

# Low Emission Strategy

Part of the Air Quality Action Plan  
Southend-on-Sea Borough Council



2018



# Foreword by Portfolio Holder

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“Everyone has the right to breathe clean air and public interest in air quality has been at an all-time high.

Southend-On-Sea Borough Council provides a high quality environment for residents, visitors and businesses and generally experiences good air quality. There are, however, traffic hot-spots giving rise to unacceptable levels of air quality, and this has become a serious public health concern for many cities and large towns throughout the UK.

Given that the primary source of the pollutants is vehicle emissions, finding solutions is a challenge for us all to rise to. There are enterprising plans for investment to build and regenerate but this vision needs to be matched with improvements to air quality.

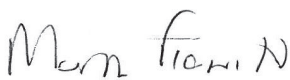
We fundamentally believe that the needs of the local community are at the heart of what we do at the Council. It is our objective to work together with communities to solve problems locally and participate in decisions that affect them and as a result build stronger more resilient communities. An improvement to air quality requires an integrated and collaborative approach on the part of both internal and external stakeholders.

In developing and implementing this strategy partnership working will be a key prerequisite. We will need to take an innovative and creative approach.

Together we shall work towards making the Borough “A Better Place to Live”, to work in and to visit.

On behalf the Council we would like to thank everyone who has been involved in the development of this Low Emission Strategy which will identify local priorities, deliver improved outcomes and make a real difference to the lives of local people.”

Signed



**Councillor Mark Flewitt**  
**Portfolio Holder**





Southend-on-Sea Borough is a healthy place to live and work, but as in all large towns and cities, emissions from cars, vans, buses and heavy goods vehicles lead to poor air quality.

In November 2016 the Council formally declared its first Air Quality Management Area at the A127 Bell Junction. This led to the development of an Air Quality Action Plan (AQAP) proposing a number of measures with the potential to improve local air quality. The plan was given Corporate Priority status (Action Code 1718 Place PPC03).

A key priority of the AQAP is to develop and implement a Low Emission Strategy (LES). The LES will provide a comprehensive plan and mechanisms for reducing road transport emissions in the Borough and should be read in conjunction with and as a part of the AQAP.

The Council has developed the strategy to tackle road transport related pollution and improve health outcomes. It will achieve this through implementing innovative policies and measures that seek to reduce vehicle emissions by helping to accelerate the uptake of cleaner fuels and technologies. It is believed that this approach will also reduce vehicle emissions of carbon and noise. In addition to the AQAP, the strategy supports and compliments other key Council strategies such as the Low Carbon Energy and Sustainability Strategy 2015 – 2010 (LCESS), Local Transport Plan (LTP3) and the Local Plan.

A LES provides a comprehensive framework for vehicle emission reduction initiatives involving a range of stakeholders capable of influencing outcomes directly or indirectly. While the Council has the ability to implement certain measures, the LES also identifies areas of work requiring a partnership approach with key stakeholders.

The Priorities for Action are:

- Reducing emissions via the Local Transport Plan (LTP3), Southend Local Plan and the Joint Spatial plan.
- The Southend Intelligence Hub, Smart City Journey and Digital Strategy.
- Land Use Planning, Development Control and Low Emission infrastructure.
- Procurement.
- Reducing emissions from commercial vehicles, passenger cars and light goods vehicles, borough wide access and parking strategy.
- Reducing emissions from taxis and buses.
- Raising awareness.



|  |          |
|--|----------|
| <b>Foreword</b>  | <b>2</b> |
| <b>Executive Summary</b>   | <b>3</b> |
| <b>1. Introduction</b>   | <b>4</b> |
| 1.1 Strategic Aims   | 4        |
| 1.2 Scope and Purpose  | 5        |
| 1.3 Public Health  | 5        |
| 1.4 Collaboration: The Importance of Partnership Working               | 5        |
| 1.5 Priorities and Options   | 5        |
| 1.6 Steering Group   | 6        |
| <b>2. Sources of Air Pollution</b>                                     | <b>7</b> |
| 2.1 The Current Position   | 7        |
| 2.2 Locally Generated Sources  | 7        |
| 2.3 Southend Urban Area Agglomeration Zone - Source Apportionment      | 8        |
| <b>3. Priorities for Action</b>  | <b>9</b> |
| 3.1 Reducing Transport Emissions                                       | 9        |
| 3.2 Southend Intelligence Hub, Smart City Journey and Digital Strategy | 9        |
| 3.3 Land Use Planning and Development Control                          | 10       |
| 3.4 Sustainable Procurement  | 12       |
| 3.5 Reducing Emissions from Commercial Vehicles                        | 13       |
| 3.6 Reducing Emissions from Passenger Cars and LGVs                    | 13       |
| 3.7 Reducing Emissions from Taxis                                      | 15       |
| 3.8 Reducing Emissions from Buses                                      | 17       |
| 3.9 Raising Awareness  | 18       |
| <b>Appendices</b>  |          |
| <b>Appendix 1 - Summary Table of Themes and Actions</b>                |          |
| <b>Appendix 2 - Response to Consultation</b>                           |          |
| <b>References</b>  |          |
| <b>Glossary</b>  |          |





