



KIRKLEES
LOCAL
AIR QUALITY
STRATEGY

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EXECUTIVE SUMMARY

Content

This strategy outlines the approach Kirklees takes for

- achieving and maintaining good air quality in Kirklees
- informing other strategies and developing plans where air quality is a linking theme
- identifying the responsibilities of different stakeholders
- providing a framework for decisions about development proposals where air quality should be considered at an early stage
- setting out the approach to development control (planning applications) where air quality is a material consideration
- highlighting initiatives involving the Council demonstrating best practice for minimising pollution

This first strategy sets out broad aims and objectives alongside a position statement, and then sets a target for developing more specific action plan targets and objectives.

Purpose

This strategy engages with the commitments made in the Kirklees Big Picture

- the Kirklees Ambition to be the best place in the UK for green living
- the Kirklees Ambition for a place with a strong economy

and within the Kirklees Environment Policy

- the Environment Vision to achieve good air quality in Kirklees
- the Kirklees Environment Strategy objectives to develop a Kirklees Air Quality Strategy and to work in partnership with other services to produce a policy framework as part of the Air Quality Strategy which will inform decision making in development control and regeneration.

Benefits

The Strategy will have the following benefits

- health benefits for people living and working in Kirklees
- enable economic regeneration and development to take place with air quality recognised as a major consideration at an early stage
- environmental benefits for people and for the ecosystem
- provide a common theme for Council services and partners to use
- fulfil Kirklees' legal responsibilities under the Environment Act 1995 and other environmental legislation

Monitoring and Review

- the Kirklees Air Quality Strategy will be reviewed each year incorporating our annual assessments of air quality to central government
- new links and developments will be incorporated in the next 6 months
- the measurable elements of the Strategy will be reported each year
- an Action Plan with aims and objectives for air quality across Kirklees will be developed in the next six months.

KIRKLEES AIR QUALITY STRATEGY

Our aims

we will

ensure that the issue of air quality in Kirklees is fully considered in:

- the Kirklees Ambition to be the best place in the UK for green living
- the Kirklees Ambition to be a place with a strong economy
- the Kirklees Vision for an attractive environment for urban and rural living

we will

seek to improve areas of poor air quality

we will

seek to maintain areas of good air quality

we will

ensure that air quality issues are identified, considered, and taken into account by the Council within all its policies plans and programmes in order to secure more sustainable forms of development.

we will

regularly review the content and performance of the strategy

Our objectives

we will

actively seek to achieve the Strategy's aims in the Council's policies plans and programmes, particularly in the following areas

- our legal obligations for "Local Air Quality Management"
- monitoring and assessment of air quality across Kirklees
- pollution control and industrial regulation
- planning system including current development control and the evolving Local Development Framework
- early consideration of air quality in major projects and partnerships
- West Yorkshire Local Transport Plan
- Kirklees 2025 Transport Vision
- Kirklees 2025 Environment Vision and the Council's Environment Policy
- Kirklees Green Design Guides
- Kirklees Biodiversity Action Plan
- other developing environmental initiatives
- develop an Air Quality Strategy Action Plan with aims and objectives by January 2008

INTRODUCTION

The government has set objectives for eight pollutants which can adversely affect human health and made a commitment to take action to reduce risks to health and the environment. These objectives are based on the best evidence available.

The objectives are set in the National Air Quality Strategy and in the Air Quality (England) Regulations for the following pollutants:

benzene	1-3-butadiene	carbon monoxide	lead
nitrogen dioxide	sulphur dioxide	small particles(PM₁₀)	ozone

These provide a high level of protection for health, and supplement it with the European limit values. The health related risk of each pollutant is set out in Appendix 1.

With the exception of ozone the responsibility for meeting these objectives is that of the local authority. This is called “**Local Air Quality Management**”.

The objectives which are set are not ambitions; they are binding. Local authorities have a statutory duty to take steps to meet them. This is significant in the Council’s ambitions as a beacon for green living and for sustainable economic development.

The commitment to delivering clean air is an important aspect of wider policies, for example:

- air pollution is one of the headline indicators of sustainable development
- it is highlighted in the 2007 Rogers Report as one of the key areas for local authority regulation
- the 2007 Royal Commission on Environmental Pollution report “The Urban Environment” clearly identifies air pollution as a major issue in human well-being
- The government has clearly recognised in the 2007 report “Air Quality and Climate Change” that other pollutants as well as CO₂ can contribute to climate change. It also recognises that some actions will tackle both local air quality problems and climate change.
- preventing the adverse impact of air pollution on the natural environment, for example the increased deposition of nitrogen on Special Protection Areas such as the South Pennines.

THE PICTURE IN KIRKLEES

Air pollution comes from 3 main sources:

- Industrial and commercial activity
- Transport
- Area sources such as the combined effect of domestic boilers on housing estates

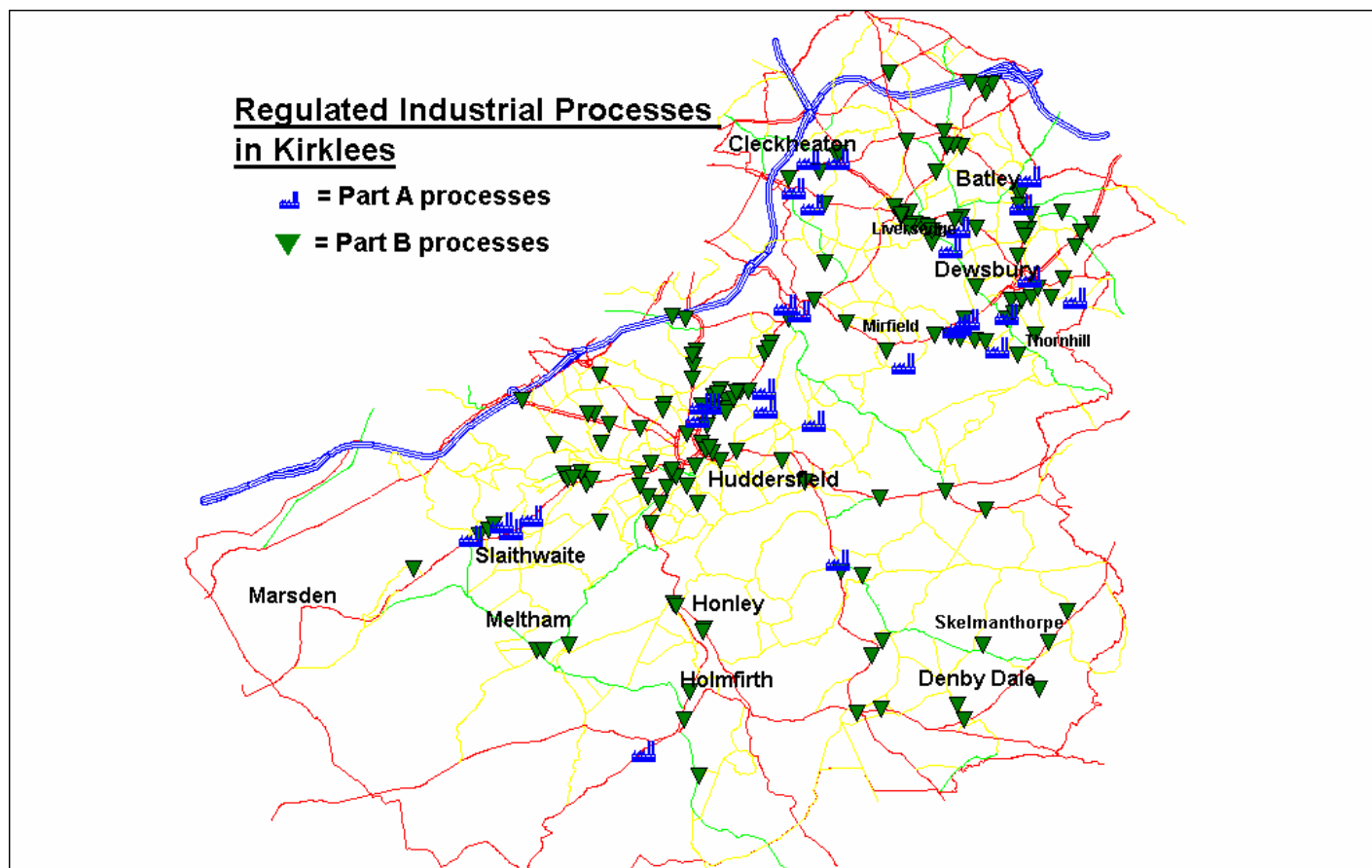
There is also a general background level of pollution in which can vary from region to region. Broadly speaking the northern area of Kirklees has a greater number of these sources than the southern and western areas.

