



Armagh City, Banbridge and Craigavon Borough Council

2022-2024 Air Quality Action Plan

In fulfillment of Environment (Northern Ireland) Order 2002
Local Air Quality Management

Executive Summary

This 'Air Quality Action Plan' for the Borough is prepared in accordance with the Council's statutory duties under the Environment (NI) Order 2000. The increasing desire for good air quality and the realisation that health, well-being, tourism, economic growth and regeneration of any area can all be adversely affected by pollution is gaining more and more public and media attention. Wedded to this is the focus on the man-made effects upon the climate. The Local Air Quality Management actions within this draft plan all seek to reduce inefficient and unnecessary releases of combustion emissions to the atmosphere and will reduce man-made impacts of carbon dioxide. Therefore, this action plan seeks to improve the sustainability of our Borough and is a strong contribution to actions arising from the Council's motion on a climate emergency made in July 2019.

The actions within this Action Plan seek to further improve air quality for all our residents, workers and visitors right across the Borough. It seeks to join together efforts at central Government level (at a national and international level) with those within Councils in order to produce a more coherent direction for actions leading to a new Northern Ireland Clean Air Strategy (plus Energy and Climate Change Strategies) to secure improvements to air quality.

Traffic emissions on congested urban roads remains the biggest air pollution issue within the Borough and every inefficient or unnecessary vehicle journey providing an opportunity for improvement. The Government's aim to eliminate the sale of fossil-fuelled cars and vans by 2030 is welcomed; however this action plan highlights the need that further infrastructure investment is required to support this change.

In addition, this document includes key actions to review and ensure the compliance of solid fuels placed on sale in the Borough with the relevant sulphur-content requirements. Higher than permitted sulphur content fuels give rise to excess smoke, particles and sulphur dioxide and may be particularly concentrated in urban areas. Ensuring compliance with sulphur content requirements and promoting the efficient use of fuels will ensure and improve the air quality in our towns and cities.

The evidence-base provided by Council air quality monitoring throughout the Borough indicates that traffic pollutant concentrations are fairly static. Reductions in emissions from newer vehicles appear to be off-set by increased journeys and congestion. A crucial strand of the actions for Councils is the maintenance of monitoring networks to provide the environmental feedback upon Government's strategies and policies to tackle all forms of air pollution.

Beneficial change is possible; look back to the example of the elimination of lead from within four-star petrol. The challenge now faced is to reduce emissions from transport use that it is key to our economy, family life and well-being is a huge one - but change can be delivered by joined-up action across all central Government Departments with the support of Local Government.

The actions within this draft plan are our commitment to that change for the benefit of all within our Borough.

Introduction

Armagh City, Banbridge and Craigavon Borough Council was created in 2015. Prior to that, each of its localities provided annual air quality reports in accordance with Department of the Environment (DOE) and laterally Department for Agriculture, Environment and Rural Affairs (DAERA) specifications and timeframes. Previous reports can be obtained from www.airqualityni.gov.uk

This Borough 'Air Quality Action Plan' should be read as a continuation of the afore-mentioned annual reports and will be submitted to DAERA in compliance with the Council's duties under the Environment (NI) Order 2000.

The measures within this action plan are designed to reduce the emissions from all polluting sources throughout the Borough but with particular focus upon traffic emissions. This action plan follows from the 2018 declaration of the entire Borough as an Air Quality Management Area and therefore replaces the extant action plans which focussed only on emissions within specific areas where pollution exceeded limit values.

Summary of air quality issues in the Borough

The vast majority of the land-mass in the Borough has very good air quality. As is the pattern repeated across the UK, certain urban areas representing a relatively small land-mass experience poorer air quality due to point sources (industries or coal-burning housing areas) or more commonly infrastructure sources (typically roads) in the vicinity.

Local monitoring in this Borough has identified that the main through-route in Armagh from Barrack Street to Railway Street normally exceeds the annual average limit concentration for nitrogen dioxide. This through-route is relatively heavily trafficked during day-time hours and particularly during school terms. There are approximately 50 dwellings within 10m of the kerbside. A further pocket of exceedance exists at Greenpark Terrace at the junction with the slip-roads to the Killylea Road. Approximately 20 dwellings exist within 10m of the kerb at this location. Again this is a relatively heavily trafficked route. These areas have been in exceedance for nearly 20 years and pollution concentrations remain fairly constant (albeit with a temporary reduction observed in 2020 and 2021 linked with restrictions arising from Co-Vid 19 pandemic).

Recent monitoring has revealed a further area of exceedance on the main road through the town of Tandragee. This road would not be nearly as heavily trafficked as those in Armagh, however, it is on a steep incline with town parking on the roadsides. Most significantly it is a major route for freight

transport to and from the Borough's significant industrial area in Craigavon linking industry to the ports. Approximately 25 dwellings are located within 10m of the kerbside in Tandragee.