# 1. Introduction

Southend is a healthy place to live and work, but as in all large towns and cities emissions from cars, vans, buses and heavy goods vehicles lead to poor air quality.

In November 2016 the Council formally declared its first Air Quality Management Area at the A127 Bell Junction. This led to the development of an Air Quality Action Plan (AQAP) proposing a number of measures with the potential to improve local air quality. The plan was given Corporate Priority status (Action Code 1718 Place PPC03).

A key priority of the AQAP is to develop and implement a Low Emission Strategy (LES). This LES will provide a comprehensive plan detailing mechanisms for reducing road transport emissions in the Borough from 2018 to 2021 and should be read in conjunction with and as a part of the AQAP.

There is significant growth planned for the Borough over the coming years which will increase potential demand for travel and consequently affect emissions.

The Council has developed the strategy to tackle road transport related pollution and improve health outcomes. It will achieve this through implementing innovative policies and measures that seek to reduce vehicle emissions by helping to accelerate the uptake of cleaner fuels and technologies. It is believed that this approach will also reduce vehicle emissions of Carbon and noise. In addition to the AQAP, the strategy supports and compliments other key Council strategies such as the Low Carbon Energy and Sustainability Strategy 2015 - 2010 (LCESS), Local Transport Plan (LTP3) and the Local Plan.

Everyone has a role to play in improving air quality, including individuals, businesses, public sector organisations and local and national Government. The Council recognise the importance of collaboration and that together they can provide the strategic commitment to implement a range of actions, both at a policy level and practical level, to improve air quality for the people of Southend.

## 1.1 Strategic Aims

The strategic aims are:

- a. To take actions that will reduce emissions from transport in the area and support sustainable development.
- b. To reduce emissions from all classes of vehicles, and to work with all groups who travel or generate traffic, including emissions from Council owned or leased fleet and staff vehicles (driven for business use).
- c. To improve the understanding of air pollution as an issue that should be considered during the development of policy, and to influence decisions made in the greater area. To raise awareness to the fact that we all have a role to play.
- d. To actively seek funding opportunities to implement innovative measures, especially the opportunity to increase the use of Low Emission Vehicles.
- e. To evaluate the success of the strategy and report annually. To use the lessons learned to develop the strategy into the future.

## 1.2 Scope and Purpose

A LES provides a comprehensive framework for vehicle emission reduction initiatives involving a range of stakeholders capable of influencing outcomes directly or indirectly. While the Council has the ability to implement certain measures, the LES also identifies areas of work requiring a partnership approach. It will therefore identify key policy mechanisms and stakeholders in an integrated approach to emissions reduction that will produce outcomes complimentary to other corporate strategies

In their published plans to improve local air quality the Department for Environment, Food and Rural Affairs (DEFRA) has stated that "as a minimum we expect all local authorities with areas currently exceeding the required levels to consider putting in place a Low Emission Strategy. Such a strategy could be used to set out a range of commitments and actions to tackle pollution as part of a coherent multi-year programme and ensure they identify and exploit the national assistance available"

## 1.3 Public Health

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 UK economy estimated to run into billions. Although significant progress has been made in improving some aspects of air quality over previous decades, further progress is both necessary and possible. This will require a combination of innovative national and local approaches.

Local authorities have a major role to play. The transfer of additional responsibilities for public health to local government in 2013 has presented a major opportunity for Directors of Public Health and Councillors to take action to enhance this leadership on air quality.