The maps below illustrate the distribution of these sources and the information shown in these maps has been very important in deciding where to place the air pollution monitoring equipment that we use.

We have 9 high specification fully automated monitoring stations that measure air pollution on a second by second basis; data is downloaded by remote telemetry to Environmental Services twice per day. 63 other locations monitor nitrogen dioxide using diffusion tubes. These tubes are analysed in Kirklees Scientific Services laboratory and give monthly averages for nitrogen dioxide. These locations are shown on the map on page 9.

The data collected is used in assessing air quality, in providing daily pollution reports to the Yorkshire Post, in weekly reports to the Huddersfield Examiner and in computer modelling that predicts future air pollution levels. The information that we collect and analyse also allows to provide an immediate investigatory response should we get any 'spikes' in air quality across the district.

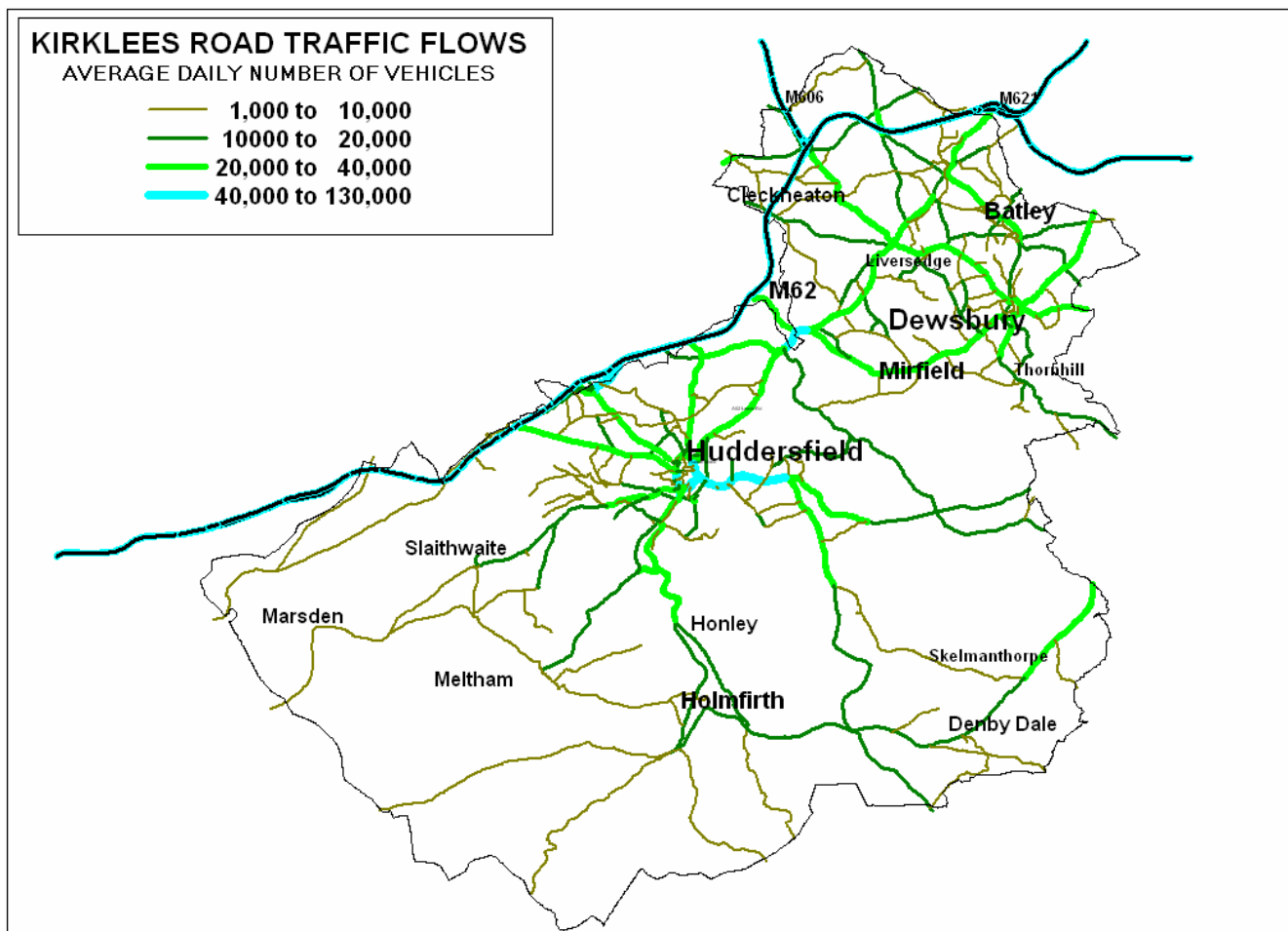
Industrial sites in Kirklees



In the map of regulated industrial processes in Kirklees, Part B processes are those industrial sites regulated by Kirklees, and Part A processes are those industrial sites regulated by the Environment Agency.
(Since this map was drawn some of the processes have ceased operation)

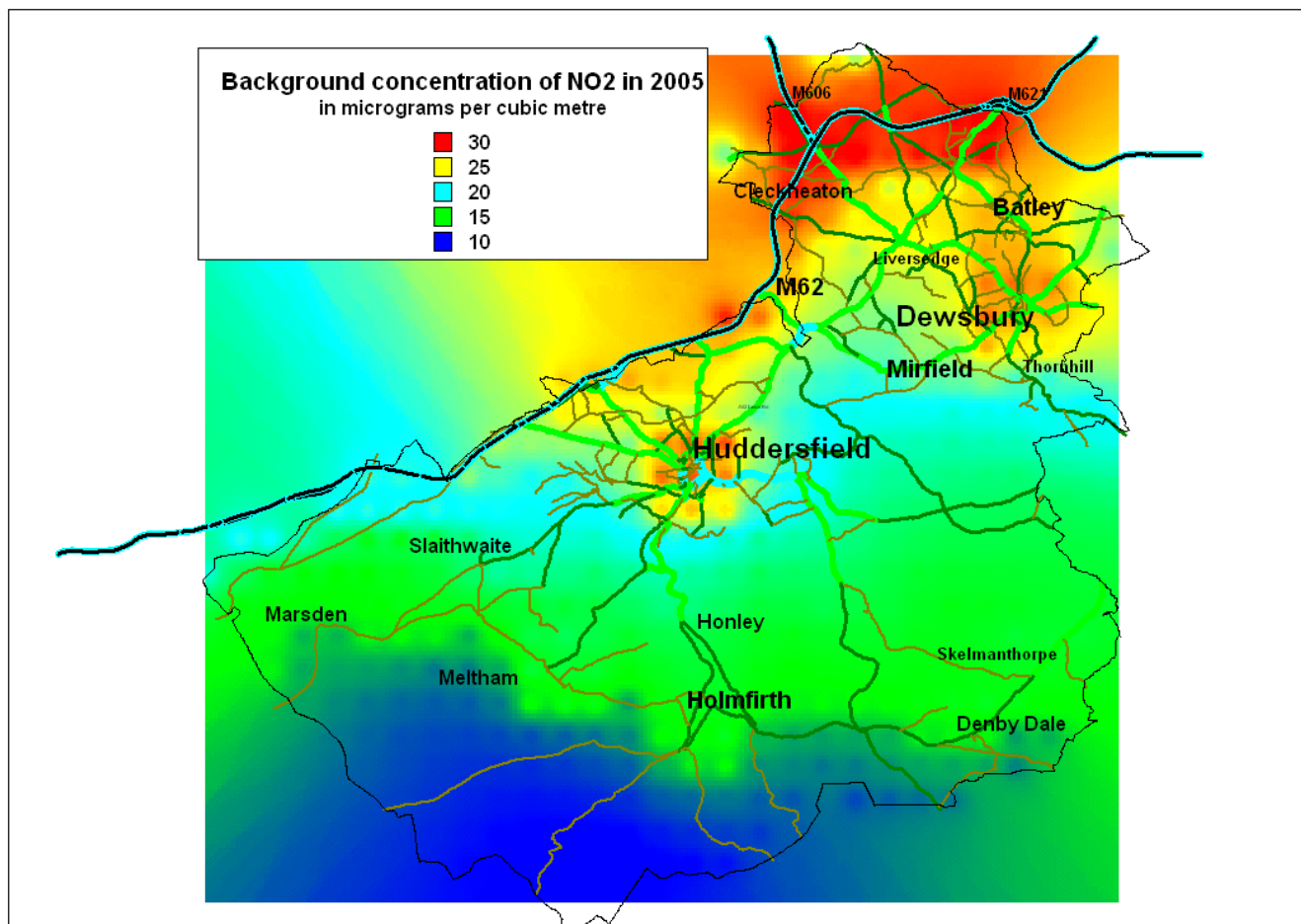
Kirklees carries out air pollution monitoring where there are concentrations of these processes.

