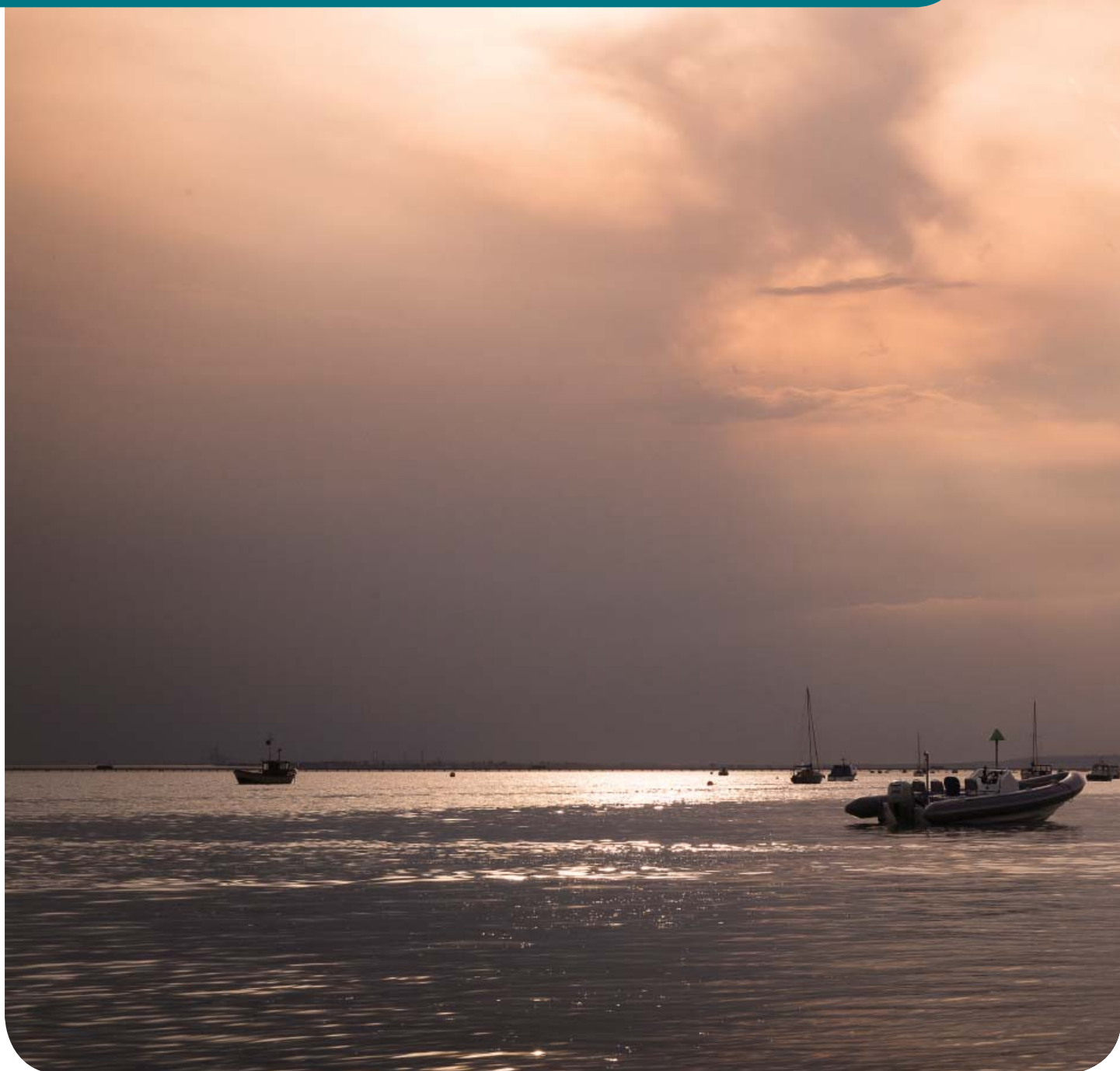


Air Quality Action Plan

Technical Report

October 2017



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Executive Summary

Taking action to improve air quality is crucial in order to improve the health of the population.

There is growing evidence that air pollution is a significant contributor to preventable ill health and early death. These health impacts impose a cost on the economy estimated to run into billions.

This document has been produced by Southend-on-Sea Borough Council and constitutes our first Air Quality Action Plan (AQAP). It has been triggered primarily to address the air quality concerns associated with the Air Quality Management Area (AQMA) declared along a stretch of the A217, Prince Avenue, Southend in November 2016.

Its secondary purpose is to address air quality across the whole Borough via so-called “soft” indirect actions.

It is a statutory duty for the Council to develop an AQAP following the declaration of an AQMA in response to an identified breach of the annual mean national air quality objective for nitrogen dioxide.

In Southend the primary source of air pollution is road traffic and we have assessed the contribution each category of vehicle type makes to the overall pollution burden.



Data from source apportionment analyses confirm that diesel vehicles are the main contributor of pollution on roads in and adjacent to the Borough.

The emphasis of the plan is to firstly, develop measures that will provide the necessary emissions reductions to achieve the air quality objectives within specified timescales, and, secondly, to act as a live document which can be continually reviewed and developed to ensure current measures are progressing and new measures are brought forward.

This AQAP has been written to incorporate the following priority work areas:

1. Southend Intelligence Hub - SMART City Journey and Digital Strategy
2. Strategic Planning and Transport Policy
3. Public Health (and Raising Awareness)
4. Sustainable Innovation
5. Land Use Planning and Development Control
6. Low Emission Air Quality Strategy (LEAQS)
7. Community Engagement

The vision of the Council is to “Create a Better Southend” supported by the five corporate aims of a “Clean, Safe, Healthy and Prosperous Southend, led by an excellent Council”. These values will be

| | |
|--|-----------|
| 1. Introduction | 5 |
| 1.1. Legislative Background | 5 |
| 2. Action Planning | 6 |
| 2.1. The Action Planning Process | 6 |
| 3. Source Apportionment | 7 |
| 3.1. Locally Generated Sources | 7 |
| 3.2. Estimated Background Concentrations | 9 |
| 3.3. Southend Urban Area Agglomeration Zone | 10 |
| 3.4. Zone Status | 10 |
| 4. The Nature and Extent of the Challenge at the Bell Junction AQMA | 11 |
| 5. Steering Group and Consultation | 13 |
| 6. Priorities and Actions | 14 |
| 6.1. Southend Intelligence Hub – SMART City | 14 |
| 6.1.1 SMART City and Digital Strategy | 14 |
| 6.2. Strategic Planning and Transport Policy | 15 |
| 6.2.1 Local Transport Plan (LTP3) | 15 |
| 6.3. Public Health and Raising Awareness | 19 |
| 6.3.1 Public Health Outcomes Framework | 19 |
| 6.4. Land Use Planning and Development Control | 22 |
| 6.4.1. Supplementary Planning Guidance | 22 |
| 6.4.2. Community Infrastructure Levy and Section 106 Agreements | 23 |
| 6.4.3. Green Infrastructure | 24 |
| 6.5. Sustainable Innovation | 25 |
| 6.5.1. Urban Innovation Action | 25 |
| 6.5.2. Low Carbon Energy and Sustainability Strategy | 25 |
| 6.6 Low Emission Air Quality Strategy | 26 |
| 6.6.1 Production and Implementation of Low Emission Air Quality Strategy | 26 |
| 6.7 Community Engagement | 27 |
| 6.7.1 Community Engagement & Corporate Aims | 27 |

Figures and Tables

| | |
|---|----|
| Figure 1. Source Apportionment NO _x | 7 |
| Figure 2. Source Apportionment PM ₁₀ | 8 |
| Figure 3. Agglomeration Zone Source Apportionment | 10 |
| Figure 4. AQMA The Bell Junction A127 | 12 |
| Table 1. DEFRA Background Annual Mean Pollutant Concentration | 13 |

Air Quality Action Plan

1. Introduction

Taking action to improve air quality is crucial in order to improve the health of the population. There is growing evidence that air pollution is a significant contributor to preventable ill health and early death. These health impacts impose a cost on the economy estimated to run into billions.

