Kingston upon Hull City Council 2017 Air Quality Strategy

Aug 2019 (Ver IX)

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Approved by Cabinet	July 2017
Report Reference number	Hull_Yorkshire_AQ_Strat_2016
Date	Oct 2019 (ver ix)

Contents. Page number.

Foreword

I am pleased to introduce this, the first Local Air Quality Strategy to be produced by Kingston upon Hull City Council.

In recent years, the City has changed significantly and the economic situation presents challenges.

This strategy brings together the great work already carried out in Departments across the Authority, and by co-ordinating it presents an opportunity to go further ourselves, and to encourage others to do similar.

More and more, Hull is being seen as a desirable place to live and work, and this is demonstrated by new developments, such as the Siemens wind turbine plant and Green Port Hull development, which are examples of how the environment can be protected and be seen as an opportunity to support and encourage growth.

These issues are difficult to address because of the increasing dependence we all have upon motor vehicles, whether for pleasure or business and transportation of goods.

This strategy recognises that no one single agency, department or community has all the answers; improvements to air quality can only be achieved by taking an integrated, collaborative approach. It acknowledges that economic growth and improving the local environment are not mutually exclusive.

The recent announcement on the consultation by the National Institute for Health Care Guidance (NICE) is also timely, and this strategy their suggested measures are very much in line.

I have no doubt that by taking a realistic and flexible approach and by closer integration of air quality and the environment into wider agendas such as health, economy and education and by building on the environmental work already being carried out we will continue to contribute to the improvements in the quality of life and commerce in the city and wider sub region.

Councillor Martin Mancey
Cabinet Portfolio Holder for
Environment & Transport,
Kingston upon Hull City Council

Introduction.

The quality of our air in the United Kingdom has improved considerably over the last decade. Overall, the air we breathe is cleaner today than at any time since before the industrial revolution. We have achieved this through tighter controls on emissions of pollutants from industry, transport and domestic sources. In recent years, our policies have helped to cut concentrations of harmful pollutants and reduced the annual numbers of premature deaths and hospital admissions by many thousands.

Hull has one area that exceeds the annual average nitrogen dioxide air quality objective (AQO), and this is along an area of the A63 Trunk Road.

An element of the exceedance relates to the way that the City has developed around the waterside, which has left an extremely active port within City, but at the side furthest away from the national road network, which leaves a trunk road running through seven miles of urban environment.

The long term trend is of general improvement, and in 2013 Hull had 19 days poor air quality per monitoring station compared to the national average of 41 days poor air quality per station. In 2017, there were 2 days of poor air quality for the Yorkshire and Humber region, with the national average being 7 days.[1]

Despite this positive picture, air pollution still harms health and the environment. Recent research has shown that some pollutants are more dangerous than previously thought. For some pollutants there is no absolute safe threshold. Air pollution is currently estimated to reduce the life expectancy of people in the UK by an average of 7-8 months with estimated equivalent health costs of up to £18 billion each year. Air pollution also has a detrimental effect on our ecosystems and vegetation. Clearly there are significant benefits to be gained from further improvements.

Whilst the exceedance for Hull relates to the annual average for nitrogen dioxide (NO_2) Health Professionals use a number of metrics to determine mortality and morbidity rates. One of these is $PM_{2.5}$, which doesn't have a specific value in the air quality objectives, but the latest Defra guidance does request local authorities include measures of improvements in the Annual Status Reports (ASR).

In April 2015, the Supreme Court ordered the UK Government to develop a new plan to urgently tackle levels of air pollution. The ruling was the culmination of a five year legal battle fought by Client Earth. The judge decided that Client Earth could take the Government back to court. The court case was on 18th and 19th October 2016 and on 2nd November the High Court again ruled that the Government had failed to implement policies and actions to tackle air pollution. On 22nd November, 2016 the High Court gave the Government 8 months to draw up fresh air quality plan. In 2018, the National Air Quality Strategy is still subject to criticism and legal processes.

In May 2017, Defra and DfT produced a new draft air quality plan for consultation, and Hull City Council responded to that, with suggestions that help demonstrate the commitment that the Authority has to tackling air quality and associated health issues. This strategy

[1] *https://uk-air.defra.gov.uk/news?view=238*

is an example of that, and it allows us to include any additional measures that are brought in with the publication of the Government's revised Air Quality Plan on July the 30th 2017. In August 2018, the Governments Plan is still being drafted and subject to consultation.

The redrawing of the plan emphasised the need for measures such as Clean Air Zones in many areas of the UK, including Kingston upon Hull.

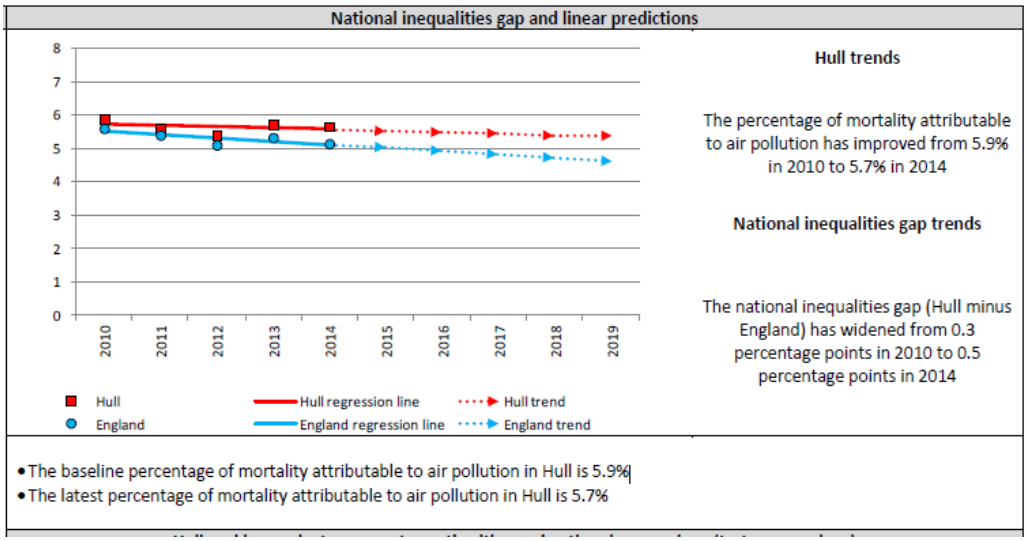

Figure 1. PM2.5 Mortality Rates.

The above graph shows predictions for mortality rates associated with $PM_{2.5}$ and demonstrates that, whilst the percentage of mortality attributable to air pollution is falling, it's at a lower rate than average for England, and needs to be improved.

Hull City Council believes that this Local Air Quality Strategy 2016 will help combat the adverse health effects resulting from poor air quality, reduce the adverse health impacts on residents and visitors, improve life chances, tackle climate change, increase competitiveness and innovation and support the transition to a low carbon City.

The adoption of this strategy will also support activities, such as; the annual reports compiled for DEFRA that detail the continual review and assessment of air quality in Hull; responses to consultations for planning applications; inspections of premises that are part of the Permitted Process regime; responding to service requests and queries.

The strategy cannot be viewed in isolation. Some of the issues can be controlled, some we can influence and some have to be accepted and mitigated against. A key element to a low emission future is changing behaviour, particularly with regards to travel choices, and this will involve a high degree of partnership working with a variety of groups, such as Friends of the Earth, Hull and Goole Port Health Authority, the Environment Agency and Highways England, to name just a few.

In the UK, responsibility for meeting air quality limit values is devolved to the national administrations in Scotland, Wales and Northern Ireland. The Secretary of State for Environment, Food and Rural Affairs has responsibility for meeting the limit values in England and the Department for Environment, Food and Rural Affairs (Defra) co-ordinates assessment and air quality plans for the UK as a whole.
Part IV of the Environment Act 1995 and Part II of the Environment (Northern Ireland)

Order 2002 requires local authorities in the UK to review air quality in their area and designate air quality management areas if improvements are necessary. Where an air quality management area is designated, local authorities are also required to work towards the Strategy's Aims prescribed in regulations for that purpose. An air quality action plan describing the pollution reduction measures must then be put in place. These plans contribute to the achievement of air quality limit values at local level.

The air quality objectives are shown in Appendix one. These are health based targets, and up to now Hull City Council have worked at creating a picture of what air quality is like across the City, focussing on emissions and how they disperse. Moving forward, there will be more focus on the areas that 'at risk' groups are liable to be exposed to, so an early task will be to try to identify those groups, as opposed to simply other members of the general public as the regulations require.

Another emerging critical factor is the proposed Public Health and Outcomes Framework which suggests air quality as one of the 6 primary indicators in the Domain One set of indicators. This not only demonstrates the importance of air quality in terms of public health but also indicates that in the future this could be an outcome on which the performance of the City is measured.

In conclusion, a failure to meet the air quality objectives will have detrimental consequences for public health and the environment and it may also have significant financial consequences for the UK and possibly for Hull City Council. For these reasons it is imperative that all efforts are made to make the necessary changes to existing policy and priorities to improve our local air quality. This requires a strategic approach in order to ensure that the Authority is meeting its obligations to local air quality and the environment, and that it can demonstrate its commitment to continue to do so. This strategy is produced to help achieve that and to help advocate global environmental and health initiatives to the wider community.

What is the Local Air Quality Strategy?

This Air Quality Strategy sets out air quality aims and policy options to further improve air quality in Hull from today into the long term.

As well as direct benefits to public health, reducing the triggers for asthma as an example, these options are intended to provide important benefits to quality of life and help to protect our environment.

This strategy is aimed in the first instance at the activities of the authority itself, but many of the activities will have an impact on external stakeholders.

An aim is that by leading by example, and building on the experience of the measures that the strategy creates, there will be a greater desire to see similar initiatives extended in the area.

The Council and its partners are committed to improving the environment as a top priority. The City Plan sets out how this will be achieved; air quality is identified as a vital part of this. The Local Air Quality Strategy sets out the Council's overall vision for managing and improving air quality together with the outcomes; aims and priorities that will help turn the vision into reality.
This Strategy is subject to periodic review to ensure that it is in line with national measures. The reviews ensure that the strategy remains in line with current national thinking, and they will be no more than five years apart.

Why do we need a Local Air Quality Strategy?

The Air Quality Strategy is identified in the Hull Air Quality Action Plan (AQAP) as key to improving local air quality.

The health effects of air pollutants are shown in appendix three, where it can be seen that poor air quality is linked to respiratory illness, heart disease and asthma. The 2007 UK Air Quality Strategy (AQS) estimated that based on air quality data from 2005, manmade PM2.5 alone reduced the average life expectancy of people living in the UK by 7-8 months (rising to a reduction of 8 or 9 years in pollution hotspots). It is estimated the cost of medical intervention which is necessary as a result of poor air quality is £18 billion. *(Ref Air Quality Action in a changing climate DEFRA March 2010*).

Air quality problems reduce the life expectancy of over 50,000 people per year in the UK, which equates to over 200 people in Hull. This is more than obesity, passive smoking or traffic accidents and the governments Environmental Audit Committee has called for the UK government to make air quality a much higher priority. This will increase during heatwaves as increased temperatures exacerbate the impacts of air pollutants and the vulnerability of those with pre-existing breathing illnesses. *(Air Quality Action in a changing climate DEFRA March 2010).*

Hull has a relatively high rate of respiratory diseases, and has the 5th highest premature (under 75) death rate from Respiratory Diseases out of 149 English Upper Tier Local Authorities.

Air pollutants are closely linked with the emissions of other gases that cause serious harm to ecosystems and the environment, such as climate change gases. The reduction of air pollutants will be beneficial in terms of human health and will also benefit the wider environment.

This Air Quality Strategy delivers a number of benefits. It will:

• Emphasises the Council's role in delivering cleaner air.
• Helps us to tackle air quality in a holistic way.
• Helps us to build partnerships with business and the community and with other authorities to achieve cleaner air within Hull.
• Provides a common framework for the use of Council services and partners.
• Builds for the future by enabling economic regeneration to take place which recognises air quality as a major consideration at an early stage.
• Highlights the reasons for tackling poor air quality i.e. the link with quality of life, health and climate change.
• Raises the profile of air quality within the City.
• Forges links with other initiatives and plans.
• Encourages partnership working, with volunteer, public and private sector, as well as individual members of the public.