The traffic density in Kirklees

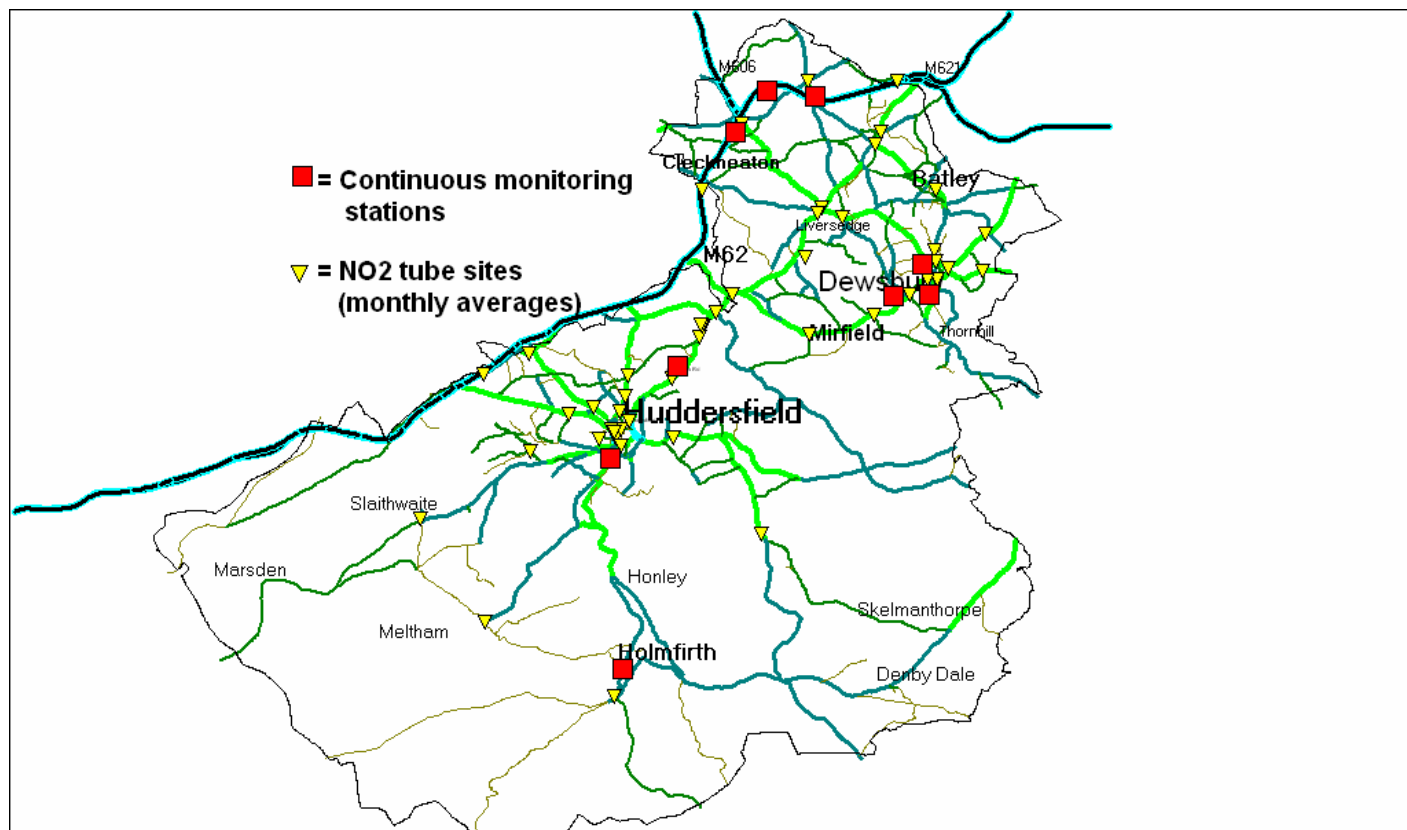


Background concentrations of nitrogen dioxide in Kirklees

This map shows the background levels of nitrogen dioxide in Kirklees. This map is taken from the nationally published map of background concentrations produced by the government consultants at NETCEN.



Air pollution monitoring stations in Kirklees



The data collected from these stations are regularly assessed and Kirklees Council determines if any of the pollutants are exceeding national air quality objectives. Each year a summary of this information is made to DEFRA in an annual report.

This information is also supplied to officers who co-ordinate annual progress reports on the West Yorkshire Local Transport Plan.

The Highways Agency has co-funded one of three automated stations (at Hunsworth) that are monitoring the pollution that comes from the M62. This monitoring will help us assess developments and changes to the motorway and the effect that this has on people living near the M62.

WHO SHOULD BE CONCERNED ABOUT AIR QUALITY?

The Council

The Council continually reviews outdoor air quality within the district against the national Air Quality Objectives and takes reasonable steps to ensure compliance with these standards. This work has been carried out for many years with the first automated station acquired in 1997.

Maintaining good air quality and achieving improvements will depend very heavily on how all stakeholders contribute.

The Council recognises the impact of its day to day operations on air quality and is therefore committed to lead by example for the attainment of air quality improvements for example

- renewing vehicles with the latest low emission engine specification
- acquiring low emission hybrid technology pool cars
- making green “eco” driving courses available for its staff
- encouraging the use of cycling, walking and public transport as an alternative to the private car
- developing sustainable energy sources using wind power and solar panels
- a commitment to reduce waste
- a commitment to reduce its carbon footprint
- a commitment to 21st century working

Commercial / Public Sectors

Businesses can ensure that they minimise the pollution they emit, particularly from industrial processes and in the organisation of their overall transport arrangements.

Commercial and Public Sector Organisations have a lot to gain through consideration of air quality. For example: operational costs can often be reduced by scrutinising working practices and also by embracing alternative technologies with lower air quality impact. Being seen as ‘green’ has the potential of being immensely positive in terms of public relations.