The most immediate air quality challenge is tackling the problem of nitrogen dioxide (NO₂) concentrations around roads – the only statutory air quality obligation the UK is currently failing to meet.

This document has been produced by Southend-on-Sea Borough Council and constitutes our first Air Quality Action Plan (AQAP). It has been triggered primarily to address the air quality concerns associated with the Air Quality Management Area (AQMA) declared along a stretch of the A217, Prince Avenue, Southend in November 2016. Its secondary purpose is to address air quality issues by a wider, cross Borough approach with so-called “soft” indirect actions.

It is a statutory duty for the Council to develop an AQAP following the declaration of an AQMA in response to an identified breach of the annual mean air quality objective for nitrogen dioxide.

The vision of the Council is to “Create a Better Southend” supported by the five corporate aims of a “Clean, Safe, Healthy and Prosperous Southend, led by an excellent Council”. These values will be reflected in and provide a clear focus for the actions outlined in this document.

1.1 Legislative Background

Air quality limit values for the protection of human health have been set by two EU Air Quality Directives 2008/50/EC and 2004/107/EC. These were transposed into UK Law via the Air Quality Standards Regulations 2010.

Action is then driven by the UK’s Air Quality Strategy which sets out equivalent Air Quality Objectives (AQOs).

Part IV of the Environment Act 1995 places a statutory duty on all local authorities in the UK to periodically review and assess air quality within their areas. This is to determine the likelihood of complying with prevailing health based air quality objectives for a number of pollutants. The UK Air Quality Strategy, Policy and Technical Guidance provide the over-arching themes for local air quality management in the UK.

Local Authorities that identify a breach of any of the air quality objectives in their area are required to formally declare an Air Quality Management Area. Once declared the authority has a duty under Section 84 (2) of the Act to produce an Air Quality Action Plan (AQAP).

Local Authorities are not legally obliged to meet the air quality objectives but they must be able to demonstrate that they are working towards the objectives.

2. Action Planning

In order to effectively discharge duties under the Local Air Quality Management regime the Council is required to report on air quality throughout the Borough. This function is undertaken by Regulatory Services.

Regulatory Services will continue to ensure that ambient air quality is monitored after the implementation of this AQAP. The team will report regularly on progress, both through the local air quality management reporting schedule to DEFRA and via the Council's Corporate Priority Actions Protocol: Action 1718 PLACE PPC03.

2.1 The Action Planning Process

Action planning is an essential part of the local air quality management process, providing a practical opportunity for improving air quality in areas where review and assessment has shown that national measures will be insufficient to meet one or more the air quality objectives. A suitable air quality action plan should include the following:

1. Quantification of the source contributions to the pollution burden for example by vehicle categories. This allows action plan measures to be targeted more effectively.
2. Evidence that available options have been considered on the grounds of cost, feasibility and potential scale of impact.
3. Quantification of expected improvement in air quality.
4. Confirmation of how the Council will discharge its powers and also work in partnership with other stakeholders in pursuit of the relevant air quality objective.
5. Clear timescales within which the authority and other stakeholders propose to implement the various measures contained in the plan.
6. Quantification of the expected impacts of the proposed measures, and where possible, an indication as to whether these will be sufficient to demonstrate compliance with the objective/s.
7. Identification of how the Council intends to monitor and evaluate the effectiveness of the plan.
8. Prompt the formation of a Steering Group to enable and drive forward all of the above.

The emphasis of AQAPs should be to firstly, develop measures that will provide the necessary emissions reductions to achieve the air quality objectives within specified timescales, and, secondly, to act as a live document which can be continually reviewed and developed to ensure current measures are progressing and new measures are brought forward.

This AQAP has been written to incorporate the following priority work areas:

1. Southend Intelligence Hub - SMART City Journey and Digital Strategy
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4. Land Use Planning and Development Control
5. Sustainable Innovation
6. Low Emission Air Quality Strategy (LEAQS)
7. Community Engagement

3. Source Apportionment of Traffic Emissions (AQMA and Agglomeration Zone)

Source apportionment is the process of identifying the contribution each individual source of a pollutant such as nitrogen dioxide makes to the overall level. These consist of background sources and locally generated sources.

3.1 Locally Generated Sources

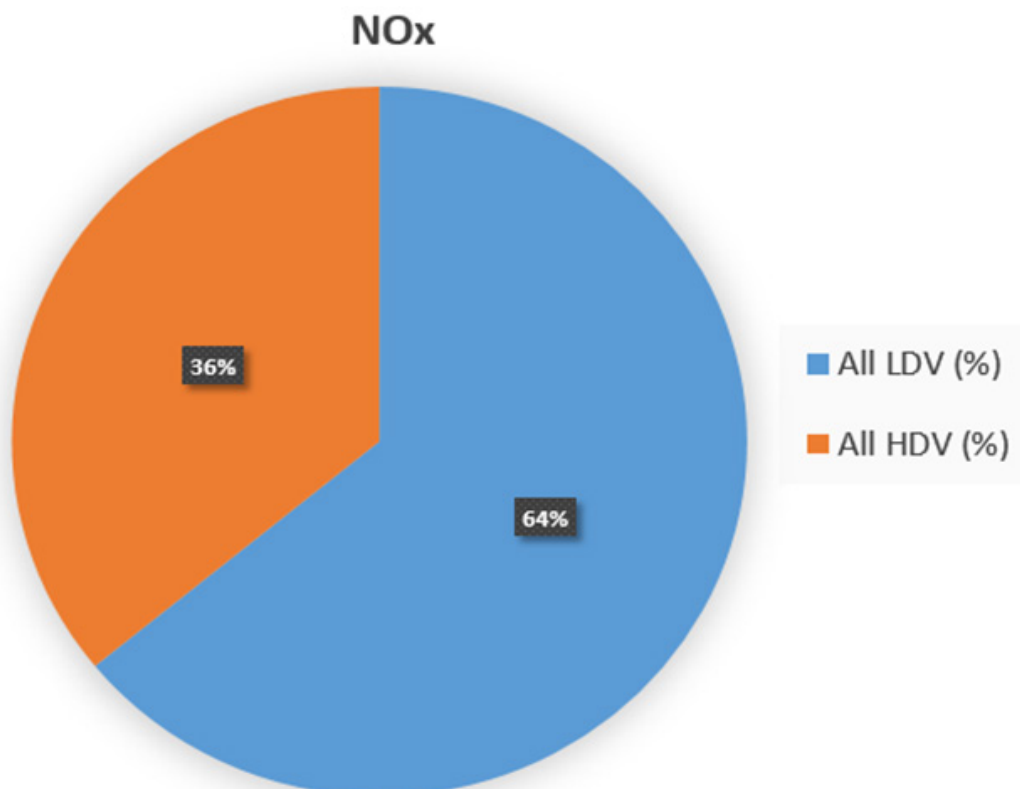
In the Borough the primary source is traffic and we have assessed the contribution each category of vehicle type makes to the overall pollution burden.

