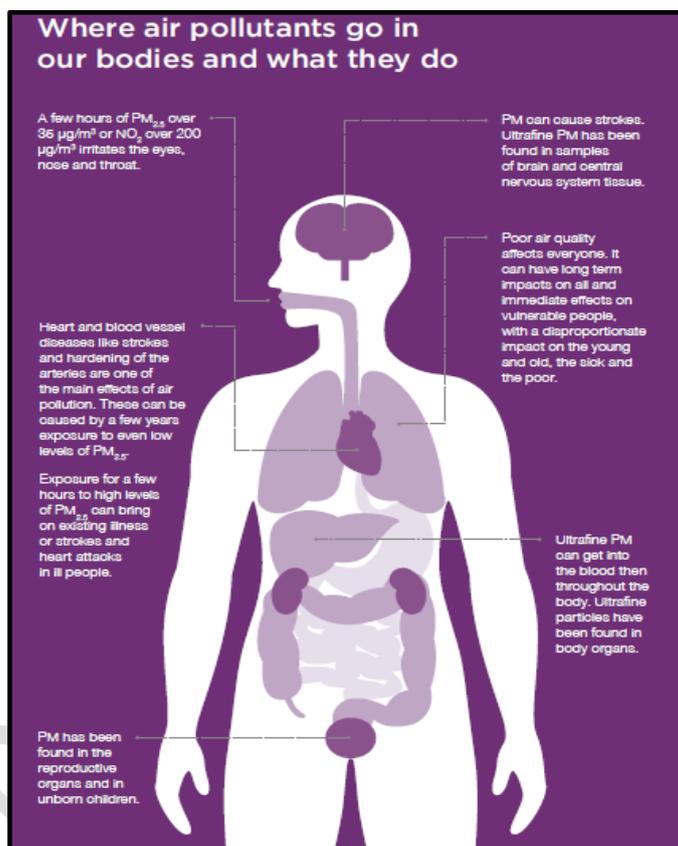


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BOROUGH CO

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



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## 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 (EVLRL) 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 policies 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 24<sup>th</sup> 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<sub>2</sub>) 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<sub>2</sub> do not exceed 40µg/m<sup>3</sup>; and
- (ii) hourly mean concentration levels of NO<sub>2</sub> do not exceed 200µg/m<sup>3</sup> 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<sub>2</sub>) 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> and Particulate Matter (PM<sub>10</sub>/PM<sub>2.5</sub>), 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<sub>2</sub> 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<sub>2.5</sub>). Within UK towns and cities, emissions of PM<sub>2.5</sub> from road vehicles are an important source. Consequently, levels of PM<sub>2.5</sub>, 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%)
<b>Newcastle-under-Lyme</b>	<b>7,959</b> <b>(6.2%)</b>	<b>7,843</b> <b>(6.1%)</b>	<b>7,992</b> <b>(6.2%)</b>
<b>Staffordshire</b>	<b>51,358</b> <b>(6.1%)</b>	<b>51,243</b> <b>(6.0%)</b>	<b>52,459</b> <b>(6.0%)</b>
<b>West Midlands</b>	<b>368,115</b> <b>(6.2%)</b>	<b>368,727</b> <b>(6.1%)</b>	<b>423,475</b> <b>(6.1%)</b>
<b>England</b>	<b>3,402,437</b> <b>(6.0%)</b>	<b>3,400,679</b> <b>(5.9%)</b>	<b>3,444,218</b> <b>(5.9%)</b>

Key: *Statistically lower than England*; *statistically higher than England*

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.

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

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

Key: *Statistically lower than England*; *statistically higher than England*

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

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

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.

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## 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, PM<sub>2.5</sub><sup>1</sup>). 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%
<b>Staffordshire</b>	<b>4.9%</b>	<b>4.7%</b>	<b>5.0%</b>	<b>4.9%</b>	<b>4.5%</b>	<b>5.2%</b>
<b>West Midlands</b>	<b>5.3%</b>	<b>5.1%</b>	<b>5.4%</b>	<b>5.2%</b>	<b>4.8%</b>	<b>5.5%</b>
<b>England</b>	<b>5.4%</b>	<b>5.1%</b>	<b>5.3%</b>	<b>5.1%</b>	<b>4.7%</b>	<b>5.3%</b>

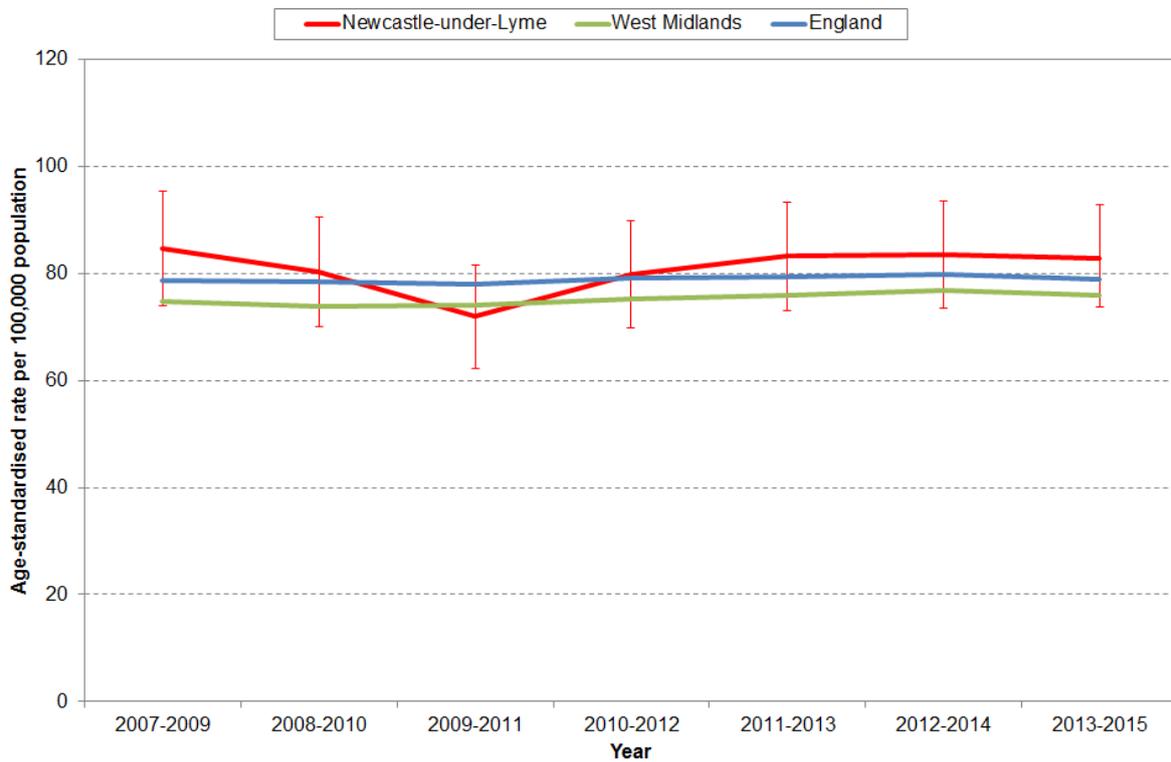
Source: Public Health Outcome Framework, Public Health England, <http://www.phoutcomes.info/>

