



clean air



# LOW EMISSION ZONES

Immediate Aid Paper for Municipalities



# WHAT WILL THE LOW EMISSION ZONE MEAN FOR MY CITY OR MUNICIPALITY?

## Reducing harmful substances means protecting the health of the citizens

According to the World Health Organisation (WHO), pollution of the air we breathe is the greatest danger to our health caused by environmental conditions today. The consequences of constant pollution of the body with harmful substances that we inhale include heart attacks, illnesses of the arteries, chronic lung diseases and cancer.

With the European Air Quality Standards, the European Union has established parameters for air cleanliness, in order to protect both citizens and the environment. Among other things, the Air Quality Standards also set parameters for particulate matter and nitrogen dioxide. Low Emission Zones are an important instrument for the air quality maintenance plans of cities and municipalities, helping to reduce the particulate matter and nitrogen dioxide content of the air. The aim is to reduce the burden of harmful substances in the air to a level that is insignificant for people and the environment. The pressure to succeed with these measures will increase significantly in the coming years. Further breach-of-contract cases with the European Commission are to be anticipated. This could result in six-figure fines, which would have to be paid by the cities and municipalities involved. This is reason enough to take effective measures to benefit health today, thereby avoiding future fines.

## Low Emission Zones

In 1996 Stockholm launched Europe's first environmental zone. The first Low Emission Zones in Germany came into force in Berlin, Hannover and Cologne on 1st January 2008. Since then, in Germany alone Low Emission Zones have been introduced in 60 cities and municipalities. For most cities in Europe, Low Emission Zones can be an important instrument for maintaining air quality. As our map shows, however, even in Germany not all cities have introduced Low Emission Zones. 28 large cities with populations over 100,000 are still without Low Emission Zones.

# WHAT NEEDS TO BE DONE IN ORDER TO MAKE LOW EMISSION ZONES SUCCESSFUL?

## Step 1: Communication

Communication with the population is an essential element of effective Low Emission Zones. As early as possible, the purpose of the environmental zone should be explained, its benefits for citizens should be presented and information regarding its anticipated consequences and alternatives should be shared with citizens. This includes information about possibilities to fit vehicles with a particle filter or possible transitions to vehicles with petrol engines. Due to their high particulate matter emissions, vehicles with direct injection petrol engines are not an environmentally-friendly alternative.

Alongside this technical information, alternatives such as cycling and walking should be promoted, attractive public transport should be offered and this transition should be supported. For the public acceptance of the environmental zone, it is important to make the measurement information publicly accessible, to explain it and to point out the relevant advances in health protection. In this way, the Senate Department for Urban Development and the Environment in Berlin has again and again addressed the public through press conferences, in order to make the people of Berlin aware of the ongoing results of the improvement of air quality thanks to the environmental zone. This creates understanding and acceptance among the population.

## Step 2: Put up signs

Low Emission Zones are an important measure for reducing the air pollution caused by road traffic. They determine and mark an area within the city in which the rules of the environmental zone apply. From the specific launch day onwards, only vehicles which meet a particular emissions standard should enter this zone. The emissions standard required for entry into the environmental zone can, referring to the label displayed on the vehicle, be raised to the highest current “green” level. The green label applies to petrol cars (vehicles with petrol engines) which are fitted with the catalyser specified in the regulations, as well as to diesel vehicles from Euro 4 level onwards and diesel vehicles of Euro 3 level that have been fitted with particle filters.

## Step 3: Exceptional Arrangements

Alongside the exceptions that apply throughout Germany, cities and municipalities also make individual exceptions. These decisions, which are made on a case-by-case basis, make it possible to take account of difficult cases and to introduce Low Emission Zones in a socially-sensitive way. In order to strengthen the effect of Low Emission Zones, the number of exceptions granted should, however, remain as low as possible. The individual exceptions should in general only be granted for a limited time period.

## Step 4: Enforcement

The effectiveness of the Low Emission Zones is increased if the police and Office of Public Order check moving and parked vehicles for the label. The holders of vehicles without a label or with an inappropriate one within an environmental zone must pay a fine of 80 Euros. In Nordrhein-Westfalen, especially, enforcement by the cities must be significantly improved.

According to information gathered by German Environmental Aid (Deutsche Umwelthilfe) in April 2014, in 21 of 25 municipalities enforcement is insufficient. In order to enhance the effectiveness of the Low Emission Zones, it is very important to increase the frequency of checks.

### Information about Vehicle Conversion for Citizens

Owners of vehicles which can no longer enter the environmental zone because they do not meet the requirements for the green label have the following possibilities to continue to drive into the environmental zone:

-  They can have their diesel vehicle fitted with a particle filter in order to qualify for the green label. This only applies to vehicles of Euro 3 standard, however. Introductory information regarding this conversion is available at: [www.partikelfilter-nachruesten.de](http://www.partikelfilter-nachruesten.de).
-  They can exchange their diesel vehicle for a (new or used) vehicle with a petrol engine. All petrol vehicles receive the green label, provided they are fitted with the catalyser specified by the regulations. Without a particle filter, vehicles with direct injection petrol engines are not an environmentally-friendly alternative.

