

How cities are restricting private cars to tackle air pollution

Fossil fuelled vehicles are the major culprit when it comes to air pollution in large urban centres. Paris, London, Madrid, Barcelona and Mexico City are some of the cities that are developing plans targeting private cars as part of the solution to improve air quality.

Mexico City – plate based system and its issues

Since 1989 car restrictions are based on the vehicle plate number, considering the final digit. For instance, on Monday licenses ending on 5 or 6 are not allowed to circulate, on Tuesday, is the turn of vehicles with 7 or 8 as the last digit and so on. In addition, all vehicles undergo an emission test and are classified accordingly; low emission vehicles are exempt from the program's restrictions. Until 2008 the restrictions only occurred on weekdays; however, expecting to reduce air pollution by 16%, the program was expanded to weekends. Since then, cars with odd plate numbers can't circulate on the first and third Saturday of the month and even numbers on the second and fourth. In months with five Saturdays all cars are allowed to circulate on the last weekend with exception of the most polluting cars which are banned from the roads all Saturdays.



A recent a study conducted by researchers from the University of California demonstrated that Mexico City's goal wasn't achieved as pollution levels haven't fallen significantly since 2008.

Although the study didn't focus on analysing the reasons why the program wasn't successful, plausible explanations relate to people using a second family car, carpool or get a taxi when their vehicle is not allowed on the streets. Although public transport is inexpensive, it is overcrowded and inconvenient as a realistic option to driving. In addition, cars are a status symbol and when families can afford to own their private vehicle they don't tend to go back to using public transport.

It is important to consider that carpooling is a more sustainable alternative than driving alone. Although it can reduce the number of cars on the streets, it doesn't significantly diminish air pollution when the total miles travelled are increased, which happens when the driver needs to divert from his original route, resulting in more exhaust being released in the air.

Long-term results of car bans based on license plate have been questioned before; the main reason is that often drivers find a way to bypass the restriction. One classical example is buying a second car which is normally a cheaper and more inefficient model. In addition, usually there are no incentives to upgrade to more efficient cars, a measure which has a proven long-term contribution to improving air quality levels.

Paris – major transformation ahead

Whenever pollution levels are considered high in Paris, car restrictions are also enforced using a plate number based system. Although it has worked as a short term measure, it doesn't prevent the reoccurrence of the problem. Paris' Mayor, Anne Hidalgo, has an audacious plan to address the pollution issue more efficiently, with the final goal being to ban private vehicles from the city centre.

As part of Paris' transformation, a plan was approved last September to pedestrianise a 3.3km section of motorway along the right bank of the Seine. Even though the city council's intention is to close the road permanently, the police, responsible authority for the city's traffic, still needs to give the final approval. The police department is currently analysing the effects of the closure and will issue evaluations six and twelve months after the implementation.

More restrictions are planned for this year: a 1km section of the road along the river from Place de la Concorde to Pont Royal will be closed; traffic will also be restricted in two main roads running from east to west. Commuters and political opponents are amongst Hidalgo's worst critics, but the Mayor is willing to continue her fight to reduce cars on Paris' roads.

A further initiative of Hidalgo's scheme was also accepted last year. Vehicles will be classified into six categories according to the year of registration, its energy efficiency and its emission efficiency. From January 2017, cars circulating within the city centre on weekdays need to display a sticker indicating their category.

Cars registered prior to 1997 and trucks and buses registered prior to 2001 are banned from the city centre. The city is offering a €400 contribution to owners of such vehicles to upgrade them to a more efficient model. Initially, the ban will affect less than 1% of vehicles. The percentage may seem too modest, but the intention is to gradually increase the constraints including other categories of vehicles until, eventually, the centre becomes a car-free area. Of course vehicles belonging to residents, emergency services, police and delivery will continue to circulate in the area.

Madrid – pedestrian-friendly city centre

Similarly to Hidalgo, Madrid's Mayor, Manuela Carmena, wants a drastic solution to reduce pollution levels, with a plan to ban private cars from the city's busiest street, the Gran Via, until 2019.

The restriction will affect a significant number of drivers as the Gran Via is used to cross the city. The solution is to re-route traffic to an external "belt" and creating a pedestrian-friendly area within the city centre.

Carmena also needs to convince commuters and other stakeholders to embrace the change. The retail sector is already on the Mayor's side as a result of the positive impacts during a test conducted last December: during a period of nine days, only buses, taxis and bicycles were

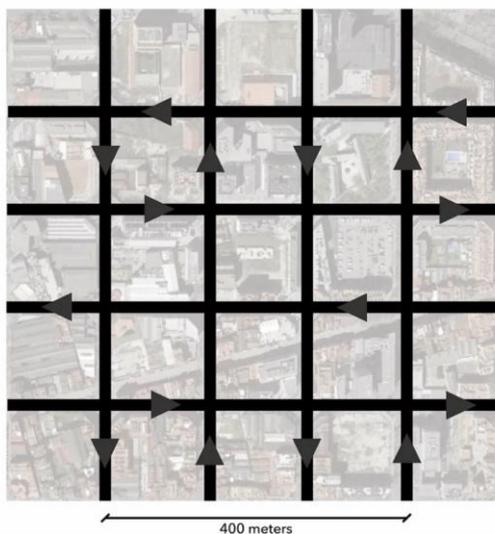


allowed in the Gran Via; despite the initial fear that the closure would affect sales by discouraging car-driving customers, the test was a success.