Local traffic data was used to calculate detailed source apportionment of vehicle types. The default fleet compositions in the DEFRA Emissions Factor Toolkit were used to derive emissions and give an estimation of source contributions for the following vehicle types:

1. All diesel/petrol Light Duty Vehicles (LDVs) including:
 - Motorbikes
 - Petrol/Diesel Cars
 - Light Goods Vehicles
2. All diesel/petrol Heavy Duty Vehicles (HDVs) including:
 - Rigid Heavy Goods Vehicles (HGVs)
 - Articulated HGVs
 - Buses/Coaches.

Figures 1 and 2 below show the source apportionment of traffic emissions around the modelled link that predicts the highest emission rates around The Bell Junction AQMA, Prince Avenue A127, near to residential receptors.

Figure 1. NOx Source Apportionment for AQMA (Prince Avenue East, Westbound)



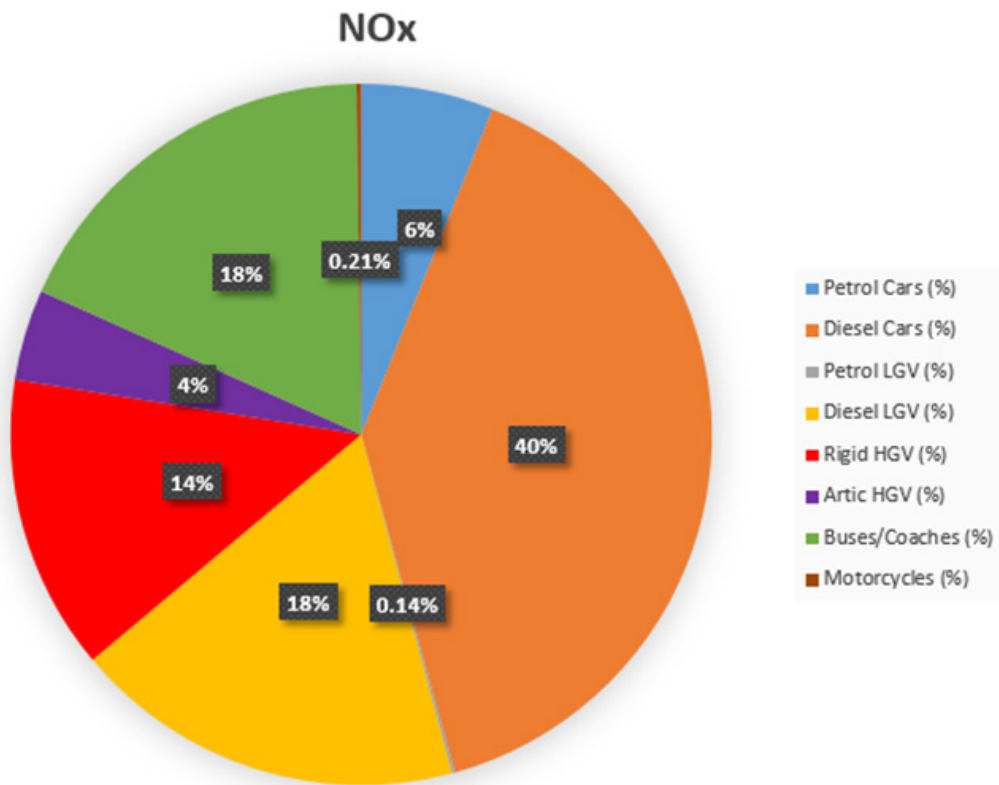
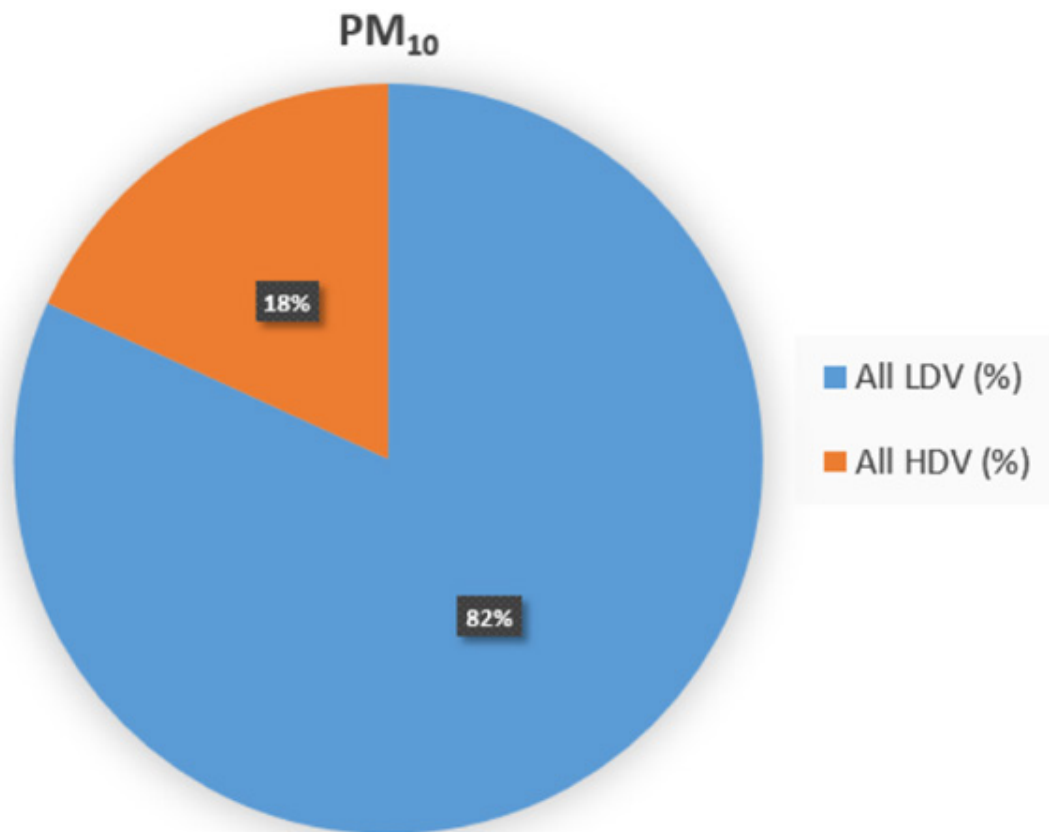
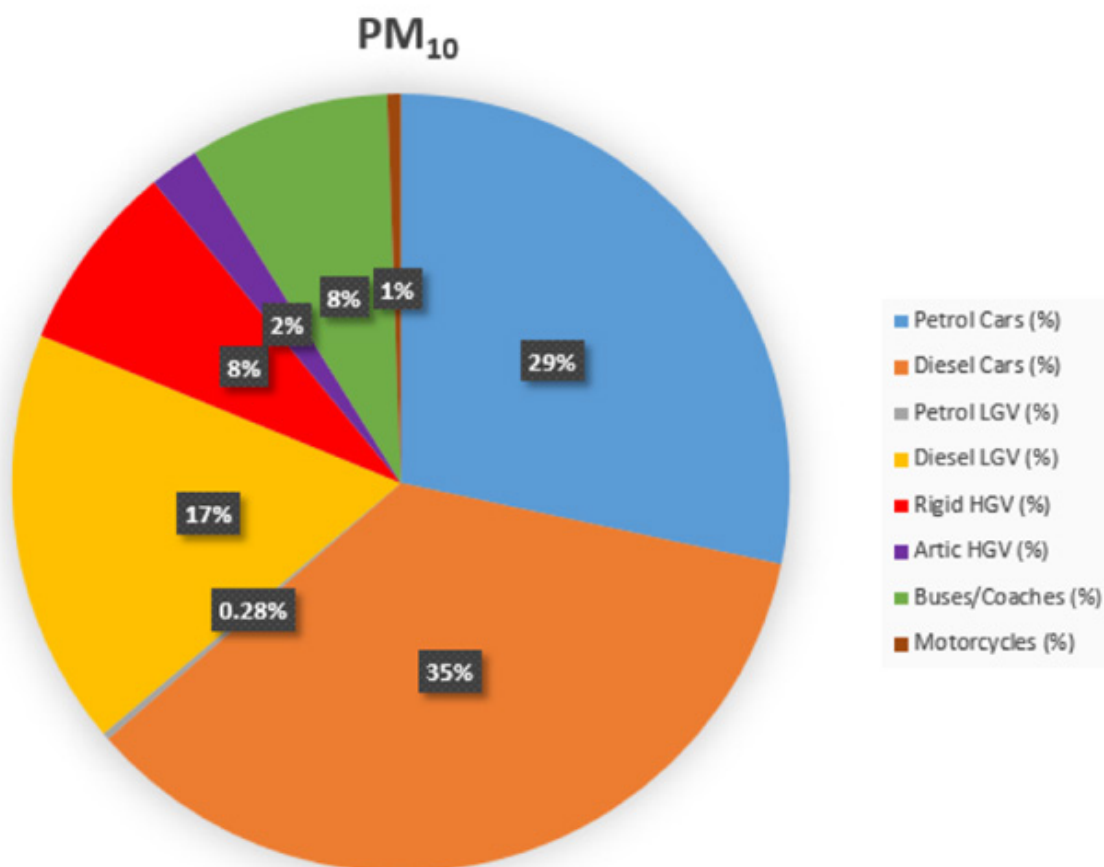


