**CYCLE STREETS IN ANDERP** FIRST CLASS CYCLING A red carpet for cyclists

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# INTRODUCTION

The implementation of cycle streets is legally possible as a policy measure since 10 January 2012. Antwerp has adopted this measure as an instrument in its bicycle policy plan. The city resolutely opts for the further 'cyclification' of Antwerp. Central to this ambition is the elimination of missing links in the cycle route network. In addition to providing infrastructure such as (separate) cycle paths, cycle suggestion strips and cycle comfort strips, the city wants to take a great leap forward by implementing cycle streets in Antwerp.

Both the mobility plan and the cycle plan stress the importance of a strong hierarchical network for every mode of transport. It goes without saying that this is also true for the bicycle. The city will mainly use cycle streets to further enhance the network of main axes. Specifically by filling in missing links and creating extra routes for cyclists, sometimes complementary to the main routes. The principle of 'doubling' certain main axes is essential to the goal of gradually becoming a world-class cycle city.

In 2014 the city implemented its first cycle street in Grotehondstraat. This pilot project resolved a missing link for cyclists coming from Pretoriastraat and riding towards the city centre (and vice versa). At the intersection with Arendstraat, the cycle street connects to the cycle highway from Antwerp Central Station to the city of Mechelen (Malines).

More than one year after the implementation, the time has come to evaluate the pilot project and consider possible design improvements.

Based on a set of criteria this policy note formulates generic design principles for future cycle streets. In the short run, the city wants to use cycle streets to fill in a number of missing links on three supra local routes:

- Antwerpen Noord
- Borgerhout intra muros
- The District Route.

These routes will be discussed further below.

# 1 THE CYCLE STREET AS AN INSTRUMENT TO COMPLETE THE CYCLE NETWORK

# THE ROLE OF CYCLE STREETS IN THE CYCLE NETWORK IN AND AROUND THE CITY

If we want visitors to easily and efficiently reach Antwerp, we need to encourage more people to cycle. In fact, it is one of the explicit ambitions of the city and partners in the joint project 'Smart ways to Antwerp' to reduce rush hour traffic with 10.000 vehicles over the next few years. This absolutely necessitates integrally safe, continuous, readable and comfortable cycle infrastructure. The city prioritises supra local cycle connections and the routes that "feed into" these connections.

The cycle street is an important instrument to realise the ambitions of the city's mobility plan and cycle plan. However, the city clearly opts for a networkoriented approach. This means focussing on the realisation and completion of high-quality cycle connections with the central aim of improving the quality of the route in its entirety. As they say: the chain is only as strong as its weakest link. The cycle street is an important part of this strategy. At certain locations, it offers the ideal solution to achieve continuous and safe cycle routes into the heart of the city. In the dense urban fabric it is not always possible or desirable to provide separate cycle infrastructure. In these cases, the cycle street can provide the 'last mile' towards the city centre.





The first two additional cycle streets ensure shorter and faster connections (5 traffic lights less on average). This is of course a huge advantage for cyclists.

### INTRODUCTION OF CYCLE STREETS FOR THREE SUPRA LOCAL CYCLE CONNECTIONS

The city and the districts of Antwerp, Borgerhout and Deurne want to gear up and realise three important supra local cycle connections in Antwerpen Noord, Borgerhout intra muros and on the District Route. These routes are part of the 'supra local functional cycle route network' that was created in cooperation with several partners, including the Province of Antwerp and the Flemish government.

The map on page four outlines the network of supra local routes and the most important and biggest missing links on these routes. Cycle streets can fill in missing links at certain locations within this network.

The first two cycle connections, Antwerpen Noord and Borgerhout intra muros, form the last mile within the intricate urban fabric and for the cycle highways, which are abruptly interrupted just before the city centre due to large infrastructural works. Cycle bridges and cycle streets can 'close' these routes.

The third cycle street, Ruimtevaartlaan in the district of Deurne, performs on a smaller scale but is essential for the continuity of the route. By implementing a cycle street here, in a residential quarter, we can eliminate a missing link in the tangential District Route.