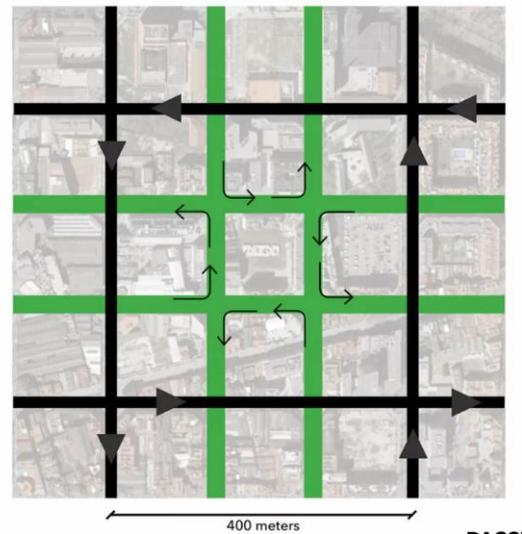
Barcelona – driving private cars is getting increasingly inconvenient

Barcelona’s plan encompasses restricting vehicles, promoting cycling and improving public transport. Instead of banning certain types of vehicle, the city is changing its layout to encourage other modes of transport through the implementation of [“Superblocks”](#), polygon grids measuring 400 by 400 metres where non-resident traffic and above ground parking are not allowed.

CURRENT SITUATION



SUPERBLOCK



Only residents, urban services and emergency vehicles can drive within the Superblock at a maximum speed of 10km/h, while the regular traffic of other motorised vehicles and public transport flows in the perimeter of the area. Each internal intersection will be transformed into a pleasant public area, turning the interior of the Superblock into a safe, preferred zone for pedestrians and cyclists.

The Superblocks will make it more difficult for motorists to reach their destination, thereby encouraging cycling, walking and public transportation. In addition, if the results from the first Superblock located in the Gràcia neighbourhood are replicated through the entire city, the benefits will allow Barcelona to be on track to effectively reduce air pollution and meet E.U. standards. Since 2007, when the model was implemented in Gràcia, walking increased by 10% and cycling by 30%. At the same time, driving in the inner streets of the Superblock was reduced by 40% while in the whole area by 26%.

London – current policies and future plans

London is currently reviewing its plans to tackle pollution. From next October, in addition to the congestion levy, owners of vehicles that don’t meet minimum Euro emission standards will pay an extra £10 to drive in the city centre on weekdays between 8 am and 6 pm. The extra fee, known as

T-charge, will apply until the implementation of the Ultra Low Emission Zones (ULEZ), which is planned to commence in 2020. The ULEZ is basically an expansion of the T-charge, as the restriction will be enforced 24h per day, every day of the week.

As we reported on the [Wayfinding Forum Blog](#), Westminster City, which is part of London's Congestion Charge Zone, is introducing a parking surcharge for diesel fuelled vehicles, further discouraging the use of polluting cars. From April this year, diesel drivers will pay an extra 50% in addition to the regular £4.90 fee to park their cars in the area. Combining the T-charge with the new parking fee will eventually result in an additional £30.00 to drive and park diesel vehicles in the Westminster City Council area.

Australia

Meanwhile in Australia, the National Clean Air Agreement is being reviewed and the country is aiming for good air quality targets. However, if there aren't stricter measures to reduce vehicle emissions, the targets won't be achieved, according to a recent article shared by [Parking Australia](#).

The OECD (Organisation for Economic Co-operation and Development) estimates that there are approximately 740 preventable deaths per year in Australia due to ozone and PM2.5, a particular matter from vehicle emissions. In a context where there are 1,280 deaths on Australian roads per year, the number of preventable deaths becomes even more significant.

One of the solutions proposed by the authors to change this scenario is to upgrade the country's refineries to supply low-sulfur fuel. Australian petrol has the lowest quality of all 35 OECD countries.

However, there are no plans to ban or discourage the use of diesel or petrol vehicles like the ones happening in the other cities mentioned above. In contrast, major new road projects are underway in Sydney, Melbourne and Brisbane while in NSW new cycle lanes have been removed. In addition, a new suite of fines for cyclists is cited as a reason for a reduction in cyclists in the past 12 months, for more details, read our post [Lower cycling rates in Sydney](#).

Are you aware of any interesting initiatives occurring in Australia? We would love to receive your contribution, so contact us on info@parkingconsultants.com

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Sydney Office:

Suite 102, 506 Miller Street
Cammeray NSW 2062
Ph: (02) 8920 0800



Melbourne Office:

Suite 2.09, 838 Collins Street
Docklands VIC 3008
Ph: (03) 9020 7333