Figure 2. PM₁₀ Source Apportionment for AQMA (Prince Avenue East, Westbound)





Figures 1 and 2 show that approximately 36% of NO_x emissions and 18% of PM₁₀ emissions from traffic travelling on Prince Avenue are from HDVs. Figure 1 shows that the majority of NO_x emissions are from diesel fuelled vehicles (diesel cars - 40%, diesel LGVs - 18% and buses/coaches - 18%). Petrol fuelled cars only emit 6% of NO_x emissions at this location. Figure 2 shows that the highest percentage of PM₁₀ emissions is attributed to diesel cars (35%), petrol cars (29%) and diesel LGVs (18%).

3.2 Estimated Background Concentrations

DEFRA has made estimates of background pollution concentrations on a 1km² grid for the UK for seven of the main pollutants including NO₂, PM₁₀ and PM_{2.5}. Base year data was for 2011 and projections are made for years 2011 to 2013. Table 1 shows the estimated background values of the pollutants for the year 2015.

Table 1. DEFRA Mapped Background Annual Mean Pollutant Concentrations (µg/m³).

| Grid Square Centre Coordinates 586500, 187500 | 2015 |
|--|------|
| Pollutant | |
| Nitrogen Dioxide, NO ₂ | 21.6 |
| Nitrogen Oxides, NO _x | 32.2 |
| Particulate Matter PM ₁₀ | 17.6 |
| Particulate Matter PM _{2.5} | 2.3 |

The background source component comprises emissions from the following sectors:

- Domestic (including heating and cooking)
- Commercial and Industrial (heating)
- Other transport sources such as railways, airports and shipping
- Small Industrial processes such as those regulated under the environmental permitting regime
- Minor roads.

3.3 Southend Urban Area Agglomeration Zone - Source Apportionment

The Southend Urban Area Agglomeration Zone is made up of Southend-on-Sea Borough Council, Rochford District Council and Castle Point Borough Council. It is one of 28 national zones each with its own DEFRA action plan setting out national, regional and local actions.

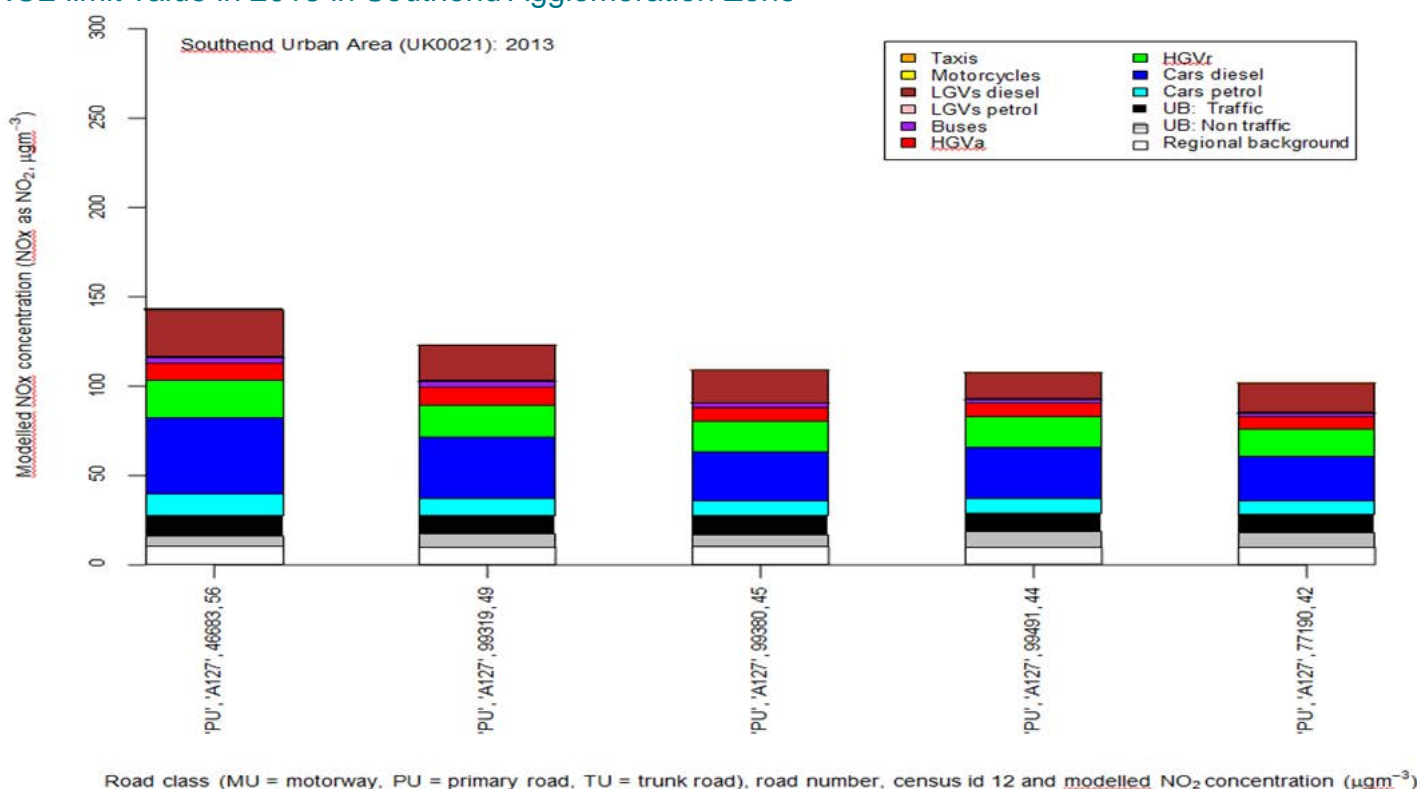
Local road traffic was the dominant source of nitrogen dioxide for the reference year of 2013. The largest contribution was from cars at the location of maximum exceedance with a contribution of 54.4 μgm^{-3} of NO_x out of a total of 142.9 μgm^{-3} . Cars, LGVs, rigid HGVs and articulated HGVs were important sources on the primary roads with the highest concentrations. For all road links concentrations of NO_x from diesel cars were approximately four times greater than NO_x emissions from petrol cars. NO_x concentrations from petrol LGVs are a small component of total NO_x concentrations and less than 2% of total NO_x from LGVs.