# **2 PRINCIPLES FOR FURTHER IMPLEMENTATION**

#### **LEGAL FRAMEWORK**

From the Highway Code (free translation):

2.61. « cycle street » : a street equipped as a cycle route where specific rules of conduct apply to cyclists but where motor vehicles are allowed as well. A cycle street is marked by road signs that signal the beginning and the end of the cycle street.

Art. 22novies. In cycle streets, cyclists are allowed to use the entire width of the road if it is only open to their direction and half of the width on the right side if it is open to both directions. Motor vehicles are allowed in cycle streets but are not allowed to overtake cyclists. The speed limit in a cycle street may never be higher than 30 km/h.

#### **NETWORK**

Fast, smooth and pleasurable journeys are what makes the bike such a popular mode of transport. The city wants to promote the bicycle as the ideal urban mode of transport. In order to seduce more residents and visitors to cycle, Antwerp wants to further analyse and optimise its cycle network, focussing on a number of elements:

- Safety
- Direct routes
- Coherence
- Comfort
- Attractiveness

The cycle network comprises a main cycle network with supra local routes for direct and fast connections to the city and a city cycle network with local routes for flexible, shorter trips within the city.

The robust main cycle network forms the spine of the cycle network and processes supra local cycle traffic on three levels: main routes, core routes and switch routes, each with their own characteristics and corresponding design principles.

Main routes separate cyclists from other traffic by means of separate cycle infrastructure (cycle ways, separate cycle paths ...), whereas switch routes increase the capacity of the network by 'doubling' the cycle infrastructure, as it were, at certain locations on the core routes.

Switch routes are a new category of cycle routes and help increase the capacity of the network without having to add new cycle infrastructure. They provide extra alternatives in the context of the increasing cycle traffic.

The city cycle network is a logical refinement of the main cycle network, with cycle routes at the level of city quarters on the one hand and 'lower' routes at the level of neighbourhoods on the other. The latter actually comprises all the streets, which, together, form a diffuse network at the neighbourhood level.

# Switch route

Switch routes are extra cycle routes in the network that allow for exchanges between supra local and local cycle traffic over short distances. They provide continuity and extra capacity and offer pleasant alternatives (with less traffic lights, calmer traffic ...) in the context of increasing cycle traffic.



### **MAIN CYCLE ROUTE**

- Main route
- Core route
- Switch route

#### **CITY CYCLE ROUTE**

City quarter routeNeighbourhood route



#### **DESIGN PRINCIPLES**

The city of Antwerp makes well-considered choices in applying the different instruments (cycle roads, cycle paths, cycle comfort strips, cycle streets, mixed traffic ...) to implement its cycle network. Each design principle results in a different 'infrastructural landscape' for cyclists (and other road users). One will appear more focused on access, while another draws attention to aspects of connection.

For instance, a separate cycle path that continues past side streets is focused on the aspect of connection. Traffic both on this route and coming from the side streets will 'sense' this focus.

Arriving at the dense urban fabric, cycle streets can eliminate missing links at the route level and offer alternative routes parallel to main car axes, doubling the cycle capacity. In cycle streets the bicycle is emphasised as the norm in a prominent manner. Cycle streets almost literally roll out the red carpet for cyclists.

Category	Max. speed (km/h)	Car traffic intensity (24h)	Main route	Core route	Switch route	City quarter route	Neighbourhood route
Separate cycle trajectory			cycle highway	cycle way / shortcut			shortcut
Great road	70		separate cycle path*				
City road City quarter road	50		cycle path*				
Main street Neighbour-		> 3500 or intense public or freight transport	cycle path*				
hood street Residential street	30 or walking pace	< 3500	cycle street	cycle street, cycle suggestion strip, cycle comfort strip, steering measures	cycle street, cycle suggestion strip, cycle comfort strip, steering measures (+ supporting measures)	cycle suggestion strip, cycle comfort strip, steering measures, mixed traffic	cycle comfort strip, mixed traffic

# Missing links en de categorisering van wegen en straten

\* if possible



#### Example

The Dutch municipality of Zwolle has applied a comparable method to a number of radial commuters' bicycle corridors. Depending on the local context, Zwolle has opted for 'normal' bicycle infrastructure or cycle streets (in residential neighbourhoods). Or rather: super cycle streets, continuing throughout several streets.









