



## From on-street to off-street parking

This ReVeAL building block fact sheet is one of a series of 33, each describing one Urban Vehicle Access Regulation (UVAR) building block and providing an example of its use in a city. The ReVeAL building blocks can be combined with one another to create a structured UVAR package for a city. Try out the ReVeAL online tool, [www.AccessRegulationsForYourCity.eu](http://www.AccessRegulationsForYourCity.eu), to receive suggestions of appropriate UVAR building blocks for your city as well as guidance in their implementation.

The EU-funded research and innovation project, CIVITAS ReVeAL, aims to add Urban Vehicle Access Regulations and associated policies and technologies to the standard range of urban mobility measures in cities across Europe. The project mission is to enable cities to optimise urban space and transport networks use to improve urban accessibility, sustainability, and liveability.

For more information, please visit: [www.civitas-reveal.eu](http://www.civitas-reveal.eu).

## Spatial Interventions

Spatial interventions are where the road layout has been altered to favor more sustainable mobility and prevent vehicles entering. Examples of these are removing road and parking space taken for vehicles and using the space for sustainable mobility or amenities (bus lanes, logistics hubs, parklets, restaurants and more)

### Speed reduction

#### Traffic filter:

- Recirculation of traffic
- Road block
- Capacity restraint

#### Reallocating parking space:

- Parklet
- Drop-off zone shared mobility
- Logistics bay (mini-hub)
- Kiss & Ride (K&R)

#### Reallocating road space for pedestrians:

- Widen pavement
- Pedestrian priority street or zone

#### Reallocating road space for cycling:

- Cycle lane
- Cycling street

#### Reallocating road space for public transport:

- Bus or tram priority lane

## Pricing Aspects

Pricing aspects are when the entry to an area or to the entirety of the city is given a price tag to encourage more sustainable transport. Pricing aspects also include the (differential) levels of penalty fees to encourage (and enforce) compliance.

#### Road charges / tolls:

- Charge applied to a perimeter or an area (congestion charge)
- Charge applied to specific points
- Distance-based charge
- Time-based charge
- Permit charge
- Charge based on emission standards (pollution charge)

#### Parking charge:

- Dynamic price (real time)
- Fixed price
- Charge based on emission standards (pollution charge)
- Workplace levy
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## Regulatory Measures

Regulatory measures are those where there is a legal instrument that states who can and cannot enter an area. They could often also be called "bans" and include Zero Emission Zones, Low Emission Zones, and Limited Traffic Zones.

#### Regulation by emissions:

- Euro standard
- Zero-emission vehicles

#### Regulation by vehicle type and dimensions:

- Vehicle type
- Dimensions

#### Regulation by trip purpose:

- Delivery and logistics
- Through traffic ban

#### Regulation by permit:

- Permit to travel
- Parking permit
- Planning permit conditions



## From on-street to off-street parking

### Definition of the building block

Vehicles are charged to occupy parking spaces. Prices are higher on-street than in parking infrastructure facilities to gradually reduce the presence of cars in the city streets and thereby improve the quality of public spaces (e.g., free/cheaper Park & Ride facilities).

### Timing, phasing, scaling and replication

The availability of on-street parking is gradually reduced on an ongoing basis.

### Time windows

- Allowing vehicle access at particular times of day
- Allowing vehicle access on given days of the week (e.g., weekends)
- Allowing seasonal vehicle access



### Enforcement options

- Cameras with automated number plate recognition (ANPR)
- Manual enforcement through visual inspection
- Physical barriers

### Gender and equity

There are no specific concerns to be aware of.

### Future considerations

In a future with dynamic signs (and related apps), it would be possible to more easily communicate available parking spaces directly to the specific user, encouraging the user to choose off-street parking.