The Primary Aim of the Air Quality Strategy

To improve the quality of air for the people of Hull and to provide the framework with which to enable the improvement of air quality in Hull, in line with both National Air Quality Standards and the principles of best practice .

Aims

1 To lead by example by minimising the environmental impact of Council activities.

2 To ensure the air quality and climate change impact of development within the district is minimised and, wherever possible, helps to improve local air quality.

3 To minimise and control polluting emissions from industrial, transport and other sources by working with business, residents and other stakeholders.

General and Policy Context.

Legislative Approach.

In the early 1990's the Department of the Environment investigated the need for a new framework for air quality control. This resulted in The Environment Act 1995, with Part IV of the Act establishing the need for the development of a National Air Quality strategy, promoting an integrated approach to air quality management by the various local authorities and agencies involved.

The National Air Quality Strategy establishes the framework for air quality improvements. It is recognised that despite National and International measures, areas of poor air quality

will remain, and that these areas are best dealt with using local measures implemented through the local air quality management (LAQM) regime.

Under Part IV of the Environment Act 1995, local authorities were required to review and assess the current, and likely future air quality in their areas. Within this procedure, local authorities consulted internally, as well as consulting with external agencies. The role of the local authority review and assessment is to identify those areas, where it is considered likely that the Air Quality Objectives will be exceeded.

If a local authority finds any places where the objectives are not likely to be achieved, it must declare an Air Quality Management Area. This area could be just one or two streets, or it could be much bigger. The local authority will put together an Air Quality Action Plan to improve the air quality

Future Legislative Approach

In June 2016, people in the UK took part in a referendum which asked “Should the United Kingdom remain a member of the European Union or leave the European Union?” and the outcome was that 48% of voters indicated that they preferred to remain in the EU and 52% of voters chose to leave.

The exact nature of what happens next is still to be determined, and there is liable to be some impact on legislation. It is not felt that this will alter the general principle of this strategy in its aim of minimising impact on the environment and improving local air quality, which are ideals that are held irrespective of the legal requirements.

As can be seen in Appendix two, the air quality in Kingston upon Hull is generally very good across most areas of the City. The main exception is stretches of the A63 heading into the City from the west. This area was declared as an Air Quality Management Area in August 2005.

This strategy engages with commitments made in the following plans and strategies:

Hull Air Quality Action Plan.
Hull Local Transport Plan
Hull Climate Change Strategy
Air Quality Strategy for England, Scotland, Wales and Northern Ireland
Hull Housing Strategy
Joint Strategic Needs Assessment
Hull Health and Well Being Strategy
City Plan

Strategic Economic Plan

The aims in this Strategy are consistent with those Plans and Strategies and sets out the framework through which we will work collaboratively to address air pollution issues and secure sustainable improvements in local air quality. The strategy will look at ways of supporting trade and industry, including that associated with the Port, yet at the same time ensuring that any air quality impacts are mitigated against.

This Strategy and associated Local Air Quality Action Plan contributes to the following corporate aims of Kingston upon Hull City Council:

UK Energy City
As the city at the heart of the UK's biggest port complex and home to one of Europe's most advanced wind turbine blade manufacturing plants, Hull is on its way to becoming a leading hub for renewable energy industries.

Destination Hull
The city's proud heritage, its role as UK City of Culture 2017 and the multi-million pound investments now being delivered in our cultural and tourism infrastructure, are major steps towards realising Hull's long-term ambition to become a world-class visitor destination.

Community & Opportunity
Hull aims to be a place of opportunity for all, as highlighted by three City Plan ambitions designed to build strong, resilient communities by focusing on:
-safeguarding the most vulnerable
-prevention and early intervention
-making money go further.

Annual Status Report (ASR)

Each year, DEFRA require local authorities to produce an Annual Status Report (ASR) on air quality. Within the ASR, Local Authorities are required to detail progress in improving air quality on a number of EU categories which are detailed in the tables associated with each Aim.

To facilitate this, part of the Hull City Council Air Quality Strategy is to assign these categories to the relevant departments, so that a more detailed response can be provided, thus forming part of the strategy as well as formulating the ASR.

Categories of the ASR have been used along with the additional categories highlighted as a result of the air quality workshop.

The breakdown and areas of responsibility are shown on pages 2o to 43.. It can be seen that some categories are assigned to more than one department. In such cases, the departments will work together to complete the submission which will be submitted by the Air Quality Officer (AQO). It will also be the case that some departments are not named, but have, or may want an input into a category. In those cases, any inter-departmental cooperation is to be fully encouraged.

How We Produced an Air Quality Strategy for Hull.

Representatives from a number of areas of the Council met for a workshop to discuss what impact the Council has and could have on air quality, both locally and globally, and how we could reduce our impact in order to improve air quality in the City and surrounding area. The resultant actions included producing an air quality strategy as a way of moving this forward.

The aim is to lead by example, so that we are better placed and informed to spread the message to the wider community, take on their thoughts and opinions, and work towards building a greener Hull.

Each area of the council looks at its own activities, knowledge and existing good practice and considers where we can improve. These suggestions form a key element in the strategy, and are be monitored for progress, and to determine where support can be given or changes made. The details and progress are shared across the Council so that others have the opportunity to learn from the shared experience.

The actual returns from the workshop are shown in Appendix Four

Summary

Whilst air quality in Hull is generally good for a City of its size, the Council's Review and Assessment of local air quality did show that road traffic emissions lead to an exceedance of the annual mean objective for nitrogen dioxide in an area around the A63 Trunk Road. At the worst affected location a reduction in 5µg/m3 is required in order to comply with this objective.

As well as concentrating efforts around the area that exceeds the AQO, areas that are currently below the objective also need to be continually monitored to ensure that pollution levels do not increase.

This requires a strategic approach in order to ensure that the Authority is meeting its obligations to local air quality and the environment, and that it can demonstrate its commitment to continue to do so. It must also have due consideration to the needs of business and commerce, and the activities of the port and associated industries.

This strategy is produced to help achieve that.

AIR QUALITY STRATEGY

The Air Quality Strategy for Kingston upon Hull

The following pages form the basis of the Air Quality Strategy for Kingston upon Hull. It is designed to be a living document, updated on an ongoing basis as measures are considered, developed and hopefully implemented.

It consists of three aims, which focus the measures that will be included in the Annual Status Report (ASR) that Local Authorities are required to submit to Defra.

In completing the tables for the ASR, it gives a clear indication of the measures Kingston upon Hull City Council are considering or implementing in order to protect the health of residents and visitors to the City and in helping the UK Government meet its obligations Under the Environment Act 1995.

Aim One

1 To lead by example by minimising the environmental impact of Council activities

Council activities impact the environment in many different ways. The aim of this strategy is to look at ways that these impacts can be minimised, or better still replaced with actions that will benefit the environment, and demonstrate how the Council is leading by example.

It is expected that in doing this, it will have a knock on effect, as suppliers should demonstrate that their goods and services minimise their environmental impact, plus it should help demonstrate how the policies can work in a practical way.

The tables in Appendix four show the measures that have been suggested from the previously mentioned workshop.

Every department has a responsibility to review their activities to demonstrate that they are complying with this Aim.

Specific responsibilities and actions for each department are shown in pages 21 - 45.

To meet this aim, the Council will be reviewing its operations and looking in detail to ask;

- Does the activity need to be carried out all?
- Can it be done in a more environmentally friendly way?
- If not, is there a way the impact can be offset elsewhere?

Without prejudging any review, it's unlikely that many of the Council's current activities will be found to be unnecessary, so the majority of outcomes will fall into the second category, and the third category will be investigated in its own right.

Measures in the second category are largely emission reduction measures, such as lower emission fuels and equipment. This will be both in the way that they are used by the Authority, but also during production of the equipment and provision of externally provided services, using procurement policies.

A review of working practices and delivery and service plans could result in the need for fewer journeys by vehicles, and alternative modes of transport may well become more viable. Where the journeys are needed, the vehicle will be greener transport, and used in a less environmentally damaging way.

It will also mean that situations like those at schools and business centres, where there is the need for a large number of people to travel, a robust travel plan will be created to consider alternative modes, plus ensuring that any vehicles used cause the minimum harm to the environment.

The plan not only relates to pupils and their parents, but to staff as well, where information and support can be given to encourage greener choices for personal travel. This includes consideration for widening the opportunity to undertake ECO driving schemes or benefit from any retrofitting programmes and personal travel planning including walking and cycling schemes.

There is already a lot of excellent work being carried out by the Councils Fleet Management Unit, and this Strategy will support the existing work and help it to progress even further.

The departments will meet twice a year and that will improve interdepartmental working on common strategic aims and encourage an outcome focused approach.

Each department will report back to Environmental Health annually using the forms on pages 21 to 45, and that will inform the Annual Service Report required by Central Government.

Partnership working will need to be a key component, and existing links with groups such as Friends of the Earth, the Environment Agency, Highways England and Hull and Goole Port Health Authority will be maintained and expanded in order to support the drive for a healthier environment both locally and globally.
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This will help ensure that the Council is demonstrating that it is leading by example, and acting in the way it advocates for others in the area.

Aim two.

To ensure the air quality and climate change impact of development within the district is minimised and, wherever possible, helps to improve local air quality.

As a local authority, we deal with a wide number of issues, many of which have their own specific policies. It is proposed to look to include air quality and measures to protect the environment within those policies, and any other working practices.
The strategy will also look to ensure that air quality and the environment are a material consideration in council activities.

The tables in Appendix Four show the measures that have been suggested from the previously mentioned workshop.

Every department has a responsibility to review their activities to demonstrate that they are complying with this Aim.

Specific responsibilities and actions for each department are shown in pages 121 - 45.

Industry and commerce also have a very important contribution to make to this strategy. Initially, this strategy is aimed at the local authority, but it is expected that it will be expanded in time and used as an example of how organisations of varying sizes can make a contribution to a cleaner environment. We know that there are a large number of businesses that already take their environmental responsibilities very seriously, and they take pride in their achievements. It's felt that recognising that will help to promote it even further, and enable a way of sharing the best practice that so many businesses have worked hard to develop, so that we and others can learn from their experience.

Much of the work to achieve this Aim will be focussed around other strategies and policies, such as an Air Quality, Planning and Development Control Policy. A major aim will be to focus on outcomes and the achievement of improved air quality in areas where air quality does not meet standards. To maintain and protect air quality where it is currently good, and to work collaboratively with others who have similar concerns and aims in order to design improvement schemes that meet the requirements of the community they serve.

An advantage of the strategic approach is that it will improve interdepartmental working on common strategic aims with an outcome focussed approach, and should provide for a more efficient use of resources.

Other examples of measures that would be utilised to achieve the Aim include direct air quality activities such as a Low Emission Strategy or Clean Air Zone, The Local Travel Plan and also Strategic Planning and Development Guidance, which would also include Travel Plans, and a Parking Policy. There are also direct links between air quality and health and cycling and walking schemes.

Other policies have been listed on page 8 of this strategy, and include the Hull Health and Wellbeing Policy and the Housing Strategy.

The departments will meet twice a year and that will improve interdepartmental working on

common strategic aims and encourage an outcome focused approach.

Each department will report back to Environmental Health annually using the forms in pages 21 to 45, and that will inform the Annual Service Report required by Central Government.

Partnership working will need to be a key component, and existing links with groups such as Friends of the Earth, the Environment Agency, Highways England and Hull and Goole Port Health Authority will be maintained and expanded in order to support the drive for a healthier environment both locally and globally.

Aim three.

To minimise and control polluting emissions from industrial, transport and other sources by working with business, residents and other stakeholders.

The tables in Appendix Four show the measures that have been suggested from the previously mentioned workshop.

Every department has a responsibility to review their activities to demonstrate that they are complying with this Aim.

Specific responsibilities and actions for each department are shown in Pages 21 - 45.

The Council has control over its direct activities, but there are a number of areas that the Council has responsibility, but the activities of those outside the direct sphere will have a significant contribution.

Many of these measures will be driven by legislation, such as industrial processes that are covered by the Environmental Protection Act which includes the need to add sustainability to certain processes. Others will be driven by policies, such as the Local Transport Plan.