#### **BICYCLE CULTURE**

An important pillar of the bicycle action plan is the implementation of a real bicycle culture in Antwerp. Creating legible cycle infrastructure is an important basic requirement in achieving this.

We also need to involve the (potential) users of the cycle infrastructure. The first cycle street was realised in close cooperation with users from the immediate vicinity.

The evaluation has confirmed that this is a good formula. And so the city wants to continue this approach for the implementation of cycle streets at other locations.



Heat map core city (cycle route registration, European Cycling Challenge 2015)





#### The Wiggle – San Fransisco

This American city has been working on a cycle-friendly programme for years. San Francisco has the luxury of being able to transform wide boulevards into cycle lanes with buffering strips on the sides. Our European cities have taken the step of upgrading the cyclist's position to that of the pedestrian years ago. The hilly terrain and grid-like street pattern confronts cyclists with many climbs. Cyclists have found their own solution by zigzagging through urban quarters and avoiding to cross vertical lines, eliminating climbs almost entirely. These routes were named 'the Wiggle' and were given a real place within the cycle network and the cycle community. Antwerp can take inspiration from this to adopt a user's perspective. Some routes are intensely used by cyclists while not being 'visible' in the urban landscape. These routes are now being incorporated into the cycle network.





The city and the district of Borgerhout will improve the legibility of the switch route that runs parallel to Turnhoutsebaan by creating a 'cycle gateway' at the Singel road. This gateway is to provide a proverbial push in the right direction towards the switch route and put cyclists 'on the right track'.

The cycle connection from the north is to receive its own icon in the form of the IJzerlaan cycle bridge. The city will provide clear guidance here by implementing a 'red carpet' with the necessary markings and signs between the cycle bridge, Park Spoor Noord and Gemeentestraat. (You can read more about this below.)

This is how the city of Antwerp promotes cycling in the urban environment in very visual ways and seduces new users to cycle.







# EVALUATION

The city opened its first cycle street in Grotehondstraat in August 2014. It is useful to know how this first cycle street functions as a new instrument before applying the concept to other parts of the cycle route network.

The evaluation focused on a number of criteria in order to determine whether the cycle street had met the original expectations:

- Use/behaviour
- Intensities
- Direction and execution
- Accident statistics

#### **USE/BEHAVIOUR**

#### **Observations**

The mobility department went on site during (and outside of) peak hours to assess how the cycle street functioned in practice. Some observations were made:

- Cyclists and motorists adapt well to the new situation. They pay attention when crossing each other as well.
- The assertive cyclist rides in the middle of the road (and probably did so before the cycle street was implemented), while careful cyclists noticeably prefer to keep right. In more intense traffic most cyclists choose to ride in the middle.
- During calmer moments with fewer cyclists, motorists are more inclined to overtake cyclists.
- The priority rule is not respected by everyone but this is the case in many streets. Awareness-raising actions might help improve on this.
- Grotehondstraat is a one-way street. One-way cycle streets work best for cyclists riding in the direction of car traffic.
- During peak hours there is a great deal of car traffic (looking to park), which lowers the average speed and encourages motorists to stay behind the cyclists. Of course this is just one specific moment in time, with many cyclists and cars looking for parking spaces.
- Evening rush hour is spread more evenly in time and people hurry more, which reduces the tendency of motorists to stay behind cyclists

The city carried out counts before and after the implementation of the cycle streets. The city opted for a visual count and averages. Passing pedestrians and cyclists were counted on the same location during morning and evening rush hours.

The counts were performed twice in the same manner (and place): before the implementation (Februari 2014) and one year after the implementation (March 2015). This way it is possible to compare the results. The wheather is a possible factor in the interpretation of the measured intensities.

#### Observations from both counts:

- Cycle traffic has increased with 10 to 15 per cent. This is partly due to better weather during the 2015 counts.
- Car traffic has somewhat decreased. The decrease is negligible in the afternoon.
- The weather was not entirely comparable.