## 1.4 Collaboration: The Importance of Partnership Working

To achieve the objectives of the LES it is essential that the Council and all other stakeholders (public and private) work in partnership with a focus on delivery and securing adequate funding.

Working in collaboration with stakeholders we can:

- Enable the identification of effective measures to reduce road transport emissions.
- Raise awareness of transport emissions and their effects on public health, and promote initiatives to reduce pollution.
- Recognise good practice, benchmark activity and engage the wider community.
- Identify funding opportunities and work in partnership to secure such funding.
- Monitor progress of initiatives aimed at reducing emissions and at appropriate intervals review the LES.

## 1.5 Priorities for Action

The priorities for action are:

- Reducing emissions via the Local Transport Plan (LTP3), Southend Local Plan and the Joint Spatial plan.
- The Southend Intelligence Hub, Smart City Journey and Digital Strategy.
- Land Use Planning, Development Control and Low Emission infrastructure.
- Procurement.
- Reducing emissions from commercial vehicles, passenger cars and light goods vehicles, borough wide access and parking strategy.

- Reducing emissions from taxis and buses.
- Raising awareness.

## **1.6 Steering Group**

This initiative will be driven by the Air Quality Action Plan Steering Group which will meet quarterly to monitor progress and identify opportunities for delivering schemes within the Borough and beyond.



## 2. Sources of Air Pollution in the Borough

### 2.1 The Current Position

The main source of air pollution in the borough is road traffic emissions from major roads, notably the A127 and the A13. Other pollution sources including commercial, industrial and domestic also contribute to background pollution concentrations.

Exceedances of the annual mean Air Quality Objective for nitrogen dioxide (NO<sub>2</sub>) have been consistently recorded at one location in Southend on the A127.

In 2016 an air quality detailed assessment undertaken by consultants recommended that the Council should declare their first Air Quality Management Area (AQMA) around the junction of Prince Avenue, Rochford Road and Hobleythick Lane, known locally as “The Bell Junction”. The formal AQMA declaration was completed in November 2016. See the Air Quality Action Plan for details.

#### 2.1.1 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.



### 2.2 Locally Generated Sources

In Southend-on-Sea 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:

- Motorbikes.
- Petrol/Diesel Cars.
- Light Goods Vehicles (LGVs).
- Rigid Heavy Goods Vehicles (HGVs).
- Articulated HGVs.
- Buses/Coaches.

## 2.3 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 2015. The largest contribution was from cars at the location of maximum exceedance with a contribution of  $54.4\mu\text{gm}^{-3}$  of NOx out of a total of  $142.9\mu\text{gm}^{-3}$ . Cars, LGVs, rigid HGVs and articulated HGVs were important sources on the primary roads with the highest concentrations. For all road links concentrations of NOx from diesel cars were approximately four times greater than NOx emissions from petrol cars. NOx concentrations from petrol LGVs are a small component of total NOx concentrations and less than 2 per cent of total NOx from LGVs.

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

For more information please refer to the Air Quality Action Plan.

## 3. Priorities for Action

### 3.1 Reducing Transport Emissions

The Local Transport Plan (LTP3) contains a number of general measures aimed at minimising the impact of road transport on air quality. The LTP3 Implementation Plan has four main Guiding Principles:

A Thriving and Sustainable Local Economy in the Borough

- Reduce congestion.
- Improve use of sustainable modes and public transport.
- Better car parking management.
- Network maintenance.
- Sustainable transport to support regeneration.

Minimise Environmental Impact and promote Sustainability for a Greener Borough.

- Reduce CO2 emissions.
- “Maintain Air Quality”.
- Increase resilience at the transport network due to Climate Change.
- Make use of technology.
- Protect and enhance the natural and built environment.

A Safer Borough

- Maintenance of highway infrastructure.
- Road safety engineering and enforcement.
- Education, training and publicity.
- Support safety partnerships.

Reduce Inequalities in Health and Well Being and a more accessible Borough

- Walking, cycling and physical activity.
- Access to healthcare.
- All public transport is fully accessible by 201.
- Quality of door to door travel.

#### 3.1.1 The new Southend Local Plan and Joint Spatial Plan

The new Southend-on-Sea Borough Council Local Plan is being prepared for adoption by 2020 and will draw upon the latest national policy and guidance. It will feature initiatives and policy in line with the national policies and corporate aims on reducing transport related emissions levels. Public consultation will take place on several occasions (with the first round of consultation taking place by the end of 2018) to fully consider and address the community’s views on the matter.

