

Objective and used methods

Characteristics of runners in Brussels

*What are their motivations?
Where do they live?
When do they run?
How long do they run?*

The most important spatial ingredients to improve the running experience

In our 'running survey', 1200 Brussels runners expressed their preferences

The most pleasant and unpleasant running routes in Brussels

2200 mapped experiences, where do runners see space for improvement?

In four city districts, opportunities to improve spatial conditions for running were elaborated. How do we give shape to the ambitions?

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START

RUNNERS OF BRUSSELS

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PRIORITIES

FOR A RUN-FRIENDLY BRUSSELS

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*structural -
traffic related*

*optimisations
& additions*

SPATIAL PATTERNS

MAPPING RUNNERS EXPERIENCES & USAGE

page 27 - 59

*structural -
traffic related*

*optimisations
& additions*

ELABORATIONS

NORTHWEST

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SOUTH

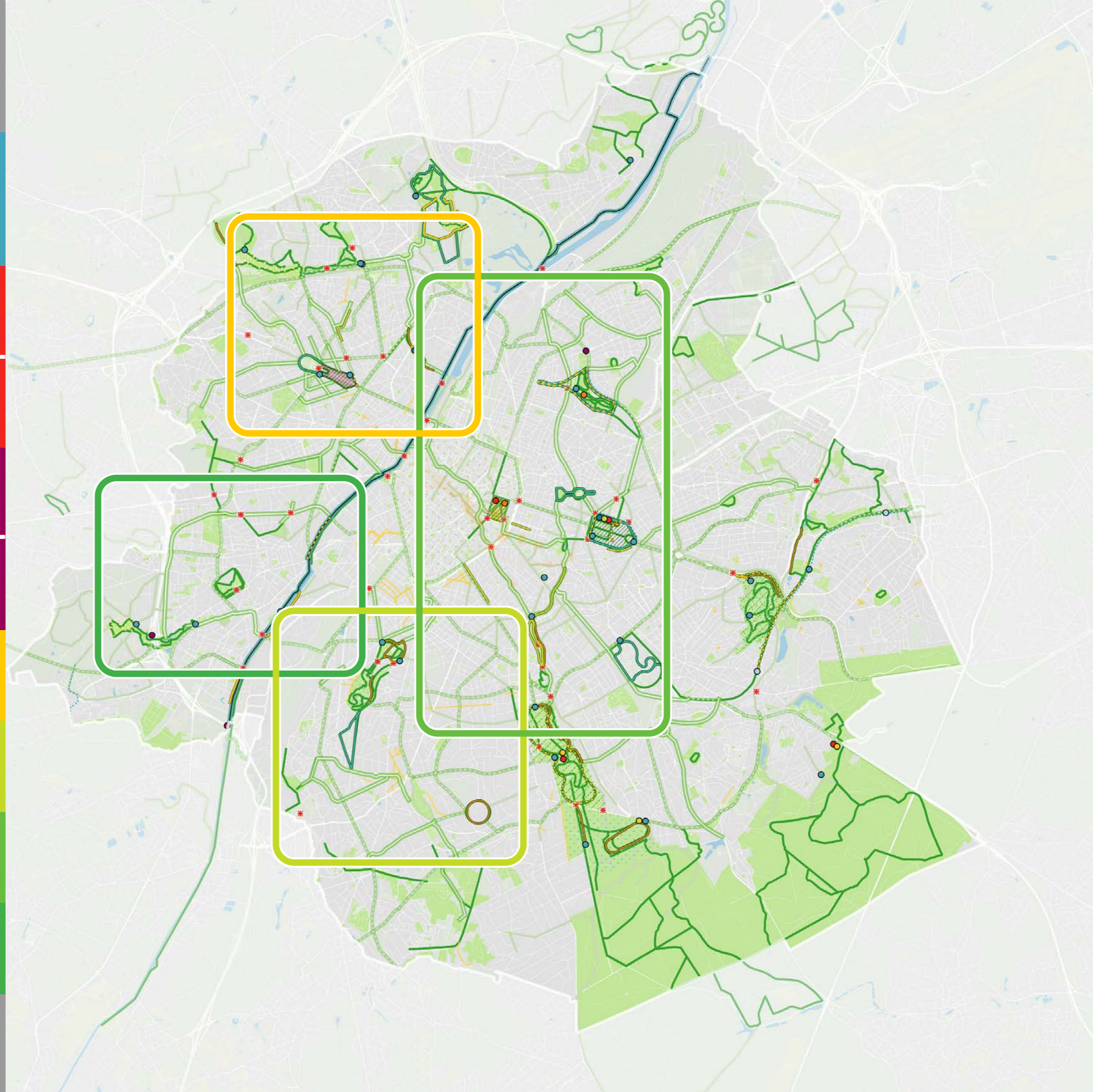
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SOUTHWEST

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RUNNER FRIENDLY PRINCIPLES

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INTRODUCTION



OBJECTIVE

BACKGROUND

Running is one of the most popular leisure activities in Brussels, taking place in public space. It is an accessible, easy way and cheap to be active.

The growth of recreational running is clearly visible in Brussels; individuals, duo's or organised running groups populate parks and streets. Recreational running is also increasingly often undertaken as a touristic activity by the cities visitors.

The activity of running has grown enormously, worldwide. Since +- 2010, a third 'running-wave' is seen worldwide, resulting from the desire to be active in a more flexible, individual way. In Amsterdam, the amount of runners doubled since 2009. This means one third of inhabitants runs regularly.

AMBITION

On 20 february 2017, Brussels parlement accepted a motion to:

"develop the 'be running' strategy for 'Brussels gewest', with necessary interventions to improve spatial conditions for running in Brussels."

The adopted resolution directs the request to set up a running and walking plan for the Brussels-Capital Region, consisting of intended interventions that are necessary to improve and expand the spatial conditions of running and walking in Brussels.

We think of small adjustments with large, notable effect: improving crossings, path surfaces or lighting.

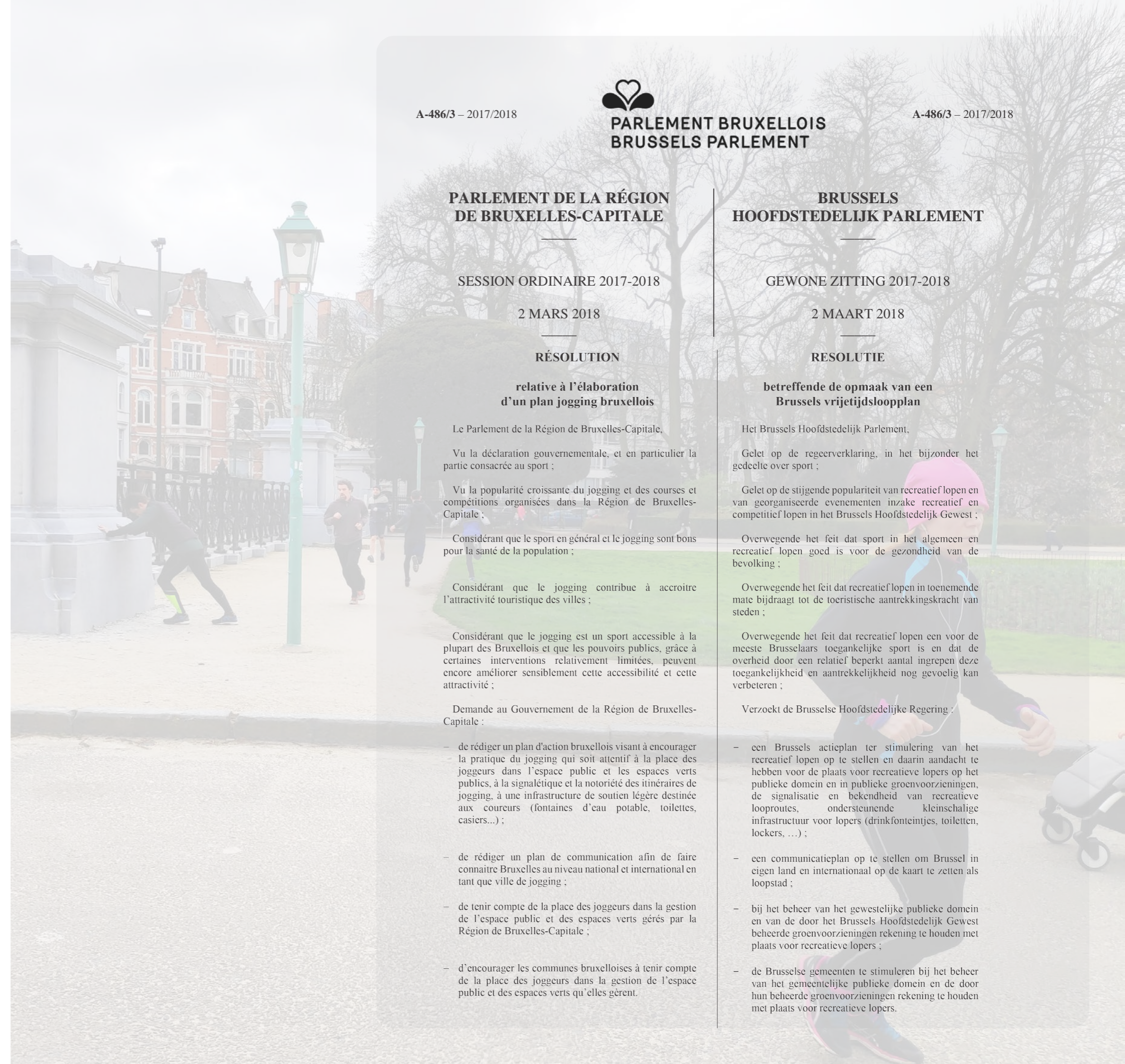
The recent 'covid-19' pandemic has given an even bigger push to individual sports worldwide. Numbers are not yet known, but it is visible in most cities worldwide.

Unfortunately not everywhere in the city is running pleasant at the moment. Running does not require specific sports-facilities, but the quality and condition of public space does determine if running can be performed pleasantly.

Or, support running by adding facilities like water taps, lockers and route-markings.

The ambition does not stand alone. The preferences and needs of runners often overlap with broader ambitions for a more healthy and movement friendly city. Chances for a better running infrastructure may overlap with chances for cycle routes and pedestrian routes. Connecting pedestrian and cycling routes often creates chances to connect green and nature as well.

The runner could give important information about the movement friendly opportunities of the city in general.



A-486/3 – 2017/2018



PARLEMENT BRUXELLOIS
BRUSSELS PARLEMENT

A-486/3 – 2017/2018

PARLEMENT DE LA RÉGION DE BRUXELLES-CAPITALE

SESSION ORDINAIRE 2017-2018

2 MARS 2018

RÉSOLUTION

relative à l'élaboration d'un plan jogging bruxellois

Le Parlement de la Région de Bruxelles-Capitale,

Vu la déclaration gouvernementale, et en particulier la partie consacrée au sport ;

Vu la popularité croissante du jogging et des courses et compétitions organisées dans la Région de Bruxelles-Capitale ;

Considérant que le sport en général et le jogging sont bons pour la santé de la population ;

Considérant que le jogging contribue à accroître l'attractivité touristique des villes ;

Considérant que le jogging est un sport accessible à la plupart des Bruxellois et que les pouvoirs publics, grâce à certaines interventions relativement limitées, peuvent encore améliorer sensiblement cette accessibilité et cette attractivité ;

Demande au Gouvernement de la Région de Bruxelles-Capitale :

- de rédiger un plan d'action bruxellois visant à encourager la pratique du jogging qui soit attentif à la place des joggeurs dans l'espace public et les espaces verts publics, à la signalétique et la notoriété des itinéraires de jogging, à une infrastructure de soutien légère destinée aux coureurs (fontaines d'eau potable, toilettes, casiers...);
- de rédiger un plan de communication afin de faire connaître Bruxelles au niveau national et international en tant que ville de jogging ;
- de tenir compte de la place des joggeurs dans la gestion de l'espace public et des espaces verts gérés par la Région de Bruxelles-Capitale ;
- d'encourager les communes bruxelloises à tenir compte de la place des joggeurs dans la gestion de l'espace public et des espaces verts qu'elles gèrent.

BRUSSELS HOOFDSTEDELIJK PARLEMENT

GEWONE ZITTING 2017-2018

2 MAART 2018

RESOLUTIE

betreffende de opmaak van een Brussels vrijetijdsloopplan

Het Brussels Hoofdstedelijk Parlement,

Gelet op de regeerverklaring, in het bijzonder het gedeelte over sport ;

Gelet op de stijgende populariteit van recreatief lopen en van georganiseerde evenementen inzake recreatief en competitief lopen in het Brussels Hoofdstedelijk Gewest ;

Overwegende het feit dat sport in het algemeen en recreatief lopen goed is voor de gezondheid van de bevolking ;

Overwegende het feit dat recreatief lopen in toenemende mate bijdraagt tot de toeristische aantrekkingskracht van steden ;

Overwegende het feit dat recreatief lopen een voor de meeste Brusselaars toegankelijke sport is en dat de overheid door een relatief beperkt aantal ingrepen deze toegankelijkheid en aantrekkelijkheid nog gevoelig kan verbeteren ;

Verzoekt de Brusselse Hoofdstedelijke Regering :

- een Brussels actieplan ter stimulering van het recreatief lopen op te stellen en daarin aandacht te hebben voor de plaats voor recreatieve lopers op het publieke domein en in publieke groenvoorzieningen, de signalisatie en bekendheid van recreatieve looproutes, ondersteunende kleinschalige infrastructuur voor lopers (drinkfonteinnetjes, toiletten, lockers, ...);
- een communicatieplan op te stellen om Brussel in eigen land en internationaal op de kaart te zetten als loopstad ;
- bij het beheer van het gewestelijke publieke domein en van de door het Brussels Hoofdstedelijk Gewest beheerde groenvoorzieningen rekening te houden met plaats voor recreatieve lopers ;
- de Brusselse gemeenten te stimuleren bij het beheer van het gemeentelijke publieke domein en de door hun beheerde groenvoorzieningen rekening te houden met plaats voor recreatieve lopers.

METHODS

Thousands of runners run in Brussels every day. The knowledge where spatial conditions could be improved is present within the 'running community' itself. We started this research by collecting this inside knowledge.

Runners speaking with their feet

In this study, information of running behaviour is mainly gathered from 'activity tracking' apps 'Endomondo' en 'Runkeeper'. These are two of the many apps that allow people to record their running activities.

What routes are most passed by runners?

And what routes are not used well? Where do runners often start their routes? It is a starting point for exploring the meaning and potential of different places in Brussels for runners.

Runners speaking about experiences

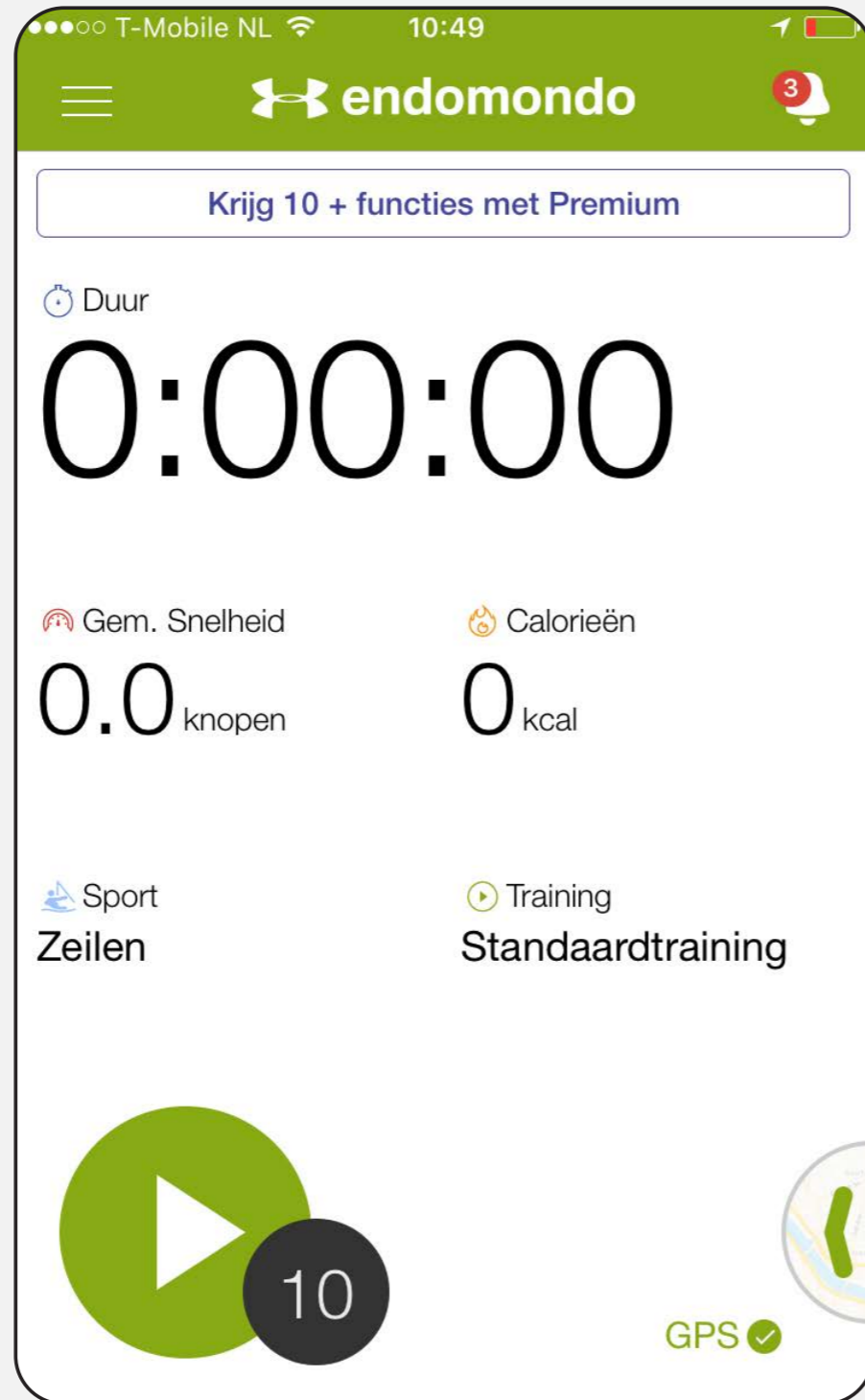
With an online survey, we ask runners in Brussels about their experiences. What are their biggest obstacles? Or most beautiful routes? Where do they see the biggest potential for a more runner-friendly Brussels? These insights give extra meaning and reasoning to the usage of the city.

Design cases

These methods form the basis for an 'ideal map' that illustrates the most important runner-friendly potential measures. In several city districts, we elaborated on these potentials. While runners may be able to explain their experiences, they will mostly not tell how to exactly redesign public spaces. We studied the potential of streets and parks by rethinking their layout.

USAGE OF THE CITY

ACTIVITY TRACKING DATA



EXPERIENCE OF THE CITY

ONLINE SURVEY



RUNNINGPLAN

- * PATHS/ROUTES TO IMPROVE
- * FACILITIES TO ADD
- * DESIGNATED RUNNING ROUTES



ACTIVITY TRACKING

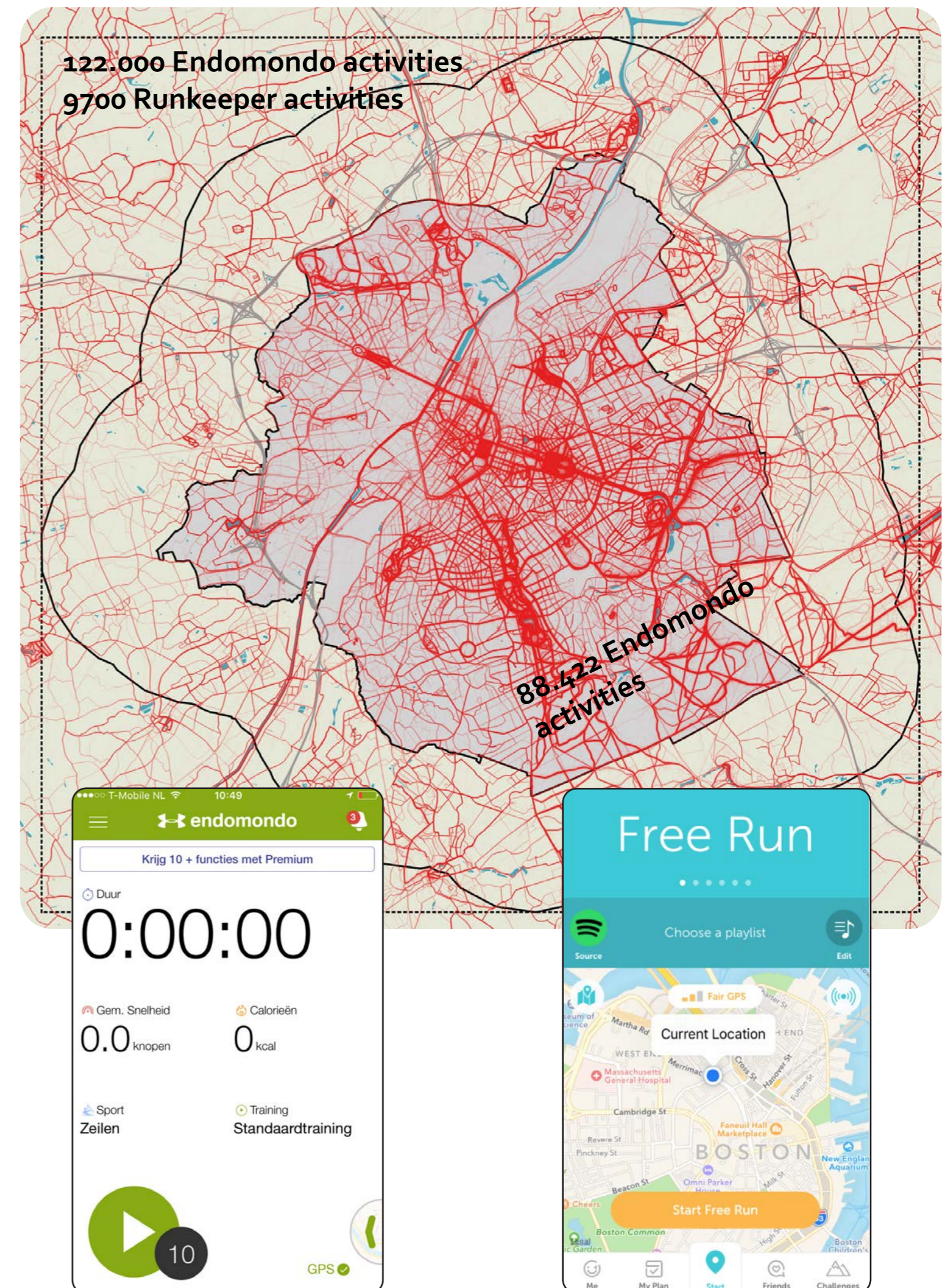
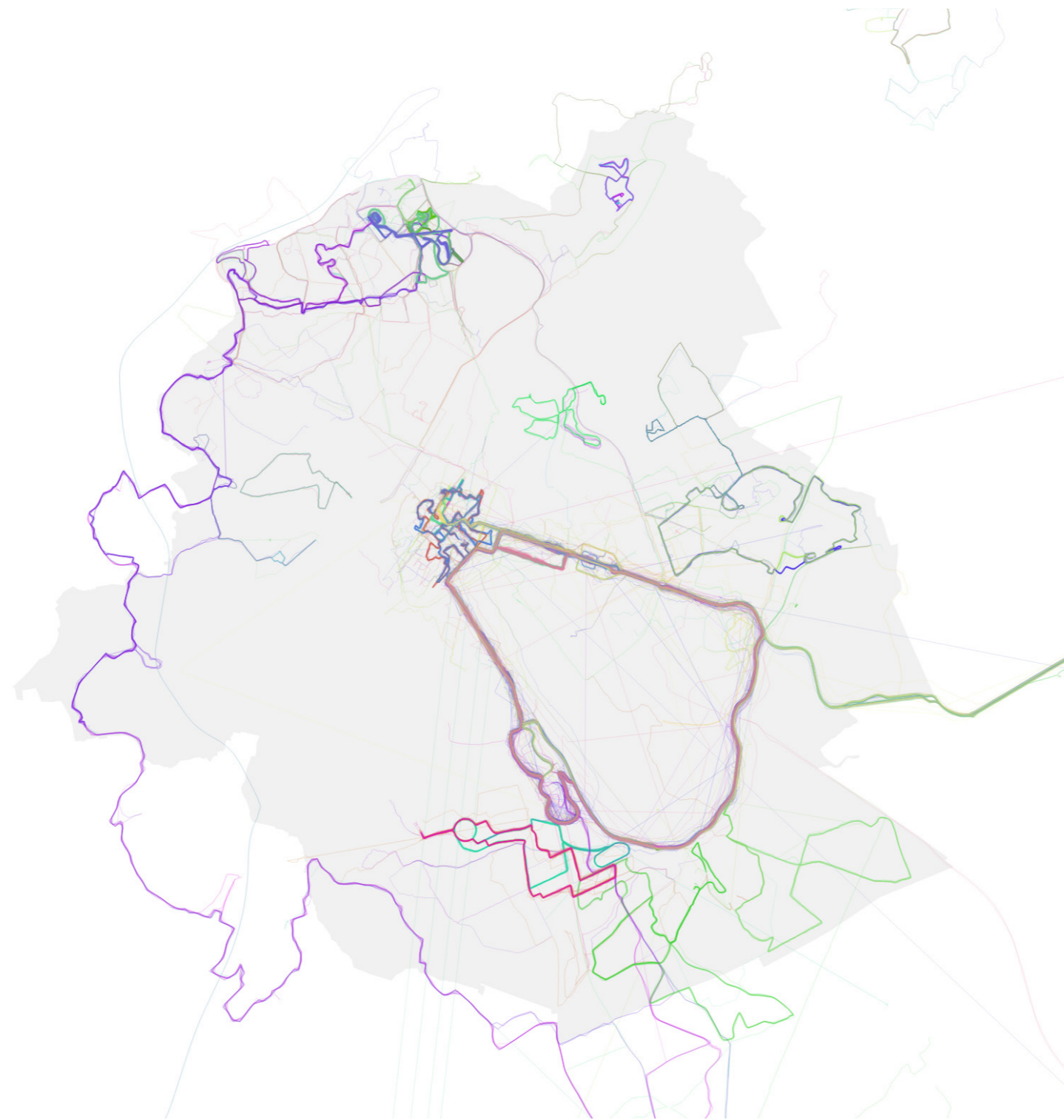
Data of 122.000 running activities were derived from the app Endomondo and 9700 activities from the app Runkeeper. These activities were performed between 2012 and 2017. This is of course only a small portion of the total amount of running activities that have been performed in this period. Though, research has shown that a relatively 'small' portion of data can give a good indication of usage. Endomondo or Runkeeper users are not recognized as a specific type of runner, for example the very fanatic one (that more often uses Strava).

In the [data-document](#), more specific information can be found about the characteristics and processing of the activity tracking data.

Comparing the results of Brussels to Dutch cities, Rotterdam contained 112.000 running activities within the municipality border in which 640.000 people live. Brussels has about twice as much inhabitants and about 20% less activities (88.000). So, relatively speaking, the data-density is about 2.5 times higher in Rotterdam than Brussels. Other regions in the Netherlands show quite similar densities of Endomondo data.

Regular streets in Brussels still contain hundreds of Endomondo activities (see heatmap page 14), popular routes contain thousands of passages (16.000 in Jubelpark for example).

Of course, activities that originate from large running events were deleted from the dataset (their routes are visible in the left image). These do not reflect the normal running behaviour in the city.



SURVEY

The survey consists of six steps:

1. Some personal questions (but anonymous).

intro 1 2 3 4 5 6 17%

Start!

Leeftijd:

Postcode:

Postcode van de werkplek:

Geslacht:
 man
 vrouw
 Anders of X

An online survey was developed to collect input from runners in Brussels on how to make the city more run-friendly. The survey was distributed in various media platforms and actors of the running community in Brussels between the 9th of March 2020 and 3rd of April 2020.

The survey attracted a large amount of participants: 1256 different runners completed the survey.

2. Motivations and characteristics of the runner and his/her run.

intro 1 2 3 4 5 6 34%

Kruis aan indien van toepassing:

Ik ren...

- Voor mijn gezondheid
- Om mijn eigen prestaties te verbeteren
- Om buiten (in een natuurlijke omgeving) te zijn
- Voor mijn plezier
- Naar mijn werkplek
- Naar een sportvereniging

Ik ren gewoonlijk...

- Alleen
- Samen met een partner
- In een groep
- Met een coach

Doe je voor, tijdens of na je activiteit een van de volgende activiteiten?

Strekoefeningen

- Nooit
- Zelden
- Soms
- Meestal
- Altijd

Loopscholing

- Nooit
- Zelden
- Soms
- Meestal
- Altijd

Krachts oefeningen

- Nooit

3. Judgement of spatial aspects. From 'very important' to 'very unimportant'.

intro 1 2 3 4 5 6 50%

Beoordeling omgevingskenmerken

Welke ruimtelijke aspecten vindt u belangrijk bij het hardlopen?
Kies uit schaal:

1: Erg onbelangrijk
2: Onbelangrijk
3: Neutraal
4: Belangrijk
5: Erg belangrijk

Een groene, natuurlijke omgeving (park, agrarisch gebied, natuur)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een levendige omgeving (aanwezigheid van mensen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schone lucht	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Niet onderbroken route/niet hoeven stoppen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. 'geotagging' positive and negative experiences when running. These points can also be on a different route/location than the previously drawn route.

intro 1 2 3 4 5 6 84%

Plus- en minpunten van je looproute

- Klik op een punt op of langs de route, er ontstaat een tekstvlak
- Beschrijf hierin je ervaring en geef aan of dit positief of negatief is
- Je mag ook punten aangeven die niet bij je getekende route liggen, bijvoorbeeld punten die je bewust vermeldt van andere gebieden/routes waar je wel eens komt

Voorbeelden:
(on)wielig, (ge)en mooie omgeving, wel of geen hinder van verkeer, onderbrekingen, stilte, verlichting, prettige paden (en waarom?), voorzieningen (informatie, trainingsoestellen, parkeergelegenheid etc.)

4. Drawings of the most frequently performed running route.

intro 1 2 3 4 5 6 67%

Teken je meest gelopen route

Hoe teken ik een route?

- Zoom en versleep de kaart naar het gebied van je route.
- Klik op **Start tekenen**
- Klik je startplaats aan, en **teken je route** door nieuwe punten aan te klikken.
- **Maak je route compleet** door weer op het beginpunt te klikken.
- De route **wijzigen** kan hierna nog, door punten te verschuiven

Je route hoeft niet exact op de paadjes te liggen. Weet je niet precies je route? Een goede indicatie is voldoende. Lukt het helemaal niet? Je kan gewoon door naar het volgende onderdeel.

6. A last question; the most desired improvement for a more runner friendly Brussels.

intro 1 2 3 4 5 6 100%

Laatste vraag!

Wat zou je als loper **het liefst** veranderen in je loopomgeving?

Heb je nog andere opmerkingen, verbeteringsuggesties, wensen of ideeën? Je kan bij de opmerking een locatie aanklikken op de kaart.



[perspectiveLab - 'be runnig']
Het Brussels Gewest zet zich in voor de joggers! **be running** gaat om het faciliteren van het joggen in de stad.

Wij vragen 10 minuten van uw tijd om volgende enquête online in te vullen; <https://survey.brickment.net/survey/brussel-nl>

Deze enquête wordt georganiseerd binnen het kader van een analyse van het regionaal grondgebied, met als doelstelling om (on-)gemarkeerde routes te verbeteren of op termijn te creëren. 'Voor stappers en lopers' is het credo van een nieuwe strategie die werd ingevoerd.

Of u nu inwoner of bezoeker bent in Brussel, uw mening is van essentieel belang om uw favoriete sport te faciliteren in de Brusselse openbare ruimte.

Voor meer informatie, zie <https://perspective.brussels/.../naar-een-recre-actief...>



Characteristics of Brussels runners

*What are their motivations?
Where do they live?
When do they run?
How long do they run?*

START

runners of Brussels



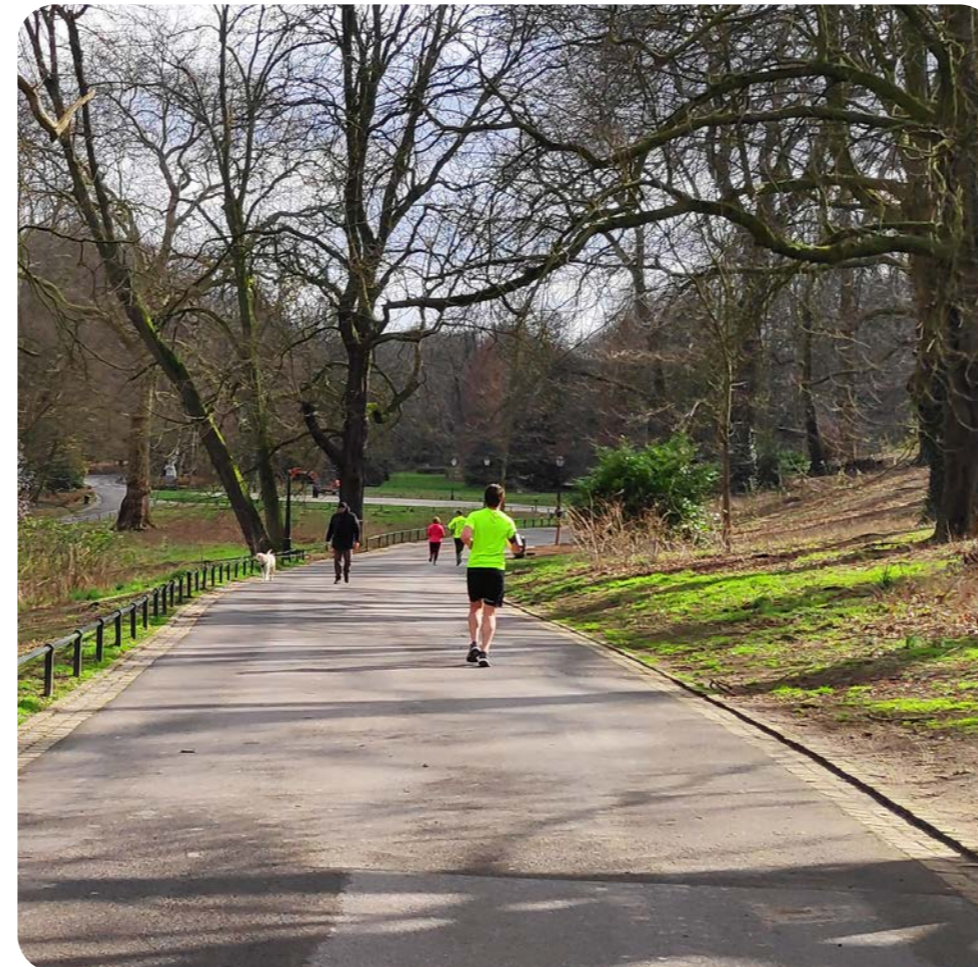
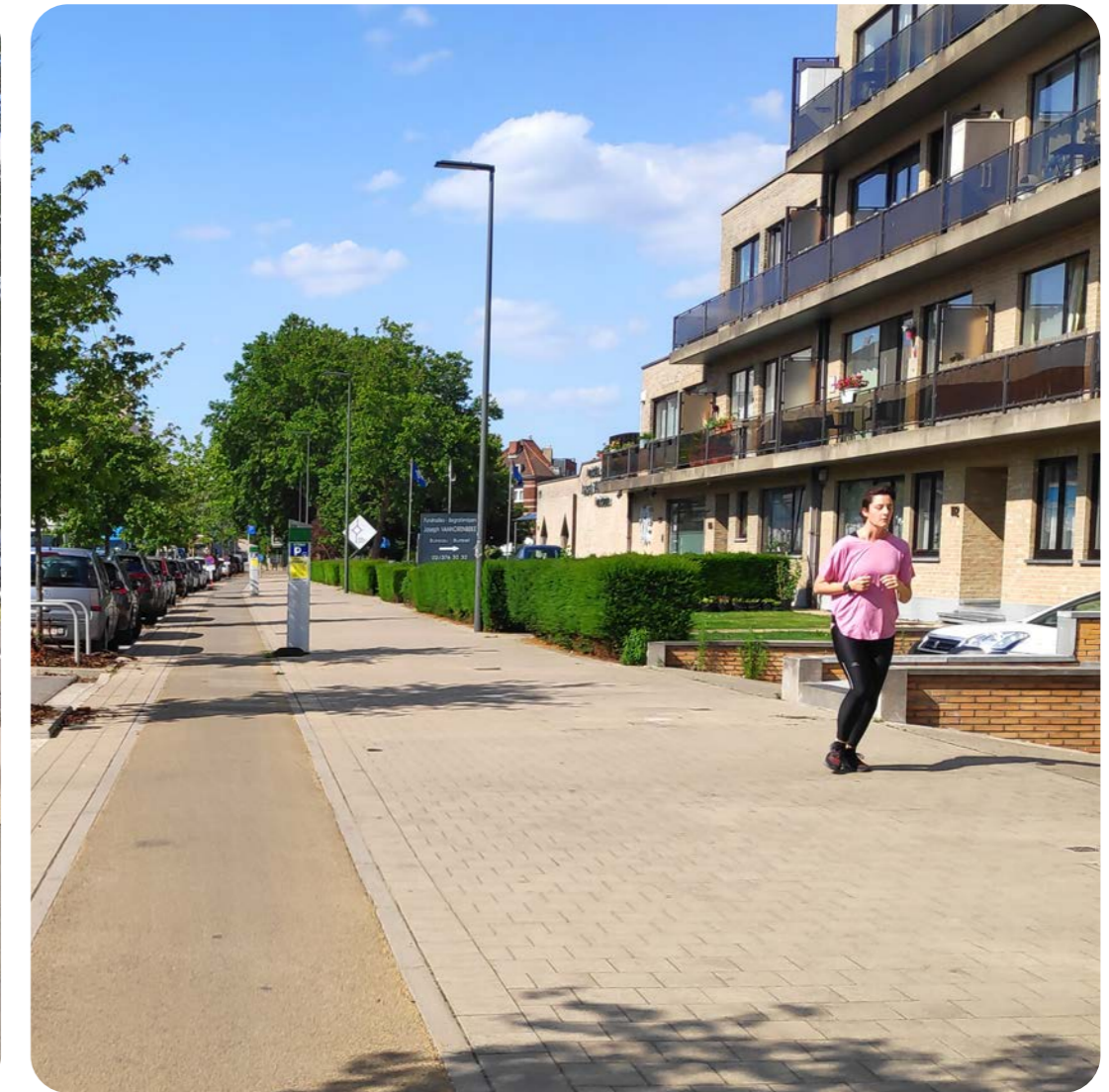
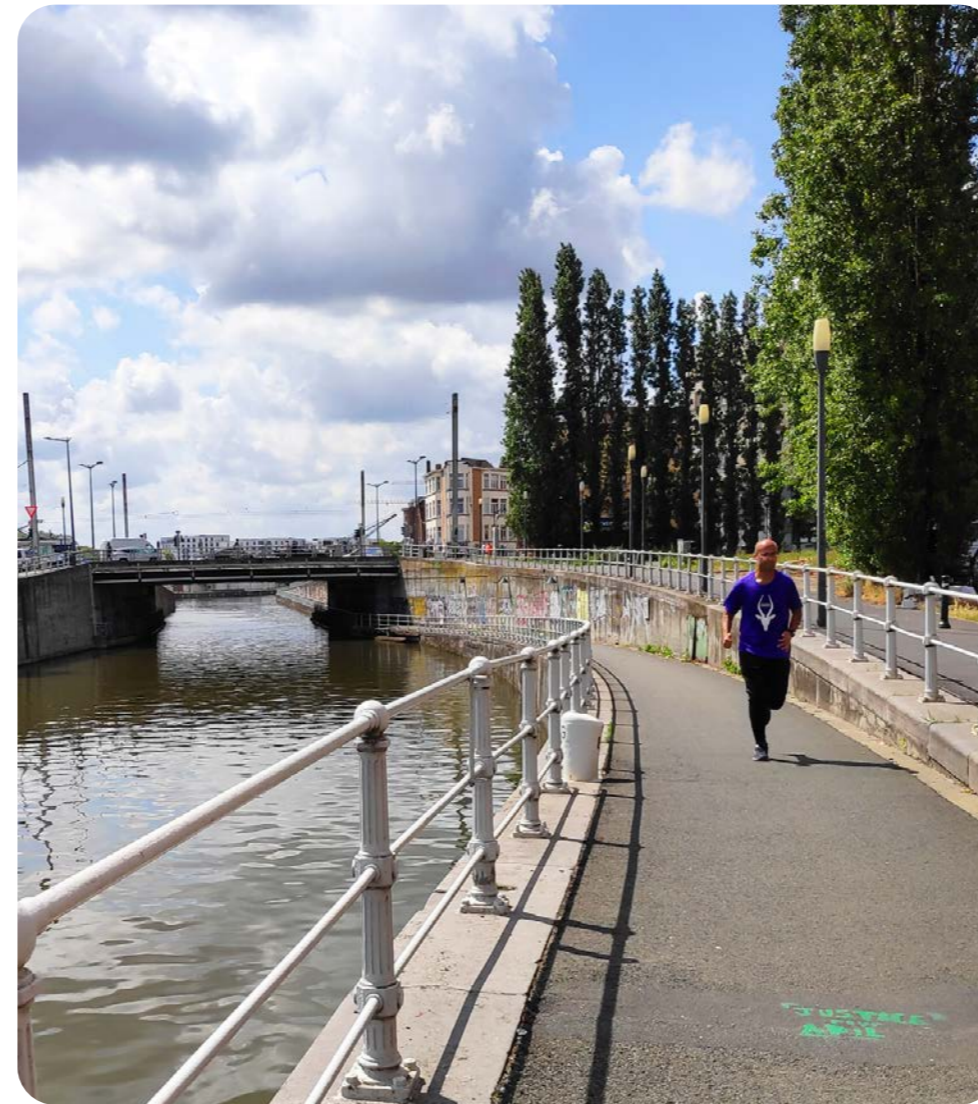
RUNNERS

Not one runner is the same. Apart from the fact that they differ in age and gender, they can have significantly different motivations and habits.

Both the survey results and the activity tracking data can be analysed to see the variety; although the variety will be even larger than this can show. The survey will mainly be participated by runners that find the objective of creating a runner friendly city important. Runners that run less often are less likely to see that importance for example.

Having said this, the survey and activity tracking data can be used to analyse:

- differences in running motivations and company
- the living locations in the city
- the spread off age categories and gender
- patterns in: time of the day, week or year to run
- different running distances and speeds



SPREAD

from runners' survey

1256 different persons completed the survey.

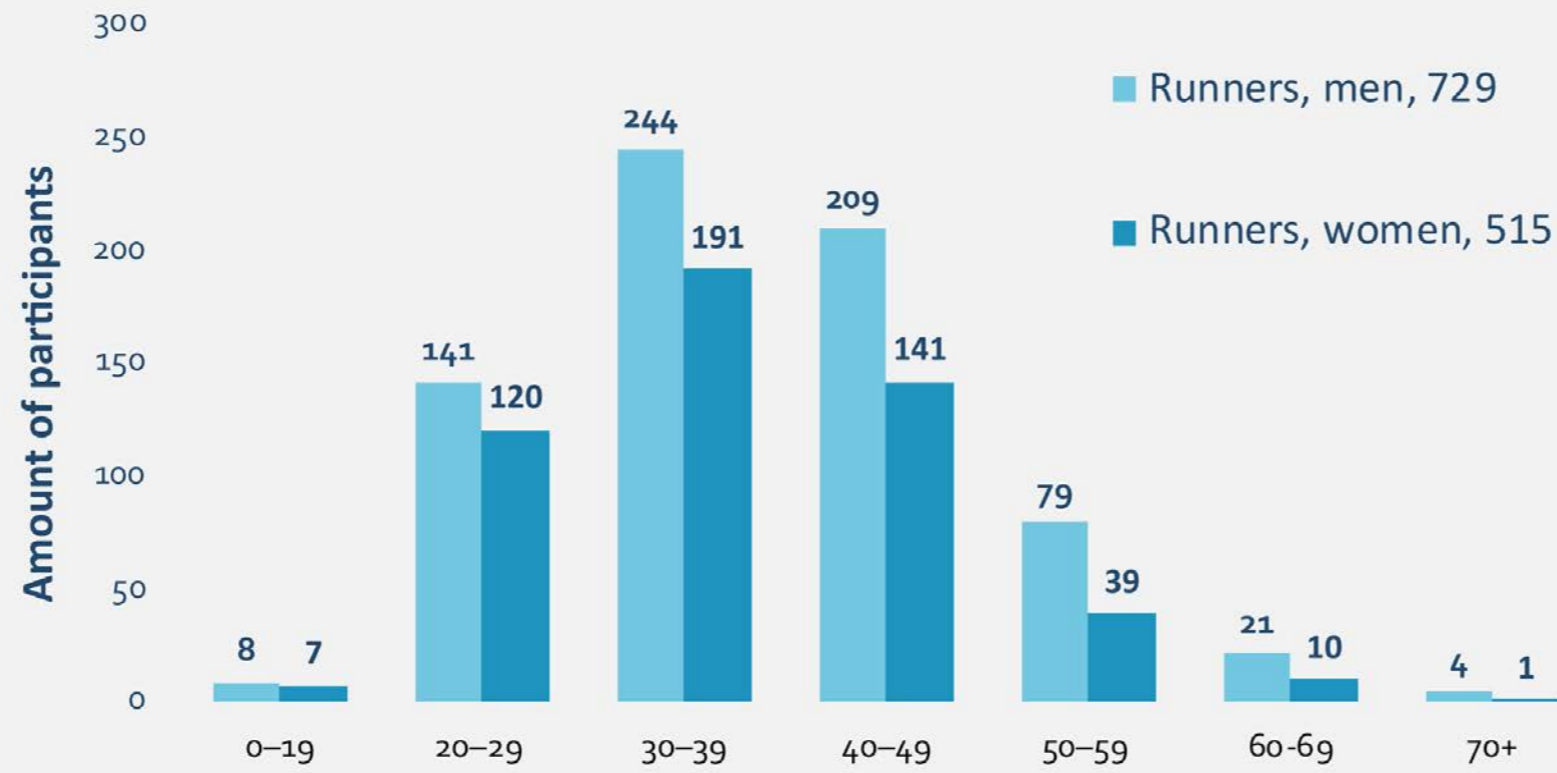
We can see a logical spread over different ages; runners are typically found in the 'middle-age' range, between 20 and 60 years. We can imagine that teen-agers would be less likely to participate in the survey.

A few more men than women participated, but running is still slightly more often performed by men (at least, this is the case in the Netherlands). We do not have these numbers in Belgium/Brussels, but a 40% women-60% men division is rather normal in the Netherlands.

Participation in the survey was spread over all municipalities in Brussels. The total amount of participants can vary quite a lot, but that is mainly a result of differences in inhabitant-amounts. The image 'right-below' displays the number of participants in the survey, per 1000 inhabitants. It varies between 0.48 and 1.65. We consider this to be a good representation.

It would be interesting to reflect these numbers with the general 'sports participation' in different municipalities, as there is quite a clear division visible. The municipalities west of the canal have relatively lower amounts of participants. We recognised this in our city visits; running is not nearly as common in Brussels-West than Brussels-East.

AGE AND GENDER

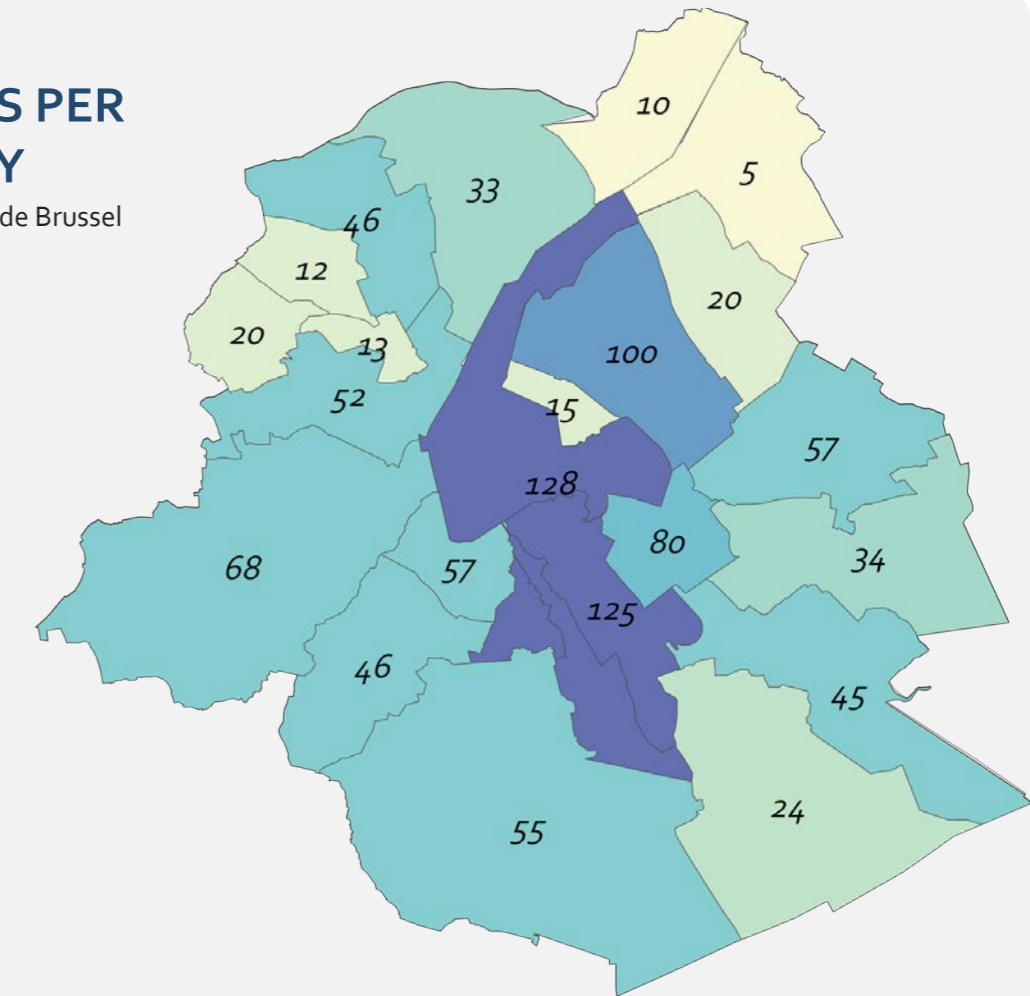


DATE OF COMPLETION

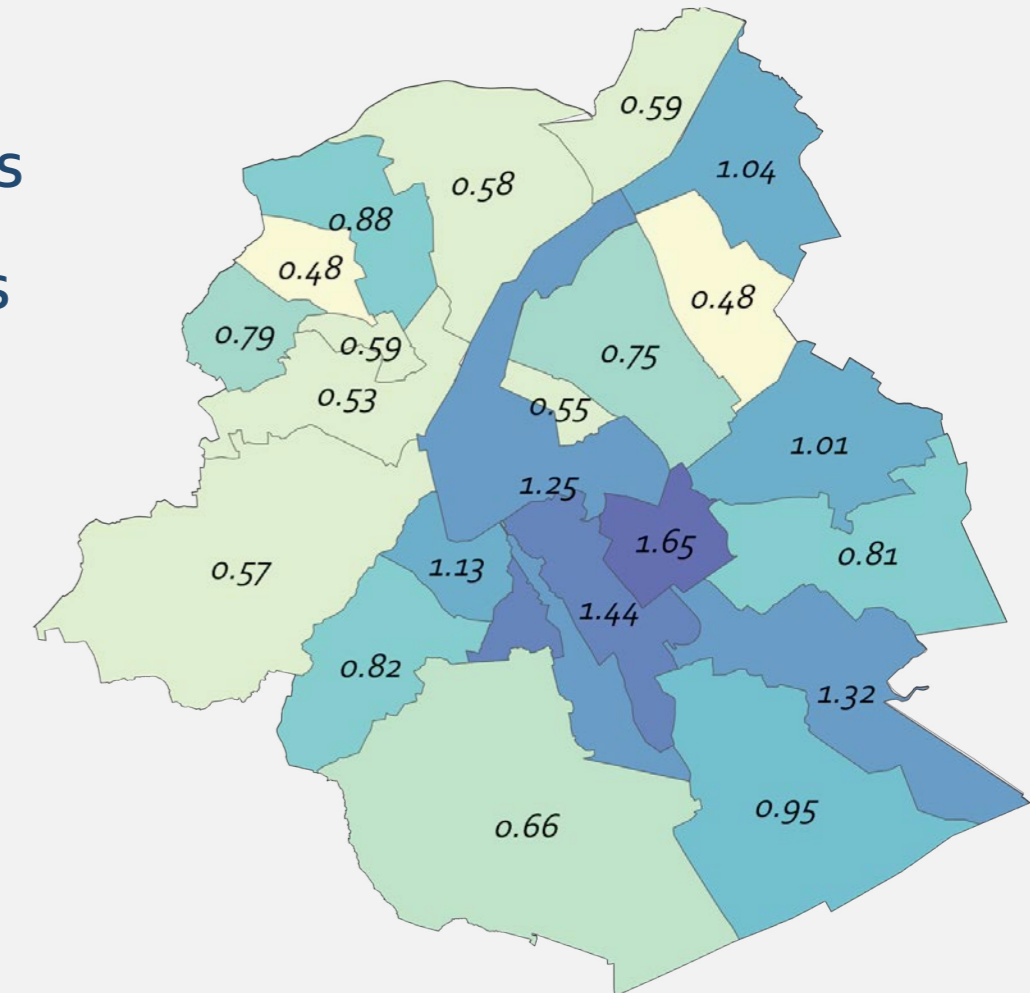


AMOUNT OF PARTICIPANTS PER MUNICIPALITY

208 participants live outside Brussel municipality, mostly in adjacent municipalities.



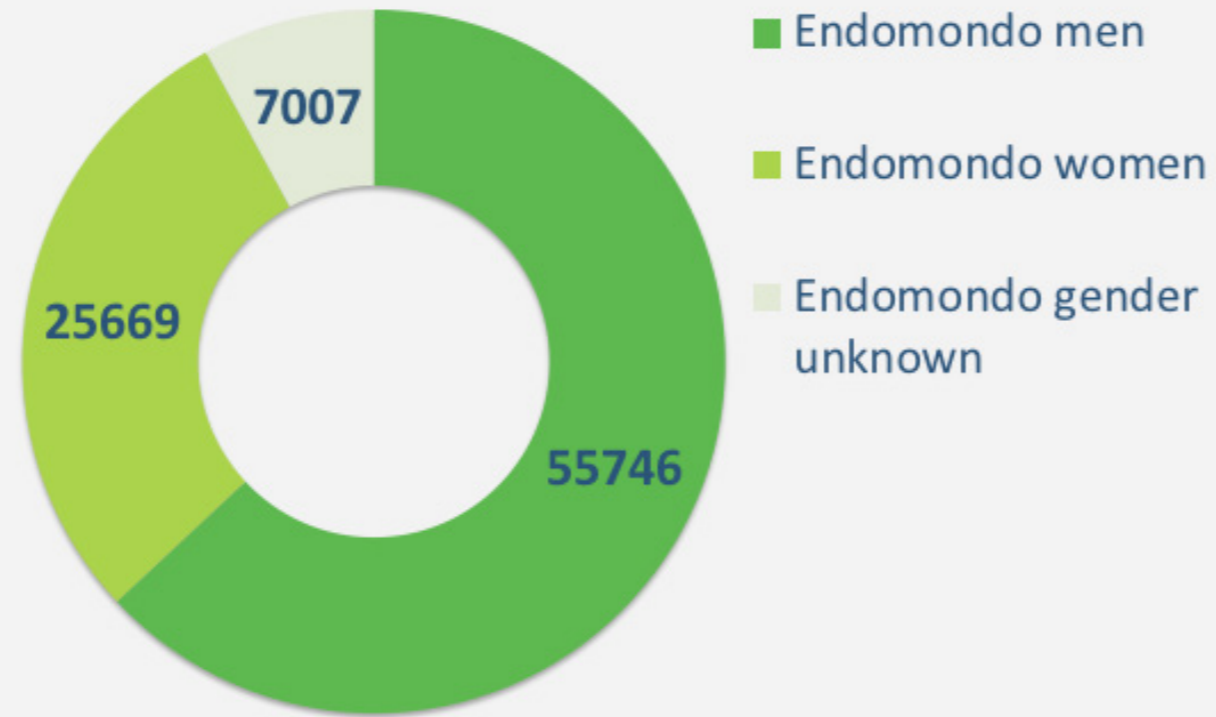
AMOUNT OF PARTICIPANTS PER 1000 INHABITANTS



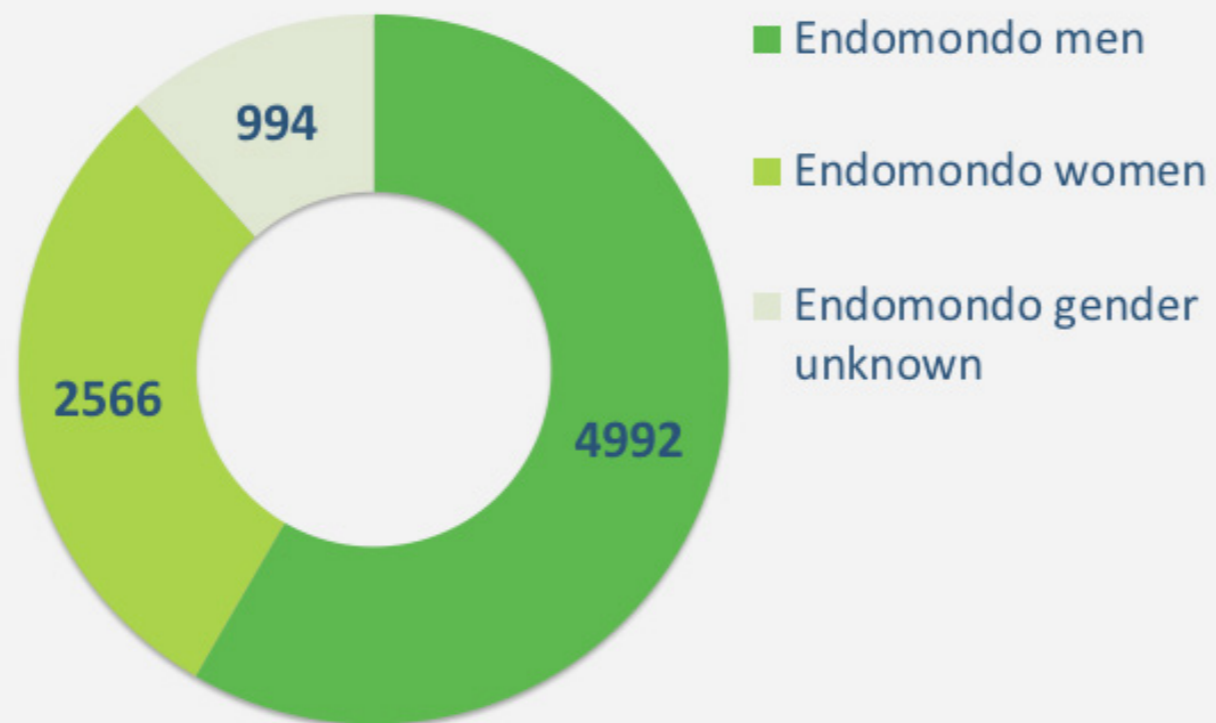
SPREAD

endomondo runners

Endomondo amount of activities (88422)



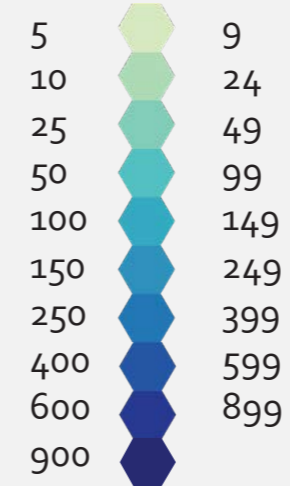
Endomondo amount of individuals (8552)



ENDOMONDO

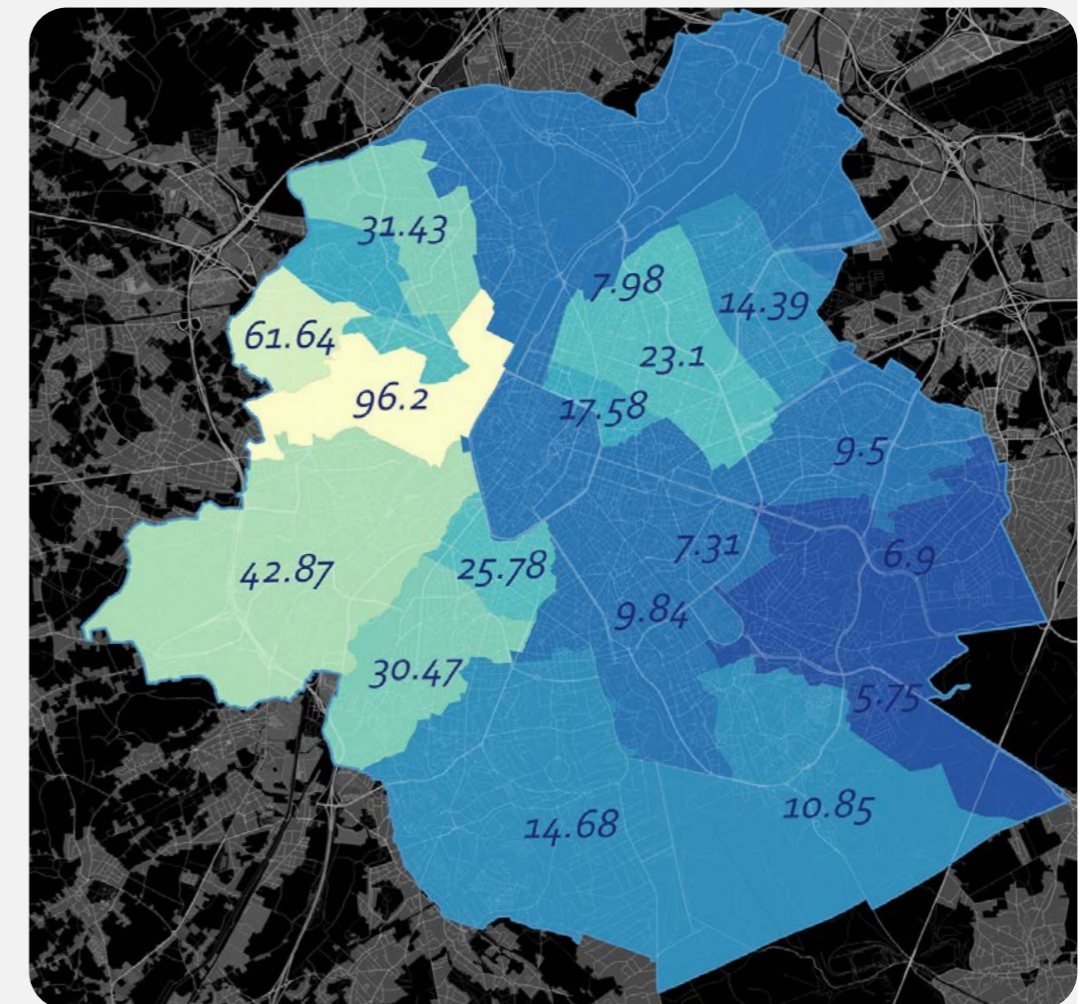
Activity origins

Number of activities from



ENDOMONDO

Amount of inhabitants per activity



survey runners

The 1256 participants of the running survey show clear habits and motivations. The biggest motivation for runners is simple: health. Pleasure and being outdoors are also important motivators. Improving performance is more often important for men than women. Participants do not run often to a sports facility or workplace.

Most runners of the survey run 'a few times a week'. Thus indeed, they are rather frequent runners. Most of them run alone, but a quarter of participants also runs with a companion or a group. Note; it was possible here to select multiple options, many runners run both alone and in groups or with partners.

Most runners decide in advance what route they are going to run. Stretching, or doing strength exercises is often part of the activity, doing run techniques less often.

The differences between men and women are rarely very large. Women seem to run slightly more often with a partner, and less often alone.

Small differences also accounted for different age groups; these figures can be found in the [data-report](#).

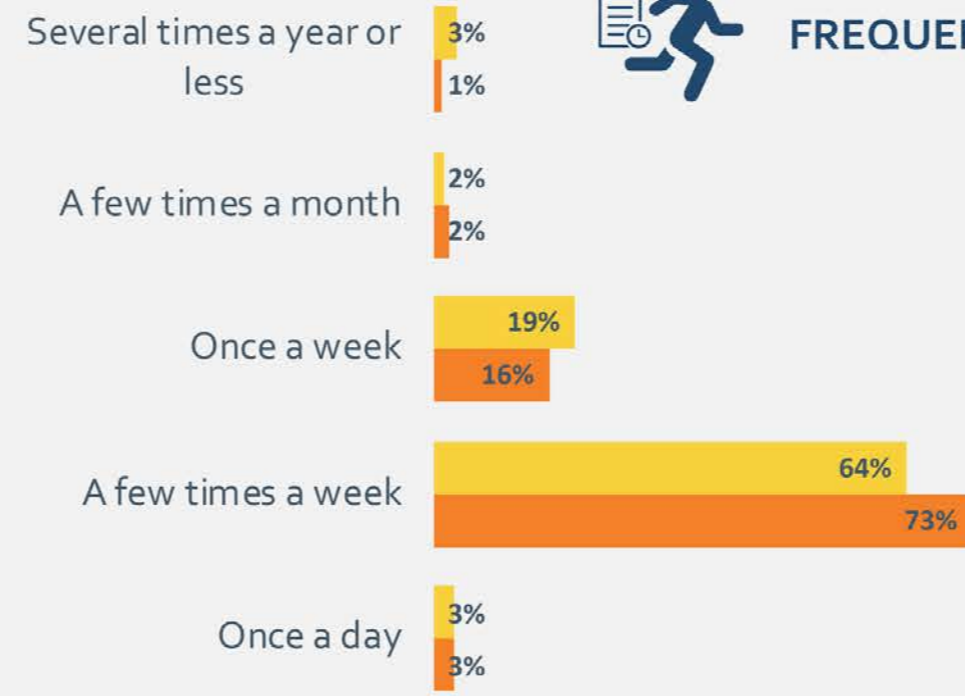
MOTIVATION



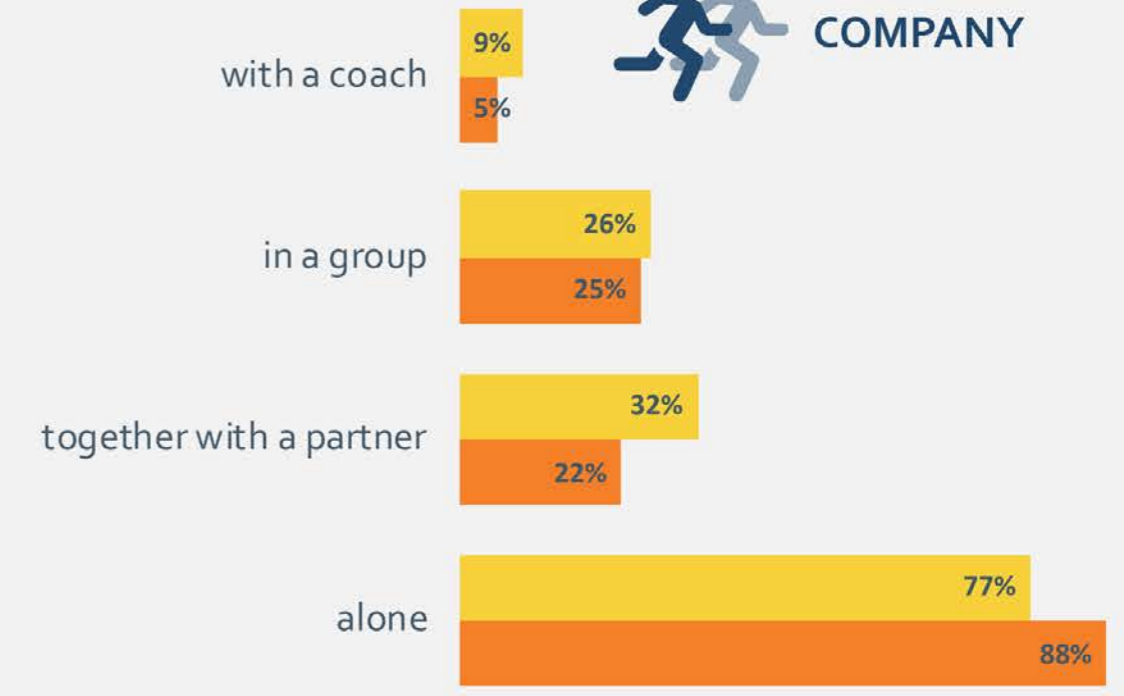
MOTIVATION



FREQUENCY

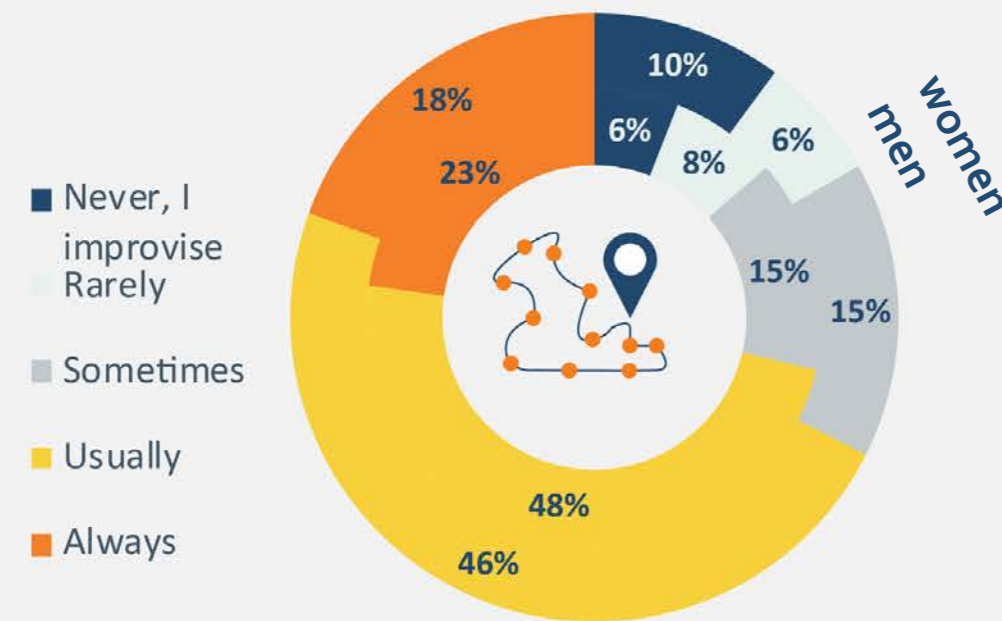


COMPANY

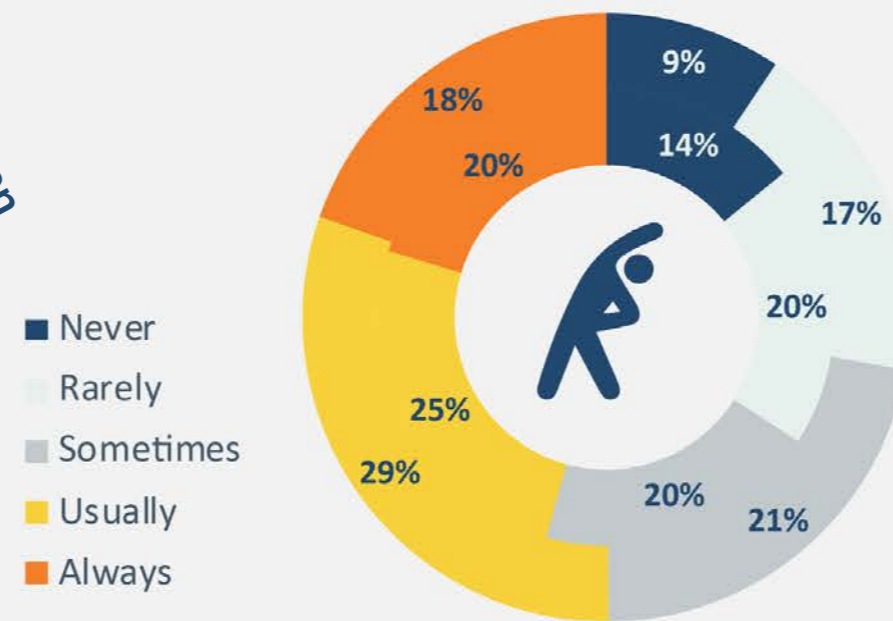


HABITS

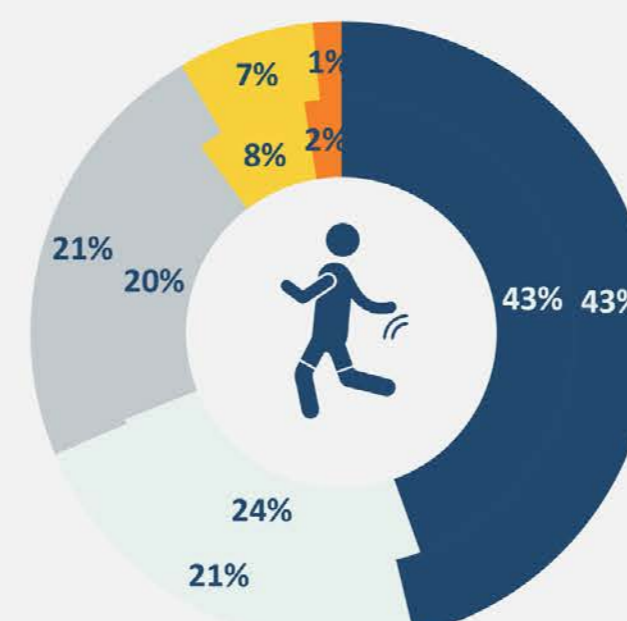
I DECIDE MY ROUTE IN ADVANCE...