# Conclusion

Taking into account the weather during both counts, we can assume that there is a small increase in cycle traffic and a small decrease in car traffic in the morning. Car traffic has practically stayed the same in the afternoon.



#### Date: 11 Februari 2014

Weather circumstances: Dry and cold (5°C) in the morning, warmer with rain in the afternoon.

Grotehondstraat	Cyclists	Cars*	Cyclists	Cars
	towards [	Draakplaats	towards C	ostenstraat
Morning 7u45 – 8u45	49	/	213	47
Afternoon 16u – 17u	110	/	29	75

\*Grotehondstraat is a one-way street towards Oostenstraat

### Date: 16 March 2015

Weather circumstances: Sunny but chilly in the morning, nice cycling weather in the afternoon.

Grotehondstraat	Cyclists	Cars*	Cyclists	Cars
	towards	Draakplaats	towards	Oostenstraat
Morning 7u45 – 8u45	55	/	242	33
Afternoon 16u - 17u	133	/	42	74

\*Grotehondstraat is a one-way street towards Oostenstraat

#### **DESIGN AND EXECUTION**

The city opted to provide Grotehondstraat with a 'red carpet' in the middle and strips on the sides to accentuate this carpet. This helped guide cyclists towards the middle of the street. The carpet received a brownish red colour, the standard colour for cycle paths in asphalt. A pictogram was painted on the street as a repetition of the sign.

The cycle street gives priority to cyclists, which is indicated by means of signs and by the red colour that continues past side-streets.

By replacing the cobble stones on the speed tables with red bricks, the city wanted to provide visual continuity for the cycle street and increase comfort for cyclists.



The design of the first cycle street has partially met the expectations. But the further implementation of cycle streets requires some adjustments:

#### CONCEPT

The idea behind the current concept is to steer cyclists towards the middle of the street, decreasing motorists' inclination to overtake cyclists. However, we have observed that, in one-way streets, cyclists riding on the red asphalt towards car traffic come into confrontation with motorists. This is not an ideal situation.

Also, the execution has resulted in a poor transition from red to black asphalt. Seams have formed where both colours meet. This is uncomfortable for cyclists. In addition, the seams might tear in the longer run, which is not only uncomfortable but also unsafe.

#### **Optimisation measure**

The red asphalt will be applied over the entire width of the road. This will allow cyclists in the direction of car traffic to claim their space and keep motorists behind them. At the same time cyclists in the other direction are not steered towards the black/red division line anymore.

#### **COLOUR**

During winter months and in rainy weather, the contrast between the black asphalt and the standard brownish-red asphalt was far too unclear. This eliminated the red carpet effect, which has an important signalling function for the road users.

#### **Optimisation measure**

Instead of brownish red asphalt, the city will use bright red asphalt for new cycle streets. The extra cost does not outweigh the improved signalling function for the road users.

#### **CYCLE COMFORT**

Asphalt is preferred because of comfort and durability and outscores concrete or bricks in practical tests. The speed tables in Grotehondstraat were fitted with red bricks. The decision to remove the cobblestones has proven to be a plus for cyclists. The bricks also clearly improve the signalling function of the speed table. Applying asphalt here would reduce the traffic-calming effect, which is undesirable from a road safety point of view. In new projects we want to bring the colour of the bricks even closer to the bright red colour of the asphalt.



# Conclusion

In order to make cycle streets stand out even more, a bright red colour is desired. Applying the colour over the entire width reduces problems with the finishing (seams) and provides a safer place for cyclists riding against the direction of car traffic in one-way streets.

### Accident statistics

Grotehondstraat	BEFORE (01/01/2012 to 01/09/2014)	AFTER (01/09/2014 to 31/12/2015)
Deadly accidents	/	/
Severe injuries	/	/
Other injuries	/	/
Material damage only	3	2



Grotehondstraat 01/01/2012 to 01/09/2014

• Accident with material damage only

# Conclusion

The number of traffic accidents in Grotehonstraat remains the same: there were almost no accidents before and after the implementation of the cycle street.