Previous source apportionment work has shown that in all the areas of nitrogen dioxide exceedance the issue it is due to localised traffic emissions. In both Armagh and Tandragee vehicles on these routes are made up from some local vehicles, but also a considerable number of regional and international movements. Only during 5 to 15 minutes of their total journey are their principal emissions giving rise to exceedances in our Borough.

In order to come up with the best solution to address the issue of emissions in these areas it is necessary to consider why these vehicles are using these busy routes at peak times and are willing to be delayed in congestion. Whilst there has been no study of road-users it is safe to assume that these peak hours users are made up of commuters, school run traffic, those attending to dependents, those travelling as part of their work, those travelling to shops or medical appointments, tourists, travelling to visit friends and relatives etc. The routes taken are the most effective for the individual in terms of time or cost. The means of travel chosen is the most suitable in terms of comfort, safety or effectiveness to meet the purpose of travel.

It is not effective to keep pushing a simple message of 'modal-shift' i.e. from a more polluting mode of transport such as the private car to a less polluting one such as cycling by appealing to individual's care for the environment. This appears to work for only a small-percentage of users and no measureable improvements have been observed over many years of promotional campaigns and air quality monitoring. Modal shift can only be achieved with much greater effort and investment to alter the decision-making process of the vehicle user to a situation where it becomes more cost-efficient or quicker or more comfortable to take a less polluting transportation method.

By way of example 'Park and Share' facilities locally have become highly popular across Northern Ireland and credit is due to the Department for Infrastructure for their recent expansion. However, their popularity is more likely driven by saving money and being able to share the burden of driving rather than reducing traffic emissions. Therefore, successful measures need to consider all the motivational factors available.

Previous action plans have scoped-out measures to remove these emissions from the immediate local congested area, principally by the construction of by pass in Armagh. Such a major infrastructure project requires significant investment and is therefore featured in the Mid South West SW Region Growth Deal. It is hoped that this collaboration with government will develop and deliver major

infrastructural investments such as new road networks and rail connectivity for the Borough in the future.

Tandragee town centre does not experience congestion nor very high traffic flows and therefore seems highly unlikely to even be considered for a by-pass. HGV restrictions are also unlikely given that alternative routes add significant time to an already near 2 hour journey.

Infrastructure developments would improve local air quality by reducing emissions and eliminating the areas of exceedance from transport sources.

There is also scope for making vehicle movements more efficient through public transport investment and by reducing the emissions produced at the tail-pipe from all vehicles through phasing out the most polluting vehicles and eventually leading to the elimination of petrol and diesel vehicles from the UK fleet.

In 2018 the entire Borough of the Council was declared an Air Quality Management Area (revoking the 2 small AQMAs in Armagh and encompassing the Tandragee area of exceedance). It is a fact that every unnecessary or inefficient vehicle movement originating, culminating or travelling through the Borough makes air quality worse than it needs to be, by either passing through or near to the areas of exceedance or by contributing to the background nitrogen dioxide levels in the Borough. This Council will encourage and support decisions and measures that reduce unnecessary or inefficient emissions.

Local Air Quality Management in the context of Climate Change

This Action Plan does not seek to view the issue of air pollution merely through the narrow prism of Local Air Quality Management. The actions within this plan and the changes sought to Government policies, funding and regulation will all have global benefits as well as bringing about local improvements. The more efficient use of fossil fuels in transport and the move to less-polluting alternatives will all reduce the emission of carbon dioxide (as well as nitrogen dioxide where combustion is taking place) and therefore will restrict adverse anthropogenic effects upon the atmosphere. We will seek to entwine air quality actions within the broad scope of climate change actions. In vast majority of circumstances local air quality improvements and climate change mitigation measures will be congruous but where conflicts arise, for example, increased particulate emissions on local roads due heavier electric cars resulting in more tyre and brake dust; or increased nitrogen dioxide emissions from hydrogen combustion – we will seek to ensure that actions are balanced against beneficial outcomes.

The Armagh City, Banbridge and Craigavon Borough Council Air Quality Management Area.

The Council made an Order in 2018 under the powers conferred by the Environment (NI) Order 2002 to declare the entire Borough an Air Quality Management Area.