## 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).

<sup>1</sup> \* PM<sub>2.5</sub> means the mass (in micrograms) per cubic metre of air of individual particles with an aerodynamic diameter generally less than 2.5 micrometers. PM<sub>2.5</sub> 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.

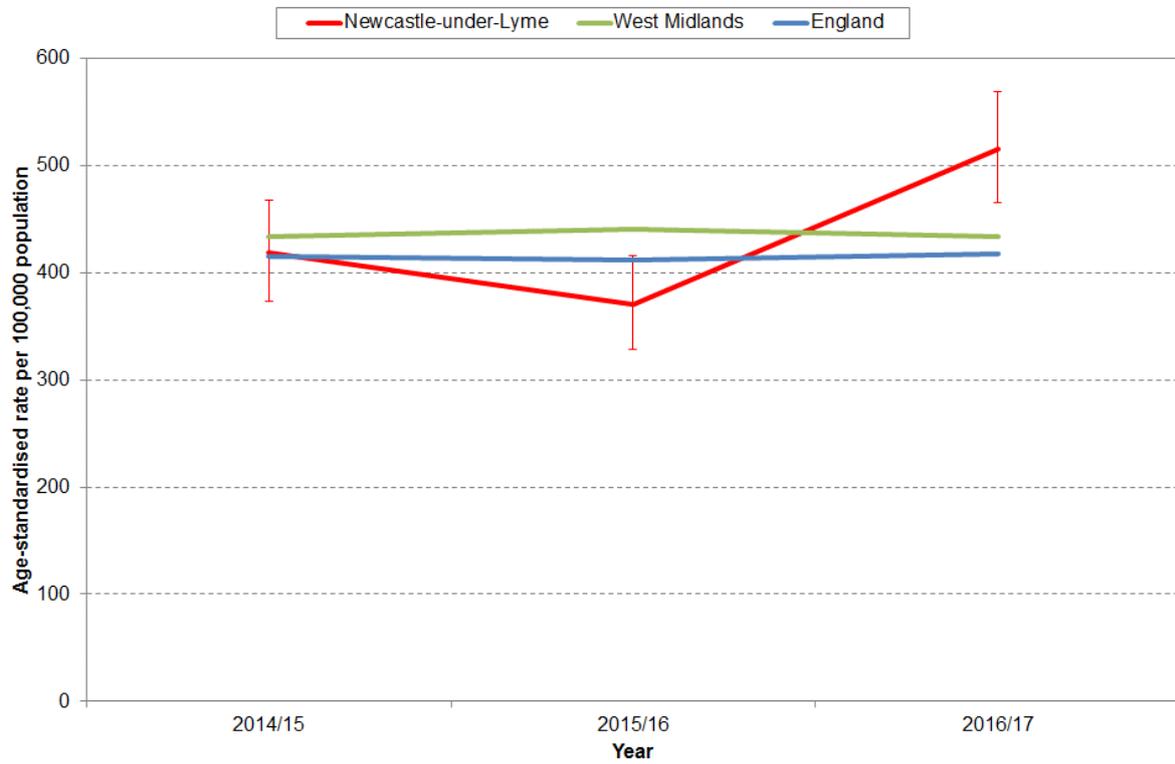
Air pollution is known to increase the chances of individuals being admitted to hospital. During 2016/17 there were almost 400 emergency (unplanned) admissions to hospital as a result of COPD for Newcastle residents aged 35 and over.

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.

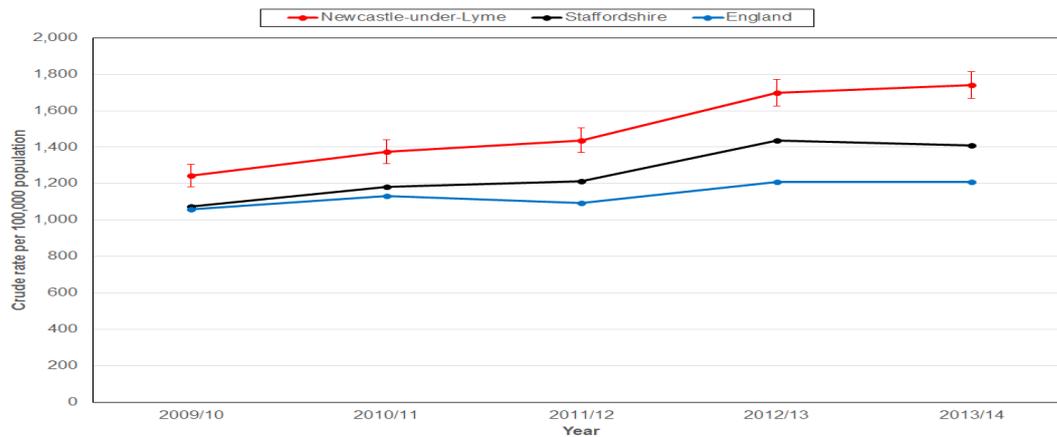
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**TABLE 5: CARDIOVASCULAR DISEASE WARD LEVEL EMERGENCY HOSPITAL ADMISSIONS IN NEWCASTLE, ALL AGES, ALL PERSONS, 2013/14 (HIGHLIGHTED ARE IN AQMA's)**