## HOW CAN I TELL WHETHER THE LOW EMISSION ZONE IS SUCCESSFUL?

### More clean vehicles means more clean air

The environmental zone requires that vehicles be fitted with particle filters, as well as the transition to clean vehicles. In this context, we can speak of speeding up the modernisation of the fleet. As a result of modernising the fleet, fewer harmful substances enter the air we breathe. In Berlin's environmental zone, for example, the level of carbon particulate matter in the air has been halved. Diesel carbon is classified as highly inducive of cancer by the World Health Organisation. By halving the particulate carbon content of the air, the environmental zone has made a significant contribution to the protection of public health. At the same time, nitrogen oxides were reduced by 20 percent. This reduction is also good for health, because nitrogen oxides aggravate and damage the respiratory passages.

According to the calculations of the Federal Environmental Agency, particulate matter pollution is considerably reduced by Low Emission Zones, such that if only vehicles with the green label are allowed in, particulate matter pollution sinks by 10 to 12 percent, which leads to a reduction of 20 level-exceedance days.

## THE AIR IS STILL NOT CLEAN?

### Everyone must display labels

There are significant sources of diesel particulate carbon which have not yet been captured by the Low Emission Zones. Further reduction of these emissions is not yet governed by other regulations. These include construction machinery, inland waterway vessels and diesel-fuelled railway vehicles.

Construction machinery such as diggers, caterpillars and electricity generators make up more than a quarter of the traffic-related particulate matter emissions in inner-city areas. In particular locations the pollution caused by them is significantly higher. The emissions of construction machinery cause a major health burden for construction workers. Through specific requirements in public regulations, municipalities can ensure that construction companies only use machines with particle filters.

At present, inland waterway transport and diesel-fuelled railway vehicles must also meet no additional reduction obligations – even in Low Emission Zones. Cities with inland ports have the opportunity, through harbour fees, to introduce a direct incentive for the use of particle filters. Through construction and operation of shore-side electricity production facilities based on renewable energies, the emissions of moored boats can be reduced. In regulations for transport services in the train sector, if the use of these railway vehicles is necessary, it should be made obligatory that only railway vehicles with filters are used.

In using buses for public transport, cities and municipalities should fulfil their example-setting function and ensure that the buses used are fitted with particle filters for the reduction of particulate carbon or with SCRT systems for particulate carbon and nitrogen oxide reduction.

# WHAT'S NEXT FOR GOING GREEN?

## Reduction of Nitrogen Dioxide (NO<sub>2</sub>)

To protect human health and the ecosystem, European parameters for nitrogen dioxide were set in the air quality regulations. The annual parameter for NO<sub>2</sub>, for example, is 40 µg/m<sup>3</sup>. It has been in force since 2010. Some cities have been granted an extension by the European Commission, however these cities must comply with the NO<sub>2</sub> parameters from the start of 2015. A look at the results of the measurements shows how pervasive harm to the public as a result of the harmful substance NO<sub>2</sub> is. At 65 percent of the measuring stations close to traffic, the annual average was exceeded in 2012. Many cities in Germany must therefore take measures quickly to reduce NO<sub>2</sub> levels.

One possibility is to introduce a blue label for vehicles with particularly low NO<sub>2</sub> emissions. The blue label would make it possible for the Low Emission Zones already introduced to reduce not only particulate carbon, but also nitrogen dioxide successfully in the future.

## The aim is: Liveable Cities

The transition from car to the eco-mobility (Umweltverbund) offers a good solution which not only makes our air cleaner but also makes our cities more liveable. Eco-mobility combines walking and cycling with the use of public transport. By increasing movement on foot and by bicycle, the air becomes cleaner, the noise level drops and the quality of journeys improves considerably. This makes cities more liveable.

Bicycles and e-bicycles in particular have great potential to shift urban personal transport. Bikes with boxes on the front offer attractive alternatives for transporting goods in urban areas. Construction of suitable infrastructure is an important basis for increasing cycle transport. This transport shift leads, among several other positive effects, to cleaner air in cities.

## Contact and Further Information

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You can find more information about low emission zones and clean air in cities on our website: [www.cleanair-europe.org](http://www.cleanair-europe.org)

Picture front page: © Sootfree for the climate

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## Clean Air

is a project by nine European environmental organisations that fight for clean air in European cities. Despite the existing legislative framework and the citizens' right to clean air, continuing violations of air pollution limits remain a problem in many cities. Air pollution threatens health, environment and climate. It's time to take action!

[www.cleanair-europe.org](http://www.cleanair-europe.org)

Started in 2009, the associated campaign „Sootfree for the Climate“ aims to reduce diesel soot emissions, which accelerate climate change and pose a threat to public health. To this day twelve European NGOs have joined the campaign.

[www.sootfreeclimate.org](http://www.sootfreeclimate.org)

A project by

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