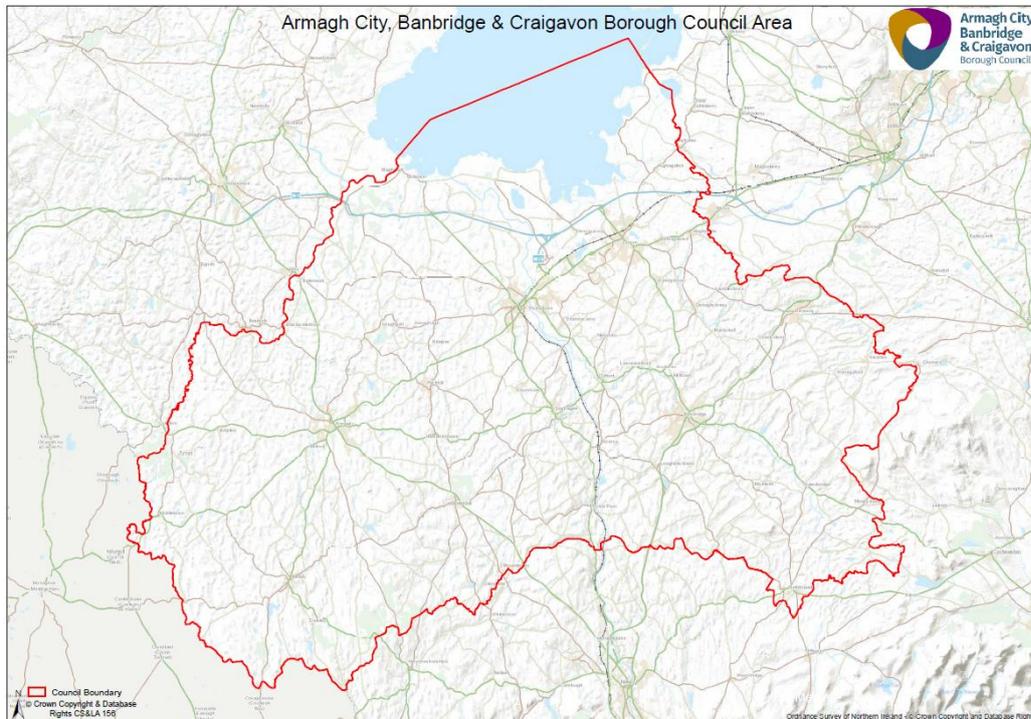


Figure 1 – The Armagh City, Banbridge and Craigavon Borough Council Air Quality Management Area.

Pollution trends

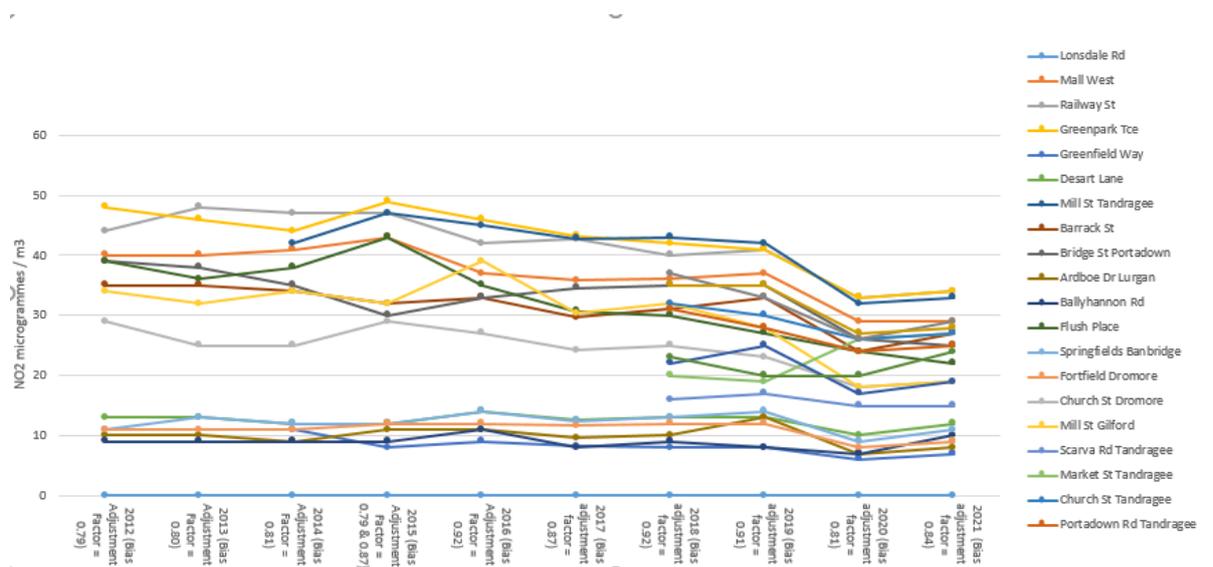


Chart 1 – Showing relatively steady annual nitrogen dioxide levels across the Borough year on year.