The Joint Spatial Plan which is being prepared in partnership with all the South Essex Authorities is also exploring the ways in which the strategic transport network serving South Essex can be enhanced to reduce congestion and promote sustainable travel patterns and therefore lowering vehicle emissions per journey.

### 3.2 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 the hub.

The hub 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, potentially reducing congestion, queueing length and improving traffic flow.
4. Contributing data to a variable parking tariff program.
5. Delivery of enhanced environmental monitoring (including a pilot study of 10 remote air quality sensors) and ultimately management solutions.
6. Activation of the community to have a healthier life style.
7. More effective and efficient use of available resources.

### **3.3 Land Use Planning and Development Control**

The planning process cannot solve immediate air quality issues, however, the National Planning Policy Framework (NPPF) recognises that air quality is a material consideration and that planning can play an active role in delivering sustainable developments that allow future residents, businesses and visitors to make low emission vehicle choices. The NPPF states that planning policies should:

*“Sustain compliance with and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas (AQMA) and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts from individual sites should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in AQMAs and Clean Air Zones is consistent with local air quality action plans”.*

Effective planning policies can play a significant role in helping sustain air quality improvements by providing infrastructure to encourage alternatives to the private car and by both discouraging the use of high emission vehicles and supporting the uptake of low emission vehicles (LEV) including the provision of LEV refuelling facilities such as Electric Vehicle charging points.



National Planning Practice Guidance (NPPG) states that mitigation may include the contribution of “funding of measures including those identified in air quality action plans and low emission strategies designed to offset the impact on local air quality arising from new development” The NPPG also states that where sustained compliance with EU Limit Values (or equivalent) is prevented a local authority is to “consider whether planning permission should be refused”.

Therefore local Planning and Development policy has an essential role to play in minimising the impacts of new development on air quality and public health.

### 3.3.1 Low Emission Infrastructure

The Council will endeavour to work with private sector partners to help identify and implement low emission vehicle infrastructure, including:

- EV Charging including provision of rapid charging and charging for properties that do not have off street parking.
- Natural Gas Refuelling Infrastructure.
- Natural gas been identified as a cost effective alternative to diesel, achieving both lower NOx and particulate emissions and potentially significant carbon savings where bio-methane is integrated into the supply.

The Department for Transport predicts that 20 per cent of all HGVs could be either dedicated or dual fuelled gas vehicles by 2020. The “Technology Strategy Board” is currently undertaking a Low Carbon Truck Trial including the assessment of dual fuel HGVs (see Gas Vehicle Hub [www.gasvehiclehub.org](http://www.gasvehiclehub.org)). The Office for Low Emission Vehicles released £4m funding in 2016 for the development of gas refuelling stations near to the motorway network to assist with the reduction in emissions from freight vehicles.



With the revised NPPF (2018), new policy has been introduced requiring the installation and provision of ultra-low emission vehicle charging facilities to enable their take up and effective use.

The new Southend Local Plan will need to consider this new national policy when being prepared. There are likely to be policies for development management based directly upon the NPPFs requirements for “the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles” at both residential and non-residential developments and that developments should “be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, convenient locations”.

## 3.4 Sustainable Procurement

National legislation and guidance encourages the public sector to support the uptake and deployment of low emission vehicles via sustainable procurement decisions. The Council's Low Emission Strategy will provide a platform to review our procurement procedures and identify areas that have potential to reduce vehicle emissions associated with council activities such as:

- Contracts relating to goods and services provided to the Council.
- Procurement of vehicles.

### 3.4.1 Goods and Services

Local Authorities are required to consider "best value", rather than lowest cost, when making procurement decisions.

The Public Services (Social Value) Act 2012 came enforceable in January 2013. For the first time the Act places a duty on public bodies to consider social value, including environmental considerations, ahead of certain procurement activities, and states that the authority must consider:

- a) How what is proposed to be procured might improve the economic, social and environmental well-being of the relevant area, and
- b) How, in conducting the process of procurement, it might act with a view to securing that improvement.

The Act provides scope to include the consideration of vehicle emissions arising from contract delivery and their impact on the health of the community.

### 3.4.2 Sustainable Award Criteria for Contracts

Sustainability should be a criterion in all procurement decisions, and vehicle emissions should be considered when decisions to award contracts are made.