Planning and Development Control activities will also contribute to achieving this Aim, as the policies should include elements such as controlling deliveries, including the times for offloading on streets that may contribute to congestion.

Low Emissions Zones and Clean Air Zones are seen as a key factor in improving air quality. The Council are looking at schemes that go beyond just limiting certain classes of vehicle and encourage wider air quality innovations within and around the designated zones.

To ensure that any Clean Air Zones are consistent with national policy and other regions of the Country, and that they utilise best practice learned from the experience of others, they will be discussed with regional groups, such as the Yorkshire and Lincolnshire Pollution Advisory Group (YALPAG) and the views of environmental groups, such as Friends of the Earth and Client Earth will be actively sought.

The Council is also in a position to work with key groups to reduce the emissions from other transport groups, such as taxis, buses and trains. The aim should not be to simply reduce the direct emissions, but to create a policy that enables cleaner fuels and better route planning options.

To compliment national initiatives on emission controls, strategic highway improvements, such as Urban Traffic Control (UTC) schemes, re-prioritising road space away from cars, access management and priority lanes will be investigated, and applied where appropriate.

The Council will also investigate opportunities for collaborative working, such as Freight Partnerships and Consolidation centres and strategic routes for HGV's.

The departments will meet twice a year and that will improve interdepartmental working on

common strategic aims and encourage an outcome focused approach.

Each department will report back to Environmental Health annually using the forms in 21 to 45, and information will be fed in to the Annual Service Report required by Central Government.

Partnership working will need to be a key component, and existing links with groups such as Friends of the Earth, the Environment Agency, Highways England and Hull and Goole Port Health Authority will be maintained and expanded in order to support the drive for a healthier environment both locally and globally.

Progress Planning and Monitoring.

The following pages show tables detailing the areas that each Department will be responsible for completing and returning to the Air Quality Officer for submission to Defra as part of the Annual Status Report (ASR).

This strategy will provide a record of how these measures relate to the aims:

1 To lead by example by minimising the environmental impact of Council activities.

2 To ensure the air quality and climate change impact of development within the district is minimised and, wherever possible, helps to improve local air quality.

3 To minimise and control polluting emissions from industrial, transport and other sources by working with business, residents and other stakeholders.

Table 7: Progress on Measures to Improve Air Quality for Environmental Health

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
3	Permitted processes	Environmental Permits	Introduction/increase of environment charges through permit systems and economic instruments	Environmental Health / DEFRA	Complete	On going	payments received	Supporting general background improvements .	on going	on going	National regulation
4		Environmental Permits	Introduction/increase of environmental funding through permit systems and economic instruments	Environmental Health / DEFRA	Complete	On going	payments received	Supporting general background improvements .	on going	on going	National regulation
5		Environmental Permits	Large Combustion Plant Permits and National Plans going beyond BAT	Environmental Health / DEFRA	Complete	On going	conditions included	Supporting general background improvements .	on going	on going	Achieved via planning conditions and consultation with EA
6		Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	Environmental Health / DEFRA	Complete	On going	conditions included	Supporting general background improvements .	on going	on going	
7		Environmental Permits	Other measure through permit systems and economic instruments	Environmental Health / DEFRA							None currently.

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
8		Environmental Permits	Tradable permit system through permit systems and economic instruments	Environmental Health / DEFRA							None currently.
12		Freight and Delivery Management	Quiet & out of hours delivery	Planning - EH - Major Projects	On going	On going	schemes approved	Supporting general background improvements.	on going	on going	Achieved via planning conditions
14		Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Planning + EH	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Completed	2018	Recognised in Local Plan.
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral w ith the Air Quality Strategy
16		Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area w ide Strategies to reduce emissions and improve air quality	EH + YALPAC	On going	On going	On going	Supporting general background improvements.	on going	on going	
17		Policy Guidance and Development Control	Sustainable Procurement Guidance	Procurement +EH	Information Gathering	2018	Production and acceptance of Guidance	Supporting general background improvements.	on going	2018	
18		Promoting Low Emission Plant	Emission control equipment for small and medium sized stationary combustion sources / replacement of combustion sources	EH - Planning - DEFRA	Current	On going	Conditions applied to sources	Supporting general background improvements.	Various options considered and being investigated.	on going	Revised legislation and guidance pending.

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
19		Promoting Low Emission Plant	Low Emission Fuels for stationary and mobile sources in Public Procurement	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various options considered and being investigated.	On going	Current green fuel ethos of fleet management to be supported with procurement guidance
20		Promoting Low Emission Plant	Other measure for low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	Various options considered and being investigated.	on going	Fleet management have on going practice of investigating cleaner technology
21		Promoting Low Emission Plant	Public Procurement of stationary combustion sources	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology
22		Promoting Low Emission Plant	Regulations for fuel quality for low emission fuels for stationary and mobile sources	EH + Trading Standards	Current	Current	Tighter regulation	Supporting general background improvements.	on going	on going	Local Authority supportive of national measures.
23		Promoting Low Emission Plant	Shift to installations using low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology. Procurement Strategy will contribute.
25		Promoting Low Emission Transport	Low Emission Zone (LEZ) ie Fruit Market Area.	EH -Highways - Planners - Transport policy - Climate Change Manager - Major Projects	Commenced	On going	Designation of defined area	Supporting general background improvements.	On going. Initial groups and contacts generated, and some trial projects initiated.	2018	Good relationship with Friends of eth Earth and other community groups developed, with regular meetings and drivers for action.
26		Promoting Low Emission Transport	Priority parking for LEV's	EH -Highways - Planners - Transport policy - Parking - Major Projects	Commenced	On going	Schemes approved	Supporting general background improvements.	On going.	On going	Integral with the Air Quality Strategy

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
27		Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	EH - York	Under review	tbc	schemes approved	Supporting general background improvements	Discussion stage	tbc	
29		Promoting Low Emission Transport	Taxi emission incentives	EH + licensing	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements	Various initiatives investigated and reviewed. Licensing Policy reviewed and to be ammened to include more air quality measures in next release.	on going	Fleet management have on going practice of investigating cleaner technology. The Council have purchased 9 electric vehicles in 2016/17 and 2017/18 and installed three new charge points for fleet vehicles in 2017. We have plans in place to increase the number of fleet vehicles as diesel lease vehicles come up for renewal as well as increase fleet and staff accessible charge points over the remainder of 2017/18
34		Promoting Travel Alternatives	Promote use of rail and inland waterways	EH	Under review	On going	schemes approved	Supporting general background improvements	On going. Working groups formed under City Manager Leadership	tbc	
44		Traffic Management	Anti-idling enforcement	EP	Under review	tbc	schemes approved	Supporting general background improvements	Discussion stage	tbc	Consideration given to practicality and locations
49		Traffic Management	Testing Vehicle Emissions	EH	On going	On going	tests carried out	Supporting general background improvements	On going	on going	EH attends spot checks with VOSA, but this has not happened recently due to resources/priorities
58		Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	EP - Licensing	Under review	2018	Campaigns initiated	Supporting general background improvements	Information gathering	2018	Integral with the Air Quality Strategy

Table 8: Progress on Measures to Improve Air Quality for Highways

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
2	Dunsw ell Park & Ride	Alternatives to private vehicle use	Bus based Park & Ride	Highw ays	Under review	tbc	Designation of site	Supporting general background improvements.	Discussions - Further partnership w ith Highw ays England	tbc	Various sites considered and progressed, but some matters outstanding.
13		Freight and Delivery Management	Route Management Plans/ Strategic routing strategy for HGV's	Planning - Highw ays - Transport Policy - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically review ed.	On going	Considered as general strategy and through planning applications
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral w ith the Air Quality Strategy
25		Promoting Low Emission Transport	Low Emission Zone (LEZ) ie Fruit Market Area.	EH -Highw ays - Planners - Transport policy - Climate Change Manager - Major Projects	Commenced	On going	Designation of defined area	Supporting general background improvements.	On going. Initial groups and contacts generated, and some trial projects initiated.	2018	Good relationship w ith Friends of the Earth and other community groups developed, w ith regular meetings and drivers for action.

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
26		Promoting Low Emission Transport	Priority parking for LEV's	EH -Highw ays - Planners - Transport policy - Parking - Major Projects	Commenced	On going	Schemes approved	Supporting general background improvements.	On going.	On going	Integral w ith the Air Quality Strategy
38		Promoting Travel Alternatives	Workplace Travel Planning	Highw ays - Transport Policy	Under review	tbc	schemes approved	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	tbc	Integral w ith the Air Quality Strategy
46		Traffic Management	Reduction of speed limits, 20mph zones	Highw ays - Transport Policy	On going	Current	Zones created	Supporting general background improvements.	On going	On going	Many zones already created. Additional zones considered.
47		Traffic Management	Road User Charging (RUC)/ Congestion charging	Highw ays - Transport Policy	Considered	N/A	Zones created	Location dependant	Considered	N/A	Other measures being investigated and applied first.

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
48		Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Highways - Transport Policy - Parking - Major Projects	On going	On going	Changes made	Location dependent	On going	On going	Schemes are under routine review. Feasibility study into suitability of AQ monitors to support traffic flows underway.
50	A63 Improvements	Traffic Management	UTC, Congestion management, traffic reduction	Highways England	On going	On going	Changes made	AQMA Revoked	On going	On going	Two improvement Schemes currently being progressed by Highways England namely: - A63 Castle Street Improvement - Development Consent Order to be submitted in summer 2018. Start of Construction 2020. Funding confirmed subject to progressing through all procedures and still being 'Value for Money' - A63 Garrison Roundabout Improvement - Funding confirmed - scheme to be implemented by 2020.

Table9: Progress on Measures to Improve Air Quality for Fleet Management

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
9		Freight and Delivery Management	Delivery and Service plans	Fleet - Major Projects	On going	On going	Plans requested	Supporting general background improvements.	On going and periodically review ed.	On going	Considered as general strategy and through planning applications
10		Freight and Delivery Management	Freight Consolidation Centre	Fleet - Planners - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically review ed.	On going	Considered as general strategy and through planning applications
11		Freight and Delivery Management	Freight Partnerships for city centre deliveries	Fleet - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically review ed.	On going	Considered as general strategy and through planning applications
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral w ith the Air Quality Strategy
19		Promoting Low Emission Plant	Low Emission Fuels for stationary and mobile sources in Public Procurement	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various options considered and being investigated .	On going	Current green fuel ethos of fleet management to be supported w ith procurement guidance
20		Promoting Low Emission Plant	Other measure for low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	Various options considered and being investigated .	on going	Fleet management have on going practice of investigating cleaner technology

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
21		Promoting Low Emission Plant	Public Procurement of stationary combustion sources	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology
23		Promoting Low Emission Plant	Shift to installations using low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology. Procurement Strategy will contribute.
24		Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	Fleet - procurement - Climate Change manager	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various initiatives considered and investigated.	on going	Fleet management have on going practice of investigating cleaner technology. The Council have purchased 9 electric vehicles in 2016/17 and 2017/18 and installed three new charge points for fleet vehicles in 2017. We have plans in place to increase the number of fleet vehicles as diesel lease vehicles come up for renewal as well as increase fleet and staff accessible charge points over the remainder of 2017/18

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
28		Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	Fleet - Climate Change advisor	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	On going	On going	Current green fuel ethos of fleet management to be supported with procurement guidance. Take up supported and encouraged through the provision of publicly accessible charge points. For example Osbourne Street car park once completed will have 6 public accessible charge points and we are also looking to install some in George Street and Pryme Street in 2017/18.
56		Vehicle Fleet Efficiency	Driver training and ECO driving aids	Fleet management	Under review	On going	Training given	Supporting general background improvements.	On going	tbc	Integral with the Air Quality Strategy
57		Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	Fleet management	On going	On going	schemes approved	Supporting general background improvements.	On going	On going	Fleet Management have a good record of achieving various eco scheme awards.
59		Vehicle Fleet Efficiency	Testing Vehicle Emissions	Fleet management	On going	On Going	Vehicles tested	Supporting general background improvements.	On going	On going	Fleet vehicles are routinely tested, consideration is being given to extending this to the 'grey' fleet.
60		Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	Fleet management	On going	On going	Retrofits applied	Supporting general background improvements.	On going	On going	Fleet management have a good record of adopting schemes, and are looking for finance for further opportunities.