Data from both source apportionment analyses confirm that diesel vehicles are the main contributor of NO_x on our roads.

3.4 Zone Status

The assessment undertaken for the Southend Urban Area Agglomeration Zone indicates that the annual limit value was exceeded in 2013 but is likely to be achieved before 2020 through the introduction of local measures included in the baseline.

Figure 3. Annual mean roadside NO_x source apportionment for all roads exceeding the annual mean NO₂ limit value in 2013 in Southend Agglomeration Zone



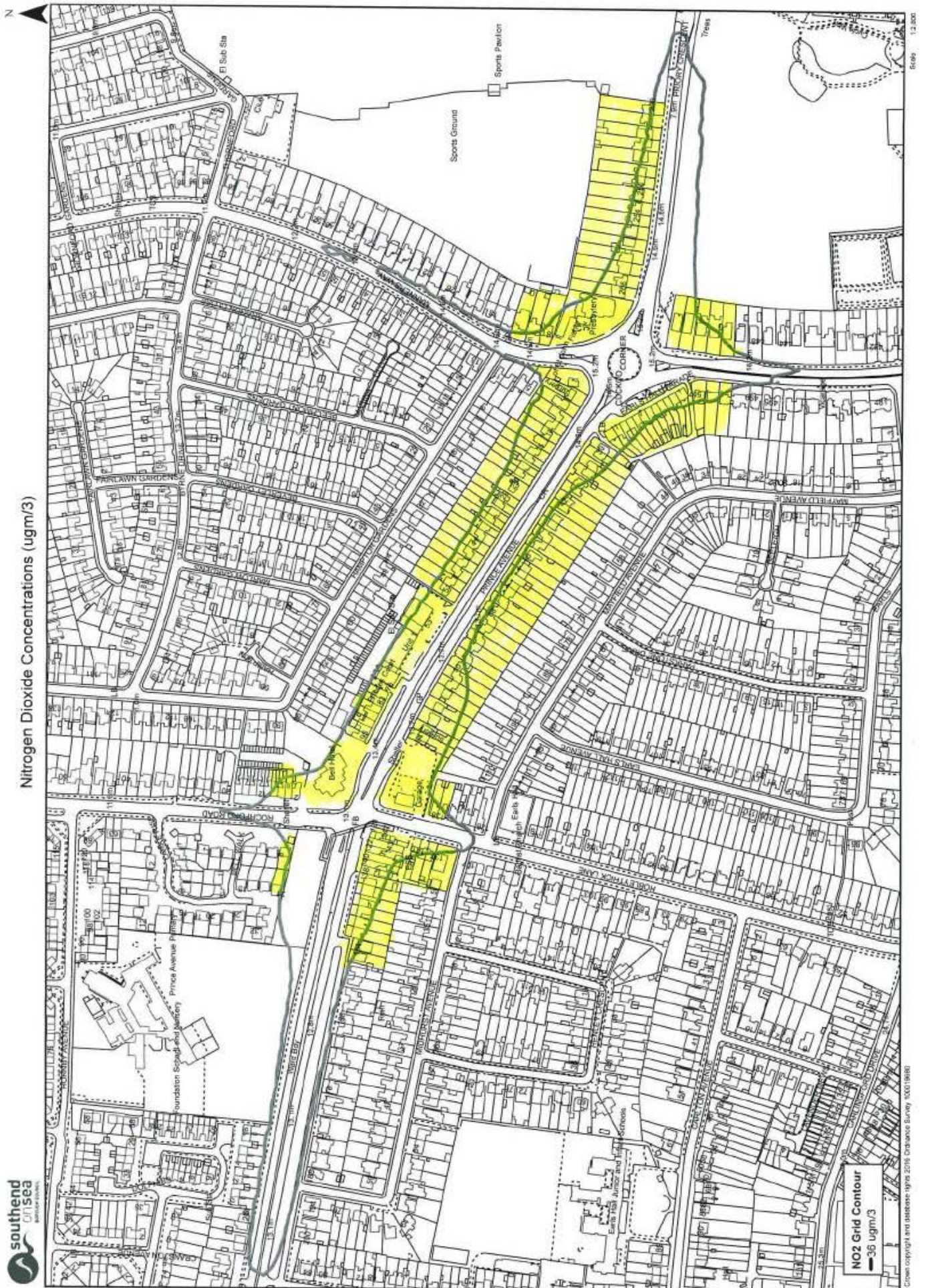
4. The Nature and Extent of the Challenge at The Bell Junction AQMA

The air quality objective being exceeded at this location is the annual mean for nitrogen dioxide (NO₂) which is 40µg/m³.

Real time automatic monitoring as part of the Detailed Assessment undertaken in 2016 confirms an (annualised) annual mean of 44µg/m³. Therefore, the minimum air quality improvement required is 4µg/m³.

There are c125 residential units included in the AQMA boundary. Based on the Office for National Statistics there were on average 2.4 people per household in the UK in 2015. Therefore it is estimated that there are c300 people living within the AQMA boundary.

Figure 4. The A127 Bell Junction AQMA: Boundary in Green; Properties Affected in Yellow



5. The Consultation Process and Steering Group

Stakeholder consultation is a fundamental aspect of Local Air Quality Management, and a legal requirement under Schedule 11 (s90) of the Environment Act 1995.

The consultation process should be collaborative based and provide the way to better prepare and develop the action plan. It provides participants and, importantly, the public, with the information they need to contribute in a meaningful and constructive way.

The public health effects of poor air quality are well documented and DEFRA expect the highest level of support across the local authority (e.g. Chief Executive and Council level) to ensure all parts of the local authority are working effectively together.

The Steering Group includes all parties involved in developing the action plan and related strategies and plans:

Potential Internal Stakeholders:

- Strategic Transport Policy
- Public Health
- Planning and Development Control
- Energy and Sustainability
- Procurement
- Economic Development
- Portfolio Holder

Potential External Stakeholders:

- Transport Companies
- Key Freight Operators
- Key Local Businesses
- Local Environment/Transport Group
- Chambers of Commerce
- Local Community Representatives

6. Priority Work Areas and Actions

6.1 Southend Intelligence Hub SMART City Journey

6.1.1 Southend Intelligence Hub - SMART City Journey and Digital Strategy

The connection of the Council's 31 Urban Traffic Control sites to the newly deployed pan borough full fibre network presents the opportunity to monitor a raft of traffic and environmental characteristics simultaneously in real time. The intention is to relay data captured this way back to the Council's Intelligence Hub and host it for analytical purposes within the CISCO City Connected Digital Platform. The provision of the Intelligence Hub and the ability to cross reference data captured in this way is key to Southend's SMART CITY ambitions. As step one, the Intelligence Hub will see the co-location of three core 24/7 services: public space CCTV, traffic management and telecare.