The extent to which organisations give priority to vehicle emissions will depend on circumstance and cost. However, a scoring matrix for tender evaluation will be considered as part of the LES. As a minimum for example, "evidence that current (or previous) Euro Standards apply to a significant fraction of the fleet and/or a commitment to increasing up-take can be demonstrated".

### 3.4.3 Local Sourcing

Local sourcing is practised widely by local authorities who encourage local contractors to bid for council contracts. Such initiatives have the potential to support the local economy while helping reduce overall mileage. Local sourcing offers the potential for lighter goods vehicles to be used for deliveries. Also, helping local suppliers develop emission strategies can provide a competitive advantage in procurement decisions.

### 3.4.4 Procurement of Public Sector Vehicles

The Cleaner Road Transport Vehicle Regulations 2011 require public sector organisations to consider the energy use and environmental impact of vehicles they buy or lease. A key concept of the regulations is the consideration of whole life costs whereby the operational costs over a vehicles life, including pollution damage costs, are taken into account rather than just the initial purchase price.

This helps to redress the issue of low emission vehicles costing more than conventional vehicles, while potentially having lower operational costs that outweigh the purchase premium.

### **3.4.5 Current Fleet Composition and Activity**

The Council fleet is contracted out to Veolia. As of March 2018, all vehicles are Euro-Standard VI.

## **3.5 Reducing Emissions from Commercial Vehicles**

Many commercial fleet operators have strategies in place to reduce emissions through their corporate social responsibility (CSR) agendas and due to high annual mileages, many blue chip companies will keep their HGVs for only 3 to 5 years meaning that the cleanest, Euro VI HGVs already provide a significant share of the total HGV fleet.

The Council's Local Transport Plan (LTP3) recognises the importance of the freight sector to the economy of Southend Borough. However, the contribution to the pollution burden from road freight is acknowledged. This Low Emission Strategy will compliment transport policy by seeking the introduction of cost effective measures aimed at road freight emissions reduction.

Road freight is not exclusively defined as Heavy Duty Vehicles (HGVs). Light Goods Vehicles (LGVs) such as vans are also a significant component and vehicle numbers have increased substantially along with the growth of home delivery services.

This LES recommends strategic measures to reduce emissions from road freight transport and facilitate a transition to low emission fuels and technologies.

### **3.5.1 Criteria for Sustainable Emissions**

The Council will endeavour to work in partnership with freight organisations to ensure that "best practice emission criteria" are considered in all relevant procurement decisions with priority given to those organisations utilising LEVs and fuels.

Emission standards for commercial fleet operations associated with new planning applications shall meet current or chronologically next closest European Emission Standard.

The Council will also endeavour to work in partnership with industrial, commercial, retail and freight associations towards the development of recommended emission standards for freight vehicles accessing urban areas with a view to implementing an industry recognised Low Emission Freight Recognition Scheme or equivalent.

### **3.5.2 Sustainable Freight Consolidation Centres**

Many commercial organisations and logistics companies already consolidate freight activity in the Essex. The potential for utilising low and ultra-low emission vehicles for the final stages of the deliveries associated with any potentially new consolidation centres will be considered.

## **3.6 Reducing Emissions from Passenger Cars and LGVs**

For many car ownership is an essential requirement for domestic life and commuting. However, the number of cars on our roads continues to increase and accordingly their impact on the pollution burden is significant. Existing source apportionment data indicates that diesel cars and LGVs contribute 58 per cent of the NO<sub>x</sub> emissions within the AQMA and 52 per cent of PM<sub>10</sub>.

A key national issue is the significant increase in the number of diesel cars, rising from under 20 per cent of the car fleet in 2000 to over 50 per cent in 2014. Europe has the highest proportion of diesel cars in the world.



Many diesel vehicles have been purchased because they have been perceived to be environmentally friendly and the Government provides a reduced vehicle excise duty to support take up. While diesel cars may generally be more fuel efficient than petrol cars especially during long journeys there remains a question mark regarding the suitability of diesel cars for use in urban areas. Some studies suggest that unless they are travelling in excess of 12,000 miles per year owners are unlikely to recover the increased cost of purchasing and maintaining a diesel vehicle compared to petrol.