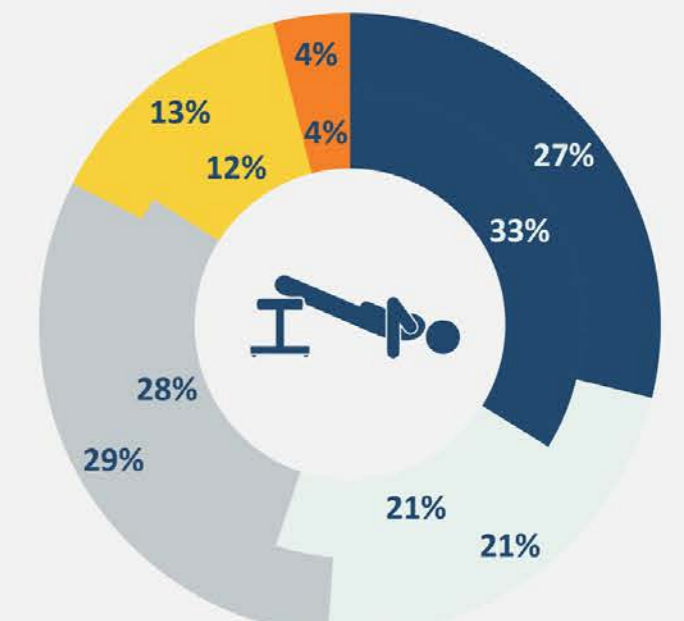
I STRETCH...



RUN TECHNIQUES...



STRENGTH EXERCISES...



TIME TO RUN

endomondo runners

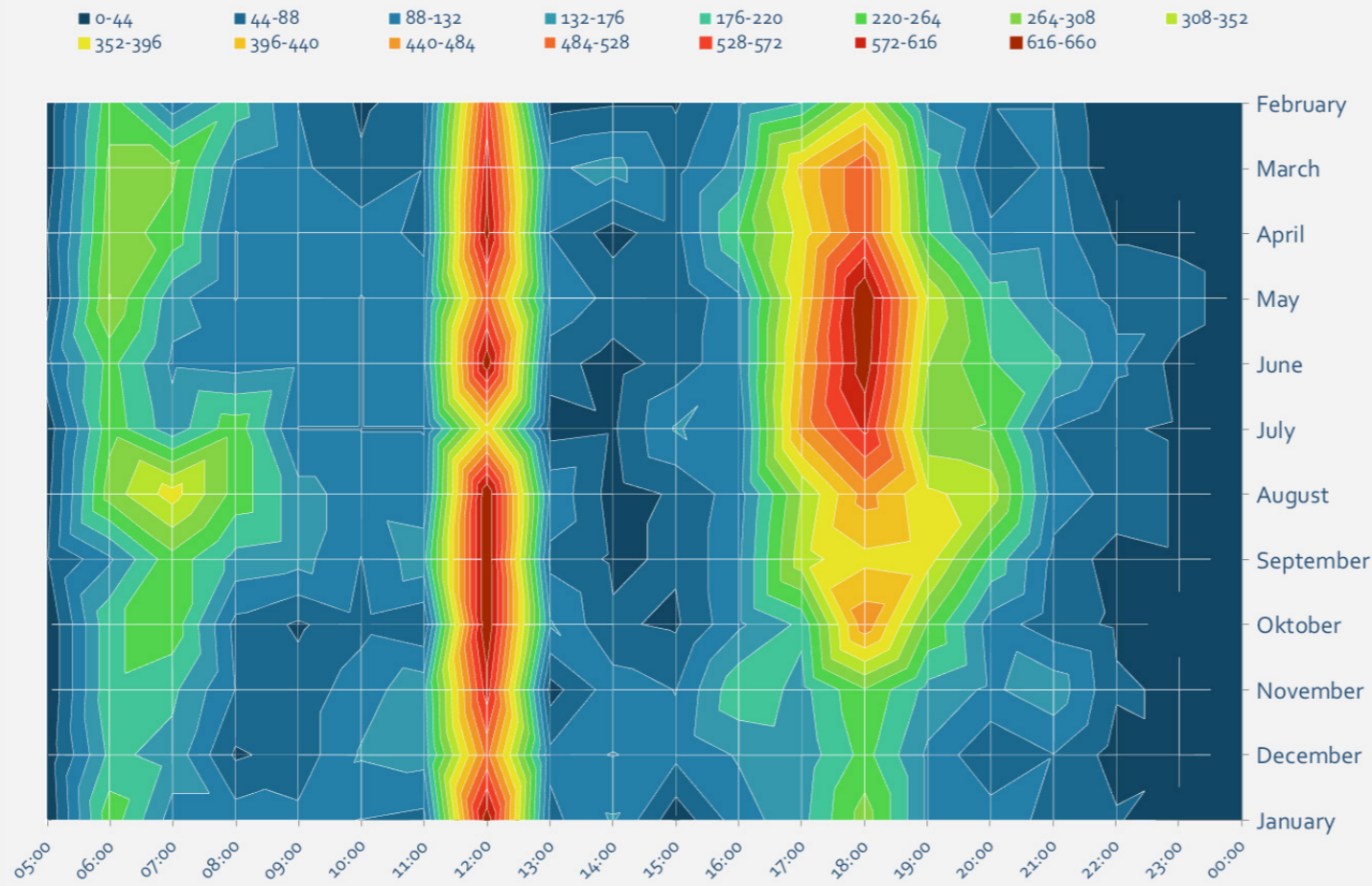
The Endomondo data shows many temporal running patterns. The presence or absence of daylight clearly influences when we go for a run, most strongly on weekdays. Runners in Brussels try to squeeze their activity in the light hours of the day, after work. But still, about 10% of all running activities take place when it is completely dark outside (already dark when they start their run). The amount of runs that partly take place during dark or slightly dark hours, will be even bigger.

In November and December, hardly anyone runs after work. These patterns account for both men and women.

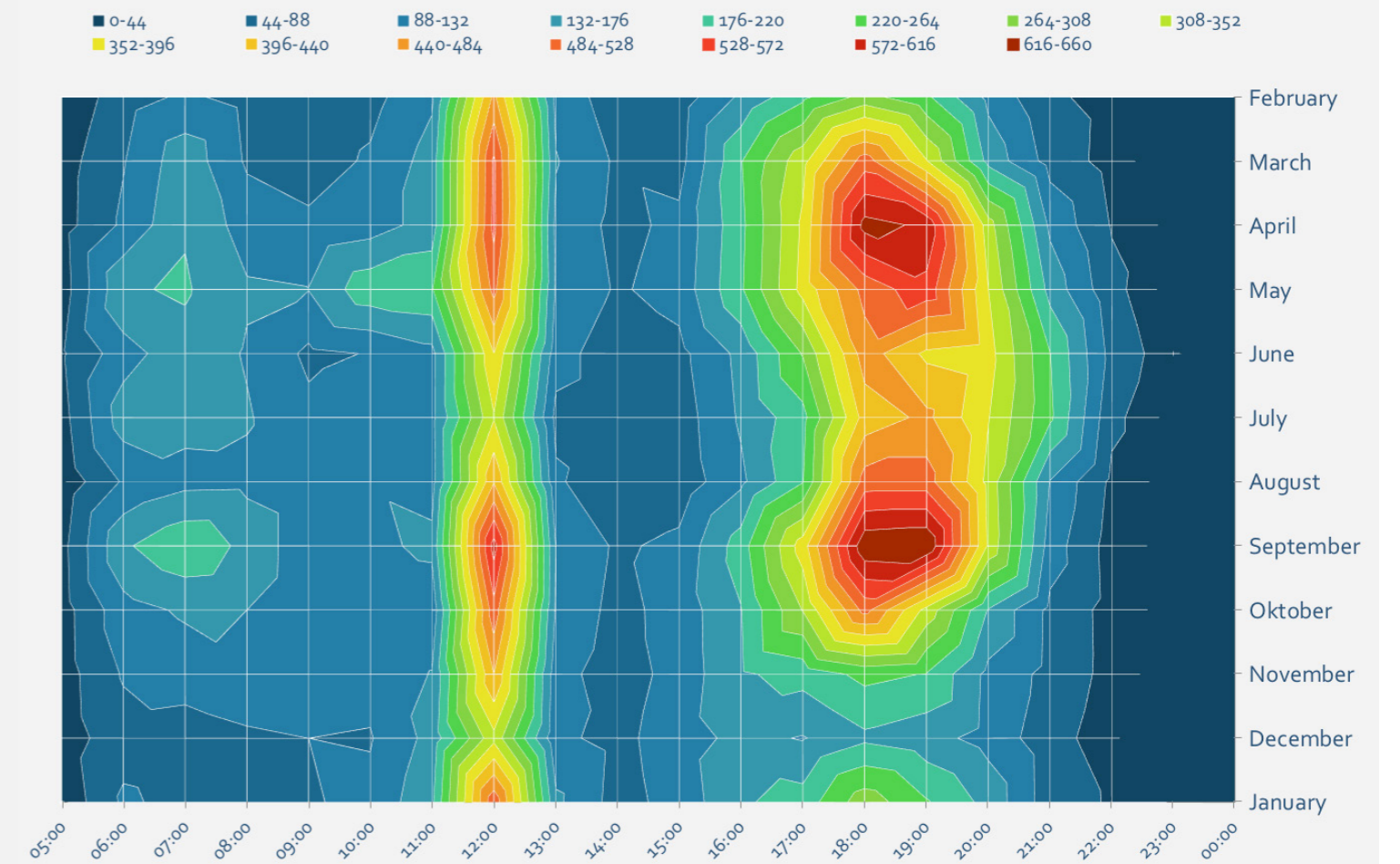
Both Endomondo and Runkeeper data show a clear activity type, that is typical for Brussels: the lunch run. On weekdays, many activities start at noon. We have not encountered this in the analysis of Dutch cities.

The 'time to run' does not only change through the year, clear patterns also exist through the week. On Monday we start-up the workweek, it seems to make us skip our run more often. Tuesday is therefore the popular day to run during the workweek. As the workweek progresses, we run less often. On Friday, we run out of energy to go for a run (or the after work drinks might be a reason). Then, the Sunday morning is the time to go running again. More often than Saturdays, when other weekend activities are more common (go shopping, bringing the kids to sports etc.)

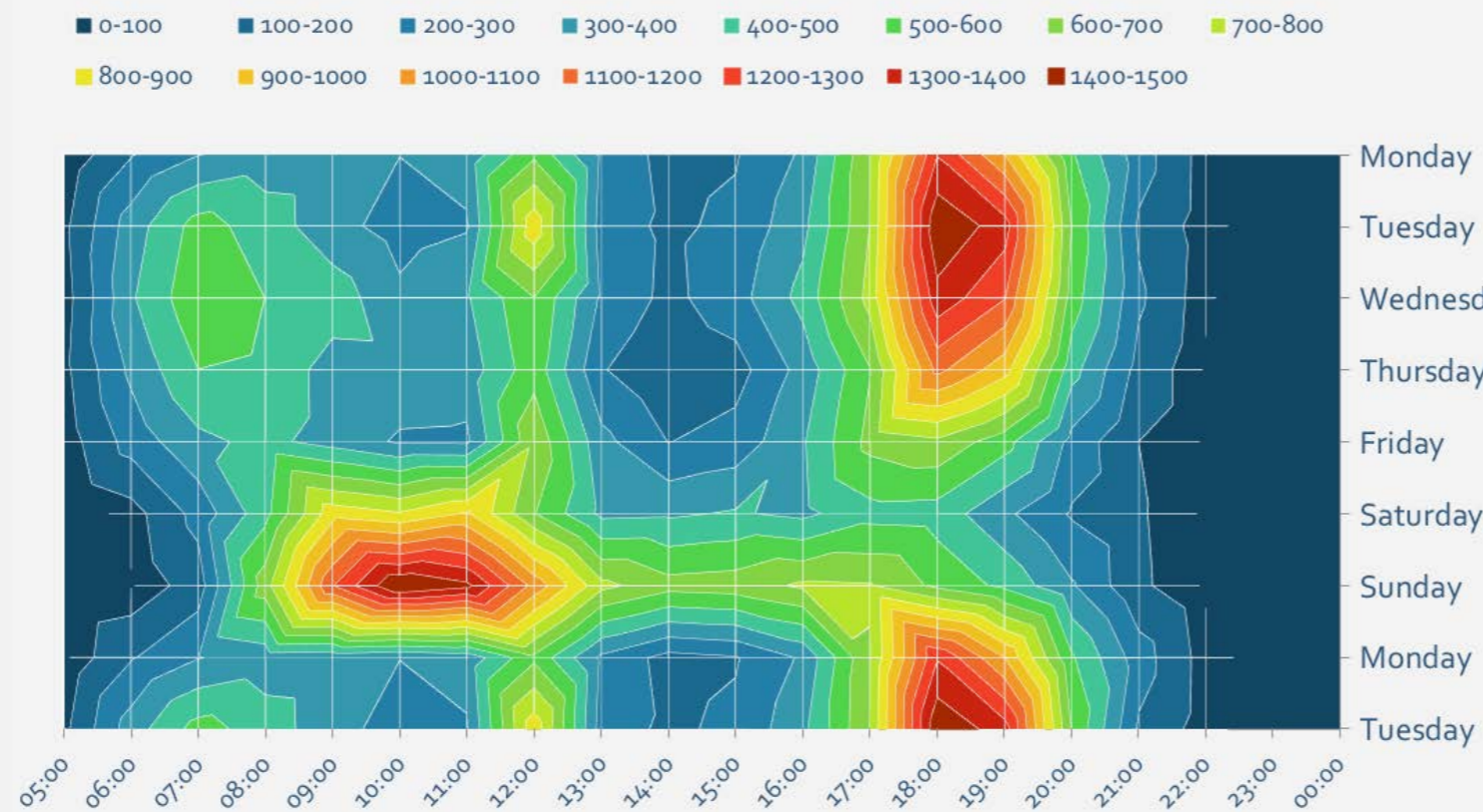
Runkeeper on weekdays: starttime of (3031) running activities (* 12,5)



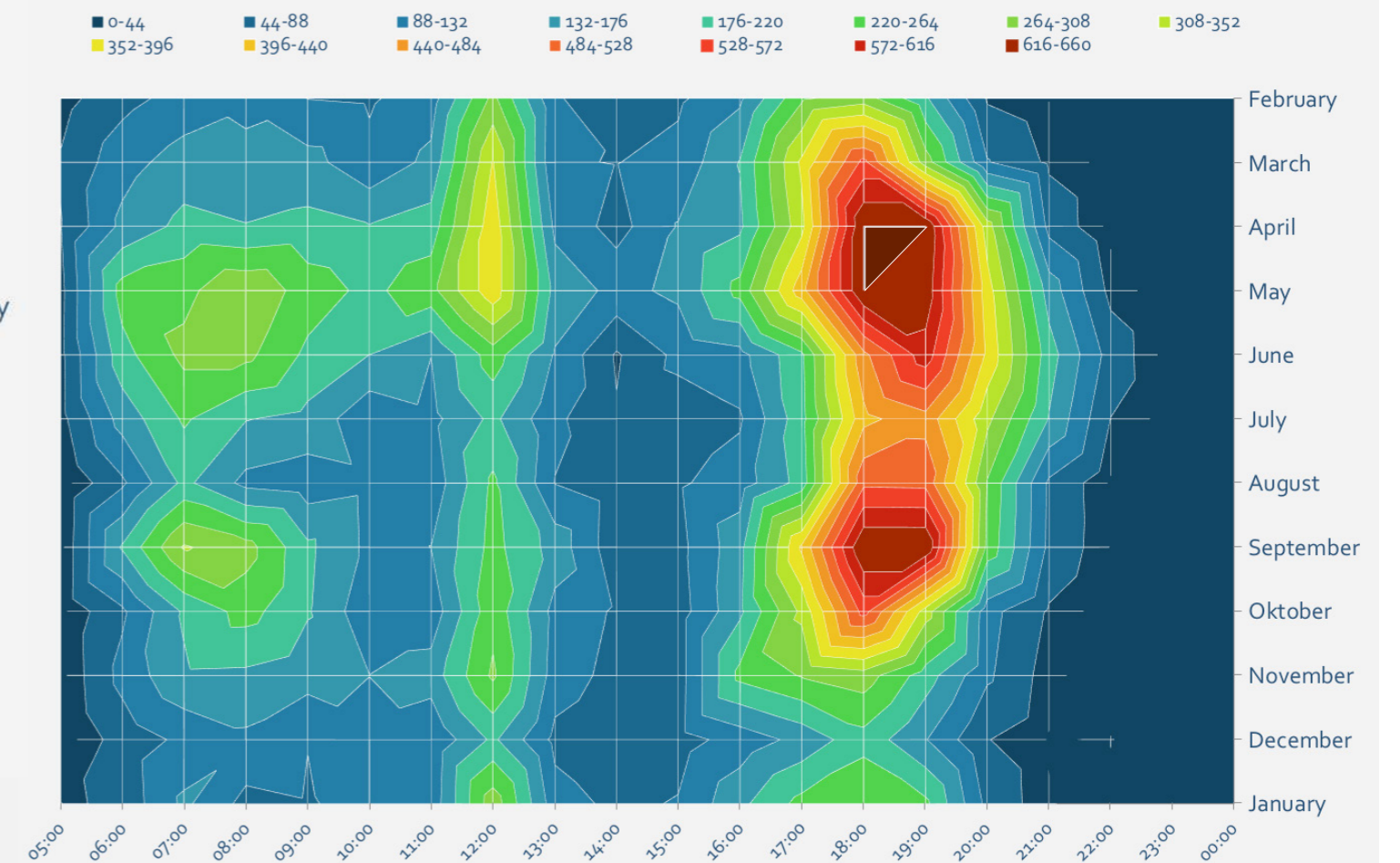
Endomondo men on weekdays: starttime of (37554) running activities



Endomondo women: starttime of (25656) running activities (*2,17)



Endomondo women on weekdays: starttime of (17290) running activities (*2,17)



ON THE LONG RUN

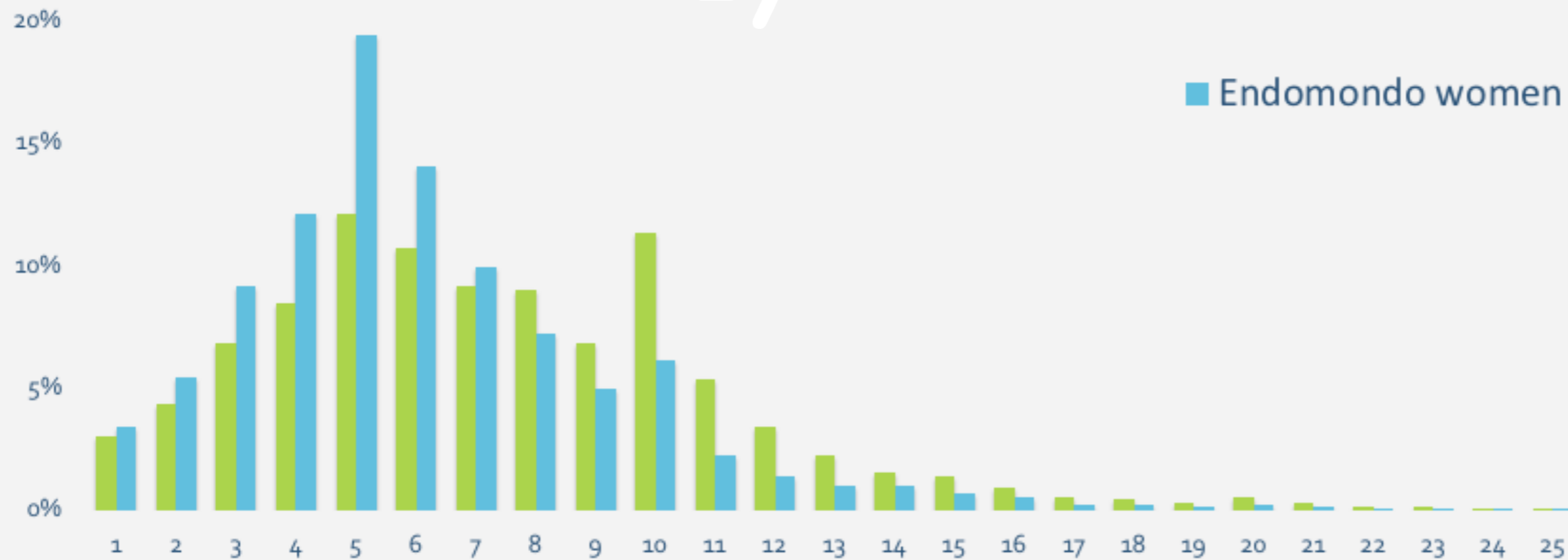
endomondo runners

What distances and speeds do we run? This aspect strongly determines where we run. Most runs start at our front door, so the length of our run determines what places are within 'reach'.

The results are similar to cities we have analysed in the Netherlands: the 5 kilometer distance is most popular for both men and women. But for women, it is by far the most often ran distance. For men, the 10 kilometer is performed almost as often as the 5. Relatively speaking, men run the '10k' twice as often as women.

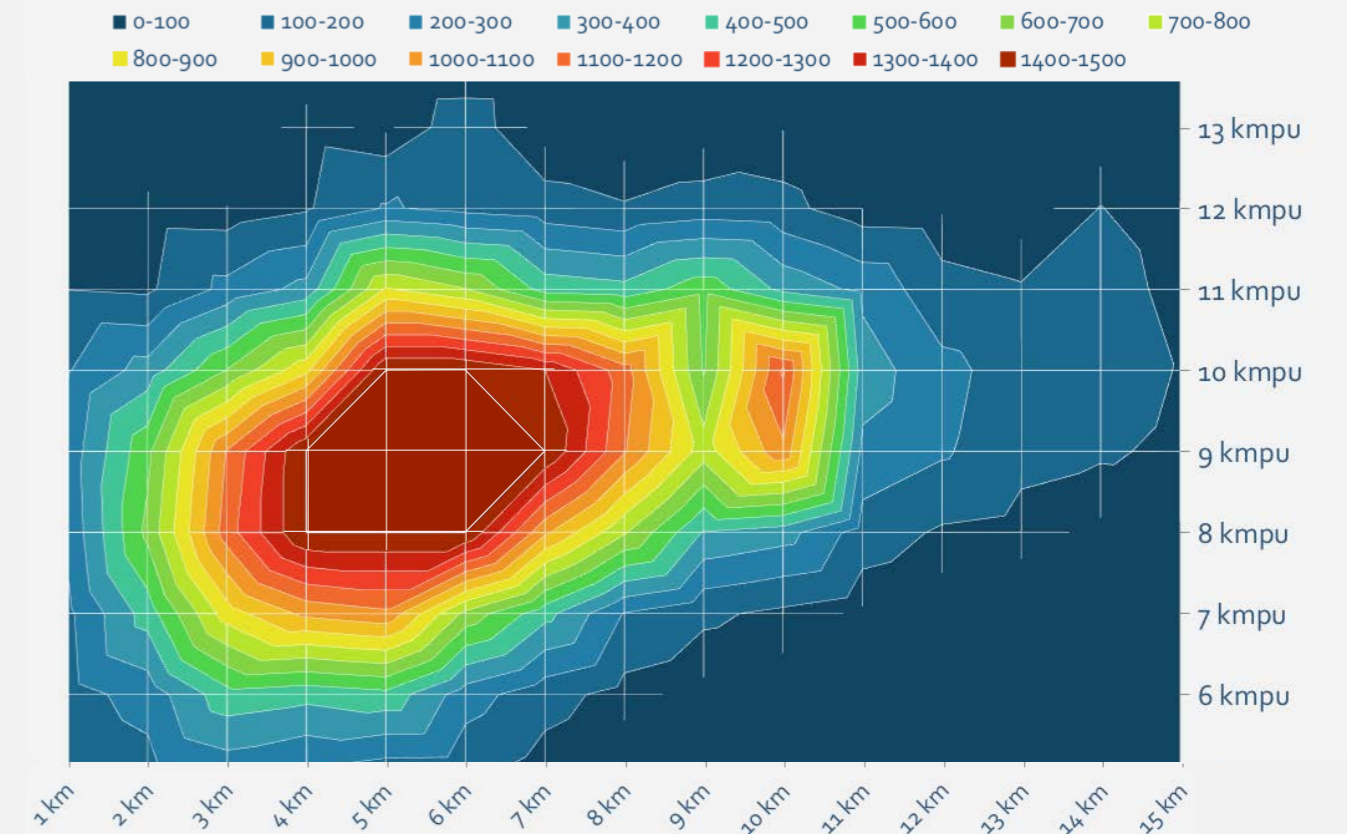
In general, runners that run long distances, also run faster. They are just more 'advanced' runners. This pattern can be seen for both women and men, although men run about 1 km/hour faster than women.

Distances of running activities

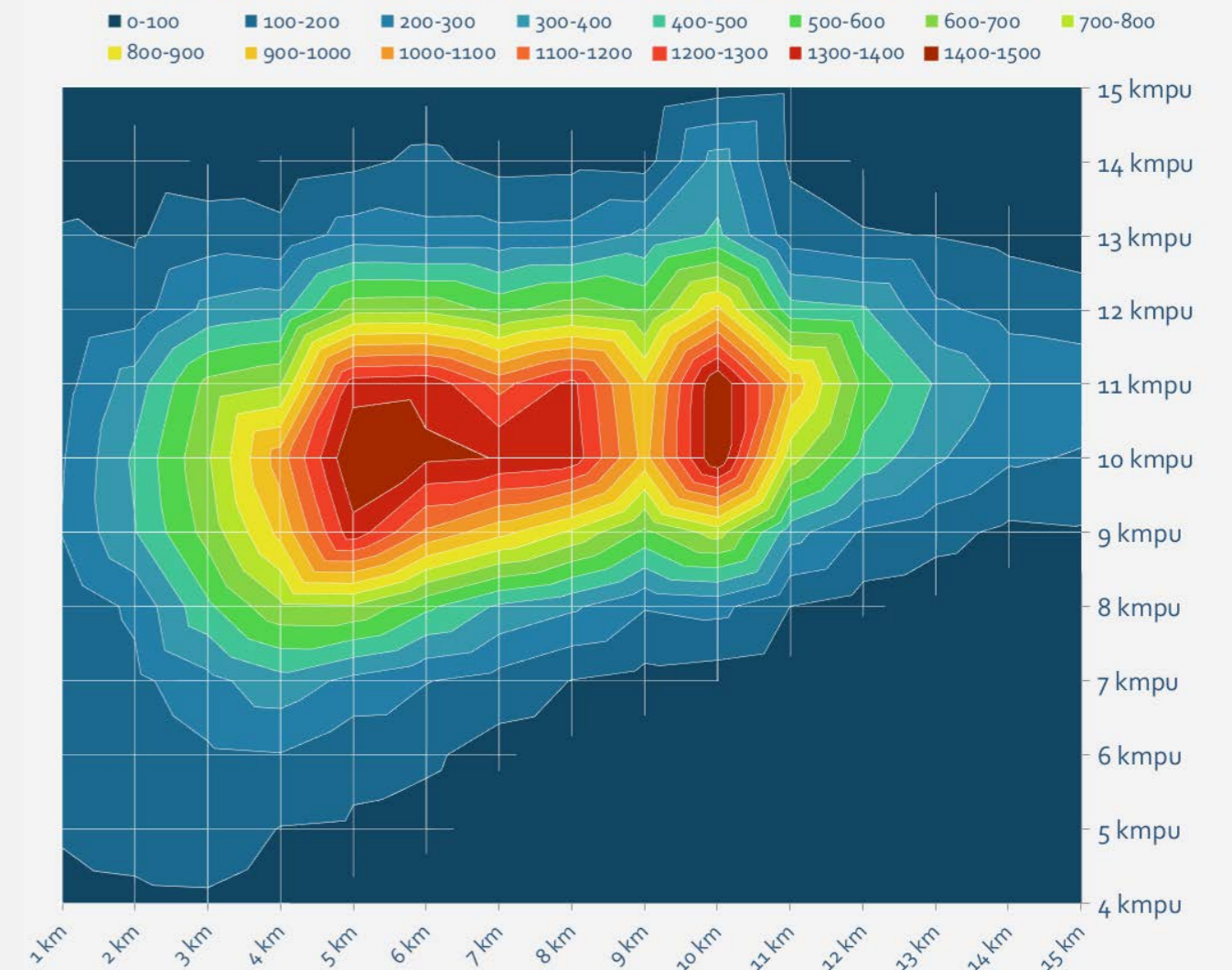


■ Endomondo men
■ Endomondo women

Endomondo women: distance - speed of (25669) running activities



Endomondo men: distance - speed of (55746) running activities



The most important spatial ingredients to improve the running experience

In our 'running survey', 1200 Brussels runners expressed their preferences

PRIORITIES

*FOR A RUN-FRIENDLY
BRUSSELS*



RUNNER-FRIENDLY BRUSSELS

survey runners

The survey participants were asked the general starting question;

do you like to run in Brussels?

Luckily, most runners are not completely unsatisfied with Brussels as a running-city. Only 4% completely dis-likes running in Brussels.

But, only 14% completely likes running in Brussels, which is actually not so much. Most people 'slightly' agree. It indicates that there are pleasant places and routes, but there is also a substantial desire for improvement.

Men and women give almost exactly the same judgement.

A difference is visible between 'younger' and 'older' runners; older runners were slightly more satisfied.

IN GENERAL I LIKE RUNNING IN BRUSSELS...

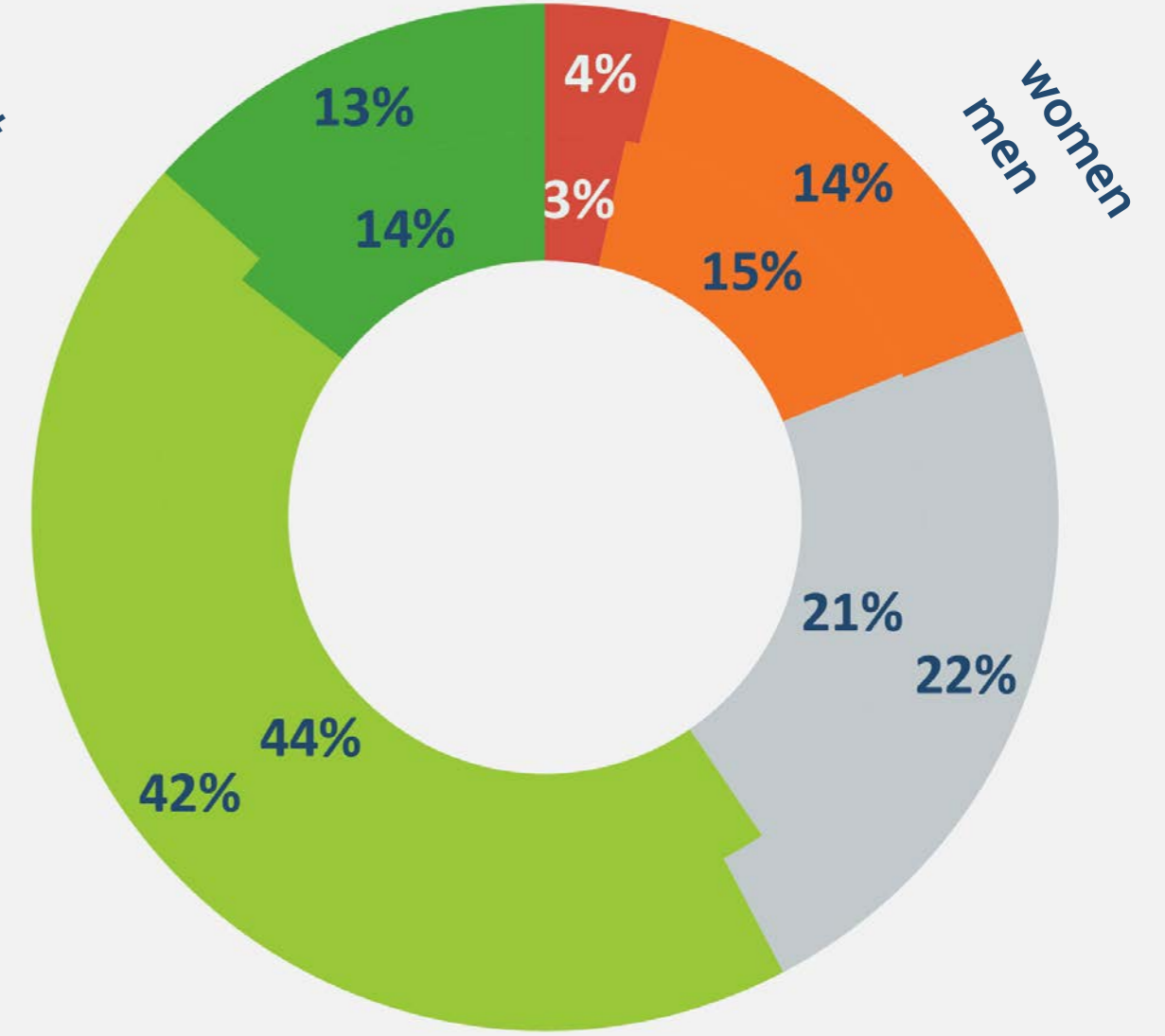
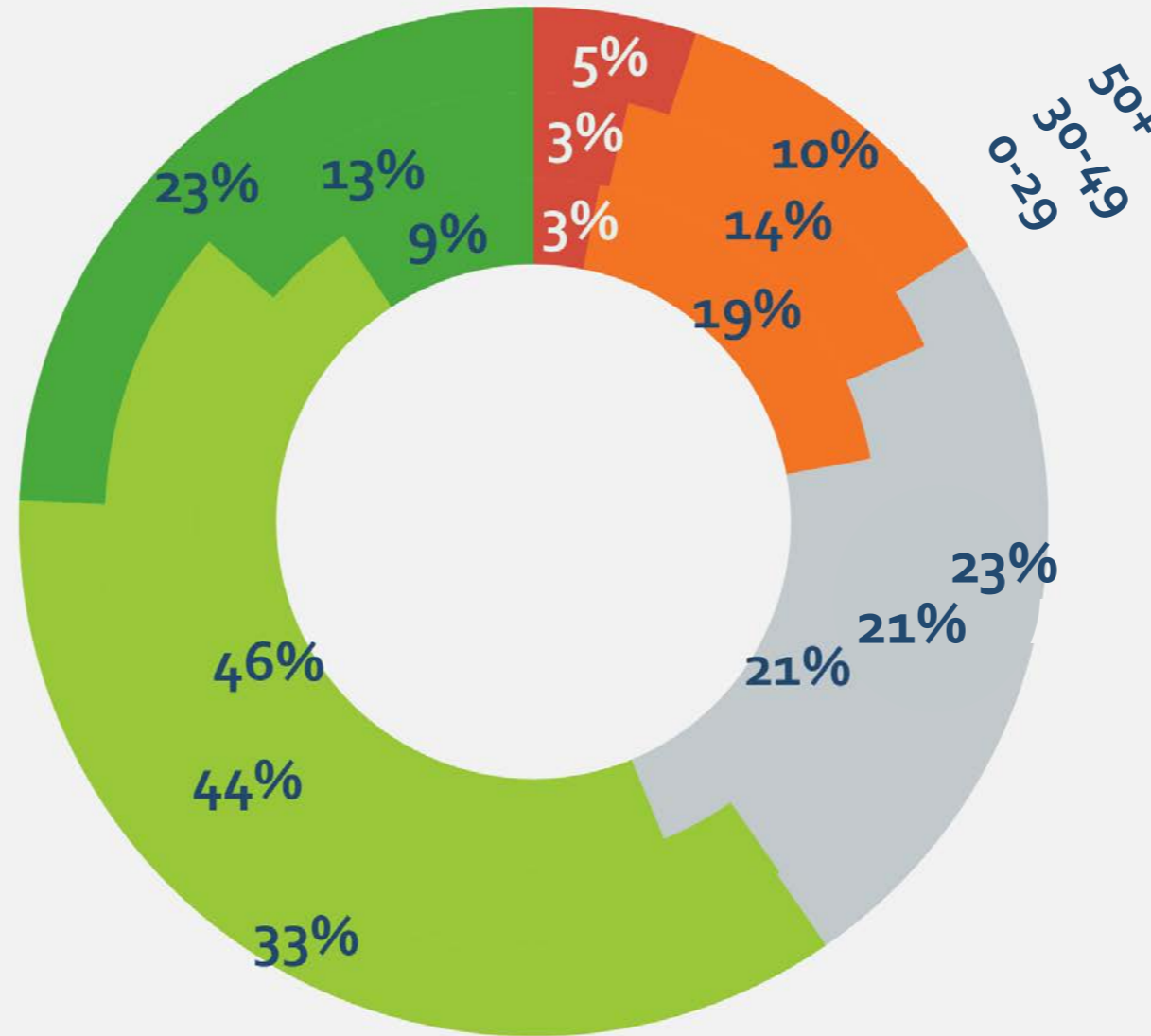
■ Completely disagree

■ Slightly disagree

■ Neither agree nor disagree

■ Slightly agree

■ Completely agree



IMPORTANCY OF SPATIAL ASPECTS

survey runners

What spatial aspects are most important for this judgement on the 'runner friendly-Brussel'?

Step 3 of the survey listed aspects, which runners were asked to rate on a 'likert scale'. The outcomes are quite clear.

First, a green/natural environment is defined as 'important' or 'very important' by almost all runners. Three out of 1250 runners found it 'unimportant' or 'very unimportant'.

The second, third and fourth aspect are strongly related: clean air, road safety and uninterrupted routes. They all point to the problem of motorised traffic (cars).

Fifth and sixth, safety aspects are mentioned. Either referring to the feeling of social safety or the presence/absence of light(ing). Women found this aspect more important than men, both regarding lighting and dogs. In the data-report, you can find a split-up by gender and age. There were not many other large differences.

Soft or unpaved paths are considered important by most runners.

Then: quiet paths, referring to other users on the path that the runner is using himself. These can be cars, scooters, cyclists or pedestrians.

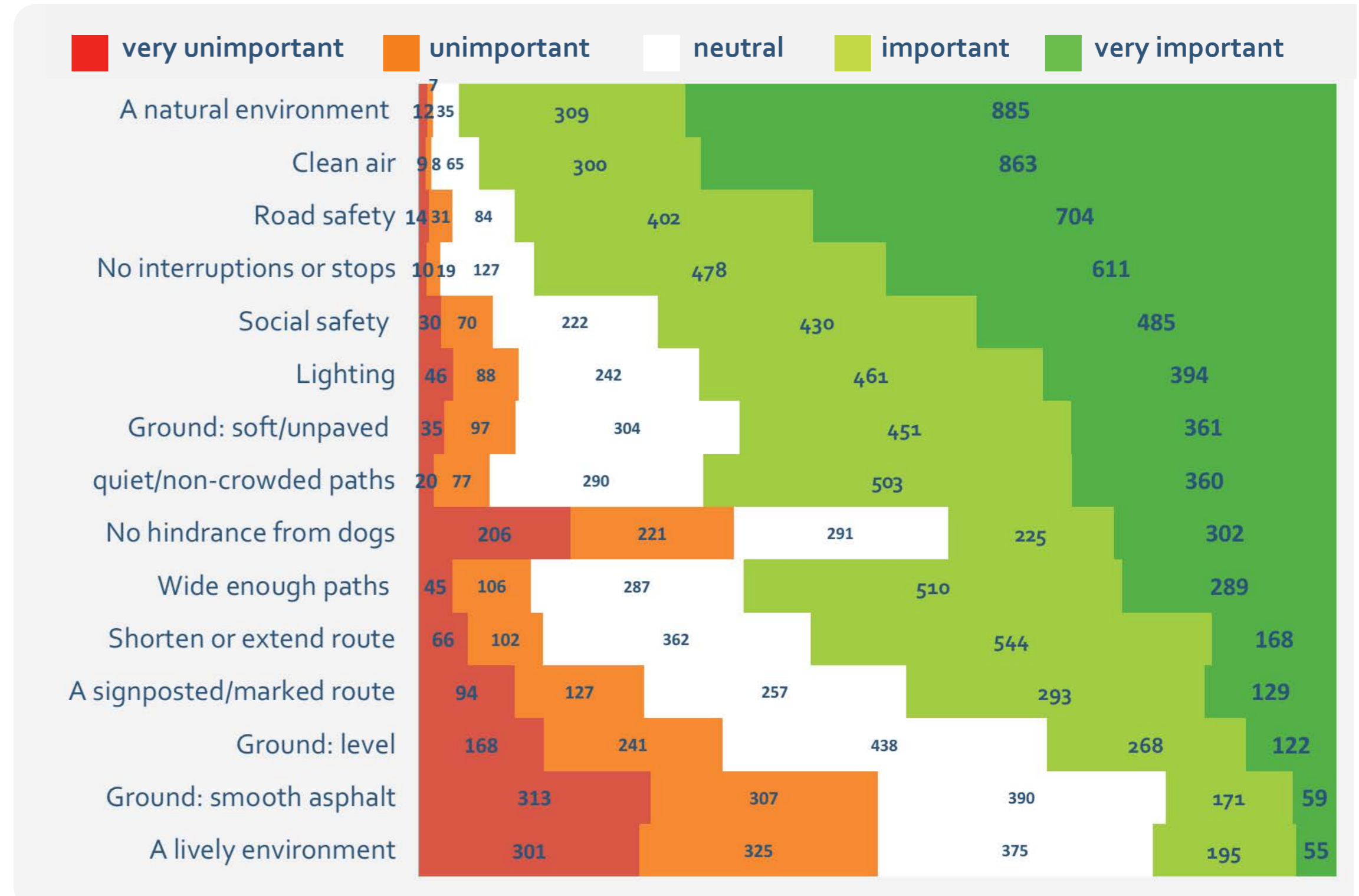
The importance of 'dogs' divides runners quite equally. Notable is the fact that relatively few runners find it 'important', more people find it 'very important'. That contrasts with 'wide enough paths' that many runners find important, but less often 'very important'. These subtle differences are typical and relevant.

Shortening or extending routes is found important by most runners, even slightly more than having a signposted route.

A lively environment is found least important, in almost equal amounts as 'ground, smooth asphalt'.

Level ground seems to divide runners, and also has the largest number of 'neutral' judgements.

The orders are interesting, but it is important to note that the 'importance' of spatial aspects also depends on the exact way that runners are asked about it. For example, the aspect that has most 'very important' votes is not necessarily the same aspect that is mentioned most often as 'the most important' aspect. It is also not necessarily the aspect that is most often tagged in maps (in step 5 of the survey). Some aspects are easier 'taggable' (unequal paths for example) than others (bad air quality for example).



THE BIGGEST PRIORITY FOR A MORE RUNNER FRIENDLY CITY

survey runners

In step 6 of the survey, runners were asked about their most important aspect for a more runner-friendly city.

Note: that is a subtle but quite different question than the previous question. The 'BIGGEST priority for MORE runner-friendly city' makes runners answer about themes in which they see opportunities for improvement.

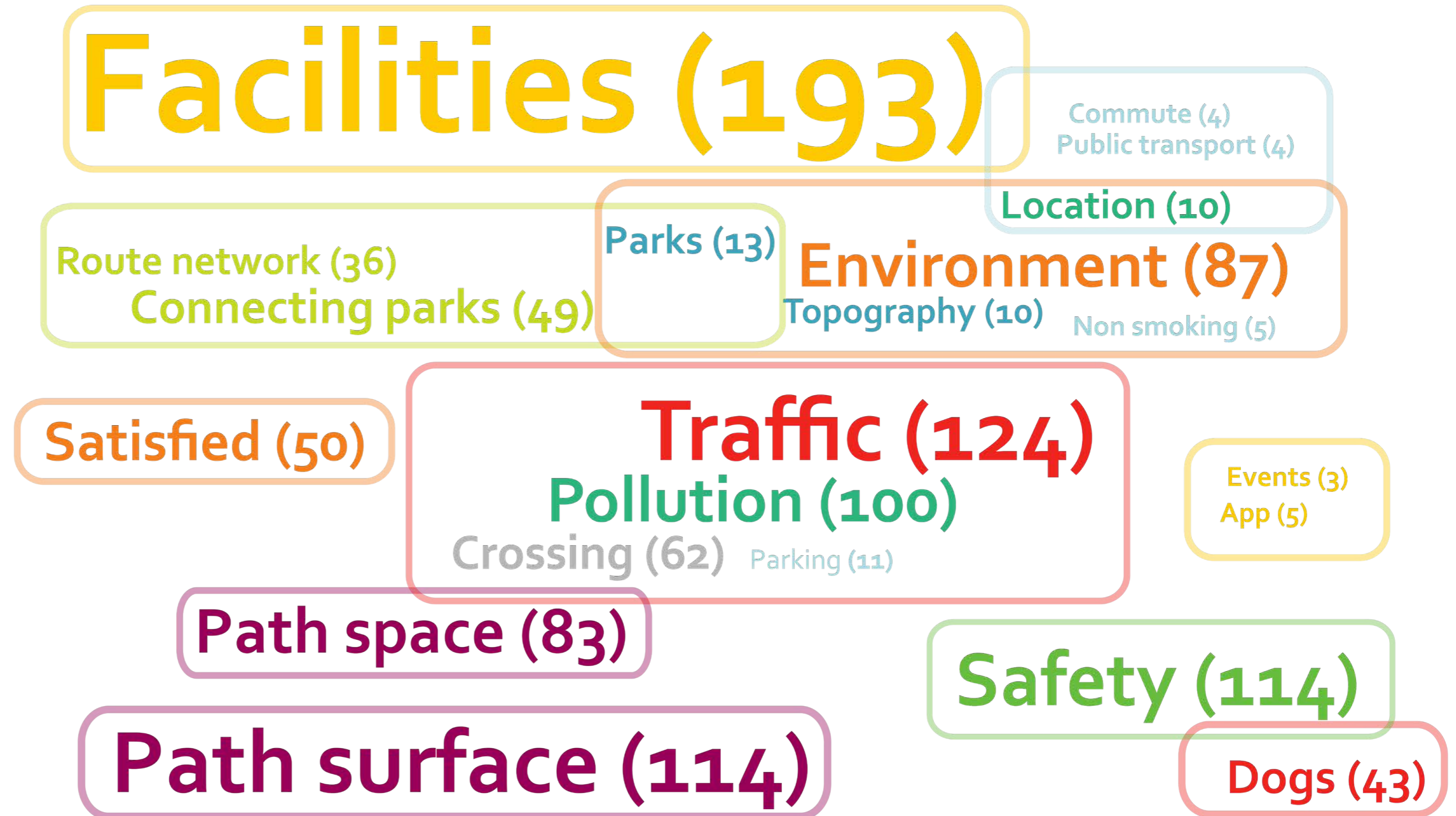
On this question, answers relate stronger to negative experiences, that they desire to be improved. The aspect of 'green/natural environment' is therefore mentioned less often than some other aspects.

But what is the biggest priority in this regard? As categorised below: facilities. But, that is also a matter of how we divided themes and sub-themes.

The themes 'traffic', 'pollution', 'crossings' and 'parking' are all a rather direct consequence of one aspect: motorised traffic.

And actually, 'path space' is as well. When street space is mainly reserved for cars, path space is limited. 'connecting parks' is currently hard, mainly because of car traffic. 'Environment' refers to the wish for more green, but they are mainly not green because they are grey.

Together, motorised traffic would be responsible for more than half of all 'biggest priorities', if we would have defined it as one category.



TWO CATEGORIES

structural - traffic related - street design

In our view, a clear split can be recognized in the challenge of making Brussels more run friendly.

The bigger challenge requires structurally rethinking the layout of streets, which automatically requires a rethinking of the entire Brussels traffic system. It is a process that has already started: Brussels is embarking on a new route by focusing mainly on cycling, walking and public transport.

The so-called "good move" ambitions recognize that the layout of the city is too car-oriented. In the Covid-19 era, many measures have already been taken to create space for cyclists and pedestrians.

The following applies to all these measures: runners are not the main reason or focus group for investing. However, they are an additional reason and they also benefit well from the measures taken primarily for cyclists and pedestrians.

optimalisations - additions - runner specific

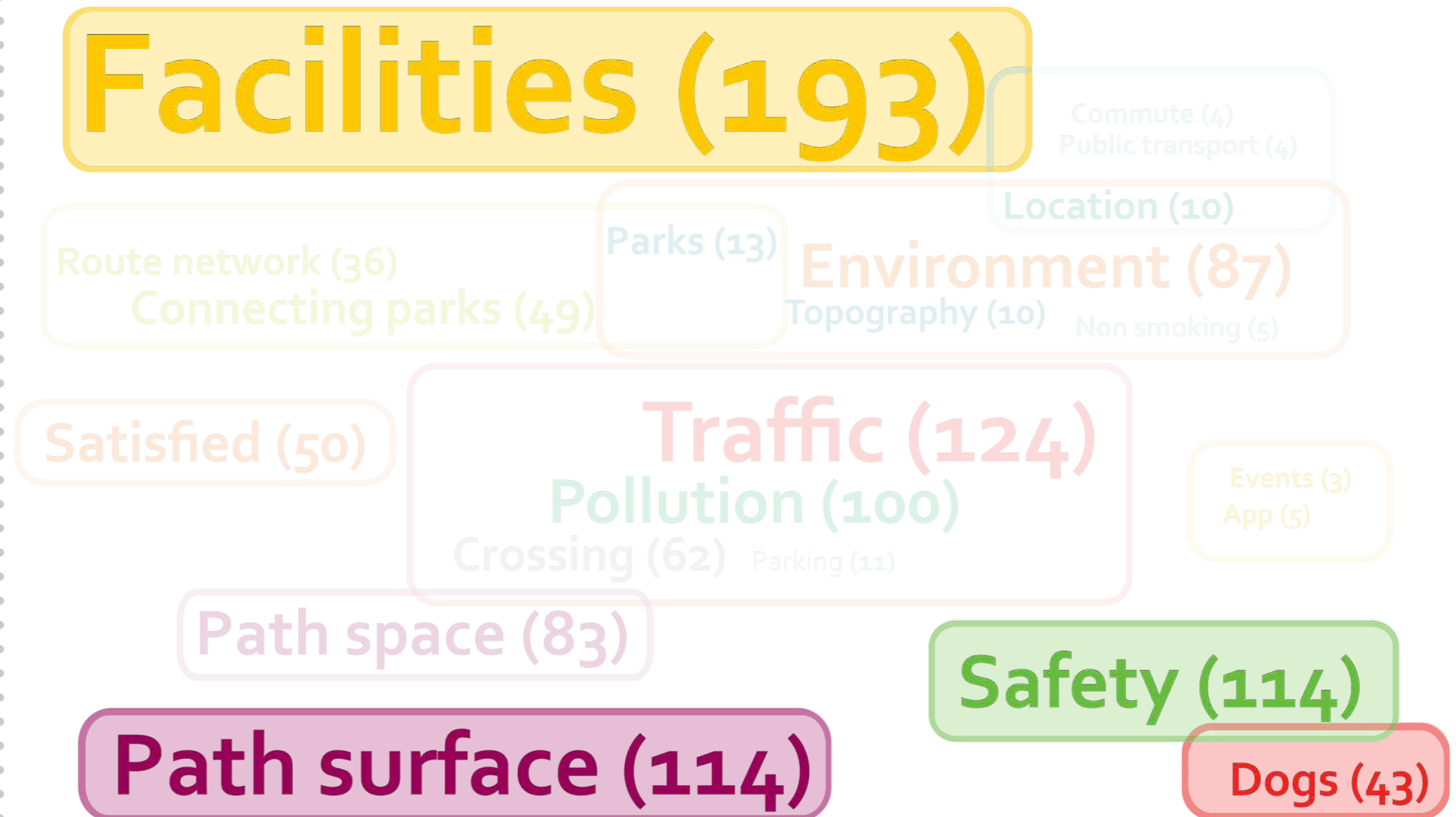
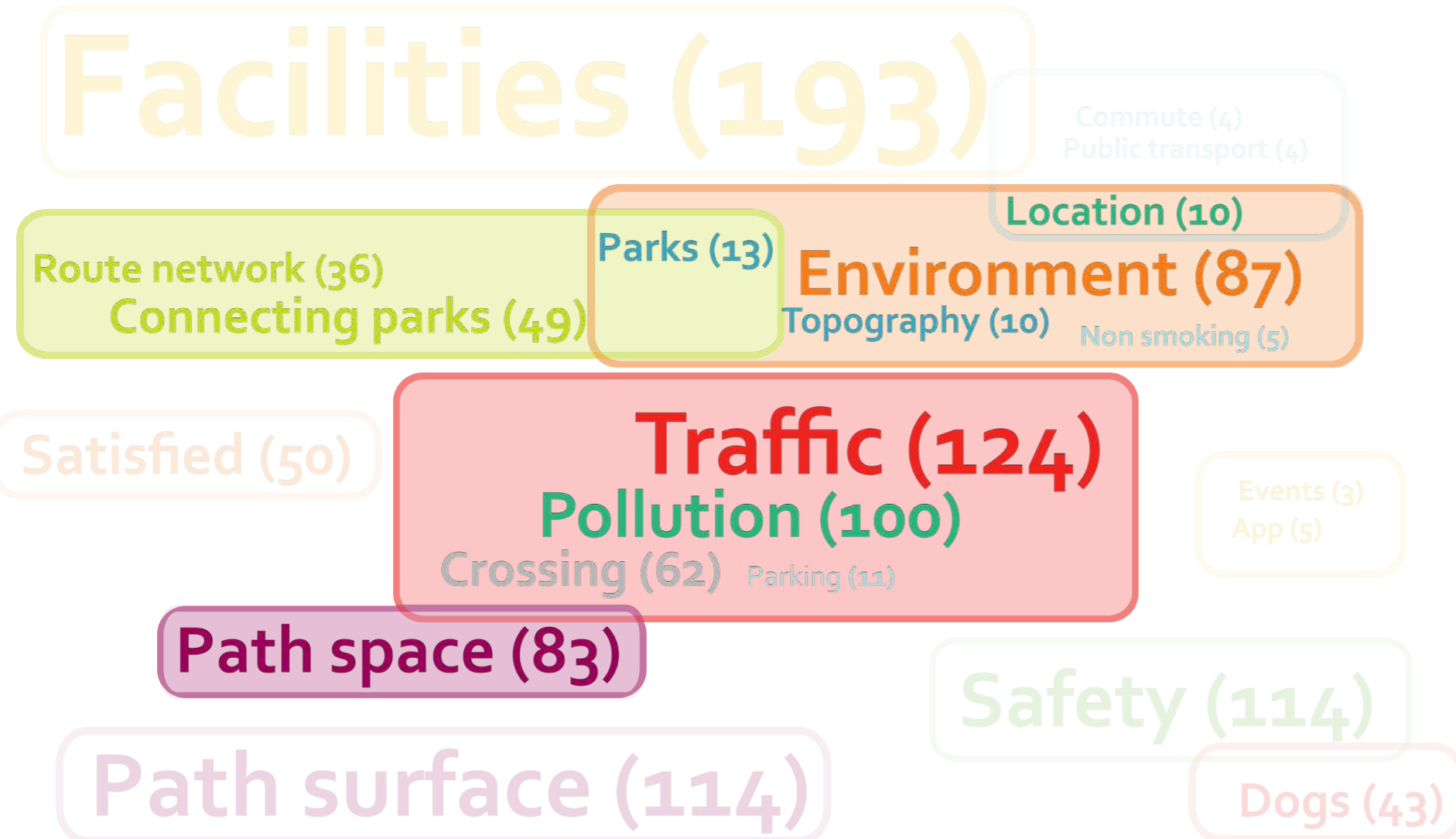
Fortunately, many running-friendly priorities were also easier to achieve. Adding run-supporting facilities is a high priority and can be done relatively cheaply and quickly.

Optimizing path surfaces is very important. It is mainly a matter of proper maintenance.

Increasing (the feeling of) safety could be achieved by adding lighting. In certain places, the runner would even be the main focus group for doing so.

The presence of dogs can be very disturbing for specific runners. Making it clear(er) where dogs are forbidden or should be attended can already make a significant difference. This is neither expensive nor difficult.

For all these measures accounts: runners could be the main reason or focus group to invest. However, other city users could well co-benefit from the investments.



STRUCTURAL - TRAFFIC RELATED

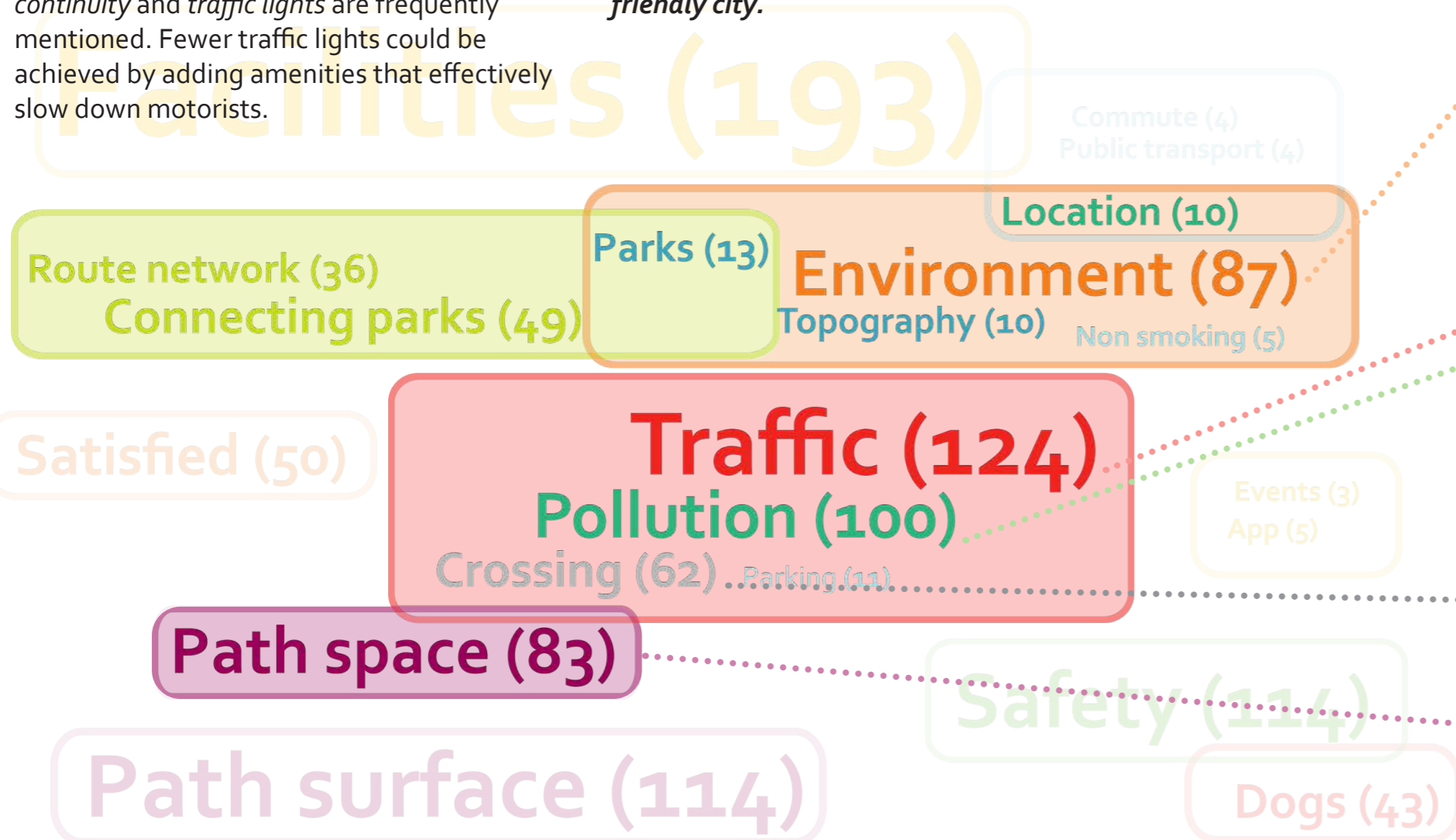
Runners' explanation of their top priority for a more running-friendly city was visualized in quotes. We have made a selection of clear and unique quotes that reflect that experience well.

Here, we see that several sub-themes actually refer to very similar problem causes. When quotes primarily refer to more green, runners often mention (less) cars as a mean to achieve this. The quotes are clever; runners are aware that a change in mindset of the city is required. It takes more car-free Sundays to achieve this, one mentions.

In the theme of *crossing*, the word *obstacle*, *continuity* and *traffic lights* are frequently mentioned. Fewer traffic lights could be achieved by adding amenities that effectively slow down motorists.

The theme 'paths' is broad, including many sub-themes. When runners refer to the width of paths, width of pavement and the separation of paths, it often refers to similar experiences. All these experiences cannot be separated from motorized traffic. When streets are filled with cars, driving or not, limited width of pavements is the result. The desire for separate footpaths also often refers to not wanting to share the path with cars.

Often, runners mention that cycleways are good for running as well and **that the ambition to create more cycleways should be taken together with designing a more runner-friendly city.**



This is unfortunately not the case everywhere in Brussels, but we should be able to **run in fairly green places and away from cars**

More parks in the **city center**

In addition to reducing the number and speed of cars, the ideal would be **to further green the public space** :)

more green spaces to run **Bxl in all municipalities**, reduce spaces for cars.

develop trafficless routes **as green as possible** in the **center**

Less car-friendly city more people-friendly one!

As a Brussels resident, we want to be able to **use the car when it is really necessary**, but we would like pedestrians / cyclists / Rennes to be favored

It takes **more Sundays without cars to change mindsets**

No interaction with motorized traffic

The general urban setting:

too much the feeling of having to cross a hostile environment before being able to go jogging

It will be more effective to encourage people to adopt **new mobility habits by making it enjoyable** AND effective than to discourage them from keeping their own. This creates a lot of frustration which does not allow openness to change.

Air quality improved. Particulate matter and smog alarms are the only things that **prevent me from walking outside.**

More priority for runners and other pedestrians, **less traffic lights**

I would especially like a course with **fewer obstacles so that we can run continuously** without having to pay too much attention.

crossings safer but **not with pedestrian lights** which oblige the runner to stop. Perhaps with better lighting and with amenities that require motorists to slow down (trays)

Cycling routes can also serve as running/walking routes if separated from car traffic

Separation for bicycle paths, make the city **more pedestrian / runner friendly by limiting car traffic / car parking**

A quote we find especially beautiful and true is the one below. We could not agree more or quote it better. It is a key overall strategy/ambition in Brussels, covering all previous themes of 'traffic, crossings, pollution, park connections and more green'.

It emphasises that car traffic is not a problem everywhere, but that a hierarchy is missing in which some streets should be appointed as movement friendly, healthy streets. They lay *within* neighbourhoods.

And read: it does not focus on excluding cars, but on adjusting speeds. We agree, cars are not so problematic when they adapt their speed to 'cycling speed', being a guest.

It would be magnificent if the *hierarchy of roads* were reinforced with real neighborhood streets, really tranquilized to have streets little exposed to noise, pollutants, unsuitable speeds

One type of intervention that runners asked for, is typical for Brussels, as many parks in the city of Brussels are not very big.

Many runners already asked for more green, but others especially emphasise on the idea of making more green routes in between the different existing parks. Connect the green dots, as green corridors.

One person even mentions the idea to connect all parks with marks like the 'green walk'.

Again, this desire cannot be separated from the over-motorised city.

Route network (36)

Connecting parks (49)

green corridors between parks

Safer running routes towards **parks**

more green and connect the green dots

More traffic free connections between **green spaces**.

The main difficulty is *to circulate between* different **green points**.

Unpaved walkways *connecting the various parks and green spaces*

Fine walking routes through the **center** and
walking routes to and between the large parks

An arrow trail *from one park to the next park* -
such as the **Green Walk** but then between ALL parks

RUNNER SPECIFIC: OPTIMALISATIONS - ADDITIONS

facilities

The last question of the survey resulted in 'facilities' being by far the most quoted category: most runners again suggested to make marked routes or add water fountains. These two are easy to think of as a suggestion for improvement. Runners mention a network of marked routes in parks, but also to connect these different routes into a 'junction network'.

According to runners, all parks deserve at least one water tap. They are even important in winter.

Public lockers, showers, toilets, run-tracks or bike parking are mentioned as well, but less often.

Facilities (193)

Facilities Fountain (62)

drinking water (all year round),

clearly indicated water fountains

more *water fountains* (especially in winter),

All parks must have a *point with drinking water*

Facilities Marks (77)

marked green routes (circuit with km, etc). Signposted connections between green areas with *advertised mileage*.

The **many parks in Brussels** are top to walk, would be nice to have *a designated 'trail' in each park*, or two I do my itineraries myself but sometimes it would be nice to be "*guided*"

Marked with different type of distance 5,10,15,20km for example.

When ready, a public route of approximately *10 km to show the possible jogging routes* through the city. Maybe a monthly run to show new jogging routes.

better *maps/signs indicating the routes to parks, nearby centres etc. with distances all around Brussels*. Runners don't always have maps and it is impossible to guess how to find a way if there are no street names or maps around.

There are a lot of local routes, *connect them to make a network in Brussel*
For example extend T&T to Boxstael and Jette, Atomium and canal again.

It would be nice to also find these routes around the city.
The green walk is already a nice start,
but I think you can go a long way with a kind of junction network

Facilities Toilet (22)

Increase the number of *public toilets in the parks*.

We also need *public toilets along all the routes and in the parks!*
There is none at all!

Facilities Track (6)

One wish: to have a race track and a green space available to the public *as there is one in the park of the Jubelpark*.
This would allow you to endorse and meet other people

Facilities Locker (8)

Public lockers at parks or the start of trails. This would be excellent.
For example at the edge of **Foret de Soignes**

an *automatic locker space*, code (limited time to avoid abuse)

Changing rooms at the workplace

Facilities Shower (4)

Facilities Bike (4)

Parking spaces for bicycles (secured)

Be able to get to my bike racing location safely and
have a place to park my bike (eg, no bike storage in the **source park**)

Facilities (193)

Route network (36)

Connecting parks (49)

Parks (13)

Commute (4)
Public transport (4)

Location (10)

Environment (87)

Topography (10)
Non smoking (5)

Satisfied (50)

Traffic (124)

Pollution (100)

Crossing (62)
Parking (11)

Events (3)
App (5)

Path space (83)

Safety (114)

Path surface (114)

Dogs (43)

RUNNER SPECIFIC: OPTIMALISATIONS - ADDITIONS

facilities

In the beginning of the survey, several types of facilities were listed. Runners could mark which one they found important.

Three types of facilities are considered most important:

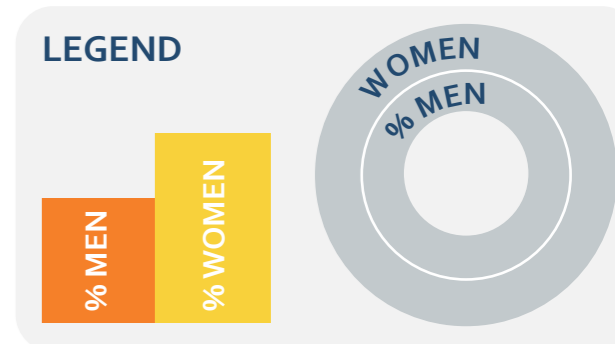
1. marked routes
2. drinking fountains (water taps)
3. information panels

Note; information panels were not mentioned often when runners were asked about their biggest priority.