Funding for the Intelligence Hub has been approved and subject to the final business case the Hub will be built in 2018/19.

The Hub will:

- Act as "eyes and ears" of the Borough, watching and monitoring activity.
- Act as the City Intelligence and Coordination Centre, responding in anticipation of incidents escalation.
- Enable the Council to generate income through the selling of services capable of being delivered through SIH.

SIH will see the upgrade and integration of systems and services provided within a modern environment on a 24/7 basis. It will also have the capability to facilitate an ambitious undertaking and could potentially co-locate key strategic and operational services from a range of partner organisations such as the NHS and Essex Police. It will in essence become a centralised operations suite for delivering borough-wide management via a wide range of partnership responses within Southend and neighbouring boroughs. In the initial formative period however, the focus will be on council services.

The overarching benefits could include:

1. The provision of a strategic and integrated approach to image capture, information dissemination and operational analysis of live incidents.
2. Intelligence-led responses to incidents including major emergencies
3. Delivery of enhanced traffic management on a borough wide basis.
4. Delivery of enhanced environmental monitoring and ultimately management solutions.
5. Activation of the community to have a healthier life style.
6. More effective and efficient use of available resources.

Action 1. Creation of the Southend Intelligence Hub – SMART CITY

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measurable By |
|-----|--|---------------------------------|---------|-----------|---------------------|--|--|
| SBC | Pilot the CISCO City Connected Digital Platform (CDP) pulling together data sets in respect of traffic and environment. Understanding the relationship and automating predictive and preventative strategies | ICT | Low (L) | End 2017 | (H) | Assist with parking, cruising and space availability | The identification of predictive and preventative strategies |
| | Provide a business case for the Creation of a Southend Intelligence Hub - SMART CITY | ICT, Strategic Transport Policy | (L) | End 2017 | (L) | N/A | Completion |
| | Build the Intelligence Hub in Southen | | (H) | 2018/19 | (H) | Single 24/7 solution for the Borough | Hub in place, properly staffed and operational |

6.2 Strategic Transport & Planning Policy

6.2.1 Local Transport Plan (LTP3)

The Council is now working to LTP3 covering the period 2011-2026 with a current implementation plan covering 2015-2021 reflecting the Governments spending plan.

Local Transport Plans steer the implementation of national transport policies at the local level. As a strategic document the LTP does not contain details of schemes, but sets out a long term transport strategy, a shorter term implementation plan and a number of supporting strategies.

Transport needs to be linked with wider economic, social and environmental objectives. The LTP3 has therefore been developed within the context provided by a range of policy documents.

The long term transport strategy vision is linked to the Council's long term vision of:

“Creating a better Southend” which is supported by five aims resulting in a “Clean, Safe, Healthy and Prosperous Southend Led by an Excellent Council.”

The document incorporates four Action Plans covering the full range of schemes to be delivered with a clear focus on ensuring that their purpose is understood, that they interrelate and contribute to delivering a “Better Southend”.

Action 2. “A Better Southend”

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-------|--|--|------|-----------|---------------------|---------------------------|---|
| LTP A | Better Sustainable Transport and Mobility Management | Strategic Transport, Regulatory Services | (M) | On-going | n/a | n/a | Completion of Projects/ Corporate Priority Action ? |
| LTP B | Better Networks and Traffic Management Schemes | Strategic Transport, Regulatory Services | (M) | On-going | M-H | CO ₂ Reduction | Completion of Projects/ Corporate Priority Action ? |
| LTP C | Better Partnership, Engagement and Sponsorship to Support Greater Efficiencies in Funding and Delivery | Strategic Transport, Regulatory Services | (L) | On-going | M-H | CO ₂ Reduction | Completion of Projects/ Corporate Priority Action ? |
| LTP D | Better Operation of Traffic Control, Information and Communication Systems including Intelligent Transport Systems and Urban Traffic Management Control (UTMC) | Strategic Transport, Regulatory Services | (M) | On-going | M-H | CO ₂ Reduction | Completion of Projects/ Corporate Priority Action ? |

Action 3. Feasibility Study -The Bell AQMA Strategic Highway Improvement

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|---------------------|------|------------|---------------------|---------------------------|----------------------|
| SBC | The Bell, A127 (AQMA) Strategic Highway Improvement. Preliminary Design and Feasibility Study | Strategic Transport | (H) | March 2019 | (H) | CO ₂ Reduction | Completed April 2017 |

Action 4. Kent Elms A127 Strategic Highway Improvement

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|---------------------|------|---------------|---------------------|---------------------------|----------------------|
| SBC | Kent Elms Strategic Highway Improvement | Strategic Transport | (H) | December 2017 | (H) | CO ₂ Reduction | Completed April 2017 |

Action 5. Promotion of Travel Plans

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|---------------------|------|-----------|---------------------|---|----------------|
| SBC | Promote Workplace , School and Personalised Travel Plans | Strategic Transport | (L) | On-going | (L-H) | Health Improvements, CO ₂ reductions | Uptake levels |

Action 6. Promotion of Cycling

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|---------------------|------|-----------|---------------------|---|----------------|
| SBC | Promotion of Cycling via "Sustainable Motion" Project, "Cycle Southend" , LSTF "Ideas in Motion" Project and Bike Hire Scheme | Strategic Transport | (L) | On-going | (L-H) | Health Improvements, CO ₂ reductions | Uptake levels |

Action 7. Promotion of Walking via "Ideas in Motion"

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|------------------------------------|------|-----------|---------------------|---------------------|----------------|
| SBC | Promote and Encourage walking via" Ideas in Motion" | Strategic Transport, Public Health | (L) | On-going | (L-H) | Health Improvements | Uptake levels |

Action 8. Promotion of Train Travel via "Ideas in Motion"

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|---------------------|------|-----------|---------------------|---------------------------|----------------|
| SBC | Promote Train Travel via" Ideas in Motion" | Strategic Transport | (L) | On-going | (L-H) | CO ₂ Reduction | Uptake rates |

Action 9. Encourage Development of Car Clubs

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|------|---|---------------------|------|-----------|---------------------|----------------------------|----------------|
| SBC9 | Encourage development of Car Clubs via Section 106 Agreements | Strategic Transport | (L) | On-going | (L-H) | CO ₂ reductions | Uptake levels |

Action 10. Promotion of uptake of Sustainable Travel via “Ideas in Motion”

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|---------------------|------|-----------|---------------------|----------------------------|----------------|
| SBC | Promote uptake of Sustainable Transport via Ideas in Motion” | Strategic Transport | (L) | On-going | (L-H) | CO ₂ reductions | Uptake levels |

Action 11. Installation of Electric Charging Points

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|---|------|-----------|---------------------|----------------------------|---|
| SBC | Installation of Electric Charging Points | Strategic Transport, Development Control, Sustainability and Energy | (M) | On-going | (L-H) | CO ₂ reductions | Number of Installations and rate of use |