Table 10: Progress on Measures to Improve Air Quality for Transport Policy

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
13		Freight and Delivery Management	Route Management Plans/ Strategic routing strategy for HGV's	Planning - Highways - Transport Policy - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically reviewed.	On going	Considered as general strategy and through planning applications
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
25		Promoting Low Emission Transport	Low Emission Zone (LEZ) ie Fruit Market Area.	EH -Highways - Planners - Transport policy - Climate Change Manager - Major Projects	Commenced	On going	Designation of defined area	Supporting general background improvements.	On going. Initial groups and contacts generated, and some trial projects initiated.	2018	Good relationship with Friends of eth Earth and other community groups developed, with regular meetings and drivers for action.
26		Promoting Low Emission Transport	Priority parking for LEV's	EH -Highways - Planners - Transport policy - Parking - Major Projects	Commenced	On going	Schemes approved	Supporting general background improvements.	On going.	On going	Integral with the Air Quality Strategy

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
48		Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Highways - Transport Policy - Parking - Major Projects	On going	On going	Changes made	Location dependent	On going	On going	Schemes are under routine review. Feasibility study into suitability of AQ monitors to support traffic flows underway.
50	A63 Improvements	Traffic Management	UTC, Congestion management, traffic reduction	Highways England	On going	On going	Changes made	AQMA Revoked	On going	On going	Two improvement Schemes currently being progressed by Highways England namely: - A63 Castle Street Improvement - Development Consent Order to be submitted in summer 2018. Start of Construction 2020. Funding confirmed subject to progressing through all procedures and still being 'Value for Money' - A63 Garrison Roundabout Improvement - Funding confirmed - scheme to be implemented by 2020.

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
50a		Traffic Management	UTC, Congestion management, traffic reduction	Highways - Transport Policy	On going	On going	Changes made	Location dependent	On going	On going	SCOOT System is currently being upgraded to provide improved system flexibility and performance.Feasibility study into suitability of AQ monitors to support traffic flows underway.
51		Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	Planners - Major Projects - Parking	Under review	tbc	schemes approved	Supporting general background improvements.	Discussion stage	tbc	Feasibility Integral with the Air Quality Strategy
52		Transport Planning and Infrastructure	Bus route improvements	Transport Policy	On going	On going	Changes made	Location dependent	On going	On going	Bus boarders are being introduced at various locations within the City to help encourage bus travel
55		Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	Transport Policy	On going	On going	Changes made	Location dependent	On going	On going	New toilets and waiting area provided within Paragon Interchange to improve passenger experience of rail travel

Table 11: Progress on Measures to Improve Air Quality for Planning

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
10		Freight and Delivery Management	Freight Consolidation Centre	Fleet - Planners - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically review ed.	On going	Considered as general strategy and through planning applications
12		Freight and Delivery Management	Quiet & out of hours delivery	Planning - EH - Major Projects	On going	On going	schemes approved	Supporting general background improvements.	on going	on going	Achieved via planning conditions
13		Freight and Delivery Management	Route Management Plans/ Strategic routing strategy for HGV's	Planning - Highw ays - Transport Policy - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically review ed.	On going	Considered as general strategy and through planning applications
14		Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Planning + EH	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Completed	2018	Recognised in Local Plan.
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral w ith the Air Quality Strategy

Table 12: Progress on Measures to Improve Air Quality for Sustainable Travel

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
32		Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	healthy lifestyles + sustainable travel officer	On going	On going	Campaigns initiated	Supporting general background improvements.	On going	On going	Integral with the Air Quality Strategy
33		Promoting Travel Alternatives	Personalised Travel Planning	healthy lifestyles + sustainable travel officer	On going	On going	Plans initiated	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	On going	Integral with the Air Quality Strategy
35		Promoting Travel Alternatives	Promotion of cycling	healthy lifestyles + sustainable travel officer	On going	On going	Campaigns initiated	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	On going	Integral with the Air Quality Strategy
36		Promoting Travel Alternatives	Promotion of walking	healthy lifestyles + sustainable travel officer	On going	On going	Campaigns initiated	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	On going	Integral with the Air Quality Strategy
53		Transport Planning and Infrastructure	Cycle network	Sustainable travel officer	On going	On going	Network improvements	Supporting general background improvements.	On going	On going	New toilets and waiting area provided within Paragon Interchange to improve passenger experience of rail travel
54		Transport Planning and Infrastructure	Public cycle hire scheme	Sustainable travel officer	Under review	tbc	Schemes initiated	Supporting general background improvements.	Information gathered	tbc	

Table 13: Progress on Measures to Improve Air Quality for Media Relations

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
39		Public Information	Via leaflets	Media Relations	Under review	2018	Campaigns initiated	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy. Consolidation of Smoke Control Areas to be used as a method of raising awareness.
40		Public Information	Via other mechanisms	Media Relations	Under review	2018	Campaigns initiated	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
41		Public Information	Via radio	Media Relations	Under review	2018	Campaigns initiated	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
42		Public Information	Via television	Media Relations	Under review	2018	Campaigns initiated	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
43		Public Information	Via the Internet	Media Relations	Under review	2018	Campaigns initiated	Supporting general background improvements.	Information gathering	2018	

Table 14: Progress on Measures to Improve Air Quality for Licensing

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
29		Promoting Low Emission Transport	Taxi emission incentives	EH + licensing	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various initiatives investigated and reviewed. Licensing Policy reviewed and to be ammened to include more air quality measures in next release.	on going	Fleet management have on going practice of investigating cleaner technology. The Council have purchased 9 electric vehicles in 2016/17 and 2017/18 and installed three new charge points for fleet vehicles in 2017. We have plans in place to increase the number of fleet vehicles as diesel lease vehicles come up for renewal as well as increase fleet and staff accessible charge points over the remainder of 2017/18
58		Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	EP - Licensing	Under review	2018	Campaigns initiated	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy

Table 15: Progress on Measures to Improve Air Quality for Procurement

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
17		Policy Guidance and Development Control	Sustainable Procurement Guidance	Procurement +EH	Information Gathering	2018	Production and acceptance of Guidance	Supporting general background improvements.	on going	2018	
19		Promoting Low Emission Plant	Low Emission Fuels for stationary and mobile sources in Public Procurement	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various options considered and being investigated.	On going	Current green fuel ethos of fleet management to be supported with procurement guidance
20		Promoting Low Emission Plant	Other measure for low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	Various options considered and being investigated.	on going	Fleet management have on going practice of investigating cleaner technology
21		Promoting Low Emission Plant	Public Procurement of stationary combustion sources	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology
23		Promoting Low Emission Plant	Shift to installations using low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology. Procurement Strategy will contribute.
24		Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	Fleet - procurement - Climate Change manager	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various initiatives considered and investigated.	on going	Fleet management have on going practice of investigating cleaner technology. The Council have purchased 9 electric vehicles in 2016/17 and 2017/18 and installed three new charge points for fleet vehicles in 2017. We have plans in place to increase the number of fleet vehicles as diesel lease vehicles come up for renewal as well as increase fleet and staff accessible charge points over the remainder of 2017/18

Table 16: Progress on Measures to Improve Air Quality for Healthy Lifestyles											
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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
32		Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	healthy lifestyles + sustainable travel officer	On going	On going	Campaigns initiated	Supporting general background improvements.	On going	On going	Integral with the Air Quality Strategy
33		Promoting Travel Alternatives	Personalised Travel Planning	healthy lifestyles + sustainable travel officer	On going	On going	Plans initiated	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	On going	Integral with the Air Quality Strategy
35		Promoting Travel Alternatives	Promotion of cycling	healthy lifestyles + sustainable travel officer	On going	On going	Campaigns initiated	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	On going	Integral with the Air Quality Strategy
36		Promoting Travel Alternatives	Promotion of walking	healthy lifestyles + sustainable travel officer	On going	On going	Campaigns initiated	Supporting general background improvements.	On going. Working groups formed under City Manager Leadership.	On going	Integral with the Air Quality Strategy

Table 17: Progress on Measures to Improve Air Quality for Regeneration

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
19		Promoting Low Emission Plant	Low Emission Fuels for stationary and mobile sources in Public Procurement	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various options considered and being investigated.	On going	Current green fuel ethos of fleet management to be supported with procurement guidance
20		Promoting Low Emission Plant	Other measure for low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	Various options considered and being investigated.	on going	Fleet management have on going practice of investigating cleaner technology
21		Promoting Low Emission Plant	Public Procurement of stationary combustion sources	Fleet - EH - Procurement - regen	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology
23		Promoting Low Emission Plant	Shift to installations using low emission fuels for stationary and mobile sources	Fleet - EH - Procurement - regen	Current	On going	Other measures applied	Supporting general background improvements.	on going	on going	Fleet management have on going practice of investigating cleaner technology. Procurement Strategy will contribute.

Table 18: Progress on Measures to Improve Air Quality for Climate Change

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
24		Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	Fleet - procurement - Climate Change manager	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	Various initiatives considered and investigated.	on going	Fleet management have on going practice of investigating cleaner technology. The Council have purchased 9 electric vehicles in 2016/17 and 2017/18 and installed three new charge points for fleet vehicles in 2017. We have plans in place to increase the number of fleet vehicles as diesel lease vehicles come up for renewal as well as increase fleet and staff accessible charge points over the remainder of 2017/18
25		Promoting Low Emission Transport	Low Emission Zone (LEZ) ie Fruit Market Area.	EH -Highways - Planners - Transport policy - Climate Change Manager - Major Projects	Commenced	On going	Designation of defined area	Supporting general background improvements.	On going. Initial groups and contacts generated, and some trial projects initiated.	2018	Good relationship with Friends of eth Earth and other community groups developed, with regular meetings and drivers for action.
28		Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	Fleet - Climate Change advisor	Current	On going	Cleaner fuelled equipment purchased	Supporting general background improvements.	On going	On going	Current green fuel ethos of fleet management to be supported with procurement guidance. Take up supported and encouraged through the provision of publicly accessible charge points. For example Osbourne Street car park once completed will have 6 public accessible charge points and we are also looking to install some in George Street and Pryme Street in 2017/18.

Table 19: Progress on Measures to Improve Air Quality for Schools

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
37		Promoting Travel Alternatives	School Travel Plans	Schools - planning - Major Projects	Considered	tbc	schemes approved	Supporting general background improvements.	Discussion stage. Working groups formed under City Manager leadership.	tbc	Integral with the Air Quality Strategy

Table 20: Progress on Measures to Improve Air Quality for Trading Standards

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
22		Promoting Low Emission Plant	Regulations for fuel quality for low emission fuels for stationary and mobile sources	EH + Trading Standards	Current	Current	Tighter regulation	Supporting general background improvements.	on going	on going	Local Authority supportive of national measures.