Chart 1 shows that the nitrogen dioxide levels monitored across the Borough are largely stable with the exception of latter years which were influenced by COV-iD 19 restrictions. Although a detailed local analysis has not been undertaken, it is assumed that undoubted improvements in fuel efficiency and emissions from newer vehicles has been balanced out by the general trend for increasing vehicle numbers and journeys across the UK. It follows that successful emission reduction measures will have to carry sufficient weight to change the desire for cars and greater journeys, or, more likely, need to be even more ambitious in reducing emission from individual vehicles. To this end the Government’s commitment in the “Road to Zero” Strategy to ban all petrol and diesel vehicle sales in the UK from 2040 (subsequently shortened to 2035 and 2030 by proceeding administrations) is welcomed. However, it is obvious that the success of such an ambitious proposal hinges on producing enough clean energy to power the new fleet and making it cost and time-effective to purchase and re-charge individual vehicles. In turn such infrastructure requires large quantities of earth minerals, an increase in renewable energy developments, development of a bridge from fossil fuel combustion to renewable and a significant investment in the local electricity supply infrastructure including transformers and substations.

Complaint numbers

Year	Air quality complaints	All Environmental Protection complaints
2016/2017	105	2229
2017/2018	114	1819
2018/2019	130	1959
2019/2020	135	1600
2020/2021	170	2160
2021/2022	126	1888

Table 1 – Showing air quality concerns from the public as a low percentage of Environmental Protection complaints.

Table 1 shows that air pollution complaints are rarely made by members of the public. Where air pollution complaints are made they tend to be regarding individual, localised matters such as builders burning their waste rather than paying for disposal. In addition, as previously stated the majority of the Borough has excellent air quality. The inference of such low levels of complaint is that there may be little impetus for drastic changes to reduce emissions purely out of concern for the environment. Success in reducing emissions will require much more effort and investment led by central Government.

Previous successful interventions on how the public used their car, lorries and vans as well as how they heated their home offered alternatives that were as good, if not better, than the status quo and were supported by innovation, grants and regulation.

Whilst there are now positive signs that emissions from newer engines are producing lower tail-pipe emissions and the Government have committed to phase-out fossil-fuelled car and van sales by 2030, there is little by way of support for innovation, infrastructure investment nor an overarching strategy and regulations to deliver the massive changes necessary in how we use vehicles.

Integration of Borough Air Quality Action Plan into Corporate Priorities

The Council’s Corporate Plan 2018-2023 has a vision to develop, *“A healthy and sustainable economy and an appealing place”* allied with a key programme to *“improve everyone’s health and well-being”*.

The Council's Community Plan 2017-2030 vision is to have *"...a happy, healthy and connected community. A vibrant and sustainable economy and appealing places for living, working and learning"*.

Local Air Quality Management is led by the Environmental Health Department of the Council. The Department's Business Plan vision is, *"To improve everyone's quality of life, opportunity, safety and wellbeing"*.

The Council (along with many other local authorities) have declared a Climate Emergency. A working group has been established to prepare a Sustainable Development and Climate Change Strategy for the Borough. This will improve and complement sustainable development across the Borough as well as tackling climate change. It is clear that this emerging Strategy will have measures to reduce unnecessary fossil fuel use as well as looking for efficiency in how we use energy to heat our homes and power transport and industry. Given the synergies with the Local Air Quality Management Action Plan it is clear that the actions towards improving air quality in the Borough (from primarily fossil fuel combustion pollutants) will have a major part to play in the practical outworking of the wider Sustainable Development and Climate Change Strategy.

The health and quality of life for our residents, businesses, visitors and all others within the Borough is a key theme that runs through all of the work of the Council. None of this can be achieved in an environment that is polluted and causing adverse health effects upon its residents, therefore with the work of the Council, the Environmental Health Department, other Departments and external stakeholders and with our residents we will work towards the maintenance and improvement of air quality throughout the Borough, nationally and globally.

A key action within this plan will be the integration of measures to reduce pollution and / or improve local air quality into all of the community development, neighbourhood renewal, biodiversity, resilience and sustainability work undertaken by the Council.

It is clear that the improvement of air quality across the Borough is a significant opportunity to improve the health and well-being of residents and visitors and as therefore is entirely consistent with the aims of Armagh City, Banbridge and Craigavon Borough Council. In the development of a new Corporate Plan and subordinate strategies local air quality (and climate change) must be considered integral to their successes.

Communication of the Plan

This Air Quality Action Plan will be provided or made accessible to the following agencies/ departments or sectors:

1. DAERA
2. DoH
3. DfI
4. OFMDFM
5. Local Health Trust
6. Translink
7. Internal Council departments
8. Residents of the Borough via the media messaging and the website

Council would also welcome comments from any interested reader / private vehicle owner / commuter in relation to the actions proposed and how the UK, NI and ACBCBC must change to deliver the air quality improvements sought.

Please refer to the title pages for contact details.

Commitment to Public Health Issues

There is sufficient evidence to confirm that poor air quality is a significant public health issue and significant feature in the inequalities in health seen locally and nationally. It is not the intention of this Borough Air Quality Action Plan to collate the wealth of evidence of adverse health effects. However, it is useful for context to consider the following extract from the Guideline produced in June 2017 by the National Institute for Health & Care Excellence (NICE) – “Outdoor Air Quality and Health”.