The Public

Over 8 million people in the UK have problems breathing, roughly one member of every family. By improving air quality we can reduce the impact of poor air quality whilst helping to safeguard the health of everyone. The Council can also encourage the public to make a contribution to reducing polluting emissions in various ways such as the exciting new “Warm Zone” scheme. These initiatives can be seen on the Kirklees web site at

<http://www.kirklees.gov.uk/community/environment/environment.shtml#e2>

LOCAL AIR QUALITY MANAGEMENT

The National Air Quality Strategy and the Environment Act 1995 introduced the framework of “local air quality management”. Its main purpose is to identify and deal with local pollution hot spot areas in which members of the public are exposed to poor air quality. These could represent small locations within built up busy streets, or whole areas containing several busy roads and factories.

The objectives set for local control are for seven pollutants:

1-3 butadiene	benzene	carbon monoxide	lead
nitrogen dioxide	sulphur dioxide	fine particles (PM ₁₀)	

The objectives apply to outdoor locations where it is possible that members of the public will be exposed over sufficient time for the onset of the harmful effects (exacerbating asthma for example). Typical locations include residential areas, hospital grounds, playing fields and school fields. They do not currently apply to occupational outdoor locations. The objectives and Regulations are set out in Appendix 2.

Local Air Quality Management encompasses:

1. Air Quality Review & Assessment

Identifies local pollution hot spot areas, and determines if Air Quality Management Areas should be declared. Every authority has to report annually to DEFRA on the air quality of its area, and on actions and initiatives that are being undertaken. The most recent reports are on the Kirklees website at:

<http://www.kirklees.gov.uk/community/environment/airquality.shtml>

In Kirklees there are concerns about compliance with the objectives for NO₂ and PM₁₀. We are satisfied, and so is DEFRA, that our district complies with the objectives for lead, benzene, sulphur dioxide, carbon monoxide and 1-3 butadiene.

If an assessment identifies that any air quality objective is likely to be exceeded, then the local authority is obliged to declare an Air Quality Management Area (AQMA) for the area concerned, following which a plan would be developed for improving air quality in that area.

2. Air Quality Action Planning

Action planning is concerned with the improvement of local air quality in Air Quality Management Area(s). The framework of action planning, if required, has to satisfy legal timetable deadlines from the commencement of AQMA declaration.

3. Local Air Quality Strategy

This approach incorporates regulatory, partnership and promotional activities. A strategy aims to achieve air quality improvement in a Local Authority's area rather than just in Air Quality Management Areas. It is particularly important in areas where the air quality is borderline in relation to the standards.

WHAT WE ARE DOING NOW: LINKS TO AREAS OF COUNCIL WORK

Air Quality links in a material way to the following:



These areas are considered in the sections below.

It is also appropriate to note that all Council plans and strategies, in accordance with Council policy, are subject to the requirements of Sustainability Appraisal. Some plans require Strategic Environmental Assessment. The Council has developed a Sustainability Framework to meet these requirements. Within this framework there is an objective directly relating to air quality:

Sustainability aim	Objective
M. Minimal pollution levels	14. Reduce air, water, land, noise and light pollution

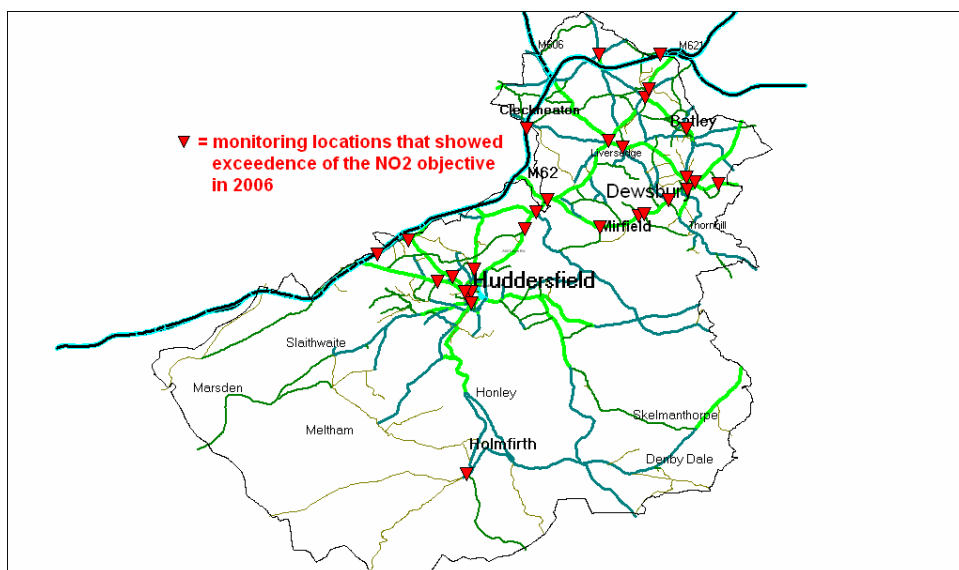
AIR QUALITY MONITORING AND ASSESSMENT

The locations of the air pollution monitoring equipment are shown in the map in the introduction. These locations have been chosen because they are believed to be the areas in Kirklees which are most likely to exceed the air quality objectives for NO₂ or PM₁₀.

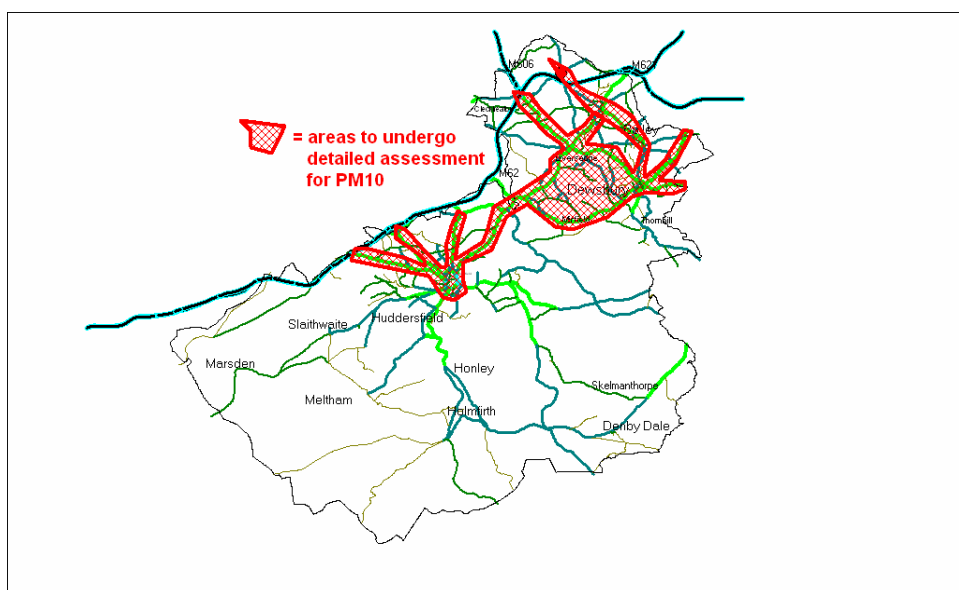
The results of this monitoring are summarised and reported to DEFRA each year. The last report in 2006 is available on the Kirklees web-site at <http://www.kirklees.gov.uk/community/environment/airquality.shtml>

It identified that there were many areas of Kirklees that require more detailed investigation and assessment. These areas are shown in the maps below:

Areas for detailed investigation for nitrogen dioxide (NO₂)



Areas for detailed investigation for small particles (PM₁₀)



POLLUTION CONTROL: INDUSTRIAL REGULATION, CLEAN AIR ACT AND NUISANCE

The Pollution and Noise Control Section of Environmental Services undertakes activities in several distinct areas which contribute to securing better air quality across Kirklees:

Industrial Pollution Prevention and Control

There are over 250 sites in Kirklees that are regulated by this authority. In addition there are more than 30 processes that are regulated by the Environment Agency, with whom this authority maintains a good working relationship.