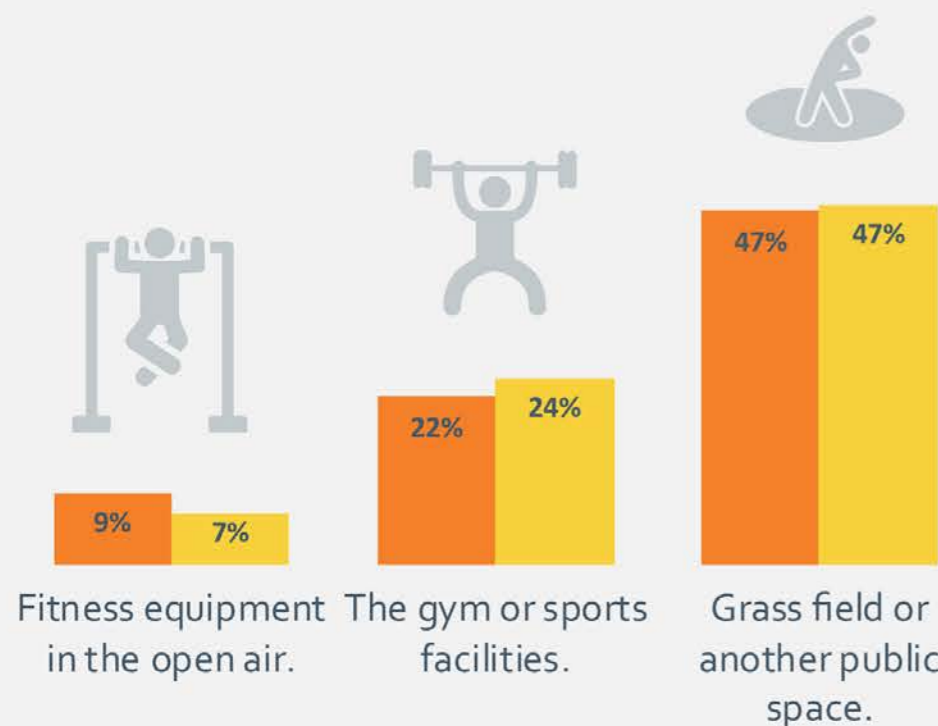
Also calm places to stretch and bike parking are considered important by many runners. Catering facilities are least important, followed by car parking and fitness equipment.

Lockers and public shower facilities are not among the most important facilities, according to the participants of the survey, but 15% - 20% off Brussels runners consider it important. Even though participants of the survey considered other facilities more important, it is still a very large amount of runners.

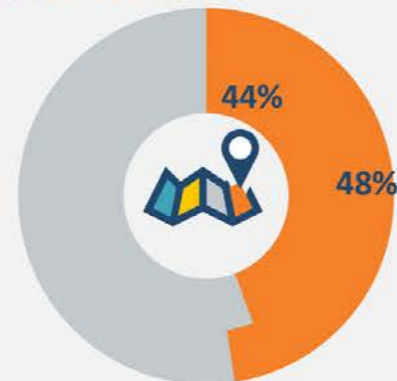
Earlier, the survey did show that a significant part of runners does combine running with strength exercises. About 50% of runners does this at least 'sometimes'. Apparently, most people do not necessarily use fitness equipment for it. A lawn, or other nice spot can serve as well.



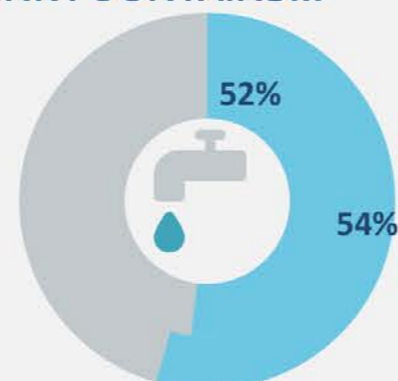
I USE...



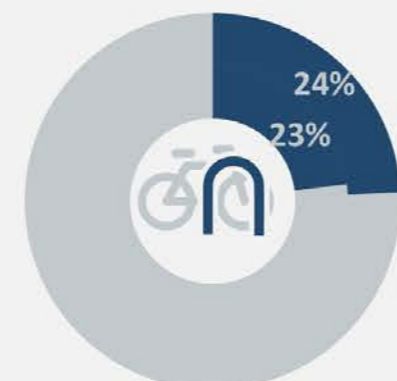
INFO PANELS...



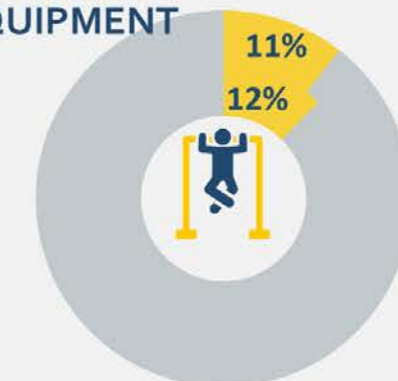
DRINK FOUNTAINS...



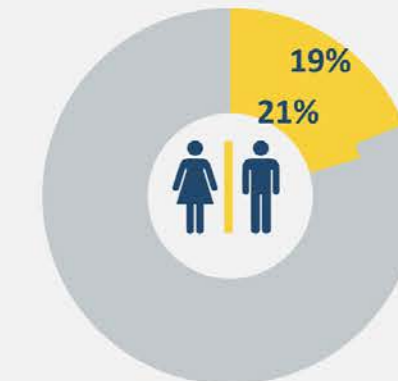
BICYCLE PARKING...



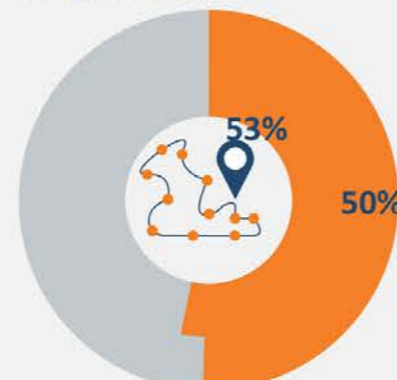
PUBLIC FITNESS EQUIPMENT



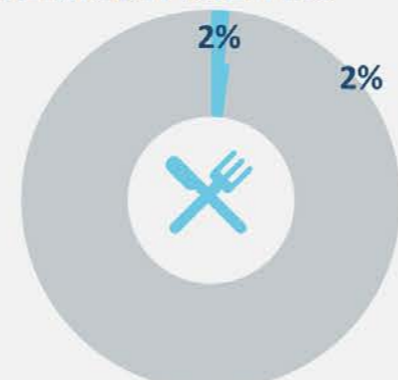
PUBLIC SHOWERS



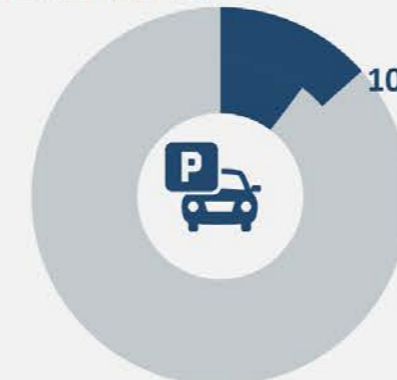
SIGN POSTINGS ...



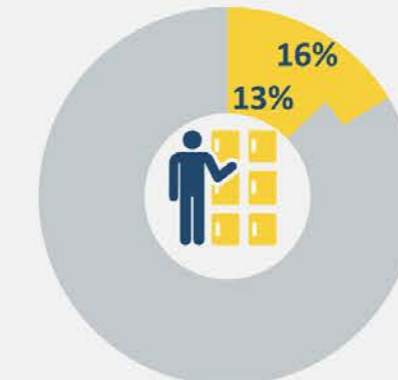
CATERING FACILITIES



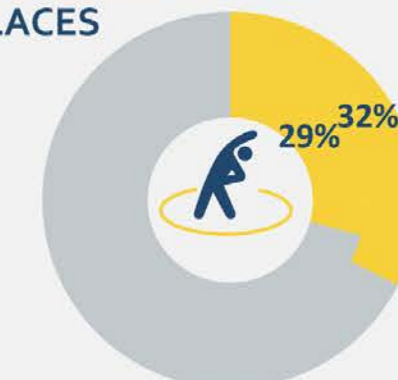
CAR PARKING



PUBLIC LOCKERS



CALM STRETCHING PLACES



RUNNER SPECIFIC: OPTIMALISATIONS - ADDITIONS

path surface

An even path surface is appreciated by many different public space users; walkers, cyclists and also high aged people. But especially runners risk serious injuries when surfaces are unequal. They land much harder. It was one of the most mentioned and tagged spatial aspects.

Also within the theme of 'path surface' different sub categories exist.

Runners often refer to the softness of paths specifically, or having access to unpaved surfaces. Soft paths are less burdening for runners joints (knees, hips, foot).

But besides the health issues, unpaved paths give a certain natural feeling. It sounds, and feels nice under runners feet. It indicates a natural, traffic less environment. It adds to the tranquillity mentioned two pages before.

The softest paths are the well known 'finnish pistes'. Some people especially ask for them in the survey.

A second aspect of path surfaces refers to the evenness of the path surface. Uneven path surfaces are truly risky, as a pothole can easily cause an ankle to break. An even surface gives a runner stability that serves an undisturbed activity.

Paths Finnish (12)

The most important things that are missing are *Finnish slopes* or *soft ground* (easy to install **along sections of the Green Walk, for example around the Royal Domain**).

A *network of unpaved paths* (eg: *Finnish piste*) instead of the asphalt. The **Laeken park** has great potential.

Paths even (41)

Even and safe path to avoid injuries and accidents

Better paths - too many potholes, broken paving stones

Smoother pavements - often they are *very uneven and easy to trip over*, especially in the evening.

Paths muddy (9)

The quality of the soil leaves much to be desired: *a lot of potholes, holes filling with water* as soon as it rains and *very uneven ground*

Even if efforts are made (eg the **old railway tracks**), often the tracks are *not sufficiently maintained* and can become dangerous (*for lack of light, degraded soils, very slippery* (see several points).

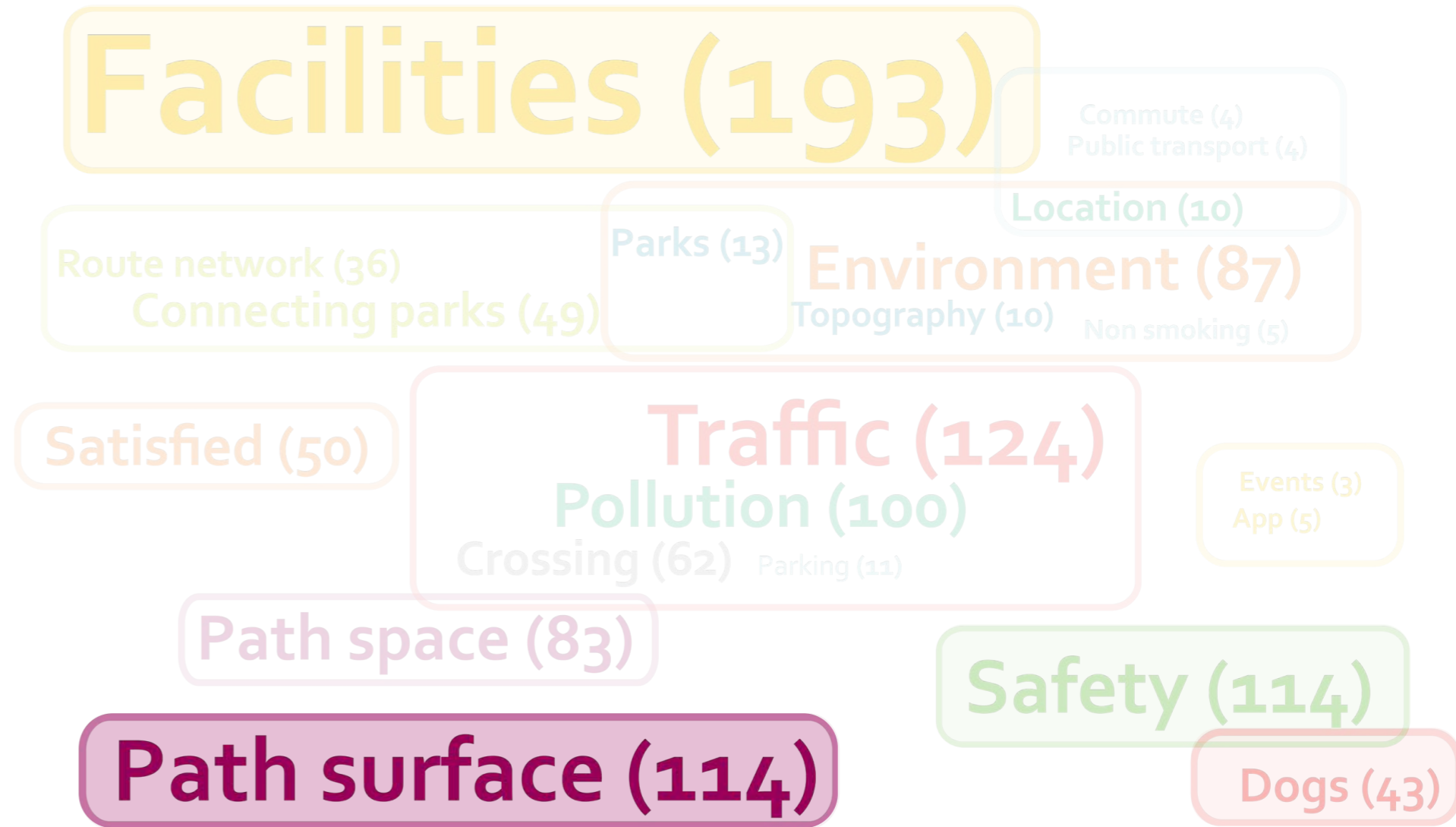
And also *well maintained sidewalks. When it rains* and you walk on paving stones you are *soaked*

Paths soft (46)

fewer paved sidewalks

soft running path around the park for the runners

In **Brussels center** likes *more unpaved roads* especially for jogging.



OPTIMALISATIONS - ADDITIONS - RUNNER SPECIFIC

safety

Running safely is a big priority. But safety can relate to many different aspects and is very personal. Places that are factually quite safe can feel very unsafe. Places that are factually quite unsafe can feel very safe. That can be due to (lack of) light, but also the presence or absence of people. The difference between safe or unsafe can be very subtle.

Runners often refer to the winter period in their desire for more lighting. Some subtle aspects are also mentioned. For example, the importance of lamps being directed towards the path. The presence of light posts does not always mean the path surface is well lit. The amount of lamps/light can also be insufficient, despite being present to some degree.

Runners also seem to be aware that more lighting is not always possible or positive.

'danger' is definitely very gender-sensitive. Women mentioned explicitly that they can feel unsafe because of the presence of men.

Dogs form a specific type of danger. Dogs only understand running as 'running away', signalled as fear, possibly resulting in aggression. The majority of dogs will leave you unattended, but runners cannot distinguish the minority.

Note the mentioning of runners on the presence of information/signs about where dogs should be leashed. In this study, we are not going to fully analyse Brussels on dog-attending/leashing signs and information. But, we have often 'seen' a lack of information about it.

Safety light (86)

More light on a **green promenade**

Light in winter for a feeling of safety

In winter, the lighting in the evening and in the morning should be improved.

with lighting during the winter.

That would also promote walking as a mode of transport.

and *in the evening it is too dark to run in certain areas.*

But I understand the problems associated with gels and light pollution

no lamps turned towards the path

small lights on the way

Safety danger (28)

Brussels has some beautiful parks to run in, but *they don't always feel safe*

A little *more safety* running alone as a woman certain park or wood are empty

As *a woman who often runs alone I wish I could feel safer*

Sometimes as a woman I am not reassured when I meet several men. /

. I am often either arrested or annoyed.

Unleashed dogs in the **parks and forests** *are a real disaster.*

keep dogs on a leash otherwise we dare not go running !!!
I'm talking about big dogs like Doberman, Staff, ...

Signs related to **dogs (on a leash)**

More responsibility and respect from dog owners. Better enforcement or information in **forest** on communal use rules (*keeping dogs on leash*).

A real **dog leash control**, 4 attacks in a year, since I avoid the parks and green spaces and I only run after 9 p.m. when most people have finished walking their dog

Facilities (193)

Commute (4)
Public transport (4)

Route network (36)

Connecting parks (49)

Parks (13)

Environment (87)

Topography (10)

Non smoking (5)

Location (10)

Satisfied (50)

Traffic (124)

Pollution (100)

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Path space (83)

Safety (114)

Path surface (114)

Dogs (43)



The most pleasant and unpleasant running routes of Brussels

2200 mapped experiences, where do runners see space for improvement?

SPATIAL PATTERNS

*MAPPING RUNNERS
EXPERIENCES & USAGE*

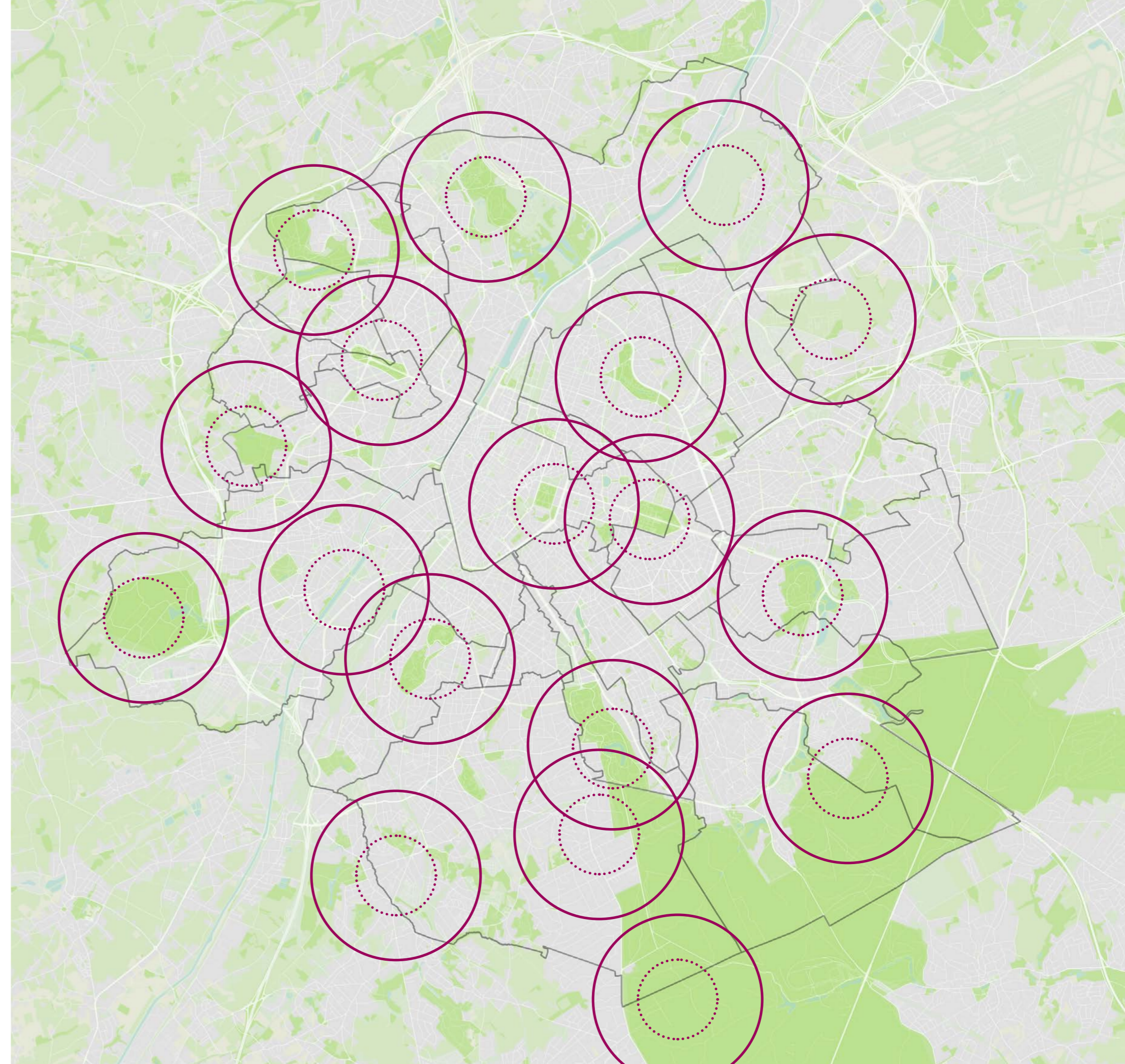
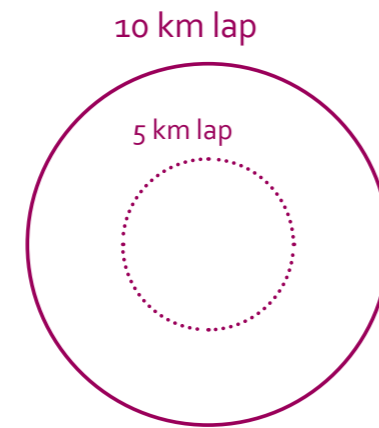
THE RUNNERS REACH

The general run-friendly challenges of Brussels are thematically presented in the previous results. That aggregated overall results of the entire city. But, does anyone run the entire city?

The Endomondo data showed that the most popular running distance is only 5 kilometres: running half an hour at 10 km/hour. This accounts for both men and women, but most strongly for women. Men run 10 kilometre also quite often. Not many running activities are much longer than 10 kilometres.

Most runs start from home, at the front door (at least, that is the case in Dutch cities, 80%-90%). Given the limited distances of the runner, city inhabitants only have a very limited amount of spaces and routes within their reach. Most runners are destined to run close to the neighbourhood they live in.

The spatial conditions and challenges in one part of the city might be significantly different than other parts. To think further about specific measures, we must identify location-specific challenges.



RUNNER-FRIENDLY BRUSSELS

run-survey

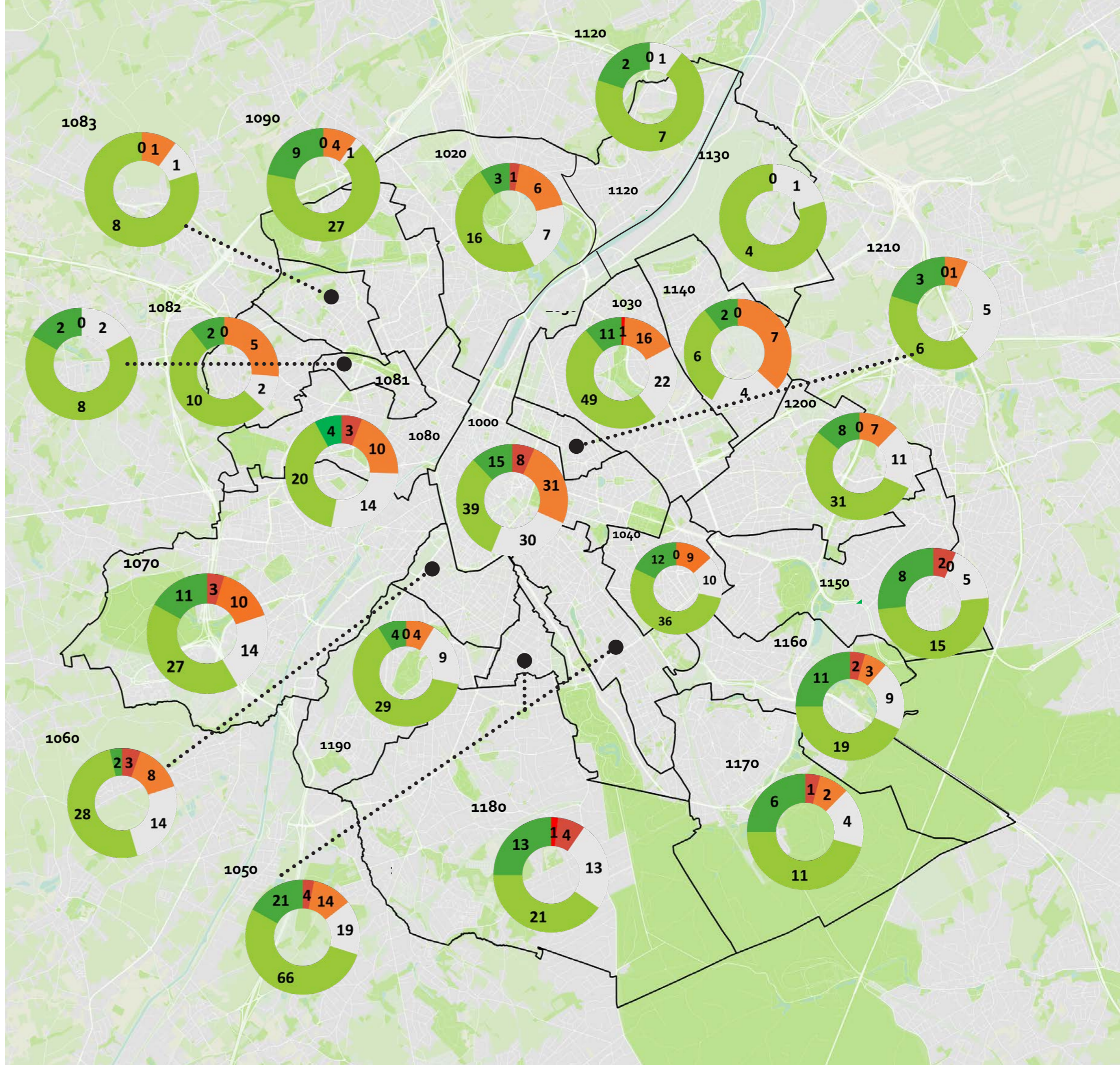
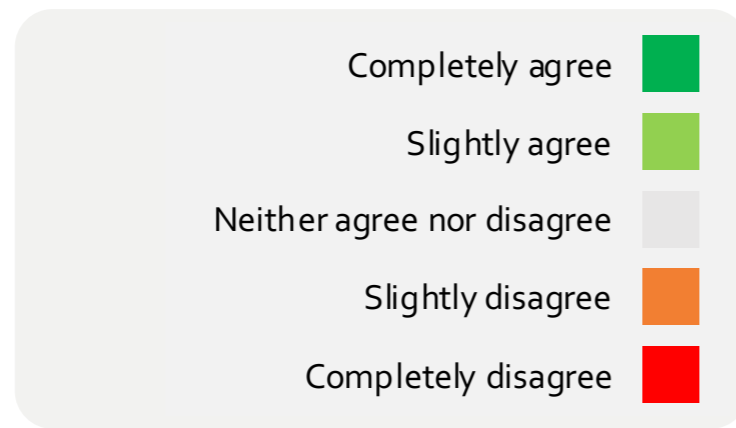
The map on the right shows more specific 'do you like to run in Brussels?' This time split up, based on the municipalities where the survey participants live.

Not all municipalities have many participants, but it gives a general impression.

The more central municipalities have a little more unsatisfied runners. Brussels-city (1000) has the lowest amount of survey participants that 'completely agreed' or slightly agreed' with the question 'do you like to run in Brussels? Also Sint-Jans Molenbeek (1080), Sint-Gillis (1060) and Anderlecht (1070) do not rank among the best municipalities.

It indicates that some (more central/urban) parts of the city have a slightly bigger need for runner-friendly interventions than others. This outcome relates strongly to the primary desire for a more run-friendly city; less traffic/crossing/pollution, more green. Urban density and traffic intensity is higher in central Brussels.

Note; all municipalities that border the canal, score among the lowest in the ranking.



MAPPING RUNNERS EXPERIENCES

In step 5 of the survey, runners were asked to geotag their experiences during a run. The different types of experiences were thematically categorised.

All categories can be expressed either positive or negative. A remark: "good air quality in the park" is a positive remark in the category 'pollution'. But, some are almost only experienced negatively (dogs, pollution, traffic). Others are expressed almost always positively, environment for example; "nice green environment" (positive) or "no green in this street" (negative).

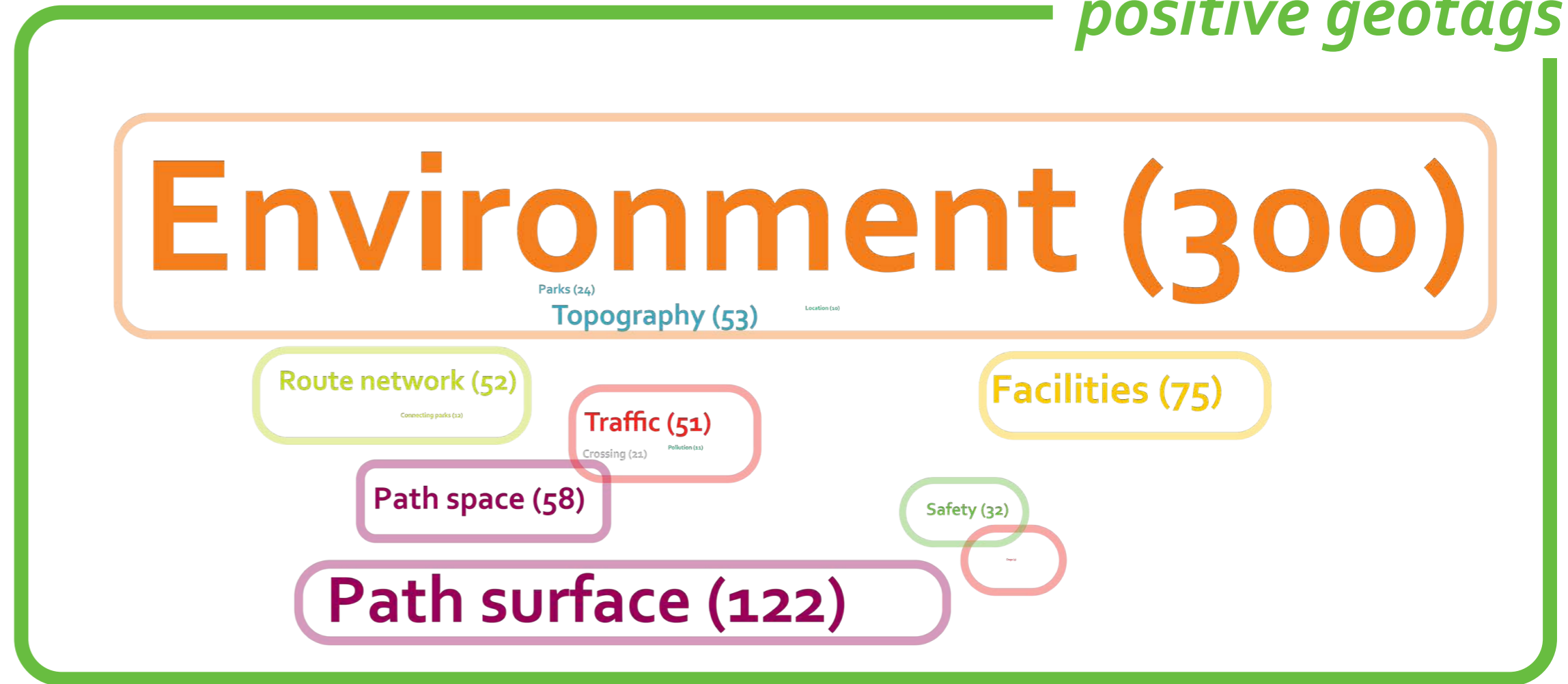
In total, 2134 maps map-points were clicked, with 1857 remarks (added explanations). 177 points did not have an explanation but were just 'positive' or 'negative'.

The division of tags over the different categories is slightly different than when we asked 'what is your biggest priority for a more runner-friendly city?'. Some themes are easier to tag in maps, mostly direct experiences like a bad path surface or a lack of light.

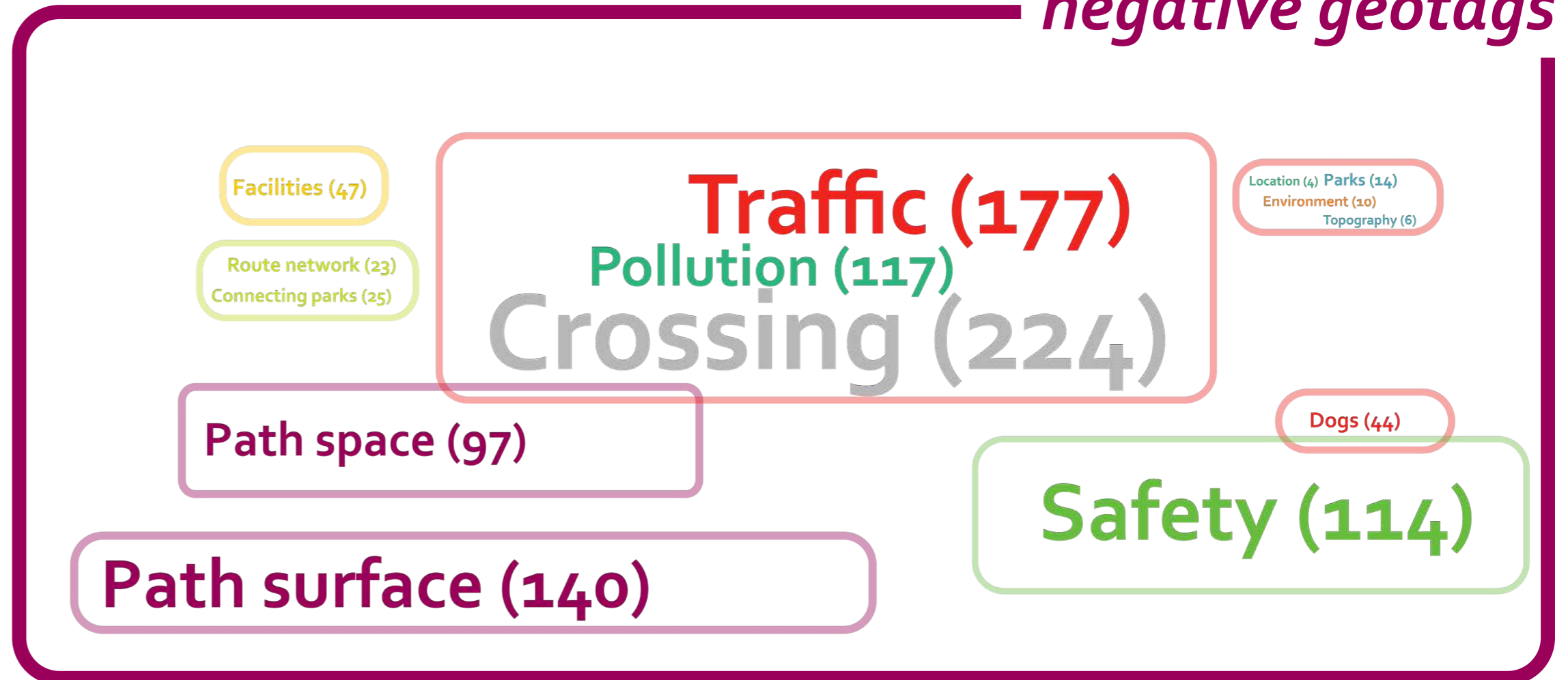
The theme of 'facilities' was tagged relatively less often. It is a more general desire, an absent running route is not a very direct experience.

In the [data-report](#), more information can be found about the categories and sub-categories, and all resulting maps. Here, we only show a selection.

positive geotags



negative geotags



EXPERIENCES

all positive

Let's start positive. The positive 'geotags' most often come from the theme most people considered important/very important: green/natural environments. And this is strongly related to 'beauty', 'views' or 'quietness'.

Most places show a mix of colours, which means that positive experiences come from different themes. The light green colour (environment) but also the red (traffic). That does not mean that runners like traffic; they almost always refer to the absence of it.

Most positive remarks in the 'environment' category are found in the larger, well known and intensely used (by runners) parks of Brussels.

T&T park and Josaphatpark also attract many remarks, even though these are relatively small.

This is in contrast to park Wolvendael for example. This can be caused by bigger and more beautiful environments relatively nearby (Dudenpark, Ter Kamerenbos).

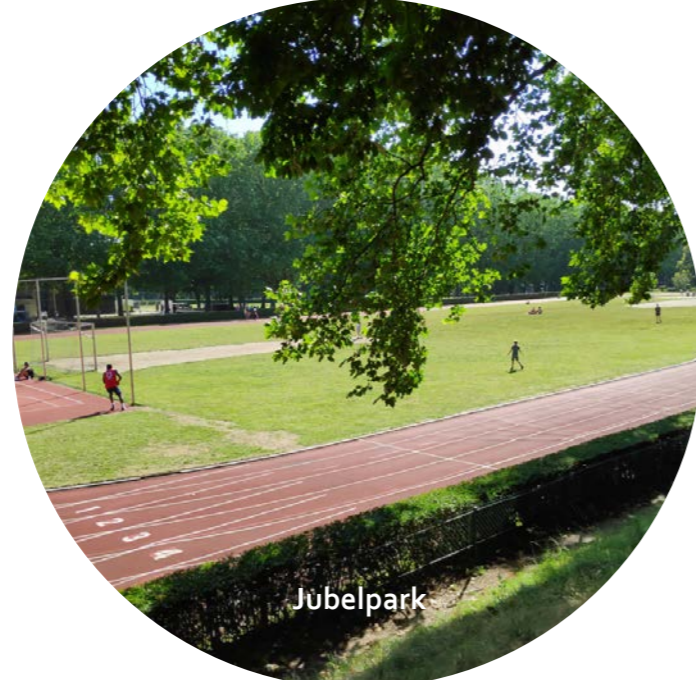
But in the neighbourhoods Anderlecht, Scheut and Ossegem, the small parks seem to have fewer 'large park' alternatives. Sometimes, what people are not saying/tagging/doing can tell as much as what they are saying/tagging/doing.



T&T park



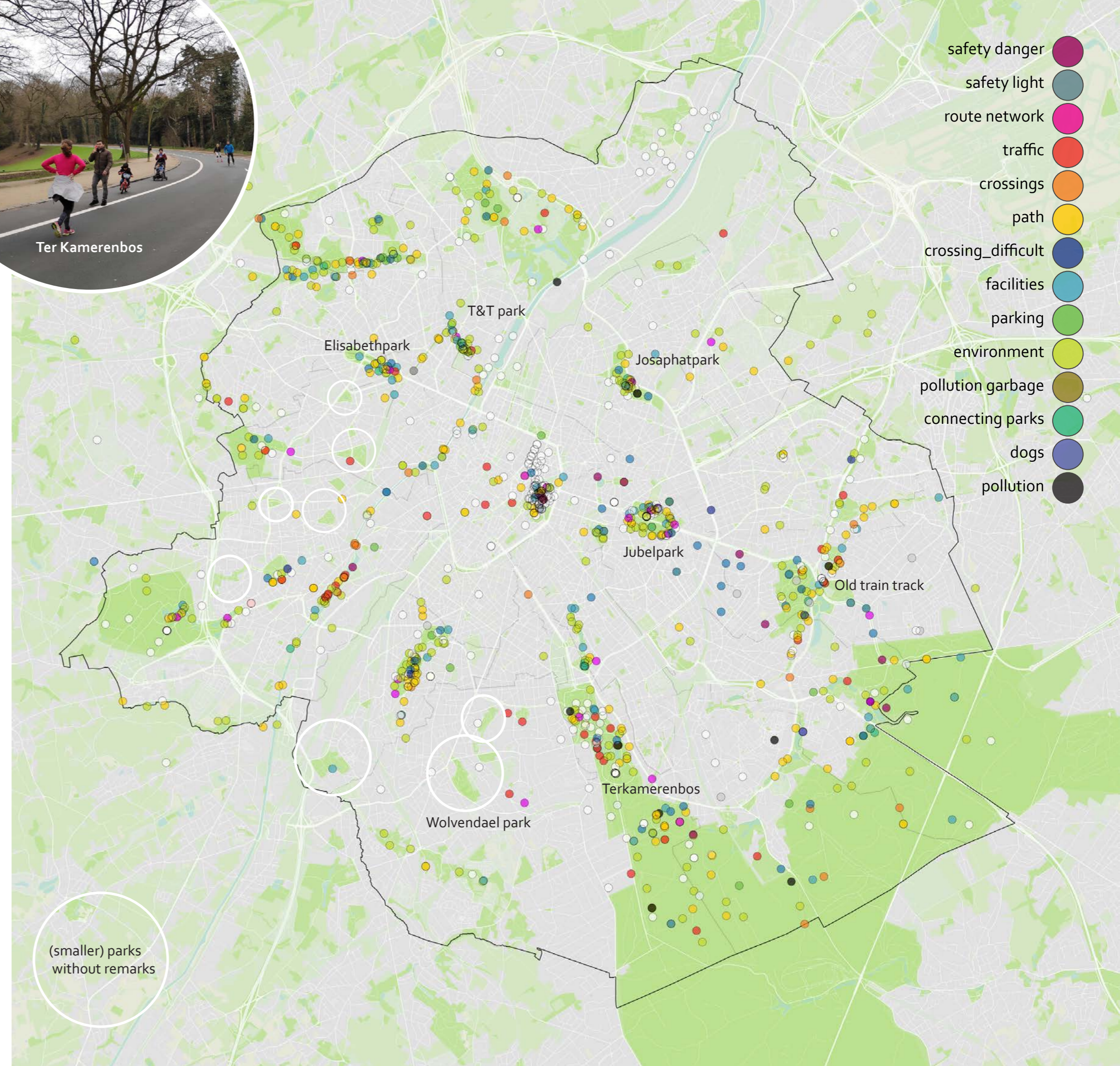
Ter Kamerenbos



Jubelpark



Elisabethpark



(smaller) parks without remarks

RUNNING USAGE BRUSSELS

Endomondo activity tracking data

How much we enjoy running in Brussels depends on the best running routes we can find in our immediate vicinity.

The map displays the use of paths and streets by 109.000 Endomondo running activities. That gives an indication of what runners see as their most preferred routes. Many of the well-known running hotspots can be recognised.

There is a strong comparison between the routes and areas heavily used in the activity tracking data, and the 'positive geotags' in the survey. The most used routes often have a high density of positive comments.

While high usage intensity does not always mean that a route is attractive as a whole, it can also be caused by a lack of alternatives. Sometimes you need to move through unattractive places to get somewhere attractive. It is therefore especially interesting to look at places where many people run, but very few positive remarks are found. These could be the necessary routes to another attractive place, for example.

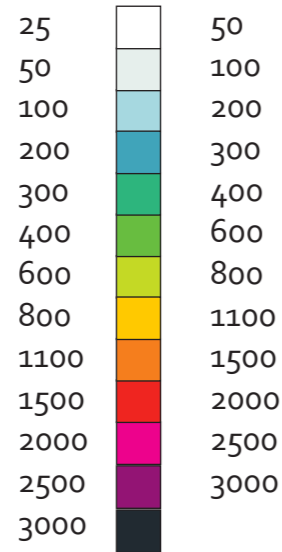
But it is also interesting to look at green spaces that are relatively poorly used. In Anderlecht, for example, the tour of Neerpede is run very intensely, but many surrounding parks and green structures are used very little. This is elaborated from page 112.

Conditions can also vary at different times of the day (dark or light outside) or week (busy weeks or weekends). We will show examples later in this report, but the full collection of heatmaps can be found in the [data-report](#).

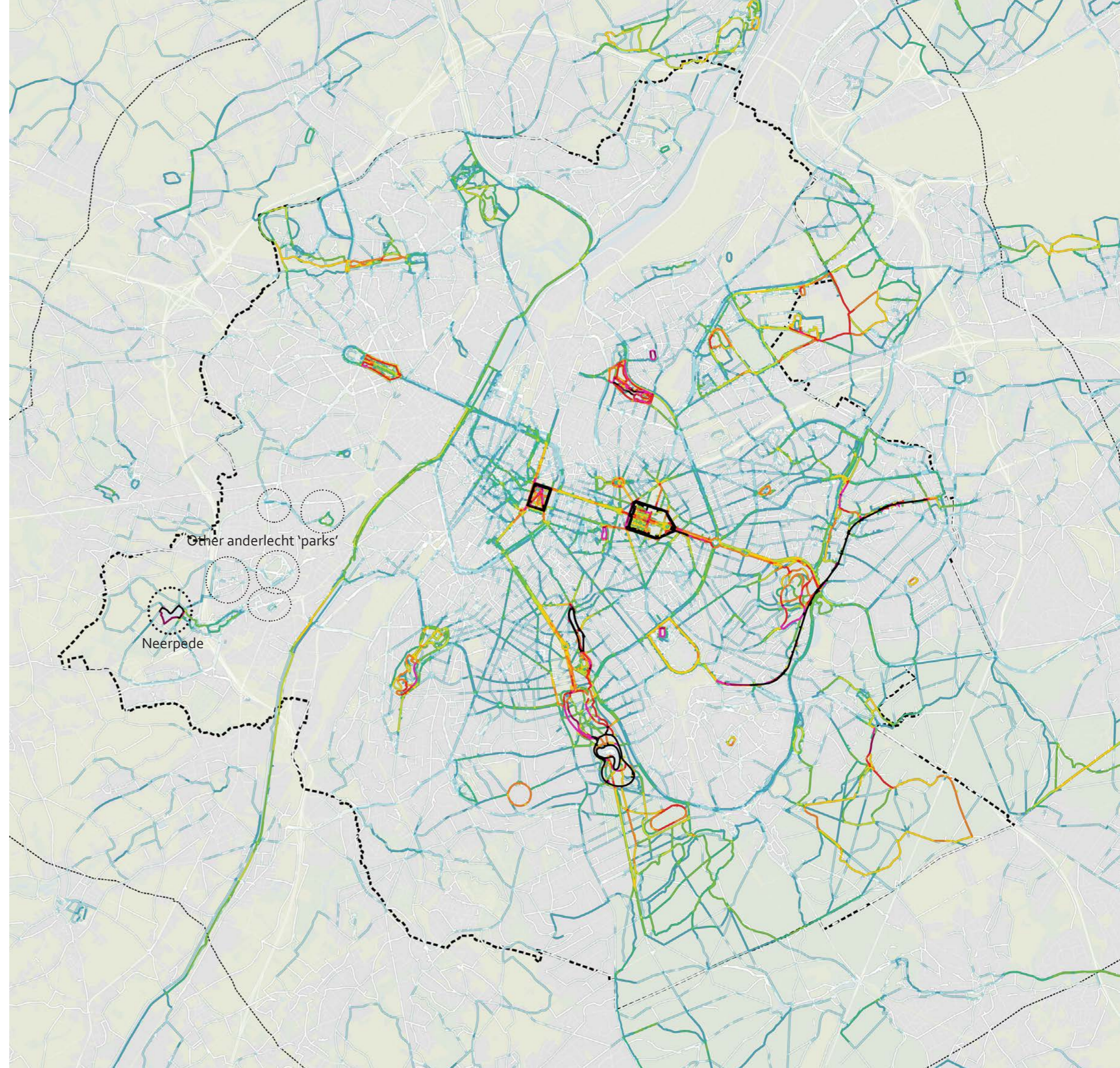
RUNNING ENDOMONDO

All activities 2012- 2017

Amount of passages based on 109408 activities



Intensity of usage of paths and streets in Brussels by runners using the app Endomondo between 2012 and 2017.



EXPERIENCES

all negative

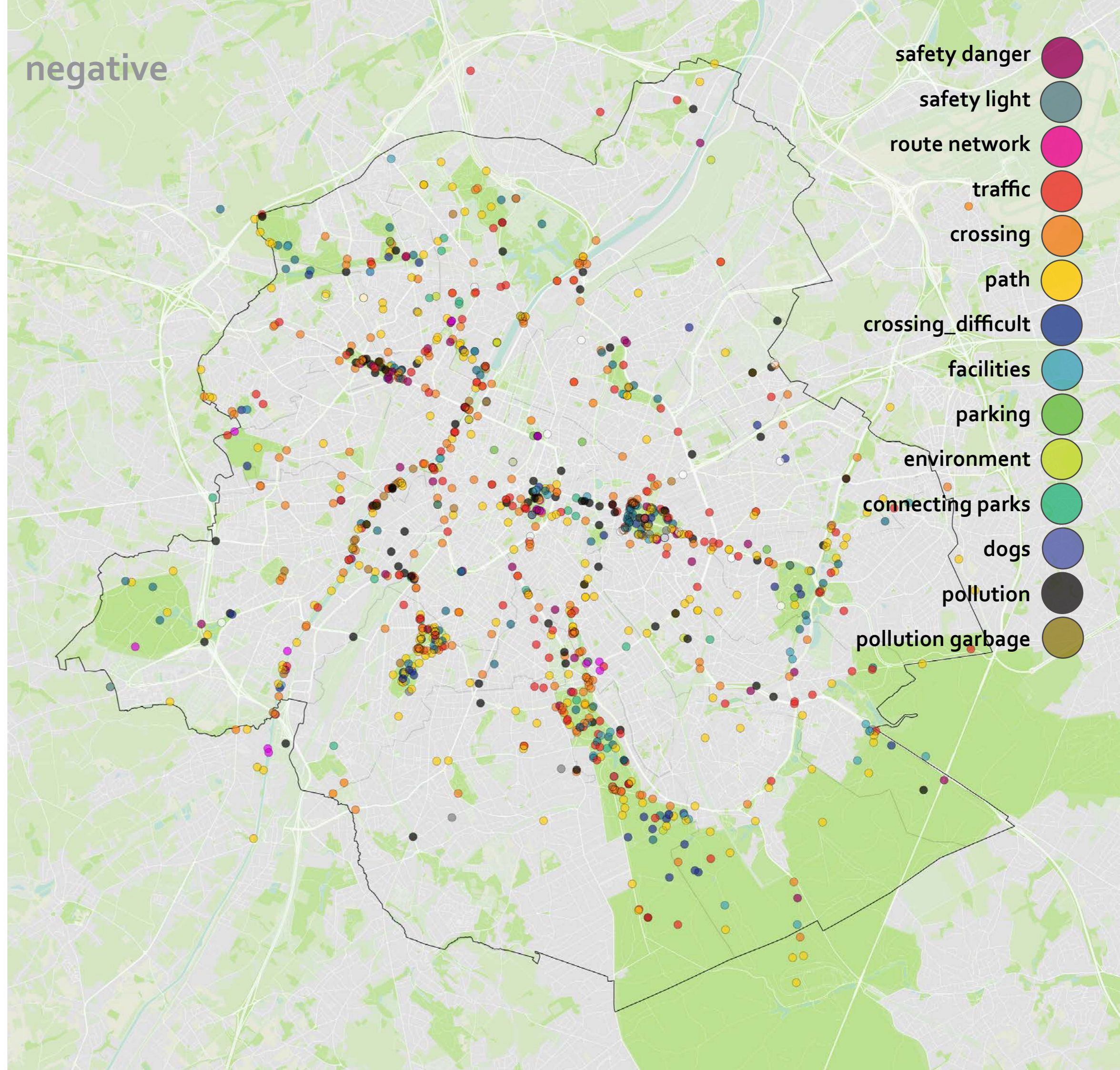
When running, we search for the places that best suit our preferences. Does intense usage mean that there are few negative experiences? No. The well used 'best suitable' places can still contain many unattractive aspects. Hardly any running place is perfect yet.

Jubelpark, Warandepark and Ter Kamerenbos are the most intensively used places, but also have the most negative tags. The poorly used parks in Anderlecht do not show many negative experiences, they just do not seem to be recognised as running destinations at all.

Again we will make a distinction between the more "structural traffic related tags" and the "optimizing, additions tags".



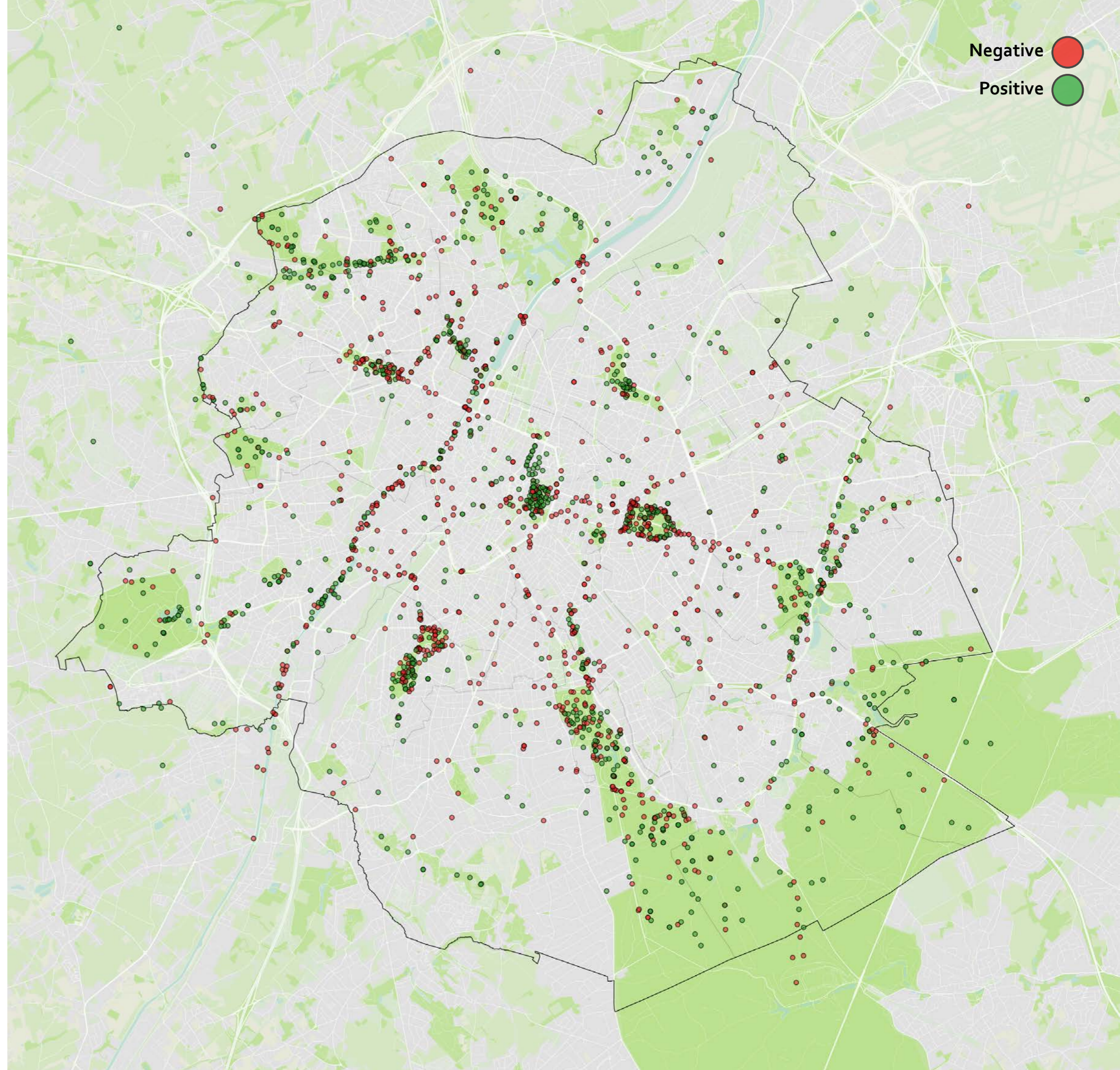
negative



EXPERIENCES

positive & negative

Mapping all remarks, divided in positive and negative, shows the overall spatial judgement of Brussels runners. Popular running places have most remarks in general, but some of these places have relatively more green (positive) remarks, while in other places the red dots dominate.





The most pleasant and unpleasant running routes in Brussels

2200 mapped experiences, where do runners see space for improvement?

SPATIAL PATTERNS MAPPING RUNNERS EXPERIENCES & USAGE

*structural -
traffic related*

EXPERIENCES

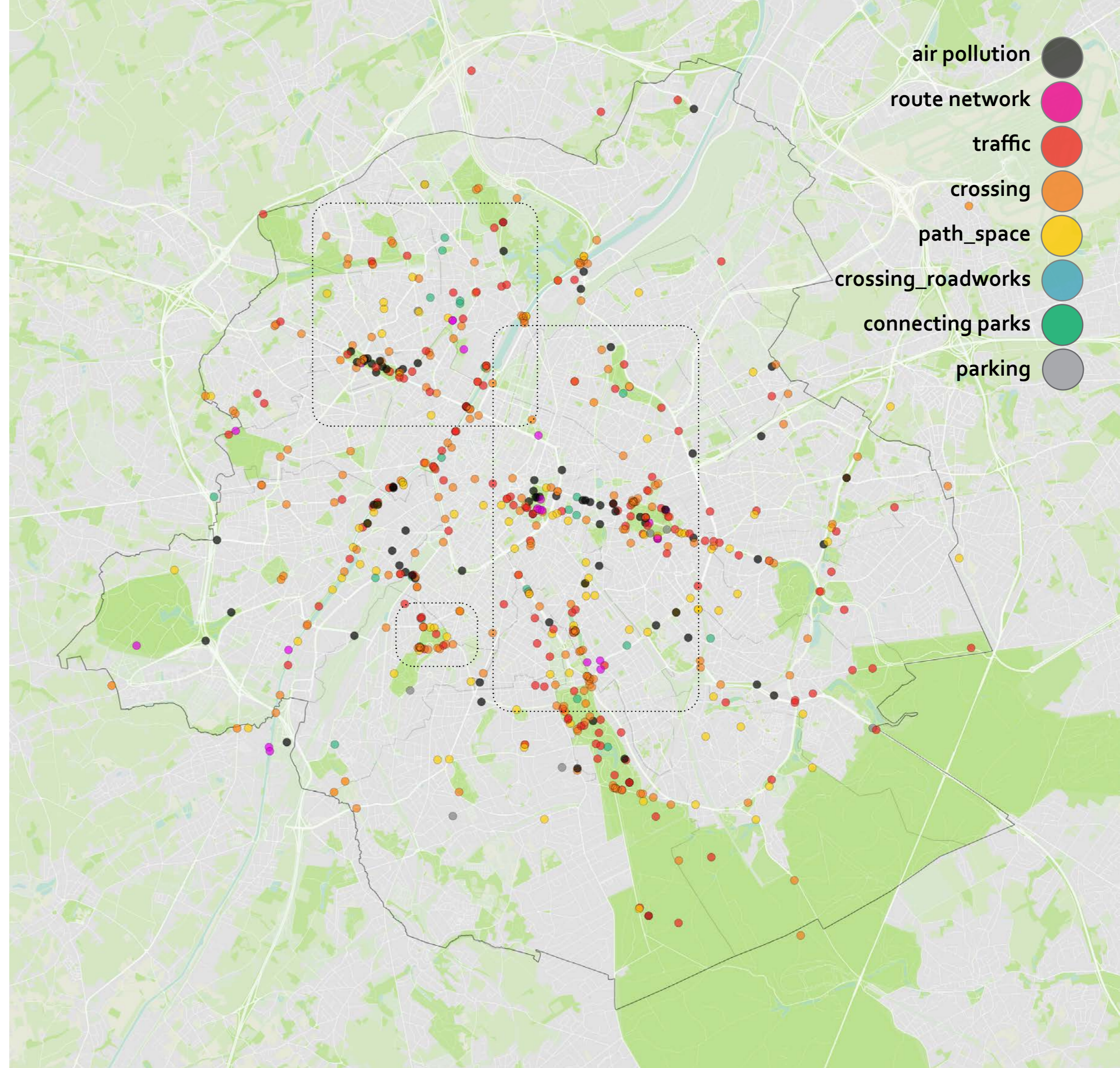
all traffic related; negative

50 % of all negative remarks are traffic related. To summarize, this map visualizes all negative geotags in the categories traffic, crossings, pollution, path space, parking, park connections and route network.

These outcomes were the main reason for the selection of areas in which design elaborations were made in the last chapter.

- The **northwest** contains a diversity of remarks that are spread both in the Elisabethpark and the neighbourhoods north of it.
- From **Josaphat till Ter Kamerenbos**, several lines of remarks can be recognised. This is also the most dense urban district of Brussels, where the desire for more green is greatest.
- **Dudenpark-Park van Vorst** also shows a specific clustering of remarks.

Apart from that, almost the entire canal zone is a chain of negative traffic related remarks. We estimate the canal to be the biggest runner-friendly potential of Brussels, if its layout would be more people oriented rather than car oriented. But a complete design document has



EXPERIENCES

crossings; negative

In the category of 'crossings' most tags refer to the need to stop, often at traffic lights. Runners want to stay in their rhythm. Interruptions, small or large, are reasons to avoid places.

Apart from that, an equal amount of remarks emphasize the danger of crossings. Being able to cross safely is just as important as being able to keep running.

In that regard, the safety of crossings can be very misleading. A zebra crossing gives right of way, but as layed out between the ponds of Elsene (image below), cars are not forced to slow down. In fact, your safety is far from guaranteed. A zebra crossing needs a considerable speed bump to ensure this.



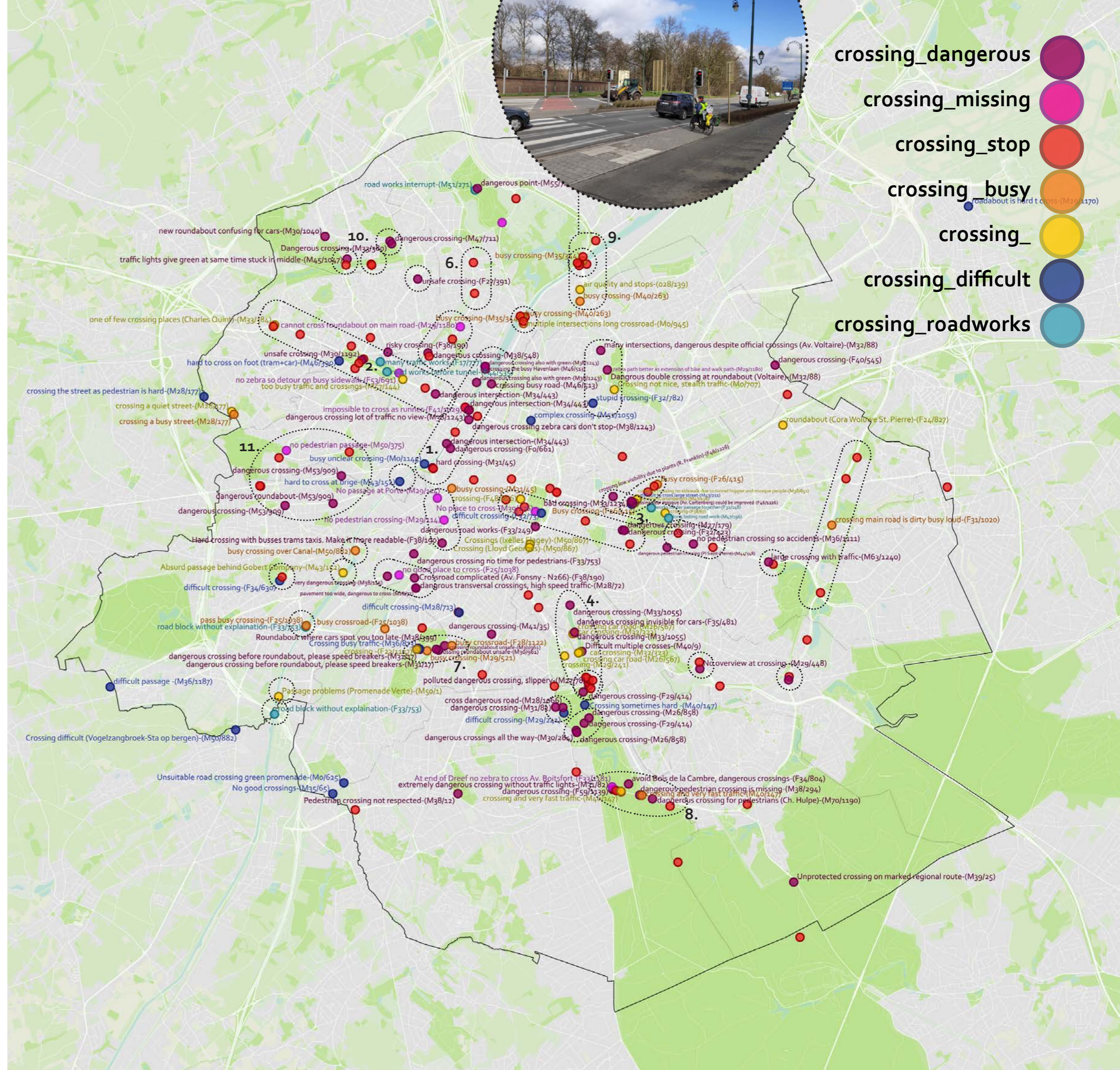
Categories 'traffic' and 'crossings' show several similar geotag clusterings, but also some different ones.

Similar clusterings are:

1. The Canal, along the 'small-ring' (inner ring) and north of the small-ring
2. In and round Elisabethpark
3. Around Jubelpark and Warandepark
4. Along the ponds of Elsene, bordering Ter Kamerenbos
5. West of Josaphatpark
6. Jette/Koekelberg/Laken neighbourhoods
7. The edge of park van Vorst, bordering Dudenpark

Some of the different clusters are (not even listing all):

8. The edge of Ter Kamerenbos, bordering Zoniënwood
9. The connections between the Canal and Lakenpark
10. Boudewijnpark becomes more prominent
11. Ossegem/ Scheut, mainly at the edges of the small parks

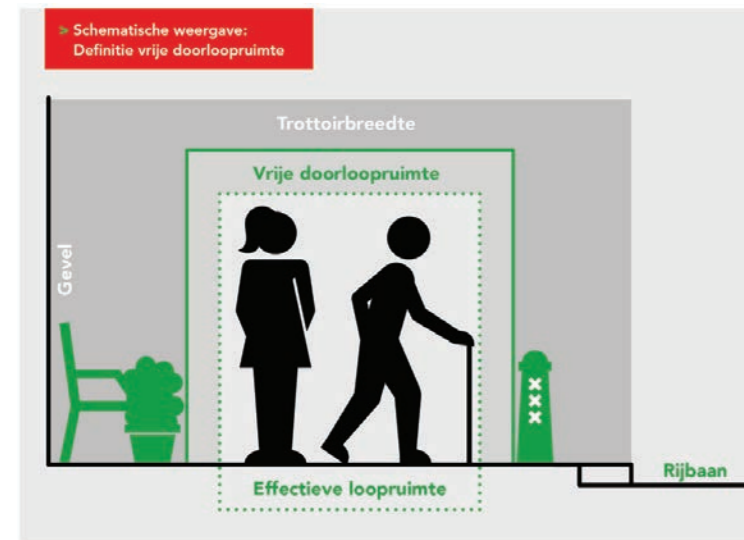


EXPERIENCES

path space; negative

Path space matters in several ways. When paths are narrow, runners are forced to leave the path (towards car-roads) when passing other people. Narrow paths also make that other pedestrians or obstacles become a hindrance that break the rhythm.

We know Brussels has a pedestrian-plan as well, with many positive ambitions such as enlarging path spaces. Amsterdam is also currently developing an interesting city pedestrian plan, which defines absolutely minimum effective pavement widths of 1,80 metres. This means that this amount of space must be free walking space, aside of pavement space that is actually filled with bicycle parking, lampposts, bins, etc. Streets are being redesigned when pavements are narrower. See: <https://www.amsterdam.nl/parkeren-verkeer/inspraak-voetganger/>

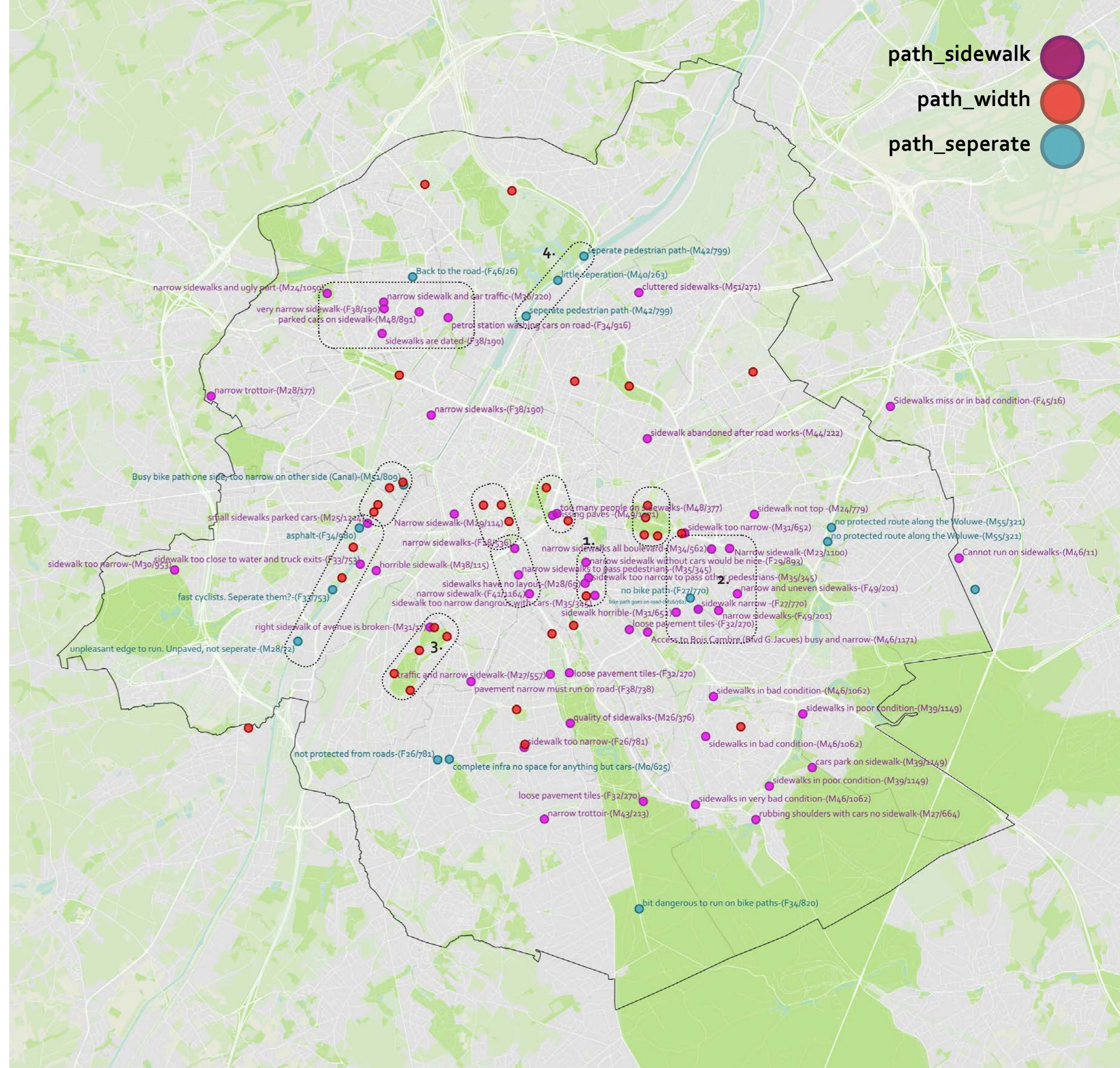


Geneva is another city known worldwide for its pedestrian policy since 1995. We recommend researching their policies: <https://www.geneve.ch/en/themes/mobility-transport>

Apart from width (quantity), quality of pavements is key. This aspect is dealt with separately in the category 'path surface'.