Ward name	Admissions	Crude rate per 100,000 population	Statistical difference to England
Audley and Bignall End	55	929	Similar
Bradwell	63	990	Similar
<b>Butt Lane</b>	<b>56</b>	<b>996</b>	<b>Similar</b>
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
<b>Kidsgrove</b>	<b>56</b>	<b>818</b>	<b>Similar</b>
Knutton and Silverdale	48	1,094	Similar
Loggerheads and Whitmore	65	939	Similar
Madeley	40	937	Similar
<b>May Bank</b>	<b>60</b>	<b>956</b>	<b>Similar</b>
Newchapel	32	951	Similar
<b>Porthill</b>	<b>51</b>	<b>1,250</b>	<b>Higher</b>
Ravenscliffe	28	714	Similar
Seabridge	55	998	Similar
Silverdale and Parkside	43	1,153	Similar
Talke	65	1,683	Higher
Thistleberry	84	1,357	Higher
<b>Town</b>	<b>75</b>	<b>1,474</b>	<b>Higher</b>
Westlands	58	1,029	Similar
Wolstanton	66	1,124	Similar
<b>Newcastle-under-Lyme</b>	<b>1,323</b>	<b>1,065</b>	<b>Higher</b>
<b>Staffordshire</b>	<b>8,495</b>	<b>997</b>	<b>Higher</b>
<b>England</b>	<b>498,497</b>	<b>925</b>	

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
<b>Newcastle-under-Lyme</b>	<b>2,105</b>	<b>1,695</b>	<b>Higher</b>
<b>Staffordshire</b>	<b>11,625</b>	<b>1,364</b>	<b>Higher</b>
<b>England</b>	<b>677,856</b>	<b>1,258</b>	

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](mailto:Phillip.Steventon@staffordshire.gov.uk).

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## 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 and 2008/09 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.

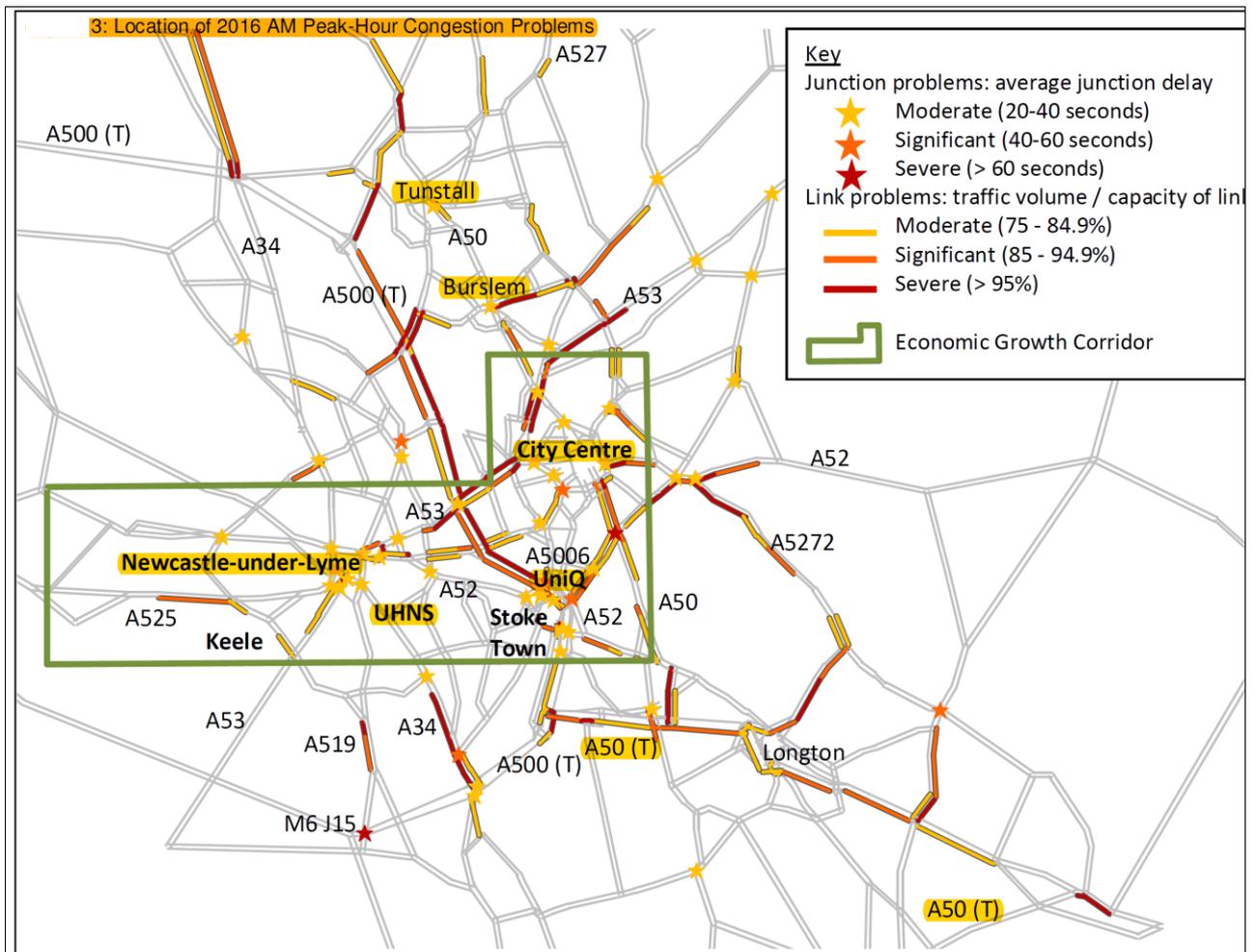
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FIGURE 4: HIGHWAYS ENGLAND MANAGED NETWORK - VEHICLE HOURS DELAY APRIL 2012 TO MARCH 2013

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





**FIGURE 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 policies have been identified in current policies. It is also anticipated that there will be opportunities for inclusion of air quality support in emerging policies

### 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 policies 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 policies in the National Planning Policy Framework form the basis for making planning development decisions within the Borough. A number of the policies 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%<sup>2</sup> 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.