Clean Air Act

All of the Kirklees area is covered by Smoke Control Orders. It is usually referred to as a "Smokeless Zone". This was, historically, a major step in securing good air quality when coal and heavy fuel oil were the major energy sources. Today gas is the major heating energy source, and petrol/diesel the main contributor to pollution. However the Clean Air Act remains an important regulatory tool, particularly with the new interest in wood burning as a sustainable heating choice.

Nuisance legislation (Environmental Protection Act 1990)

Dating from 1875 this legislation remains one of the strongest tools to deal with problems that cannot be dealt with by specific legislation, and is used to deal with problems arising from industries not regulated by the Industrial Pollution Prevention and Control regime or the Clean Air Act.

Advice on planning applications

Advice to the Development Control team in Planning Services with recommendations for conditions to be applied in planning approvals provides an opportunity to prevent problems arising from new developments.

In total more than 8000 cases per year are dealt with by the Pollution and Noise Control section of Environmental Services.

TOWN PLANNING AND DEVELOPMENT CONTROL

The National Air Quality Strategy and the Environment Act 1995 made air quality a “material consideration” in the planning process. The planning system is a vital player in securing improvements in air quality and in ensuring as far as possible that deterioration in air quality is avoided. The basic advice from central government is that air quality is one consideration in development and should be fully considered before a decision is made.

Guidance and advice on air quality and related planning matters

Guidance from central government in relation to planning issues is issued through Planning Policy Guidance notes (PPG) now being superseded by Planning Policy Statement (PPS). The PPS of most relevance to local air quality management is PPS23 Planning and Pollution Control, which has been updated to encompass the air quality management process. Further planning guidance relevant to local government air quality management responsibilities are set out in the following PPGs and PPSs:

- **PPG13 Transport** - (currently under revision) places greater emphasis on the integration of planning and transport, and provides guidance on planning policies to deliver the Integrated Transport White Paper objectives.
- **PPS6 Town centres and retail developments**- recognise the need to cut pollution in congested town centres while promoting their vitality, attractiveness and viability.
- **PPG4 Industrial and commercial development and small firms** -together with PPG6 advises planning authorities to promote the use of mixed-use developments.
- **PPS12 Local Development Frameworks** - requires local authorities to have regard to environmental, social, and economic considerations when preparing development plans.

Central government has produced a series of technical and general guidance documents on delivering air quality, one of which is specifically entitled Air Quality and Land Use Planning and another Air Quality and Traffic Management.

Local Planning Policy

The current statutory development plan for Kirklees is the Unitary Development Plan (UDP) adopted in March 1999. This contains the policies and proposals which are the basis for determining planning applications. Over the next few years the provisions of the UDP will be progressively replaced by the Local Development Framework (LDF). Details of the documents that will make up the LDF and the timetable for their preparation are set out in the Local Development Scheme. Details can be found on the Kirklees website at <http://www.kirklees.gov.uk/business/planning/ldf/whatisldf.shtml>

Two UDP policies refer to air quality;

EP1:

Development proposals will be considered taking into account consequences for:

- i) land quality;
- ii) **air and water quality;**
- iii) noise levels; and
- iv) visual intrusion

and

T1

Priority will be given to:

i) satisfying the needs of all sections of the community through an effectively integrated transport system with emphasis on improving public transport and encouraging a modal shift away from travel by private car;

ii) ***promoting a transport network on which it is safe to travel and which causes minimal disturbance through danger, noise and air pollution; and***

iii) co-ordinating land use change with transport provision so as to minimise the need to travel and locating new development where it can best be served by public transport and where it minimises the need for expansion of the highway network.

Policy EP1 has been included in the schedule of UDP policies which the Council proposes should not be “saved”, i.e. should not remain in force after 28 September 2007, because it does no more than repeat national policy. The Secretary of State will determine whether or not the policy is saved. If it is not, as the Council proposes, the basis for assessment of planning applications will be PPS23.

In the period before the part of the new Local Development Framework covering air quality is adopted, individual planning applications will be assessed on the basis of these UDP policies (and PPS23). Where it is thought that air quality should be taken into account in consideration of an application for development then further information will be sought to enable Environmental Services to make relevant representations and comments.

In 2005 – 2006 two refusals of planning approval were made where air quality was a factor, and several detailed air quality impact assessments were requested as part of planning applications. The air quality issues arising from Kirklees led schemes such as the proposed Kirklees Strategic Economic Zone and the Stadium Axis have also been recognised, and approaches developed to improve the effects the schemes may have on air quality.

An informal note for developers on air quality is included in the planning advice notes on the Kirklees website. This note is shown in Appendix 3.

WEST YORKSHIRE REGIONAL LOCAL TRANSPORT PLAN

The Transport Act 2000 requires the development and implementation of Local Transport Plans. In West Yorkshire this has been done jointly between all the Councils (Leeds, Wakefield, Bradford, Kirklees and Calderdale) and the Public Transport Authority / Executive (Metro). The plan was approved in 2006

Air quality is one of the 5 priority areas which are:

- Delivering Accessibility
- Tackling Congestion
- Safer Roads
- **Better Air Quality**
- Effective Asset Management.

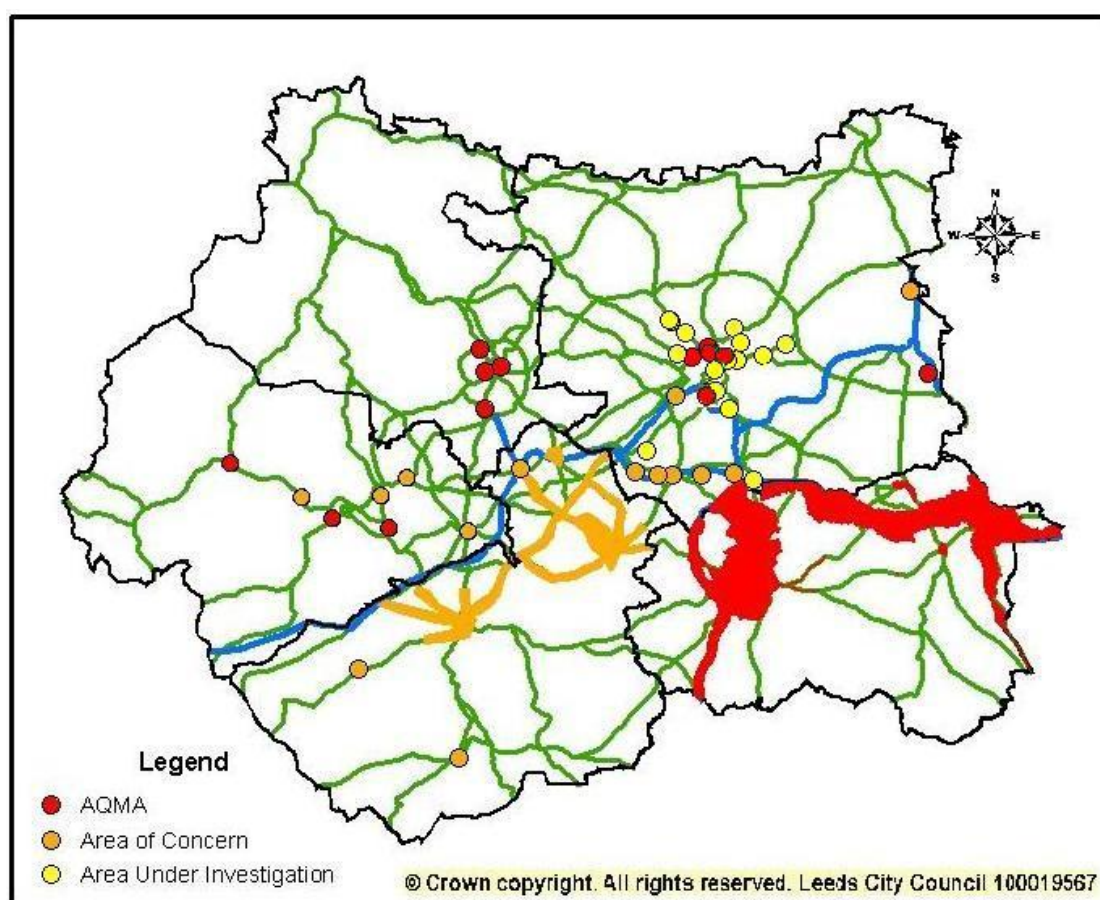
The WYLTP has its own web site which is accessible at:

<http://www.wyltp.com>

The 5 priority areas have many overlaps - for example tackling congestion should improve air quality. Kirklees has made significant inputs into the development of the plan and in monitoring its implementation.