“Short-term exposure (over hours or days) to elevated levels of air pollution can lead to:

- *effects on lung function*
- *exacerbation of conditions such as asthma increases in hospital admissions and mortality.*

Epidemiological studies have shown that long-term exposure (over several years) reduces life-expectancy, mainly because of increased risk of mortality from cardiovascular and respiratory causes and from lung cancer.”

In the Department of Health’s recently published Cancer Strategy for Northern Ireland 2022-2032 a summary of potential issues associated with air pollution is given as follows:

“In 2013, the International Agency for Research on Cancer (IARC) confirmed that outdoor air pollution is a cause of cancer. In Northern Ireland, around 70 cases of cancer each year are caused by exposure to outdoor air pollution. The smallest particles known as PM10 and PM2.5 are linked to lung cancer.

Air pollution in Northern Ireland comes from a variety of sources. Domestic combustion (burning wood and open fires) is one of the biggest sources of PM10 (27%) and PM2.5 (44%) in the UK. Road transport is responsible for 11% both of PM10 and PM2.5 emissions across the UK, of which 27% to 43% is from vehicle exhaust emissions and the remaining is from tyre and brake pad wear.”

Air pollution is also significant mortality factor in preventable cardio vascular disease, in fact it presents a greater risk than high cholesterol.

Research is emerging (University of London – Aung et al 2021 & The Escape Project as reported in BMJ 2014) to suggest that significant health effects occur following long-term exposure at levels below the relevant limit values. This evidence is additional support for the approach taken by the Council seeking to reduce nitrogen dioxide across the Borough rather than focussing upon individual streets or roads.

Further information in relation to the evidence-base for adverse health effects from outdoor air pollution can be found at the World Health Organisation and Department of Health websites.

The focus of this Action Plan is upon nitrogen dioxide. Source apportionment work has confirmed that the main source of nitrogen dioxide pollution is local road traffic. It should be remembered that nitrogen dioxide is a ‘marker pollutant’ which is indicative of the level of traffic emissions as a whole. Emissions are made up of a complex mix of many gases and fine particles of many other substances. Nitrogen dioxide was chosen as a marker because its chemical properties are well-known and it can be measured relatively inexpensively. Whilst some evidence is available in relation to the health effects of individual pollutants, there is a distinct lack of evidence in relation to the relationship between complex mixes of pollutants, real-time human exposure and adverse health effects. Accordingly, all references in this Air Quality Action Plan to reducing nitrogen dioxide concentrations across the Borough should be read to also mean the reduction of all complex mixes of air-borne pollution.

The costs associated with air pollution

Air pollution results in huge costs upon the public purse through the provision of primary health and social care to deal with ill-health caused by or exacerbated by pollutant emissions.

The report “Estimation of costs to the NHS and social care due to the health impacts of air pollution” published by Public Health England in May 2018 advises that,

“The total NHS and social care cost due to PM2.5 and NO2 combined in 2017 was estimated to be £42.88 million (based on data where there is more robust evidence for an association), increasing to £157 million when diseases are included where there is currently less robust or emerging evidence for an association.

Between 2017 and 2025, the total cost to the NHS and social care of air pollution for where there is more robust evidence for an association, is estimated to be £1.60 billion for PM2.5 and NO2 combined

increasing to £5.56 billion if we include other diseases for which there is currently less robust evidence for an association.”

No similar figures are believed to exist for Northern Ireland, however, it is safe to assume that air pollution is a significant cost burden in this region too.

Whilst tax generated from fuel sales is significant in a UK context, there is little association between the costs of addressing ill-health caused by the combustion of fossil fuel and the price paid at the pump. There no relationship between the cost of fuel consumed and the adverse impact caused in areas of poor air quality save for a weak relationship in the few charging zones across the UK. Whilst a dramatic change in fuel taxation levies which would vary depending upon the likelihood of emissions giving rise to adverse health impact would likely result in improvements in air quality, there is no evidence that H.M. Treasury would be open to such a bold and disruptive measure (indeed H.M Treasury have decreased such levies in response to cost-of-living concerns) and therefore it is not considered any further throughout this Air Quality Action Plan.

Other air pollution concerns.

Whilst this Action Plan focusses on nitrogen dioxide associated with traffic emissions, there are a number of other air quality concerns which are emerging in this Borough, as across NI and the UK.

Firstly, recently the issue of the sulphur content of solid fuel has been raised as a regional concern. The sulphur content of fuel such as household coal, smokeless coal and blend is enforced by district council under the Sulphur Content of Solid Fuels Regulations (NI) 1999 and is limited to 2%. High levels of sulphur within solid fuel gives rise to sulphur dioxide and smoke / particulate matter which are both significant pollutants in urban areas when emitted from numerous chimneys. Aside from measures to build an approach to deal with traffic emissions, this action plan contains, as a key measure, effort to review and ensure compliance within the coal import and retail sectors in relation to solid fuels.