Table 21: Progress on Measures to Improve Air Quality for Parking

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
26		Promoting Low Emission Transport	Priority parking for LEV's	EH -Highways - Planners - Transport policy - Parking - Major Projects	Commenced	On going	Schemes approved	Supporting general background improvements.	On going.	On going	Integral with the Air Quality Strategy
45		Traffic Management	Emission based parking or permit charges	Parking - Transport Policy	Considered	tbc	schemes approved	Supporting general background improvements.	Discussion stage	tbc	
48		Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Highways - Transport Policy - Parking - Major Projects	On going	On going	Changes made	Location dependent	On going	On going	Schemes are under routine review. Feasibility study into suitability of AQ monitors to support traffic flows underway.
51		Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	Planners - Major Projects - Parking	Under review	tbc	schemes approved	Supporting general background improvements.	Discussion stage	tbc	Feasibility Integral with the Air Quality Strategy

Table 22: Progress on Measures to Improve Air Quality for Major Projects

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
10		Freight and Delivery Management	Freight Consolidation Centre	Fleet - Planners - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically reviewed.	On going	Considered as general strategy and through planning applications
12		Freight and Delivery Management	Quiet & out of hours delivery	Planning - EH - Major Projects	On going	On going	schemes approved	Supporting general background improvements.	on going	on going	Achieved via planning conditions
13		Freight and Delivery Management	Route Management Plans/ Strategic routing strategy for HGV's	Planning - Highways - Transport Policy - Major Projects	Under review	On going	Centre's created	Supporting general background improvements.	On going and periodically reviewed.	On going	Considered as general strategy and through planning applications
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
25		Promoting Low Emission Transport	Low Emission Zone (LEZ) ie Fruit Market Area.	EH -Highways - Planners - Transport policy - Climate Change Manager - Major Projects	Commenced	On going	Designation of defined area	Supporting general background improvements.	On going. Initial groups and contacts generated, and some trial projects initiated.	2018	Good relationship with Friends of eth Earth and other community groups developed, with regular meetings and drivers for action.
37		Promoting Travel Alternatives	School Travel Plans	Schools - planning - Major Projects	Considered	tbc	schemes approved	Supporting general background improvements.	Discussion stage. Working groups formed under City Manager leadership.	tbc	Integral with the Air Quality Strategy
48		Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Highways - Transport Policy - Parking - Major Projects	On going	On going	Changes made	Location dependent	On going	On going	Schemes are under routine review. Feasibility study into suitability of AQ monitors to support traffic flows underway.
51		Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	Planners - Major Projects - Parking	Under review	tbc	schemes approved	Supporting general background improvements.	Discussion stage	tbc	Feasibility Integral with the Air Quality Strategy

Table 23: Progress on Measures to Improve Air Quality for Human Resources

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
15		Policy Guidance and Development Control	Low Emissions Strategy	EH and all other departments	On going	2018	Strategy produced and accepted	Supporting general background improvements.	Information gathering	2018	Integral with the Air Quality Strategy
31		Promoting Travel Alternatives	Encourage / Facilitate home-working	Human resources	Tbc	tbc	Uptake of home working	Supporting general background improvements.	tbc	tbc	
61		Alternatives to private vehicle use	Car & lift sharing schemes	Human resources	Under review	tbc	Schemes initiated	Supporting general background improvements.	Information gathering - Various initiatives investigated	tbc	Integral with the Air Quality Strategy
62		Alternatives to private vehicle use	Car Clubs	Human resources	Under review	tbc	Schemes initiated	Supporting general background improvements.	Information gathering	tbc	Integral with the Air Quality Strategy

APPENDICES

APPENDIX ONE

AIR QUALITY OBJECTIVES AND AIR QUALITY BANDINGS

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m^3	Running annual mean	31.12.2003
	5.00 µg/m^3	Annual mean	31.12.2010
1,3-Butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m^3	Annual mean	31.12.2004
	0.25 µg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m^3	Annual mean	31.12.2005
Particulate Matter (PM_{10}) (gravimetric)	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

DEFRA Air Pollution Information Bands

DEFRA publishes daily air quality bulletins. The information is published as Air Pollution Information Bands for five pollutants. These bandings are set for public information purposes and normally the “moderate” level is triggered when the short term objective levels for ozone, NO2, PM10 or SO2 are exceeded.

Pollution band and Health effect
numerical index

1-3 (LOW) Effects are unlikely to be noticed by people who know they are sensitive to air pollutants

4-6 (MODERATE) Mild effects are unlikely to require action, but sensitive people may notice them.

7-9 (HIGH) Sensitive people may notice significant effects, and may have to act to reduce or avoid them (for example, by reducing time spent outdoors). Asthmatics will find that their reliever inhaler should reverse the effects of pollution on their lungs.

10 (VERY HIGH) The effects of high levels of pollution on sensitive people may worsen when pollution becomes very high. Sensitive individuals are people who suffer from heart and lung diseases, including asthma, particularly if they are elderly.

These daily bulletins are available at
www.defra.gov.uk/environment/airquality/index.htm
and on Ceefax (pages 169, 410-417) also Teletext (page 106).

These bandings are also used by DEFRA to assess long-term trends in air quality for reporting against sustainability targets.

Hull City Council, reports on the number of days of poor air quality each year. This reflects DEFRA’s own reporting from the national air quality monitoring network.

APPENDIX TWO

Air Quality in Hull has been monitored for many years, and using a variety of techniques. Prior to the availability of more advanced analysers, this was largely done by measuring the discolouration of a filter or by determining levels from changes in acidity of bottles that had atmospheric air bubbled through them. There then followed the use of small tubes that were exposed to the atmosphere, and then sent for analysis to determine the changes to an impregnated gauze that they contained.

These 'diffusion tubes' are still used and are a cost effective method of getting trends in pollution levels over a wider area. We have around 50 tubes located at various points around the City that provide a monthly value for the levels of nitrogen dioxide.

Whilst the monthly results are useful for determining long term trends, they don't give an idea of shorter term peaks and troughs such as weekends or peak travel times. They are also limited in determining if we comply with the Hourly AQO for nitrogen dioxide.

The diffusion tubes are used as a screening tool and a method of validating modelled outputs. The modelled and tube results are then used to determine the most appropriate location for more sophisticated and consequently more expensive electronic, real time analysers are subject to rigorous quality control and assurance procedures, as is the data that is produced.

The number of the real time analysers has varied over the years. Defra currently operate two sites in the City, one on Holderness Road, and one that had previously been in the City Centre near what is now the BBC building, and is now located on Francis St, near Freetown Way.

Hull City Council currently operates its own site in the grounds of the Myton Centre on William St, adjacent to the A63.

Historically, Hull City Council have operated a number of stations, which we have moved around the City, in locations such as Holderness Rd near to East Park, the Mount Pleasant junction, Princes Rd roundabout, Stoneferry Primary School, National Avenue and locations near to West Street on Ferensway.

The Council also maintained a station at Marfleet Primary School on behalf of a third party.

These provide more refined data for gaseous pollutants such us the oxides of nitrogen, sulphur dioxide, ozone and carbon monoxide and also for particulate matter smaller than 10 microns, and also 2.5 microns.

As can be seen from Figures A2.1 and A2.2, as with previous years, the general trend in NO2 is downwards and the reduction more pronounced at the roadside than it was at background. This reduction is generally attributed to improvement in emissions from the vehicle fleet as older vehicles are replaced by newer, greener ones.

To keep the graph easier to read, rather than putting all results, sites were chosen to represent the overall trend, with Wetherby Close being a background site, Castle Street being within the AQMA and Anlaby Road and Spring Bank being typical of the busier arterial routes.

Reviewing the data shows that the exceedances are for the annual mean NO2 only and are primarily focused along the A63 and therefore within the existing AQMA. There are no exceedances of any short term objectives. The Overall trend continues to be a reduction in monitored values.

Figure A2.1 Trends in Annual Mean NO_2 Concentrations Measured at Automatic Monitoring Sites (µg/m^3)

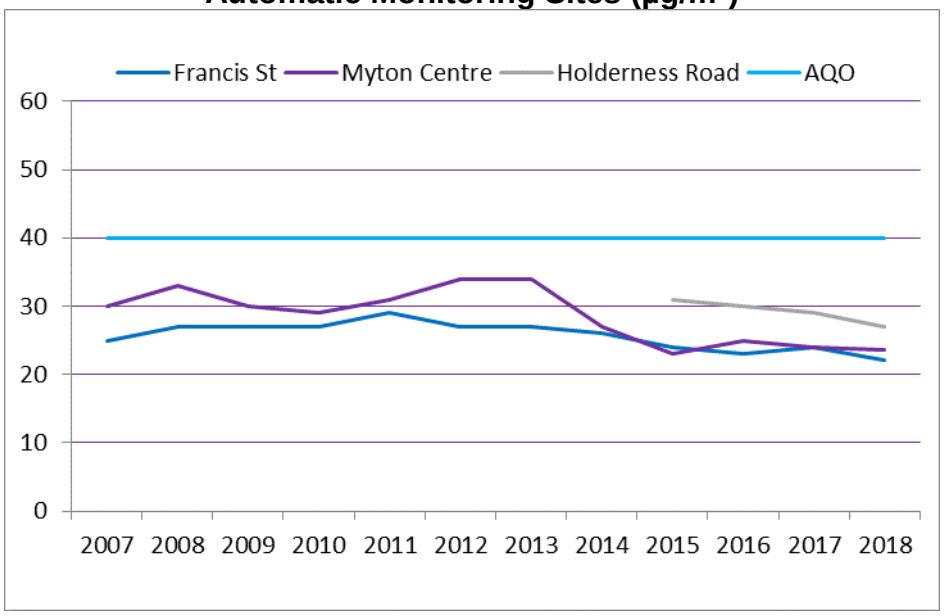
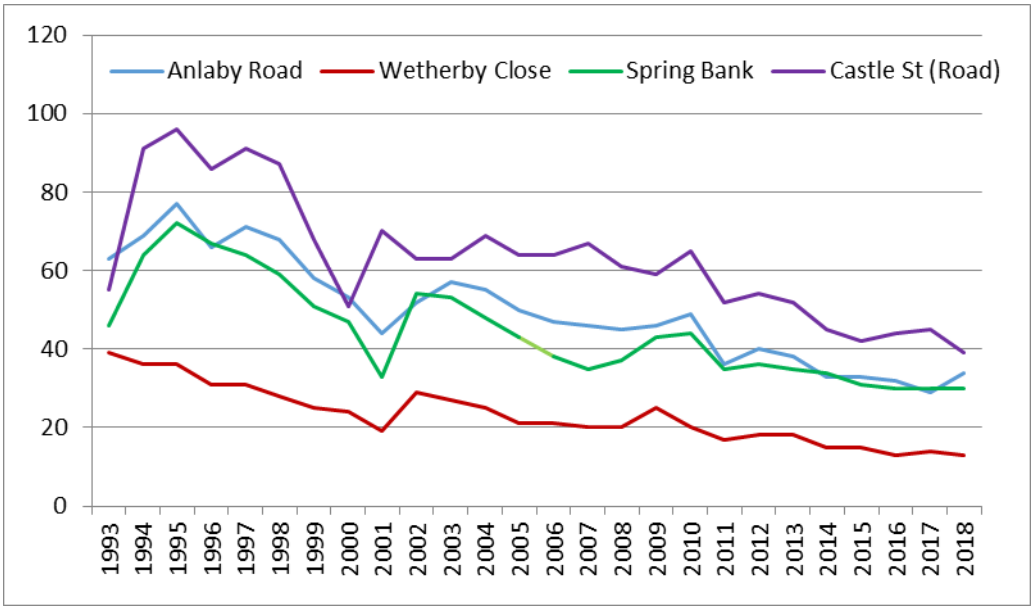


Figure A2.2 Annual average diffusion tube results. (µg/m^3)



APPENDIX THREE

Major air pollutants and their effects

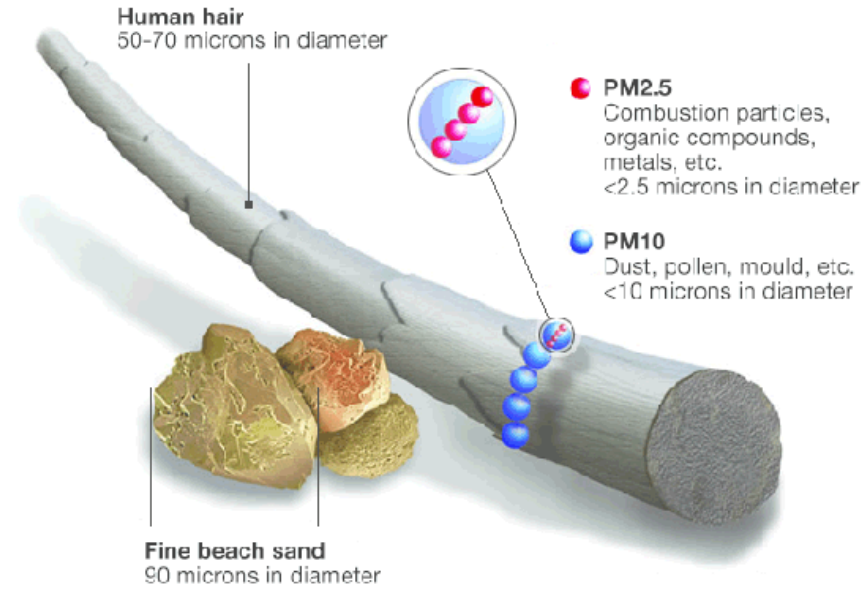
Nitrogen dioxide (NO2)

The principal source of NO2 is the internal combustion engine. It is produced during the combustion process when nitrogen in the air reacts with oxygen at high temperatures. It is a reddish brown pungent smelling gas which is highly toxic. When breathed in it attacks and damages the mucous lining of the lungs

PM particulates (PM_{10} and $PM_{2.5}$)

Particulates are fine solid particles suspended in the air. Particulate matter (PM) is usually classified by the size of the particles. The maximum size of the particles is placed after the initials e.g. PM10. Those smaller than 10 micrometres (µm) are capable of being carried deep into the lungs. While PM10's story ends at the lungs, PM2.5 can pass from the lungs into the blood supply and be carried throughout the body.