From a planning perspective one important development has been the mapping of the AQMAs and “areas of concern” for air quality in the region. This map is regularly updated and identifies those areas where traffic related air pollution is of significance.

Kirklees is the bottom left, south west quarter of the map.



The LTP sets the following strategic elements:

AQ1 Traffic demand management measures, focusing on commuter journeys

AQ2 Encouraging more sustainable travel

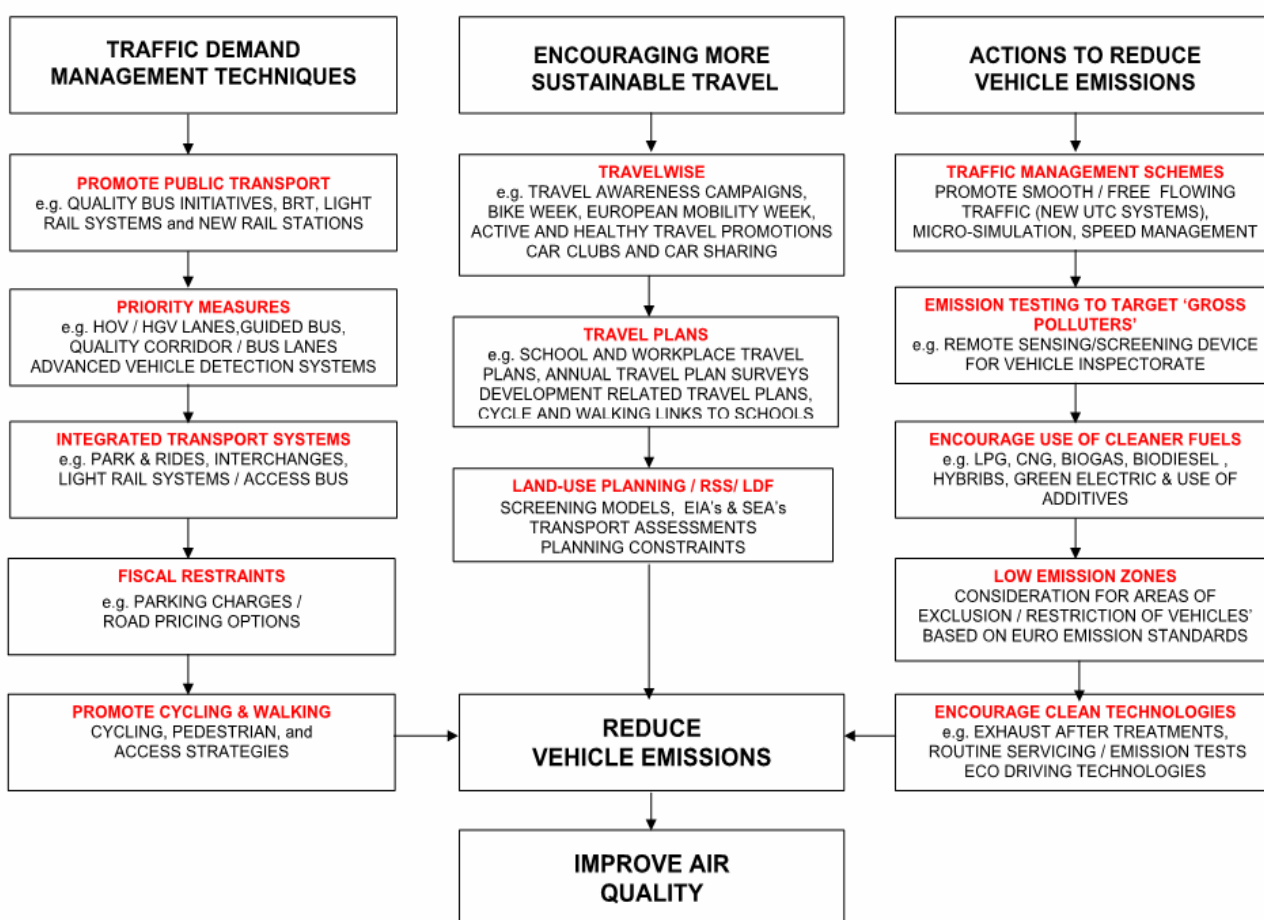
AQ3 Actions to reduce vehicle emissions

AQ4 Measures to adapt to the effects of climate change

In early 2008, the Full Cabinet unanimously agreed to adopt transport demand management policies

The broad strategic elements in the West Yorkshire Local Transport Plan have been elaborated to entail three main strands for initiatives as shown in the following diagram::

WEST YORKSHIRE TRANSPORT INITIATIVES TO IMPROVE AIR QUALITY



The arrows connecting the above options do not indicate a “flow “ between them: they only indicate the heading under which they have been grouped.

Action Plans developed as a result of declaring an AQMA encompass as appropriate some or all of these measures.

2025 KIRKLEES TRANSPORT VISION

The realisation of this Transport Vision has a key role in delivering air quality objectives, and it was approved by Kirklees Council in March 2007. **The approved document is reproduced in full in Appendix 4.**

The introduction is reproduced here:

2025 Kirklees Transport Vision

Transport and the need to travel are essential for our everyday lives, allowing people to work, play and access services. But the unrelenting growth in car use is not sustainable with worsening congestion, poor air quality, environmental damage and finite oil reserves. Additionally, public transport services are poor, suffer a negative image and are a last choice mode of travel for many people.

Against this background Kirklees Council has set an ambitious 20 year Transport Vision to allow sustainable transport systems to flourish. It will improve the wellbeing of all its citizens and the environment whilst providing the building blocks for a thriving local economy.

The vision will be reviewed regularly against changing travel patterns, technology improvements and funding opportunities.

The 2025 Kirklees Transport Vision provides:

- A A top class public transport system for everyone providing a first choice for travel for many more new customers and a real alternative to using the car.**
- B A sustainable transport system that encourages healthy citizens, promotes social inclusion and preserves and enhances the local environment.**
- C A transport network that promotes a sustainable thriving economy for businesses to invest in.**

ENVIRONMENTAL POLICIES OF KIRKLEES

The Kirklees Environment Vision 2025 adopted in January 2007 sets out a list of aims which have been adopted by the Council, the relevant one for the air quality strategy being

A4 Achieve and maintain good air quality in Kirklees

The Kirklees Environment Policy sets out the following air quality corporate objectives:

Air Quality

AQ1 Develop a Kirklees Air Quality Strategy. This will include air quality related actions, targets and good practices including those promoted by other Kirklees policies and initiatives, in order to maintain air quality where it is good and improve air quality where it is poor

AQ2 Work in partnership with other services to produce a policy framework as part of the Air Quality Strategy which will inform decision making in the areas of development control and regeneration

(Please note that AQ1 and AQ2 in the Kirklees Environment Policy are not the same as AQ1 and AQ2 in the Local Transport Plan)

EMAS Accreditation

The Council is one of the few local authorities within the UK that is accredited under the Eco Management and Audit Scheme (EMAS). As part of this accreditation Kirklees has to publish an Environment Statement which is revised every three years, in which targets and performance indicators are reported. Regular periodic audits are carried out to assess our compliance with each target. These can be viewed at:

<http://www.kirklees.gov.uk/you-kmc/kmc-policies/environmentpolicies.shtml>

There are a number of activities and targets which relate directly to air quality and these are:

1. Monitor a number of locations throughout Kirklees for levels of smoke, SO₂, NO_x, Ozone, CO, PM₁₀, and other airborne pollutants.
2. Feed into LDF and other significant developments regarding air quality
3. Undertake assessment of air quality within Kirklees
4. Provision of the Smokey Vehicle Hotline
5. Corporate PI - Number of planning applications that have been assessed for potential air quality impacts in a 12 month period

The targets set in 1 and 3 above reflect the statutory requirements which are maintained by Environmental Services under Local Air Quality Management.