Again, a diversity of clusterings could be recognised. Some of them overlap with clusterings of previous themes, but some are new:

1. Between Leopoldpark and ponds of Elsene, some 'sidewalk' comments
2. The triangle between Jubel-, Woluwepark and University campus contains more than a few as well
3. The edges of Dudenpark and Park Vorst
4. Between Laken and the Canal, a desire for more path separation for different kinds of traffic



EXPERIENCES

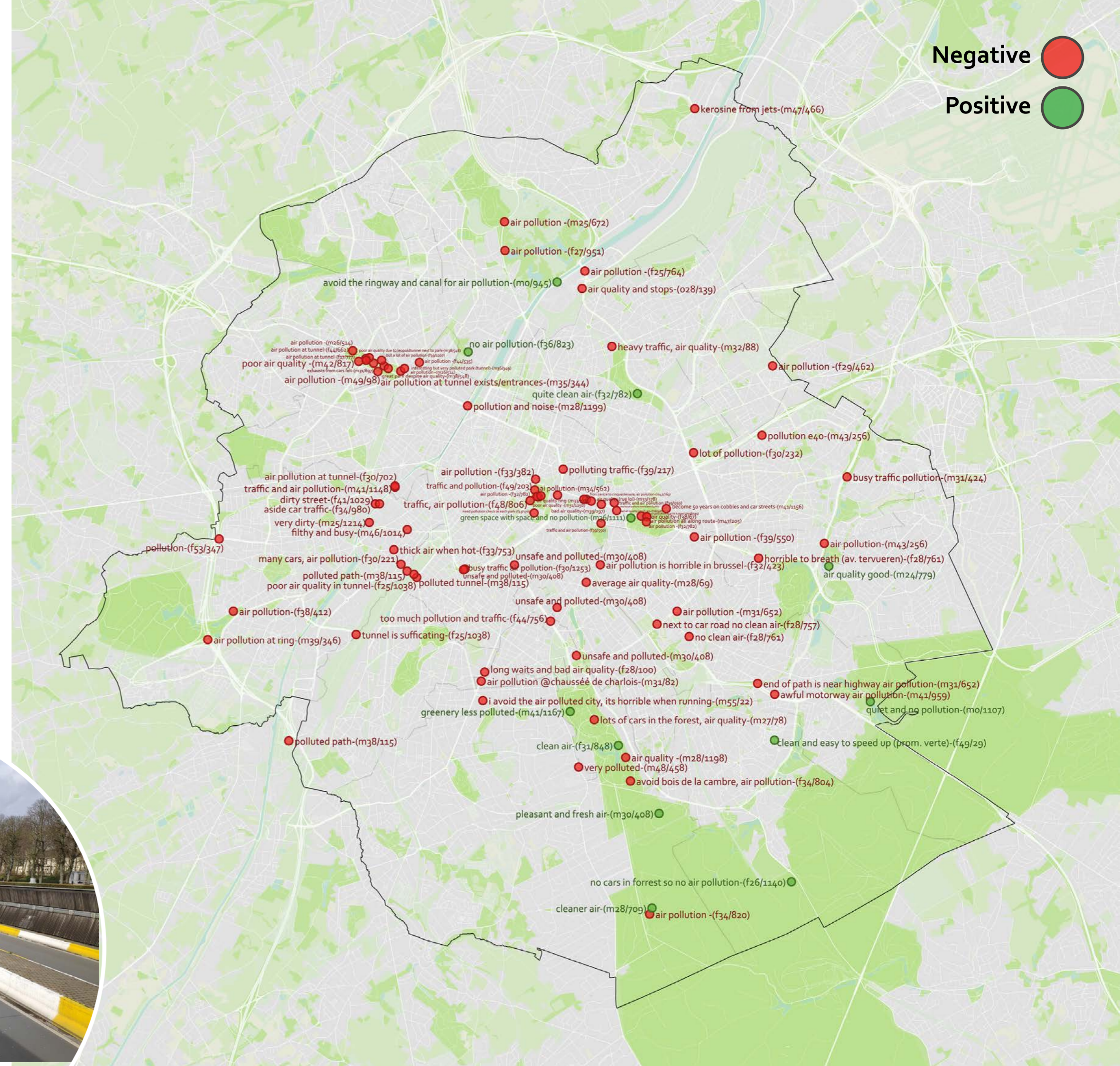
air pollution

Air pollution was the second aspect in the list of 'importance' (survey step 3, see page 17). It is not always a visible aspect, and therefore not always easy to tag spatially. It relates directly to motorized traffic.

Why are runners so concerned about air pollution? Not only do we breathe in three times more air while running, we breathe it deeper into our lungs: it causes more damage. Aside from that, the main reason for running is our health. Fortunately, research shows that running in polluted air is still healthier than not at all. But it diminishes the health benefits, which is frustrating when you put that much

Some areas have a high density of tags nevertheless:

1. Elisabethpark (tunnel often mentioned)
2. Warande-, Jubelpark (tunnel) and between Jubelpark and Warandepark (Wetstraat, picture)
3. Ter Kamerenbos
4. Canal and above the Zenne/traintracks
5. Park van Laken and routes surrounding it
6. On the small ring at several places
7. Along several N-roads



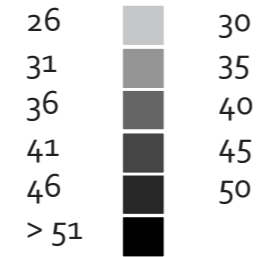
AIR POLLUTION

no2

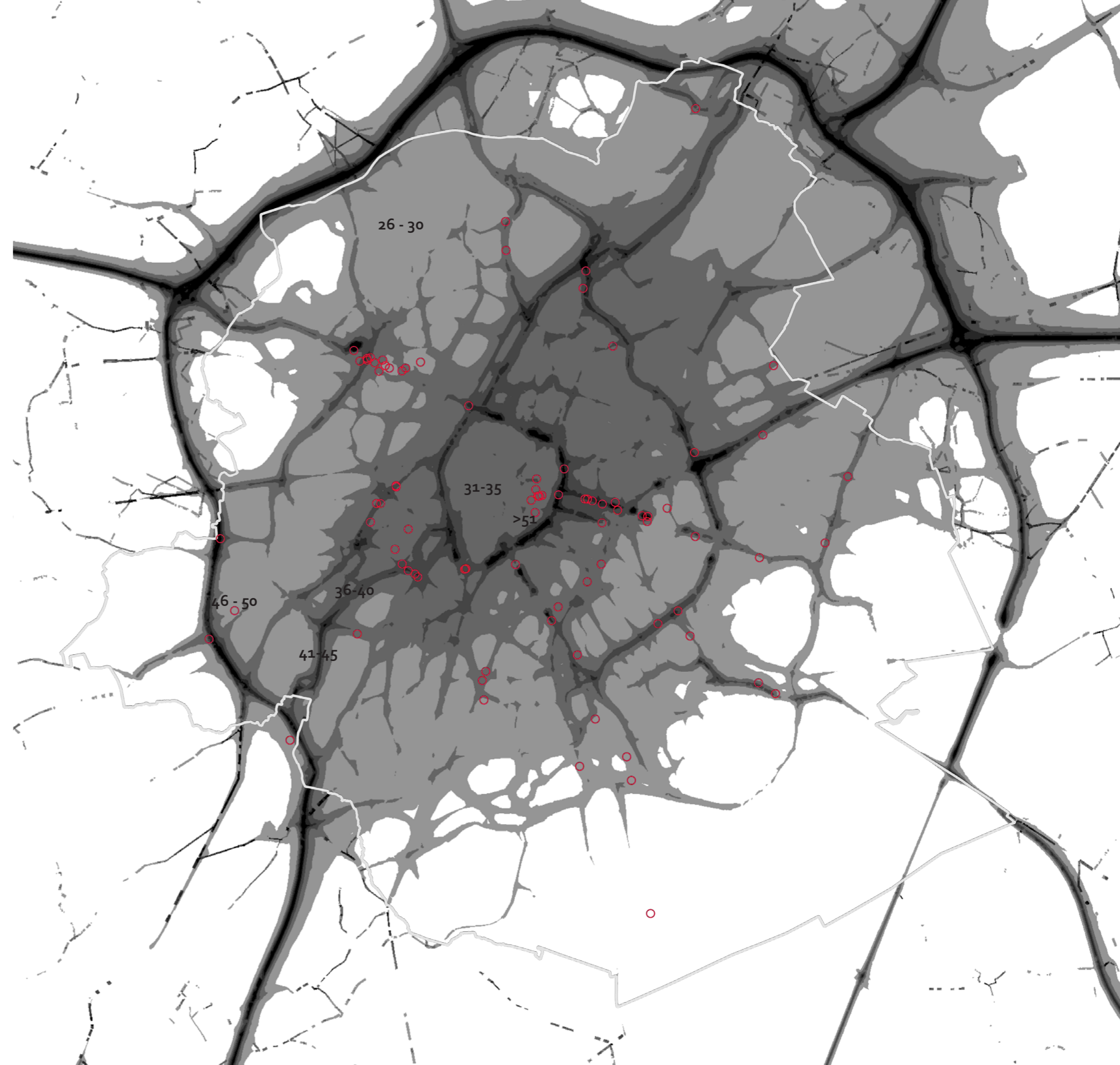
Runners' perception of polluted air does not always have to correspond to the actual concentrations of air pollution. The map shows the concentrations of NO₂ and the comments of runners. (source:)

Actually, it shows that these runners are at least very accurately aware of pollution. Almost all negative comments are posted where the concentrations are indeed high.

Concentration of fine particular matter NO₂



○ negative air pollution remarks



USAGE & AIR POLLUTION

Endomondo data

Concentrations of air pollution have also been overlaid with running intensity (Endomondo data).

There are quite a few places where poor air quality meets high running intensity. This is mostly present along some structural N/R-roads such as:

1. The small ring/pentagone (R20)
2. Wetstraat (N3a)
3. Louizalaan (N24)
4. Along the Canal at Laken (N26)
5. Louis Schmidtlaan (R21)

But also in other places, runners seem to choose the more polluted roads.

6. In Jette, the relatively well used routes are also more more polluted
7. This also accounts for some roads north of park van Vorst

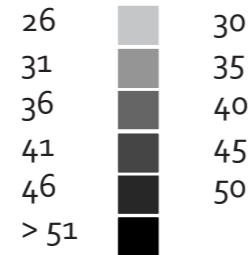
But also very importantly, there are multiple parks where pollution is apparently quite low:

8. Woluwepark
9. Boudewijnpark (west side mainly)
10. Zoniënwoud
11. Scheutbos
12. Pedepark (eventhough close to the highway)

Inform runners about these 'cleanest' places, for example make running routes here, or make a runners brochure (online) that shows where these places can be found, and what routes can be run here.

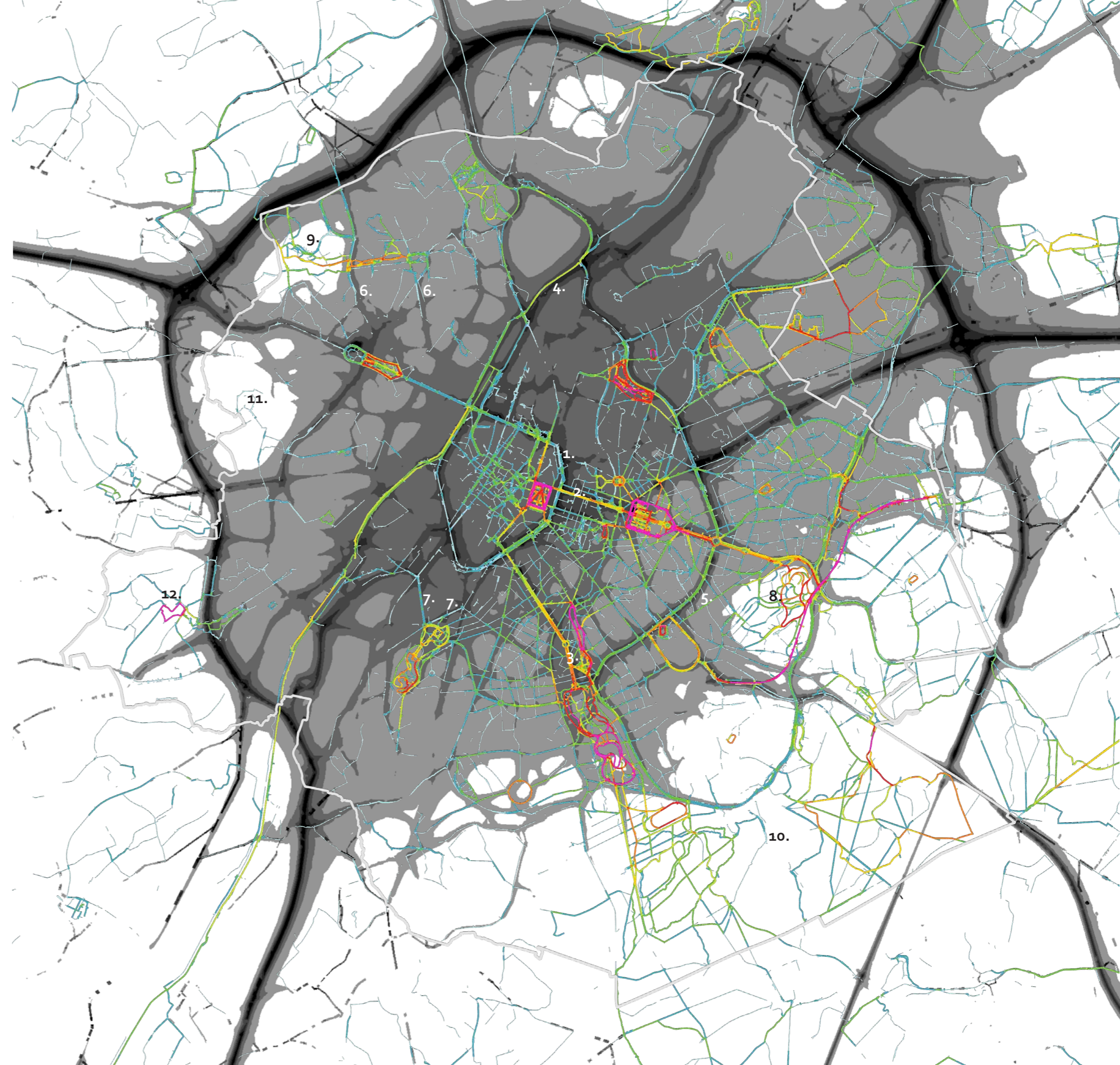
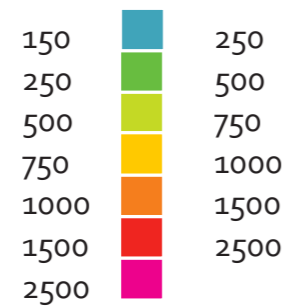
Source NO2 map: Belgian Interregional Environment Agency, no2_anmean_2017_atmostreet

Concentration of fine particular matter NO2



RUNNING Endomondo All activities 2012- 2017

Amount of passages based on 109408 activities



EXPERIENCES

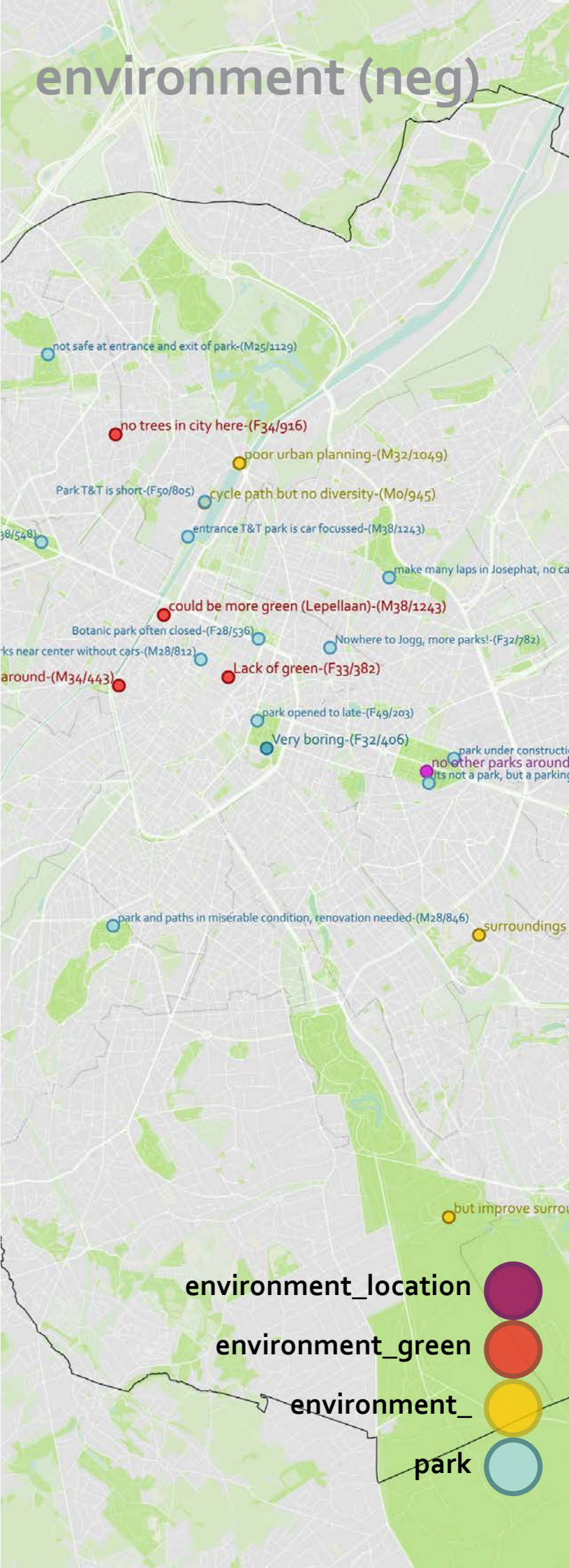
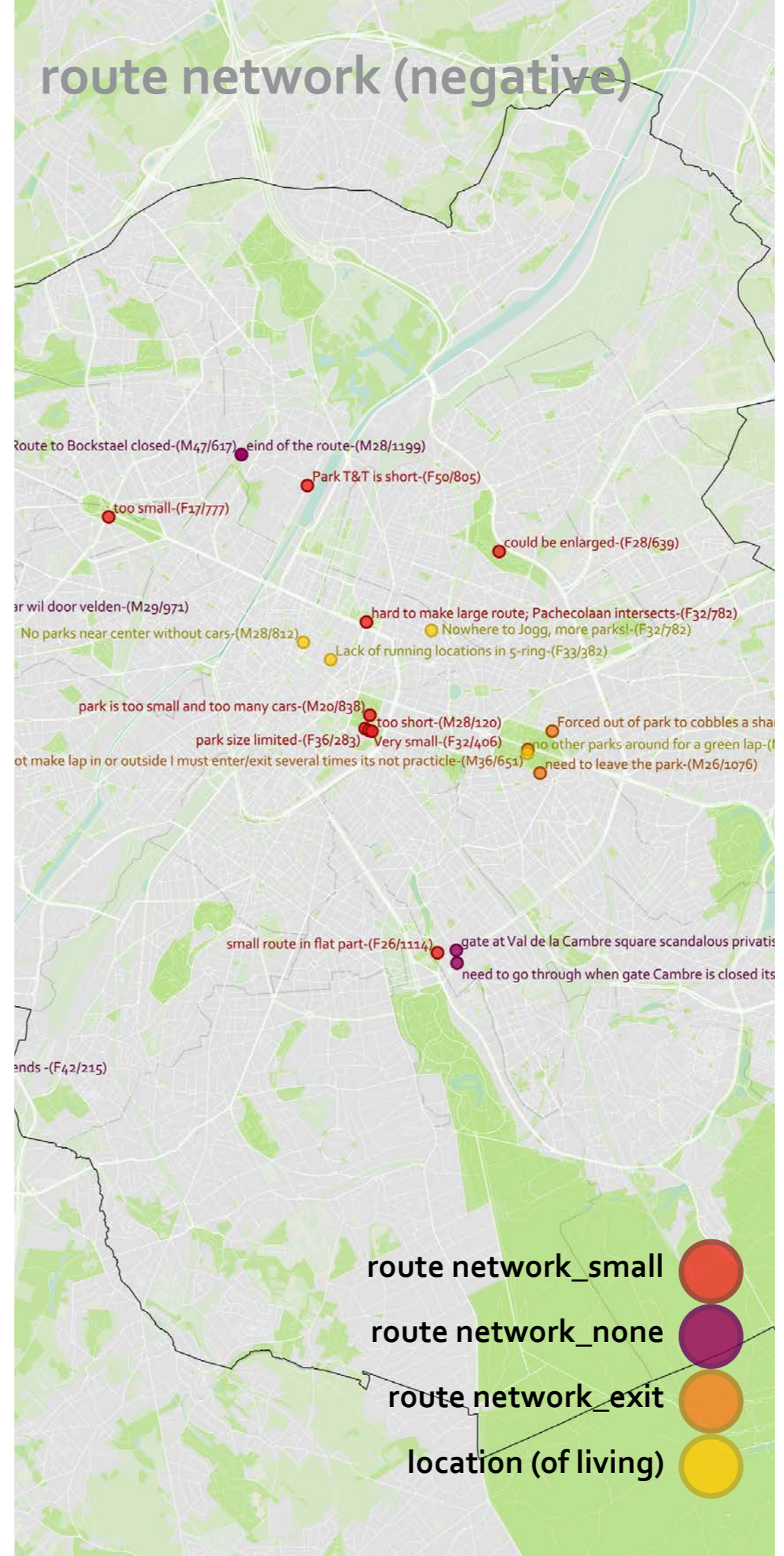
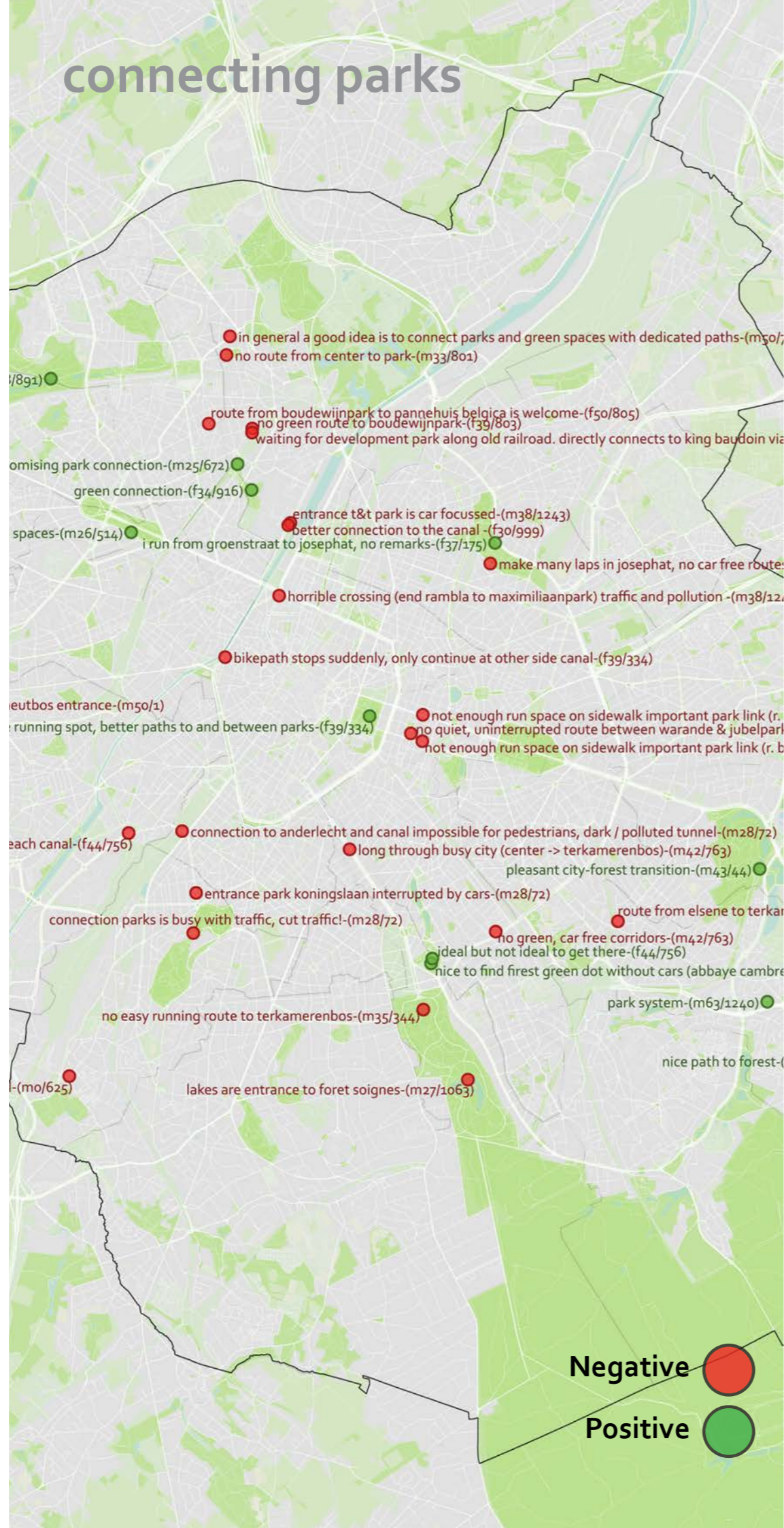
To summarize all traffic related aspects, a common feeling among Brussels runners is that (to quote a quote) you have to "go through a hostile environment to reach the parks".

In the theme 'environment negative' various runners especially note the lack of greenery in the city center.

Similar problems are expressed in the theme 'route network'. Several parks are described as being 'too small'. Indeed, many Brussels parks are relatively small for a run, given the preference of 5-10 kilometres. This means either running multiple laps, which runners do not like, or running through the urban environment where they experience too much traffic.

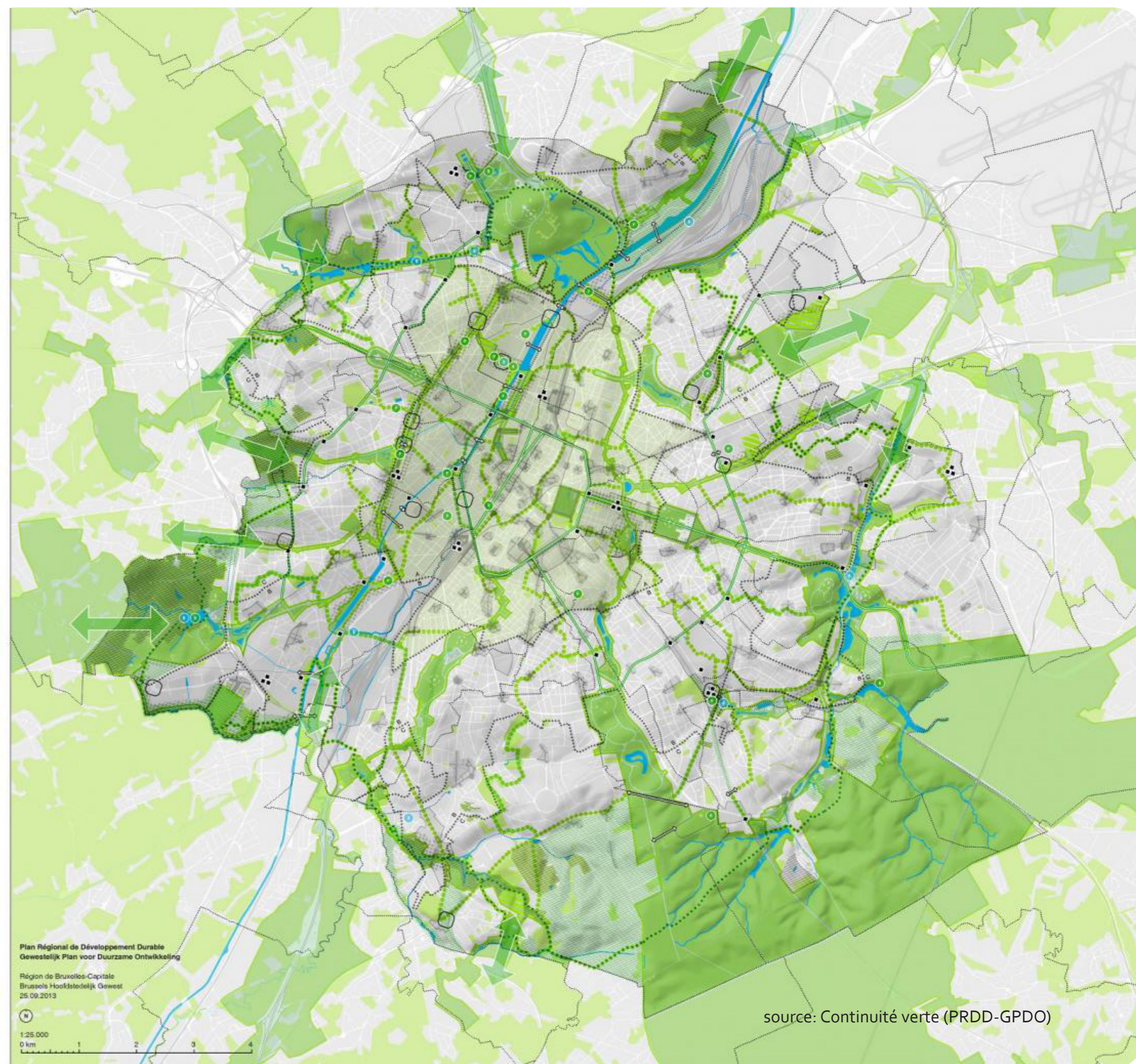
These remarks are also most often made in the central part of Brussels, especially between and around Josaphatpark, Warandepark and Jubelpark in particular.

It is clear: spacious pedestrian and cycle paths, between the parks, with a green atmosphere and low traffic intensity, are the main priority for Brussels runners.



GREEN CONNECTIONS (PRDD-GPDO)

Brussels has a program/policy to develop green connections (continuité verte) in the urban environment, displayed in the map on this page. This ambition could strongly contribute in making more green, and less traffic dominant connections towards and in between running hotspots (mainly parks). Most of them have not been developed/designated yet; it is yet a drawn ambition.



GREEN CONNECTIONS

Continuité verte overlay running usage

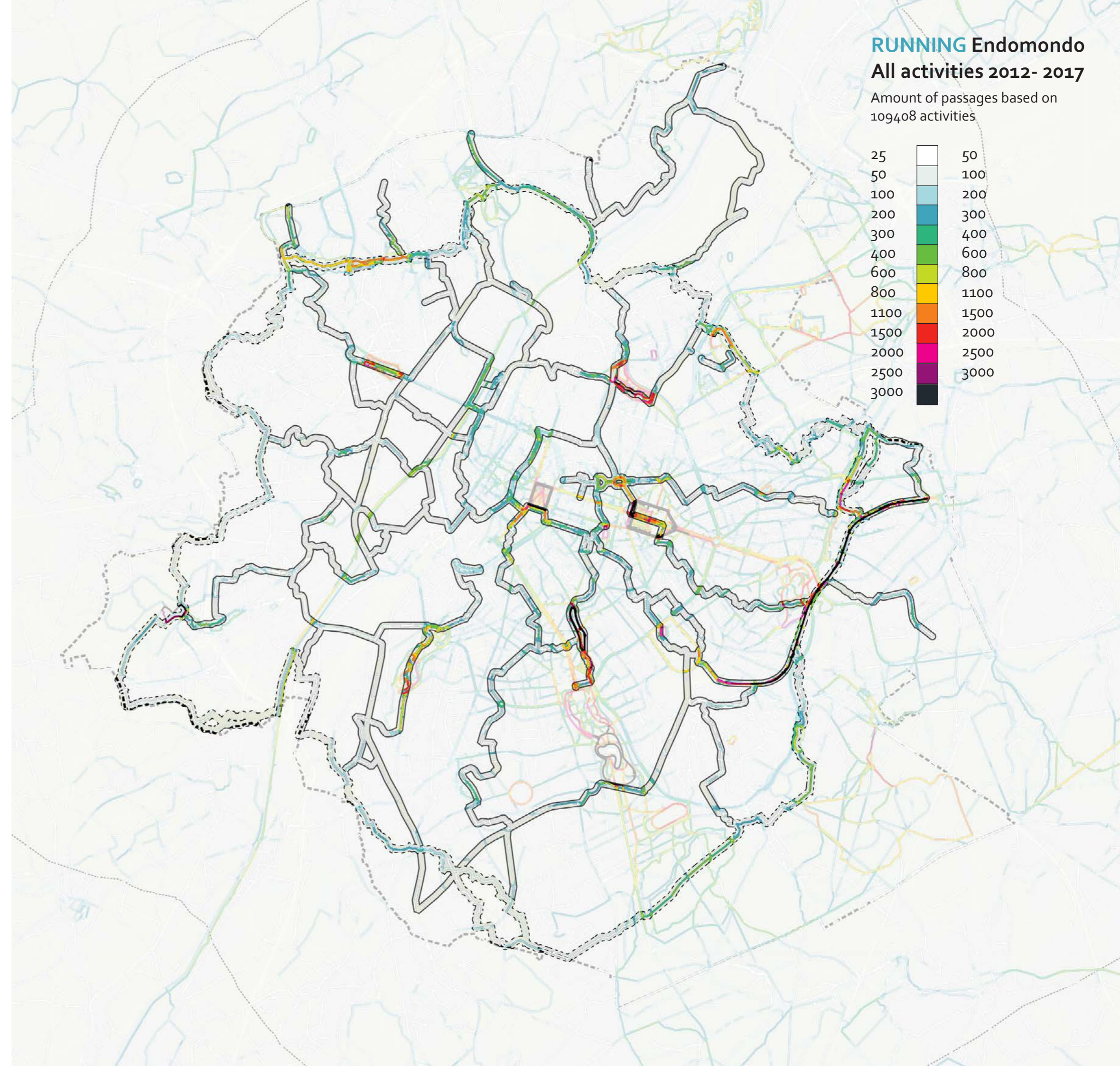
Looking at the running usage of the proposed routes in the PRDD-GPDO, many are currently not used very much as running route. Runners tend to follow easy, direct and logic route structures. That is why we have seen runners choose busy car roads in many cities: they are well known structures with clear directions. It is an easy thing to do and runners like simplicity.

Many of the proposed 'green connections' do not yet have those characteristics. They are very frequently altering in direction, not creating naturally readable routes. The 'Green walk' however is a well known structure and is a popular track at several places (old train track for example). But not everywhere, 'the green walk' is often not intensely ran at the south and west side of Brussels.

- continuité verte
- promenade verte (green walk)

We strongly support the idea of a 'continue verte', but we also have some different ideas on which streets and routes have the biggest potential for it. These routes often have a more readable, continuing character.

With this runners usage as a start, the sequence of the following maps shows the layers of a new green network as proposed by us.



TOWARDS AN IDEAL RUNNING MAP

running destinations based on Endomondo data

The primary interest for runners would be that the main running destinations are the main 'centers' or 'nodes' in this network.

From the Endomondo data we have selected the main running hotspots. In this map the actual running hot-spots in Brussels are drawn as green lines, based on Endomondo data, drawn in vector format by TRACK landscapes.

This is not a 1:1 translation of the running intensity. For example, Ossegem or Anderlecht have significantly fewer running activities than the districts between Jubelpark, Warandepark and Ter Kamerenbos. But, Ossegem and Anderlecht do have some streets or parks that are used 'relatively' well. These are selected as running destinations. As such, each city district has its running destinations.

These destinations usually have their 'connecting routes'. Routes that are well used towards or from these destinations.

The canal as a whole is a running destination in potential/development. It would be the running-backbone of Brussel.

The green walk encircles Brussels and could be the ring to which many pleasant routes connect.

running destinations



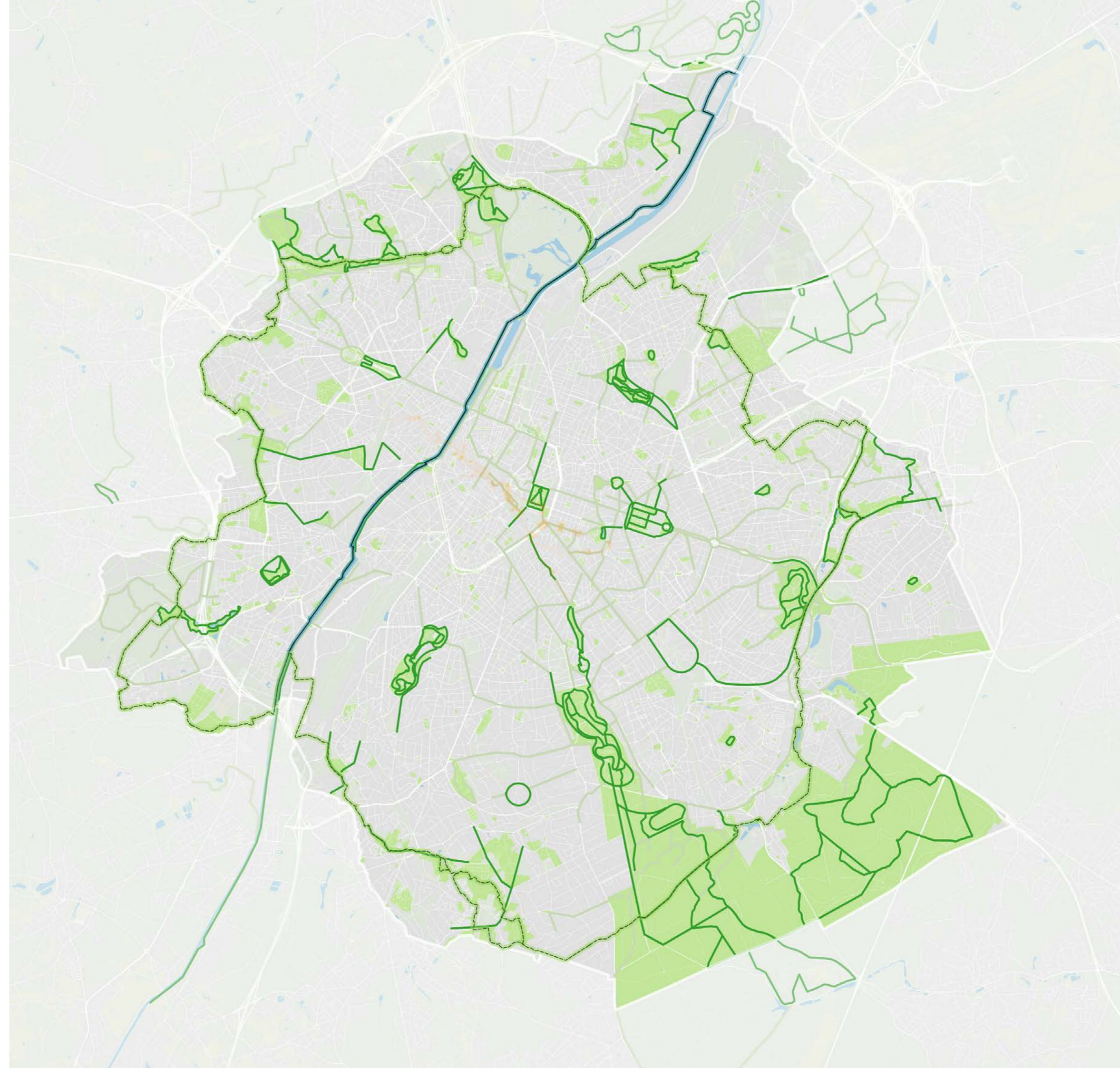
connecting routes



canal



green walk



TOWARDS AN IDEAL RUNNING MAP

planned cycleways and living streets

The potential runner-friendly connections between these destinations could in the first place be assembled by plans that are already on the agenda of Brussels.

Many streets in Brussels became quieter during the Corona period. By cutting streets off from car traffic, living streets or streets for play have been created. They can form calm running routes towards many running destinations.

On top of that, many cycle paths have been created or are planned. As mentioned by many runners, cycle paths can be pleasant paths for runners too. But that is especially true when cycle paths offer enough space. In the development of cycle paths, it is always key to consider pedestrian space in coherence. And it favours the runner as well to follow routes with relatively low traffic intensities, in a pleasant environment.

Taking these aspects into account; the network of cycleways can have great potential for runners. They would improve the connections between many running destinations.

running destinations



connecting routes



canal



green walk



corona living streets



planned cycleways



TOWARDS AN IDEAL RUNNING MAP







additional green connections

In addition, we recognise a series of truly green, tranquil, pedestrian friendly neighbourhood streets that could be planned and developed. We define them as additional green connections.

They make the final links that continuously connect the different green places/running destinations.

Often, living streets, cycleways and “additional” green connections follow-up one another. Much more than just planning a complete green network or bicycle network, we recommend planning a bicycle network, residential street network and green network in conjunction with each other. Making a very hard distinction between them is not necessary or possible in our opinion. The green connections preferably also have cycle paths and there is room for greenery in the residential streets. They are not separate entities for the runners, pedestrians or cyclists of Brussels. It is a network of paths and streets with a pleasant environment, preferably with green, minimal motorized traffic nuisance, in which slow moving people have priority.

Apart from the actual streets, the crossings between streets (with traffic) have a high priority. In the map, we point the most important crossings to be improved for runners. But many more could be added in the complete network.

- running destinations 
- connecting routes 
- canal 
- green walk 
- corona living streets 
- planned cycleways 
- additional green connections 







TOWARDS AN IDEAL RUNNING MAP

car & cycle structures

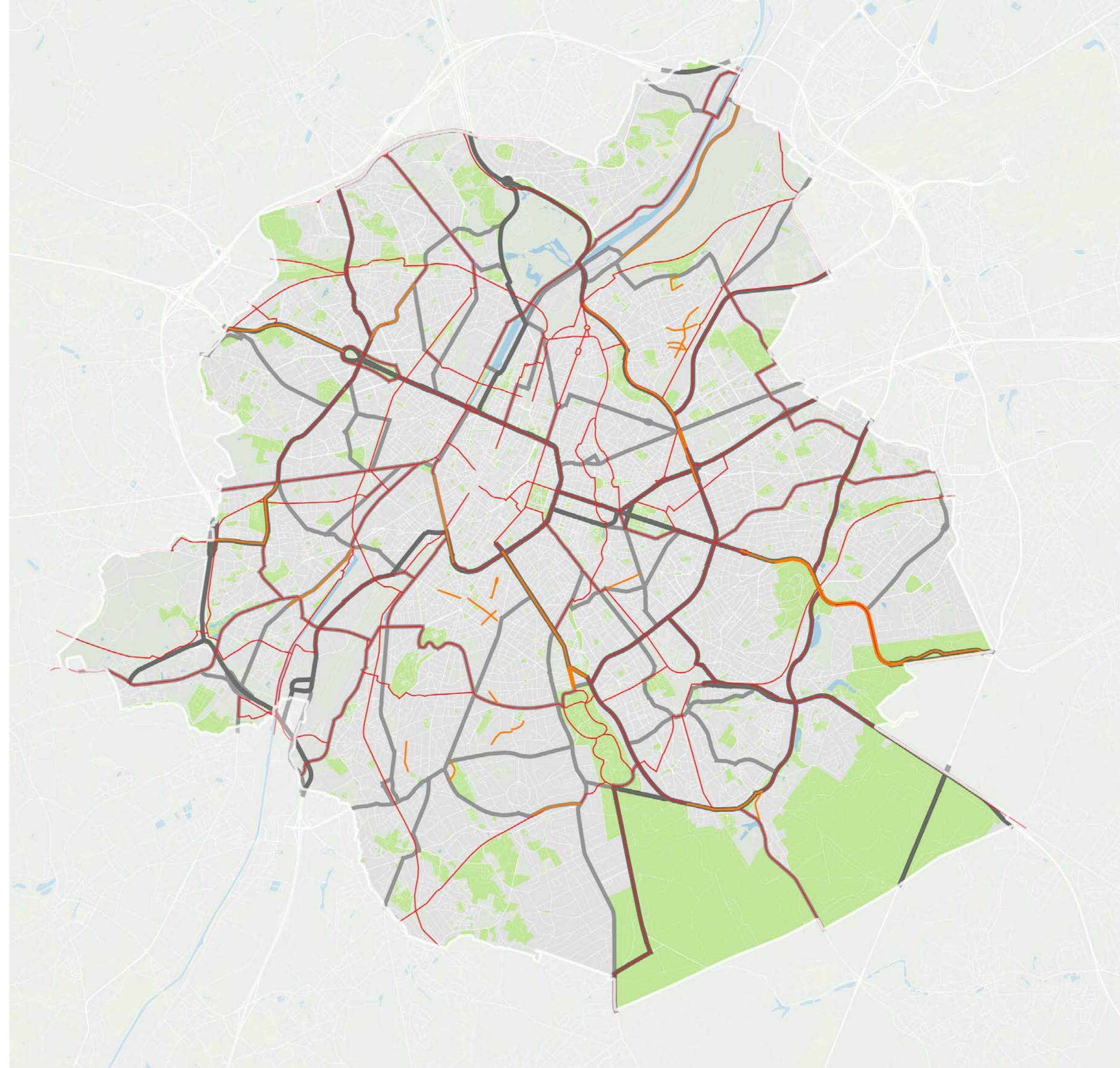
Although we emphasize the coherent development of bicycle networks, pedestrian networks and the green network, the green network still meets an ambition that is different from the current planning of bicycle paths.

The new bicycle space in the Corona period is often created from the car space in the toughest car routes in Brussels (orange lines). That's not directly a bad thing, but we also insist on creating a network that avoids these heavily motorized routes. Because despite the newly added bicycle space, they are still the main motorways.

They do not offer a low-pollution, green route for runners, only the added extra cycling space would benefit runners.

- main motorized roads 
- secondary motorized roads 
- existing main cycling routes 
- planned or created cycling routes during Corona 

Source road structure: Open street map (primary, secondary, tertiary roads)








TOWARDS AN IDEAL RUNNING MAP

additional green connections, car & cycle structures

The additional green connections we propose, add routes that move through the hearts of neighbourhoods instead, away from the heavy motorized infrastructure.

Still, they do also connect to the cycleways that often follow the heavier motorized infrastructure.

- main motorized roads 
- secondary motorized roads 
- existing main cycling routes 
- planned or created cycling routes during Corona 
- additional green connections 

Source road structure: Open street map (primary, secondary, tertiary roads)





The most pleasant and unpleasant running routes in Brussels

2200 mapped experiences, where do runners see space for improvement?

SPATIAL PATTERNS

MAPPING RUNNERS
EXPERIENCES & USAGE

*optimisations
& additions*

EXPERIENCE

path surface

The most common remarked aspect that could be regarded as an optimization or matter of maintenance, are path surfaces. More specific; the evenness of the path surface, the smoothness.

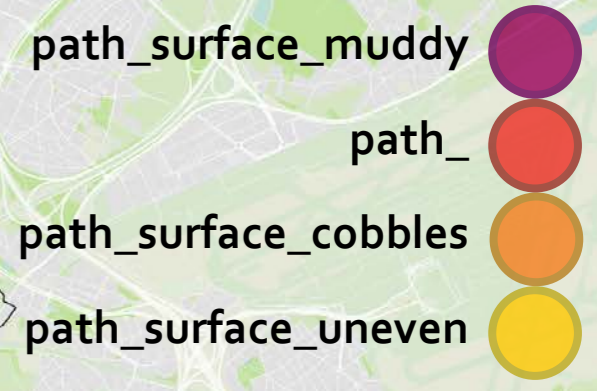
Several clusters of negative experiences with path surfaces can be recognised. By far the most mentioned place is:

1. Park van Vorst and Duden park. The condition of paths is horrible, some paths cannot be used at all.

Several other tagged places (in a non-specific order):

2. T&T park is mentioned as the paths become muddy (image on previous page)
3. Around the ponds of Elsene: although the condition of the paths is not nearly as bad as in Park Vorst. Also the paths at the beginning of Ter Kamerenbos are mentioned.
4. Jubelpark. This is probably caused by the fact that runners are sent out of the park to the surrounding streets.
5. Along the Woluwe creek and old train track, paths can get muddy.
6. At the beginning of Zoniënwoud, specifically the Hippodrome.

To our surprise, no comments were made around the observatory of Ukkel (7), even though the path surface is in a drastic state and it is used quite well by runners.



EXPERIENCE

safety; lighting

Runners strongly prefer to run during daylight, which is not always possible. The extent to which running is possible in the dark, depends on the perceived safety of the routes a runner could make. The perceived safety is strongly influenced by the presence of lighting. Although, presence of lighting does not guarantee (perceived) safety.

Multiple negative experiences concentrate at several locations.

By far the most important one:

1. Jubelpark. More specific, the western edge is often tagged negatively. Often, runners quote that lighting here is 'poor' or 'insufficient'. It seems the place is lit up enough to make runners run here during darkness, it is actually one of the most ran places of Brussels during darkness. But, the lighting is apparently not enough to comfort runners completely.

Some other places:

2. The same accounts for the old rail road. Lights are mentioned to be broken, missing or 'not enough'.
3. Also T&T park and the path along the canal are mentioned in this regard, there is a desire for more lighting.
4. In or around Josaphatpark, lighting is present sufficiently. The park closes and should not be entered between sunset and sunrise, but some runners still do it. Most runners start running around the park instead.
5. Ter Kamerenbos is also tagged frequently. It has lighting, but not everywhere.
6. Pedepark, lighting posts are absent.
7. The edges of park van Vorst
8. The west side of Boudewijnpark
9. Along the canal

Adding lighting is often less simple than it seems; ecologic values, light pollution and actual insecurity can sometimes be considered more important.

But, the real inner-city parks like Jubelpark, T&T, Park Vorst (edges) would benefit from added lighting in our view. At Josephat park, light around the park could also be a solution.

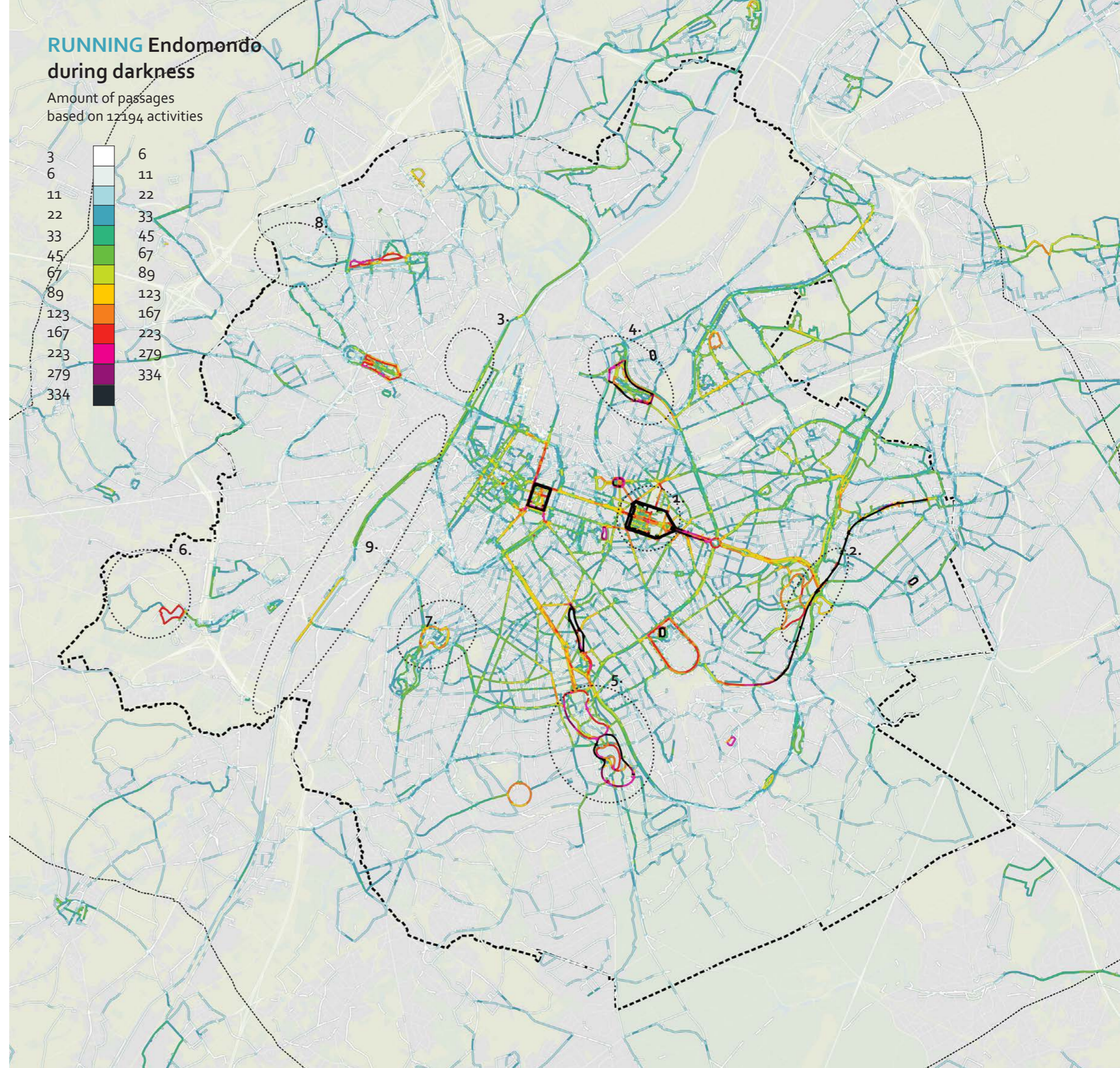


USAGE during darkness

From the Endomondo running data, all activities that took place during darkness were selected. The image shows the usage of the city during darkness, based on these activities.

Sometimes running activities reduce at the listed locations during dark hours, but not always.

1. Jubelpark is still used very intensely, despite the many complains about (quality or presence of) lighting.
2. The old rail road is used intensely as well
3. T&T park disappears. But, the data contains activities till 2017 and as T&T park is quite young, this could be influential.
4. At Josaphat, activities shift out of the park, to the edges or route around it.
5. At Ter Kamerenbos, activities concentrate on the main lap.
6. In Pedepark, runners still run, despite the complete absence of lighting.
7. The Edges of park van Vorst (with the pathways in poor condition..) are used most intense during darkness.
8. In Boudewijnpark, runners only run the illuminated east side.
9. The canal is used 'segmented'.



USAGE

during darkness

A good judgement on running behaviour during darkness, requires a comparison with behaviour during daylight.

The image shows the difference in usage "during daylight" and "in the dark". Dark red means, that the path was passed four times more often during the day.

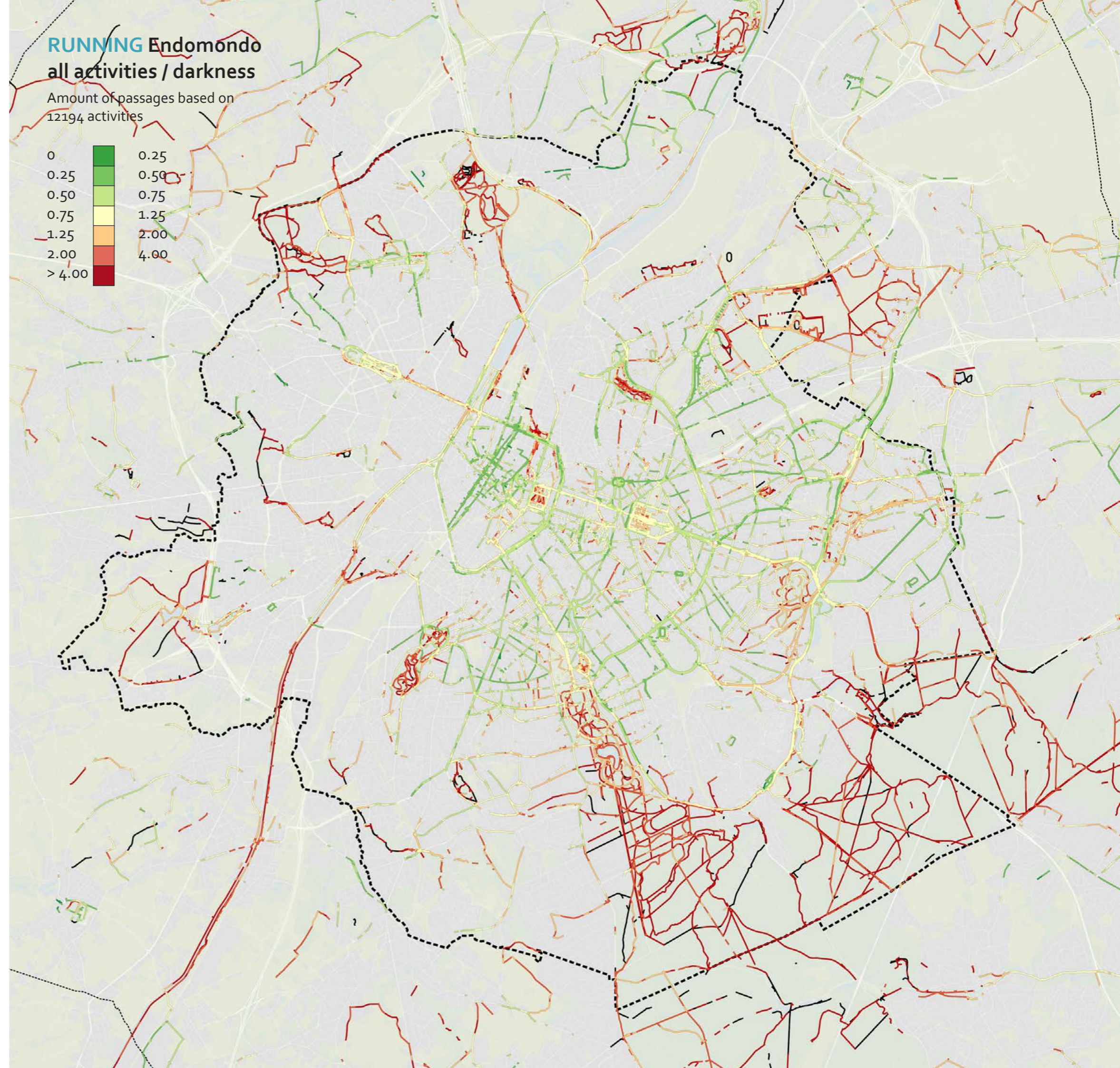
The word "relative" is important in this regard. About 1 out of 9 running activities takes place in the dark. "Red" therefore means at least 36 times more passages during daylight than in the dark (4 times 9).

Green paths are therefore used relatively well in the dark.

In general, activities shift toward the city centre. Even though relatively, usage does not increase in Jubelpark for example. An increase can mainly be seen along several large N-roads. Those are often well illuminated indeed.

Note the east-west split in Boudewijnpark, and the negative usage in park Laken and Dudenpark. Elisabethpark is 'neutral'.

The old train track scores slightly negative.



EXPERIENCE

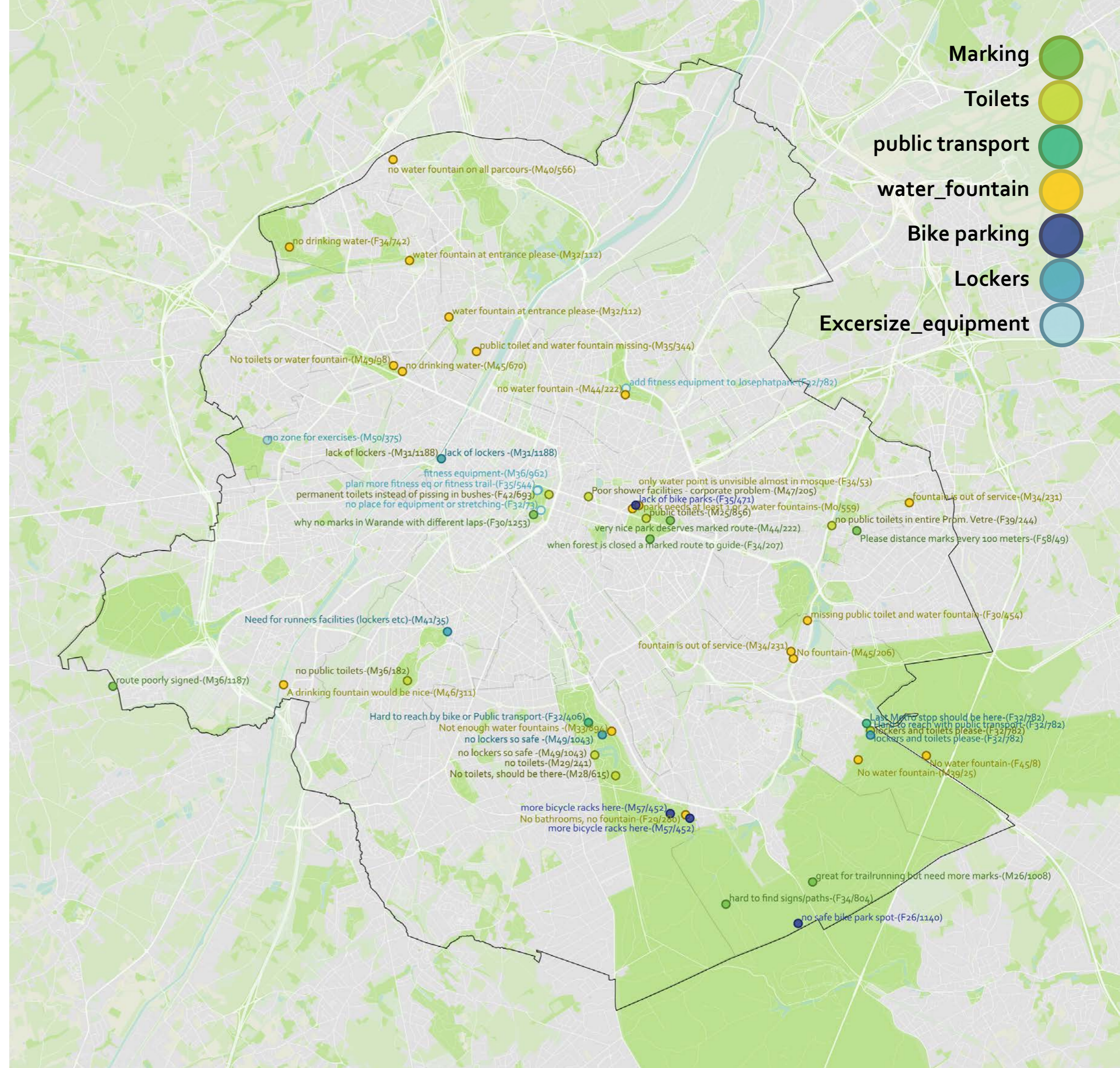
facilities; missing

The last category of important runner-friendly additions are facilities. They were the most frequently mentioned aspect for creating a more runner-friendly city. Even though, this theme is less 'assignable' in maps. The absence of facilities is not so much a direct encounter, like a bad path surface or missing lighting.

Nevertheless, runners pointed out the lack of facilities in several places. The most frequently tagged missing facility is 'the water fountain' or 'water tap'.

This is interesting because they are relatively easy to install. The most interesting places to install these facilities are the common running start-locations. Runners gather here, do exercises, and get ready (drink some water) before they start to run. In 90% of the runs (at least in the Endomondo data), the finish location is in the same place as the start location. Runners mainly run a complete lap. So the facilities at the starting points, also serve as facilities for after the run. Here, runners could drink water again, do some extra strength exercises, sit down, stretch or do a cooling down.

We have data of all water fountains in Brussels, that we can match with the data.



USAGE

common start locations of runs

With the Endomondo data, the common start (and finish) locations of runners can be visualised.

At specific locations a lot of different people start their run. The intense blue points show unique persons that ever started their activity within a circle of 100 meters, using the app of Endomondo.

These places are especially interesting for facilitating runners: adding water fountains, starting marked routes, or adding other facilities like fitness equipment, lockers or showers/toilets.



USAGE

common start locations of runs

The locations of existing water fountains are projected on the map with start locations of activities.

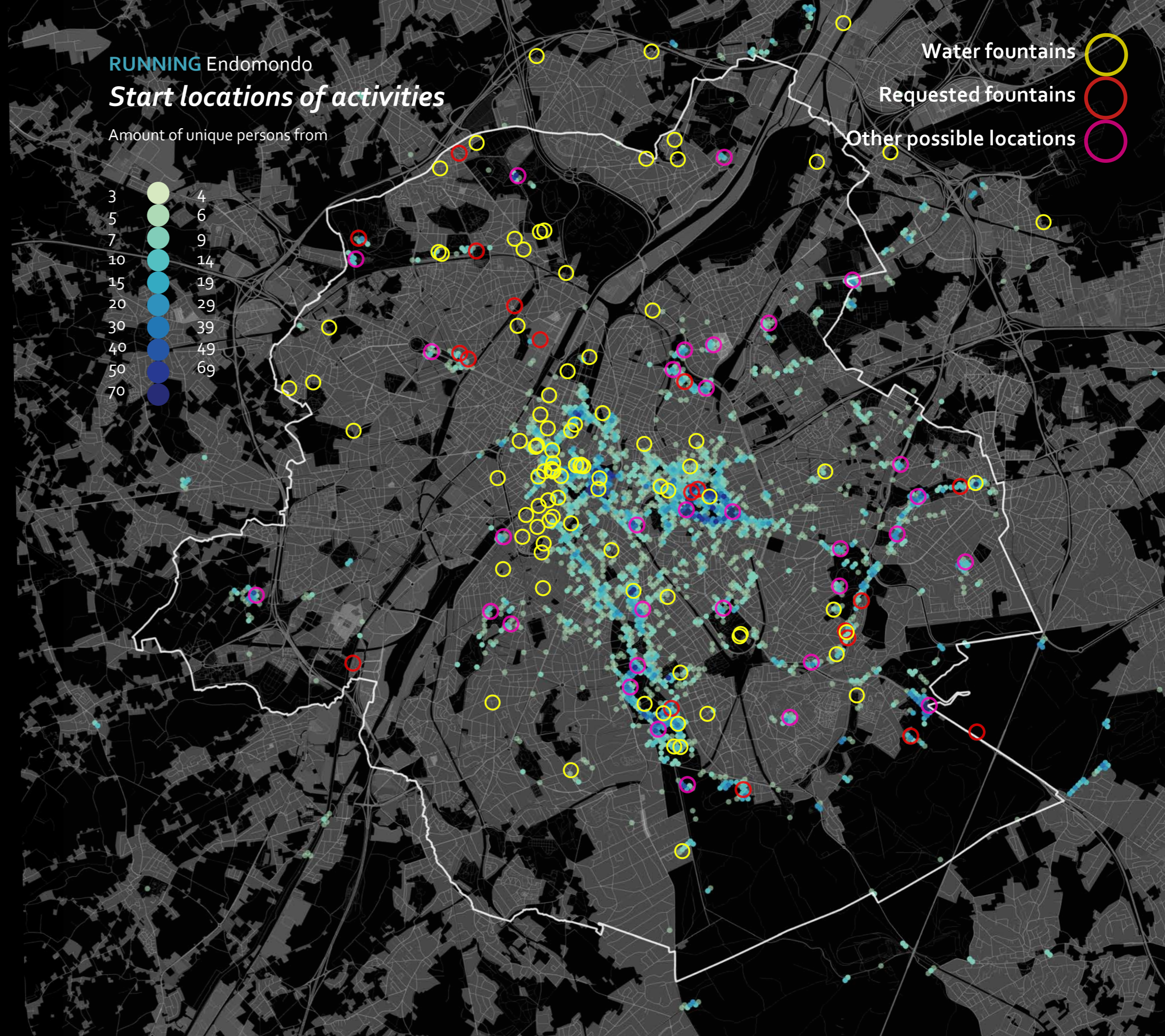
Several well-used starting points have a water fountain, but more places don't have that yet.

The red circles on the map show appointed locations for water fountains where people were missing them. The central part of Brussels does contain quite a density of fountains, only two runner-fountain-requests were made (in Jubelpark). Much more requests are found in the south-east and north-west of Brussels. But also the south-west side of Brussels seems to contain few fountains, although they are not often requested.

They were often pointed at common starting locations and on the trajectory of the Green Walk.

In addition to the locations where people would like to have a new fountain, we want to point at the pink circles. These are the commonly used starting points, but they were not geotagged in the survey. These could be facilitated in addition.

Often, these are at the entrances of parks, or other important running destinations.



TOWARDS AN IDEAL RUNNING MAP

optimizations and additions

Just like adding water taps, many additions and optimizations can be made to make running more enjoyable, easier, more fun, more logical, safer and healthier.

Hardly any runner asked for interventions or additions that only serve themselves. All proposals have meaning for many other types of city users.

























- Water taps are pleasant for every park user. This also applies to public toilets, lockers and bicycle parkings
- Many runners like to use fitness equipment, but most fitness equipment users are not even runners
- Marked 'running' routes can of course also be walked. This particular map does not represent a network of marked routes, there can be many different ways to do that. We will provide some examples later in this report
- Creating more convenient park laps enhances the unity of a park in general.

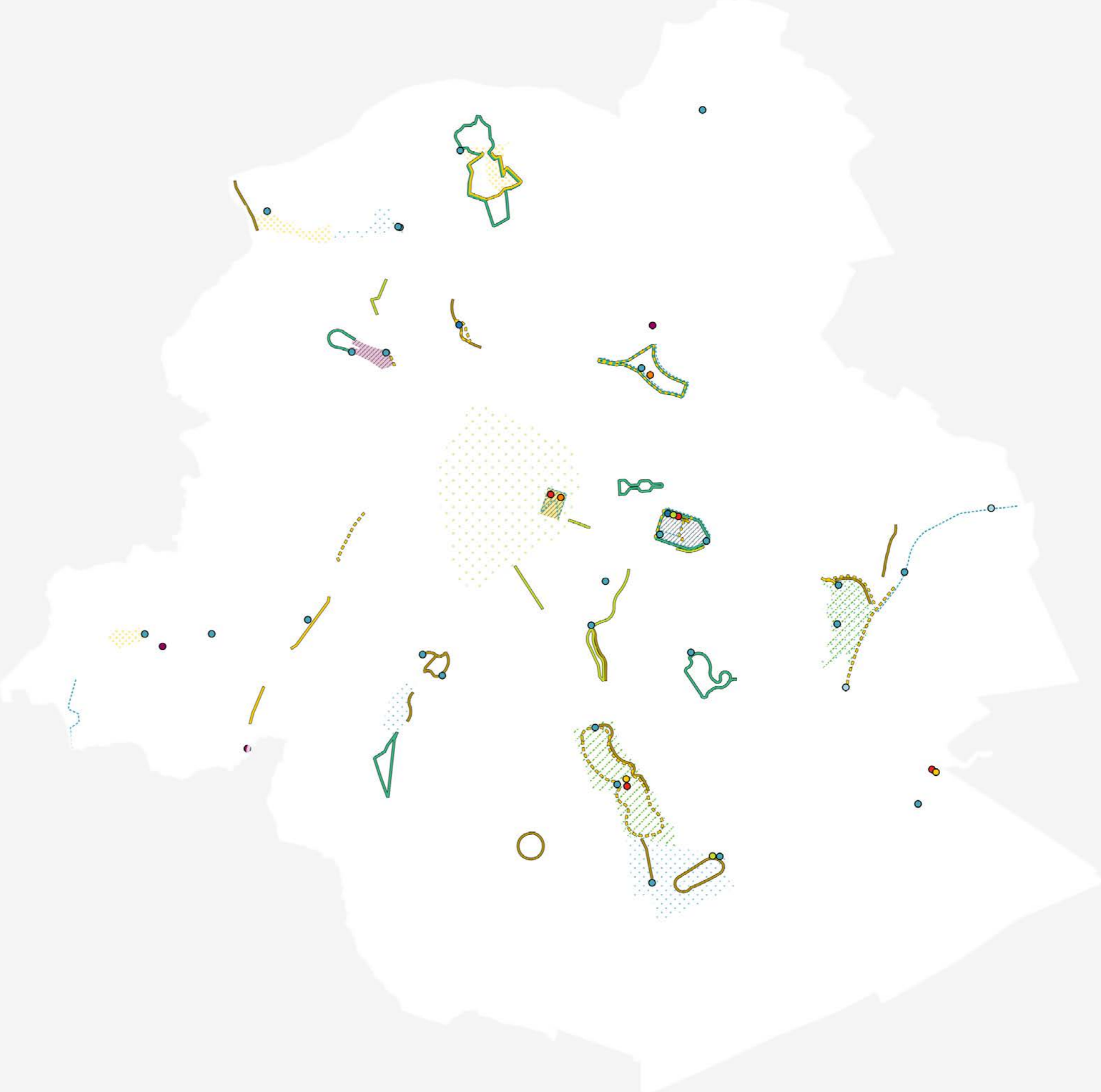
- Adding lighting to enhance safety benefits all city users at evening.
- Improving path surfaces is appreciated by all pedestrians. In research that we did in the Netherlands, bad path surfaces were the most tagged themes for recreational pedestrians, runners and cyclists alike.
- Better air quality is healthy in general.