Grotehondstraat 01/09/2014 to 31/12/2015

• Accident with material damage only

#### FINAL CONCLUSIONS OF THE INTERNAL EVALUATION

Grotehondstraat was used intensively by cyclists before the implementation of the cycle street, without great problems in terms of road safety. The implementation of the cycle street has increased comfort for cyclists, improved the legibility of the route and reinforced the high level of safety.

The number of cyclists has increased, albeit not with spectacular amounts. The city did not receive many complaints. The priority rule was not always clear, but this is a problem throughout the city.

Cyclists' behaviour does not appear to have changed much since the implementation of the cycle street. Assertive cyclists still claim their space while defensive cyclists still prefer the right-hand side, in spite of motorists' obligation to stay behind cyclists.

The city opts for a better finish by applying a brighter red over the entire width of the road.

A cycle street remains a good instrument to fill in certain gaps in the cycle network. It is important to adopt a user's perspective and a network-oriented approach to the measure, in view of the local context and its role within the network.

An integral approach on the route level will allow the city to further promote cycling and increase the number of cyclists on these routes.

# **4** GENERIC DESIGN PRINCIPLES FOR CYCLE STREETS

Based on the evaluation, the city wants to refine and optimise the generic design principles for cycle streets. These principles will contribute to road safety, improve legibility and increase comfort and user-friendliness for cyclists. By implementing these solutions everywhere, the city wants to provide a uniform lay-out for cycle streets. This will improve recognisability and allow road users to see what is expected from them.

#### INRICHTING

- Width: measures specified in the city's road construction scripts
- Red carpet over entire width of intersection, provided that:
  - the intersection is situated in the cycle street or the next street continues in a logical line and is a cycle street itself
     -> principle: "rolling out the red carpet"
  - the intersecting street is situated within a 30km/h zone
  - the intersecting street is not categorised as a main road (or higher) in the mobility plan. For safety reasons, the city will have to study this in detail based on local intensities and morphology.
  - the intersecting street is not an axis for public transport or intensive car traffic.
- In all other situations a continuation of the red carpet is ruled out in order to ensure safety and respect priority rules. This also respects the principles of road hierarchy and coherent 30km/h zones, as formulated in the city's mobility plan.
- Cycle streets (with a 30km/h speed limit according to the Highway Code) are usually residential streets where speed breakers (e.g. speed tables, narrowing the road...) are acceptable. It is preferable to equip the beginning and end of cycle streets with speed tables.

 If there are no cobblestones in the parking zone, demarcation of the parking strip can be considered if motorists prove to use the space to overtake cyclists

#### EXECUTION

- A cycle street is executed in bright red asphalt over the entire width of the road, gutter to gutter (and following the line of gutters along curb extensions). The gutters are therefore not part of the red carpet.
  Remark: It is preferable to renew the gutter and position it in-between the road and the parking strip, but this cannot be imposed. The separation between the red asphalt and the gutter or parking strip will be clearer and problematic seams such as those in Grotehondstraat are avoided.
- The red asphalt changes into red bricks on speed tables, the colours which will be matched as closely as possible

#### **PRIORITY RULES**

- Traffic sign B1 (upside-down triangle indicating to give way) is mandatory and it is advised to combine this with shark's teeth road markings.
- The shark's teeth should be applied as closely as possible to the red carpet.

#### SIGNING

#### Traffic sign

 A traffic sign is mandatory. The traffic sign has to be repeated at every intersection with side streets.



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 In one-way streets where cyclists are allowed to travel against the direction of car traffic, the traffic sign will be provided in the opposite direction as well in order to improve legibility for cyclists

#### Pictogram

- The traffic sign is repeated by means of a sticker (large pictogram) on the road.
- This pictogram is complementary. It is applied in the beginning of the street and repeated after side streets.
- In two-way streets the sticker must not be applied in the middle of the road but in both traffic directions.
- Upon leaving the cycle street, the sign doesn't have to be repeated by means of a pictogram on the road.
- In one-way streets where cyclists are allowed to travel against the direction of motorists, the pictogram will also be provided for cyclists traveling against the direction of car traffic. This will improve legibility.