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<sup>2</sup> 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)<sup>1</sup> 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**<sup>3</sup> 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**,<sup>4</sup> 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.<sup>5</sup>

### 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

<sup>3</sup> <https://www.stokestaffslep.org.uk/delivering-growth/deals/growth-deal/>

<sup>4</sup> [https://www.stoke.gov.uk/news/article/39/consultation\\_starts\\_on\\_major\\_new\\_road\\_for\\_etruria\\_valley\\_and\\_a500\\_upgrade](https://www.stoke.gov.uk/news/article/39/consultation_starts_on_major_new_road_for_etruria_valley_and_a500_upgrade)

<sup>5</sup> <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	<a href="https://www.gov.uk/government/publications/stoke-on-trent-and-staffordshire-growth-deal">https://www.gov.uk/government/publications/stoke-on-trent-and-staffordshire-growth-deal</a>	Staffordshire CC, NULBC, Stoke-on-Trent CC.	2014
Newcastle-under-Lyme and Stoke-on-Trent Core Spatial Strategy. 2006-2026	<a href="https://www.newcastle-staffs.gov.uk/all-services/planning/planning-policy/current-development-plan/newcastle-under-lyme-and-stoke-trent">https://www.newcastle-staffs.gov.uk/all-services/planning/planning-policy/current-development-plan/newcastle-under-lyme-and-stoke-trent</a>	Staffordshire CC, NULBC, Stoke-on-Trent CC.	2009
Staffordshire Local Transport Plan 2011 to 2026 - Strategy Plan	<a href="http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/staffordshirelocaltransportplan2011strategyplan.pdf">http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/staffordshirelocaltransportplan2011strategyplan.pdf</a>	Staffordshire CC, NULBC, Stoke-on-Trent CC.	2011
Staffordshire Transport Plan – Newcastle-under-Lyme Integrated Transport Strategy 2015-2026	<a href="https://www.staffordshire.gov.uk/transport/transportplanning/District-integrated-transport-strategies/districtintegratedtransportstrategies.aspx">https://www.staffordshire.gov.uk/transport/transportplanning/District-integrated-transport-strategies/districtintegratedtransportstrategies.aspx</a>	Staffordshire CC, nulbc	2015
Staffordshire Freight Strategy April 2011	<a href="https://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/Appendices/appendixl-staffordshirefreightstrategy.pdf">https://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/Appendices/appendixl-staffordshirefreightstrategy.pdf</a>	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.	<a href="https://www.newcastle-staffs.gov.uk/all-services/planning/planning-policy/joint-local-plan">https://www.newcastle-staffs.gov.uk/all-services/planning/planning-policy/joint-local-plan</a>	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
<b>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)</b>		
<b>Policy SP1 Spatial Principles of Targeted Regeneration</b>		
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
<b>Policy SP3 Spatial Principles of Movement and Access</b>		
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
<b>Core Spatial Strategy Strategic Aims</b>		
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
<b>Area Spatial Policies</b>		
ASP4	<b>Newcastle Town Centre Area Spatial Policy</b> 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	<b>Newcastle and Kidsgrove Urban Neighbourhoods Area Spatial Policy</b> 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	<b>Rural Area Spatial Policy</b>	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
<b>Newcastle under Lyme Local Plan Saved policies beyond September 2007 (Note this is due to be replaced in 2020 with a joint local plan with Stoke on Trent City Council)</b>		
<b>Employment and Economic Development - Chatterley Valley</b>		
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, ( <a href="#">as shown on the Proposals Map</a> ). 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
<b>Employment and Economic Development – London Road, Chesterton</b>		
Policy E4 (v)	The redevelopment of this site, ( <a href="#">as shown on the Proposals Map</a> ), 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
<b>Employment and Economic Development Chemical Lane</b>		
Policy E6	<b>The development of 2.8 ha of land off Chemical Lane (<a href="#">as shown on the Proposals Map</a>)</b> , 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
<b>Employment and Economic Development – Kidsgrove Station Yard</b>		
Policy E7 (i, iii, iii, iv)	The development of 0.8 ha of land at Kidsgrove Station Yard ( <a href="#">as shown on the Proposals Map</a> ), for uses that exploit the potential offered by its canal/ raiiside 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

<b>Employment and Economic Development – Keele University</b>		
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
<b>Retail and Town Centres – Development in Kidsgrove Town Centre</b>		
Policy R12	Development for retail or leisure uses within or close to Kidsgrove Town Centre <a href="#">as shown on the Proposals Map</a> , will be encouraged so long as the following ii) Any opportunities to improve conditions for pedestrians should be exploited.	Staffordshire CC,NULBC
<b>Retail and Town Centres – Development in District Centres</b>		
Policy R14	<b>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:</b>  iii) Any opportunities to improve conditions for pedestrians should be exploited.	Staffordshire CC,NULBC
<b>Transport – Rail Freight</b>		
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
<b>Development – General Parking Requirements</b>		
Policy T16	Development will not be permitted to provide more parking than the maximum levels specified in <a href="#">Table 3.2 (appendix 3)</a> . 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
<b>Parking in Town and District Centres</b>		

Policy T17	<p>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.</p> <p>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.</p> <p>Similar improvements may be sought in Kidsgrove town centre and the district centres.</p>	Staffordshire CC,NULBC
<b>Development – Servicing Requirements</b>		
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
<b>New Footpaths, Horse Routes and Cycleways</b>		
Policy C11	<p>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:</p> <p>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).</p>	Staffordshire CC,NULBC
<b>Provision of Essential Supporting Infrastructure and Community Facilities</b>		
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
<b>DRAFT NuL INTEGRATED TRANSPORT STRATEGY - CHALLENGES</b>		
	<ul style="list-style-type: none"> <li>Manage peak hour congestion and carbon emissions on local roads</li> </ul>	Staffordshire CC, NULBC
	<ul style="list-style-type: none"> <li>Provide sustainable transport connectivity to jobs and services</li> </ul>	Staffordshire CC, Local Bus Operators
	<ul style="list-style-type: none"> <li>Improve public transport connectivity and quality of life for local communities</li> </ul>	Staffordshire CC, Local Bus Operators
	<ul style="list-style-type: none"> <li>Support the management of potential air quality issues in Newcastle and Kidsgrove</li> </ul>	Staffordshire CC, NULBC
	<ul style="list-style-type: none"> <li>Raise awareness of environmental issues and encourage people to lead more sustainable lifestyles, helping to reduce carbon emissions</li> </ul>	Staffordshire CC, NULBC
<b>STAFFORDSHIRE FREIGHT STRATEGY APRIL 2011 – Actions and Priorities</b>		
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<sub>2</sub> 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/m<sup>3</sup> at a number of relevant locations principally along Liverpool Road (A50).