We can easily conclude that the priority of 'runner-friendly interventions' will only create a more pleasant city overall.

In QGIS we have listed all possible improvements mentioned by runners. We have also listed some improvements that we have noticed in addition.

In the attribute table associated with the mapped improvements, we note how often it has been marked in the survey, what theme of improvement it is, or how much of a "quick win" it could be.

 lap park	 add bike parking	 air quality
 add/improve light	 add fitness equip	 attend dogs
 route markings	 add fountain	 add light
 improve marks	 fix fountain	 more green
 path condition	 visibility fountain	 no cars
 missing link	 add lockers	 open earlier
 path softness	 safety tunnel	 safety feeling
 path width	 add toilet	
 shape a lap		



TOWARDS AN IDEAL RUNNING MAP

The optimization and additions, together with the proposed new green connections, create the path towards a complete ideal running map of Brussels.

Convenient park laps with space for all users and smooth surfaces are linked to green connections to other nearby parks. These routes have safe crossings in a surprisingly green, urban environment. When entering a park, information boards clearly indicate parks options and allow you to drink some water. Marked routes easily guide you along the best routes. Every city district has at least one pleasant lap to run, both during the day, and in the evening.

- existing main cycling routes
- planned or created cycling routes during Corona
- green connections
- lap park
- add/improve light
- route markings
- improve marks
- path condition
- missing link
- path softness
- path width
- shape a lap
- add bike parking
- add fitness equip
- add fountain
- fix fountain
- visibility fountain
- add lockers
- safety tunnel
- add toilet
- air quality
- attend dogs
- add light
- more green
- no cars
- open earlier
- safety feeling



DESIGN ELABORATIONS

The runners' structural needs will be central to the running-friendly solutions. Shaping the ambition of "green, movement-oriented connections" is a complex matter. It requires an exploration of possible strategies to elaborate.

NORTHWEST

Jette-Koekelberg was also the city district where a high density of 'traffic related remarks' were placed in between parks, in the neighbourhoods. The run for a more pleasant city starts here.

Jette-Koekelberg is exemplar. The current layout of this city district and parks require design strategies that are applicable to other city districts as well.

CENTRE

In the central parts of Brussels, the parks are suitable for short runs. However, attractive routes for long distance runners are hard to find, because most runners do not like to run many similar laps in the small parks. Consequently, running to different parks is than the only option.

In an attempt to connect the small parks, runners tend to run through the city in between the parks. In general, this area is characterized by a lack of green

SOUTH

On a map, Park Vorst and Dudenpark look like one continuous green space. But from the experience of the runners, both the connection between the parks and the edges of the park could be improved.

Many positive interventions are already taking place. The path surface will be restored, and various surrounding streets were temporarily converted into quiet living-streets during the corona period. These temporal corona-measures form excellent opportunities to redesign the streets around the parks permanently and create a healthier living environment.

SOUTHWEST

Anderlecht did not receive many remarks from runners in the survey, but the running pattern was revealed from the activity trackers. Runners talk with their feet. The district is known for its 'park system', the green qualities are present. However it deserves a more consistent routing in order to be a truly runner friendly city-district. There are many quick wins that are not only pleasant for runners.

1. PARKING
2. ELISABETH ONE-PARK
3. PARKLAP GANSHOREN
4. CONNECTION L28

RUNNER ADDS

1. JOSAPHAT TO JUBEL
2. AMBIORIX TO LEO
3. GREEN ARTERIES
4. PONDS TO TER KAMERENBOS

RUNNER ADDS

1. VORST <-> DUDEN
2. UKKEL <-> DUDEN

RUNNER ADDS

1. PEDE-VIJVERPARK
2. OVER SYLVAIN DUPUIS
3. ASTRID AND ON
4. LEMAIREPARK
5. ABOUT ROUNDABOUTS
6. CANAL SOUTH-EAST

RUNNERS ADDS





In four areas, opportunities to improve spatial conditions for running were elaborated. How do we shape the ambitions?

ELABORATIONS

NORTHWEST

SOUTH

CENTRE

SOUTHWEST

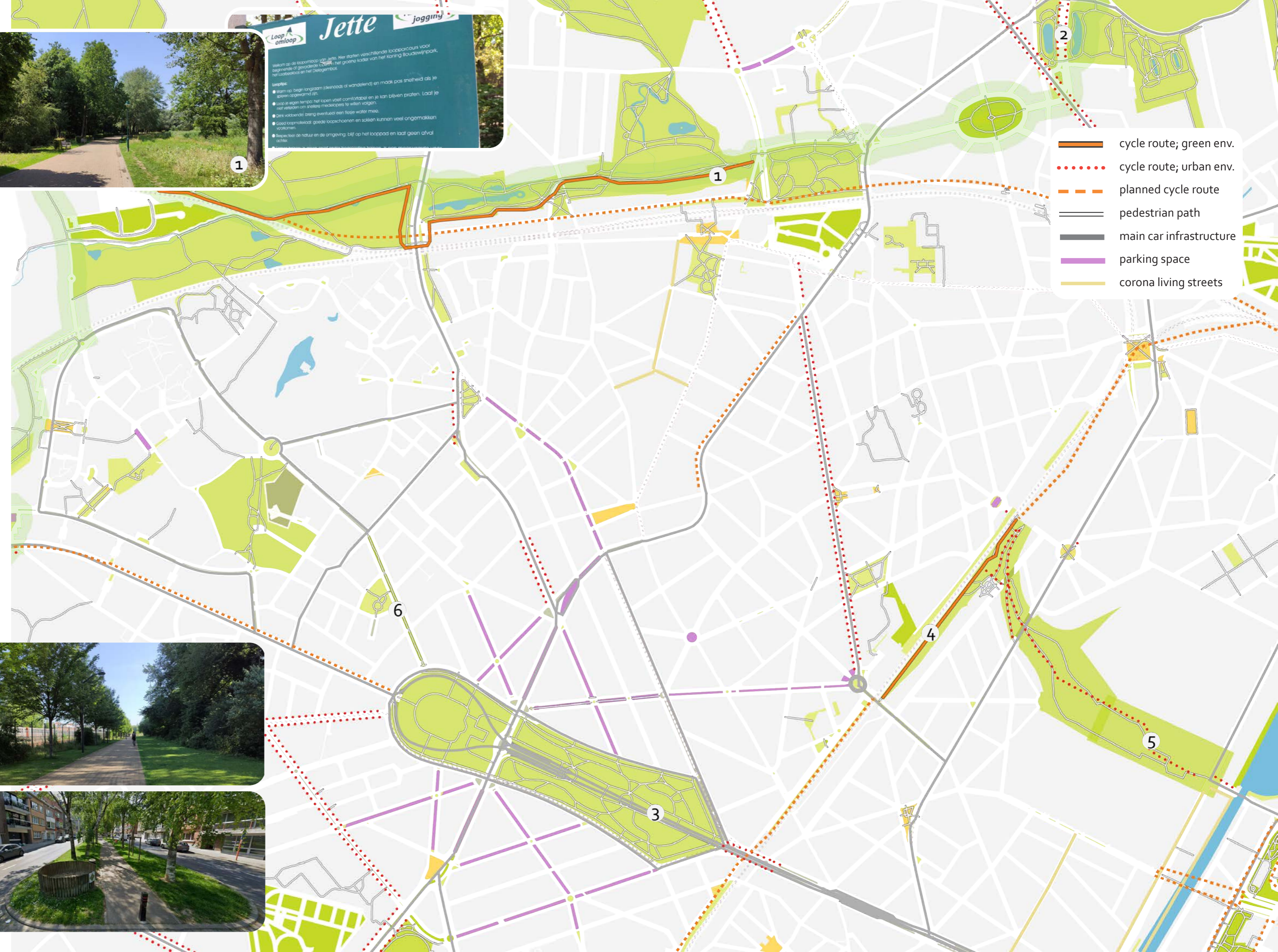
QUALITIES

green spaces

The main running destinations in Jette-Koekelberg are the parks located on the outer edges of this district: Boudewijnpark (1), Park van Laken (2), Elisabethpark (3), Park L28 (4), Thurn and Taxis (5). Boudewijnpark and park van Laken are connected by the green walk.

Elisabethpark and T&T park form the two more central green 'dots'. They are smaller, but large enough for a '5k-run' starting in the neighbourhood. In between T&T park and Elisabethpark, a new bicycle highway is planned, and partly already shaped (4). Also along Boudewijnpark a bicycle highway is planned. In the Corona period, bike spaces are added along several main motorized-roads.

The potential quality of many neighbourhood streets is illustrated by the 'van Overbekelaan' (6).



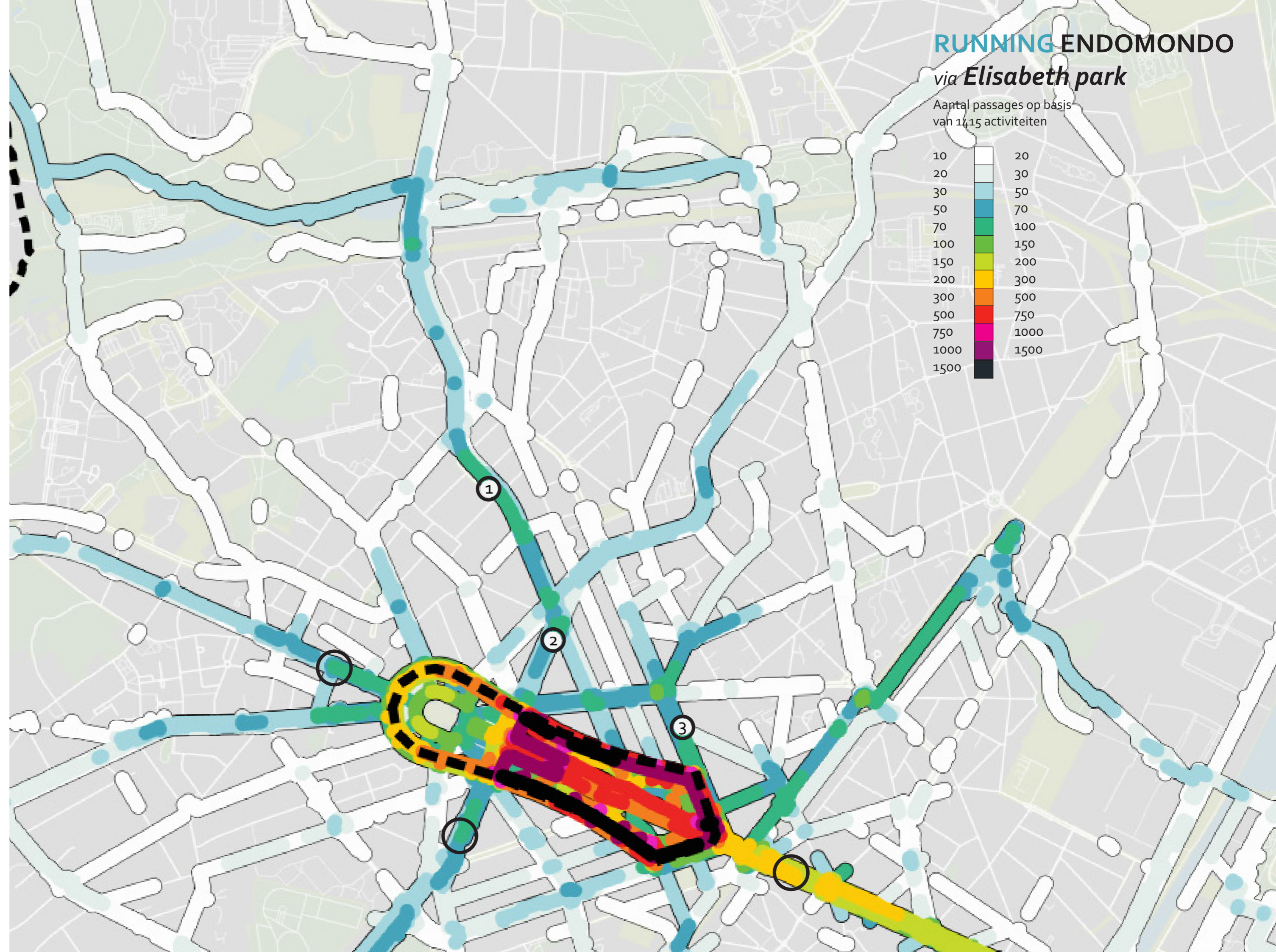
RUNNING CONNECTIONS

The current running practice towards and in between the parks, highlight the challenges of designing better "green connections".

The image shows the usage of this city district by runners, who had the Elisabethpark in their route. Runners do connect Elisabethpark to Boudewijnpark and T&T park. A run of 5-10 kilometres could already combine these parks.

Runners tend to choose very busy (and polluted) streets to connect parks, rather than smaller surrounding streets that are more quiet. All circled streets are busy N-roads, where new bicycle lanes are most often created. The main streets go straight to the park, they are easy to follow and therefore attract runners, despite their busy character and therefore unattractive environment.

Also notable is that the northwest side of Elisabethpark is used a lot less intense than the southeast side.

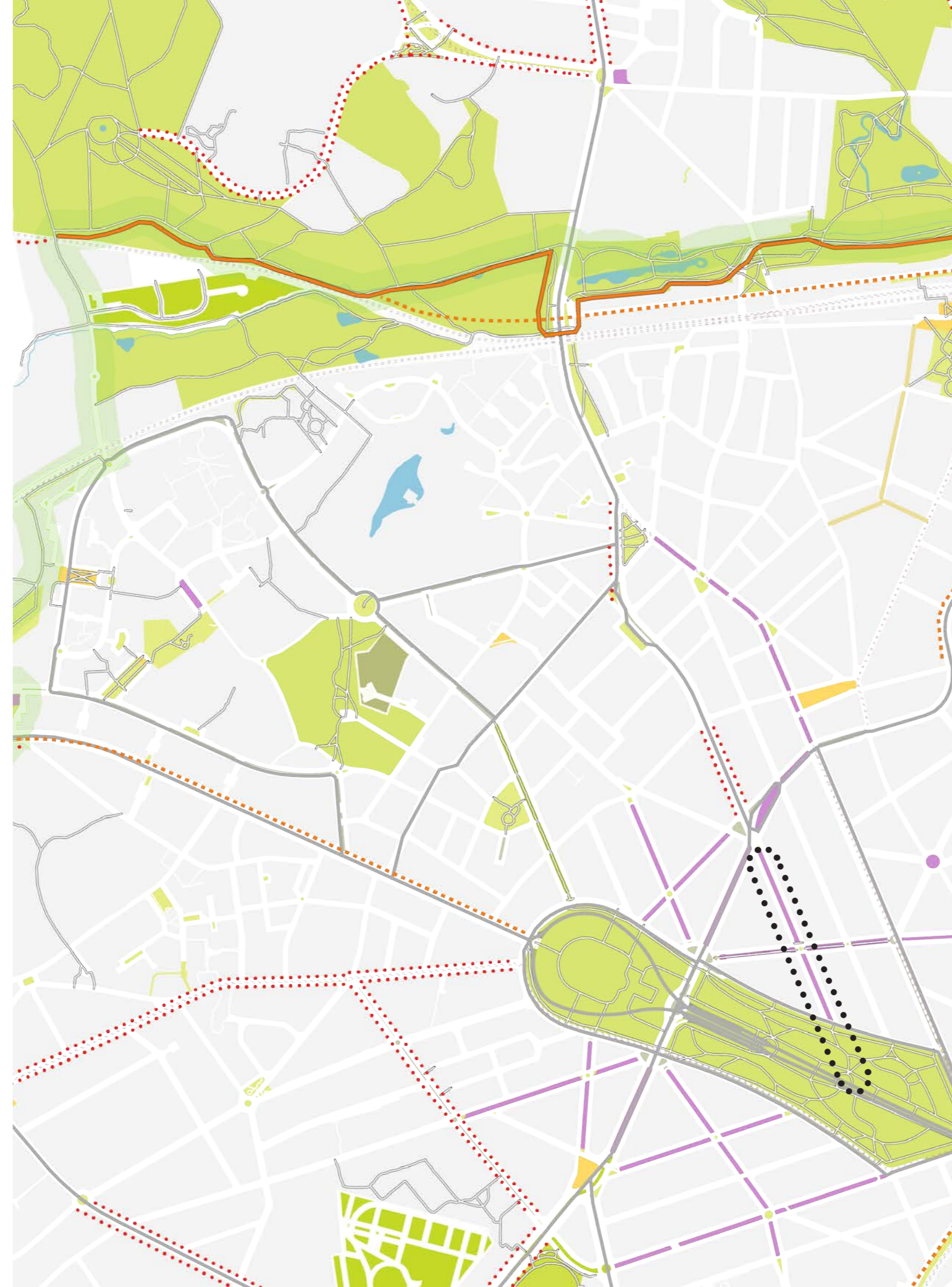


PROBLEM / POTENTIAL

Jette-Koekelberg contains many potential green connections that runners do not yet recognise nor use.

The purple lines around Elisabethpark are parking space. These streets were actually designed with the Elisabethpark: note the way in which pathways in the park are designed in alignment with several of these streets. These streets are connected to the Elisabethpark, designed as wide, green, neo-baroque boulevards/lanes. The green qualities are already there; large, beautiful tree avenues are still present. But later on this resulting width was seen as the perfect wide parking space (mostly four-double), instead of park space.

Enjoying the green in a pleasant walk is hardly possible at the moment.



STRATEGY

parking

The biggest potential for green, movement oriented streets, through neighbourhoods and connecting the parks, is in these parking streets. When parking space is reduced, the real quality of these streets can be used and experienced again.

This is not a small intervention, inhabitants have adapted to the amount of parking space available. Though, the 'Good Move' ambition of Brussels has a very clear ambition to reduce parking space. The availability of cheap parking space is considered as the main reason for inhabitants of Brussels to choose the car over walking or cycling. When street parking is widely available and cheap, it forms the basis for car usage and dependence.

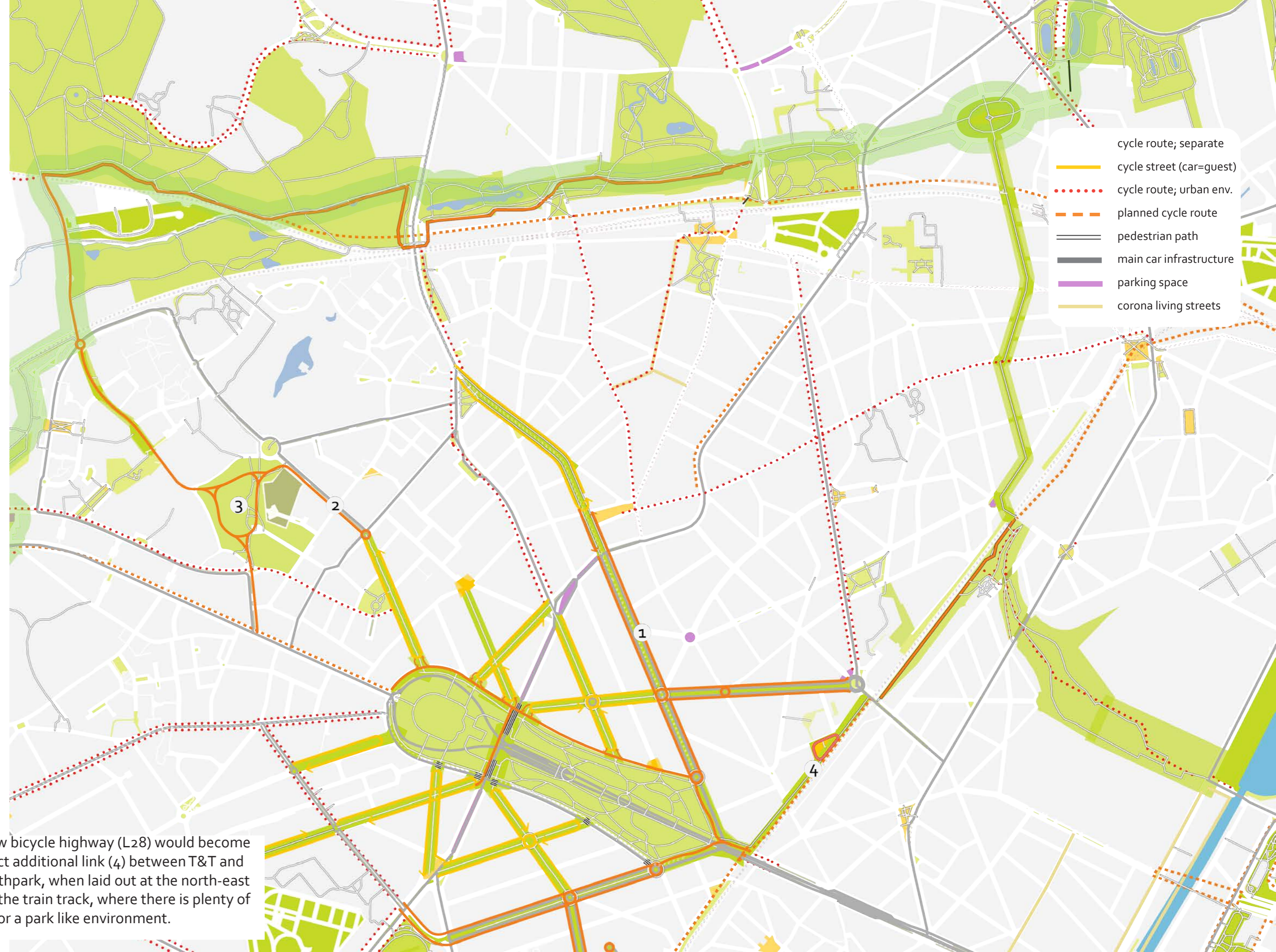
In a 30 meter wide street, two rows of parallel car parking are considered acceptable in a modern city. The streets around the Elisabethpark often contain four rows, including perpendicular parking.

We propose to not intervene in the primary car network of N-roads. In our view, the main 'car-problem' are not the N-roads or secondary roads, but the amount of (ongoing) traffic and parking in the standard 'neighbourhood streets'. Hierarchy is lacking as such.

When these streets would be transformed, Elisabethpark would have a network of attractive routes from and towards it, that could extend the park. The Jetselaan (1) would become the main connection between Boudewijnpark and Elisabethpark.

A redesigned van Overbekelaan (2) would, via park Ganshoren (3), be a green cycle route between Boudewijnpark and Elisabethpark. It would be an incentive to upgrade the Ganshoren park.

The new bicycle highway (L28) would become a perfect additional link (4) between T&T and Elisabethpark, when laid out at the north-east side of the train track, where there is plenty of space for a park like environment.



1. PARKING

continues car infra

The possible transformation of the “parking streets” is not a matter of “one profile that is suitable for everyone”. There is a lot of subtle variation in the current profiles, in the hierarchy of motorways and public transport, and in the different functions in the street.

Here, we address this variety and present ideas on how they form the basis for possible profile-transformations. Depending on the Good Move plan, some streets can be transformed into a local/destination streets and becomes 30 km/h.

In these conditions, a separate bicycle lane is not necessary because there is only local traffic and reduced speed on this road. Separate cycle lanes, or filtering the street for motorized, non-local traffic are two different solutions.

The main problem in the current street design for streets indicated by numbers 1, 2 and 3 is that there is a total lack of space for cyclist. A comfortable and safe cycling infrastructure is also positive for runners.

Separate cycle lanes are recommended for streets indicated by numbers 1, 2 and 3. A comfortable and safe cycling infrastructure is also positive for runners.

The first category consists of streets that are important in the car network. In addition to the N-roads (which we will not discuss) there is a network of secondary roads in this district.

First we will discuss the street that are important in the car network: 1. Carton de Wiart, 2. Jetselaan southern part, 3. Jetselaan middel part.



In the Carton de Wiartlaan and the Broustinlaan, there are very few or no indications for active transport modes (cycling and walking). The main reason is because each lane is bounden py parking spaces on both sides. The danger of opening doors makes it difficult to have a designated bicycle space adjacent to the parking spaces.

Although the middle green part is not very useful, the trees form the green face of the street. The outer parking strips (on the side of the houses) strongly enclose the footpaths.



Cars park between the trees in the southern half of Jetselaan. The number of parking spaces is therefore quite minimal. However, due to these few places, a separate cycle path is not possible.

The tram line has a stoned surface, with a small green border.

A cycle path is painted, but not separated which gives no physical protection from motorized traffic. Hence, the current cycle path does not encourage runners to use the cycle path for running.



In the middle section of the Jetselaan the tram line is greener, but the number of parking spaces has doubled.

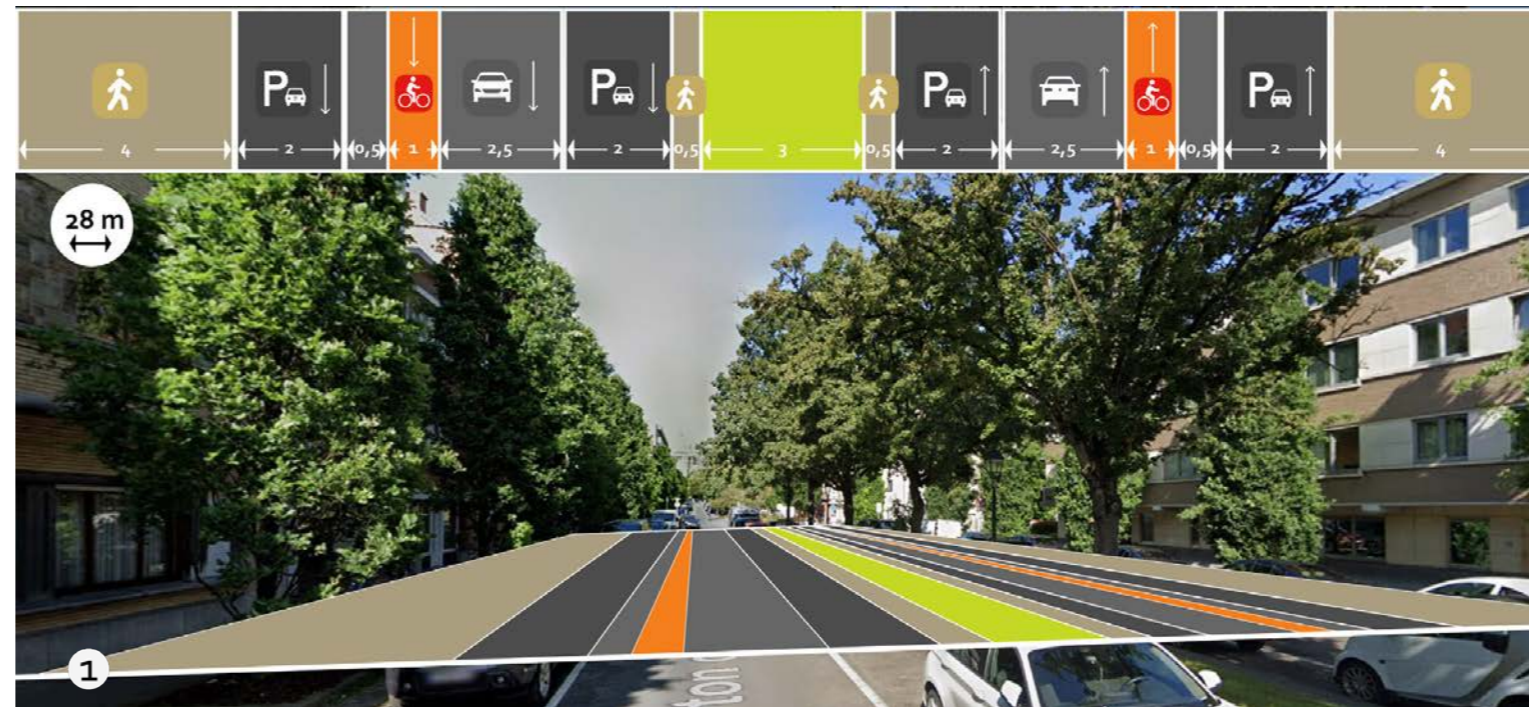
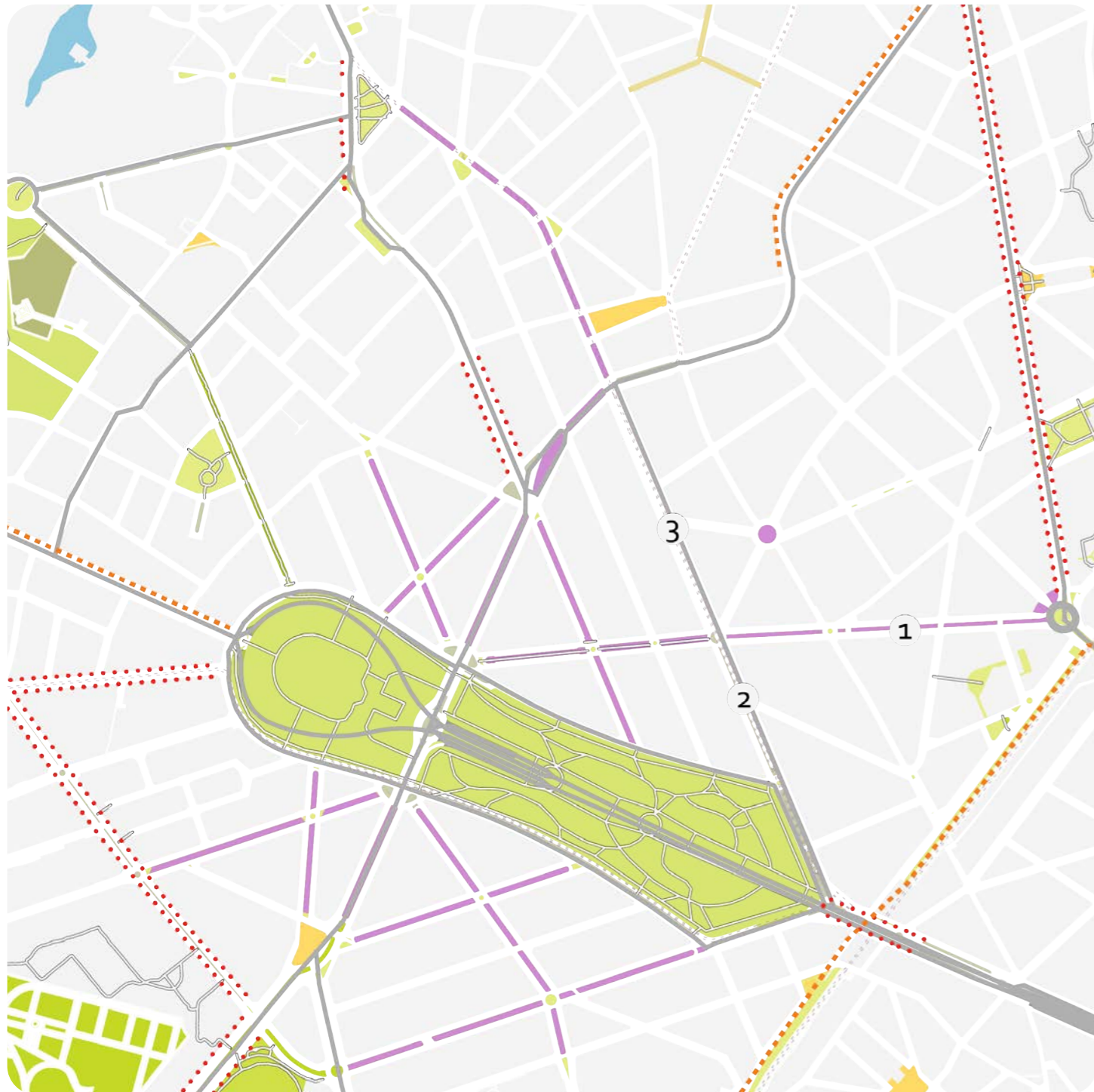
Cycle indications disappeared.

In this street, the number of parking spaces along the sidewalk is minimal due to garage boxes. The trees are now along the tram line.

1. PARKING

continues car infra. Current profiles

When we set out the dimensions of the three street profiles, we get confronted with the 'amount' of space that is preserved for pedestrians and cyclists. Or otherwise; the amount of space consumed by motorized traffic.



16 out of 28 metres is used by cars.

The sidewalks near the houses are planted with trees, and therefore a considerable number of metres (2 in 4) is in fact not free walking space. Qualitative cycling space is missing.



The tram line and cars consume 25 of the 30 metres.



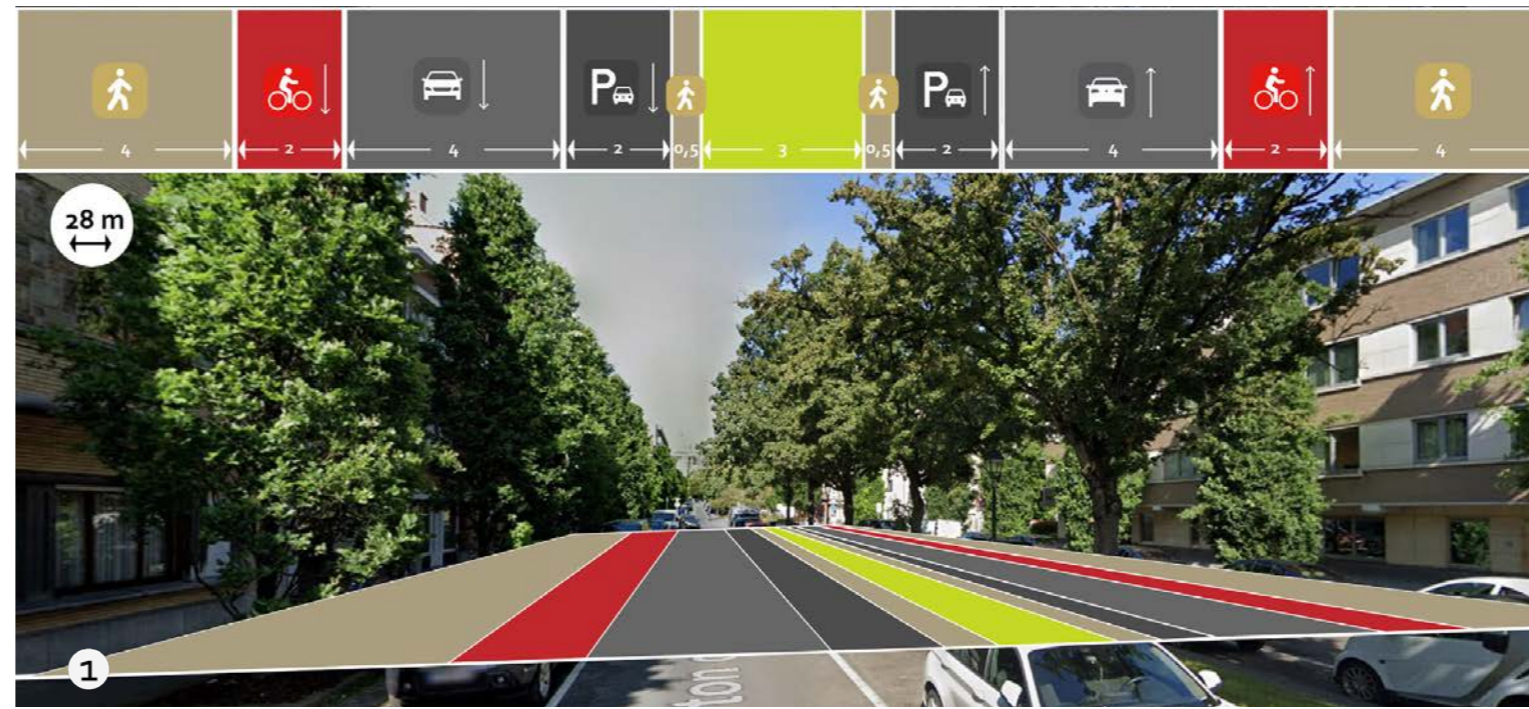
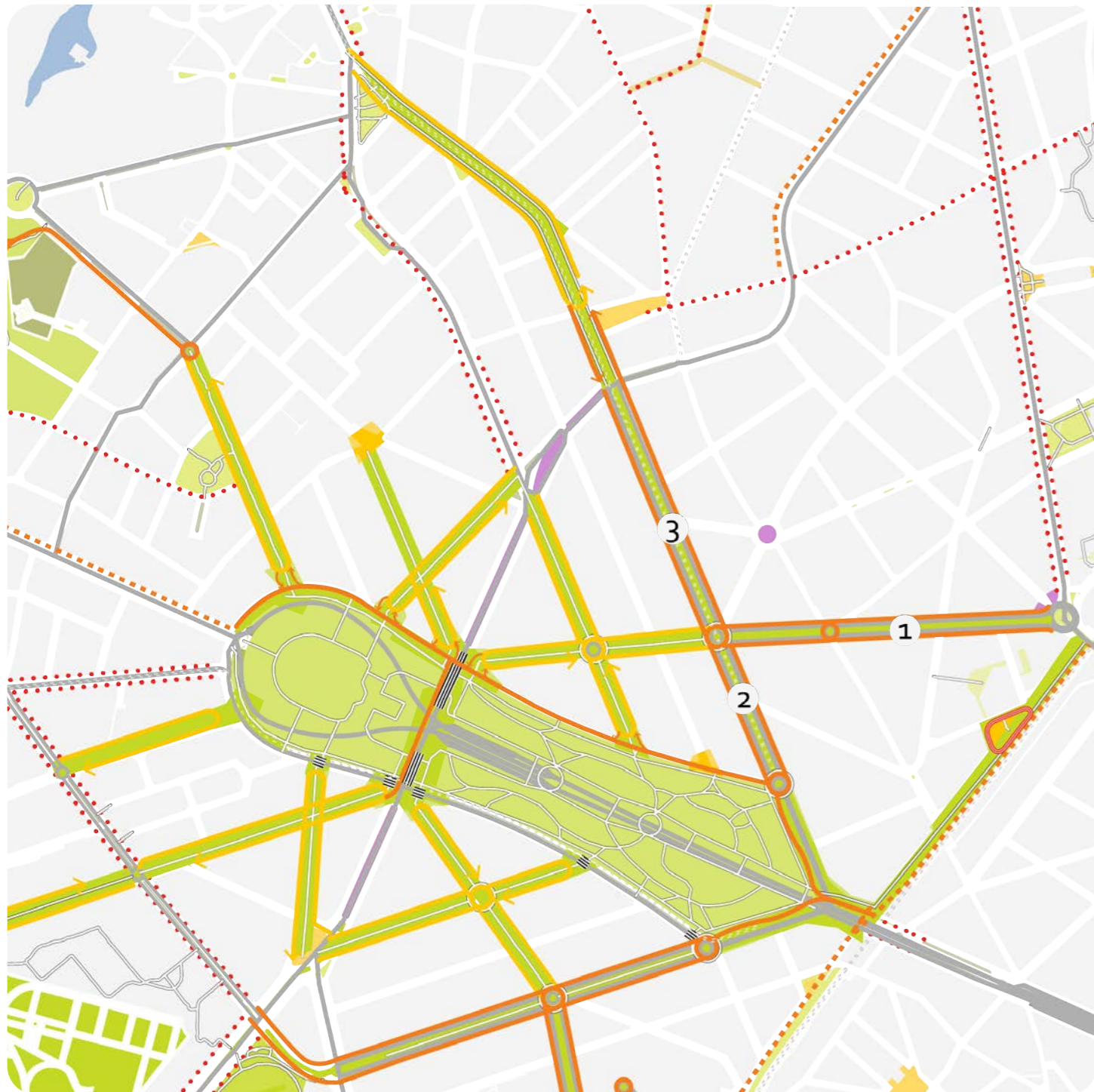
The tram line and cars consume 24 of the 30 metres.

1. PARKING

continues car infra. Improved profiles

In all three streets, the simplest intervention would be to replace the outer parking by a separate cycle path.

- cycle route; separate
- cycle street (car=guest)
- ⋯ cycle route; urban env.
- - - planned cycle route
- = pedestrian path
- = main car infrastructure
- = parking space
- = corona living streets



The cycle path in the Carton the Wiertlaan could even be 2.5 metres. Now cars do not have to share the road with cyclists, 3.5 metres is wide enough.

If the sidewalk borders on a cycle path, a more open, less dark path is created in front of the houses.



In the southern Jetselaan, the outer-parking could well be replaced by a loamy surface or planting. It is an extension of the pavement, and creates a more healthy surface for the trees.

This drawing shows the 'optimal' profile for the southern Jetselaan.



In the simplest transformation, one row of parking spaces in the middle section of Jetselaan would make way for a separate bicycle path. The outer parking spaces are already fragmented. Runners could choose between the cycling or walking path.

The street would still not have large trees, as parking spaces still take up space next to the tram line.

1. PARKING

continues car infra. Optimal profiles

- cycle route; separate
- cycle street (car=guest)
- ... cycle route; urban env.
- - - planned cycle route
- = pedestrian path
- main car infrastructure
- parking space
- corona living streets



In an even better profile, parking in the middle of the street would be replaced by the motorway. Then the sides of the streets would become very spacious. One parking strip can possibly remain. With the new space, a two-way bicycle path of 3.5 metres could be constructed. The line containing the outer trees could be made completely green or into a loamy footpath.

In the middle part of the Jetselaan, the next step could be to completely remove parking and replace this space with trees and greenery.

Then the trees could grow to a quite natural size. The current trees are so close to the tram line that they are heavily pruned.

This is already present in the most northern part of the Jetselaan, although unfortunately there are cars parked between the trees. But trees here have room to grow and provide shade and a green atmosphere.



1. PARKING

local traffic only

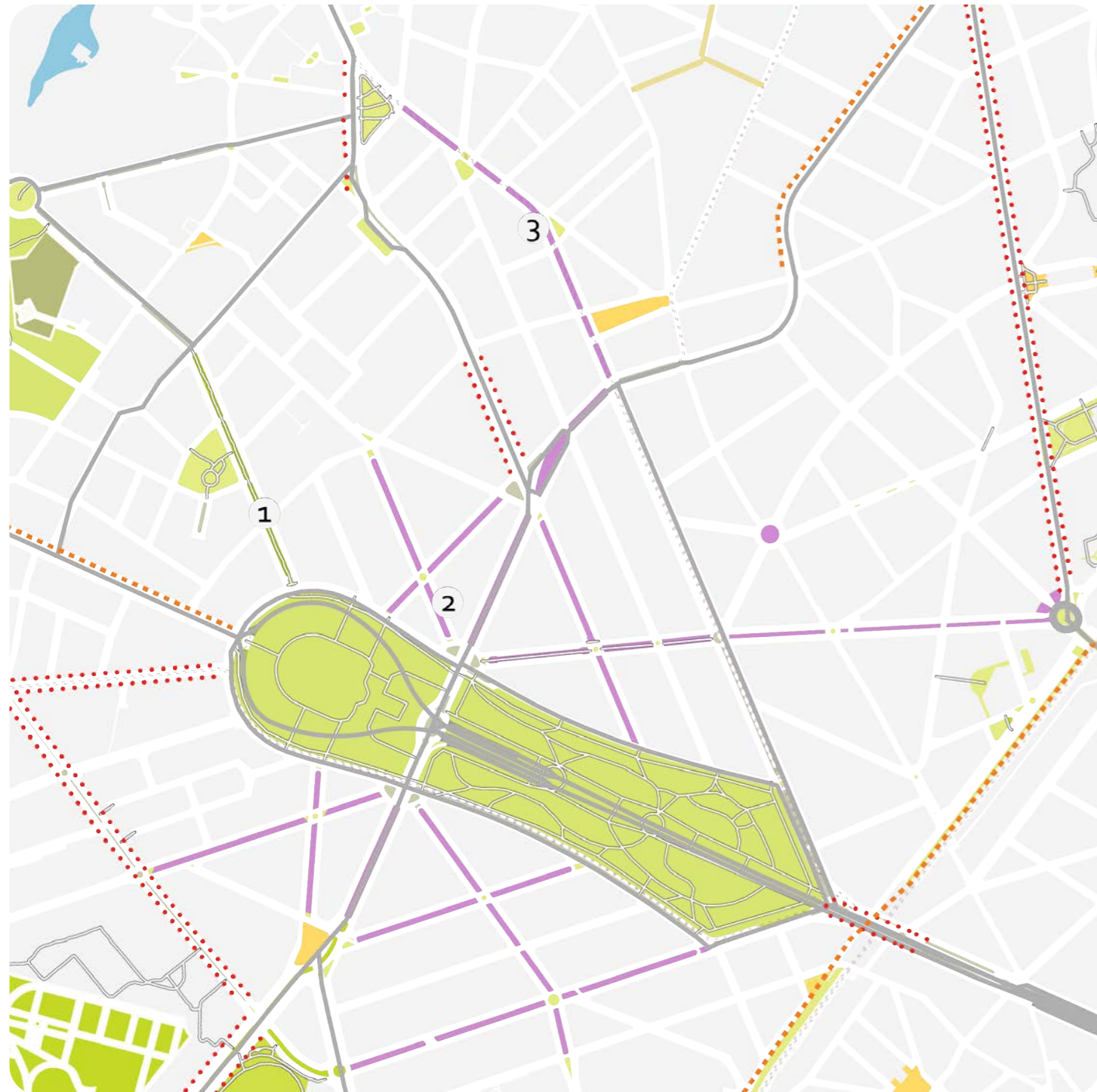
A second category is formed by streets that are not important in the car network; they can be destination streets. We will discuss van Overbekelaan, Hertog-Janlaan, northern part of the Jetselaan

These streets would not need a separate cycling path, cyclists and destination traffic can make use of the same road.



The van Overbekelaan shows what is possible when the middle section is not used for car parking. It is already a green street with space for a green walk.

But, it is yet not perfect. That is not due to the profile, but the traffic circulation. It can be used by continuing traffic, and intersected at many points. The green pathway is in fact a string of cut-off green islands, bordered by busy traffic at times.



The profile of the Hertog-Janlaan differs from other streets around Elisabethpark. Parking plots are split up by small green pocket squares.

Also the Hertog-Janlaan allows continuing car traffic.



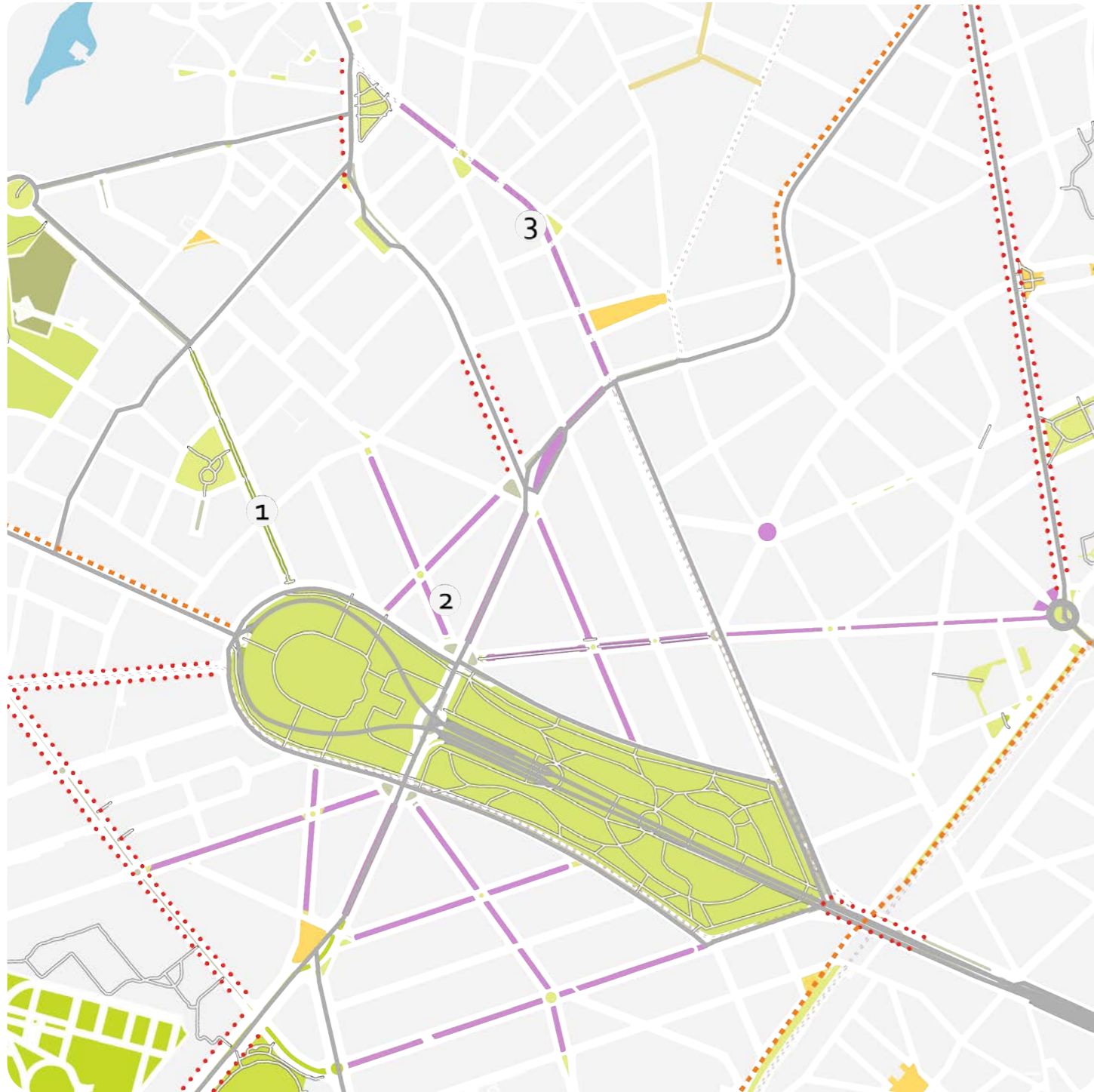
The Northern part of the Jetselaan differs from the southern and middle part. It is not important for continuing car traffic, as the N290 (Wereldtentoonstellingslaan) lies parallel to it.

This part of the Jetselaan contains many shops, and large Platan trees that have space to grow in a loamy soil.

1. PARKING

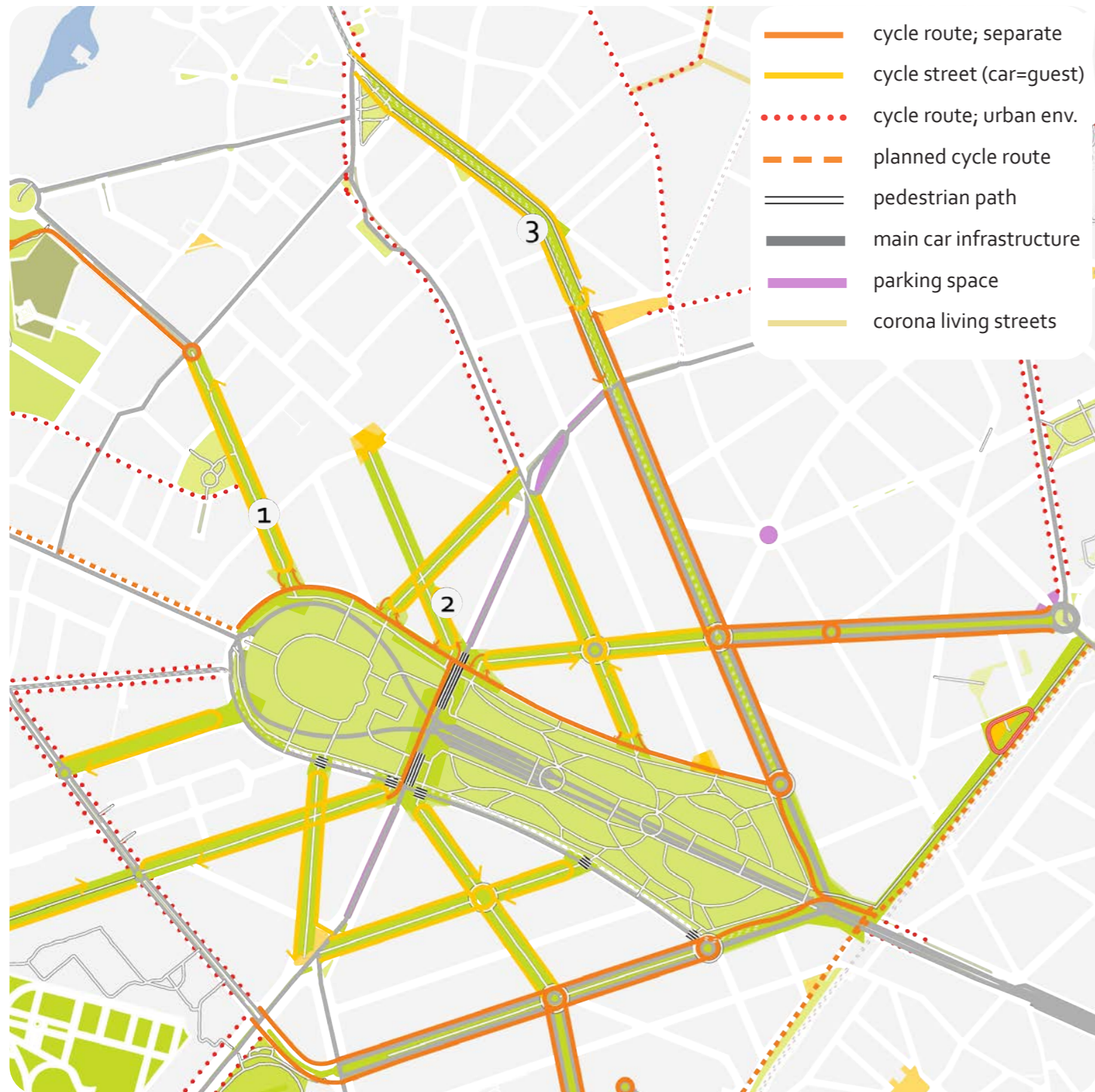
local traffic only. Current profiles

- cycle route; separate
- cycle street (car=guest)
- ⋯ cycle route; urban env.
- - - plannen cycle route
- = pedestrian path
- main car infrastructure
- parking space
- corona living streets



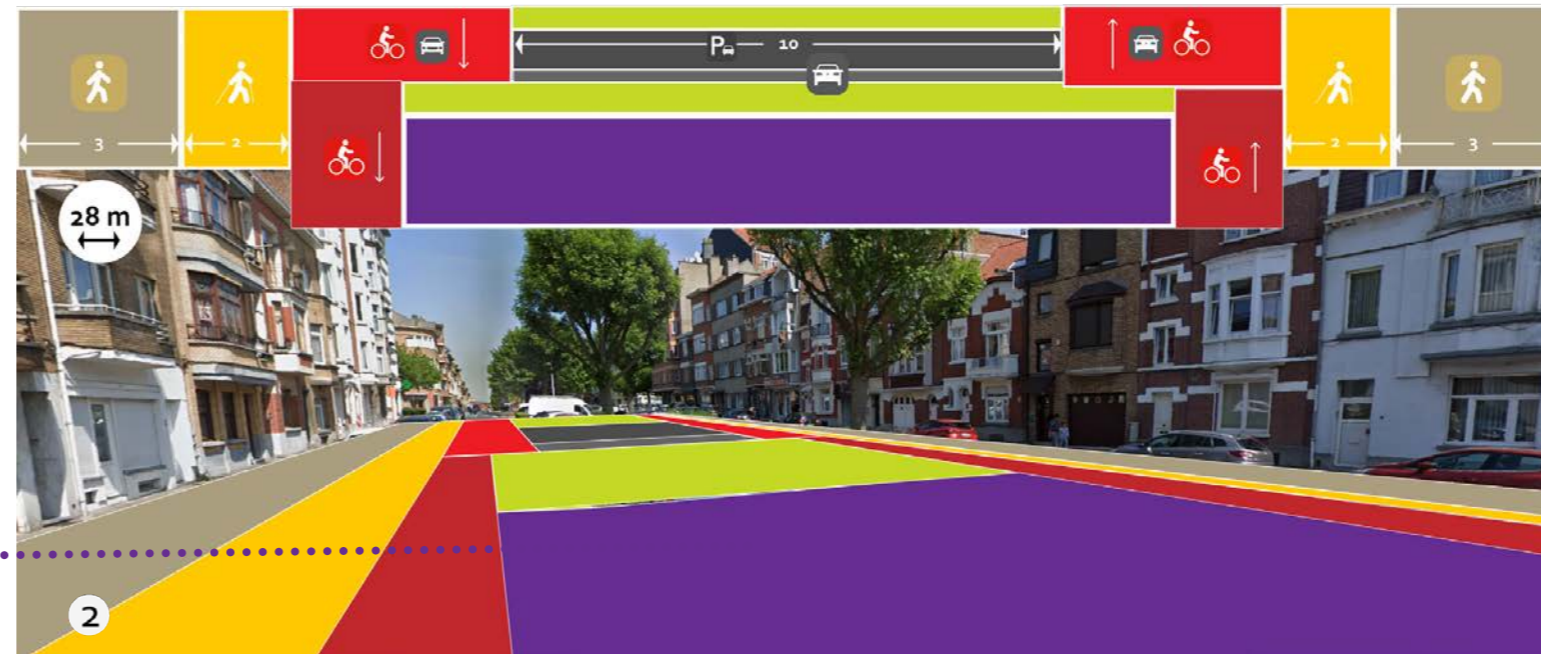
1. PARKING

local traffic only. Improved profiles



When the “van Overbekelaan” was only accessible for local traffic (dead end street), the streets bordering the green middle could become bicycle streets. Destination car traffic would be welcome, but as a guest. A different asphalt colour with clear “cyclestreet” signs could clarify this hierarchy.

A row of parking spaces can even remain, it is more important that the middle green part is not constantly crossed.



Hertog-Janlaan could be treated differently than other streets. Since it doesn't have one consistent profile, a transformation could start with that characteristic.

By turning it into a dead end street, the end of the street could be made completely car-free. The returning point for cars would be after the last parking spaces.

The end of the street can become a square or playground, edged by a cycle path. This can already be created by painting play lines on the asphalt.

The parallel parking strips on the sides could be replaced by loam or green strip











If the loam surface next to the tram line is widened by 0.5 meters and parking on it is prohibited, a pleasant walkable path will be created.

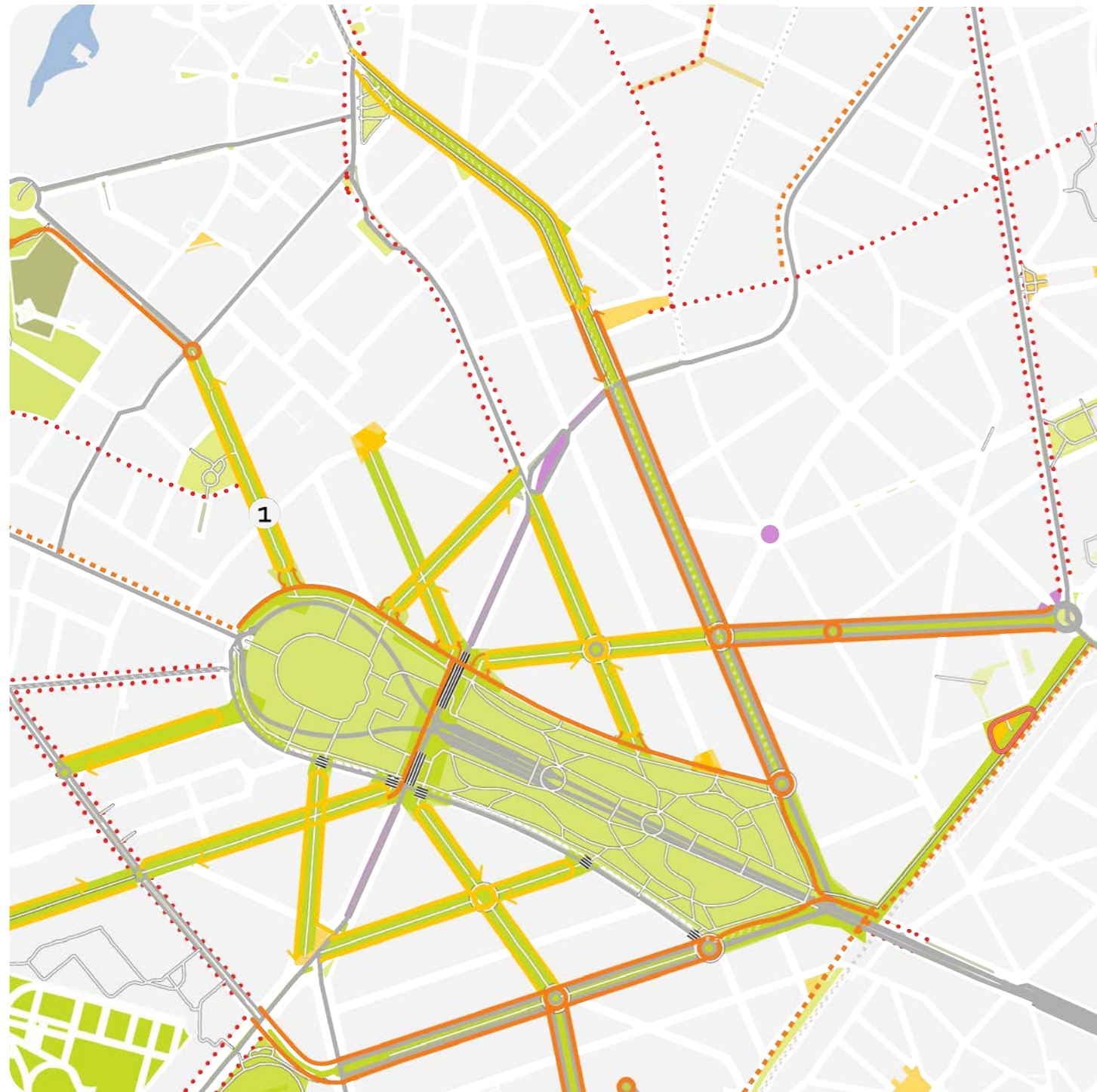
Cars can still reach the shops and the park, but they are guests in the street that is mainly for cyclists.

1. PARKING

local traffic only. Optimal profiles

In fact, all purple streets on page 71 have the same width as the Van Overbekelaan (28-30 meters). The potential shown can be in any of them.

-  cycle route; separate
-  cycle street (car=guest)
-  cycle route; urban env.
-  planned cycle route
-  pedestrian path
-  main car infrastructure
-  parking space
-  corona living streets



An even more optimal street is conceivable. In this option the symmetrical street pattern is abandoned in order to create more qualitative public space. A two-way bicycle street (again with destination car traffic as guest) could be constructed over a width of 6 meters. That would also fit one side of the street, if a parking strip was sacrificed for it. Utrecht (see image) has some very pleasant 'cycling streets' in a width of six meters. Cars can ride here, in two directions. But the color and profile make sure they behave as guests.



Then the other side of the street does not need any car or bicycle infrastructure at all in this asymmetric street profile. A green carpet could be placed up to the front doors. The street becomes a true linear park.



2. ELISABETH ONE-PARK

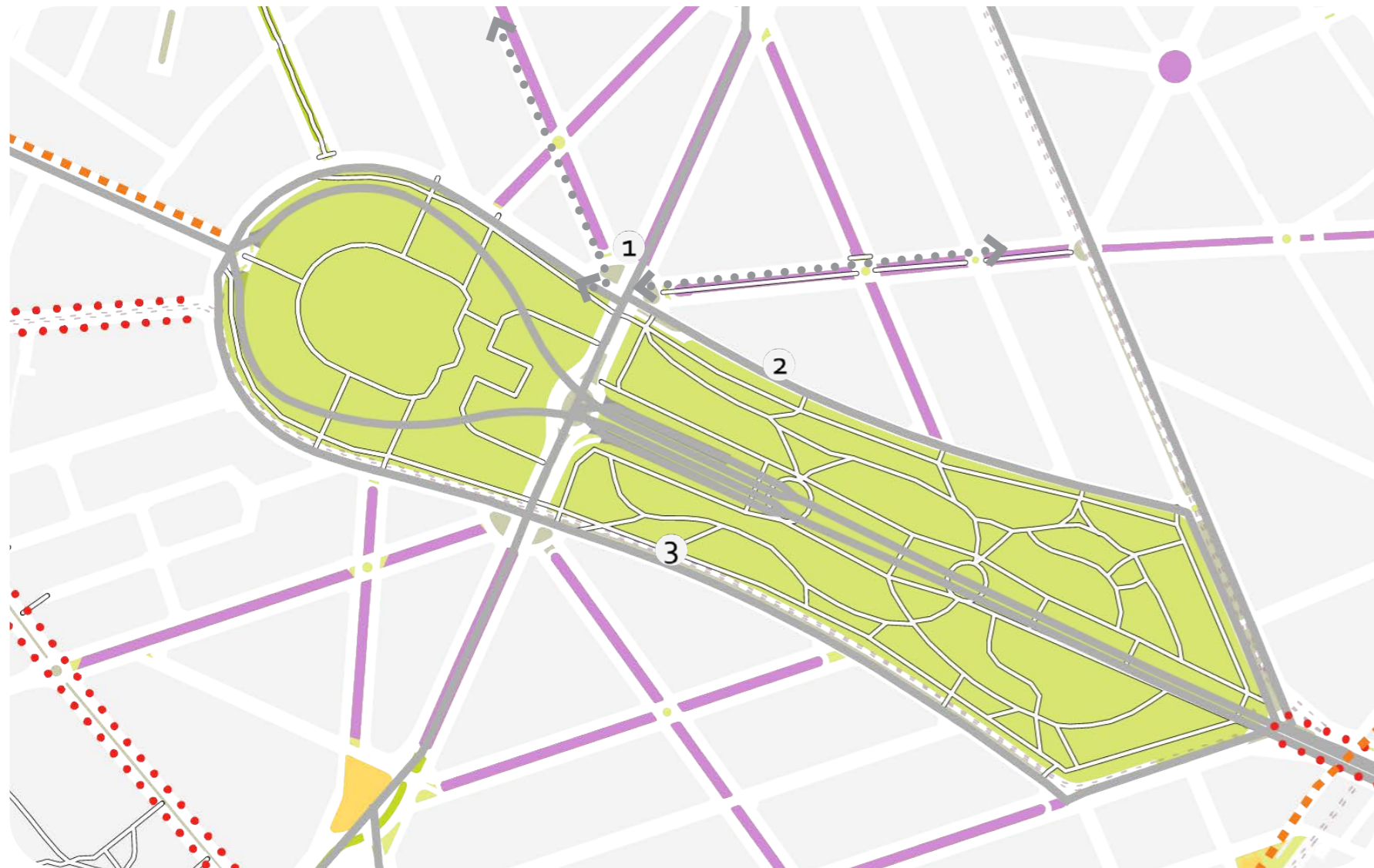
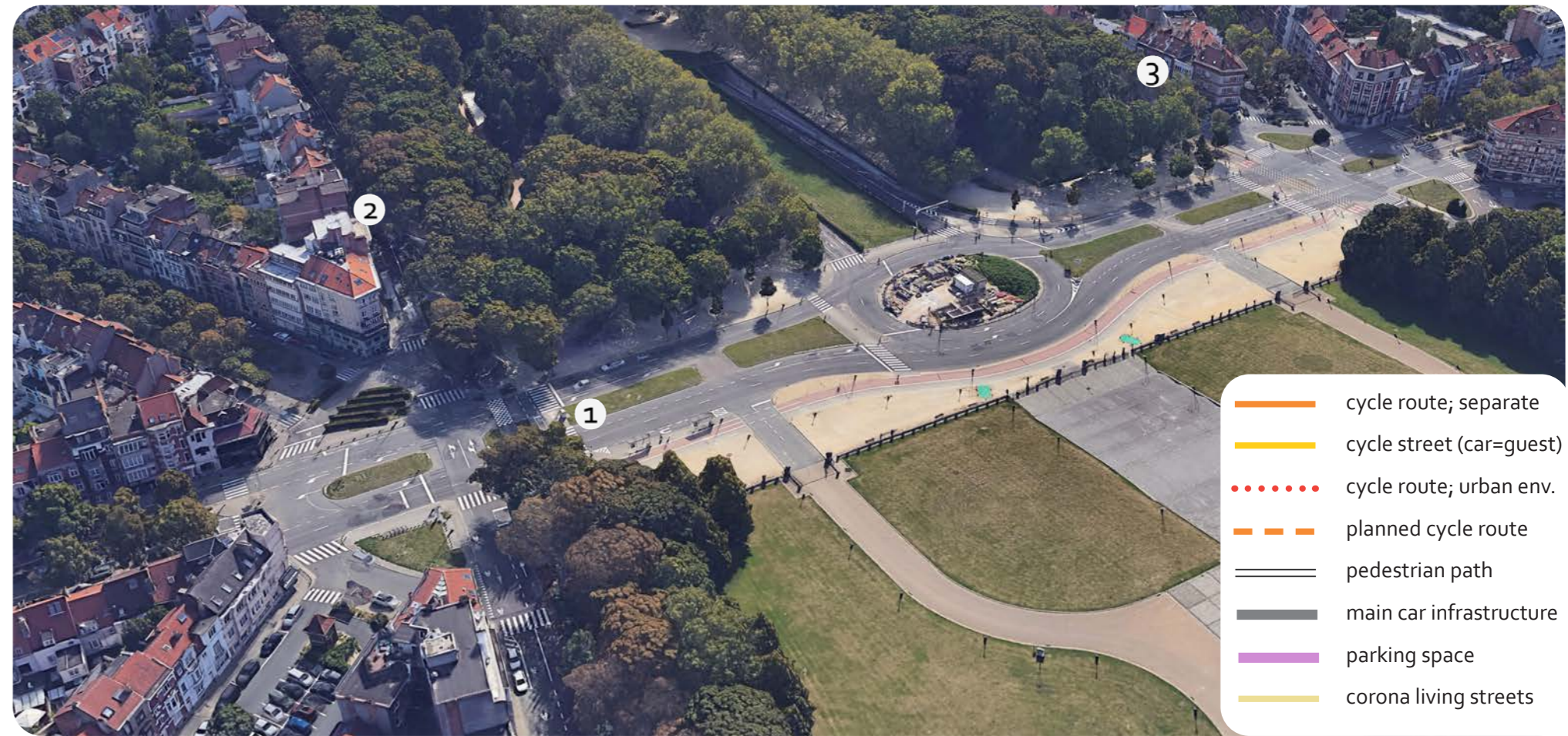
current separation

The ambition to make several neighbourhood streets only accessible to destination car traffic will also have consequences for the connection between both sides of Elisabethpark.