#### **LEGIBILITY OF THE ROUTE**

- If cycle streets do not connect directly to each other on a cycle route (e.g. across a square), cycle guidance measures are advisable. These measures can indicate the further course of the route and guide the cyclist towards the next cycle street or other types of cycle infrastructure. However, the squares themselves will remain mixed-traffic areas where cyclists always have to mind pedestrians
- If a cycle route involves a change of direction across a square and into a side street and can therefore not be elongated, markings are advisable to indicate directions. This way cyclists will be able to read the route more easily and find their way within the system of cycle streets.

The city of Antwerp has developed a new 'cycle guidance system' to mark out routes and increase their legibility. These are round symbols with clear bicycle pictograms and arrows.



#### **INTERSECTION TYPES**

### **Intersection A**

The intersection is located in the cycle street. The red carpet continues over the intersection

### **Intersection A'**

The cycle route continues in a logical line but through different streets. The red carpet continues over the intersection.



### **Intersection B**

The cycle route doesn't continue in a logical line. The red carpet is not continued over the intersection and the cycle streets have a 'beginning' and an 'end'.

### Intersection C

The connection across a square and/or an ensuing cycle street is not visible. Cycle guidance is provided to improve the legibility of the route.



# <sup>26</sup> 5 CYCLE STREET PROJECTS

The city wants to reinforce a number of routes in the short term and use cycle streets to achieve this.

The cycle routes with the most impact are:

- 1. Antwerpen Noord
- 2. Borgerhout IntraMuros
- 3. District Route

But cycle streets will also help fill in other missing links on the network. Oher potential cycle street projects are being studied or prepared:

- Speelpleinstraat (district of Merksem)
- Fodderiestraat/ Cdt.van Laethemstraat (district of Hoboken)

#### Legende







# 28 Antwerpen Noord

The Antwerpen Noord cycle street project is the crown on a number of important cycle routes in the north. IJzerlaan cycle bridge ensures an integrated connection to the cycle highways from Essen and Herentals and the important cycle route coming from Brasschaat



### 1 Cycle highway Essen

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
between Schriek -Maria Theresialei	cycle paths	2016
Oude landen - Havana Station -Argentiniëlaan	cycle paths	2017 - 2018
between Argentiniëlaan -Groenendaallaan	cycle paths	2017
over Groenendaallaan	cycle bridge	2020
between Groenendaallaan-Vaartkaai	cycle paths	2017

### 2 Cycle highway Herentals

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Groot dok	cycle bridge	2019
Asiadok cycle bridge and southern embankment of the Albert Canal	cycle paths	2020
Straatsburgdok	cycle paths	2016
Kotterstraat-Straatsburg Noordkaai	cycle paths	2017
Vaartkaai	cycle paths (temporary)	executed

## 3 Cycle Route Brasschaat

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Bredabaan	cycle paths	executed



Argentiniëlaan profile



Temporary cycle path Vaartkaai



Cycle path Bredabaan

## 4 Cycle route IJzerlaan

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
IJzerlaan	Cycle bridge	2017



Simulation of IJzerlaan cycle bridge in the direction of Merksem

#### **5 Cycle street project** TRAJECTORY **DESIGN PROPOSAL** EXECUTION Samberstraat cycle street 2017 cycle street/guiding measures/suggestion strips Dam 2017 Park Spoornoord guiding measures 2017 Lange Dijkstraat cycle street 2017 St-Jansplein guiding measures 2017 Rotterdamstraat cycle street/suggestion strips 2017 Van Stralenstraat/ cycle street/suggestion strips 2017 Van Arteveldestraat



Impression of Lange Dijkstraat



Cycle connection Park Spoor Noord

# <sup>30</sup> Borgerhout IntraMuros

The Borgerhout intra muros cycle street project pertains to the switch route running from the Singel road to Carnotstraat. The cycle gateway is the entrance to the city centre, where supra local cycle routes from Wijnegem and Wommelgem meet on the Singel and Ring cycle paths.