The image below gives an indication of the relative sizes.



Source: US EPA

Benzene

A hydrocarbon compound widely used in the chemical industry, and also a constituent of petrol. It is highly toxic and also carcinogenic.

1, 3-Butadiene

Produced mainly from the combustion of petrol but also from the production of synthetic rubber for tyres. It is carcinogenic.

Lead

Emitted from the combustion of coal. Affects kidneys, digestive tract, joints and the nervous system. Affects intellectual development in children.

Sulphur dioxide

Produced by the combustion of fuels containing sulphur, such as coal and heavy oils. Causes lung damage. It is the main constituent of “acid rain” which damages soils,
plant life and water systems.

Carbon monoxide

Produced by the incomplete combustion of fuels. The main source is road transport but combustion of domestic and industrial fuels also make a significant contribution. Reduces the blood’s ability to carry oxygen to brain and body tissues

Ozone

Is not emitted by any human source. It is produced when other pollutants, primarily oxides of nitrogen, react together in strong sunlight. Irritates eyes and nose, may lead
to airway damage and reduced lung function. Also causes damage to plant life and many building materials.

Carbon dioxide

Emitted naturally by plants and animals and by the action of rain on limestone. Also produced by the complete combustion of carbonaceous fuels. It is the major “greenhouse gas".

Polycyclic aromatic hydrocarbons (PAH)

The main sources are domestic coal and wood burning fires, accidental fires, bonfires and road transport. Exposure leads to an increased risk of lung cancer.

Methane

Occurs as a result of bacteriological decomposition. Major sources are landfill sites and agriculture. Is often collected and used as a fuel. A significant greenhouse gas with a greenhouse factor approximately 23 times that of carbon dioxide

Hydrogen sulphide

A toxic gas with the smell of rotten eggs produced by anaerobic decomposition. Associated with landfill sites and sewage treatment.

Appendix Four

Representatives from a number of areas of the Council met for a workshop to discuss what impact the Council has and could have on air quality, both locally and globally, and how we could reduce our impact in order to improve air quality in the City and surrounding area. The resultant actions included producing an air quality strategy as a way of moving this forward.

The questions and outputs are shown in the tables below.

Table One.

Which service areas have an impact on air quality?	**Environmental Health** • Staff travel to and from inspections • Regulate permitted activities in order to control emissions to air from factories • Enforce smoke control area legislation • Advise on planning applications in relation to impacts on local air quality **Fleet Management** • 1.6 million litres of fuel purchased and used per year • Purchase fleet vehicles; from vans to refuse lorries **Public Health** • Health Impact Assessments on large projects e.g. City of Culture 2017 **Economic Development** • Types of businesses and processes considering inward investment to the City **Planning Development.** • Land use planning, detailed layout, local plan, conditions – Travel Plans- **Transport Policy** • Local Transport Plan (LTP) Encourage sustainable travel – P&R cycling, walking public transport. **Network Management** • Traffic Management Act, minimising congestion, managing highway works. Cross boundary liaison, public utilities co-ordination, Liaison with Highways England, Parking Provision. Car park charges.

	Human Resources. • Policies – car share scheme – cycle to work – electric cars. **Property and Assets.** • Insulation – Utilities – Heat etc. – Flexible Buildings – IT infrastructure for work from home.

Table Two.

Which Council departments have a role in making an impact in relation to improving air quality?	• Public Health Team • Environmental Health • Licensing (taxi) • Transport Policy • Fleet management • Highways England • Planning – development control and policy • Highway Control • Parking • Climate change • Sustainable travel • Procurement • Comms and marketing • Estates (NPS) • HR • Users of vehicles – they decide what vehicles they want • Waste Management – use a large % of fleet vehicles • Education • Finance / Procurement • Social Services • Building Control • Operational Depts – Cleansing, Highways, grounds mtce, school transport. • Planning Policy. • Hull Events team • Sports development • Active travel • Regen. • Unions
How would we communicate local air quality with members of the public	• Signage to encourage walking

	• Highlight pollution risks • Tap into schools/universities • Big public events • Marketing campaigns/social marketing • Website • Use of walking / cycling apps • Staff engagement • Policy • Events – specific or as supporting element • Corporate sponsorship – messaging • Media • Schools/colleges/university • Elected members • Licence conditions
How would we propose involving the public in shaping an Air Quality Strategy for Hull?	• Website • Long term behaviour change strategy – public health campaigns • Joined up approach for public sector • hand held air monitors for public • Apps for cycling/walking routes

Table three

Who are the stakeholders that we deal with which could have an impact on air quality?	• Fleet Service users • Bus operators • Waste Management • Train operators • Taxis • Port • Highways England • Local authorities ie ERYC • Clinical Commissioning Group • Hospital Trust • Schools and travel • Public Utilities • Sustrans/CTC • Energy companies • Car dealers • Elected members • Ramblers • Business Improvement District. • Planning and DC

	• Transport Policy • Car park charging. • Businesses/retailers/manufacturers • Interestgroups – Transport groups • Public organisations

Table four.

What funding streams are available to support improving air quality?	• European funding streams • Capital programme • Prudential borrowing • Issue – internal capacity to bid and deliver • LTP • PFI (Lighting) • Local Growth Fund • LSTF Extension Fund • Green incentive schemes • LEP

Table Five.

What could we do to tackle air quality if there were no constraints?	• More vehicles moved to electric – up to 300 vans could be electric • Promote low emission vehicles • Resurrect the service users group meetings • Decision making on fleet vehicles should be at a more strategic level • Look at how we utilise vehicles – can be used less • Need to tackle air quality as part of the fleet decision making process • Pedestrianism of the city centre • Create a ring road
What are the barriers that stop us achieving this?	• Alternative fuel infrastructure costs • Council don't control private parking policy • Money Funding • Behaviour change/public outcry/personal choice • No model that fits all of the variables • Infrastructure • Culture of communities • Communication and liaison with partner authorities • Accessibility (inc DDA) • Politics.

	• Sustainability • Land availability

Table six.

What has your service area got planned for 2017 that could be developed to improve air quality?	• Temporary park and rides – already planned • Extra rail services – late night/early morning for events – already planned • Extra bus services - late night/early morning for events – already planned • Event specific walking and cycling maps • Cycle hire for the event • Bus/rail and event ticket promotions • hotel shuttle buses • multi venue event shuttle buses • link promotion of sustainable travel to specific events • use electric signs on trunk roads to direct to park and rides • electric vehicle charge points on street and car parks • motor home and caravan parking – already planned • joint marketing of events with local bus/train operators – already planned • Environmental event • trial events – sky ride, park and ride, incentive schemes • road closures • cultural event links • working with schools • community roads hows • Changing working times/compressed hours • Build into existing campaigns • Showers for Guildhall • Cycle compound improvements • Public utility works kept to a

	minimum • Transport interchange improvements • 4,000 volunteers • Event travel planning. Priorities non-car maps. Tourism • LED street lighting programme • Scoot validation • Corridor improvements.

APPENDIX FIVE.

Glossary of Terms.

The following list relates to words in the strategy, and also some for general information taken from the air quality area of the Defra website. https://uk-air.defra.gov.uk/air-pollution/glossary

A

- Acid Deposition

  The total atmospheric deposition of acidity is determined using both wet and dry deposition measurements. Wet deposition is the portion dissolved in cloud droplets and is deposited during precipitation events. Dry deposition is the portion deposited on dry surfaces during periods of no precipitation as particles or in a gaseous form. Although the term acid rain is widely recognized, the dry deposition portion ranges from 20 to 60% of total deposition

- Acid Rain

  When atmospheric pollutants such as sulphur dioxide and nitrogen oxides mix with water vapour in the air, they are converted to sulphuric and nitric acids respectively. These acids make the rain acidic, hence the term 'acid rain'. Acid rain is defined as any rainfall that has an acidity level beyond what is expected in non-polluted rainfall. Acidity is measured using a pH scale, with the number 7 being neutral. Consequently, a substance with a pH value of less than 7 is acidic, while one of a value greater than 7 is basic. Generally, the pH of 5.6 has been used as the baseline in identifying acid rain, with precipitation of pH less than 5.6 is considered to be acid precipitation.

- Air Pollution Bandings

  The Air Pollution Information Service uses four bands to describe levels of pollution. The bands are Low, Moderate, High and Very High. Healthy people do not normally notice any effects from air pollution, except occasionally when air pollution is "Very High".

- Air Pollution Bulletins

  Air Pollution Bulletins are issued daily for each zone of the UK. The bulletins show current and forecast air quality for the next 24 hours. The forecast air quality is

categorised using four Air Pollution Bandings and also using a numerical Air Pollution Index.

- ### Air Pollution Index

  The Air Pollution Index is a numerical index for air pollution ranging from 1 to 10 related to the Low, Moderate, High and Very High Air Pollution Bandings.

- ### Air Pollution Information Service

  The Air Pollution Information Service provides free of charge, detailed, easy-to-understand information on air pollution. This information is particularly important to people with medical conditions which may be aggravated by poor air quality. The latest information is available by freephone, on Ceefax and Teletext, and via the Internet. The Service gives regionally based summaries and detailed information on current pollution levels, as well as forecasts for the next 24 hours.

- ### Air Quality Action Plans

  Air Quality Action Plans ultimately provide the mechanism by which local authorities, in collaboration with national agencies and others, will state their intentions for working towards the air quality objectives through the use of the powers they have available.

- ### Air Quality Limit Values

  EU Limit values are legally binding EU parameters that must not be exceeded. Limit values are set for individual pollutants and are made up of a concentration value, an averaging time over which it is to be measured, the number of exceedances allowed per year, if any, and a date by which it must be achieved. Some pollutants have more than one limit value covering different endpoints or averaging times.

- ### Air Quality Management Area (AQMA)

  If a Local Authority identifies any locations within its boundaries where the Air Quality Objectives are not likely to be achieved, it must declare the area as an Air Quality Management Area (AQMA). The area may encompass just one or two streets, or it could be much bigger. The Local Authority is subsequently required to put together a plan to improve air quality in that area - a Local Air Quality Action Plan.

- ## Air Quality Objectives

  The Air Quality Objectives are policy targets generally expressed as a maximum ambient concentration to be achieved, either without exception or with a permitted number of exceedances, within a specified timescale. The Objectives are set out in the UK Government's Air Quality Strategy for the key air pollutants.

- ## Air Quality Standards

  Air Quality Standards are the concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The Standards are based on assessment of the effects of each pollutant on human health, including the effects on sensitive sub-groups.

- ## Air Quality Strategy

  The Air Quality Strategy for England, Scotland, Wales and Northern Ireland describes the plans drawn up by the Government and the Devolved Administrations to improve and protect ambient air quality in the UK in the medium-term. The Strategy sets Aims for the main air pollutants to protect health. Performance against these Aims is monitored where people regularly spend time and might be exposed to air pollution.

- ## Air Quality, Planning and Development Control Policy.

  A policy aimed at encouraging interdepartmental working, and raising awareness and providing information to developers and planners and other interested parties on the issues associated with air quality

- ## Ambient Air

  The air (or concentration of a pollutant) that occurs at a particular time and place outside of built structures. Often used interchangeably with "outdoor air".

- ## Annual Mean

  The annual mean is the average concentration of a pollutant measured over one year. This is normally for a calendar year, but some species are reported for the period April to March, which is known as a pollution year. This period avoids splitting a winter season between two years, which is useful for pollutants that have higher concentrations during the winter months.

- Annual Status Report (ASR)

  An Annual Status Report is designed to provide the public with information relating to local air quality in the Authorities area, to fulfil the Council’ s statutory duty to review and assess air quality within its area, and to determine whether or not the air quality objectives are likely to be achieved.