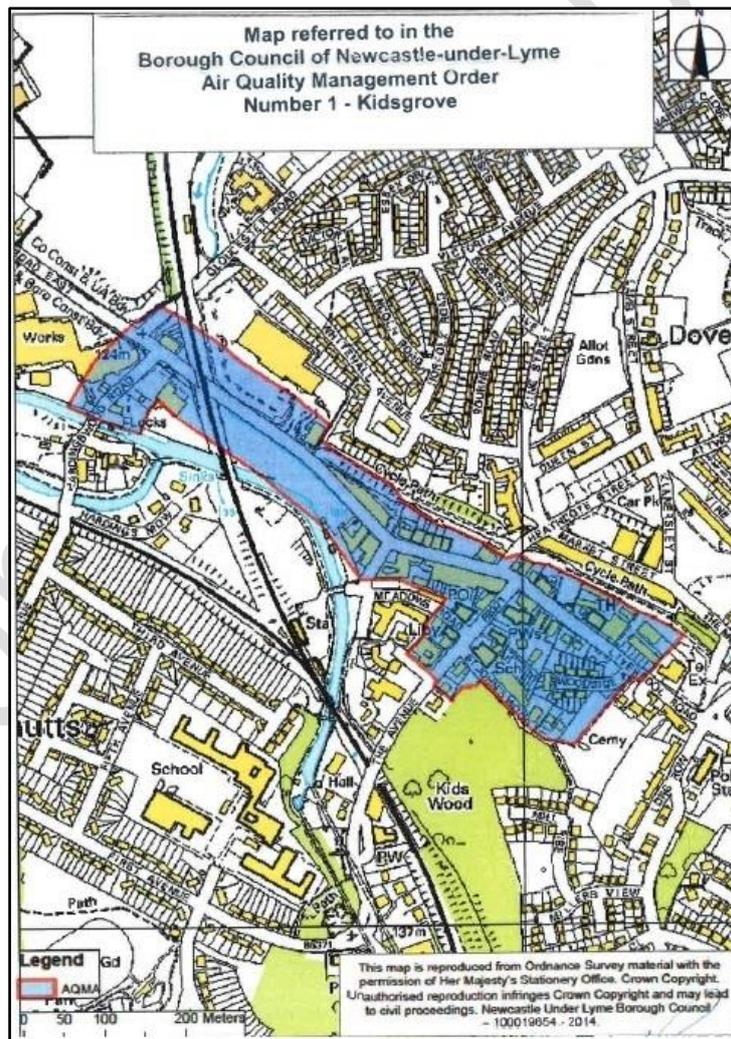


Figure 7: Location of Kidsgrove AQMA Number 1

### 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  $41.8\mu\text{g}/\text{m}^3$  for annual mean nitrogen dioxide concentration in 2016, whilst the 5 year average was  $41.3\mu\text{g}/\text{m}^3$ . These results, if maintained, suggest a lower required reduction of road NO<sub>x</sub> to achieve the NO<sub>2</sub> 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.

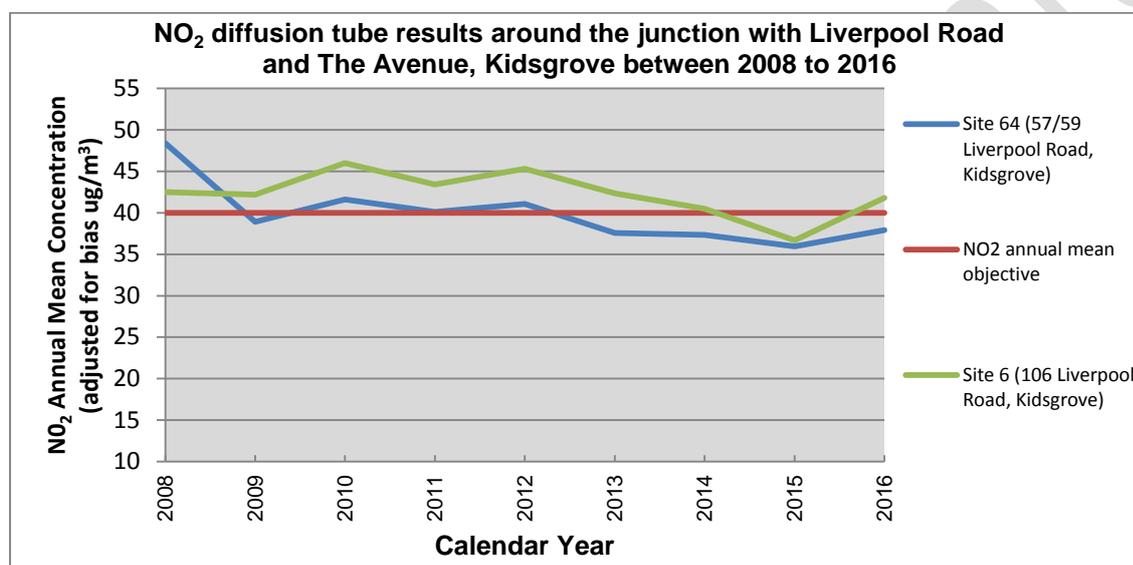
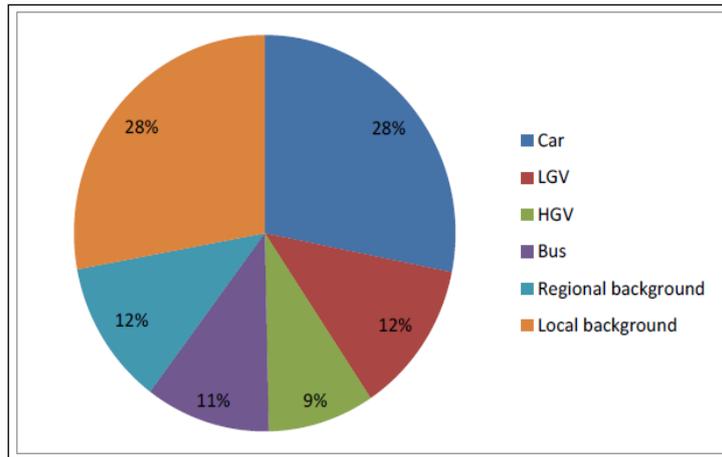


Figure 8: Trends in Nitrogen Dioxide Annual Mean Objective Data - Kidsgrove AQMA

### 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 NO<sub>2</sub> levels in this area is derived from local traffic (60%) with nearly 30% of NO<sub>2</sub> being attributable to emissions from cars.