Currently, six different roads converge where people have to cross the two sides of the park (1). It is a very traffic-intensive jungle of traffic lights. There is a struggle for the flow of car traffic, cyclists and pedestrians.

The complex traffic situation along the N290 separates both parts of the park physically for active transport modes.

It is important to note that the two outer sides of Elisabeth Park (2 and 3) differ. The south side is more infrastructural with two-way traffic and a tram line. The north side is one-way traffic for cars and cyclists, and a bus lane in the opposite direction.



2. ELISABETH ONE-PARK

mega zebra

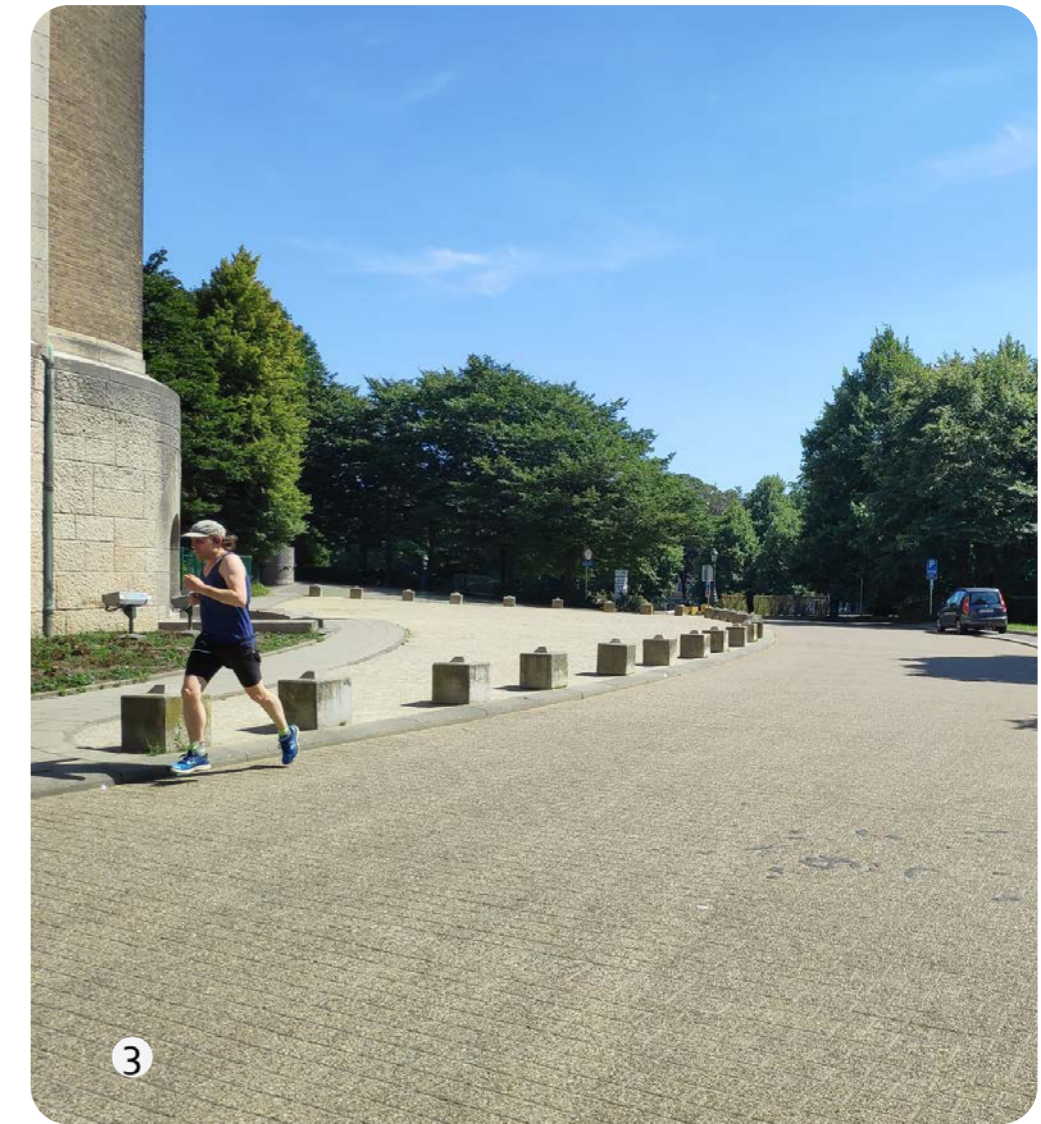
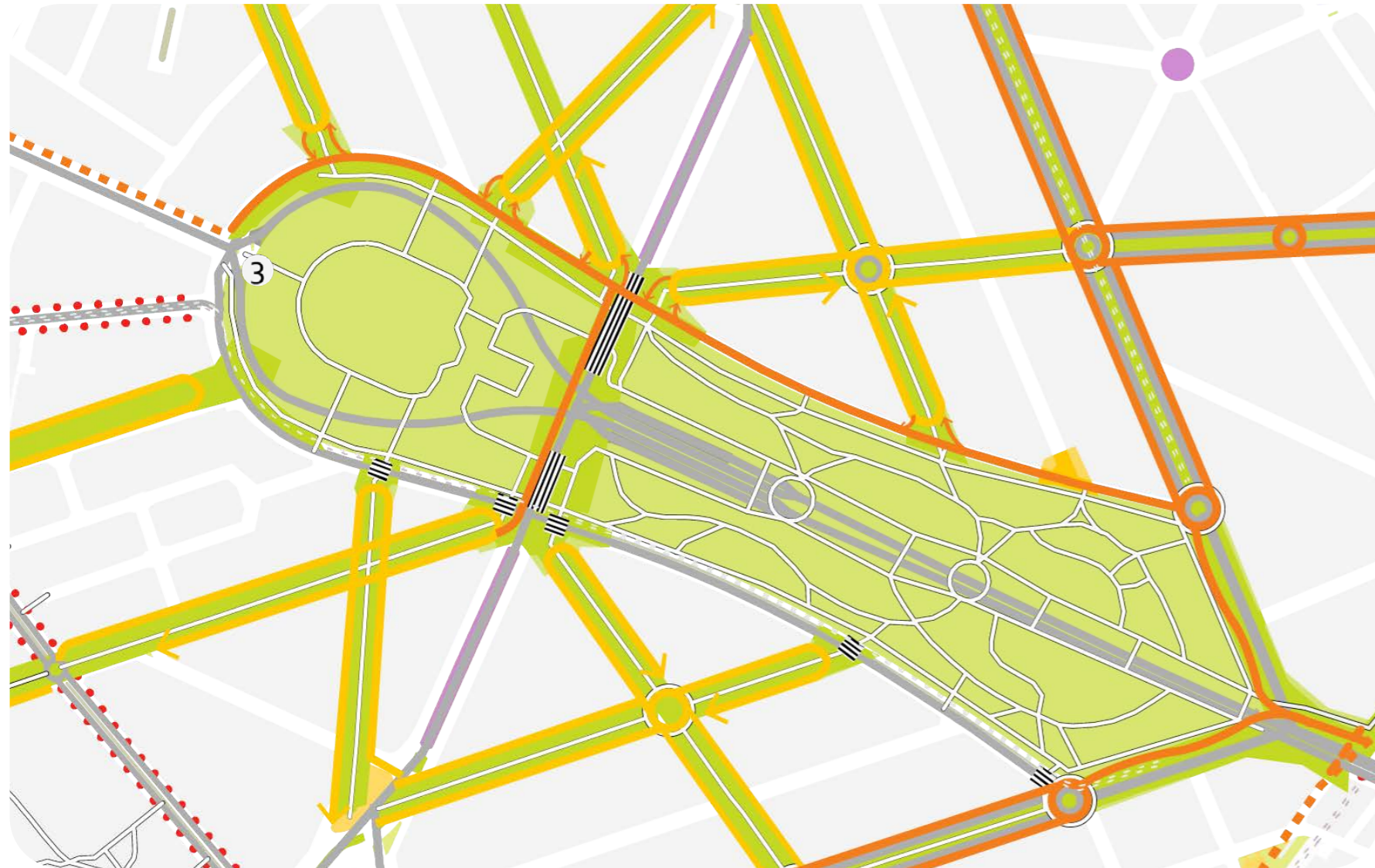
To start; the situation is complex, many types of different solutions can be addressed.

But making the Broustinlaan (1) and Hertog Janlaan (2) as destination streets would already reduce traffic and intersection complexity and intensity.

This will be reinforced when the northern park edge is converted into a bicycle street. The bus could stay, but the transit-traffic would either take the tunnel or the route on the south edge of the park (where there is already a tram line and more car space).

Subsequently, a large bicycle + pedestrian crossing could be made between the two sides of the park. If traffic is effectively slowed down (speed bump), traffic lights may not be necessary. A mega pedestrian crossing could be better. A similar example is given between Park Vorst and Dudenpark.

Around Koekelberg Cathedral (3), the innermost path ring should be made "park-like", with a loamy, green path instead of a parking lot. Then Elisabeth Park would be much more integrated, both in terms of use and experience.



3. PARKLAP GANSHOREN

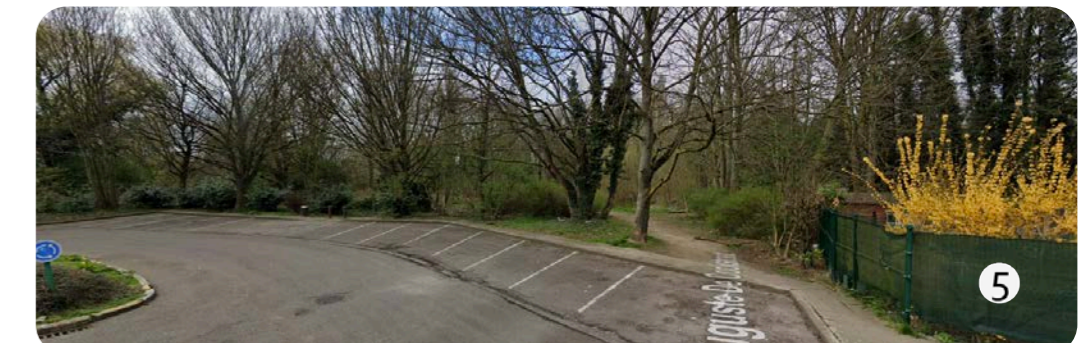
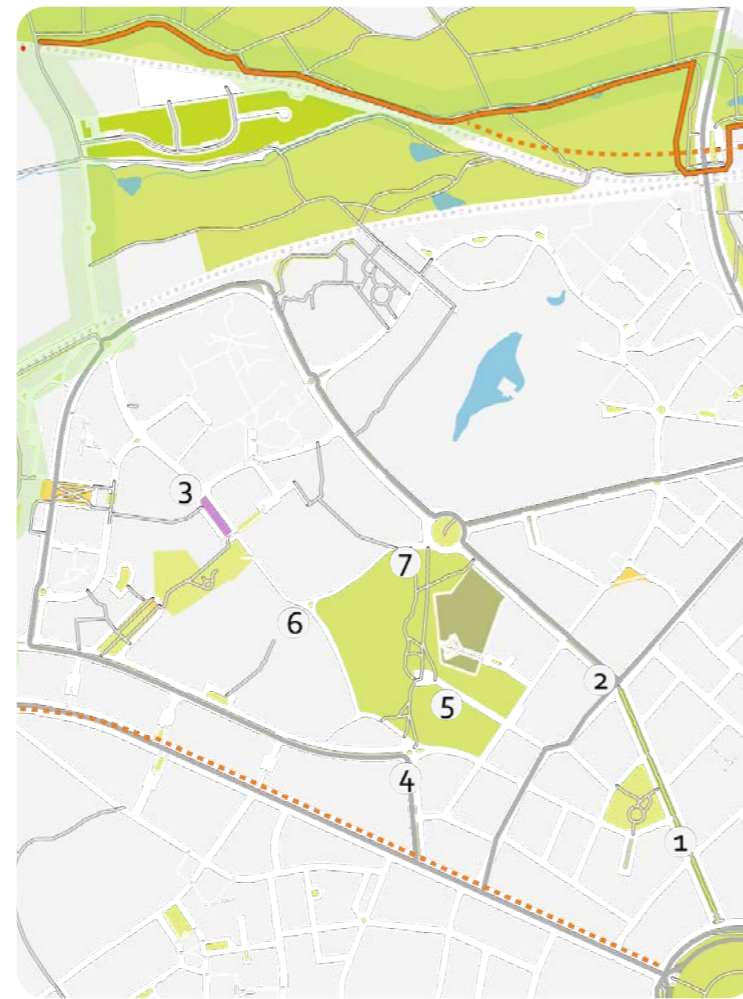
loose ends

Reprofiling these streets as 'sections' is most valuable when these attractive profiles have a certain continuity. This can be achieved by making walkways continuous, giving them the same type of surface and width, laying crossings in line with the path, etc. When attractive profiles are consistent in between two destinations, green streets routes become real complete green connections.

From that perspective, Ganshoren has great potential. The van Overbekelaan already has quality (1). Unfortunately, that is only partial. In the northern part (2) it loses its green profile. It changes back into a gray parking street. Vandervekenstraat (3) is also quite spacious, peaceful and green. Minimal improvement would be needed to make it a true "park link".

Exactly between these two streets is park Ganshoren (that's what we call it because as far as we know it has no real name). You can cycle around the park where you don't see it. We cycled around the park, but did not notice the presence at all. All entrances are hidden (4 and 5), absent (6) or vague (7).

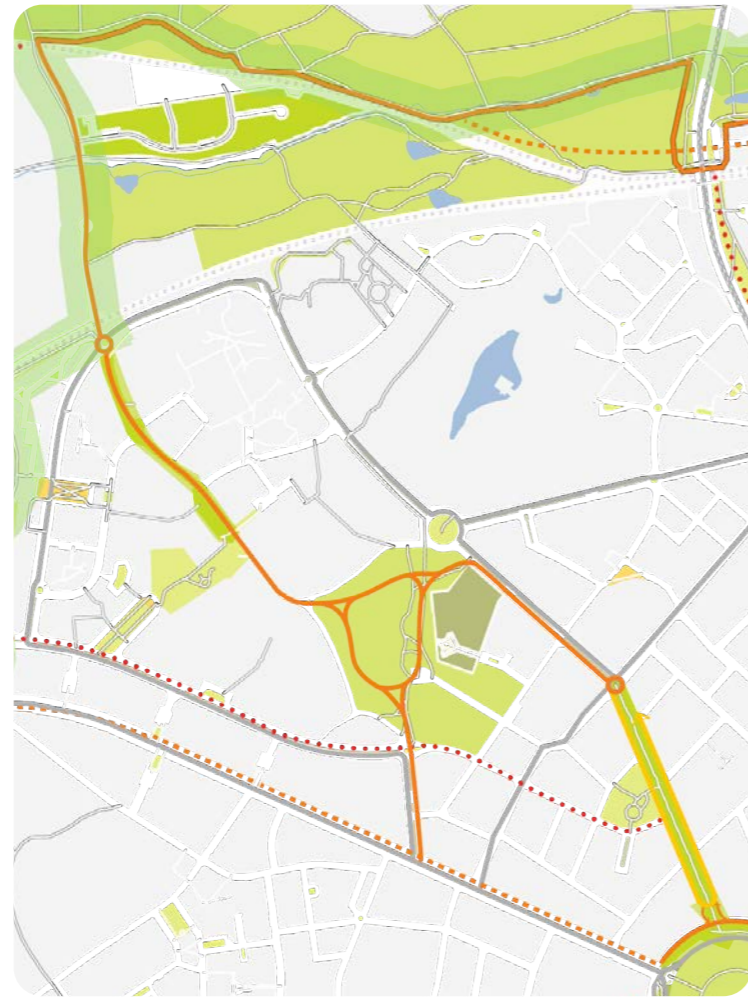
The park has no circular footpaths, the number of paths is minimal. The park has no meaning for runners yet. It is hardly used as such (Endomondo data).



3. PARKLAP GANSHOREN current profile ->

Park Ganshoren is potentially the green junction that connects the van Overbekelaan and the Vandervekenstraat. It does this by adding a full lap in the park with clear entrances. It is a great bicycle "roundabout" that also gives runners and pedestrians more metres of park.

Currently, the van Overbekelaan has a symmetrical profile with car traffic on both sides. It leaves a streak of green in the center that has little meaning. Traffic is one-way on both sides, including an extra bus stop in some places.



proposed profile

Traffic needs a place on this street, it is a main motorway. But if infrastructure is bundled in one side (instead of the pointless green stripe), all green and bicycle space on the park side can be bundled.



3. PARKLAP GANSHOREN

possible entrance + route

Subsequently, the routes of park Ganshoren smoothly connect with a continuous green van Overbekelaan, and Vandervekenstraat on the other side of the park.

By adding activating facilities at the entrance, the park gets the activating facelift it deserves.

It is an investment in the liveliness of a neighbourhood park, as much as it is an investment in a route. And of course it needs a marked running route.



4. Connection L28

two sides

The new bicycle highway (L28) would become a perfect running connection between T&T Park and Elisabethpark. But the "way" it will be designed is key. It will follow the train track, that much is known. But the train track has two sides with parallel streets.

The northwestern street "Jean-Baptiste Serkeynstraat" (1) is in front of many thresholds. It is a spacious neighbourhood street with a fairly safe atmosphere.

The southeastern street is the "Leiestraat" (2), a narrow, blind thoroughfare, not in a safe atmosphere, not in front of doors. Of course, this asphalt could be painted red to "create" a bicycle highway. That would be an investment to get cyclists from A to B.



4. L28 the right side



But, creating a bicycle highway in the 'Jean-Baptiste Serkeynstraat' could be a health investment in the neighbourhood.

By transforming the motorway and parking into a 'parkway', a more lively and pleasant public space is created at the front doors of the local residents.

It creates space for greenery, water storage, playgrounds and a safe and beautiful passage for cyclists and pedestrians.

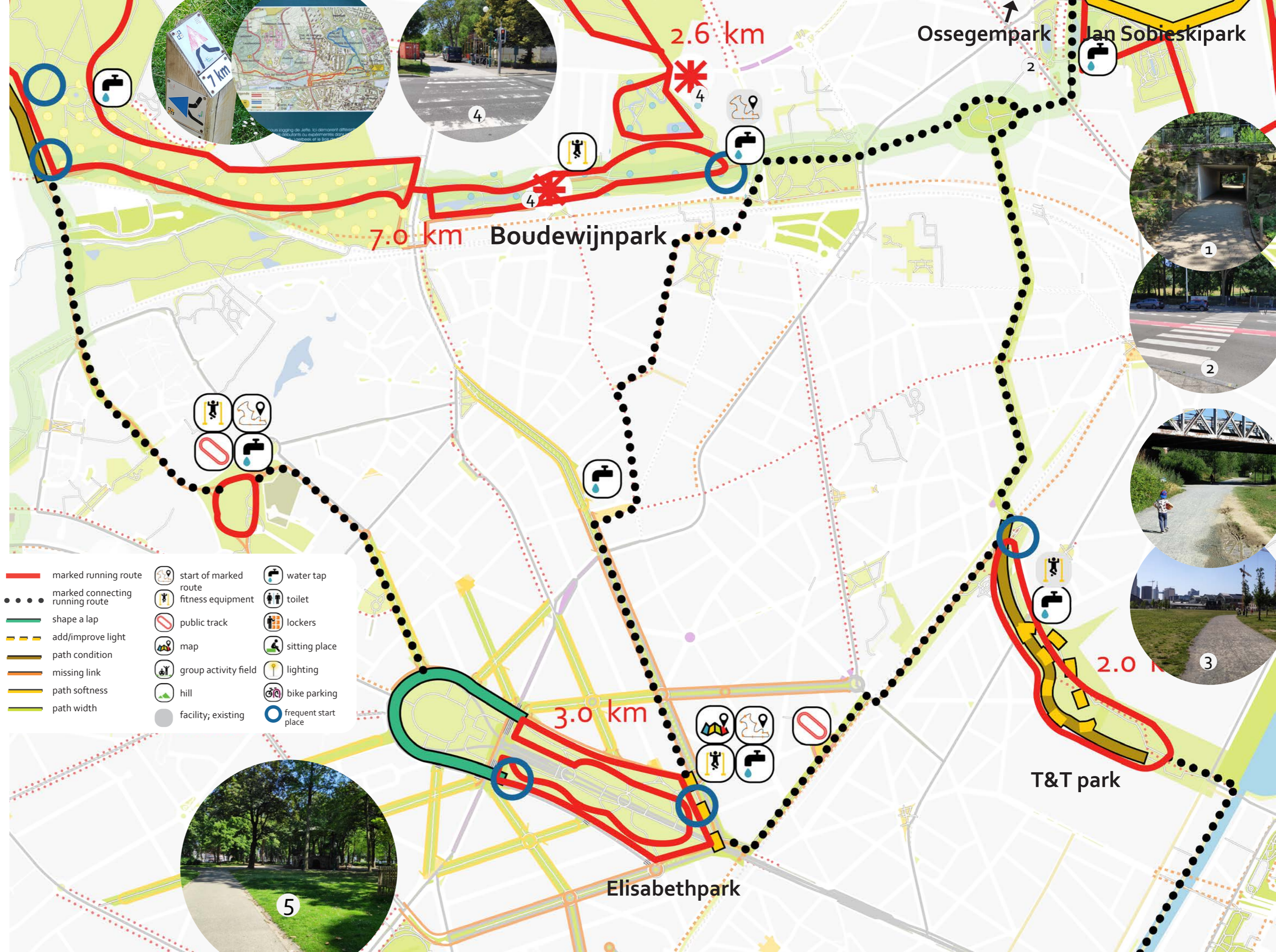
It would be a place for runners to get together, do some exercise or intervals, and run to T&T Park or Elisabethpark. Or both. And of course it should have a public water tap.

RUNNER ADDS

optimizing

Boudewijnpark, T&T Park and Elisabethpark form the existing basis on which additional runner-friendly measures can be taken.

- In addition to the popular existing running route in the Boudewijnpark, several marked running routes can be added. Although the Elisabeth Park is relatively small, a 3 km route could be laid out by making creative use of existing paths. When this route would be connected to a Route in T&T park, they together form a real running unit.
- There is a truly beautiful route between Jan Sobieskipark and Ossegempark. But you must know the way (1). A guided route would be useful, it could be connected to the Boudewijnpark. Crossings are not yet very safe (2).
- T&T park deserves light in the open part (3). The eastern part already has light, but the large western lap does not. The light posts could be small, pointed towards the path.
- The condition of the pathways can be improved, they become muddy easily.
- A 150 bootcamp-running track could circle a new playground at the L28
- This district had the most requests for water taps, at various park entrances.
- At the Boudewijnpark, two intersections have traffic lights (4). This results in complaints from runners. We believe that these intersections can be solved well with effective speed bumps in combination with wide pedestrian crossings (zebra).
- The safety conditions in the Elisabeth Park deserve attention, several comments were made. Especially the lighting in the southwest of the park was mentioned.
- The southeast corner of Elisabeth Park is often used as a starting point for running (5). Adding facilities here would be perfect. There are a number of other places where this applies.
- Multiple runners noted the absence of soft paths, for example at Ossegempark.





In four areas, opportunities to improve spatial conditions for running were elaborated. How do we shape the ambitions?

ELABORATIONS

NORTHWEST

CENTRE

SOUTH

SOUTHWEST

QUALITIES

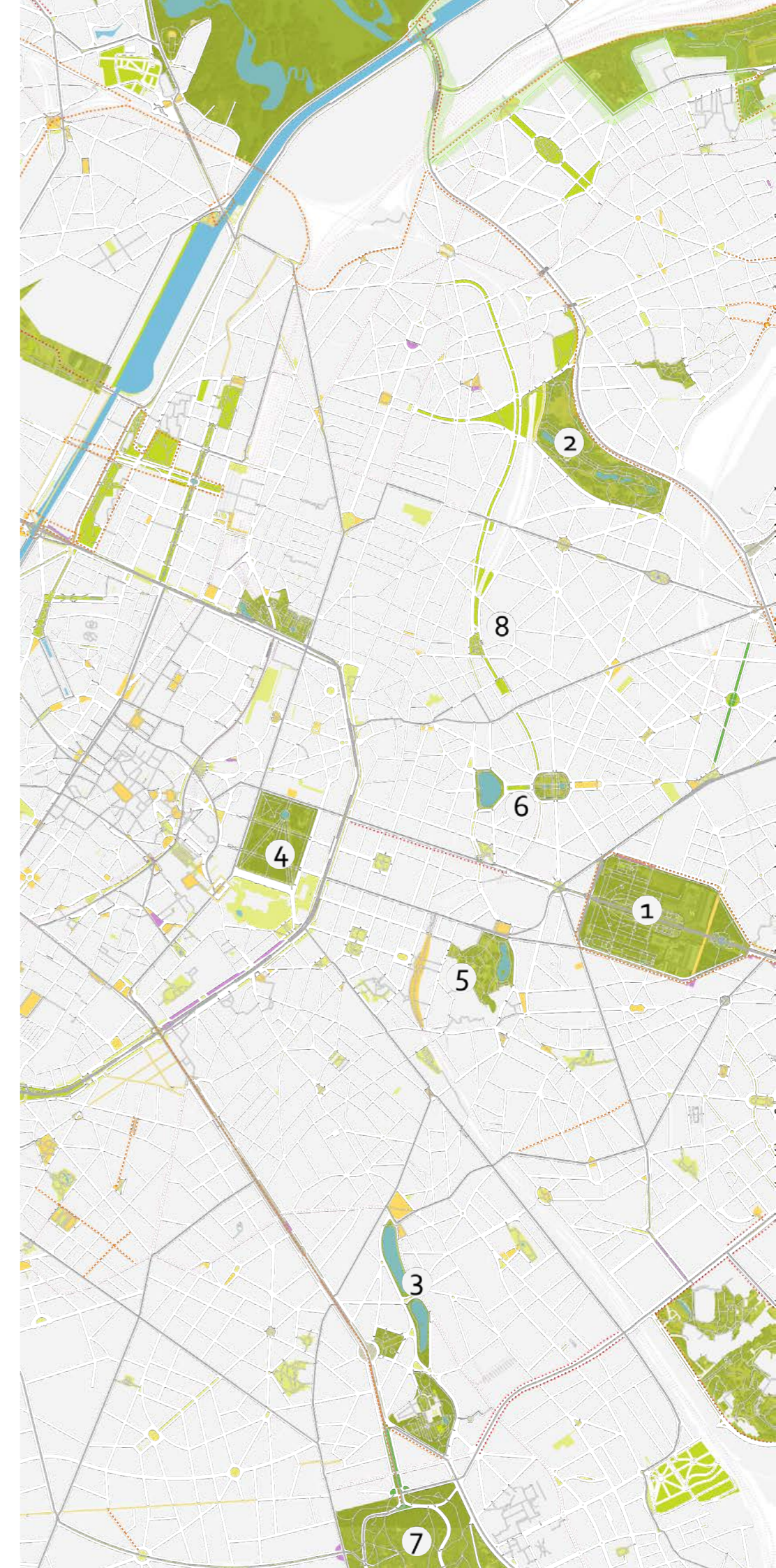
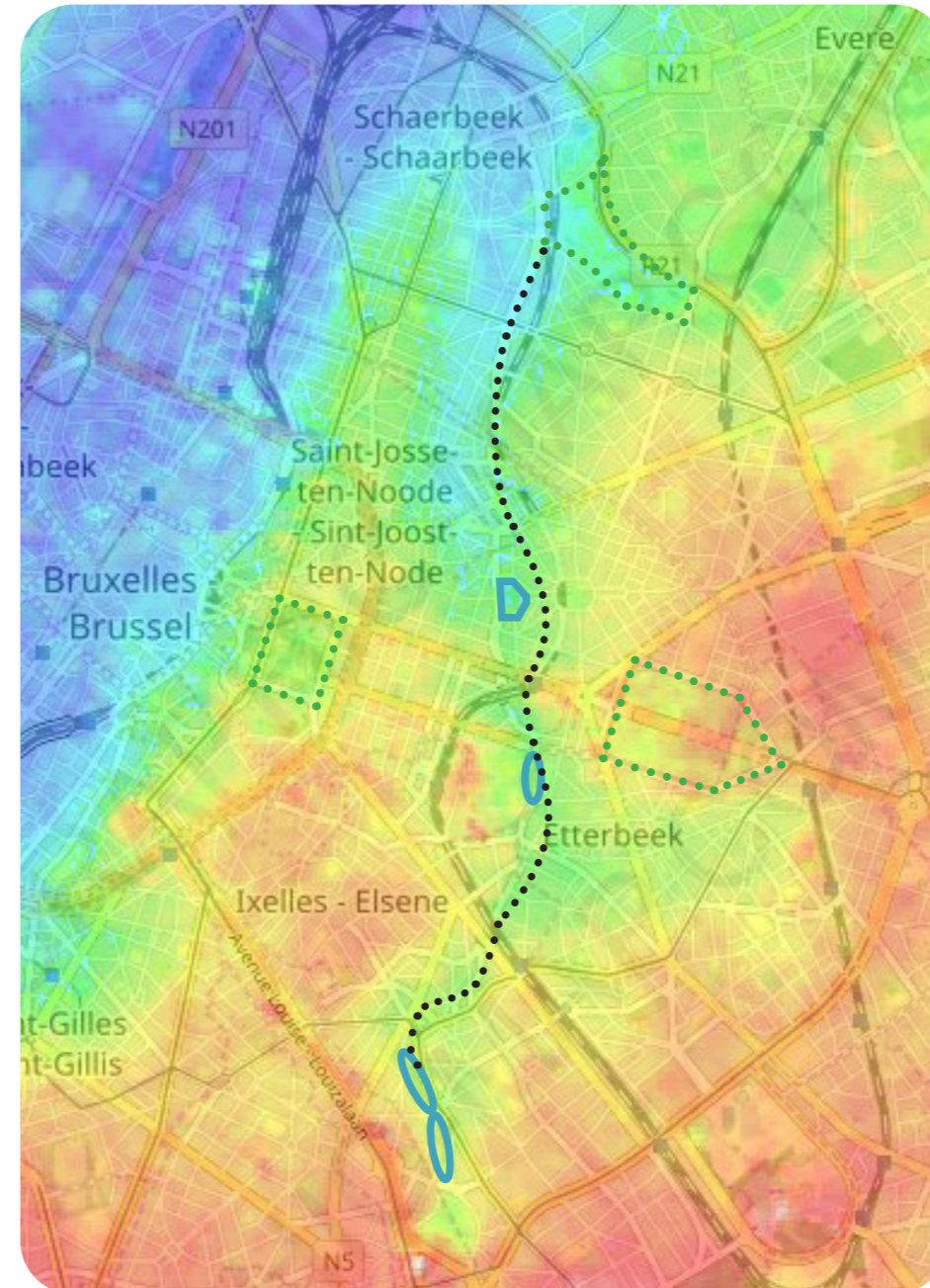
green spaces

'connect the green dots' quoted one runner. These "dots" are especially applicable in this central district. There are many parks, but for many runners, they are all quite small. A lap in/around Jubelpark (1) is 2.4 km, Josaphatpark (2) 2km, the Elsene-ponds (3) lap 1.6 km, Warandepark (4) 1.4 km. Leopoldspark (5) and Square Ambiorix (6) are even smaller.

Ter Kamerenbos (7) and the adjacent Zoniënwood certainly suit the longer runs, but most people do not live close to it. Between Josaphatpark and Square Ambiorix, a 'green line' is present (Paul Deschanellaan, 8). Following the direction of that line south, it touches a series of ponds. This is no coincidence, this is the low, continues line where the Maalbeek flows (see topo image line).



- cycle route; separate
- cycle street (car=guest)
- cycle route; urban env.
- planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- corona living streets



RUNNING CONNECTIONS

It is remarkable/interesting to observe the running patterns towards and in between parks (Jubelpark in this case).

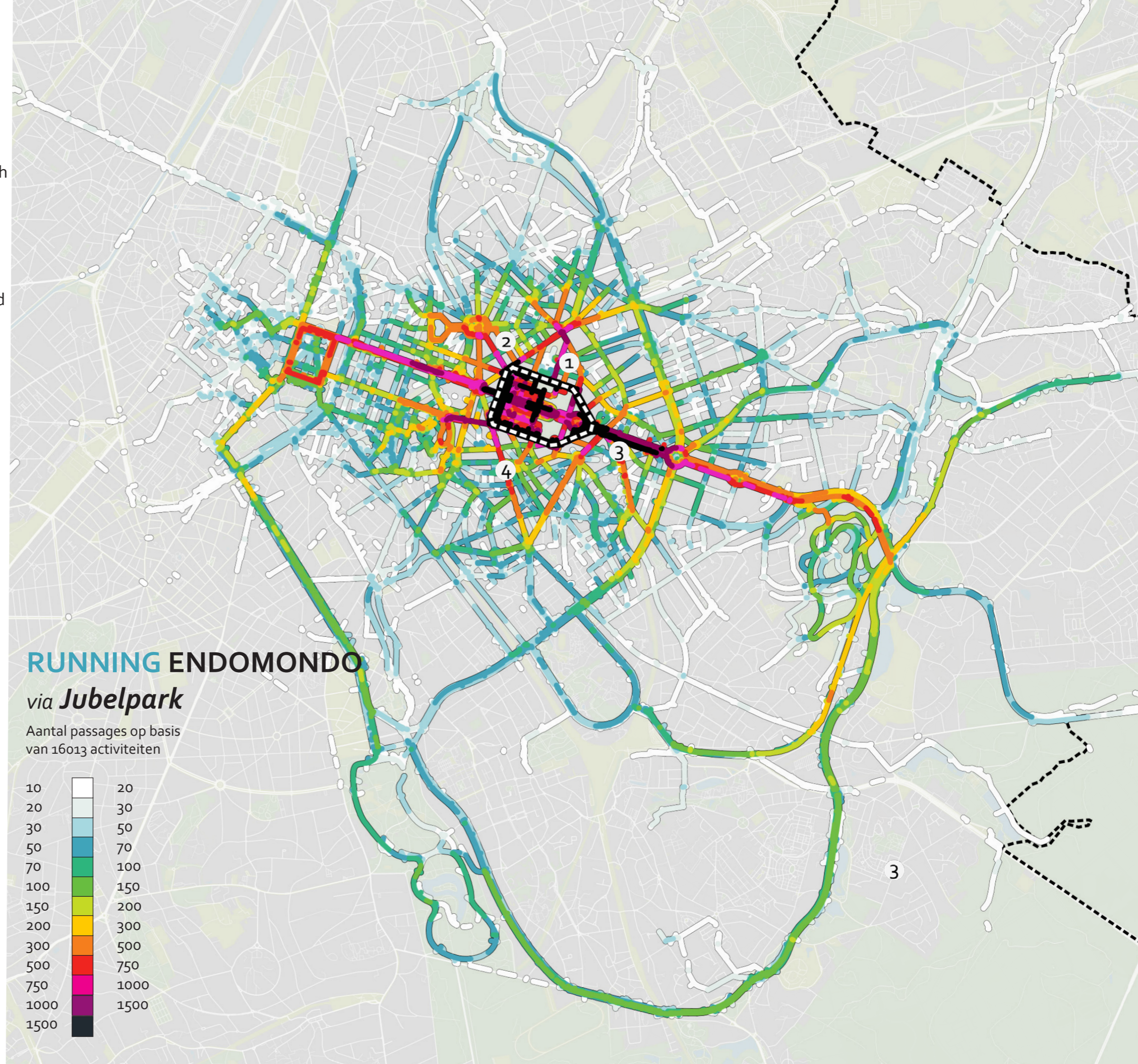
Many remarks were made about the edges of Jubelpark, where runners need to cross the street when they come from surrounding streets. It is certainly not only the Wetstraat that is used as connection to Jubelpark. The eastern Tervuren (3) is actually the most used route, certainly when both sides are counted. We will not make a design elaboration on this street, but it would be logic to make the parallel streets into cyclestreets, with more designated space for pedestrians as well.

Also streets like the Michel Angelolaan (2) and Hobbemastraat (3) are used often towards Jubelpark.

The Brussels zok is clearly visible, runners also run this well known route apart from the event.

Notable is the fact that runner do hardly connect Jubelpark to Josephatpark, eventhough it has a similar distance from Jubelpark as Warandepark. And the Warandepark is combined with Jubelpark often.

This remarkable running usage shows, that there is a challenge in connecting Jubelpark and Josephatpark better.



STRATEGY

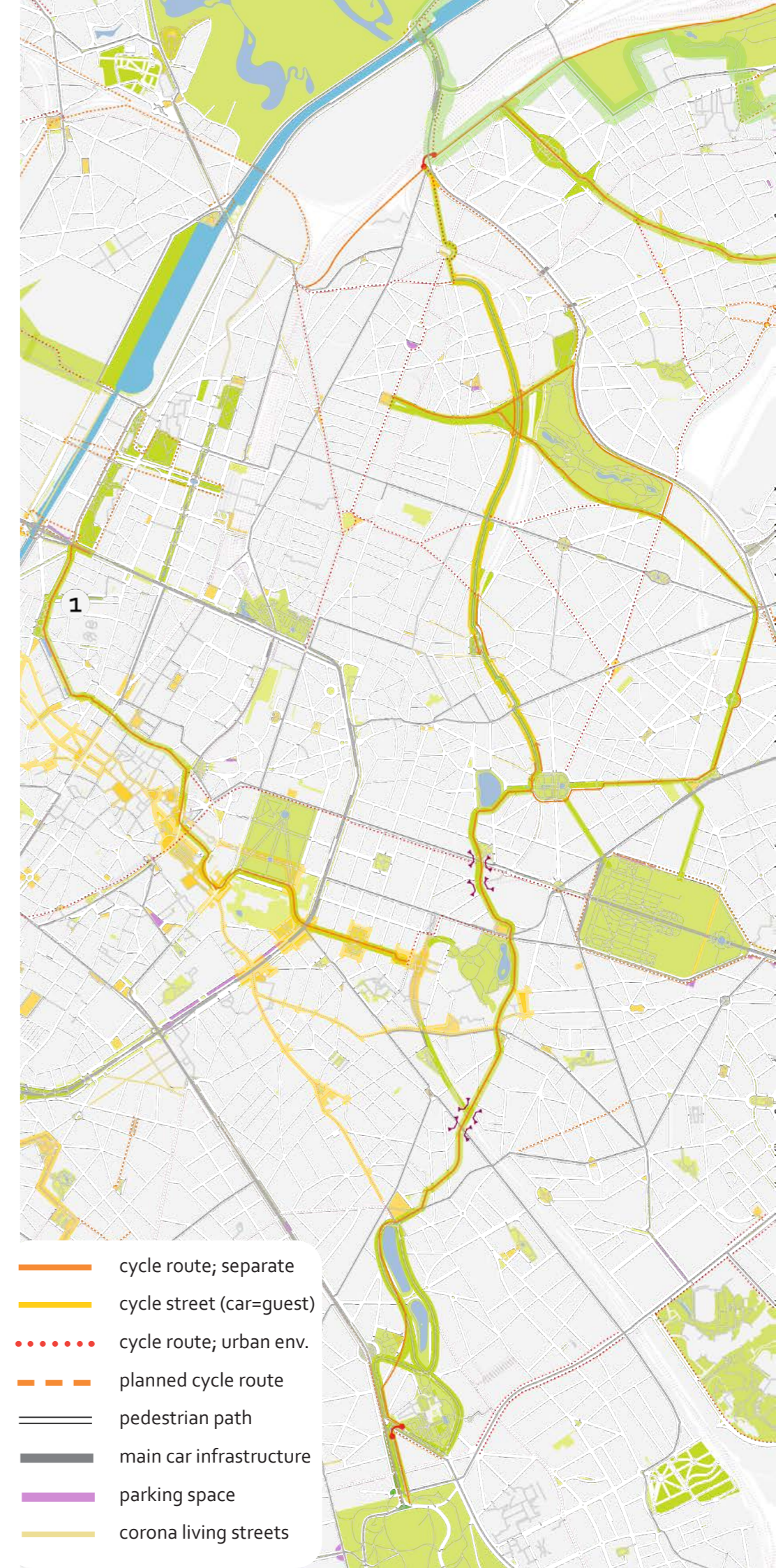
long green lines + dots

A long, continuous green north-south line makes a complete connection from north to south Brussels, from Laken park to Ter Kamerenbos. It runs straight through most city districts and follows the low topography of the former Maalbeek. On the way it connects all the green dots. In both outer parts, heavy N roads are crossed with a bridge or a tunnel. The whole green line is rarely crossed by traffic. The line runs through the densely populated neighbourhoods, giving these neighbourhoods a central green heart / artery. It separates the car traffic, they can only pass the line on the main motorways and not in the neighbourhood.

In addition, existing green streets between Josaphat and Jubelpark, which were already frequently used by runners towards these parks, can be made even more movement friendly.

In east-west direction, the Schuitenkaai (1) will be expanded with a green bicycle street in the direction of Warandepark and Leopoldpark. It is the green, parallel bicycle backbone of the "Steenwegtraject". Together this band cannot be intersected by continues motorized traffic of the inner ring road.

These two trajectories are enriched by a network of pleasant cycling streets. These streets are not necessarily green, but slow traffic has priority.



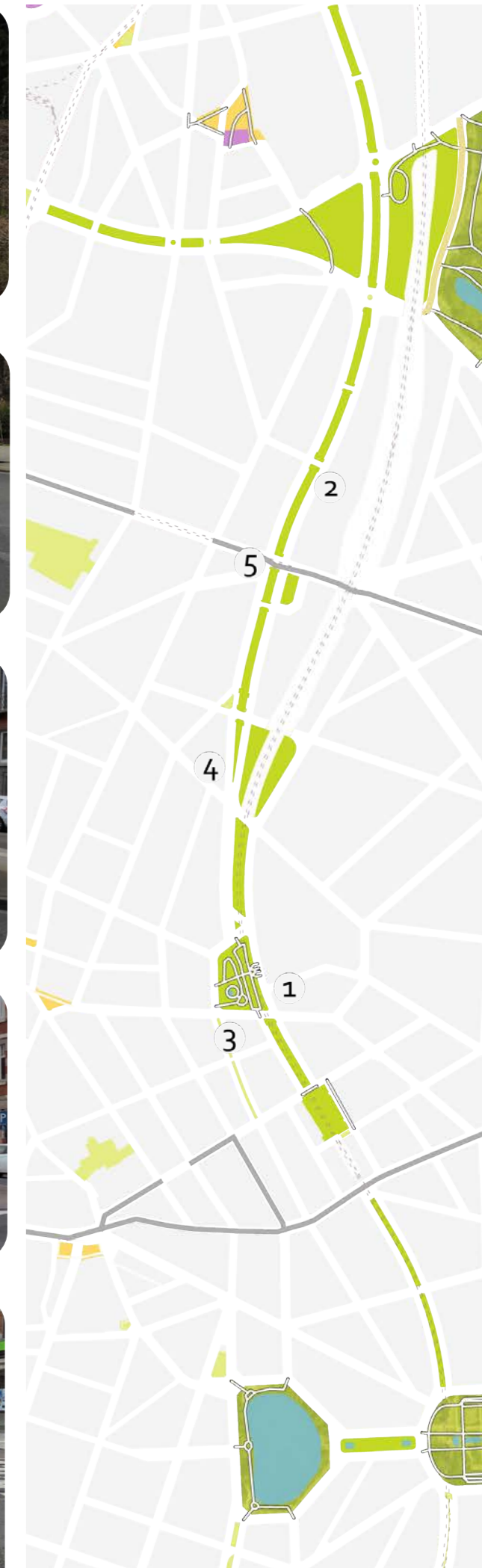
1. JOSAPHAT TO JUBEL green islands

The Paul Deschanellaan has a number of beautiful parts for running (1), walking or cycling.

But in the 1.75 kilometres between Square Ambiorix and Josaphat Park you have to cross busy car streets 14 times. It is a series of green islands, not a motion-friendly continuous green axis.

Only two of these 14 intersections are important for continuous motorized traffic: crossing with Rogierlaan and Leuvensesteenweg. The remaining 12 are neighborhood streets and should not be considered through traffic routes.

The small linear park in the middle of the street, occupies only 14 metres of the 40-metre wide street.



1. JOSAPHAT TO JUBEL a long linear park

A transformation of the Paul Deschanellaan would require two ingredients in the first place.

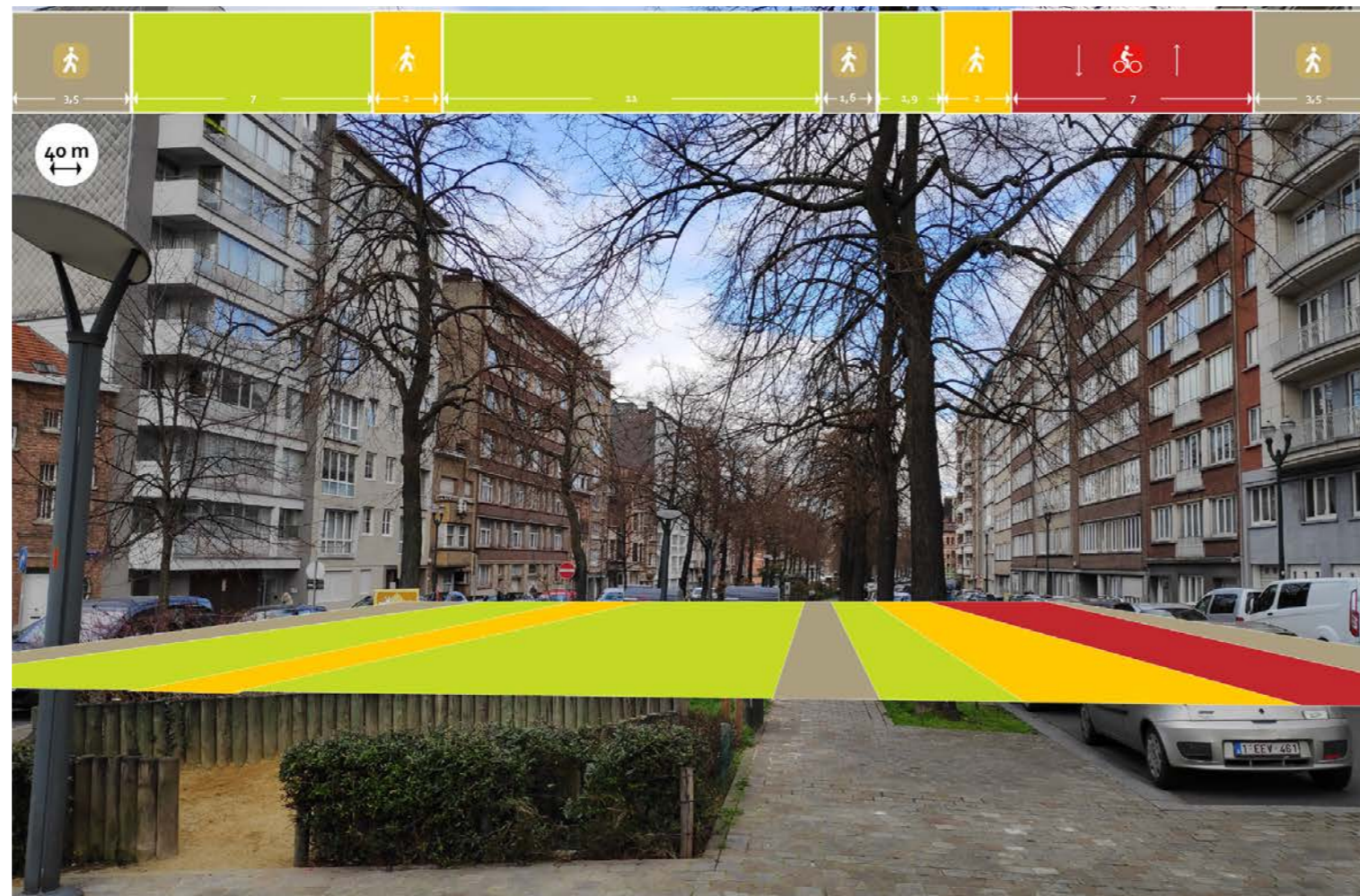
One, only cross it with roads that are important to continuous motorized traffic. The number of intersections will go from 14 to 2. These heavier intersections could be made enjoyable with “people-oriented roundabouts”. Pedestrians, cyclists and runners have right of way here and are protected when cars are effectively slowed down. In that case the traffic on these two roads could still pass, even without traffic lights.

Two: no parking on the edge of a (potential) park. In Copenhagen, South Boulevard (1) has also been built on a street that is exactly 40 meters wide. But it appears considerably more spacious and pleasant. The only real difference here is that the South Boulevard is not enclosed by parking at the edges of the middle green area. Complete basketball courts fit in it.

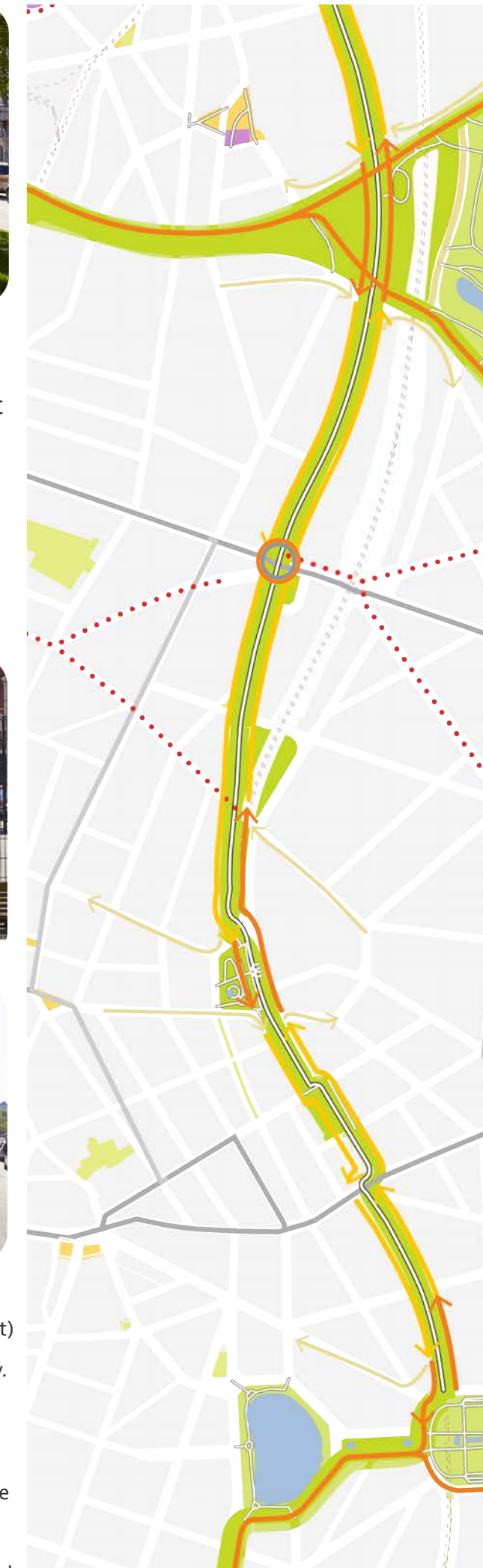
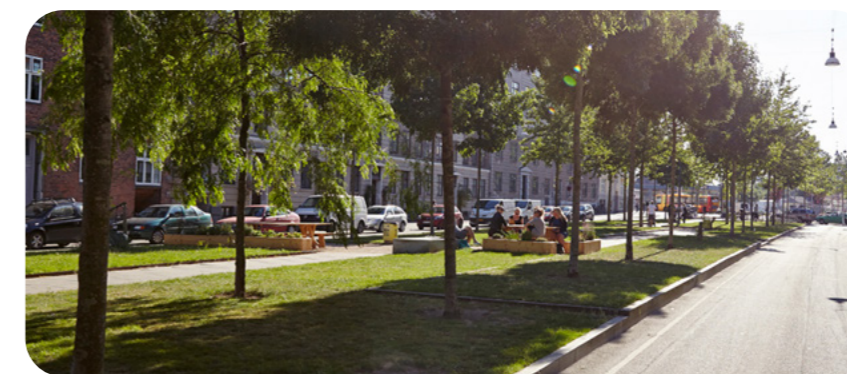
The minimal strategy for this profile is to remove the parking strips and replace them with a loamy path of 2 meters wide. Cars can still use the street, but it would be a bicycle street in which they are guests.



The optimal strategy would completely take out traffic in the street. The pavement could be directly linked to the park area on one side (2), and a cycle path can run through the park on the other. Runners can choose.



The path through the southern Boulevard in Copenhagen does ‘kink’ strongly. That creates spaces and a ‘slow’ feeling. We can recommend more straight side paths for runners in addition.



- cycle route; separate
- cycle street (car=guest)
- ⋯ cycle route; urban env.
- - - planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- normal neighbourhood street

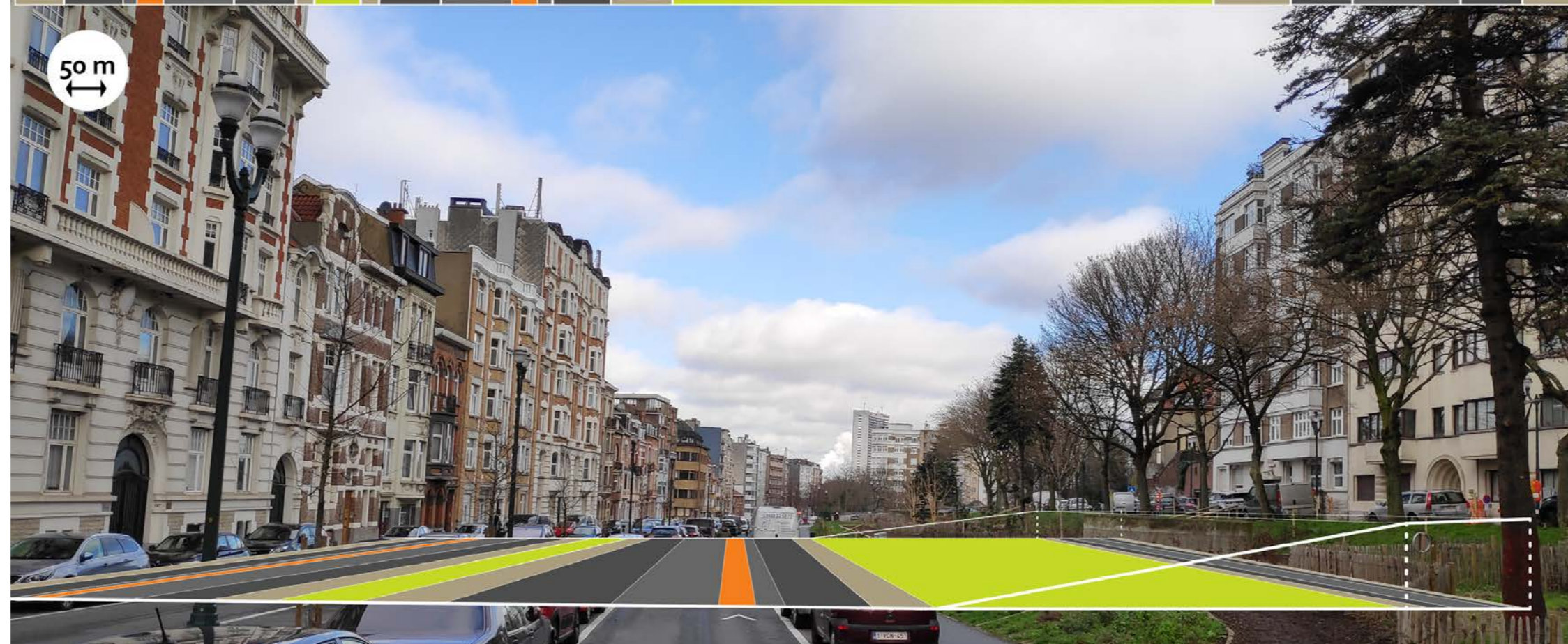
1. JOSAPHAT TO JUBEL

the widest street

The 17-metre wide, green area along the Paul Deschanellaan between Square Armand Steurs (1) and Trooststraat (2) has recently been converted into a small linear park. It used to be inaccessible.

Although this is a positive development for walkers and runners in this street, this 50-meter-wide profile still has no less than 6 rows of parking.

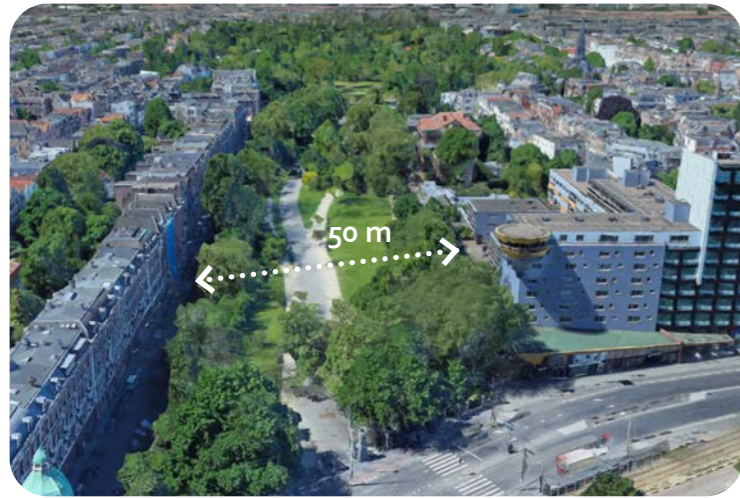
The separated one-way car streets, everytime with parking on both sides and the fragmented designated zones for different users (especially cars and cyclists) make the street feel very car-dominated and leaves an enormous spatial claim for asphalt. Two third of the 50 meters is asphalt.



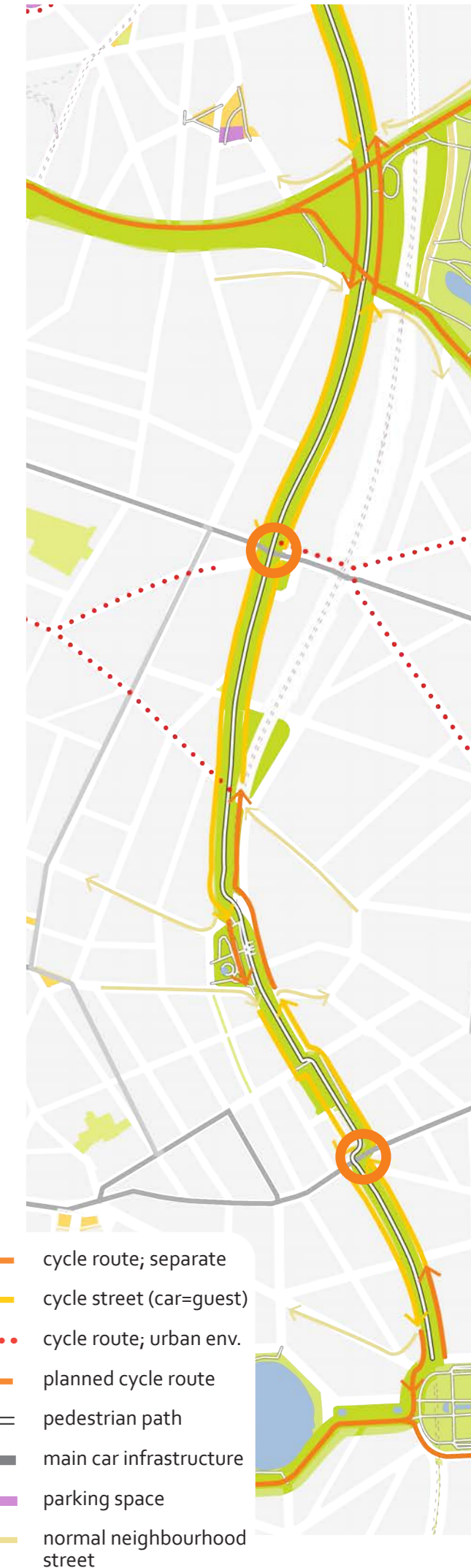
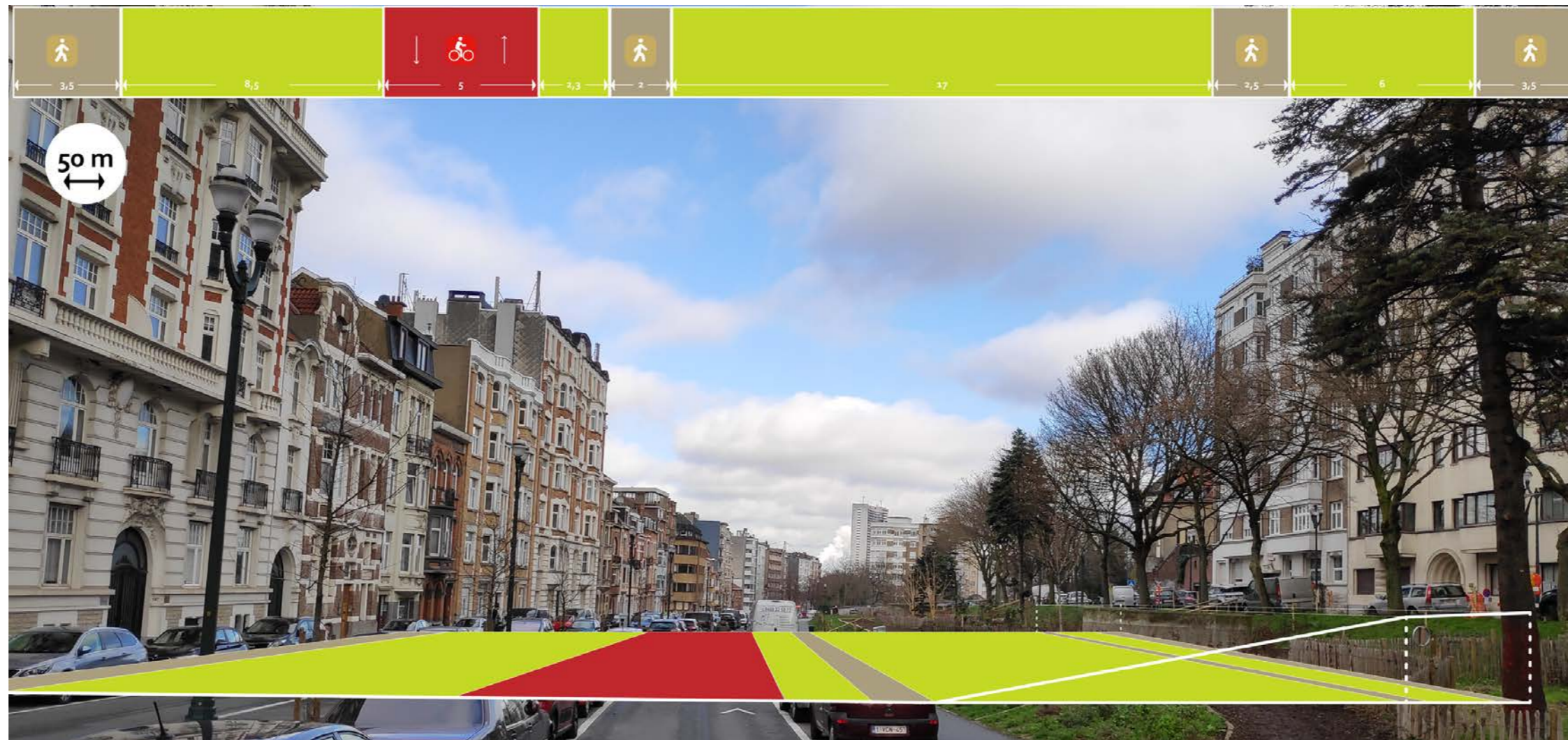
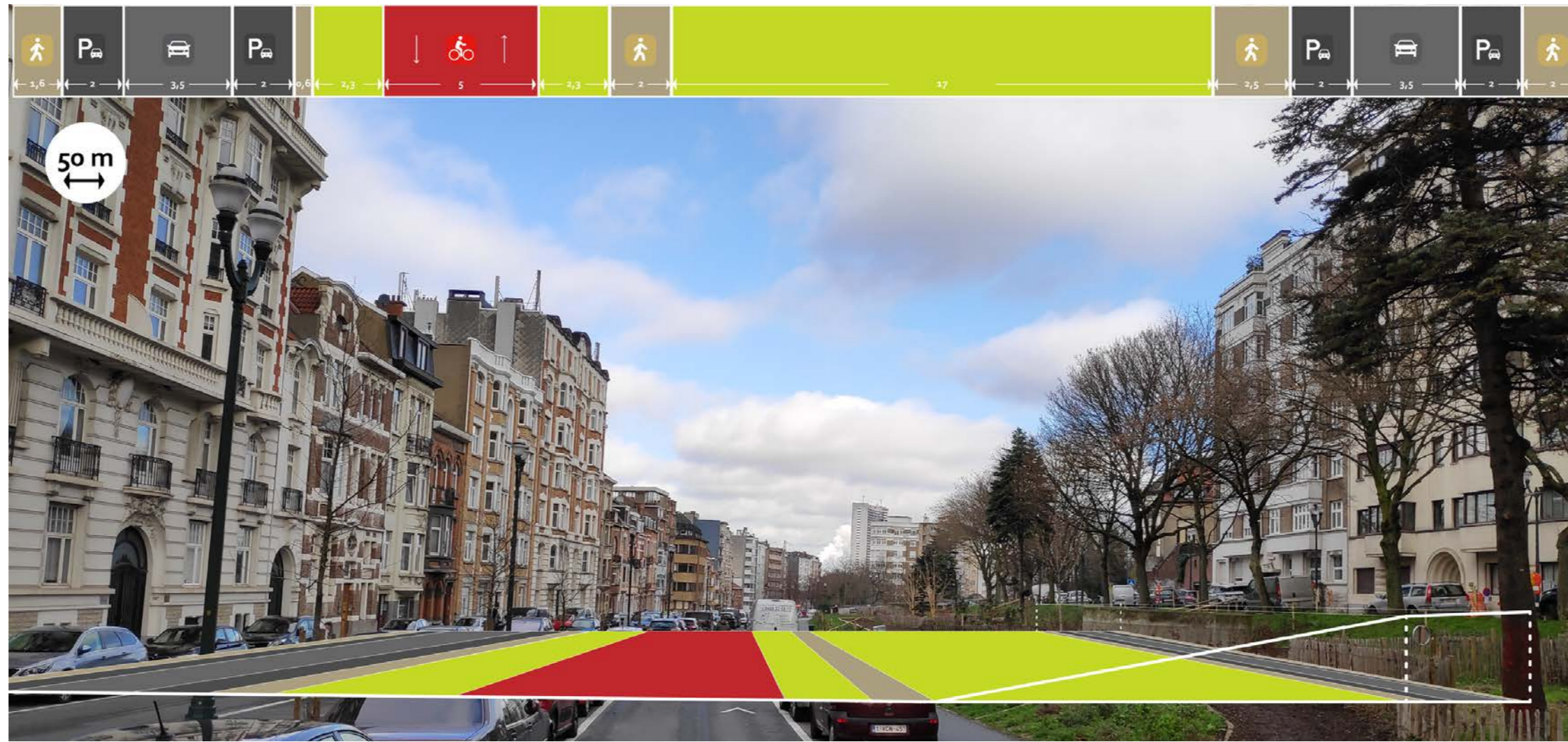
1. JOSAPHAT TO JUBEL a long liniar park

50 meters is enough to create a real linear park.

The most important intervention is to cluster the fragmented zones: the green area in the middle must become wider, with a substantial two-way cycle path through it. Car infrastructure and parking are being pushed to the sides, next to the houses.



The two photos above show the narrowest part of the Vondelpark in Amsterdam. This part of the park is also 50 meters wide and shows what is possible in an optimal 'street' profile for the Paul Deschanellaan: A liniar park from door to door with a wide parkway for cycling, running and walking through it and plenty of opportunities for games and sports. This space does not even feel like a street, it is an absolute park space.



2.AMBIORIX TO LEO

grey to green

The logically low 'Steenweg op Etterbeek' (1) runs underneath the Wetstraat and underneath the railroad. It would be a perfect connection for both slow traffic plus the bus. The N205 lies parallel, it would remain as the main car artery.