### 3.6.1 European Emission Standards (Euro Standards)

In Europe since 1993 attempts to regulate vehicle emissions have been undertaken via the “Euro Standards” regime. In order for manufacturers to sell vehicles within EU member states they must limit exhaust emissions to a level dictated by the latest Euro Standard assessed during a standardised in door test cycle. This methodology has been criticised for not being representative of the reality of external driving conditions. Emission projections assume the standards will be met but there is currently a move to amend the Euro 6 regulations to use more realistic and representative testing in the vehicle approval process. Also Euro 5 and 6 diesel cars have had compliance issues especially with NOx requirements.



Even if Euro 6 diesel cars were to achieve their regulated emission limits in representative driving conditions studies data suggests that additional measures will be required to improve air quality including the promotion and take up of low and ultra-low emission vehicles.

Many car owners are unaware of the impact their vehicle emissions have on local air quality and there have been mixed messages from Government. The LES will encourage provision of information to raise awareness of passenger vehicle emissions and their impact on health. Additionally, information will be provided on the Total Cost of Ownership (TCO) of cars, including emissions, to assist the public in making better informed purchasing decisions.

The LES will seek to encourage the take up of low and ultra-low emission vehicles through the provision of information and incentives. This would be in line with an observed increase in sales of plug-in electric vehicles in the UK in the last two years.

The Government currently provides a £5000 grant towards the purchase of ultra-low emission cars including plug in vehicles, and will continue to support the charging infrastructure required to support take-up. The LES also recognises that the majority of vehicle charging will be at home and at work and proposes measures to support Ultra Low Emission Vehicle (ULEV) uptake including:

- Promotion of differential parking charges for low and ultra-low emission vehicles.
- Promotion of preferential parking places for ultra-low emission vehicles.
- Promotion of differential car allowance rates for low and ultra-low emission vehicles.

- Promotion of ultra-low emission vehicle pool cars, car clubs and lease cars.
- Consideration of reducing business rates for companies demonstrating a commitment to the significant use of ULEVs.
- Additional incentives from businesses for customers who use ULEVs.
- Ensure adequate recharging/refuelling infrastructure to support ULEV use especially in areas where no off street parking is available through the use of rapid charging facilities and other forms of public charging infrastructure such as charging through streetlights.
- Introduce minimum recharging standards for all new developments as part of the Southend Planning Procedures.

### **3.6.2 Borough Wide Parking and Access Strategy 2018**

This strategy (currently in draft) aims to:

- Achieve a step-change in travel information provision, adopting an approach centred on meeting the needs of travellers and addressing their pain points of queuing to access Southend-on-Sea, finding car parks and finding a space to park.
- Provide a framework for moving from the current position to an integrated smart city data platform into which a network of specialist providers provide reliable, access-controlled feeds, leading to a more efficient parking system.
- Effectively manage peak periods of visitor demand through a range of measures including:
  - Encouraging travel behaviour change by Southend residents and visitors on peak days through dedicated peak-day communications.
  - Improving existing information resources and extensive use of websites and social media.
  - Providing visitors to the Borough with comprehensive, up to date pre-trip and pre-arrival information about all travel and payment options available through a range of media.
  - Providing visitors to the Borough with improved travel information during their trip to Southend through a range of media and systems.
  - Improving wayfinding from car parks to key visitor destinations.
  - Actively manage traffic on days of high visitor demand through a range of on the ground interventions.
  - Continually improve the visitor experience through engagement with visitors to understand their experiences and behaviours.
- Improve signage to principal car parks across the Borough through:
  - Directing drivers to the most appropriate car park.
  - Raising awareness of other seafront locations in the Borough from Leigh and Chalkwell to Shoeburyness to spread the demand.
  - Encouraging use of less well used car parks, particularly on days of high demand.
  - Providing guidance on the most appropriate route to the car parks, particularly on days of high demand.
  - Adopting state of the art dynamic signage infrastructure to allow for variable signage which responds to the different patterns of demand in Southend.
- Support the visitor economy through dynamic changes to parking tariffs for Summer weekends to better balance the demand for parking between the seafront and town centre car parks.
- Engage stakeholders early and frequently during implementation of the strategy.

### 3.7 Reducing Emissions from Taxis

The Council has 276 licensed Hackney Carriages and 154 Private Hire Vehicles which operate at some point in the urban area, the vast majority of which are diesel vehicles.