Action 12. Promotion of Electric Vehicles

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|-------------------------------------|----------------------|------|-----------|---------------------|---------------------------|----------------|
| SBC | Electric Vehicle Promotional Events | Strategic Transport, | (L) | On-going | (L-H) | CO ₂ reduction | Uptake rates |

Action 13. Consider Noise Action Planning together with Local Air Quality Management

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|---|------|-----------|---------------------|---------------------|--|
| SBC | Consider a Policy for Noise Action Planning with LAQM Considerations | Development Control Strategic Transport | (L) | On-going | (L-H) | Noise Reduction | Completion of Improvements made at noise traffic hot spots |

Action 14. Provision of Electric Cars via Motion Hub Project

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|----------------------------|-------|------------|---------------------|---------------------------|-----------------------------|
| SBC | Provision of Electric Cars for staff business and private use | Strategic Transport Policy | (L-M) | 2017 -2018 | (L-H) | CO ₂ reduction | Provision and uptake rates. |

Action 15. Apply for National Productivity Investment Funding for Infrastructure Projects

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|----------------------------|------|-----------|---------------------|---------------------------|-----------------|
| SBC | Apply for NPIF to Support New Infrastructure Projects | Strategic Transport Policy | (L) | June 2017 | (L-H) | CO ₂ reduction | Secured Funding |

Action 16. Undertake a “Park and Ride” pilot study

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-------|---|----------------------------|------|-------------|---------------------|---------------------------|-------------------------|
| SBC17 | Undertake a Park and Ride pilot in order to assess viability and up-take rate for future implementation | Strategic Transport Policy | (L) | August 2017 | (L-M) | CO ₂ reduction | Assess results of pilot |

6.3 Public Health Awareness

6.3.1 Public Health Outcomes Framework

The Public Health Outcomes Framework originally published in 2012 sets out the (national) desired outcomes for public health and how these will be measured. The framework concentrates on two high level outcomes that set the vision to be achieved across the public health system. These are:

- Increased healthy life expectancy
- Reduced differences in life expectancy and healthy life expectancy between communities.

The outcomes reflect a focus not only on how long people live but also on how well they live at all stages of life. The second outcome focuses attention on reducing health inequalities between people, communities and areas. Using a measure of both life expectancy and healthy life expectancy will enable the use of the most reliable information available to understand the nature of health inequalities both within and between areas.

A set of supporting public health indicators will help focus understanding of progress year by year nationally and locally on those things that matter most to public health.

The indicators, which cover the full spectrum of public health and what can be currently realistically measured, are grouped into four domains:

1. Improving the wider determinants of health
2. Health improvement
3. Health protection
4. Healthcare public health and preventing premature mortality?

The domain of health protection includes air pollution (specifically PM2.5) as a public health indicator. For the Southend area the mortality burden estimate for the local population is that 6.1% of all mortality for age group 25+ years, is attributable to anthropogenic PM2.5 exposure.

Action 17. Health Impact Assessment

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|--|------|-----------|---------------------|---------------------|----------------|
| SBC | To carry out a HIA to understand the health impacts of air pollution in the Borough | Public Health, Regulatory Services, Sustainability | (L) | 2018 | (L) | Health benefits | Completion |

Action 18. Joint Strategic Needs Assessment

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|------------------------------------|------|-----------|---------------------|---------------------|----------------|
| SBC | Ensure the JSNA has up to date pollution data and information about the impact of air quality on health | Public Health, Regulatory Services | (L) | 2018 | (L) | Health benefits | Completion |

Action 19. Raising Awareness of Public and Business

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|--|------|-----------|---------------------|---------------------|----------------|
| SBC | Raise awareness of road traffic related pollution, health effects, travel choices, behaviours/ driving habits/ energy efficient driving styles via Variable Message Boards and Social Media, Phone Apps? | Public Health, Regulatory Services, Sustainability | (L) | On-going | (L) | Health benefits | Updates |

Action 20. Raising Awareness of High Risk, Vulnerable Groups

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|--|--|------|-----------|---------------------|---------------------|----------------|
| SBC | Raise awareness of HIGH RISK groups to pollution episodes and what to do to avoid unnecessary exposure via Variable Message Boards, Social Media, Text Messaging Service | Public Health, Regulatory Services, Sustainability | (L) | On-going | (L-M) | Health benefits | Updates |

Action 21. Provide Useful Public Health Information via SBC Website

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|--|------|-----------|---------------------|---------------------|---------------------------|
| SBC | Upgrade website to provide current air quality data, public health information/alerts | Public Health, Regulatory Services, Sustainability | (L) | On-going | (L-M) | Health benefits | Customer Feedback/up-take |

Action 22. Promote National Clean Air Day

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-------|--|---|------|--------------|---------------------|---------------------------|----------------|
| SBC23 | Promote National Clean Air Day June 5th 2017 | Public Health, Regulatory Services, Sustainability and Energy | (L) | Annual Event | (L-M) | CO ₂ reduction | Completion |

6.4 Land Use Planning and Development Control

A key principle for Southend-on-Sea Borough Council is to integrate air quality considerations with other policy areas such as Planning. Many developments have the potential to increase the pollution burden and it is appropriate that these developments are required to mitigate or offset this in order to help to achieve an overall reduction in local air pollution. It is therefore essential to identify how we can bring air quality considerations into the planning process at the earliest possible stage. It is no longer satisfactory to simply demonstrate that a development is no worse than the existing or previous land use on a particular site.

6.4.1 Air Quality Supplementary Planning Guidance

This document will be produced in order to provide consistency in the way potential developments are considered in relation to their potential impact on local air quality and the need to provide an appropriate air quality assessment. Where developments take place in an AQMA mitigation measures must be considered as standard practice, particularly in cases where the development is new and does not simply replace an existing use. This is especially important where the development has provision for a large number of parking spaces significantly increasing the number of vehicle trips, and/or heating plant. In some cases it may be necessary to recommend refusal when a development is so contrary to the objectives of the Air Quality Action Plan and Low Emission Air Quality Strategy.

This approach should potentially bring health benefits across the Borough, not just those living in the immediate area i.e. hot spots where the objectives are being exceeded. This is particularly important for nitrogen dioxide and small particulates as these pollutants have a significant potential impact on health. In order to reduce overall exposure, background pollution levels will need to be reduced, so it is essential that every development with the potential to increase the pollution burden must require mitigation or offsetting to help achieve an overall improvement in our local air quality.

Action 23. Produce and Enforce Supplementary Planning Guidance

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measurable By |
|-----|---|--|------|-----------|---------------------|---------------------------|------------------|
| SBC | Produce and Adopt an Air Quality Supplementary Planning Guidance Document. To include Construction Site Dust and Non Road Mobile Machinery (NRMM) Emissions Management. | Regulatory Services, Development Control | (L) | 2017 | (M) | CO ₂ Reduction | Adoption and Use |

6.4.2 Community Infrastructure Levy Bid (CIL) and Section 106 Agreements

The Council seeks to work constructively, in partnership with developers to foster a “thriving and sustainable local economy and to safeguard public health.” The Community Infrastructure Levy and Section 106 Agreements provide a mechanism for achieving these outcomes. Funding is sought in respect of air quality action planning to assist with improving air quality within existing AQMAs and to prevent other hot-spots with elevated levels of pollution deteriorating into future AQMAS.