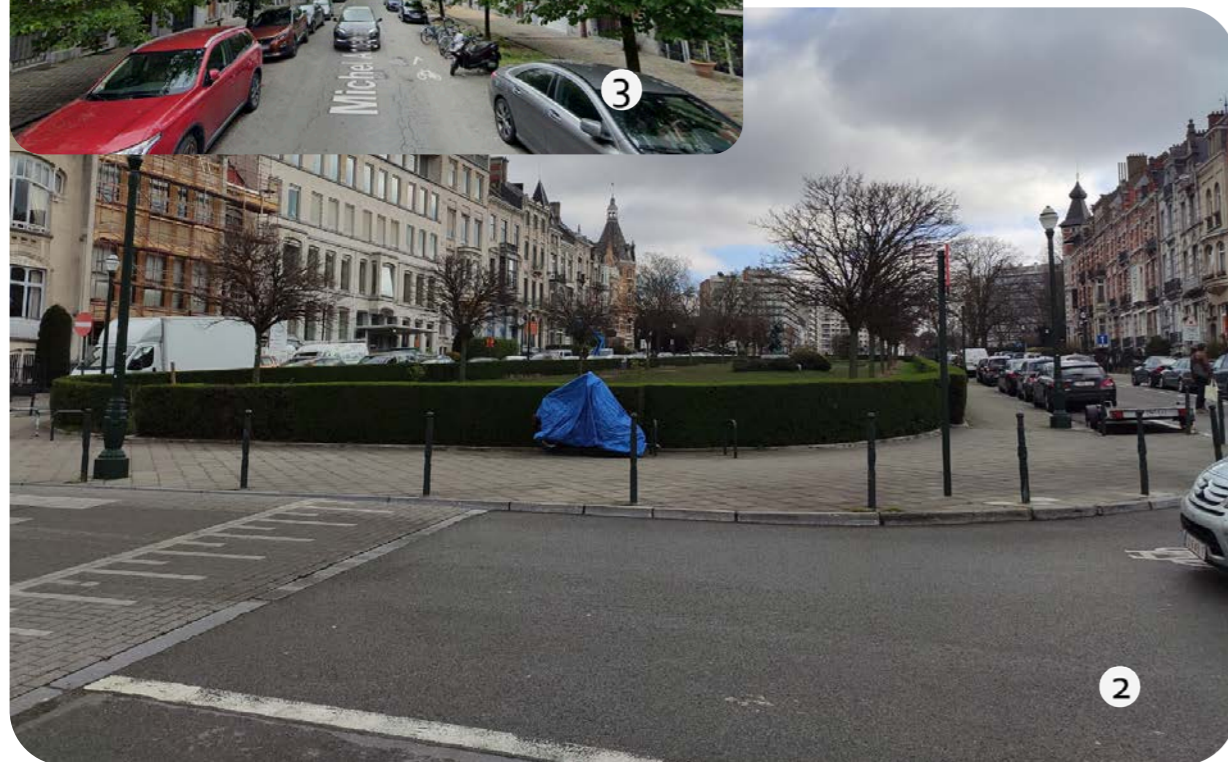
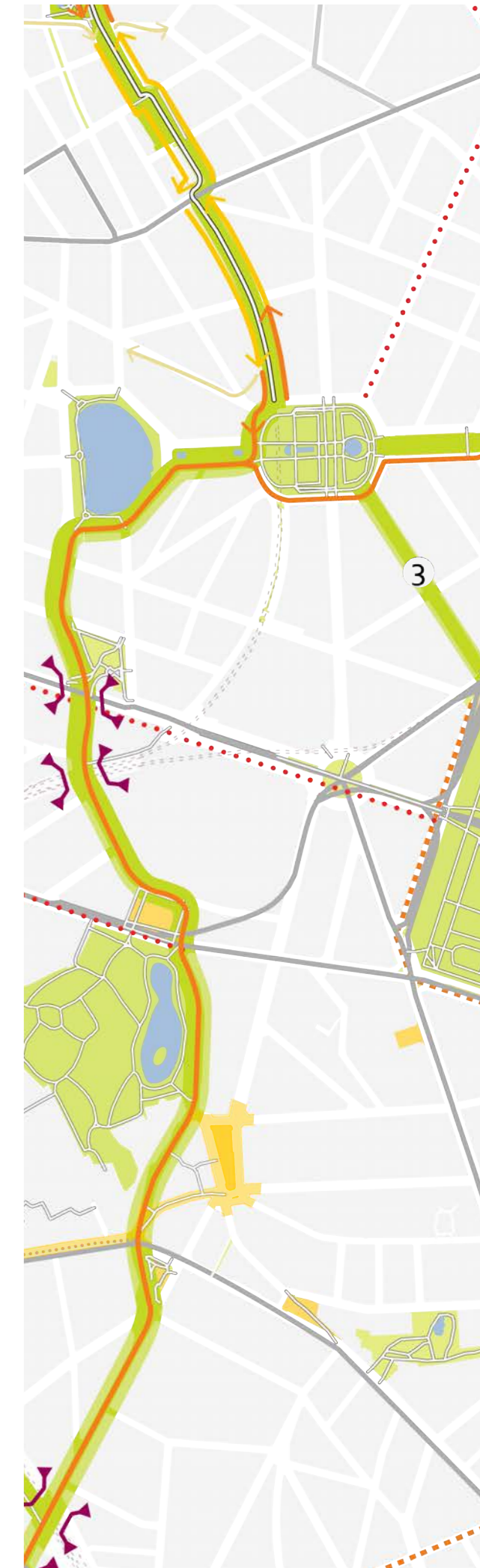
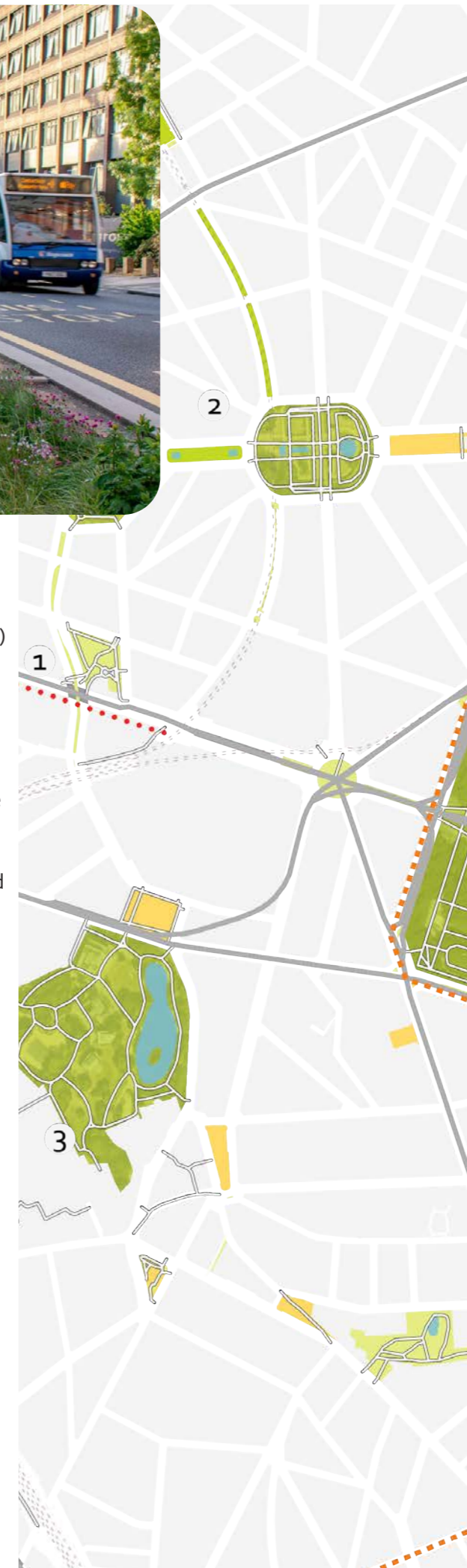
The project 'grey to green' in Sheffield (by Zac Tudor and Nigel Dunnett) is a perfect example of what the 'Steenweg op Etterbeek' could become.

In addition, the Square Ambiorix (2) could be designed more strongly as a single green entity. It is currently more a series of mini-green pockets, intervened and surrounded by asphalt and a parking lot.

The Michel Angelolaan (3) would be the best connection to the Jubelpark, when made into a 'playstreet' or 'living street'. The green face is present, it could be a destination traffic street.



- cycle route; separate
- cycle street (car=guest)
- ⋯ cycle route; urban env.
- - - planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- normal neighbourhood street



3. GREEN ARTERIES center and Maalbeek

The triangle shaped map that comprises the northeastern part of the pentagon, the European Quarter and the ponds of Elsene, shows a very complex part of Brussels. However, a part with a lot of potential in terms of green routes. Many different locations and starting areas can improve the quality of running, walking or cycling routes, we address one.

Two route segments have similarities, the 'Greystraat' (1) and 'Schildknaapstraat' (2). Both streets are accessible to car traffic and buses. But so are their parallel streets. On the Wolvengracht (3) there are both buses and cars (just like in the Schildknaapstraat in one direction). The parallels of the Graystraat have tram lines (Mouterijstraat, 4) and buses (Scepterstraat, 5).

Both car traffic and busses make major spatial claims on these streets. The Graystraat passes through a narrow one-way tunnel that is simply not designed for it. Since both parallel streets of the Graystraat have a bus lane (Scepterstraat) or tramline (Mouterijstraat), we propose to preserve the Graystraat for active transport modes.

At the Schildknaapstraat at the same time, these urban links lack a good cycle route. Going through the inner ring road by bicycle in an east-west direction is not logical, safe and not pleasant either. Cycling around the pentagon is the alternative, which is a large detour for the east-west trajectory, and at the time of writing, bidirectional cycle lanes on both sides of the pentagon are still under construction.



The small map from 1845 shows the logic. Between Warandepark (6) and the Brandhoutkaai (7) there was a strong continuous connection up to the Wetstraat.

The naturally low Chaussee de Etterbeek (8) had a more straight parallel, the Oudergemselaan (9, N205).



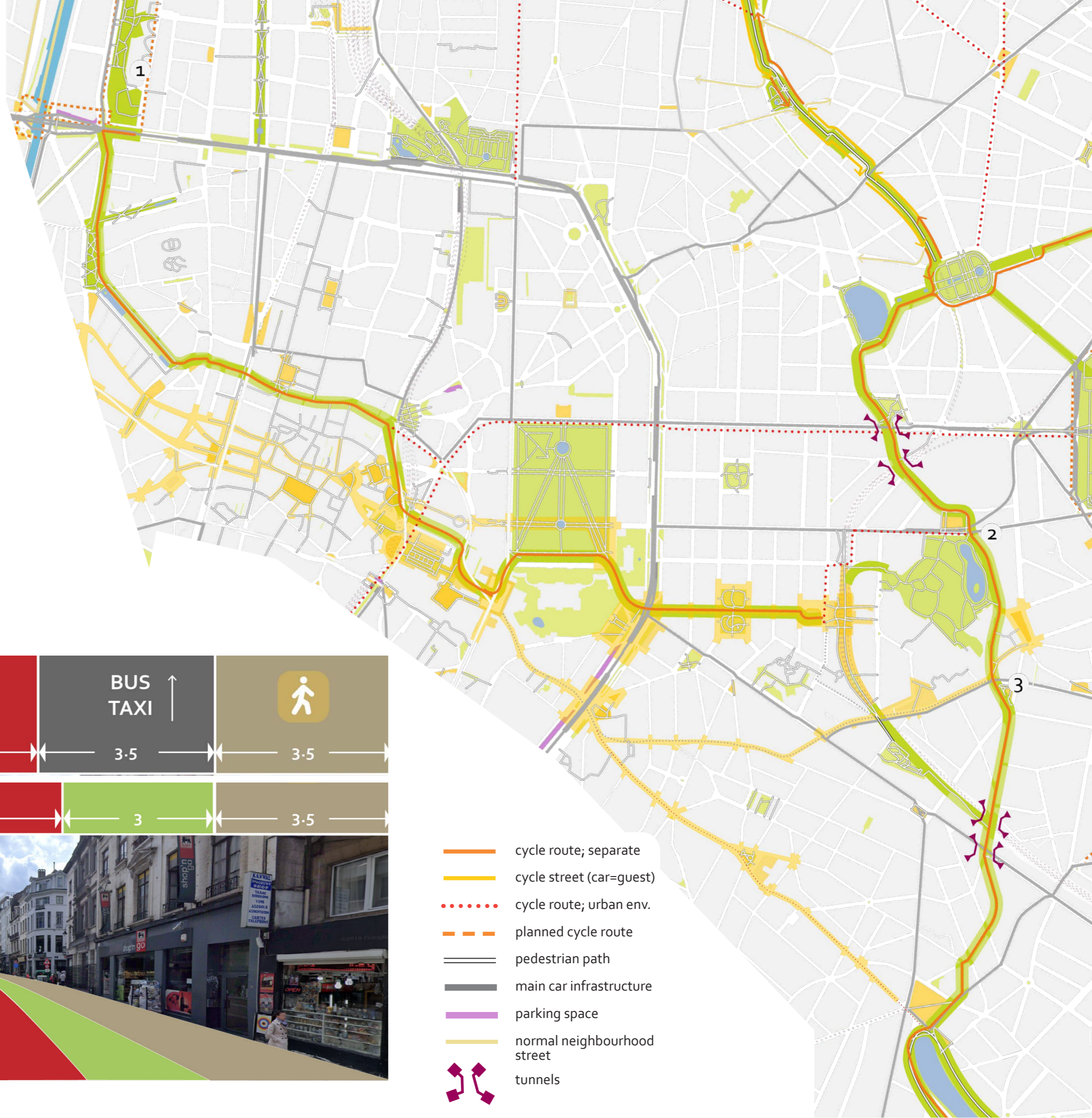
ENVIRONS DE BRUXELLES en 1845.
Indiquant le projet de Viaduc en fonte qui met le quartier Leopold en communication directe avec la Ville et la Campagne.

3. GREEN ARTERIES center and Maalbeek

The ambition would not be to go back in time, but to recognize and build on a certain natural urban logic. We would see the Schildknaapstraat as a green, car-free cycle path, a continuation of the Brandhoutkaai parks and Maximiliaanparks (1).

The Steenweg streets and Schildknaapstraat together make a band that cannot be intersected by continues traffic. In a first step, a bus and taxi lane could remain in the Schildknaapstraat, with the motorway becoming a cycle path. In a second step, the busses and taxis will move to the Wolvengracht.

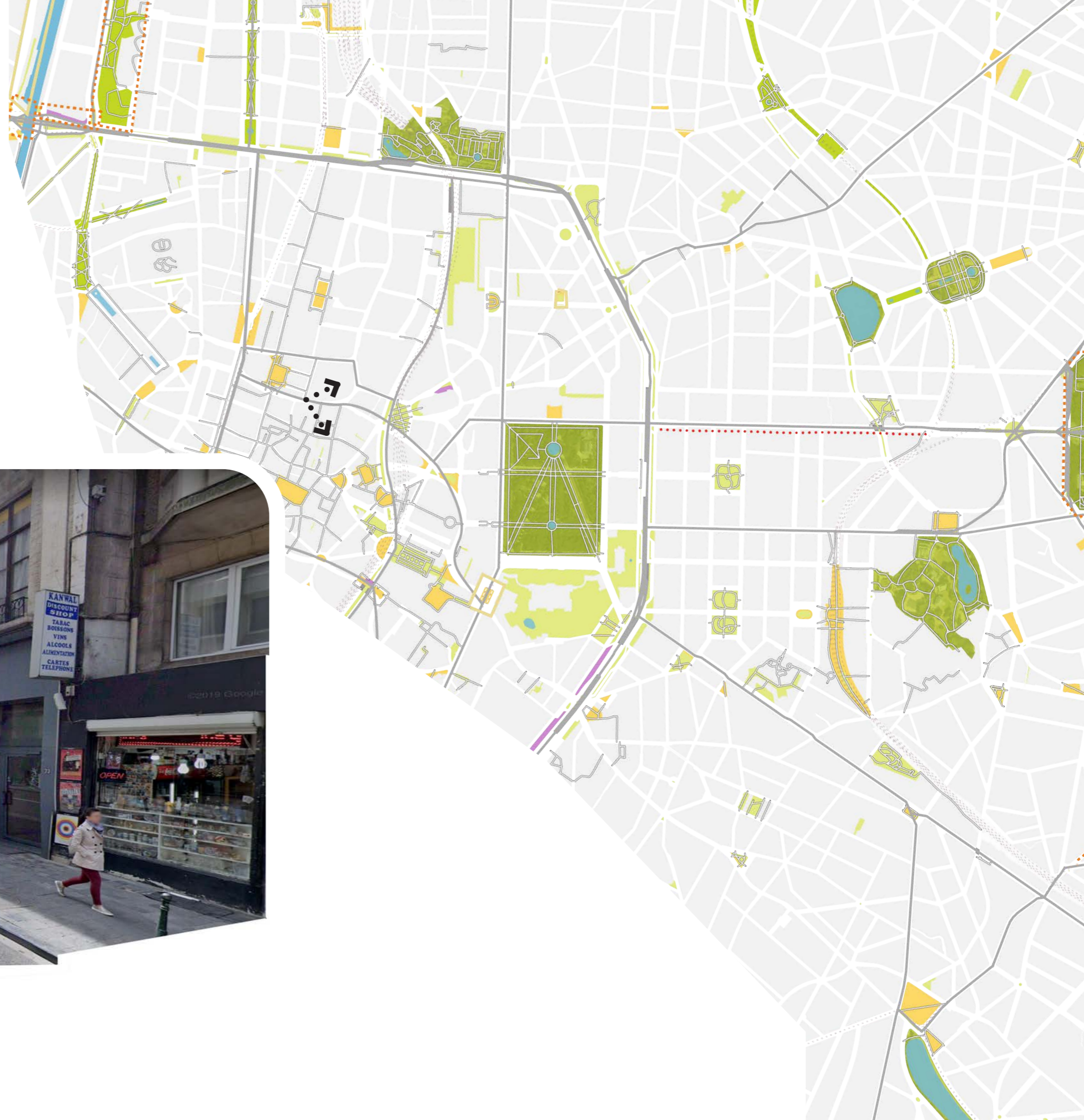
Between Leopoldpark and the Elsene ponds, it is time to designate the Graystraat as a green bicycle street reserved for active transport modes. Due to the low topography of the Maalbeek, it under-passes heavy infrastructural lines almost everywhere. Between Square Ambiorix and Ponds of Elsene, it only crosses traffic on Rue Belliard (2) and Vijverstraat (3).



- cycle route; separate
- cycle street (car=guest)
- ⋯ cycle route; urban env.
- - - planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- normal neighbourhood street
- ↔ tunnels

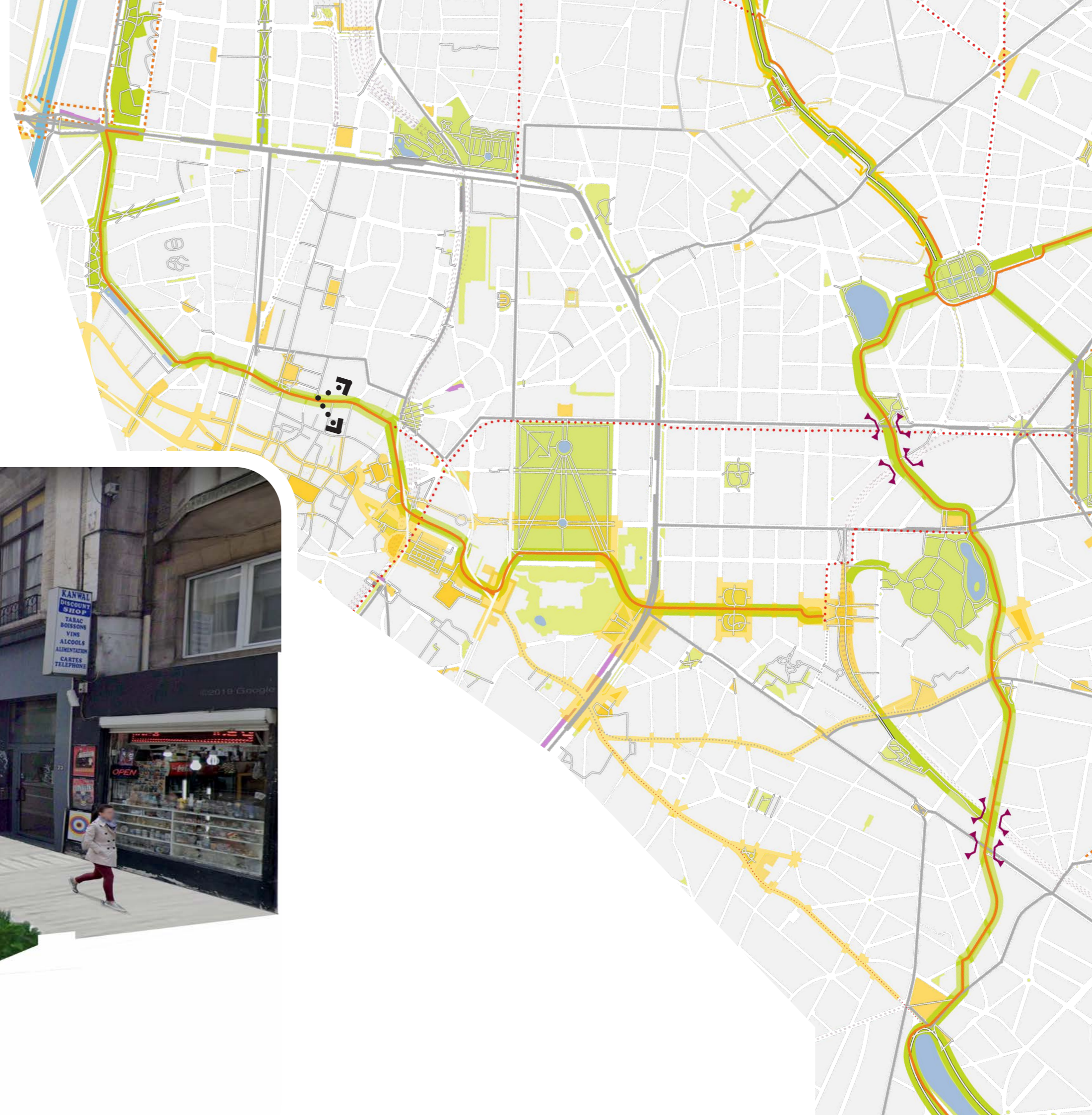
3. GREEN ARTERIES center (Schildknaapstraat)

A gray, busy street does not leave a separate space for cyclists. There is space for pedestrians, but it does not leave an enjoyable inner city environment.



3. GREEN ARTERIES center (Schildknaapstraat)

This street is converted to the green backbone of the Steenwegband. A green bicycle street also creates a more pleasant pedestrian environment. The green verge can contain seating areas. The street becomes cooler in the summer and water is collected naturally and flows into the green zone.



3. GREEN ARTERIES

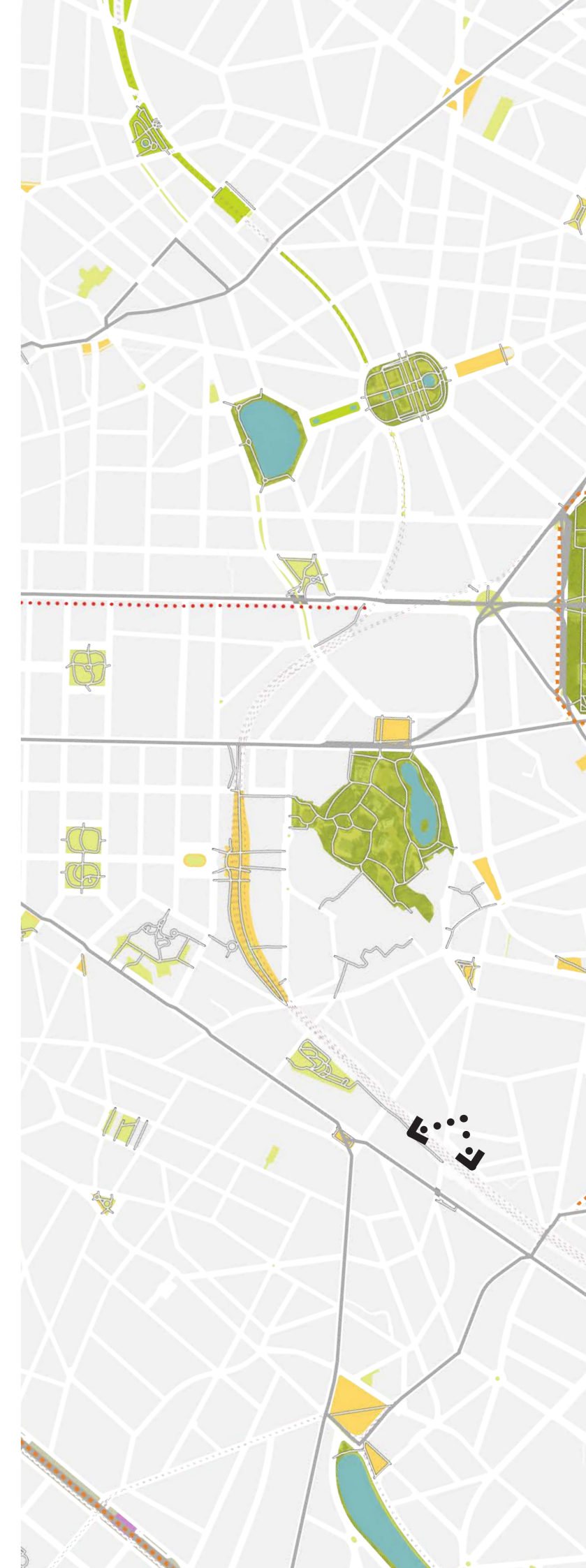
Graystraat



The passage is not made for cars; this is not a street for transit-traffic. The sidewalk is too narrow, cyclists mingle with car traffic.

On the left, the street has already been greened and made more spacious for pedestrians.

A new park route will be built alongside the railway on the right-hand side.



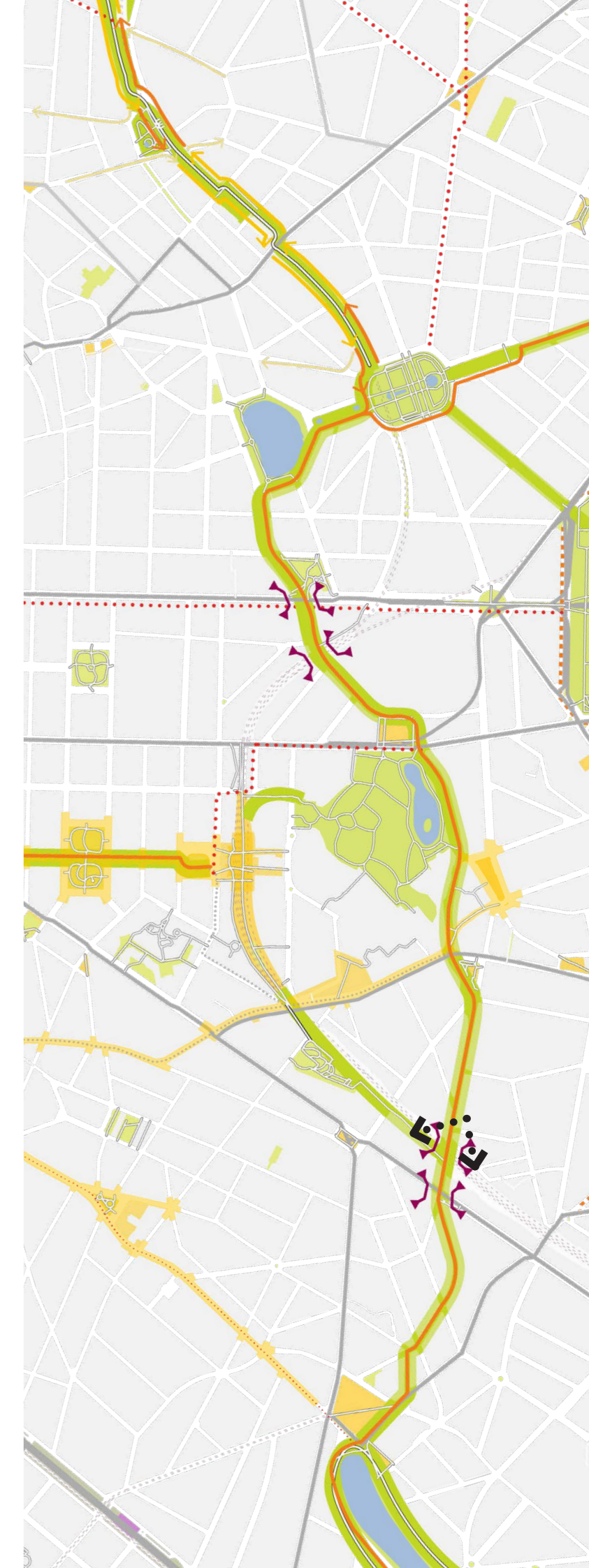
3. GREEN ARTERIES

center and Maalbeek



A green cycle path provides a logical connection with the new park route along the train track. It will become one green hub for cycling, walking, playing, relaxing and running.

Water is collected in the street, reviving the Maalbeek.

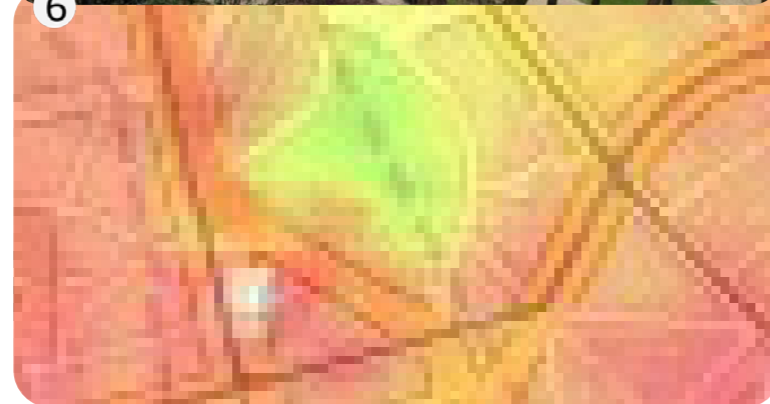


4. PONDS TO TER KAMERENBOS

routes around

The Elsene ponds are important running destinations; they are the start of a triple-stage-green-structure: Elsene-Ter Kamerenbos-Zoniënwoud. But there is a range of measurements that can be taken to improve routes for runners, pedestrians and cyclists. The combination of these measures creates a really pleasant network.

- The pathways around the Ponds of Elsene are too narrow (1). The adjacent parking spaces make it difficult to pass or cross other pedestrians. We recommend removing parking spaces and extending the path by 2 metres.
- Several roads have to be crossed between the ponds and the Abdij Ter Kameren. Zebra crossings are present, but do not force traffic to slow down (2). We recommend to make complete, loamy pedestrian zones here where traffic cannot pass. This was the case during the temporal measures during the corona-pandemic.
- The east side of the Louizalaan between Ter Kamerenbos and 'Koningtuin' has partly wide loamy paths in a relatively tranquil environment(3). However, the crossings are not yet pleasant or safe (3&4). Pedestrians and cyclists could be given more priority.
- The second half of the Louizalaan (5) is busier. Here we prefer to see all motorized traffic bundled in the middle, so that a designated bicycle / pedestrian area appears on the outside.
- The route through and around the Abdij Ter Kameren is also pleasant for walking or running. We recommend to make a wide under-passage (tunnel) under the Emile De Motlaan to connect these two attractive structures. Preferably, the under-passage would also be bicycle-accessible. The possibility arises from the fact that the Abdij lies significantly deeper than Emile De Motlaan (6).



RUNNER ADDS (1) facilities

This district contains the most intensively used running parks in Brussels. Certain facilities should belong to the standard of such parks. As runners said about Jubelpark and Josaphatpark: a park like this deserves a running route, all parks need at least one watertap.

- One of the most important runner-friendly measurements in Brussels concerns the lighting (1) in Jubelpark. It is not sufficient.
- The opening times of Warandepark could be made earlier to allow morning runs.
- Almost all crossings at the edges of Jubelpark were tagged by runners. A lower traffic-intensity around the park could create opportunities to tackle these crossings as well.
- The future network of green connections could connect all running routes in the parks.
- The watertap at the Mosque in Jubelpark is hard to find. The running track has a waterpump, which is not too practical.
- Improved bicycle parking and the addition of a public toilet were also mentioned at Jubelpark. In Warandepark, fitness equipment was mentioned.
- Signs about dogs attendance in Jubelpark could be looked at.
- A general remark for all parks; the information at entrances is not very complete (4). Large, clear maps should be present in all parks, including information about activating facilities (routes, watertaps, fitness equipment etc). We would recommend a certain 'housestyle' for all parks, so that Brussels runners/park users could become familiar with it
- Last, but not least: never let the cars return in Ter Kamerenbos. It is a top-running priority in Brussels.



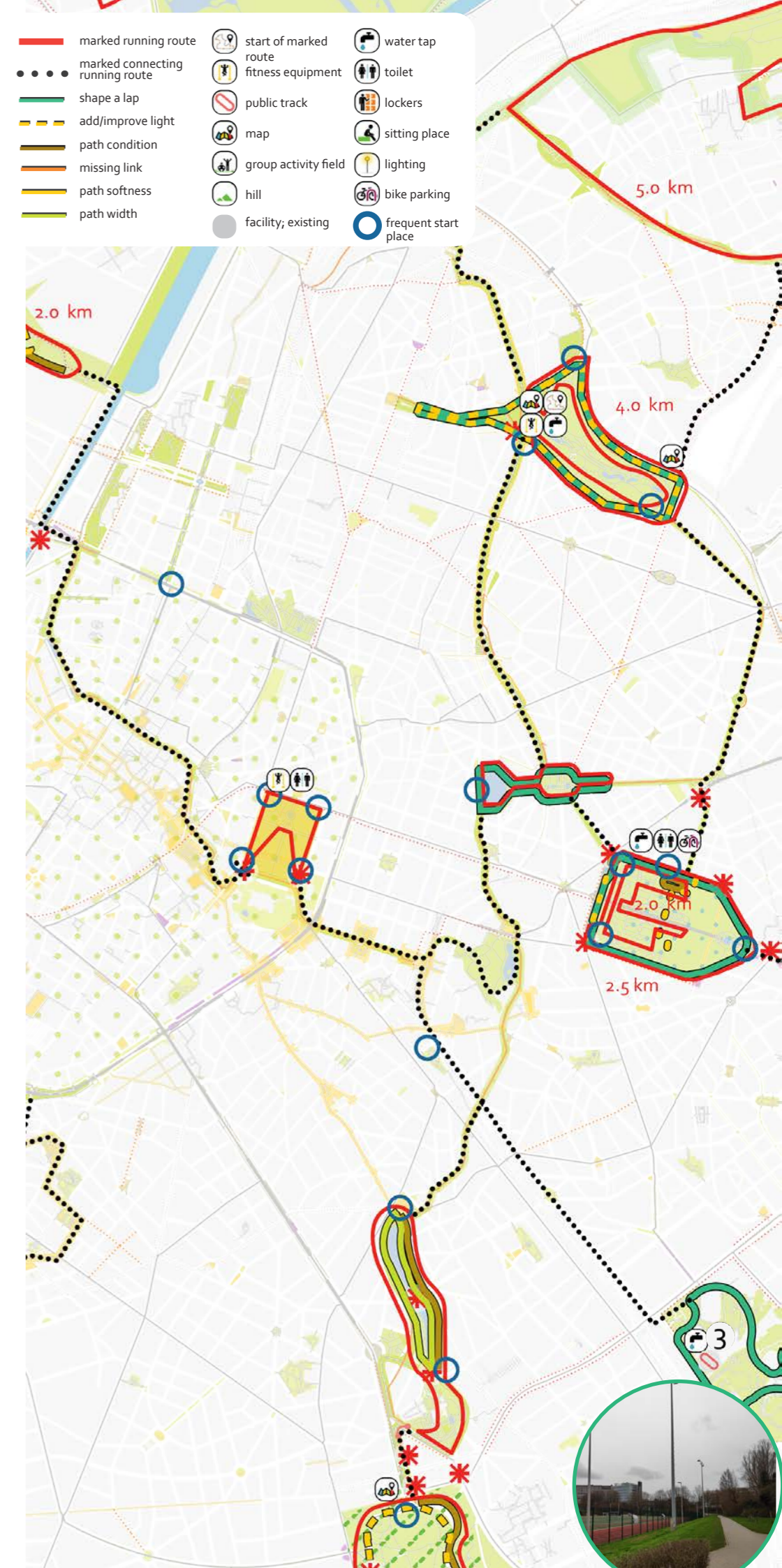
'cobblestones' around Josaphatpark. These are certainly not the worst cobbles, but runners strongly prefer really flat surfaces (asphalt or loam).



At Jubelpark, lighting is present, but apparently not sufficient.



The running track at Jubelpark creates a much broader sports-zone in the park. It creates an environment in which being active is the standard.



RUNNER ADDS (2) laps

A comfortable running lap both in and around the parks is essential for the parks of Brussels. During storms parks are closed, during winter times it gets dark early and people like to run but avoid the parks alone, it is a good route to the park and an easy extra run (variation).

- The Jubelpark lap is currently very inconvenient (2). A complete lap requires to leave and enter the park several times. We recommend to make a guided lap in the park first. When outer streets are made quieter, a lap around the park could be added.
- Josaphatpark, Warandepark, Jubelpark and the Elsene ponds deserve a marked route. At Josaphat, this could be double route, one in the park and one around. Combined, it could be 4 kilometres long. The route around the park must be designed because the cobblestones on the Azalealaan are currently not pleasant to walk. Without traffic (corona residential streets) a running route could arise on the roads. The available lighting also deserves attention there.
- The University campus lap (3) currently runs around the campus, along the intense (polluted) traffic. A lap on the campus should be shaped, as part of a broader redevelopment of the campus design. The existing running track could be the starting point, a watertap could already be added. Along the railway, it could be connected to the Graystraat/Elsene.
- Square Ambiorix deserves a clear round that would strengthen the unity of the park routes.



A Jubelpark lap...go out the park here...



or you end up here



So you run around, on the bicycle path...



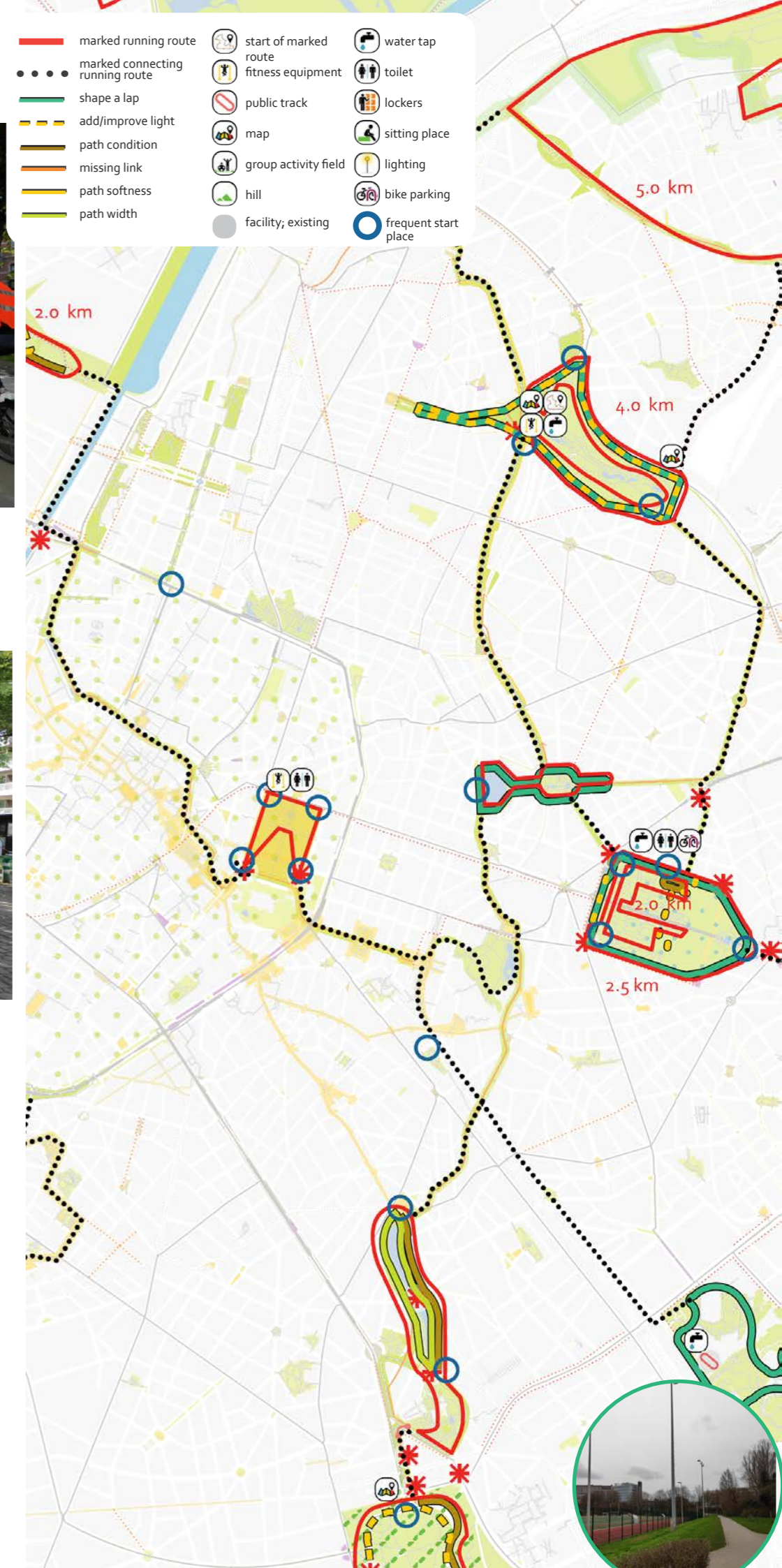
squeeze back in the park here...



get out again here...



and back in here..





Looking at the image, park van Vorst and Dudenpark look like one continuous green space. But from the experience of the runners, both the connection between the parks and the edges of the park could be improved.

Many positive interventions are already taking place. The path surface will be improved by Beliris (link to <http://www.beliris.be/nl/projecten/dudenpark-en-jupiterpark.html>). During the corona pandemic, various surrounding streets were reshaped into quiet living-streets. We see various opportunities to build on these developments that encourage directly a healthy lifestyle by promoting the active transportation modes.

ELABORATIONS

NORTHWEST

CENTRE

SOUTH

SOUTHWEST

In four areas, opportunities to improve spatial conditions for running were elaborated. How do we shape the ambitions?

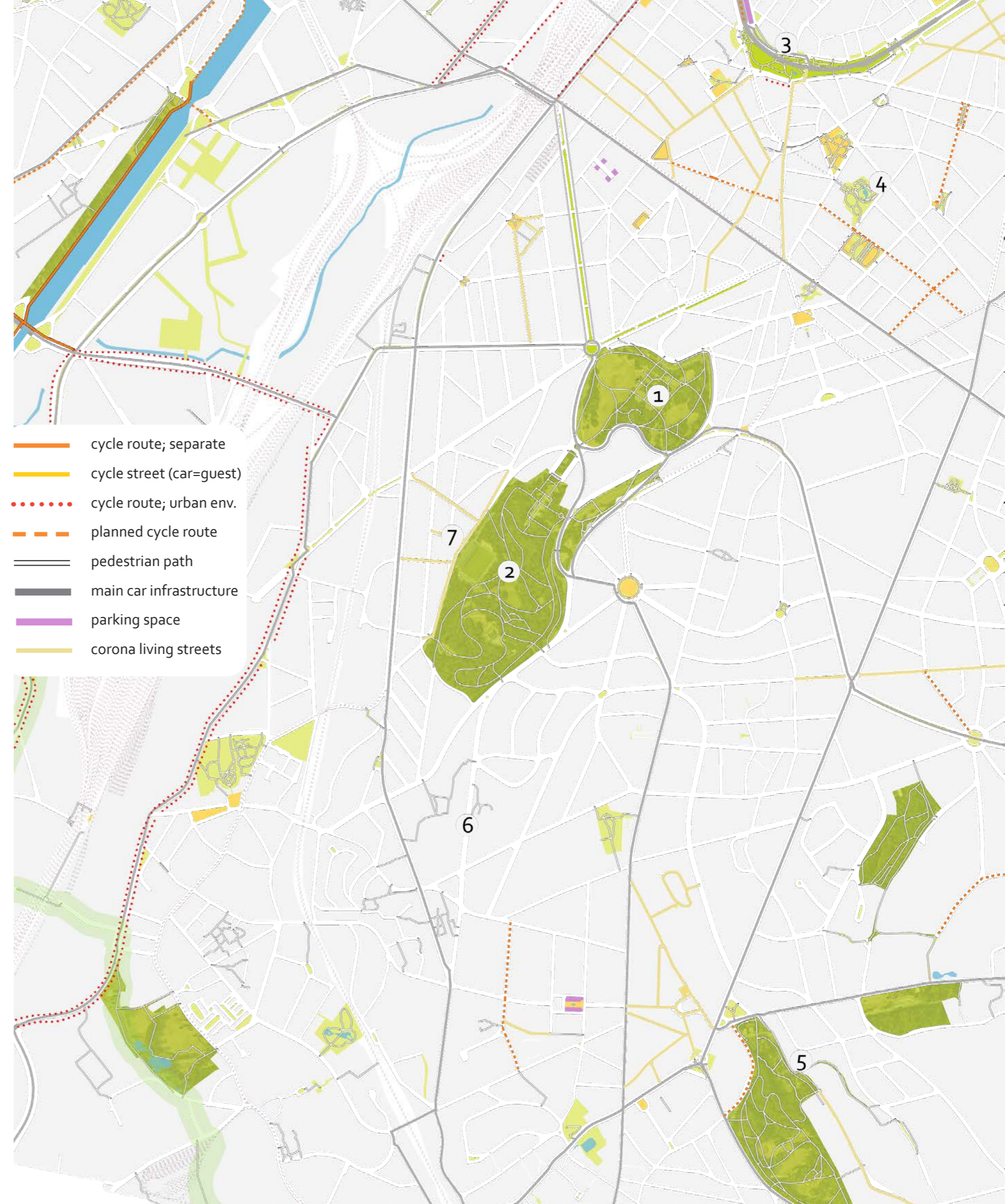
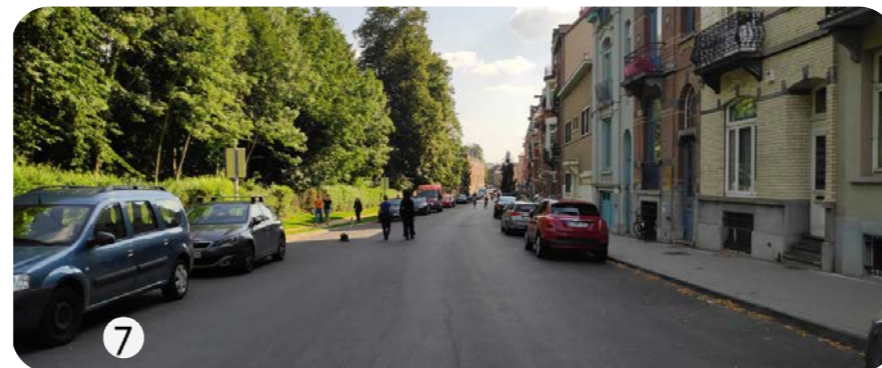
QUALITIES

green spaces

The municipalities of Sint-Gillis and Vorst have one green space that acts as a running hotspot: park van Vorst (1) - Duden Park (2), if we consider it as two pleasantly interconnected green spaces.

But many different qualities can be found in the surrounding districts. To the north of park van Vorst, De Hallepoort (3) is the greenest part of the inner ring. Many streets are quiet between the Hallepoort and Park van Vorst. And above the trajectory of the future metro line 3 (4) there is a series of pocket parks, towards park van Vorst.

South of Dudenpark, Bemtpark, Brugmannpark and park Wolvendael (5) are within runnable distances. The Domeinlaan contains a separated, loamy path in the direction of these parks (6) To the west of Duden park, 'play streets' have been designated (7).



RUNNING CONNECTIONS

The way runners are currently running towards Duden and Vorst says a lot about the challenges of making better “green connections”.

The image shows the use of these districts by runners who had the Dudenpark or Park van Vorst in their route.

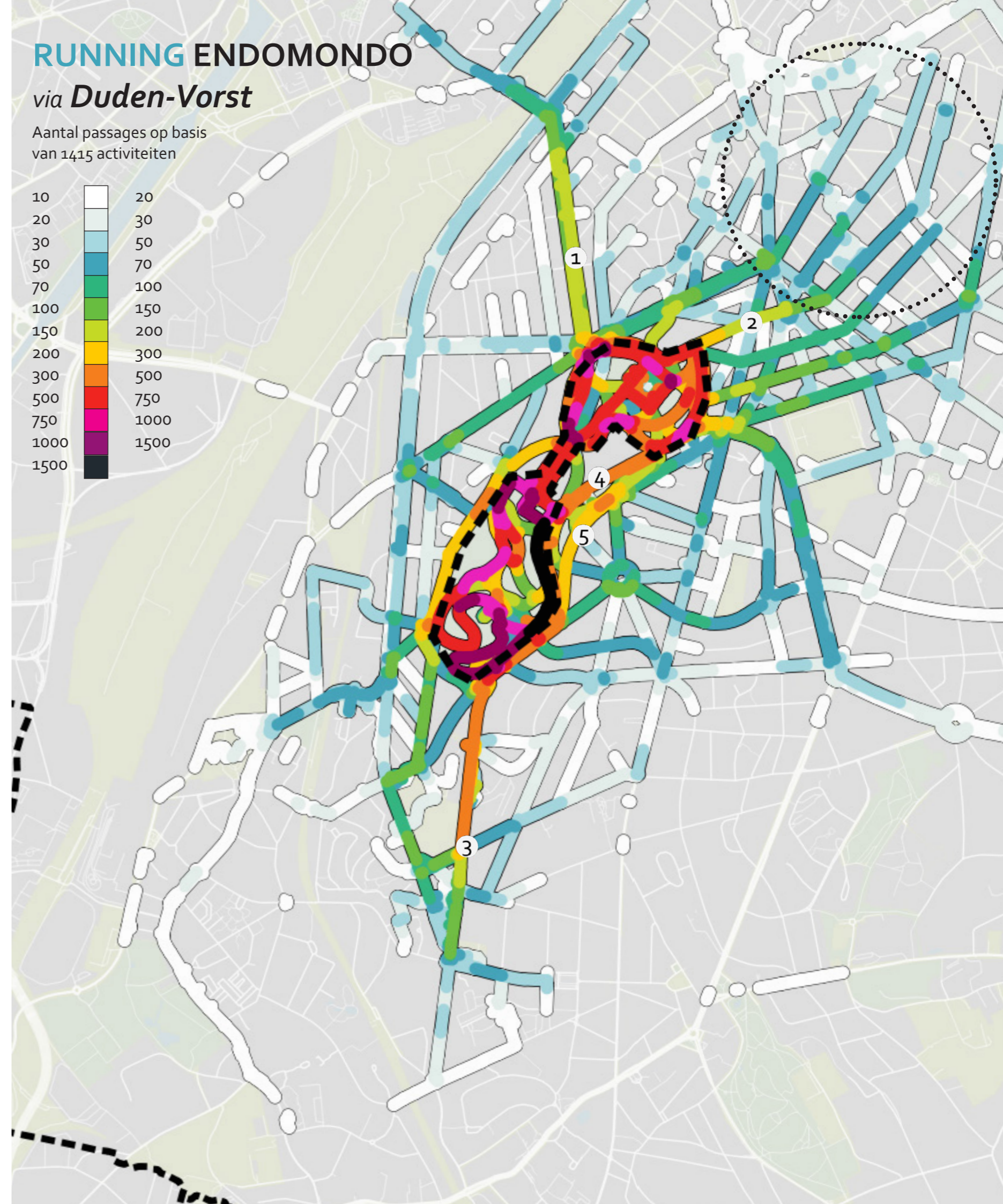
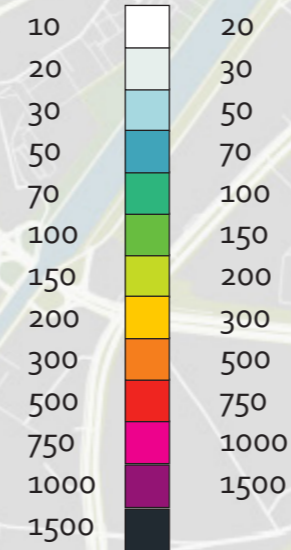
Several streets are very important as green connections:

1. The Koningslaan, as a connection between Park Vorst and Kuregem.
2. Adolphe Demeurlaan, the connection with the furthest corner of Park Vorst. Many related activities come from the northeastern district of St. Gillis.
3. The Domeinlaan, towards the neighbourhoods of Ukkel-Stalle
4. The Besmelaan
5. Jupiterlaan

RUNNING ENDOMONDO

via *Duden-Vorst*

Aantal passages op basis van 1415 activiteiten



PROBLEM / POTENTIAL

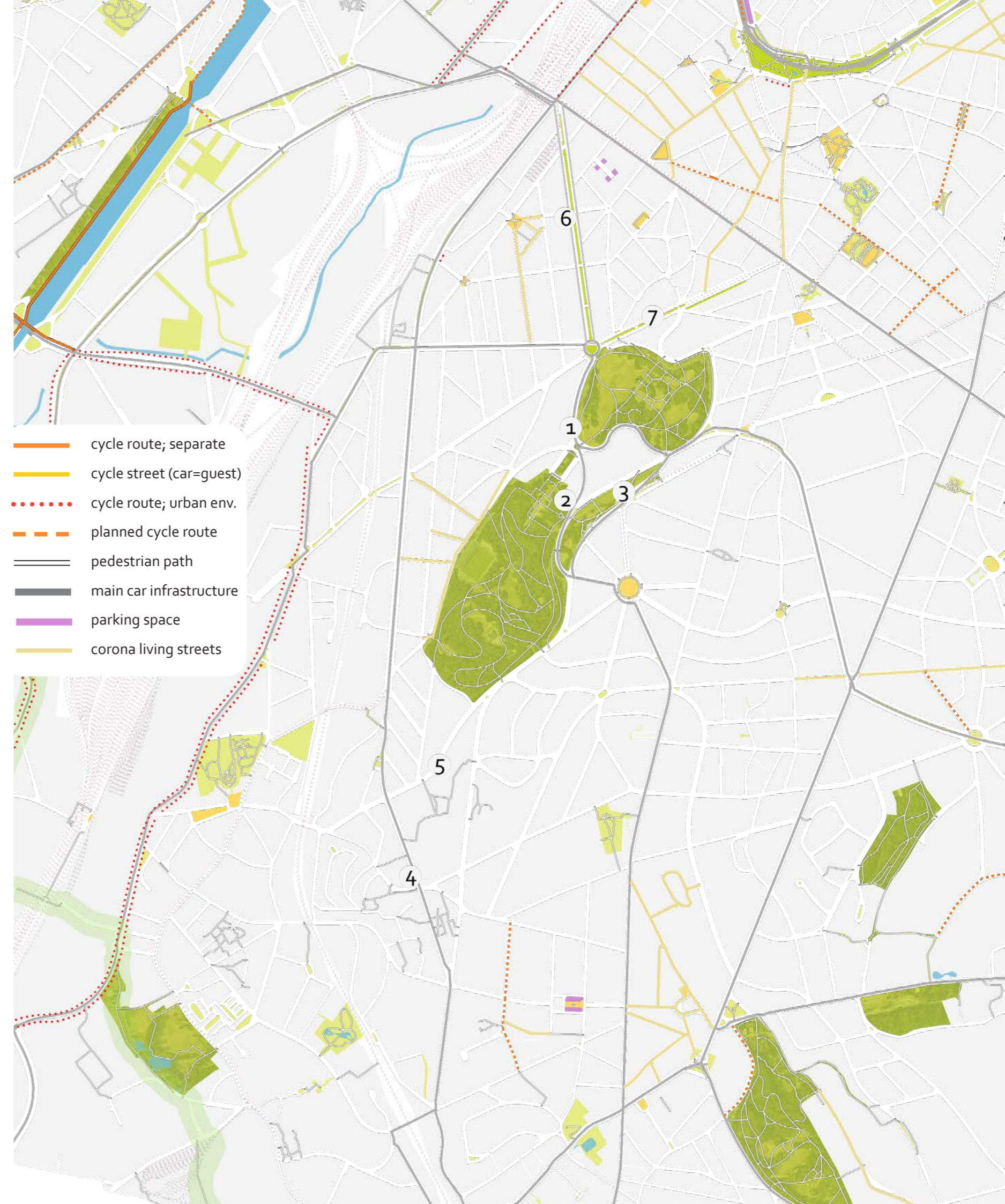
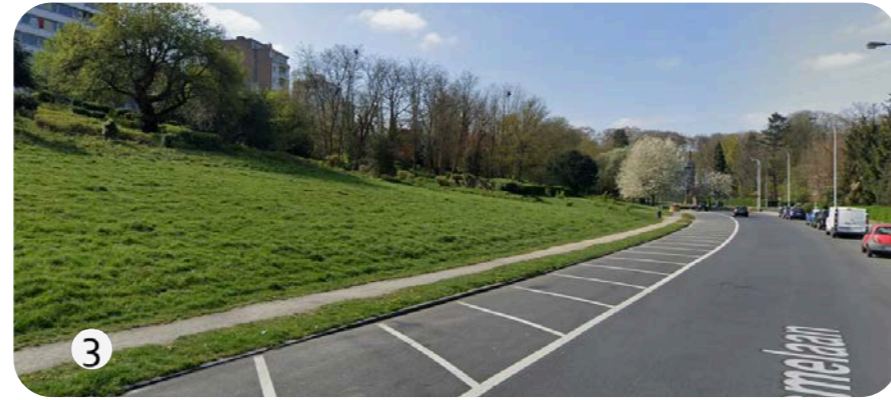
Traffic between park van Vorst and Dudenpark was one of the main concerns of runners in Brussels. There is currently a triangle of heavy roads (1,2 and 3) between the two parks. These crossings are not yet pleasant, both due to the traffic intensity and the way in which the intersections / roundabouts are arranged.

The quality of the Domeinlaan (loamy pathway) is almost completely present around the CSF sports-complex (4). It is just missing at the Victor Rousseaulaan (5).

There is no continuous walking / cycling route between Hallepoort, park van Vorst and neighborhoods to the northeast of St. Gillis.

The N266 was appointed as a horribly polluted tunnel. That is not so easy to change. But when you finally ran out the door, the Koningslaan is segmented by traffic and enclosed by superfluous on-street car parking (6). In it's current state, the Koningslaan offers a beautiful opportunity to redesign a parking-oriented street towards a green corridor connecting the Park van Vorst and Kuregem (Anderlecht)

The Parklaan has a pathway in a green area, but is segmented and in poor condition (7)

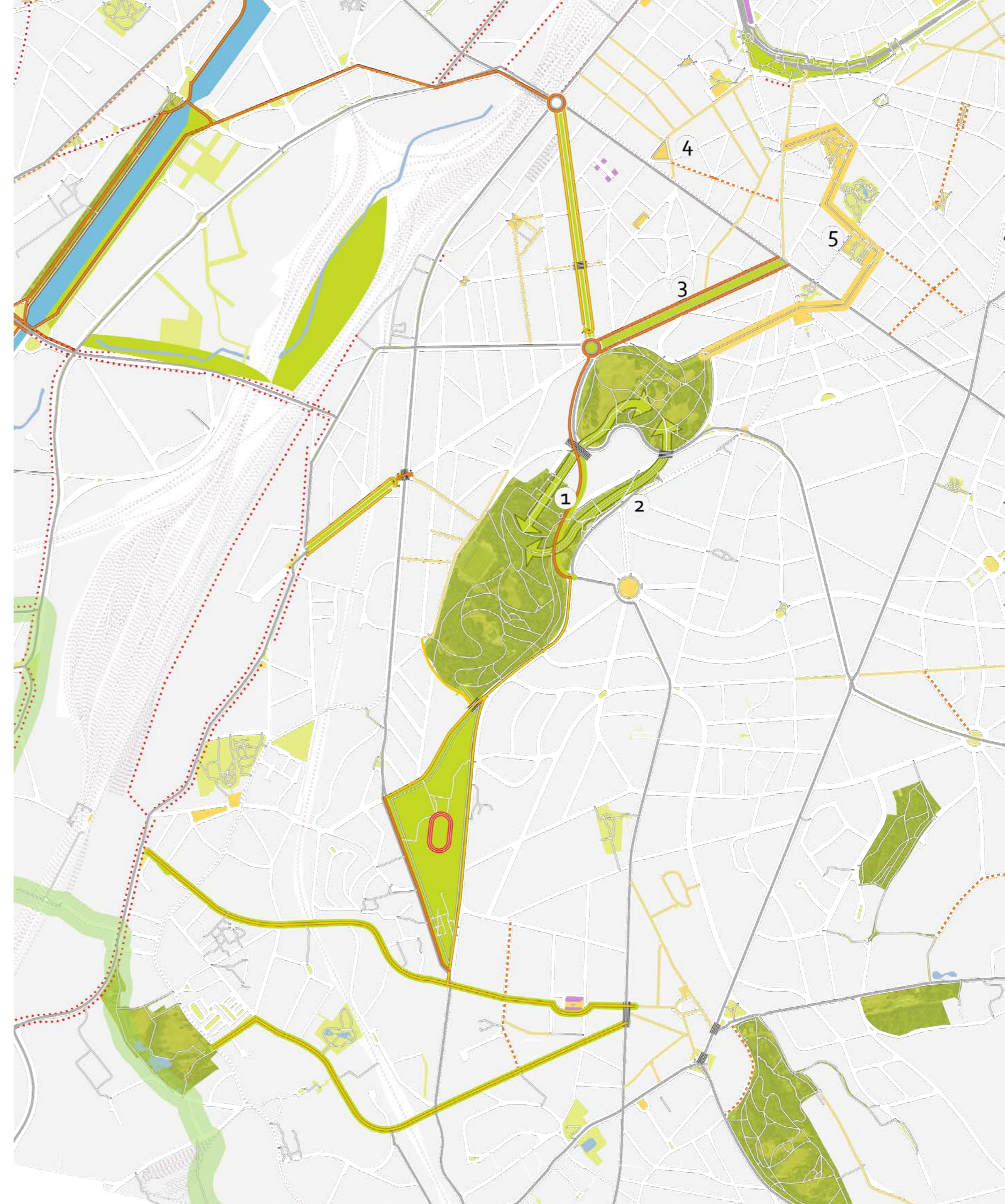


STRATEGY

mixed green optimizations

- The southern half of the Gabriel Faurélaan (1) is not necessary for car traffic. If this section were to be considered part of Dudenpark, a completely green finger would connect Duden Park and Park van Vorst in the southeast. There are plans to improve the quality of the Besmelaan (2), the traffic measures would reinforce this development.
- When the Gabriel Faurélaan is filtered for car traffic, one continuous road for transit-traffic remains next to Park van Vorst. This filter makes two roundabouts obsolete, and a wide priority zone for pedestrians would be more appropriate.
- There are three options for a better connection between the Hallepoort and Park van Vorst. The first option (3) starts at Hallepoort, follows the Vorstsesteenweg and ends at the tram stop Rochefort at the lower part of the Park van Vorst. The Vorstsesteenweg is a relative unsteep narrow street meandering through densely populated neighbourhoods and via the squares Jacques Frank and Bethlehem. The second option (4) is to redesign the Parklaan as a real Parklaan. (What's in a name). The third option (5) starts at Hallepoort as well and end at the northeastern corner of the Park van Vorst at the Villalaan. It follows the trajectory of the underground metroline 3 that is currently under construction. Starting at the beautiful Jean-Volderslaan, it meanders through the vivid neighbourhoods of Sint-Gillis and passes along the squares Parvis, Marie Janson, Pierre-Paulus, Louis Morichar, Lyceumstraam, Horteplein, Maurice Van Meeneplein, Villalaan.
- The Koningslaan could only be designated for local traffic, parking could be reduced from 4 lanes to 2. It would create a very attractive connection between Kuregem (Anderlecht) and Park van Vorst, a nice gift after the tunnel.

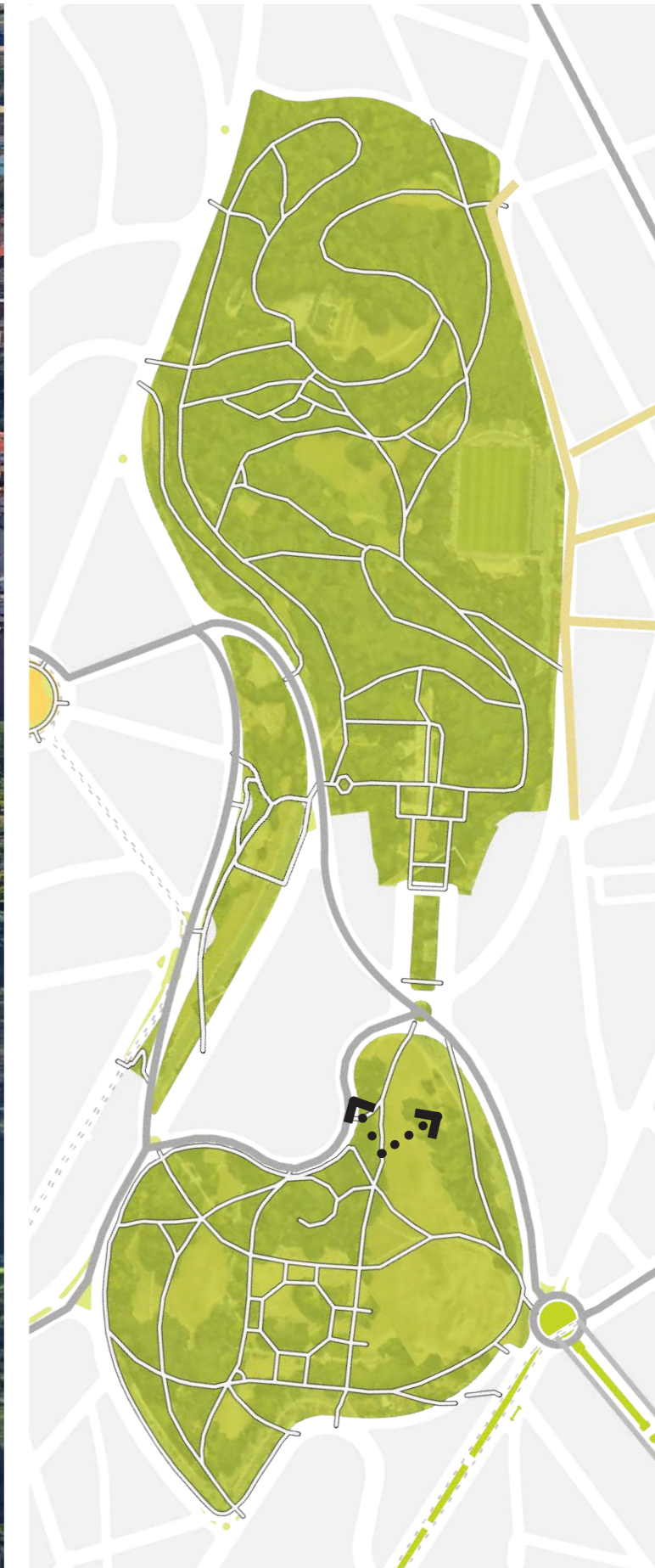
- cycle route; separate
- cycle street (car=guest)
- cycle route; urban env.
- - - - - planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- corona living streets



1. DUDEN - VORST



The roundabout (s) that separate Dudenpark and Park van Vorst at Besmelaan and Lainésquare do have zebra stripes, but offer insufficient protection. But more importantly, the two parks feel separate for users such as runners or recreational walkers. The edges are too traffic-centered.



1. DUDEN - VORST

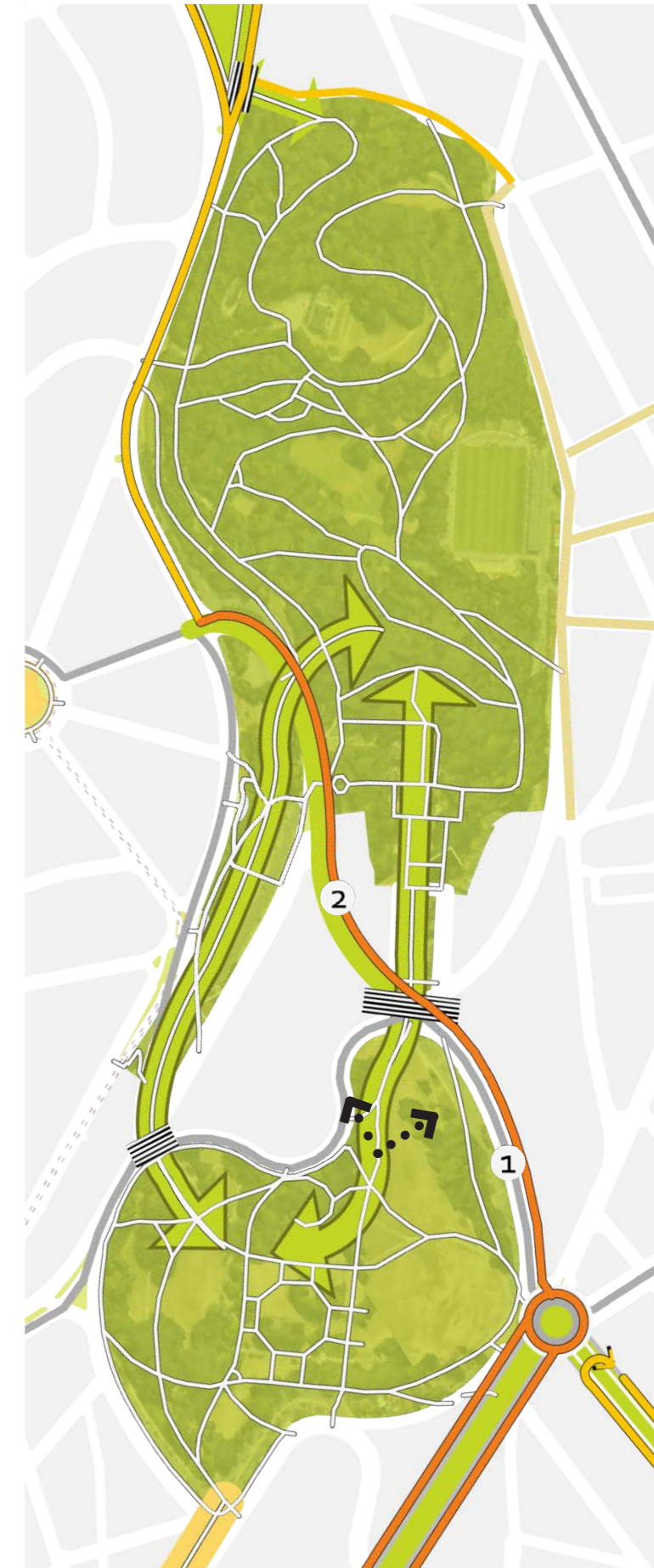


A roundabout would not be necessary if the Kon. Maria-Hendrikalaan (1) does not connect to the Gabriel Faurélaan (2) for cars. Only a cycle route continues.

The loamy path surfaces of the park edges are continued in the beginning of the Duden Park instead of the current parking space.

A super zebra crossing makes the crossing safe for pedestrians; cars must be effectively slowed down by a speed bump in front of the zebra.

The large width of the zebra creates a connecting park where cars are mainly guests. This would give extra glance to the beautiful viewpoint on the Palace of Justice.