One of the key requirements of EMAS is to ensure that the Council is legally compliant with all other environment legislation. All service areas have activities and targets in EMAS, set by their own EMAS management programmes that have a close link with improving air quality. The Transport section of Environment and Transportation for example has targets such as:

- When funding becomes available ensure all new refuse vehicles are fitted with EminoX exhausts.
- Continue phasing out LPG as new diesel engines become cleaner.
- As from October 2006 vehicles must be manufactured with engines which comply with Euro 4 standards and Kirklees has included this in the specification for all new vehicle tenders.
- The delivery of “safer and greener” driver training programmes

Climate change and air quality

Local air quality management is concerned with the mitigation and improvement of air quality within a local authority’s area. Decreasing emissions of global pollutants such as carbon dioxide and ozone are not its primary objective.

However recently there has been recognition by central government - and in the 2007 Royal Commission on Environmental Pollution report “The Urban Environment” - that much of the work done in local air quality improvement carries benefits for the reduction of CO₂ emissions and decreasing levels of ozone and vice versa.

ECONOMIC REGENERATION and PARTNERSHIPS

This Air Quality Strategy has a major role in helping deliver Kirklees Council's Vision for "a high quality environment offering the best of rural and urban living" as set out in the Community Strategy. The Local Area Agreement sets targets for this and one of its blocks "Economy and Enterprise" is the responsibility of the Local Public Service Board "Regeneration and Sustainable Development".

Within this Local Area Agreement "Economy and Enterprise" block of outcomes and indicators there is a key outcome of "An economy more capable of environmentally sustainable long term growth with less need to travel particularly by private car". Associated with this are very relevant indicators and targets such as energy reduction and congestion reduction. These are set out in Appendix 5.

There has already been close consideration of the effects on air quality in major schemes such as the proposed Kirklees Strategic Economic Zone, the Stadium Axis proposals and other larger proposed developments. Sharing of information and good inter-service co-operation will ensure that air quality as an issue is considered at the earliest possible opportunity and then take its place alongside other material considerations.

Advice from DEFRA consultants at the University of the West of England (Bristol) maintains that good developments in areas of poor air quality can help support actions to improve air quality. Several local authorities have also agreed planning obligations with developers for air quality initiatives, and work with Planning Services is ongoing to provide criteria and examples of this approach.

Information and advice on the air quality aspects of regeneration proposals is available from Kirklees Scientific Services (telephone 01484 226476)

APPENDIX 1

POLLUTANTS and HEALTH EFFECTS

BENZENE

Benzene is a known human carcinogen.

CARBON MONOXIDE

Carbon Monoxide is a colourless, odourless poisonous gas. It affects the transport of oxygen around the body by the blood. At very high levels, it can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease.

LEAD

Lead is a cumulative poison to the central nervous system and is particularly detrimental to the mental development of children.

NITROGEN DIOXIDE

Nitrogen Dioxide gas irritates and inflames the airways of the lungs. This irritation causes a worsening of symptoms of those with lung or respiratory diseases.

PARTICULATES (PM₁₀)

Fine particles (<10 micron) can be breathed deeply into the lungs and thus are more likely to have a toxic effect than larger dust particles. Particles are associated with health effects including increased risk of heart and lung disease. In addition, they may carry surface-absorbed carcinogenic compounds into the lungs. Expert opinion is that there is no threshold concentration below which particulates have no effect on health.

OZONE

Like Nitrogen Dioxide, high levels of Ozone can irritate and inflame the lungs and is responsible for the early death of between 700 to 12,500 people a year in the UK. It can also cause eye irritation, migraine and coughing.

1-3-BUTADIENE

1-3-Butadiene is a known carcinogen.

SULPHUR DIOXIDE

Short-term exposure to high levels of sulphur dioxide may cause coughing, tightening of the chest and irritation of the lungs and is estimated to bring forward 3,500 deaths annually in the UK.

With the exception of lead and ozone all of these pollutants are emitted from combustion processes, from domestic, commercial, industrial and vehicle engines.

APPENDIX 2

AIR QUALITY OBJECTIVES AND AIR QUALITY BANDINGS

Air Quality (England) Regulations 2000

<i>Substance</i>	<i>Air quality objective levels</i>	<i>Air quality objective dates</i>
Benzene	5 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2010
	16.25 micrograms per cubic metre or less, when expressed as a running annual mean	31st December 2003
1-3 - Butadiene	2.25 micrograms per cubic metre or less, when expressed as a running annual mean	31st December 2003
Carbon monoxide	10 milligrams per cubic metre or less, when expressed as a running 8 hour mean	31st December 2003
Lead	0.5 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2004
	0.25 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2008
Nitrogen dioxide	200 micrograms per cubic metre, when expressed as an hourly mean, not to be exceeded more than 18 times a year	31st December 2005
	40 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2005
PM ₁₀	50 micrograms per cubic metre or less, when expressed as a 24 hour mean, not to be exceeded more than 35 times a year	31st December 2004
	40 micrograms per cubic metre or less, when expressed as an annual mean	31st December 2004
Sulphur dioxide	125 micrograms per cubic metre or less, when expressed as a 24 hour mean, not to be exceeded more than 3 times a year	31st December 2004
	350 micrograms per cubic metre or less, when expressed as an hourly mean, not to be exceeded more than 24 times a year	31st December 2004
	266 micrograms per cubic metre or less, when expressed as a 15 minute mean, not to be exceeded more than 35 times a year	31st December 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 numerical index	Health effect
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.

A report is sent to the Huddersfield Examiner each Monday providing information about the previous 7 days pollution levels; each working day at 2pm a report is sent to the Press Association about the previous 24 hours pollution levels in Kirklees and this normally appears in the Yorkshire Post weather section.

Kirklees, under EMAS accreditation targets 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.

In 2006 Kirklees had 19 days poor air quality per monitoring station compared to the national average of 41 days poor air quality per station

APPENDIX 3

ADVICE NOTE FOR DEVELOPERS ON AIR QUALITY

WHY SHOULD I READ THIS?

Air quality was made a material consideration in the planning process by the Environment Act 1995 and subsequent National Air Quality Strategy. Air Quality Objectives (AQOs) have been set for seven air pollutants in the Air Quality (England) Regulations 2000 and subsequent regulations.

If any air quality objective is likely to be exceeded where there are “relevant receptors” such as houses, schools, hospitals etc. then the Council is under a legal obligation to declare an “Air Quality Management Area” (AQMA) where improvements in air quality must be sought by any available means.

New developments can have an impact on air quality by the generation of additional pollution, either directly by new on-site processes or by having an effect on traffic levels and congestion. Therefore some planning applications will need to consider the effect that the development will have on air quality, or indeed the effect that local air quality will have on the development.

WHAT IS AN AIR QUALITY ASSESSMENT?

Advice on environmental impact assessment is given in Planning Policy Statement 23 “Planning and Pollution Control”. The full extent of an air quality assessment should be discussed with Kirklees’ Scientific Services section of Environmental Services, in pre-application discussions. In general an air quality impact assessment will comprise an assessment of pollution levels in the locality of the proposed development and predictions of pollution levels after the development is in place. It may also include measures to mitigate or minimise the air quality impacts of the development.