- At Risk Groups

  This refers to those most susceptible to the effects of poor air quality, such as the young and those with an underlying condition.

- Automatic Monitoring

  Monitoring is usually termed "automatic" or "continuous" if it produces real-time measurements of pollutant concentrations. Automatic fixed point monitoring methods exist for a number of pollutants, providing high resolution data averaged over very short time periods. BAM, TEOM and FDMS instruments are all automatic monitors.

B

- Black Smoke

  Black Smoke consists of fine particulate matter. These particles can be hazardous to health especially in combination with other pollutants which can adhere to the particulate surfaces. Black Smoke is emitted mainly from fuel combustion. Following the large reductions in domestic coal use, the main source is diesel-engined vehicles. Black smoke is measured by its blackening effect on filters. It has been measured for many years in the UK. Now interest is moving to the mass of small particles regardless of this blackening effect.

C

- COMEAP

  Committee on the Medical Effects of Air Pollutants, COMEAP is an Advisory Committee of independent experts that provides advice to Government

Departments and Agencies on all matters concerning the potential toxicity and effects upon health of air pollutants.

- Clean Air Zone (CAZ)

A Clean Air Zone is a designated area where schemes aimed at improving air quality or initiated. The schemes are generally transport focussed, but other measures can be implemented. In Hull, we consider these schemes as community driven initiatives.

- Client Earth

Are activist lawyers that use law as a tool to mend the relationship between human societies and the Earth. They work in Europe and beyond, bringing together law, science and policy to create practical solutions to key environmental challenges.

- Climate Change Gases

A layer of greenhouse gases – primarily water vapour, and including much smaller amounts of carbon dioxide, methane and nitrous oxide – acts as a thermal blanket for the Earth, absorbing heat and warming the surface to a life-supporting average of 59 degrees Fahrenheit (15 degrees Celsius).

D

- Data Capture

"Data capture" is the term given to the percentage of measurements for a given period that were validly measured.

- Days with Exceedances

The number of days with exceedances is the number of days on which at least one period has a concentration greater than, or equal to, the relevant air quality standard (the averaging period will be that defined by that Standard). Since the National Air Quality Standards cover different time periods (15 min average, 24 hour running mean etc.), this gives a useful way of comparing data for different pollutants.

- Defra

The Department for Environment Food and Rural Affairs is a ministerial department of UK government, supported by 33 agencies and public bodies that are responsible for safeguarding our natural environment, supporting our food and farming industry, and sustaining a rural economy. They play a major role in people's day-to-day life, from the food we eat, and the air we breathe, to the water we drink.

- ### Deposition

See Acid Deposition.

- ### Diffusion Tube Samplers

Passive diffusion tube samplers collect nitrogen dioxide and other pollutants by molecular diffusion along an inert tube to an efficient chemical absorbent. After exposure for a known time, the absorbent material is chemically analysed and the concentration calculated.

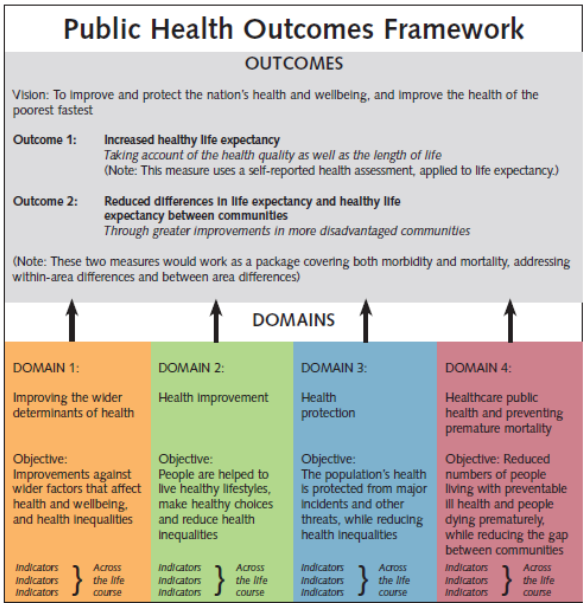
- ### Dispersion model

A dispersion model is a means of calculating air pollution concentrations using information about the pollutant emissions and the nature of the atmosphere. In the action of operating a factory, driving a car, or heating a house, a number of pollutants are released into the atmosphere. The amount of pollutant emitted can be determined from knowledge of the process or actual measurements. Air Quality Objectives are set in terms of concentration values, not emission rates. In order to assess whether an emission is likely to result in an exceedance of a prescribed objective it is necessary to know the ground level concentrations which may arise at distances from the source. This is the purpose of a dispersion model.

- ### Domain 1 Indicators.

The Public Health Outcomes Framework will be delivered through improvements across a broad range of public health indicators grouped into four domains relating to the three pillars of public health: health protection, health improvement, and healthcare public health (and preventing premature mortality); and improving the wider determinants of health.

The diagram below sets out a model for understanding the Public Health Outcomes Framework



E

- ### Emission Factor

An emission factor gives the relationship between the amount of a pollutant produced and the amount of raw material processed or burnt. For example, for mobile sources, the emission factor is given in terms of the relationship between the amount of a pollutant that is produced and the number of vehicle miles travelled. By using the emission factor of a pollutant and specific data regarding quantities of materials used by a given source, it is possible to compute emissions for the source. This approach is used in preparing an emissions inventory.

- ### Environmental Audit Committee

The remit of the Environmental Audit Committee is to consider the extent to which the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development, and to audit their performance against sustainable development and environmental protection targets.

- Environmental Protection Act.

  This act brings in a system of integrated pollution control for the disposal of wastes to land, water and air.

  Part I establishes integrated pollution control and gives Local Authorities new powers to control air pollution from a range of prescribed processes;

  Part II improves the rules on waste disposal; and

  Part III covers statutory nuisances and clean air.

- EPAQS

  The Expert Panel on Air Quality Standards (EPAQS) was set up in 1991 to provide independent advice to the UK Government on air quality issues, in particular regarding the levels of pollution at which no or minimal health effects are likely to occur. The Panel's recommendations were adopted as the benchmark standards in the National Air Quality Strategy. EPAQS has now been merged into the Department of Health's Committee on the Medical Effects of Air Pollutants (COMEAP).

- EU Directives

  The European Union has been legislating to control emissions of air pollutants and to establish air quality objectives since the early 1970s. European Directives on ambient air quality require the UK to undertake air quality assessment, and to report the findings to the European Commission on an annual basis. Historically this has been under the Air Quality Framework Directive (1996/62/EC) and the Daughter Directives (DD) (1st DD -1999/30/EC, 2nd DD -2000/69/EC, 3rd DD 2002/3/EC and 4th DD- 2004/107/EC). In June 2008, a new Directive came into force: the Council Directive on ambient air quality and cleaner air for Europe (2008/50/EC), known as the "Air Quality Directive". This Directive consolidates the first three Daughter Directives, and was transposed into the Regulations in England, Scotland, Wales and Northern Ireland in June 2010. The 4th Daughter Directive remains in force.

- Exceedance

An exceedance defines a period of time during which the concentration of a pollutant is greater than, or equal to, the appropriate air quality criteria. For Air Quality Standards, an exceedance is a concentration greater than the Standard value. For Air Pollution Bandings, an exceedance is a concentration greater than, or equal to, the upper band threshold.

- External Stakeholders

External Stakeholders are individuals or groups outside the Authority, but who can affect or be affected by the project. In the case of air quality, this includes residents and visitors to the City, as well as local businesses, transport and environmental groups.

F

- FDMS

The Filter Dynamics Measurement System (FDMS) monitors the core and volatile fractions of airborne particulate matter. The instrument is based on TEOM technology, measuring the mass of particles collected on a filter, whilst also accounting for loss of semi volatile material. The FDMS records gravimetric equivalent particulate data. Measurements recorded in the UK by the instruments are now used in the Volatile Correction Model (VCM) to correct TEOM measurements for the loss of volatile components of particulate matter that occur due to the high sampling temperatures employed by the instrument.

- Friends of the Earth

An international group that campaigns for solutions to environmental problems.

G

- Global Warming

Global warming describes an increase in the temperature of the Earth's troposphere. It has occurred in the past as a result of natural influences, but the term is now more commonly used to refer to the warming predicted by computer

models to occur as a result of increased emissions of greenhouse gases as a result of human activity.

- ### Gravimetric Equivalent PM_{10} Data

  Monitoring of PM10 levels in the UK has to date, been largely based upon the use of TEOM analysers. A principal concern with the TEOM instrument is that the filter is held at an elevated temperature (50°C) in order to minimise errors associated with the evaporation and condensation of water vapour. This can lead to the loss of the more volatile species (some hydrocarbons, nitrates etc.) and has led to the identification of differences between TEOM and gravimetric measurements at co-located sites. In the past, a factor of 1.3 was applied to all TEOM-measured concentrations to estimate the gravimetric equivalent. Further studies commissioned by Defra, the Scottish Executive, the Welsh Assembly Government and the Department for the Environment in Northern Ireland to investigate these effects, and to provide a more robust relationship between the TEOM and the European transfer gravimetric reference method, have led to the development of the Volatile Correction Method (VCM), http://www.volatile-correction-model.info/. The VCM uses measurements of volatile particulate matter made by nearby FDMS instruments to correct TEOM measurements for the loss of such volatile material. The corrected measurements have been demonstrated to be equivalent to the gravimetric reference equivalent.

- ### Greenhouse Gases

  Greenhouse gases are atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapour that slow the passage of re-radiated heat through the Earth's atmosphere.

H

- ### Hydrocarbons

  Hydrocarbons are compounds containing various combinations of hydrogen and carbon atoms. They are emitted into the air by natural sources (e.g. trees) and as

a result of fossil and vegetative fuel combustion, fuel volatilization, and solvent use. Hydrocarbons are a major contributor to smog.

L

- Local Air Quality Action Plan

When a Local Authority has set up an Air Quality Management Area, AQMA, it must produce an action plan setting out the measures it intends to take in pursuit of the Air Quality Objectives in the designated area. The plan should be in place, wherever possible, within 12-18 months of designation and should include a timetable for implementation. http://laqm.defra.gov.uk/action-planning/action-planning.html

- Local Air Quality Management (LAQM)

The Local Air Quality Management (LAQM) process requires Local Authorities to periodically review and assess the current and future quality of air in their areas. A Local Authority must designate an Air Quality Management Area (AQMA) if any of the Air Quality Objectives set out in the regulations are not likely to be met over a relevant time period.
http://www.defra.gov.uk/environment/quality/air/airquality/local/

- Low Emission Strategy (LES)

A Low Emission Strategy is a package of measures for mitigating air pollution and carbon dioxide emissions associated with the road transport impacts of new or significantly altered developments.

- Local Transport Plan. (LTP)

Local Authorities are periodically required to submit an LTP's to the Department of Transport. The LTP outlines the current baseline with regard to transport, accessibility and pollution. I sets out challenging but achievable objectives and sets out the programme for achieving these objectives.

M

- ### Maximum hourly average

  The maximum hourly average is the highest hourly reading of air pollution obtained during the time period under study.

- ### Microgrammes per cubic metre (µg/m^3)

  A measure of concentration in terms of mass per unit volume. A concentration of 1 µg/m^3 means that one cubic metre of air contains one microgram (10-6 grams) of pollutant.

N

- ### National Atmospheric Emissions Inventory (NAEI).

  The NAEI compiles annual estimates of UK emissions to the atmosphere from sources such as road transport, power stations and industrial plants. These emissions are estimated to inform policy, and to help to identify ways of reducing the impact of human activities on the environment and our health. The NAEI is funded by Defra, the Scottish Executive, the Welsh Assembly Government and the Department for the Environment in Northern Ireland.

- ### National Statistics

  The emissions and concentration statistics shown in the air quality database are National Statistics. National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

O -

P

- ### Parts per billion, ppb

  Parts per billion, ppb, describes the concentration of a pollutant in air in terms of volume ratio. A concentration of 1 ppb means that for every billion (10^9) units of air, there is one unit of pollutant present.