**Figure 9: NO<sub>2</sub> 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 Hardingswood 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<sub>2</sub> levels appear to be showing a downward trend. NO<sub>2</sub> levels in the London Road area do not appear to be showing a sustained reduction with levels consistently above the annual mean objective. See Figure 13.

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.

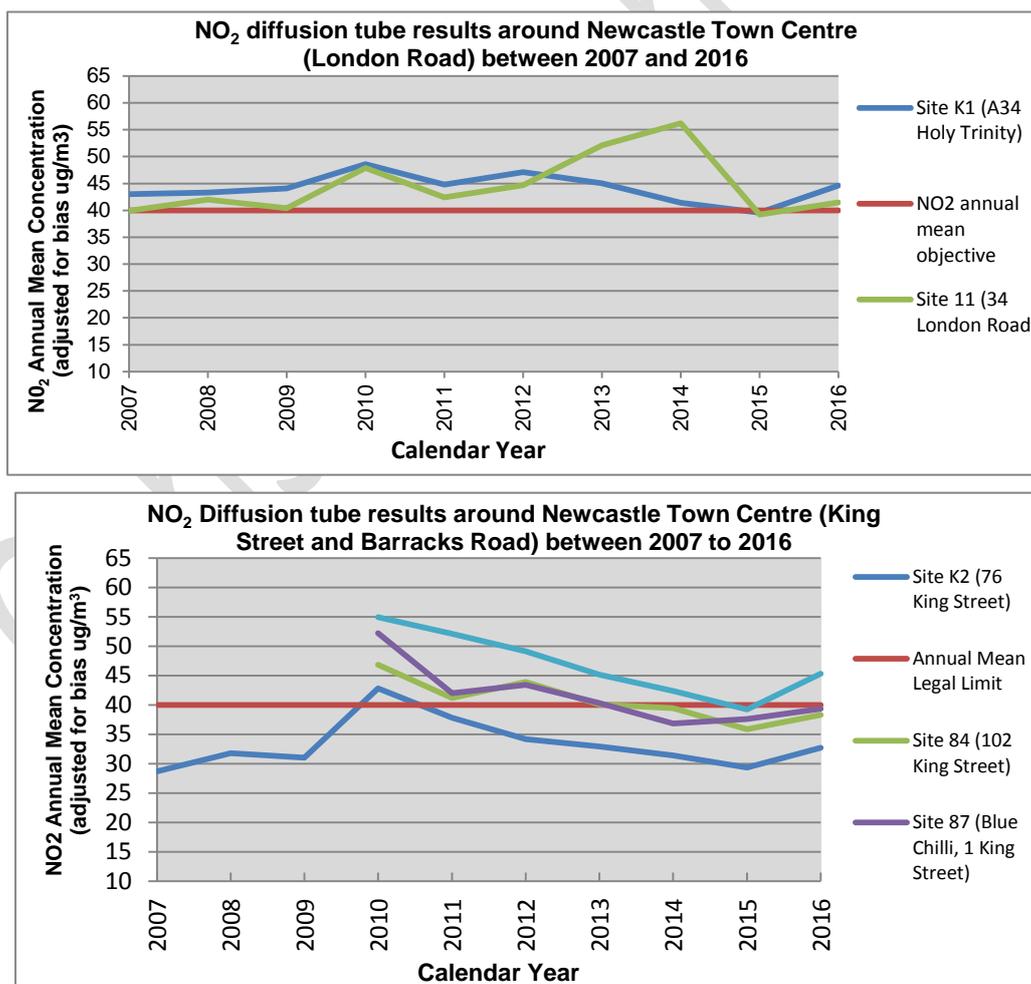


FIGURE 11: TRENDS IN NITROGEN DIOXIDE AROUND THE TOWN CENTRE

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

The greatest contribution to NO<sub>2</sub> 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 NO<sub>x</sub> 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<sub>2</sub> 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.	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.		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	Measurement 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.