Action 24. Secure Funding from Section 106 Agreements

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measurable By |
|------|---|---|------|-----------|---------------------|---------------------------|--------------------------|
| SBC2 | To secure funding for Air Quality Action Planning including monitoring and support for initiatives aimed at reducing air pollution directly or indirectly via S106 Agreements and the Community Infrastructure Levy | Regulatory Services, Development Control, Strategic Transport | (L) | 2017 | (M H) | CO ₂ Reduction | Level of Funding Secured |

6.4.3 Green Infrastructure

Promoting/adopting a Green Infrastructure Strategy (?) has an important role to play in improving local air quality and helping communities offset their carbon impact. In urban areas trees, vegetation and green space can help to reduce pollutants and improve air quality by absorbing gaseous pollutants, lowering ambient temperatures, preventing pollutant concentration, and by producing oxygen during plant photosynthesis. In addition to using green infrastructure to mitigate the effects of poor air quality, opportunities exist at the community area scale to adapt our transport behaviours/adopt modal shift and utilise walking and cycling networks or consider travel around the town via public transport?

Action 25. Promote Green Infrastructure Initiatives/Strategy?

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|---|------|-----------|---------------------|---------------------------|--|
| SBC | Promote Green Infrastructure and/ or Adopt Strategy | Regulatory Services, Development Control, Strategic Transport | (L) | Ongoing | (M H) | CO ₂ Reduction | Adoption or Completion of Individual Initiatives |

Action 26. Green Infrastructure Funding Bid

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|---|------|-----------|---------------------|---|--------------------------------------|
| SBC | Apply for Green Infrastructure Funding via Nature Smart Cityscapes Scheme | Regulatory Services, Development Control, Strategic Transport | (L) | Ongoing | (M H) | CO ₂ Reduction Visual Amenity | Completion of Individual Initiatives |

6.5 Sustainable Innovation

6.5.1 Urban Innovation Action

We are keen to involve all parts of the travel and transport sector and community in order to help tackle common issues around Urban Mobility in the Borough and deliver solutions and concepts as part of Urban Innovation Action (UIA) European Regional Development Fund (ERDF) funding bid. Emphasis throughout the bid is on innovation and how that can help find solutions to the challenges we currently face in the Borough. The key UIA work packages are:

1. Alternative Route Planning
2. Air Quality Management
3. Instrumenting Cities to collect and improve access to better data
4. Car Clubs and Autonomous Vehicles

The project could provide a “Borough Wide Mobility Hub” involving all parties where a resident or visitor can view, plan and book all parts of their journey and visit to, from and through Southend. A comprehensive service would include air, rail and road transport, car clubs, electric cars, car sharing, bicycle hire, buses, taxis and parking spaces together with extensive advice and notice provision extending through airlines, rail companies and the road network. Solutions to parking and reduction of congestion together with processes to reduce traffic in Air Quality Management Areas/hot-spots are expected to be included using open data i.e. real time public transport, delays, congestion, road works, incidents, events and tracking data, air quality, real time sensors and CCTV.

Action 27. Urban Innovation Action Funding Bid

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|---|---------------------------|------|-----------|---------------------|--|--|
| SBC | Urban Innovation Actions funding bid via European Regional Development Fund and/or National Funding Streams | Sustainability and Energy | (L) | Dec 2017 | (M H) | CO ₂ Reduction Health Benefits | Secured funding stream and completion of project |

6.5.2 Low Carbon Energy and Sustainability Strategy

Our current Low Carbon Energy and Sustainability Strategy (2015-2020) has a number of focus areas, one of which is “To Encourage Sustainable Travel and Transport”.

Action 28. Implement Ideas in Motion Programme

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measureable By |
|-----|-------------------------------------|---------------------------|------|-----------|---------------------|--|--|
| SBC | Implement Ideas In Motion programme | Sustainability and Energy | (L) | 2017 | (M H) | CO ₂ Reduction Public Health | Secured funding stream and completion of project |

6.6 Low Emission Air Quality Strategy (LEAQS)

6.6.1 The Production and Implementation of a LEAQS

The purpose of the strategy is to reduce emissions from local traffic. The main pollutants of concern are nitrogen dioxide (NO₂) and particulate matter (PM). Particles cause the greatest harm to people's health, but evidence of the effects of nitrogen dioxide is growing too. Global pollutants such as carbon dioxide and other greenhouse gases are also a concern.

The strategy describes the steps the Council and partners will take to reduce the impact of transport emissions and support sustainable development. To do this we will work with all groups who travel or generate traffic in our area.

The Council will evaluate the success of the strategy and use the lessons learned during the period 2018 – 2020 to further develop the strategy for 2020 onwards.

Its production and implementation will be a key component of the Air Quality Action Plan 2017 and the following themes, amongst others, will be considered:

- Retro-fitting of fleet via a joint application for Clean Bus Technology Fund 2017-18
- Promotion of Low Emission (LEV) and Ultra Low Emission Vehicles (ULEVs)
- Electric Vehicles and charging points
- Sustainable Procurement
- Promotion of Modal Shift
- Reducing emissions from Taxis
- Commercial Vehicles, Freight Consolidation Centres
- Preferential parking tariffs for cleaner vehicles
- Promoting and raising awareness of the benefits of “No Idling Zones”
- Planning Policy
- Public and Business Advice and Raising Awareness
- Implement a “Working from Home” policy in order to reduce emissions from commuting staff

Action 29. Development and Implementation of a Low Emission Air Quality Strategy

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measurable By |
|-----|---|---------------------|------|-----------|---------------------|---------------------------|---------------|
| SBC | LEAQS Strategy Development and Implementation | Regulatory Services | (L) | Feb 2018 | (M H) | CO ₂ Reduction | Completion |

6.7 Community Engagement

6.7.1 Community Engagement and Corporate Aims

The vision of the Council is to “Create a Better Southend” supported by the five corporate aims of a “Clean, Safe, Healthy, Prosperous Southend led by an excellent Council”. These principles and values will be reflected in our work and provide a clear focus for actions we take. Our actions will be underpinned by the following Corporate Priorities:

- To create a safe environment across the town for residents, workers and visitors.
- To continue to promote the use of green technology and initiatives to benefit the local economy and environment.
- To encourage and enforce high standards of environmental stewardship.
- To actively promote healthy and active life styles for all.
- To work with and listen to our communities and partners to achieve better outcomes for all.
- To improve the life chances of our residents, especially our vulnerable children and adults, by working to reduce inequalities and social deprivation across our communities.
- To enable communities to be self-sufficient and foster pride in the town.

This is about people and place, fostering a sense of community belonging and self-sufficiency where communities can solve problems locally with our support.

Action 30. Promote Community Engagement

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measurable By |
|-----|--|---|---------|-----------|---------------------|---------------------|-------------------------|
| SBC | Promote Community Engagement via involvement in Steering Groups, Community Area Partnerships | Public Health, Regulatory Services, Local Community | Low (L) | On-going | n/a | n/a | Annual Progress Reports |

Action 31. Undertake and Apply Results of Local Business Survey

| Ref | Action | Responsibility | Cost | Timescale | Potential AQ Impact | Additional Benefits | Measurable By |
|------|---|---------------------|---------|------------|---------------------|---------------------|----------------------|
| SBC2 | Undertake Business Survey to inform policy decision making for 2017/18 onwards. | SBC/Marketing Means | Low (L) | April 2017 | n/a | n/a | Completed April 2017 |