The Council will not licence any vehicle over 5 years old on first licensing. Wheelchair accessible vehicles may be six years old. Vehicles are licensed for 8 years with 6 monthly extensions up until 10 years. Wheelchair accessible vehicles are licensed for up to 20 years.

The Council will consider introducing a licensing standard based on emissions or age restrictions, linked to Euro standards e.g. minimum Euro 4 for petrol and Euro 6 for diesels, as adopted by Birmingham City Council.

The Council will encourage taxis to turn off their engines when idling in AQMAs or hot spots, and promote the general benefits of non-idling.

#### 3.7.1 Incentives for LEVs, ULEVs and Electric Vehicles

The Office for Low Emission Vehicles (OLEV) 2015-2020 program includes £20m made available for local authorities to support the uptake of ULEV taxis. Round 2 of the scheme will release £6M in 2019. Note that all applications for funding are subject to approval.

There are a number of measures that will be explored to encourage the uptake of Low Emission Vehicles (LEVs) and Ultra-Low emission Vehicles (ULEV) such as:

- Low emission taxi ranks for hybrids and alternatively fuelled vehicles.
- Preferential queuing facilities at existing ranks.
- Public sector contracts based on emissions for the provision of private hire services.
- Rapid charging facilities for ULEVs (remote from taxi ranks to prevent vehicles from sitting in the rank to charge e.g. public car parks or near facilities for drivers to use when taking a break.
- The Ultra-Low Emission Vehicle (ULEV) Taxi Scheme will provide local authorities with funding to install electric vehicle charging infrastructure for taxi and private hire use.
- LoCASE grants can be awarded for the replacement of Taxis with Electric or Hybrid vehicles. Taxi operators can access a 40 per cent grant and up to £20K per company to support the purchase of “green” vehicles when they are replacing their current vehicles.
- Provide information about car emissions and Total Cost of Ownership (TCO) of alternative, cleaner vehicles to taxi drivers.
- The Electric Blue scheme is committed to improvement of air quality across the UK by promoting Electric Taxis, and new Clean Air Zone technologies. Electric Blue’s aim is to install and operate a national vehicle charging network powered completely by renewable energy, in locations based on the deep understanding of operational profiles of taxis, delivery fleets and other high mileage vehicles. Based on practical experience and real world data, it aims to identify to local authorities, taxi and other high mileage fleet operators, journeys which can be readily electrified.
- Wireless Semi-Dynamic Charging for Electric Taxis (WS-CET): WS-CET will consider the viability of charging electric taxis at taxi ranks within Southend. This will also include work to analyse taxi operations to assess how viable using electric taxis is for local operators and the optimum locations for wireless charging which would assist taxis to top up their batteries during their working day. WS-CET will be based around a new wireless charging technology using a charging bar set into the highway, in this case within the taxi rank. The technology includes a newly patented way to improve safety. The benefit of this technology is that a taxi will be able to charge at all points within the taxi rank as it moves forward in the queue thereby increasing the available charging opportunity whilst also lowering costs when compared to other wireless induction techniques. For this project the Consortium would be The Council, Algret Innovations (technology provider), University of Birmingham, Electric Blue (taxi analysis), and possibly other local authorities. Local taxi operators

- will be informed about the bid and one of the larger operators will be sought as a project partner.
- Town Centre EV Charging Hubs (TCEVCH): TCEVCH will consider the provision of rapid charging hubs with 6-8 charging stations powered by renewable energy. The hub will be positioned in the town centre close to facilities provided and to local transport links. Additional facilities will be provided by the hub including a system to allow users to book their charge to improve confidence in charging availability and measures to improve vehicle security when compared to public car parks.
- Renewable Fleet Fuels (ReFuel): If awarded, ReFuel will work with 4 EU countries and UK universities to test and promote the provision of alternative fuel vehicles. In Southend, the project will install solar canopies on up to 100 car park spaces all of which will have EV charging facilities. Power demand and supply will be regulated using a large battery co-located with the solar canopies. Other partners will work on fuel cell and gas powered vehicles allowing Southend to learn within the project.
- The Council already works with e-Car Club to provide a fleet of EVs available to hire by the hour and makes provision for staff to be able to use these cars as pool cars for work journeys. The Council will consider ways to promote and grow the car club.