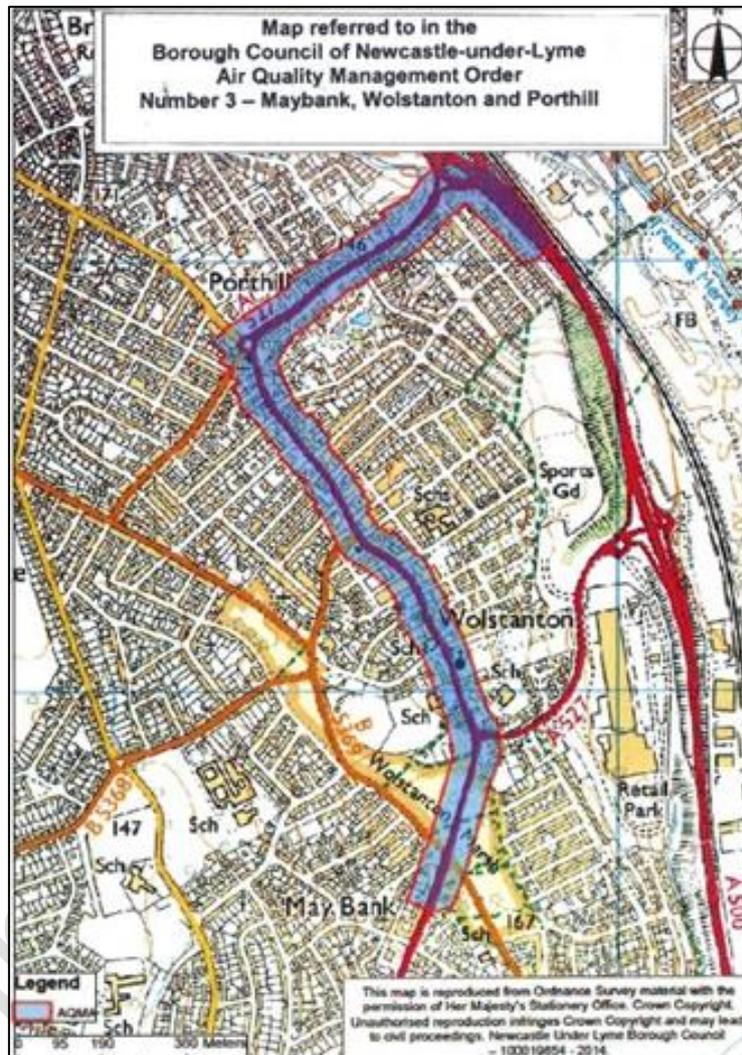


Figure 12: Location of AQMA Number 3, Maybank-Wolstanton-Porthill

#### 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<sub>2</sub> 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.

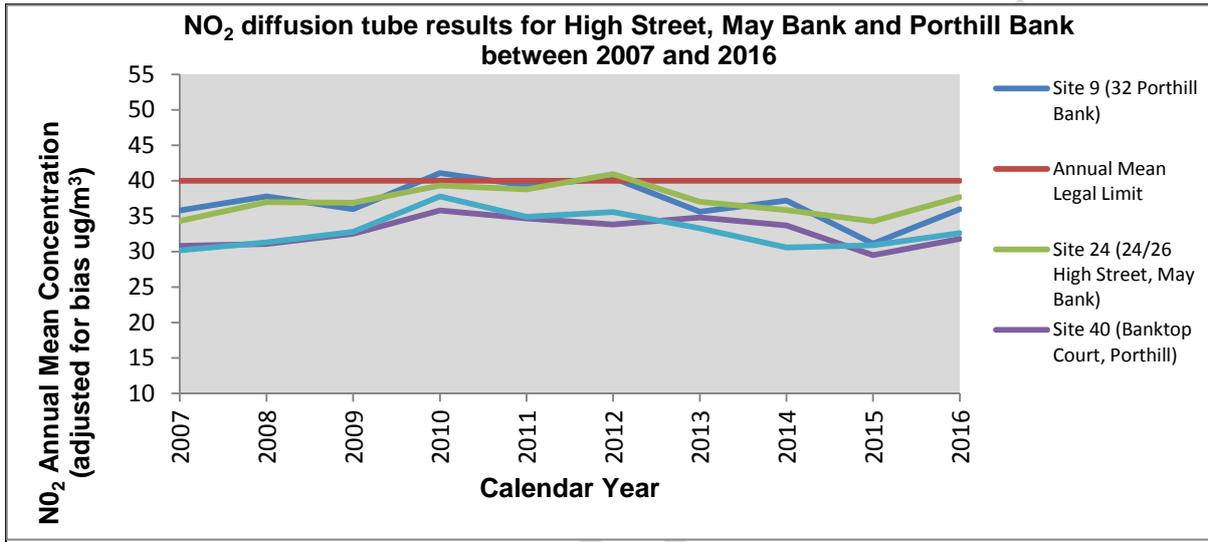


Figure 13: Trends in Annual Mean Nitrogen Dioxide Levels, Maybank-Wolstanton-Porthill AQMA

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

The greatest contribution to NO<sub>2</sub> 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<sub>2</sub> contribution followed by buses (10-13%).

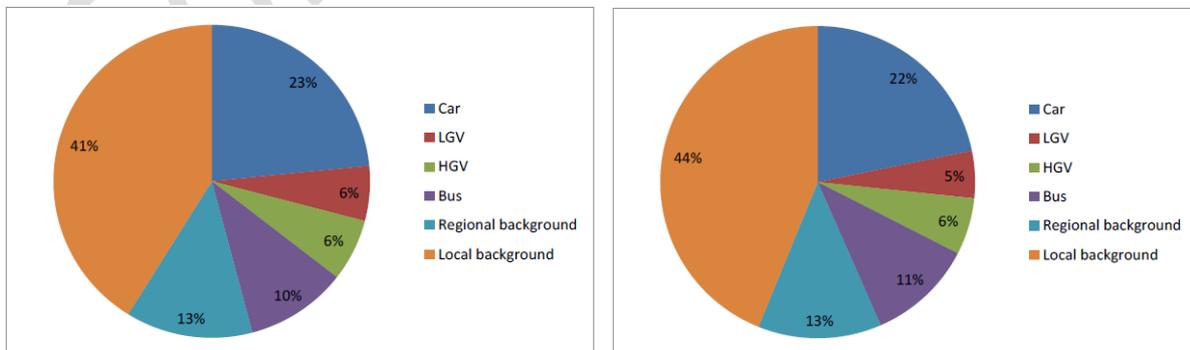


Figure 14: Nitrogen Dioxide Contribution by Source, Maybank-Wolstanton-Porthill

#### 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<sub>2</sub> 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<sub>2</sub> 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 measures 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 adverse 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 NO2 is being exceeded.