In addition there is an increase in the amount of solid-fuel burning in stoves within houses in urban areas. Often when biomass / wood is used it is not correctly dried nor does it promote complete combustion leading to greater than anticipated pollution.

Secondly, there is increasing evidence to suggest that drivers of vehicles are being exposed to high levels of pollution dependant upon the length of time spent driving and the time in areas of congestion / high pollution.

Thirdly, there is concern regarding particulate matter concentrations including very fine particles (sometimes referred to as PM2.5) and how this interact with the lungs. Some of this pollution can arise from tyre and brake wear and therefore would still be an issue even if an electric vehicle were used.

Finally, there is also increasing concern over the exposure to indoor air pollution within homes. Sources can be heating systems, cookers, aerosols and other cleaning materials used in homes.

The Environmental Health commitment to improving public health

Environmental Health Departments in local Government are key stakeholders in the Public Health agenda with a highly successful track record in delivering key interventions which helped to reduce the risk to public health, for example tobacco control legislation . In the realm of air quality, the high levels of smoke and sulphur dioxide that was prevalent in urban areas due to domestic coal burning have been eliminated due to measures introduced in the 1981 Clean Air (NI) Order which were delivered by Councils with funding from central Government. The success of this measure relied upon the provision of a grant to move to a cleaner, more easy to use form of domestic heating which had the support of the vast majority of residents within the designated Smoke Control Areas. This was combined with Building Regulations requiring new home to be smokeless and legislation governing the sulphur and smoke-producing content of fuels.

It is not yet evident that there is any of the features of a successful public health intervention within the measures presently enacted by central Government to address traffic emissions in NI, specifically there is an absence of a strategy, support and regulation. Therefore, a key part of our draft Borough Air Quality Action Plan is to build a consensus for change amongst elected representatives, local officials and other stakeholders as well as the residents of the Borough based upon our monitoring and knowledge of local air pollution issues.

How to determine the success of the Action Plan

This Action Plan serves to reduce the levels of pollution in order to protect and improve the health of our residents, workers, visitors etc. Ideally, the success of an Air Quality Action Plan would be measured by direct health-outcome statistics, however, these are not readily available. The following outcome measures are suggested:

- A reduction in mortality and morbidity estimates due to air pollution in the Borough as produced and published by or for central Government.
- A reduction in the level of hospital admissions linked to air pollution episodes in NI
- Absence or a reduction in the number of cases in the Borough where “air pollution” is listed as a cause of death.
- A reduction in costs to the National Health Service due to air pollution.

In the absence of direct outcome measures it is necessary to an alternative proxy measure.

Proxy measure for Borough Action Plan success

As it has been established that nitrogen dioxide pollution has adverse effects upon human health, it is proposed that a reduction in the concentrations of nitrogen dioxide as measured at all sites across the Borough by both passive and automatic means shall be seen as a proxy measure of a health outcome.

The Air Quality Standards (Northern Ireland) Regulations prescribe a concentration limit of 40 ug/m³ as an annual mean. However, there is less scientific certainty regarding a “safe” level of traffic-emissions. The NICE 2018 report states, *“Members noted there is little evidence to suggest a threshold below which no adverse health effects would be anticipated”*.

Focussing on compliance with an annual mean based largely upon fairly crude monthly measurement by passive diffusion tube also fails to consider that within the measurement periods there could be periods of days or weeks where pollution is very high but averaged out by other periods of low pollution. It also has little regard for the diurnal patterns (i.e. the variation in flow traffic through the day and the night) of traffic-based emission and given that exposure tends to occur at the same time as emission, the influence of low emissions from low traffic-flows during night-time periods is overly influential. For this reason, the proposed proxy measure of success is to reduce nitrogen dioxide concentrations without reference to a limit value.

The Northern Ireland Executive’s “Draft Programme for Government Framework (PfG) 2016-2021” contained a number of outcomes including *“We enjoy long, healthy, active lives”* and *“We live and work sustainably – protecting the environment”*. To help achieve the desired outcomes a number of indicators were specified including the reduction in nitrogen dioxide concentrations (based on an average of a number of roadside monitoring locations including Armagh).

Therefore, the proxy measure of success within this Borough Action Plan aligns with the ambitions in the last Executive's draft PfG. The inclusion of such a measure in the draft PfG was warmly welcomed and seen as a very positive acceptance of the needs for action to improve air quality. We urgently await a Clean Air Strategy for Northern Ireland and legislation to deliver air quality improvements in this Borough and across Northern Ireland. We note with concern that other regions and countries are moving ahead rapidly with shifts towards less polluting fuels and technologies which will deliver health improvements for their people in a much quicker timeframe.