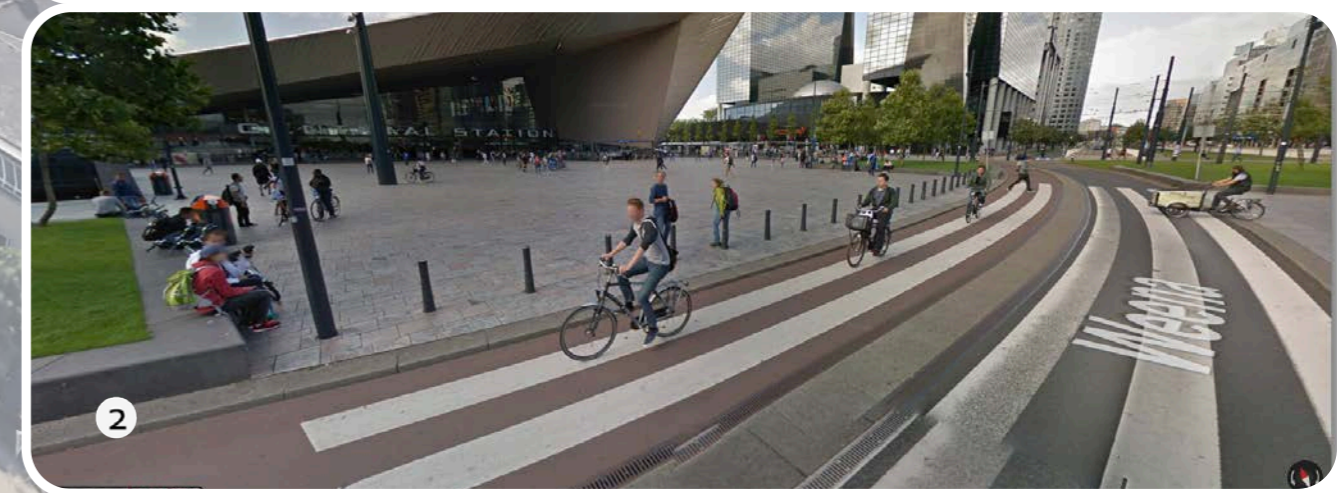


1. DUDEN - VORST



There are already examples of "super zebras". In Utrecht (1, NL) a 50-meter zebra has been constructed, where cars have to slow down to <math><15\text{ km/h}</math> (or damage your car). Complete zebra zones have been created in the center of Rotterdam (2).

The Besmelaan hill is already planned to become more natural and playful (3). By taking out cars from the Gabriel Faurélaan, this quality can be extended to Duden Park. We want to mention the opportunity to make playground equipment that can also be used as urban gym. Copenhagen has several examples of this in park Sondermarken (4).

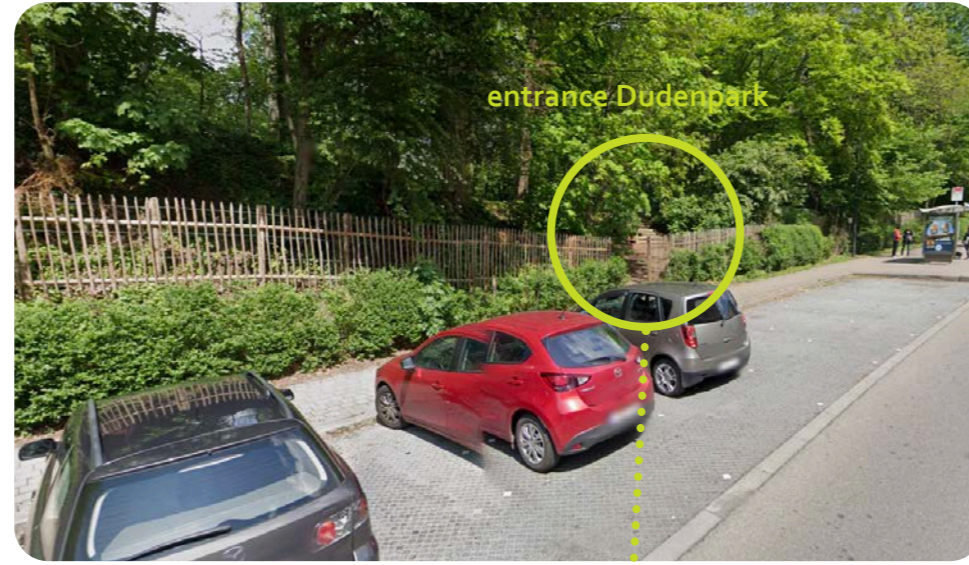


2. UKKEL - DUDEN



A tiny forest has been planted on this green corner. A nice start, although it is a pity that Duden Park cannot be entered from here (the most southern corner). The current entrances (a few hundred meters away) are not very clear.

The tiny forest will still border a very gray and motorized street, there is no pleasant connection with Duden Park.



2. UKKEL - DUDEN



Continue to build on the initiative of the tiny forest. Create loam paths as sidewalks all around the southern sports complexes. Create a safe crossing to Duden Park, where you can enter directly and visibly. Provide information about the parks on panels, and schedule a marked running session both in the Duden Park and around the sports complexes.

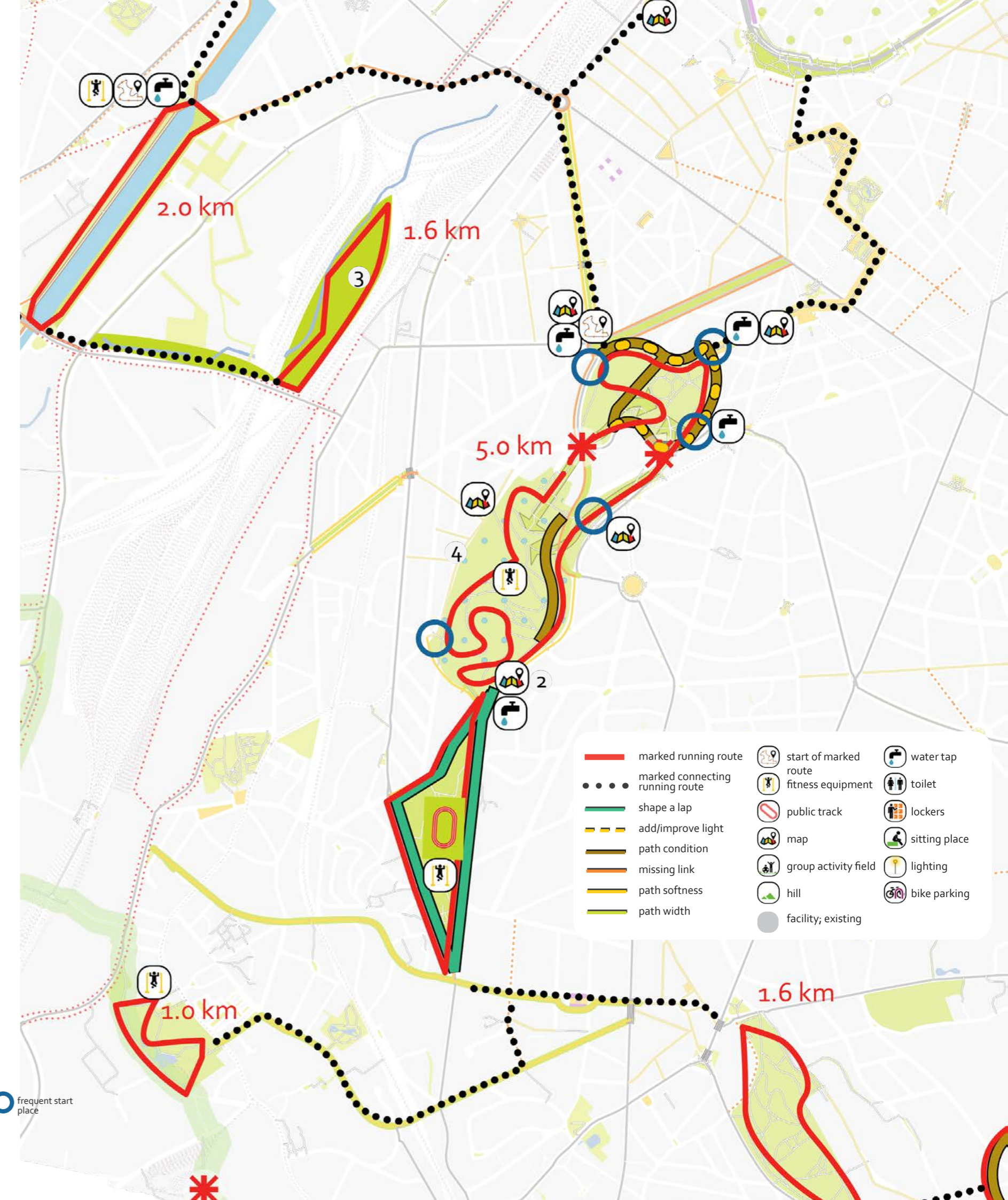


RUNNER ADDS

a guided park system

Park van Vorst and Dudenpark had a number of clear points for improvement that were mentioned; the path surfaces and intersections. But more could be added, almost all result directly from runners' comments themselves:

- Park van Vorst-Dudenpark is the only real 'big' park in this district, we recommend making a guided route that is about as long as can be made here. It can reach 5 kilometres. It shows runners how to use paths for a long run. It tries to avoid too much topography where possible.
- This route could be connected with a connecting route with, for example, the Brussels-South station. Vorst-Duden could then be reached by many Brussels residents via the Koningslaan.
- Several smaller parks such as Wolvendaalpark and Bemtpark can also be given a small route.
- As the main running destination, facilities such as a public restroom or lockers can be valuable.
- A wooden urban gym would fit in beautifully in Dudenpark (1).
- Park van Vorst and Dudenpark have a number of clear starting locations. One or two water taps would be welcome there.
- The information at the entrances to the parks is poor (2). Making large information panels would reveal what is possible in these parks.
- Information about the dog attendency should be considered in Duden Park
- The possible redevelopment of the hill at the Besmelaan offers interesting activation opportunities. Such a hill could very well match attributes for sports and playing. There are many examples of activating facilities using topography.
- The (currently inaccessible) sports field under Dudenpark can be seen as a sports extension of Dudenpark. A nice lap around could also get a marked route.
- The lap around Park van Vorst could be (better) illuminated.
- Between the railways there is a green pearl: Moeras van Wiels (3). This could be a real park and running / sports destination along the Zenne in the future. It is quite deserted, but therefore surprisingly quiet.
- The living streets (4) around Dudenpark are very pleasant for runners as well, it allows to run around the park easily. That is pleasant in the evening, during winter times, or as an extra lap, or as route to the park. Lighting is therefore important.





ELABORATIONS

NORTHWEST

CENTRE

SOUTH

SOUTHWEST

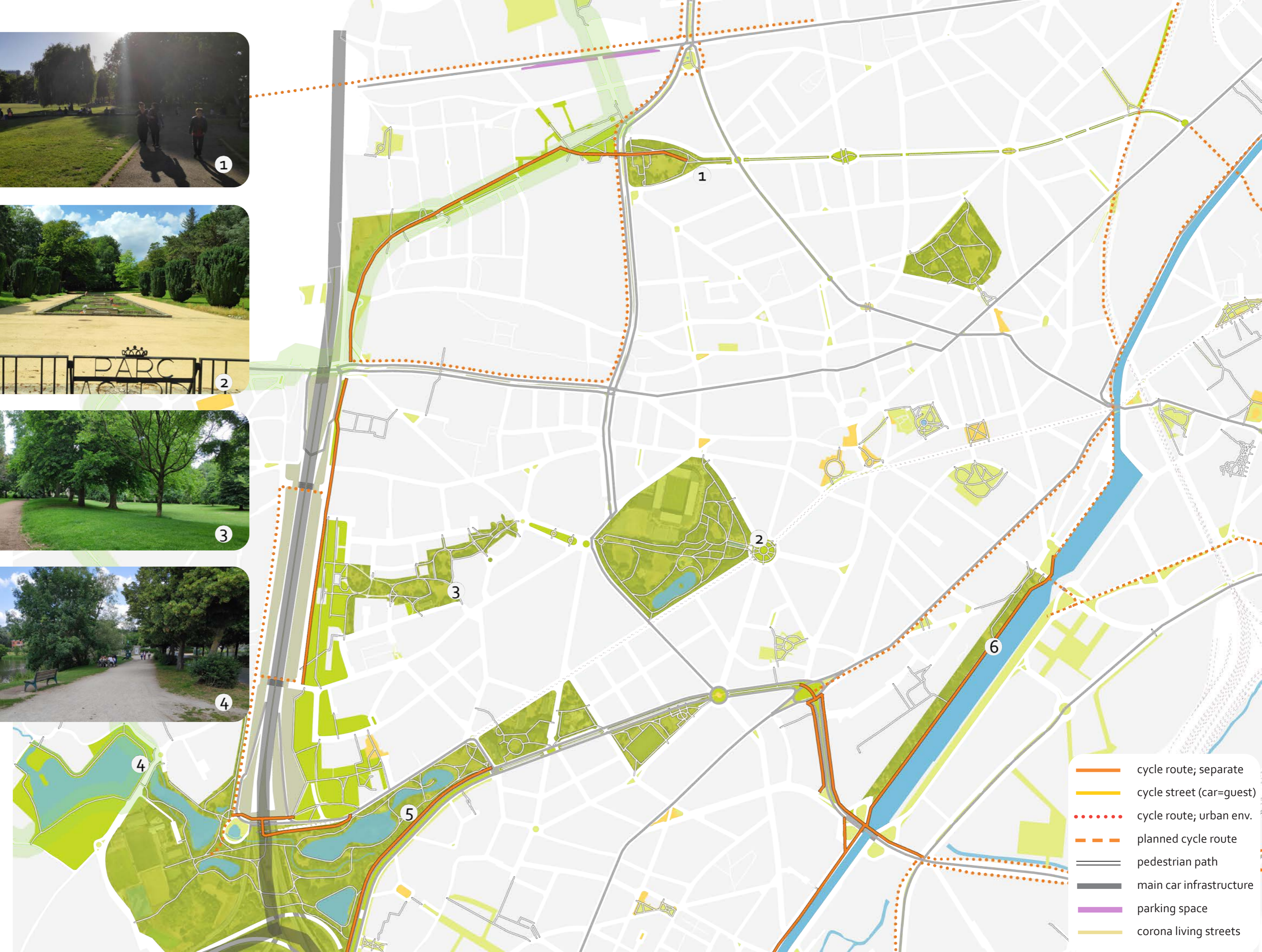
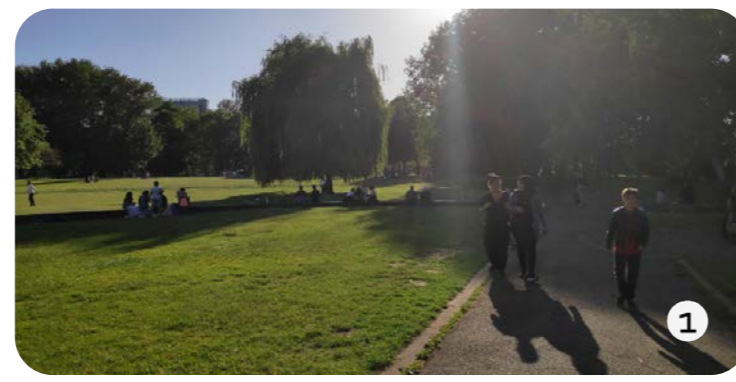
In four areas, opportunities to improve spatial conditions for running were elaborated. How do we shape the ambitions?

QUALITIES

green spaces

Anderlecht is unique in Brussels from a green-structural point of view. First of all, there is a series of larger green spaces/parks. They are located both at the borders of the city, and deeper into the urban tissue. Notable is the fact that the paths in the parks are very pleasant: wide, soft and even and thus perfect for running.

This is primarily a blessing for runners, walkers or cyclists from within the borders of the municipality of Anderlecht itself. But we can well imagine that runners in Brussels outside Anderlecht, would want to and be able to run here if there are good cycling routes or public transport connections that connect it with the surrounding districts / municipalities. This could happen in the future when the canal and cyclostrade will be developed as main bicycle structures.



QUALITIES

green lines

The real quality is that almost all these green spaces are connected with more linear green structures. There are some very long, green trajectories, often even containing loamy 'stap-as' (1 and 6 especially).

Together that seems the perfect layout for recreational activities such as running, walking and cycling.



- cycle route; separate
- cycle street (car-guest)
- ... cycle route; urban env.
- - - planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- corona living streets

RUNNING USAGE

However, the quality present in both the green areas and green lines is often not reflected in the frequency with which runners use them.

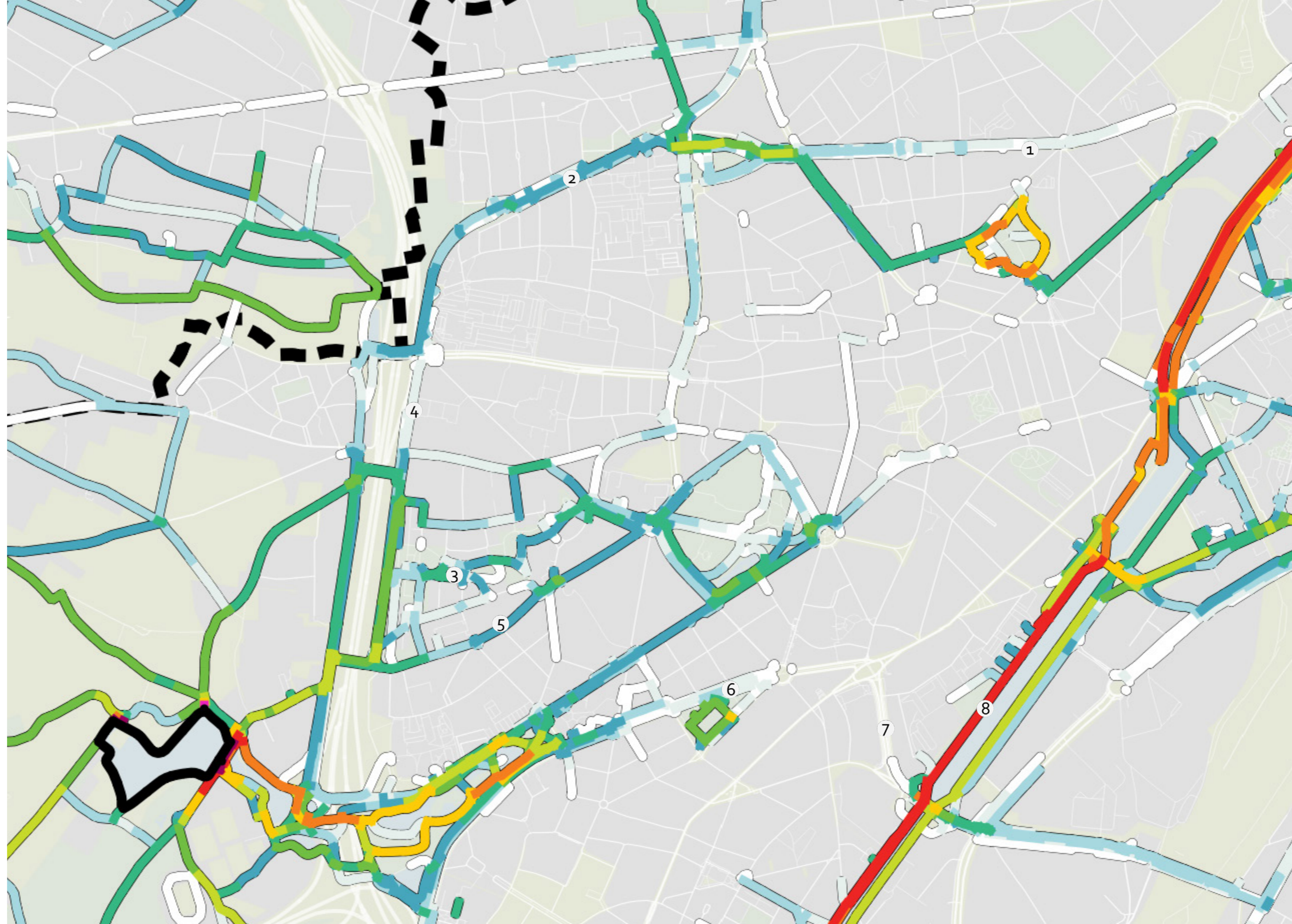
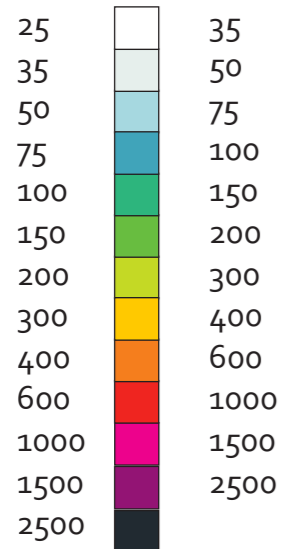
The big exception is the Pedepark lap. This is used very frequently: Endomondo users passed this lap more than 2500 times. This is in large contrast to many green lines and spaces within the city. The park at Scherdemael (3) was only passed about 100 times, the Maurice Herbetelaan (1), Joseph Bracopslaan (2 & 4), Aristide Briandlaan (6) and Frans Kalkenlaan (7), are even less frequently passed. The Astridpark is not yet a very popular running destination.

The canal is the main linear running destination, but it is not yet connected to the Anderlecht routes. The southside of the canal is used significantly less than the Northside (8).

In the running-survey, almost no negative comments were placed at these 'under-used' places. The lack of negative comments is also an indication of the lack of running. Our interpretation and estimation from visiting these parks and looking at the usage, is that runners do not yet recognise them as continuous route structures.

Amount of passages based on 109408 activities

RUNNING ENDOMONDO
All activities 2012- 2017



PROBLEM / POTENTIAL

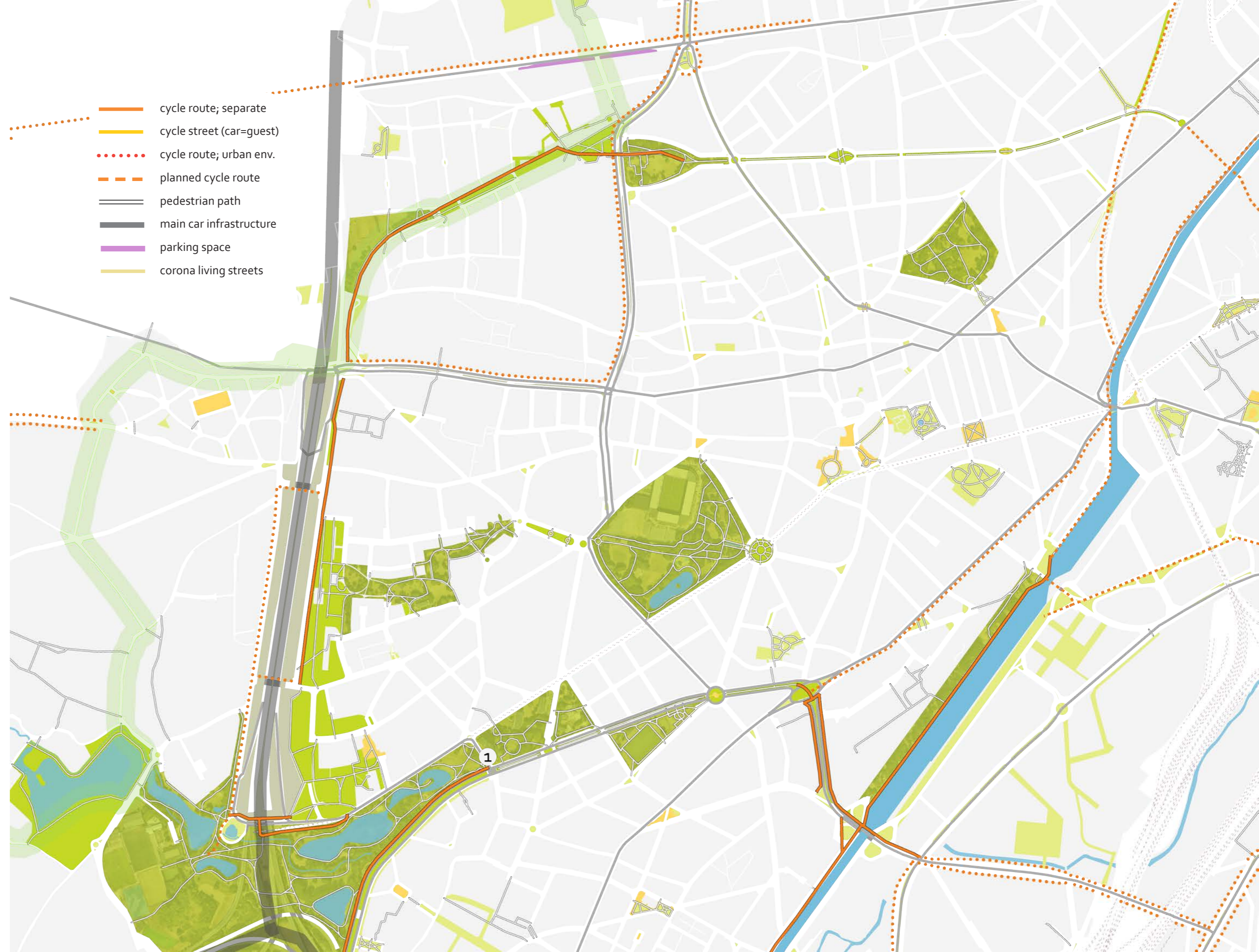
missing links

Although this "Anderlecht park system" is a delineated entity and green quality, the route systems for foot and bicycle movement have not yet been laid out in conjunction with this structure.

Looking at the bicycle infrastructure of this district, the presence of bicycle paths that are separate from the car infrastructure is not continuous. But the detached cycle paths that do exist can often be found inside or along the green structures.

There are, however, several opportunities along the canal, railway (L28) and Bergensesteenweg, new cycling infrastructure or space is planned.

There are footpaths, so-called 'stap as', in all parks. But even these paths do not continue from one green structure to another.



STRATEGY

greenways

Our primary advice is to develop a consistent network of cycle paths in conjunction with the green structures. Not only with the aim of improving the bicycle network (which is already a good ambition in itself), but also to give the green park system a connecting entity. It must be a continuous, recognizable, readable and runnable path that always offers space for both cyclists and pedestrians.

The main cycle route follows the green structures and canal. It makes a loop of approximately 12 kilometres. Within this loop, a diversity of streets in a more urban context can be made more cycle- and pedestrian friendly. Together, they make a complete and dense network of movement friendly routes, connecting urban centres and squares to the green network.

The green route network avoids major motorized roads wherever possible and where they intersect, slow traffic can pass safely without stopping.

The image below is an example of the possible layout of such a path, that we could imagine for Anderlecht. The document 'Hollandse Banen' from West8 (downloadlink: <https://we.tl/t-gkqwoQzngV>) shows even more ambitious path profiles that serve both cyclists and pedestrians. These paths only have an indicated separation between pedestrians and cyclist, but without direction marks. The idea is that when marks are minimized, slow users are responsible for the safety of themselves and others. It can lead to more people paying more attention and leaving more space for each other.



We recommend to design one type of path; that is recognisable along the entire loop. A cycleway, that always contains space for pedestrians.

- cycle route; separate
- cycle street (car=guest)
- ... cycle route; urban env.
- - - planned cycle route
- pedestrian path
- main car infrastructure
- parking space
- normal neighbourhood street



1. PEDE-VIJVERPARK under the bridge

One of the most important inconsistencies in both bicycle and pedestrian infrastructure is the connection between the (east-west oriented) Vijverpark and Pedepark and the (north-south oriented) parks along the highway.

When crossing the Neerpedestraat, the cycle path disappears into a poorly maintained footpath (photo 1, 2 & 3). It does not connect to the Vijverpark. Another cycle path exists in the same direction, but ends without a connection (4).

The Vijverpark has a beautiful cycle path (5), a few hundred meters long. It then disappears into a parking strip / motorway (6) or directs you to the other side of the road (7).

This inconvenient routing does not help in making the environment under the highway feel safe.



1. PEDE-VIJVERPARK

under the bridge

A system of consistent cycle paths could create an understandable network in both north-south and east-west directions.

In this network, a cycle path must always provide space for pedestrians as well. There are also numerous separate footpaths, but they always end in the primary network and are designed smoothly with the bicycle paths.

We recommend only one cycle-passage under the highway in clear direction: as clear as possible.

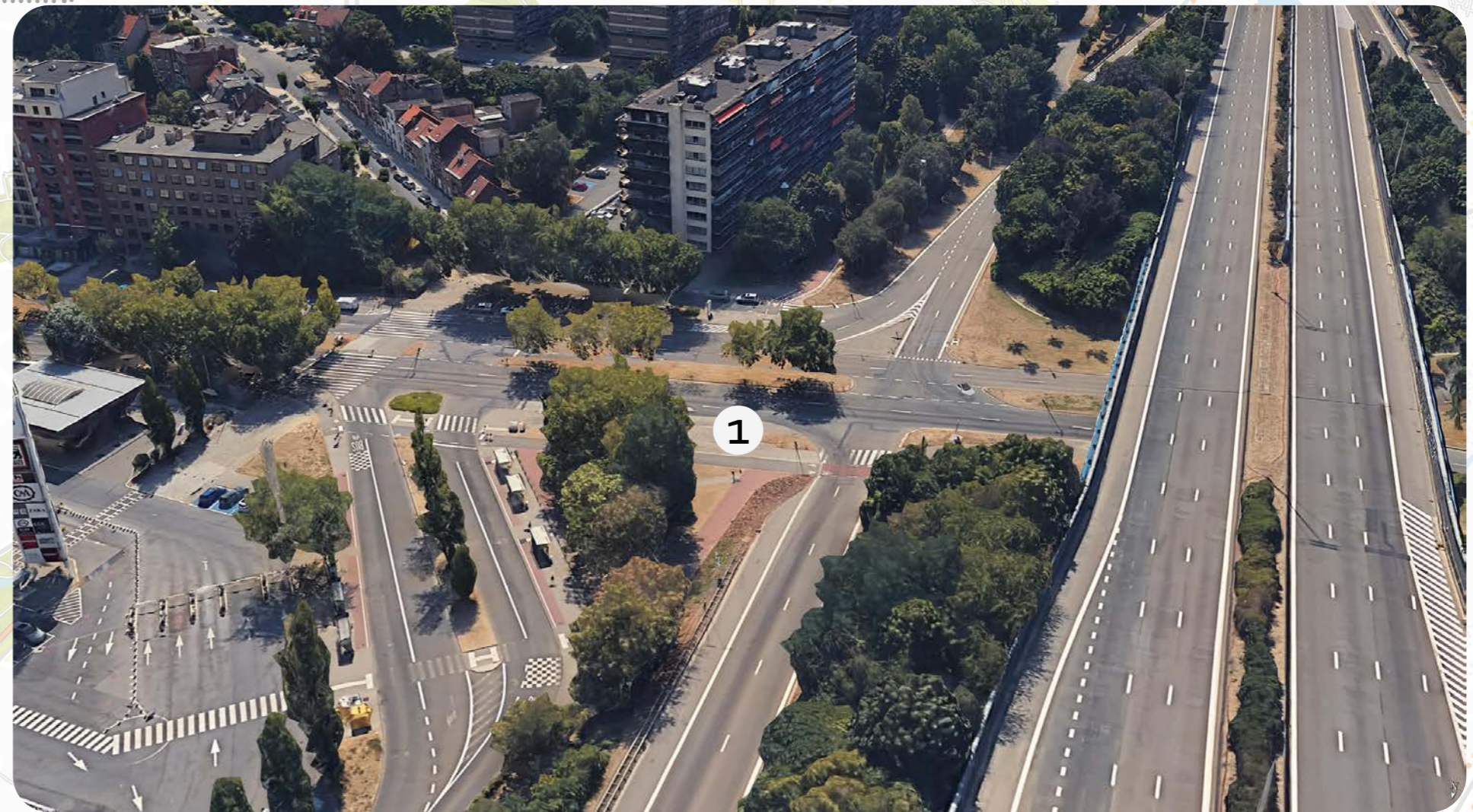


2. OVER SYLVAIN DUPUIS

a gap

There is a clear bottleneck a kilometre to the north. Crossing the Sylvain Dupuislaan is very hard (1), and requires an illogic detour. The road is a hard separator for the two adjacent neighbourhoods.

The cyclepath from the north is not in a very good condition, pedestrians do not have a clear space (2).

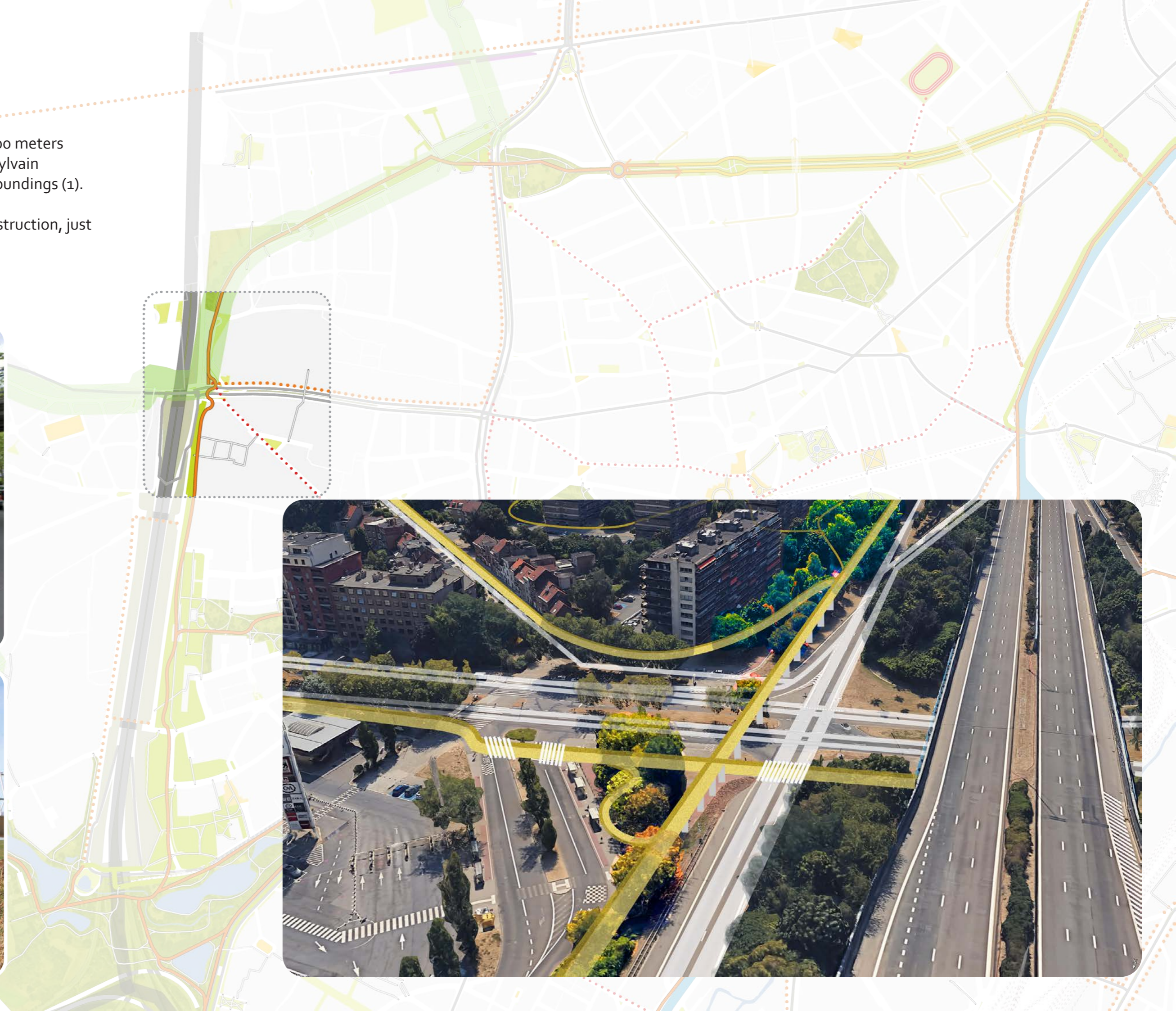


2. OVER SYLVAIN DUPUIS to bridge

However, the potential connection offers an interesting opportunity. There is already a natural elevation on both the north and south sides, the paths descend towards the Sylvain Dupuislaan. A bridge shouldn't have to be climbed, but you could just stay on the same level.

This is actually already present 400 meters to the east: A bridge passes the Sylvain Dupuislaan, from the higher surroundings (1).

The bridge could be a simple construction, just using pillars (ref 2).



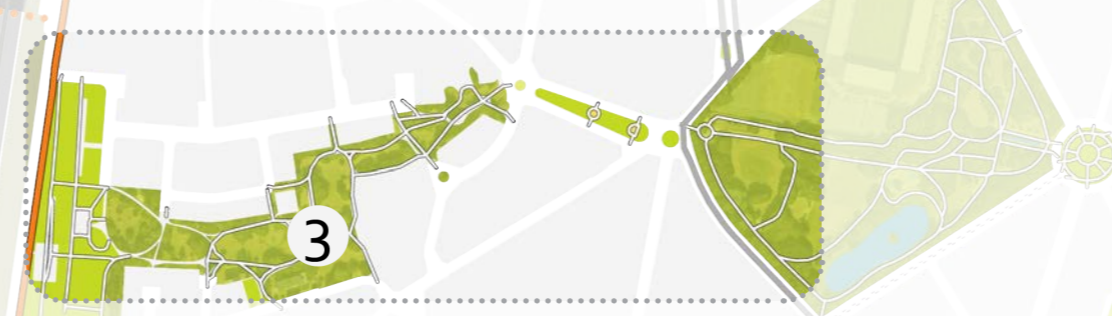
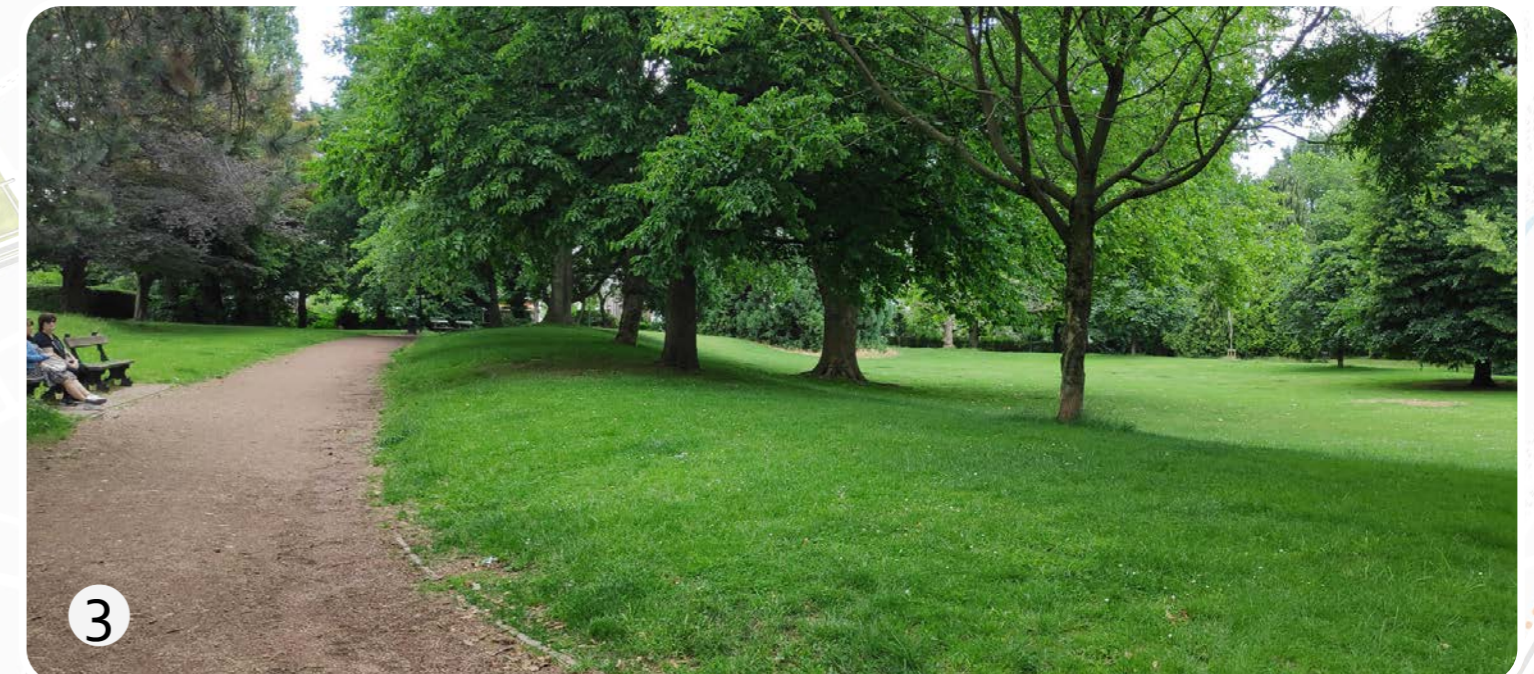
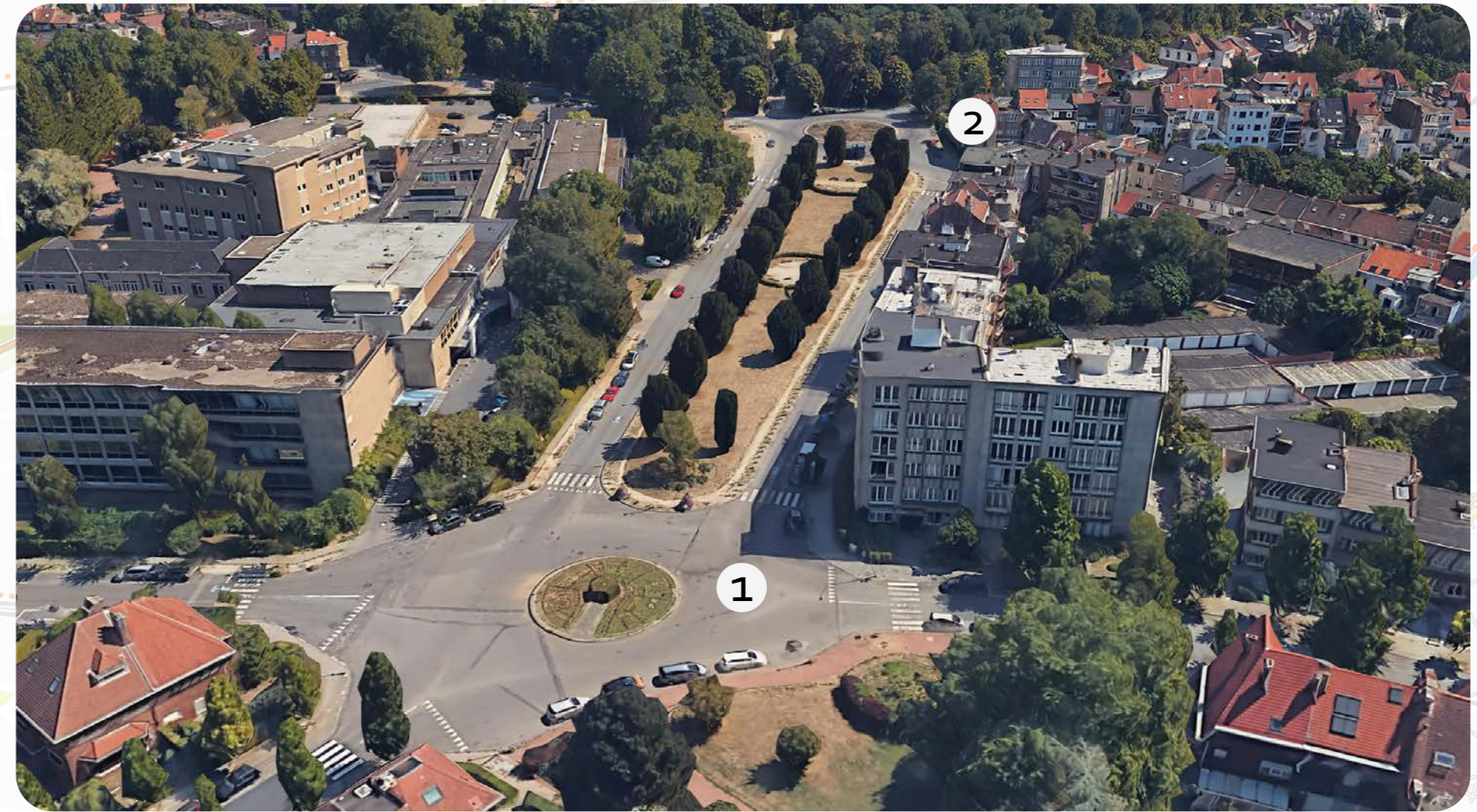
3. ASTRID AND ON grey between green

The Astrid Park has no cycle route and does not need one. The adjacent streets could serve as pleasant cycling routes.

But to the west of Astridpark, a linear park connects to the green structures along the highway. A cycle route could easily be added to this park (3); it is designed as a 'connecting park'.

The Egide Rombaux Square lies in between, a linear green structure as well. This section has a great potential as an ongoing green structure.

But at the moment it is mainly an asphalt environment. Cars are parked right in front of the park entrance, making the paths invisible. As logical as the green structure appears on a map, as inconvenient are the route structures in it.



3. ASTRID AND ON green between green

We propose to make one side of the Egide Rombaux Square completely green, including a continuous bicycle and pedestrian route.

The car roads are crossed via zebras. These zebras must be wide and lifted (on a speed bump) cars are effectively slowed down to <15 km/hour.



4. LEMAIREPARK frontdoor green

Between the Vijverpark, Astridpark and canal there is another sequence of green areas (Lemairepark). It includes a beautiful pedestrian boulevard in the middle (1).

However, this is also a main car route. That is unfortunate, the green structure becomes an island in a car dominated environment (2).

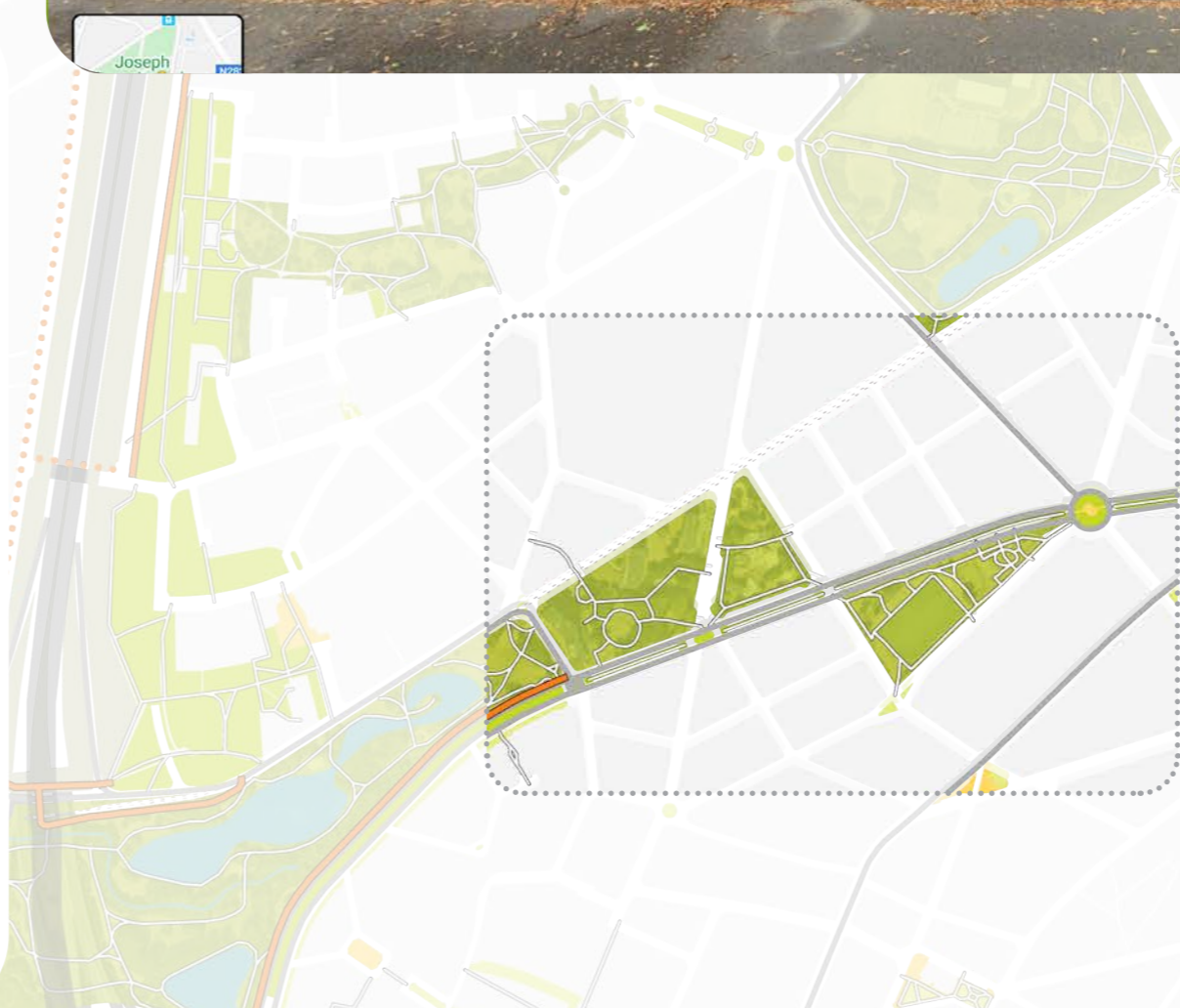
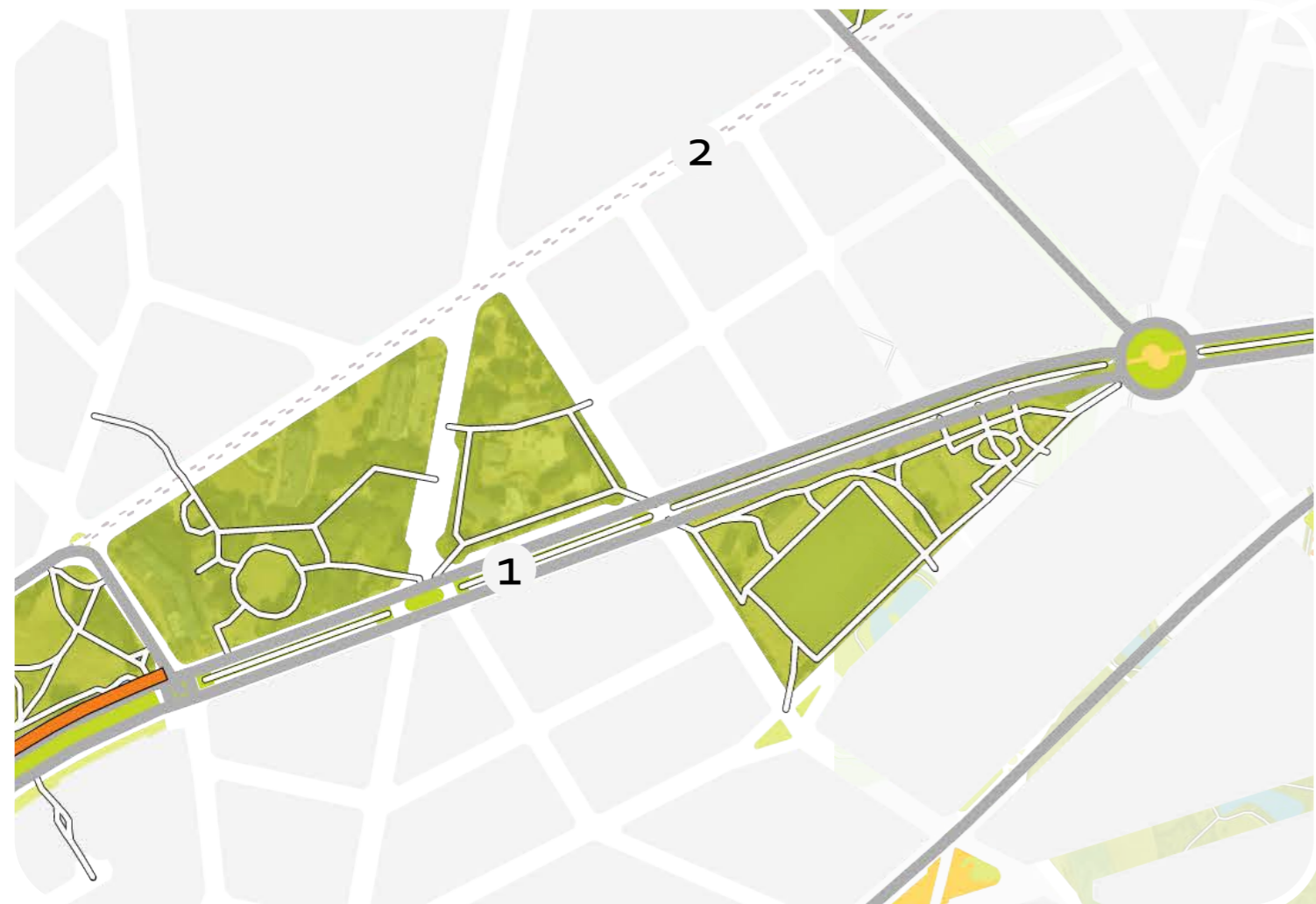
The road on the northern edge of these same parks (3, Marius Renardlaan) is more suited as primary car route. It is a larger-scale, more open environment. It is not the direct street at front doors.



2



1



3

4. LEMAIREPARK

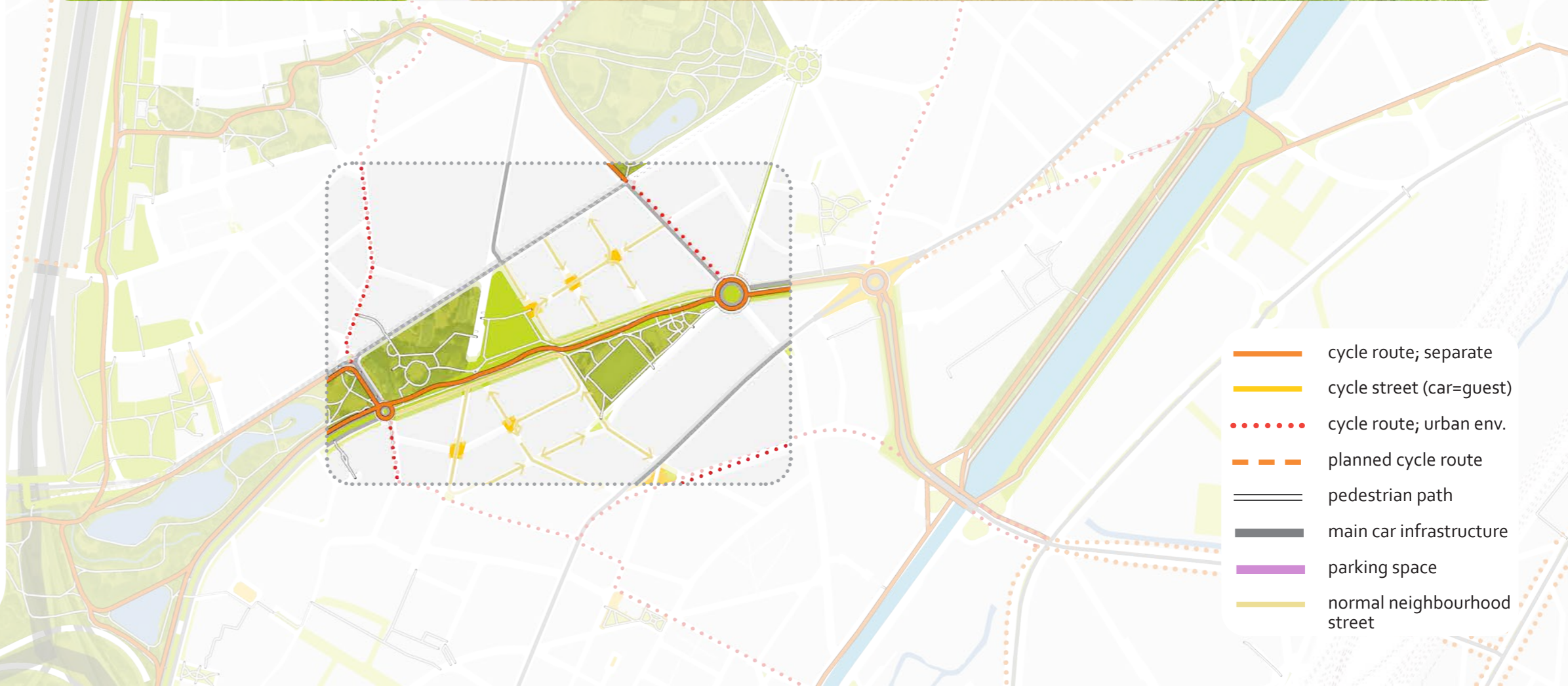
frontdoor green

We propose that this street is only accessible for destination car traffic. The bus connection could get a small detour around the south edge of the two small parks.

The pedestrian boulevard becomes part of the bordering parks, creating a complete green street.

The two small parks get a green connection in the middle, where the (destination) car roads bend off.

Mowing the grass only once a year would allow a more natural and ecologically valuable environment to grow. Moreover, it saves maintenance costs. By mowing some parts, natural seating and meeting areas are created.



5. ABOUT ROUNDABOUTS

people centered

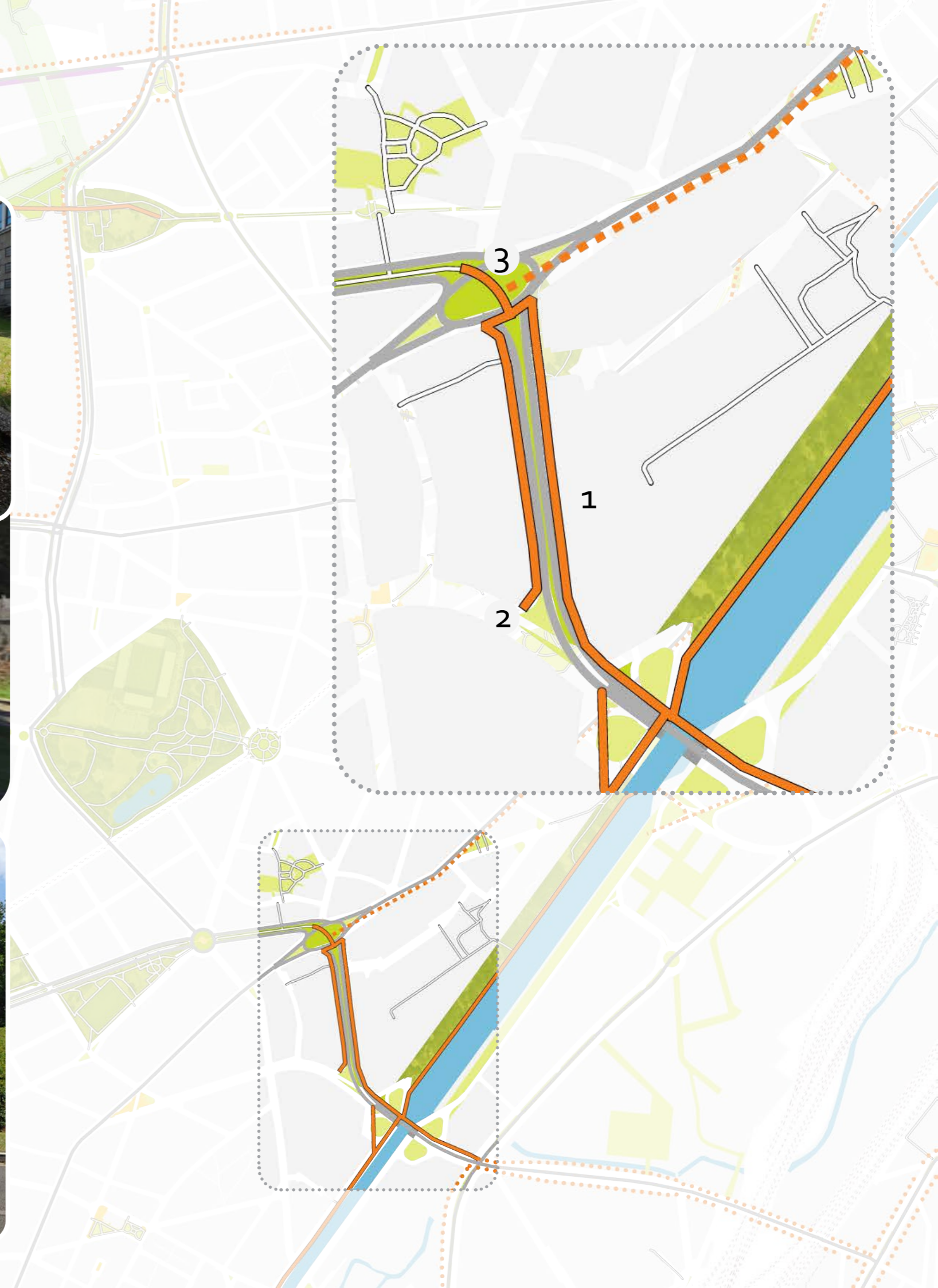
On the scale of the entire 'Anderlecht lap', the connection of the Aristide Briandlaan with the Frans van Kalkenlaan to the Canal is essential.

The Frans van Kalkenlaan is a very green and clear route (1), even though the cycle path suddenly ends on the west side (2).

It is unfortunate that this connection is interrupted by a large, unpleasant roundabout/

crossing with two traffic lights (3). The pedestrian path intersects the roundabout straight (and we have seen this more often in Brussels).

Car traffic also has to wait for traffic lights. That is all rather strange in our view, the idea of a roundabout is that you do not need traffic lights, and slow traffic can have safe priority.

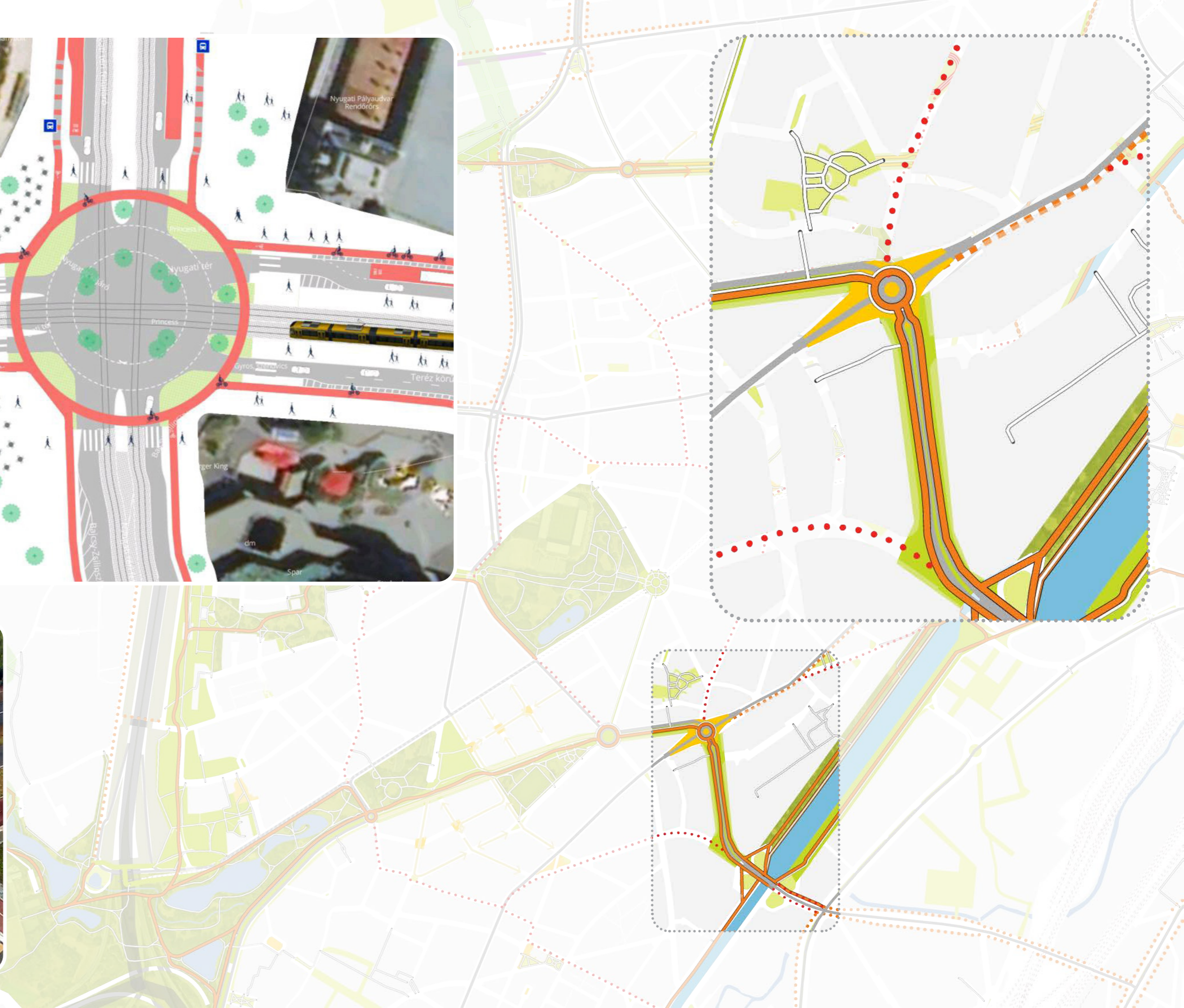
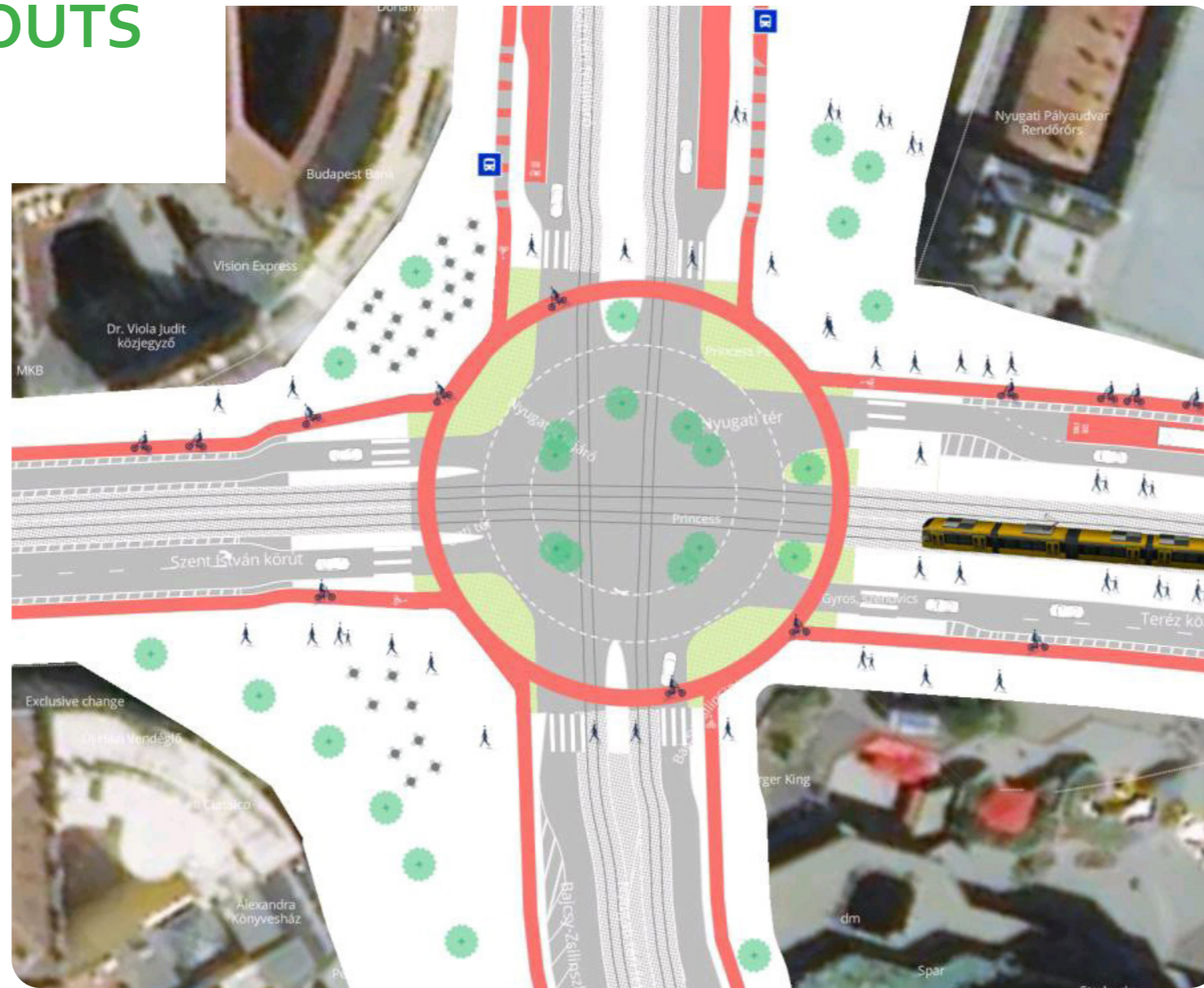


5. ABOUT ROUNDABOUTS

people centered

There is plenty of space to shape this. The roundabout could be designed much smaller than it is now, increasing the pedestrian/plaza spaces on the corner blocks. Cycle and pedestrian paths have priority over car roads, the roundabout forces cars to slow down their speed, serious accidents are almost impossible when designed well. This is called the safety by design principle.

We have seen many 'roundabouts' in Brussels that do not contain these ingredients. When Brussels would develop their cycle infrastructure to a higher level, designing these nodes with more priority, safety and consistency for slow traffic is essential.



6. CANAL SOUTH-EAST

just not a path

The last, and for runners most essential missing link, is the southeast side of the Canal. The northwest side is very popular as a running, cycling and walking route. But making a lap is currently hardly possible, a pleasant pathway is missing on the opposite side of the canal. Running a lap is really essential for runners; they don't like to use the same route twice in one run.

The only path now consists of cobble stones, un-runnable.



6. CANAL SOUTH-EAST

not just a path

Though in between the lane of trees, there is a beautiful opportunity to create a trail. A loam path should best be at least 1.5 metres wide, which allows running/walking side by side, or passing other pedestrians pleasantly. At this location, a separate cycling path is recommended seen the high intensity of cyclist along the canal (European cycling route)



RUNNER ADDS

a guided park system

The network of parkways could in the first place be addressed by introducing a series of activating facilities in the green structures. This could already underline the existence and potential of the associated green structures in Anderlecht, a basis for the more structural interventions.

- Several running routes could be marked between two and five kilometres. These can also be walked. Those who want to go longer can combine different routes via connecting segments. The routes make use of the park-system pathways. Using a consistent type of markings would make it recognisable as one system of routes. We have good experiences with punaises (1)
- Outdoor exercise equipment can be added to the marked routes. There are already some (2), adding some new ones creates a real network of routes + equipment along the way. In Bilbao for example, fitness equipment is designed with the parkroute (3).
- Water taps could be placed at a number of frequently used starting locations: the entrance to Pedepark, Vijverpark and Astridpark. Some other prominent green spaces may be of interest.
- The canal lap is one of the most important running destinations of Brussels. In the corners are wider green spaces. Making activating facilities / place here would be welcome (5).
- To the south of Pedepark, the public routes and areas around the sports fields are in a rather miserable condition (6). This environment could be an interesting extension of the Pedepark lap, if improved.
- Several runners asked for light on the lap of the Pedepark. For some it would be welcome, but other environmental aspects should also be considered.
- Vijverpark got some notes about unattended dogs. Clear information at the entrances can be valuable.



RUNNER FRIENDLY PRINCIPLES

The runner is a pedestrian, who often runs on cyclepaths, and prefers a green environment. The runner friendly city might just be the ideal way of making a healthy, sustainable city for people.