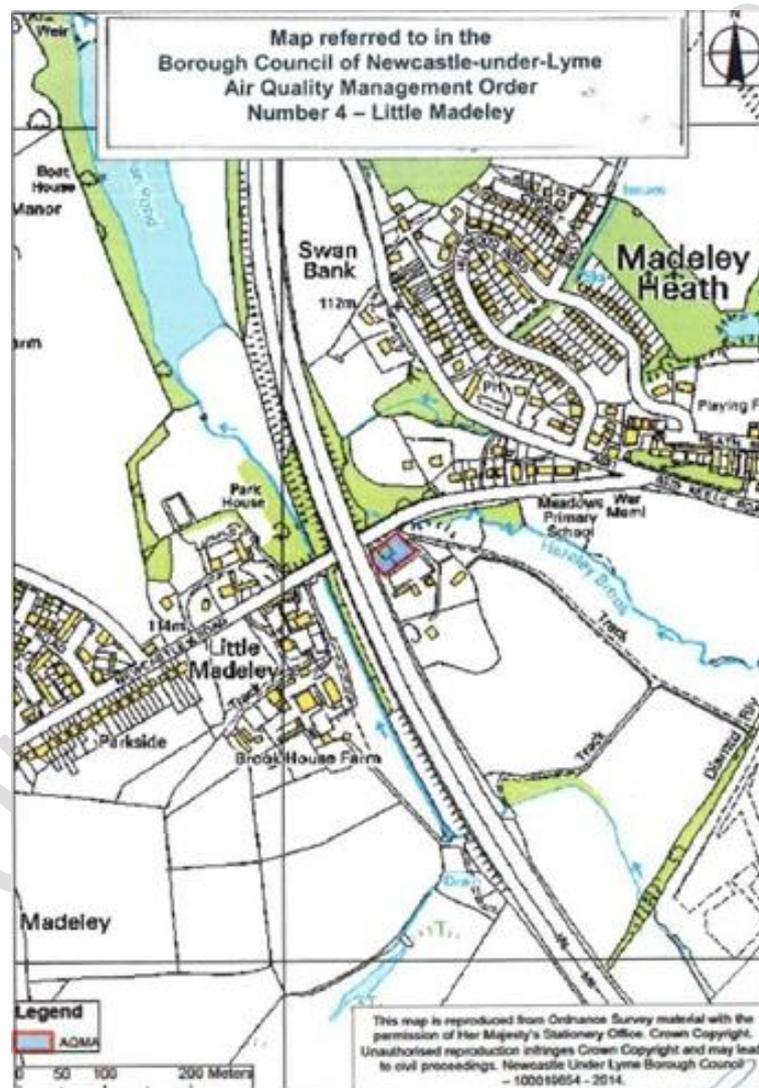
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## 10.4 AQMA Number 4 – Little Madeley

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  $31.4\mu\text{g}/\text{m}^3$  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<sub>2</sub> are showing a steady fall.

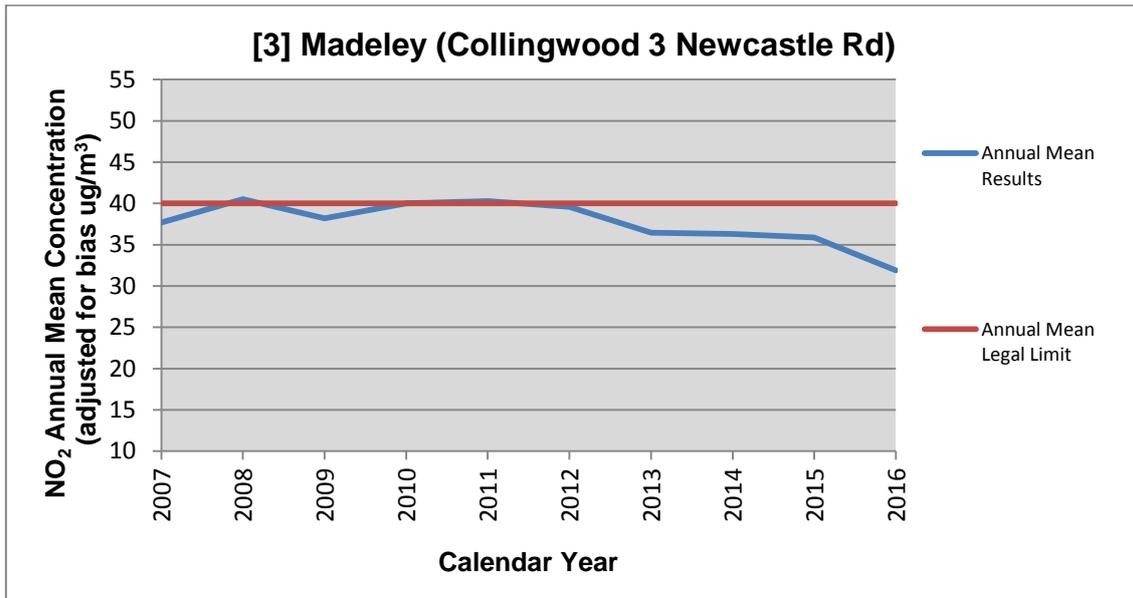
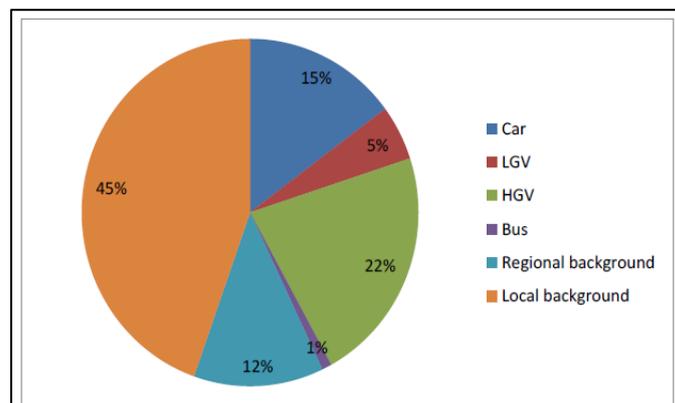


Figure 16: Trends in Nitrogen Dioxide in the Little Madeley AQMA

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

The largest NO<sub>2</sub> source is derived from the local background (i.e. other roads, industry, domestic and rail). Local traffic emissions, principally from 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 NO<sub>2</sub> 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 NO<sub>x</sub> 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<sub>2</sub> 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<sub>2</sub> are currently compliant 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 NO2 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.

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**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

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## 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 <sub>2</sub> 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 - Kingsgrove Town Centre	NO <sub>x</sub> NO <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 RTP1, 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

Stoking 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

<p>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</p>	Sustainable transport choices	Staffordshire C.C.		in planning stage						2015		Transport		
<p>(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</p>	Sustainable transport choices	Staffordshire C.C.						Transport Planning and Infrastructure	Other			Transport	Local	Implementation
<p>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.</p>	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
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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	

Consultation Draft