DO I NEED AN AIR QUALITY ASSESSMENT?

Developments in many areas of Kirklees will not require an air quality assessment. Some locations in Kirklees actually exceed the annual average air quality objective for nitrogen dioxide (NO₂), but this so far has not been a problem because there are no relevant receptors in those areas. In these locations it is possible that a recommendation for refusal of planning permission, on air quality grounds, would be made for proposed residential developments. The main source of NO₂ in Kirklees is road traffic and some locations in Kirklees, near busy roads are borderline for complying with the NO₂ air quality objective. New developments in or near these areas could increase NO₂ pollution levels above the air quality objective level. In these circumstances an air quality assessment would be required.

The location of these sensitive areas has been published in the Local Transport Plan and in our annual reports to DEFRA. These reports can be accessed on Kirklees Council’s web site at

www.kirklees.gov.uk/community/environment/airquality

It is recommended that you contact Environmental Services (Scientific Services) to discuss whether an air quality assessment will be necessary.

WHAT INFORMATION DO I NEED TO PROVIDE?

This work requires detailed information, particularly about traffic movements, and it will normally link closely to transport assessments. For larger developments this information will be part of an Environmental Impact Assessment. The general requirements are outlined in the template on the next page

WHEN SHOULD I DO THIS?

You should identify if an air quality assessment is necessary in pre-application discussions with Planning Services and Environmental Services. The assessment itself may take some time to compile and the extent and methodology should be agreed in scoping discussions with Environmental Services. The full assessment should be submitted with your planning application.

WHERE CAN I GET FURTHER INFORMATION?

Further information is available from the following sources:

Web resources

www.airquality.co.uk

www.uwe.ac.uk/aqm/

www.defra.gov.uk/environment/airquality/index.htm

<http://www.communities.gov.uk/index.asp?id=1143916>

Kirklees Council Contacts

Polution and Noise Control (tel: 01484 221349)

Environmental Services

Flint Street

Fartown

Huddersfield

HD1 6LG

OUTLINE OF EXPECTED CONTENTS OF AN AIR QUALITY IMPACT ASSESSMENT

1. **Baseline conditions at time of commencement**
Background pollutant levels
Existing traffic flows – in AADT, speeds, effects on junctions (which may be some distance from the development)
Relevant sources of pollution affecting the area
Relevant monitoring information for the area, or justified surrogate information
2. **Business as usual scenario**
Prediction of pollutant levels at estimated time of completion of the development if the development had not taken place and for later years. To date it has been normal practice to predict forward to 2010
3. **Changes arising due to the development**
In construction phase
Quantified effects on traffic flows –increased (AADT), speeds, effects on junctions
Any additional sources of relevant pollution
4. **On completion and in 2010**
Quantified effects on traffic flows –increased (AADT), speeds, effects on junctions
Any additional sources of relevant pollution
5. **Relevant receptors in the area**
Locations where people might be affected by the changes in air quality associated with the development
6. **Assessment of the impact**
Quantitative assessment of the air quality impacts using an agreed model (e.g. DMRB)
Other assessments air quality impacts e.g. dust in construction phase.
7. **Any proposals regarding adverse impacts and their mitigation**

Sources of information should be referenced or agreed with Kirklees.

APPENDIX 4

2025 KIRKLEES TRANSPORT VISION

Transport and the need to travel are essential for our everyday lives, allowing people to work, play and access services. But the unrelenting growth in car use is not sustainable with worsening congestion, poor air quality, environmental damage and finite oil reserves. Additionally, public transport services are poor, suffer a negative image and are a last choice mode of travel for many people.

Against this background Kirklees Council has set an ambitious 20 year Transport Vision to allow sustainable transport systems to flourish. It will improve the wellbeing of all its citizens and the environment whilst providing the building blocks for a thriving local economy.

The vision will be reviewed regularly against changing travel patterns, technology improvements and funding opportunities.

The 2025 Kirklees Transport Vision provides:

- A A top class public transport system for everyone providing a first choice for travel for many more new customers and a real alternative to using the car.**
- B A sustainable transport system that encourages healthy citizens, promotes social inclusion and preserves and enhances the local environment.**
- C A transport network that promotes a sustainable thriving economy for businesses to invest in.**

Rob Vincent Chief Executive Kirklees Council 28 March 2007	Councillor Robert Light Lead Kirklees Council 28 March 2007
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2025 Kirklees Transport Vision

A A top class public transport system for everyone providing a first choice for travel for many more new customers and a real alternative to using the car.

- A1 Publicly accountable bus services so that they serve local needs and improve accessibility.
- A2 Priority for public transport modes on all congested core routes and motorways.
- A3 Comprehensive rail network with regular rapid services linking directly key local, regional and national destinations with sufficient capacity to meet local needs.
- A4 An extended Bus Rapid Transit network linking Kirklees with other districts.
- A5 Fully integrated hub & spoke public transport system, with feeder services linking into core routes for bus, rail and taxi.
- A6 Simple through ticketing system for bus, rail and taxi.
- A7 Integrated park & ride facilities for bus and rail.
- A8 A fare structure that encourages public transport use.
- A9 Enhanced passenger facilities at local and strategic locations with improved waiting facilities, real-time information and comfortable, clean, modern vehicles with easy access for all.

B A sustainable transport system that encourages healthy citizens, promotes social inclusion and preserves and enhances the local environment.

- B1 Increased use of sustainable modes of travel to safeguard the environment.
- B2 Continued road casualty reduction with 20mph zones in residential areas and around schools.
- B3 Local services are promoted and local produce used, reducing the need to travel.
- B4 Regenerated town and district centres as pleasant places for people to live, work and shop.
- B5 All Kirklees schools have enforceable, achievable and effective Travel Plans.
- B6 Increased walking and cycling journeys through encouragement and by creating safer routes.
- B7 Improved accessibility for all highway users.
- B8 Targeted demand management & parking restraints to suppress growth in car usage.

C A transport network that promotes a sustainable thriving economy for businesses to invest in.

- C1 Create a range of sustainable transport networks that support economic development.
- C2 Flexible and sustainable working practices for all employees in the district e.g. Travel Plans, flexible working hours, electronic communication, etc
- C3 Improved transport infrastructure to meet local business needs and sustain a vibrant economy.
- C4 A regional approach to transport through the “Northern Way” strategy.
- C5 First-rate transport links with the regional economies.
- C6 The Leeds Road Strategic Economic Zone in Huddersfield is fully developed.
- C7 Land for future sustainable transport investment is safeguarded.
- C8 Tackle local congestion hotspots by increasing highway capacity to assist regeneration
- C9 Support the widening of the M62 to improve local congestion problems providing it is done in an environmentally sustainable manner with due consideration to local communities.
- C10 Understand the current and future impact of congestion on economic performance and the role of demand management measures in tackling congestion.

APPENDIX 5

KIRKLEES COMMUNITY STRATEGY AND LOCAL AREA AGREEMENT

Various outcomes are sought which have a link to air quality. The most relevant come under the “Economy & Enterprise Block”:

For example

An economy more capable of environmentally sustainable long term growth with less need to travel particularly by private car

- .Reduction in levels of congestion as measured by:
 - a) Person journey times in selected travel corridors
 - b) Morning peak traffic volumes crossing a cordon around Huddersfield and Dewsbury
- Increase use of and satisfaction with public transport as measured by:-
 - a) increase in bus use
 - b) increase in rail use
 - c) satisfied with bus travel
 - d) improvement in bus punctuality

The relevant parts of the Kirklees Community Strategy and Local Area Agreement can be seen at:

<http://www.kirkleespartnership.org/publications/communitystrategy/LocalAreaAgreement.pdf>

and:

<http://www.kirkleespartnership.org/publications/communitystrategy/communitystrategy2006-2008.pdf>