### Further guidance

- Communicating the aim of the scheme
- Enforcement options

In Rotterdam there are different time windows for paid on-street parking (Indebuurt, 2022)

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## Complementary measures

Increased mobility options

The types of increased mobility options will be different depending on the scheme type, but some examples are:

- Creation of mobility hubs
- Increasing/improving walking or cycling facilities
- Increasing/improving public transport
- Facilitating vehicle hire and/or car sharing
- Providing parking spaces in alternative locations (e.g., Park & Ride)

## Consider combining with:

Spatial Interventions

Reallocating parking space:

- Parklet
- Drop-off zone shared mobility

Reallocating road space for pedestrians:

- Widen pavement
- Pedestrian priority street or zone

Reallocating road space for cycling:

- Cycle lane
- Cycling street

Reallocating road space for public transport: Bus or tram priority lane

Pricing Aspects

Road charges / tolls:

- Charge applied to a perimeter or an area (congestion charge)
- Charge applied to specific points
- Distance-based charge



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*Example: Rotterdam, the Netherlands*

### Description

In 2015, Rotterdam's City Lounge strategy set a goal of reducing on-street parking. The strategy specifically focuses on fixed pricing based on parking zones, permits for residents, businesses and their visitors, and price differentiation between on- and off-street parking.

Parking is free in the park and ride facilities at the outskirts of the city, and municipal parking garage are cheaper than on-street parking. Paid parking is more expensive in the city centre than in the outer districts.

The municipality may grant a paid permit valid for one year for parking on the street. These may be public or authorised parking spaces, and in the latter only permit holders may park.

Prior to setting up regulated parking in neighbourhoods, public consultations are held.

### Enforcement methods

Scan cars equipped with 12 Automatic number plate recognition (ANPR) cameras

### Time windows

Times differ across zones of the city. Depending on the zone, paid parking applies:

Monday to Saturday

- from 9:00 to 18:00 or
- from 9:00 to 23:00

Sunday

- from 12:00 to 18:00 or
- from 12:00 to 23:00

Friday and Saturday, from 09:00 to 1:00  
In the city centre (the regulated parking hours on Fridays and Saturdays were initially earlier and then extended to 1:00).

Blijdorp Zoo, Sundays from 9:00

### Phasing and upscaling

- 1999 - 2012. Around 5,300 paid parking spaces were added per year
- 2012 - 2018. Around 750 paid parking spaces were added per year (total of 82,000 in 2018)
- 2019. 4000 paid parking spaces were added (total: 86,000) as well as approximately 300 parking spaces for permit holders (permits can be obtained by residents at a cost of €28.40/3 months).
- 2019. 1800 on-street parking spots removed of the 3000 planned by 2020





## Other building blocks put in place

### Spatial Interventions

Reallocating parking space: Parklet

Reallocating road space for pedestrians:  
Widen pavement

### Pricing Aspects

Road charges / tolls: Permit charge

Parking charge

- Dynamic price
- Fixed price

### Regulatory Measures

Regulation by emission: EURO standard

Regulation by permit

- Parking permit
- Planning permit conditions

### Additional information

The Municipal Executive may grant a permit for parking in spaces near parking equipment or spaces for interested parties. The license is granted for one year, with tacit renewal for one year at a time. The permit states at least name and address of the license holder and the registration number of the license holder's motor vehicle or a code; the area, the road

## Complementary measures

### Exemptions

In some commercial streets outside the city centre, there is a reduced fee for the first 30 minutes

Blue zone: visitors can park free of charge for a fixed maximum period, indicating the length of their stay by means of a blue disk behind the windscreen

Residents and business park tenants can buy 500 hours of parking for their visitors, who then park free of cost

section or the road sections on which the permit holder may park their motor vehicle; the period of validity of the permit.

It is prohibited to place or leave any object, other than a motor vehicle in a parking space near parking equipment and in a parking space for interested parties; the Municipal Executive may grant an exemption from this prohibition. It is prohibited to park in a parking space for interested parties without a license and contrary to the regulations attached to the permit.

The annual fee for the first permit is:

- Residents: public, €115.20; licenced space €489.60
- Companies: public, €216; licenced space €996

In 2021, Rotterdam tested a parking app for residents of a pilot borough with the aim to indicate available parking spaces and avoid parking search traffic.

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## Rotterdam, the Netherlands



A parking spot converted into a parklet (City of Rotterdam, 2016)

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