### 3.8 Reducing Emissions from Buses

Public Transport as a viable alternative to car use is an essential prerequisite to improving air quality and the number of car journeys. Moreover, the public transport fleet should positively contribute to improving local air quality.

The Council will work in partnership with Essex County Council, neighbouring authorities and local bus operators (mainly Arriva and First) in order to identify ways to reduce the pollution burden from buses especially in AQMAs and traffic hot-spots. Funding streams will be identified and sought.

Monitoring and modelling show that diesel buses are a major contributor of NO<sub>x</sub> (18 per cent) and airborne particles (8 per cent of PM<sub>10</sub>) in the AQMA. They also contribute to CO<sub>2</sub> emissions.

Replacing old with brand new vehicles is capable of generating significant reductions in NO<sub>x</sub> and particulates, but it remains uncertain whether bus operators will invest significantly in new Euro VI buses for Southend. Retro-fitting may be the realistic viable alternative based on experience of other local authorities. Significant reductions in bus emissions can be achieved by clean bus technology retro-fitting. At a cost of £13000 per vehicle Selective Catalytic Reduction (SCR) technology can improve emissions of older buses almost to the equivalent of Euro VI.

Note that in February 2018 the Council (along with Essex CC, Rochford and Colchester DCs) were successful in securing approximately £1.1m to retro-fit 60 buses, 42 of which use the A127 corridor. Buses will be fitted with SCR technology and particle traps capable of reducing emissions by up to 90 per cent.

The Government's Low Emission Bus Scheme offers £30m of funding for Low Emission Buses which is most applicable where local air quality is an issue. LEVs such as electric, natural gas powered and hybrids are included and the Council will raise awareness and encourage operators to make applications and seek other funding streams to improve their fleet.

Additional measures to be considered are:

- Introduction of fuel efficient driver training as part of any test carried out when appointing or re-appraising drivers.
- In-vehicle real time information about current fuel efficiency, gear selection, speed, or telematics to provide next day information about driving behaviour.
- Training staff drivers to reduce their vehicle emissions by behavioural changes such as reducing rapid accelerations and decelerations and correct gear selection to improve fuel consumption.
- Switching off engines when practical and safe when parked by the road side and when dropping off



- people or deliveries.
- Maintaining vehicles including tyre pressures to the optimum pressure.
- Raising awareness that reducing vehicle emissions will reduce both fuel costs and air pollution.

## **3.9 Raising Awareness**

### **General Public and Businesses**

The Council will provide the public with information on how:

- Health is affected by exposure to air pollution (not just NOx and Particulates), especially vulnerable groups such as asthma sufferers.
- Travel choices contribute to pollution and exposure to levels of local pollution.
- Engine idling affects air quality inside vehicles as well as outside.
- To minimise exposure by altering travel habits or routes (this includes restricting time spent with an engine “idling” particularly near schools).

The Council will provide information to businesses that they can reduce road traffic related air pollution and improve fuel efficiency. For example:

- Ensuring their drivers develop an energy efficient driving style.
- Scheduling deliveries to minimise congestion, optimise vehicle movements and fuel efficiency.
- Encouraging employees to cycle, walk to work, use public transport.

#### **3.9.1 Smart Vehicle Purchasing**

The Council will provide an information service on e.g. our website and social media platforms.



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21. Oxford City Council Low Emission Strategy 2013: Oxford City Council

22. Northampton Low Emission Strategy 2107: Northampton Borough Council

# Glossary



|                   |   |
|-------------------|---|
| AQAP              | Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'    |
| AQMA              | Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives |
| AQS               | Air Quality Strategy  |
| ASR               | Air Quality Annual Status Report  |
| Defra             | Department for Environment, Food and Rural Affairs  |
| EU                | European Union  |
| LAQM              | Local Air Quality Management  |
| NO <sub>2</sub>   | Nitrogen Dioxide  |
| NO <sub>x</sub>   | Nitrogen Oxides   |
| PM <sub>10</sub>  | Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less   |
| PM <sub>2.5</sub> | Airborne particulate matter with an aerodynamic diameter of 2.5µm or less   |
| µgm <sup>-3</sup> | Microgram – One millionth of a gram   |
| LEV               | Low Emission Vehicle  |
| ULEV              | Ultra-Low Emission Vehicle  |
| LDV               | Light Duty Vehicle  |
| LES               | Low Emission Strategy   |
| OLEV              | Office for Low Emission Vehicles  |