- Parts per million, ppm

  Parts per million, ppm, describes the concentration of a pollutant in air in terms of volume ratio. A concentration of 1 ppm means that for every million (10^6) units of air, there is one unit of pollutant present.

- Public Health and Outcomes Framework.

  The Government is creating a new, integrated and professional public health system designed to be more effective and to give clear accountability for the improvement and protection of the public’ s health. The new system will embody localism, with new responsibilities and resources for local government, within a broad policy framework set by the Government, to improve the health and wellbeing of their populations. It will also give central government the key responsibility of protecting the health of the population, reflecting the core accountability of government to safeguard its people against all manner of threats

R

- Running mean

  This is a mean - or series of means - calculated for overlapping time periods, and is used in the calculation of several of the National Air Quality Standards. For example, an 8-hour running mean is calculated every hour, and averages the values for eight hours. The period of averaging is stepped forward by one hour for each value, so running mean values are given for the periods 00:00 - 07:59, 01:00 - 08:59 etc. This can also be considered as a "moving average". By contrast, a non-overlapping mean is calculated for consecutive time periods. Using the same 8-hour mean example, this would give values for the periods 00:00 - 07:59, 08:00 - 15:59 and so on. There are, therefore, 24 possible 8-hour running means in a day (calculated from hourly data) and 3 non-overlapping means.

S -

T

- ### TEOM

  The tapered element oscillating microbalance (TEOM) is used to continuously measure particulate concentrations. It measures the mass collected on an exchangeable filter cartridge by monitoring the corresponding frequency changes of a tapered element. The sample flow passes through the filter, where particulate matter collects, and then continues through the hollow tapered element on its way to an electronic flow control system and vacuum pump. A principal concern with the TEOM instrument is that the filter is held at an elevated temperature (50°C) in order to minimise errors associated with the evaporation and condensation of water vapour. This can lead to the loss of the more volatile species and has led to the identification of differences between TEOM and gravimetric measurements at co-located sites. In the past, a factor of 1.3 was applied to all TEOM-measured concentrations to estimate the gravimetric equivalent. Now, the Volatile Correction Method (VCM) uses measurements of volatile particulate matter made by nearby FDMS instruments to correct TEOM measurements for the loss of such volatile material. The corrected measurements have been demonstrated to be equivalent to the gravimetric reference equivalent.

- ### Travel Plan.

  A travel plan is a package of actions designed by a workplace, school or other organisation to encourage safe, healthy and sustainable travel options. By reducing car travel, travel plans can improve health and wellbeing, free up car parking space, and make a positive contribution to the community and the environment.

U

- ### Urban Traffic Control Schemes (UTC)

  The primary purpose of Urban Traffic Control systems is to ensure traffic safety at intersections. Traffic signals make it possible to reduce the risk of collisions between cross traffic or vehicles turning across the opposite flow. Through the coordinated management of traffic signals, UTC systems are able to increase the efficiency of traffic flows by allowing vehicles to pass through a succession of signals without needing to stop. This reduces the incidence of queues at traffic signals as well as fuel consumption and hence, indirectly, vehicle emissions.
  UTC systems which operate over a wide area can be used to balance capacity across the road network, minimizing the overall delays to traffic and decreasing trip time. When integrated with fleet management systems they can also be used strategically to give priority to specific categories of vehicles such as public transport and emergency vehicles.

V

- Volatile organic compounds (VOCs)

Monitoring of PM_{10} levels in the UK has to date, been largely based upon the use of TEOM analysers. A principal concern with the TEOM instrument is that the filter is held at an elevated temperature (50°C) in order to minimise errors associated with the evaporation and condensation of water vapour. This can also lead to the loss of the more volatile species and has led to the identification of differences between TEOM and gravimetric measurements at co-located sites. In the past, a factor of 1.3 was applied to all TEOM measured concentrations to estimate the gravimetric equivalent. The Volatile Correction Method (VCM, http://www.volatile-correction-model.info/) has recently been developed. The tool uses measurements of volatile particulate matter made by nearby FDMS instruments to correct TEOM measurements for the loss of such volatile material. The corrected measurements have been demonstrated to be equivalent to the gravimetric reference equivalent.

X -

Y

- YALPAG

The Yorkshire and Lincolnshire Pollution Advisory Group share and promote best practice in environmental protection regulation between local authorities in the Yorkshire and Lincolnshire region. They coordinate training events and consultations and produce regional guidance documents and operate technical groups for land, air quality and permitting.

Z

- Zones and Agglomerations

The UK has been divided into zones and agglomerations for the purposes of air pollution monitoring, in accordance with EC Directive 96/62/EC. There are 16 zones. They match:

1.The boundaries of England's Government Offices for the Regions; and

2.The boundaries agreed by the Scottish Executive, National Assembly for Wales, and Department of the Environment in Northern Ireland.

There are 28 agglomerations in the UK. An agglomeration is defined as any urban area with a population greater than 250,000.

Appendix 6

Annual Summary of Hull City Council's Air Quality Strategy

November 2019

This Appendix is aimed at providing an over view of the work being carried out by the Authority, and also the further measures being proposed.

It is drawn from the information in the tables presented in Appendix 2 of the Cabinet Report 2019 and Tables 7 to 23 of the Strategy.

Achievements

Kingston upon Hull City Council has taken forward a number of direct measures during the current reporting year of 2018 into 2019 in pursuit of improving local air quality. A summary of these are listed below. More detail on these measures can be found in their respective Action Plans, which can be found in tables 7 to 23 of the Air Quality Strategy, as initiated by individual Council Departments.

Last year's annual status report (ASR) was appraised by independent experts on behalf of DEFRA and the findings accepted. The findings were that air quality in the City is continuing to improve, the one area of exceedance remains near the A63, but it too is improving and is expected to be resolved by the upcoming road improvements.

Key completed measures are:
The Environmental Regulation section have been working closely with various internal and external partners who are carrying out a feasibility study into the wider use of low cost analysers to monitor amongst other things Air Quality, including linking them to the various communication systems that operate, such as wifi, LoRaWAN and 4G networks, all linked to the Internet of Things (IoT). These monitors have the potential to highlight air quality issues that may have missed by the authorities existing monitors and could have beneficial use for educational purposes. This initiative does, however, raise some other issues / concerns regarding the accuracy of these monitors which are included in the 'potential issues' section of this summary.

Environmental Regulation has produced a business case for funding for mobile air quality monitoring equipment of an appropriate standard to validate the results and supplement our existing monitoring regime. If purchase of these monitors is approved the monitors can be used to validate the accuracy of low cost monitoring alternatives mentioned above, answer concerns from members of the public and others regarding air quality issues in specific areas such as around schools and to supplement information provided in our annual status report to DEFRA as well as measuring the impact of some of the schemes being progressed in the Council's Air Quality Strategy.

Council officers have taken the opportunity to encourage community engagement

when Councilors or members of the community raise air quality concerns. Examples include presenting information to area committees to help progress community schemes to monitor air quality using diffusion tubes.

In conjunction with the community air quality monitoring schemes, Environmental Regulation are also looking to include other council initiatives, such as the Playing Out schemes (where communities request that roads are temporarily closed to traffic to allow children to play), to encourage awareness of the issues and offer some means for the community to minimise emissions. This also links to Public Health's work with Planning to produce a Supplementary Planning Document (SPD) - 'Healthy Places' that will provide additional evidence, interpretation and guidance on the various health related polices contained in Hull's Local Plan (2016-32).

Linked to the proposed Healthy Places SPD, a group has been formed to investigate improvements and to promote Green Travel Plans corporately and externally.

The Air Quality Strategy update report to cabinet in 2018 mentioned the Supplementary Planning Guidance Document which aims to specify which developments will require an air quality assessment and what it should contain, in particular by way of good design and mitigation. This has now been approved and forms part of the Local Plan.

Public Protection will continue to comment on planning applications, and ensure that they meet the requirements of Hull City Council's Air Quality Strategy and Supplementary Planning Document. The aim is to minimise any increase in emissions to protect health.

The proposal for the existing 25 Smoke Control Orders to be revoked, and replaced by one single, clearer Order covering the whole of the City has been advertised. This is seen as an opportunity to raise awareness of the issues around solid fuel combustion and fine particulate. A consultation and settling in period is required by law, and the Order will come in to force on the 1st of June 2020.

The review of the taxi licensing policy has also been carried out, and this commits the licensing section to include air quality as a major element of any actions.

The electric vehicle and charging point strategy is progressing, and will be enhanced by the Council's Declaration of a Climate Emergency for the City, which creates a very challenging timescale for carbon reduction, which will also have benefits for local air quality. Environmental Regulation are also working closely with the Environment and Climate Change Strategy Advisor on this issue.

Public Protection officers are assisting Hull University with a ground breaking study to determine the concentration of micro-plastics in the atmosphere, and an investigation into the likelihood of them being inhaled. This will provide us with more detailed knowledge of the components that make up the particles in the atmosphere smaller than 10 microns (PM_{10}).

Highways England has commenced improvement works to the A63 Garrison Roundabout to address delays and congestion. The scheme commenced in spring 2018 and is on target to be completed by 2020. These improvements should ensure a better flow of traffic and therefore improve air quality in this area.

Good connections with internal and external organisations have been further developed, including Port Health, Friends of the Earth, The Plant a Tree Foundation, Hull Carbon Neutral, Hull and East Riding Climate Coalition and others.
Discussions are ongoing with Connected Humber, based at the C4Di building, to offer advice on the development of low cost air quality sensors with a view to developing a project that can be taken into schools.
Environmental Regulation are assisting Associated British Ports to develop their own Air Quality Action Plan. This is incorporates liaison with colleagues in East Riding Council.
Discussions on alterations to the air quality area of the corporate web page have been initiated.
Officers are in the process of putting together two bids for grant funding. One is to create an interactive emissions inventory for the City that links emissions to health, and enables scenarios for air quality and climate change interventions to be analysed. The second bid would be for monitoring equipment that could be used to support the elements of the inventory, to support the study of low cost analysers, and also as an educational tool.

Priorities

Kingston upon Hull City Council's priorities for the coming year are to continue to build on the support and commitment offered by leading Councillors, Senior Managers and Officers as well as environmental and community groups in implementing The Air Quality Strategy, and Air Quality measures, as well as the actions required as a consequence of declaring the Climate Emergency, which all help to demonstrate that we are leading by example.
There are a number of measures relating to the forthcoming road schemes on the A63 and Stoneferry Corridor that will be priorities. These include working with the appropriate organisations to minimise the impact during the works, and relocating monitoring stations and devices to ensure that health is protected.
To further develop relationships with external organisations, and in particular schools, the university and the NHS to help raise awareness of air quality issues.

Potential issues

The principal challenges and barriers to implementation that Kingston upon Hull City Council anticipates facing are that the primary cause of the exceedance is emissions from vehicles using the A63, and this is not within the Control of the Authority. This leaves us with potential issues when the major works commence, such as the potential to increase traffic, and therefore emissions, on other roads. Another consequence is that the rest of the areas where people are exposed are below the objectives, which means some future development applications could have the potential to add to a potential creep of background levels, and we would be limited in our ability to fully minimise that.
Progress on the removal of the exceedance that has resulted in the AQMA has been slower than expected due to it being out of the direct control of the authority, who can only influence and support the measures proposed by Highways England.
Kingston upon Hull City Council anticipates that the measures stated above and in the updated Tables will achieve compliance in Hull AQMA1 when Highways England completes their works. As a summary of progress, in 2010 Highways England made the Preferred Route Announcement for the A63 Castle Street Improvement Scheme. The scheme improves a 1.5 kilometre section of the A63 in Hull to improve

journey times for road users through the conversion of a major interchange into a split level junction. The scheme also includes the provision of two new pedestrian bridges together with an improved pedestrian route underneath the A63. Work is currently ongoing to refine the design and to consider the logistics of minimising the impact of the works during its construction. The Development Consent Order for the scheme has been submitted, with an anticipated start of works in 2020 and open in 2025.

The increased use of lower cost air quality sensors has the potential for an increase in media interest. In itself this is a positive but there is a general misconception on the credibility of the data from these sensors. It is necessary to ensure that Hull City Council are presenting a consistent message, and that any schemes the Council are involved in are appropriately aligned and not conflicting with the Air Quality Strategy or presenting misleading or inconsistent information.