Monitoring and Review

This Borough draft Air Quality Action Plan shall be reviewed and reported upon annually in conjunction with the reporting requirements specified in the Environment (NI) Order 2000. Elected Members shall be briefed annually on the air quality within the Borough and members of the public and other stakeholders shall have access to all published reports and data via www.airqualityni.gov.uk

Challenges to the success of the 'emissions-reduction' approach in the Borough Air Quality Action Plan:

1. Deficit in control over transport emissions

Interventions led by the Environmental Health sector tend to be driven by robust legislation and have a track record of high success. However, without strategic or at least legislative backing there are few levers available to the Council to tackle traffic emissions within the Borough. The Clean Air Order (NI) 1981 is very-much out of date and contains no provisions in relation to traffic emissions, whilst the Environment Order merely proscribes a reporting mechanism without any new enforcement powers available to tackle problem sources. Against this legislative backdrop traffic emissions have remained fairly steady in those areas identified in previous action plans.

2. Disconnect between Local Air Quality Management and national compliance requirements through the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019 (as amended).

Whilst the Council's 'Local Air Quality Management' (LAQM) plays a part in the overall package of measures designed to meet legislative requirements they have become increasingly disconnected systems.

A different method of monitoring and modelling air quality is used by DAERA for national air quality standards compliance on behalf of NI. The model is stand-alone does not pick up local issues and as a result central Governments own 'Air Quality Action Plans' are only designed to achieve national compliance and therefore do not pick up all of the Air Quality Management Areas declared by Councils under the LAQM regime.

In this Borough there have been Air Quality Management Areas declared for many years, however, these areas have not been the subject of national-level action planning or funding. To add to the confusion, regional air quality reporting and national-level action plans can give the impression that outside of the Belfast urban area (where undoubtedly the highest numbers of people may be affected by traffic pollution) there are no issues of concern. This then makes it increasingly difficult to persuade the public, elected representatives and local stakeholders that this Borough (and Councils of a similar profile) has issues that also require huge efforts to resolve.

This confusion extends to the very system of action planning at local and national compliance level as it is the same population driving the same vehicle fleet on journeys all across this relatively small country, yet outside of Belfast local measures are not reflected in the NI action plan and nor is there a requirement for national measures to be specified and reported on within local plans.

Therefore, it is clear that if there is to be success in reducing emissions across the UK then a single joined-up system of monitoring and reporting is required with contributions to actions at both a national and local level reported on within the plan and with clear demarcations of responsibility between central and local Government. For example, as it is now clear that a monumental increase in the number of electric vehicle charging points is required, then local Government could be tasked with identifying a specific number of suitable locations within the public realm and central Government should commit to the release of land and the funding of their installation.

What would work?

Previous action plans focussed on measures which would bring concentrations in the current areas of exceedance below the 40ug/m³ limit value. As previously stated, this draft Action Plan has taken an alternative approach – that of seeking to reduce the emissions of every vehicle across the Borough as well as regionally and desirably internationally too.

Where previous plans scoped the potential improvements that could be made from re-alignments to the road traffic network and the construction of new roads (primarily a by-pass of the centre of

Armagh), were such projects to be delivered and the areas of emissions-exceedance eliminated then that would be the end of the process. Instead the ‘emissions-reduction’ approach currently advocated seeks to make long-term, sustainable, year-on-year reductions to emissions. Change on such a scale cannot be delivered via local Council intervention alone and nor should LAQM be seen in isolation from national-compliance actions.

Therefore, whilst the delivery of local improvements in areas of exceedance are re-stated in this new Borough draft Air Quality Action Plan these now go hand-in-hand with national emissions reduction measures.

It is estimated that a 50% reduction in nitrogen dioxide emissions from the fleet operating within the Borough and travelling through the Borough from national and international locations would reduce the concentrations measured at all sites across the Borough as well as addressing the areas of limit exceedance.

It is evident that the Government does not intend to directly curtail the growth in UK vehicle numbers nor does it appear palatable to Government to seek to reduce journeys by taxation or other forms of pricing and restriction. As a result, the key focus of emissions reduction will be at source, i.e. by tighter emissions standards placed upon manufacturers selling in the UK and elsewhere together with greater support for low-emission vehicles leading ultimately to the replacement of traditional combustion engines to a UK fleet mainly comprised of electric vehicles.

It should also be recognised that no single measure or suite of measures is likely to be successful in addressing such a broad-ranging issue. Success is more likely to be achieved through a flexible mix of measures including public transport investment, new road building, new ways of working, integrated spatial planning, new forms of industrial power supply, more efficient domestic energy use etc.