# 1 Cycle route Wijnegem

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Turnhoutsebaan extra muros	cycle paths	executed



Turnhoutsebaan extra muros

# 2 Cycle highway Wommelgem

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Peter Benoitlaan	lighting	2016
Cycle bridge Ruggeveldlaan	cycle bridge	2016-2017
Vaartweg	lighting	2017
Cycle bridge Sterckxhoflei	cycle bridge	2020
W. Haecklaan	cycle paths	2017



Cycle bridge location Ruggeveldlaan



The shortened Ring cycle path continues underneath the entrance to the E313

# 3 Ring cycle path

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Entire Ring cycle path	lighting	2016
Verkorting ondertunneling E313 thv Singel	cycle tunnel	2017
Verkorting via Stenenbrug en Singel	cycle paths	2017
Collegelaan	maintenance	2017



The Ring cycle path today

# 4 Singel

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Entire Singel	lighting	2017
South and middle	cycle paths	executed
North	cycle paths	2016-2017
Slachthuislaan	cycle paths	2017
ljzerlaan	cycle paths	2017-2018



Future IJzerlaan cycle path



Zuidersingel cycle path

### 5 Cycle gateway



Cycle gateway: connection of Turnhoutsebaan switch route to Singel and Ring cycle paths



Impression of Turnhoutsepoort after the works

# 6 Cycle street project

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Karel Geertsstraat	cycle street	2017
Rechtestraat	cycle street	2017
St-Lucasstraat	cycle street	2017
St-Marcusstraat	cycle street	2017
Lammekensstraat	cycle street	2017
Kattenberg	cycle street	201
Helmstraat	cycle street	2017
Van de Keilenstraat	cycle street	2017
Laar	guiding measures	2017
Kerkstraat	cycle paths/suggestion strips	2017





Cycle path Carnotstraat



# <sup>34</sup> District route

The District route runs all around the city, from Olieweg to Havanastraat along the outside of the Ring Road and through several districts. The missing links are solved in order to create a closed high-quality cycle route. Within this route, a cycle street will be implemented in Ruimtevaartlaan in order to increase legibility and provide decent connections for the linked parts.



#### Districtenroute Zuid

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
Olieweg (nieuw zuid)	cycle paths	
Krugerbrug		
Krugerstraat		executed
Zwaantjesstraat (part 1)	improving comfort	executed
Zwaantjesstraat (part 2)	improving comfort	2016
M. Willemslaan	suggestion strips	2016
Pastoor Bauwenslaan	cycle paths	2016-2017
Berkenrijslaan	cycle paths	2016
D. Veeckmanslaan	cycle paths	2016
Heistraat	improving the crossing	2016
Groenenborgerlaan	cycle paths	2017-2018
Ringlaan	cycle paths	2017-2018
Ringlaan Berchem	cycle paths	executed
Fruithoflaan	cycle paths	

Ringlaan Berchem





### **District route Deurne**

	TRAJECTORY	DESIGN PROPOSAL	EXECUTION
1	Vosstraat	cycle paths	2016
2	K. Cardijnplein	guiding measures/ suggestion strips	2017
3	Ruimtevaartlaan	cycle street	2016
4	Boekenberglei part 1	cycle paths	executed
5	Boekenberglei part 2	cycle paths	2018-2019



Vosstraat cycle path plan

Cycling accross K. Cardijnplein



Cycle paths Boekenberglei part 1



Boekenberglei profile part 2 Boekenberglei





The district route in its entirety from north to south

![](_page_36_Picture_0.jpeg)

Fietspad Ruggeveldlaan Noord

![](_page_36_Picture_2.jpeg)

Fietspad F. Pauwelslei

# Northern district route

TRAJECTORY	DESIGN PROPOSAL	EXECUTION
F. Pauwelslei		executed
Ruggeveldlaan zuid	maintenance	2016
Ruggeveldlaan Noord	cycle paths	executed
Bremweide	cycle way	2016
Melkerijstraat /Kruningenbrug	cycle bridge	
Winkelstap	shielding off	2016
Merksemheidelaan	maintenance	2019
Ringlaan	maintenance	2017
Maantjessteenweg	maintenance	2017
V. Govaerslaan	maintenance	2018
B. J. Masurebrug	maintenance	2018
Havanastraat	maintenance	2018

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![](_page_38_Picture_0.jpeg)

![](_page_39_Picture_0.jpeg)

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