Actions

ACTION	LEAD	COUNCIL ACTION	WHEN
<p><i>1. Undertake sampling and analysis of solid fuel for sale within the Borough to address suspected non-compliance with the Sulphur Content of Solid Fuels Regulations</i></p>	<p><i>Armagh City, Banbridge and Craigavon Borough Council</i></p>	<p><i>Participate in regional exercise to address suspected non-compliance. Advisory messages to import, supply and retail sectors. Test-purchasing to follow.</i></p>	<p><i>June 2023</i></p>
<p><i>2. Build a consensus for action to improve air quality throughout the Borough and nationally</i></p>	<p><i>Armagh City, Banbridge and Craigavon Borough Council</i></p>	<p><i>Annual reporting to Members</i></p> <p><i>Liaison with other Council Departments</i></p> <p><i>Liaison with central Government.</i></p> <p><i>Liaison with professional bodies and academics.</i></p> <p><i>Use of media requests/publicity to highlight air quality issues</i></p>	<p><i>2023 and annually thereafter</i></p>
<p><i>3. Road infrastructure development in Armagh and</i></p>	<p><i>HM Treasury & DfI. Mid South West region Growth Deal</i></p>	<p><i>Support and lobby for same Infrastructure development included</i></p>	<p><i>On-going</i></p>

<i>improved rail connectivity for the Borough</i>		<i>in Regional Growth Deal.</i>	
<i>4. Provision of new efficient public transport services for NI</i>	<i>HM Treasury & DfI</i>	<i>Support and lobby for same</i>	<i>On-going</i>
<i>5. New Clean Air Order to address new emission sources including road traffic</i>	<i>UK Government & DAERA</i>	<i>Lobby for same</i>	<i>On-going</i>
<i>6. New Air Quality Strategy for Northern Ireland</i>	<i>NI Executive & DAERA & Councils</i>	<i>Lobby for same</i>	<i>On-going</i>
<i>7. New legislation to facilitate domestic users away from solid fuel heating where affordable and supported by other measures</i>	<i>NI Executive & DfE</i>	<i>Lobby for same</i>	<i>On-going</i>
<i>8. Air pollution monitoring to provide evidence-base for policy change</i>	<i>Councils & DAERA</i>	<i>Deliver high quality monitoring and reporting</i>	<i>On-going</i>

<p>9. Maintenance of AURN monitoring station within the Borough for the purposes of UK compliance with Air Quality Standards</p>	<p>Councils & DAERA</p>	<p>Deliver high quality monitoring and reporting</p>	<p>On-going</p>
<p>10. Seek to expand monitoring network to include Poly Aromatic Hydrocarbon monitoring in Armagh as an indicator of household solid fuel emissions</p>	<p>Councils & DAERA</p>	<p>Deliver high quality monitoring and reporting</p>	<p>2023</p>
<p>11. Emerging actions to support UK Government move to zero emission by 2030</p>	<p>HM Treasury, UK Government, NI Executive & Councils</p>	<p>Assist in development and implementation of same</p>	<p>Awaited from UK Government</p>
<p>12. Measures to achieve Indicator 37 in the NI Executive draft PfG – or its successor from a newly</p>	<p>NI Executive, HM Treasury & Councils</p>	<p>Assist in the development and implementation of same</p>	<p>Awaited from NI Executive</p>

<i>formed administration</i>			
<i>13. Incorporate air quality considerations into Local Development Plan</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Have regard to the improvement in air quality with the LDP</i>	<i>By 2023</i>
<i>14. Regulate emissions from all Part C prescribed industrial processes in the Borough</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Ensure emissions within compliance</i>	<i>2023 and Annually</i>
<i>15. Regulate emissions from all relevant medium-scale combustion plant and generators in the Borough</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Ensure emissions within compliance</i>	<i>2023 onwards</i>
<i>16. Have regard to air quality impacts in all development control applications within the Borough</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Have regard to planning policy and best practice in minimising adverse impact</i>	<i>On-going</i>
<i>17. Enforce all smoke control provisions</i>	<i>Armagh City, Banbridge and</i>	<i>Minimise emissions</i>	<i>On-going</i>

<i>within the Borough</i>	<i>Craigavon Borough Council</i>		
<i>18. Prevent smoke or other air quality nuisances within the Borough</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Minimise emissions</i>	<i>On-going</i>
<i>19. Adhere to regulatory requirements and have regard to guidance and best practice in minimising emissions from Council-owned fleet</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Adhere to purchasing requirements and vehicle maintenance and emissions standards</i>	<i>On-going</i>
<i>20. Ensure the phasing-out and control of use of Ozone-Depleting Substances and Fluorinated Gases in accordance with Council's statutory duties.</i>	<i>Armagh City, Banbridge and Craigavon Borough Council</i>	<i>Minimise release of powerful climate change gases into the atmosphere</i>	<i>On-going</i>

