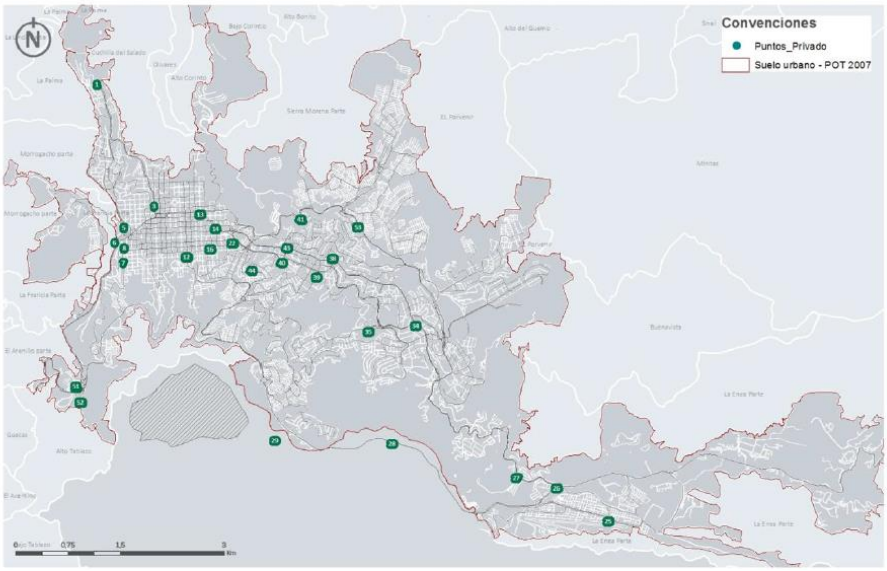
ANNEX I

AVAILABLE INFORMATION ABOUT THE MANIZALES MOBILITY MASTER PLAN

With the Master Mobility plan, THE CONSULTANT will have each and every one of the documents, tools, instruments, databases and results generated in the development of the plan, within which it is highlighted:

- **Four-stage transport model** that contains the modes of transport of private automobiles and public transport, calibrated for the peak period in the morning with their respective prospective scenarios in the EMME software.
- **Field work studies:** Each of the field information gathering exercises is explained in a general manner, according to the document "baseline and diagnosis of the current mobility situation", corresponding to stage 2 of the Master Mobility Plan.
    - Home surveys of Origin-Destination: 2,773 valid surveys were obtained, which have as their population of interest the residents of the municipal seat with ages equal or greater than 5 years old. Its level of representativeness was estimated at the level of Territorial Units of Mobility Analysis (UTAM)
    - Interception surveys in all modes, at 59 points in the city obtaining a total of 31,124 surveys during one month of information-gathering in 11 working days, between 5:00 a.m. and 11:00 a.m. with 4 master stations being allocated.
    - Origin-Destination Intercept Surveys with motorcycles, automobiles, occupied taxis, small trucks of two axles and large trucks of more than two axles, where 28 stations were selected throughout the city obtaining a total of 19,204 surveys.

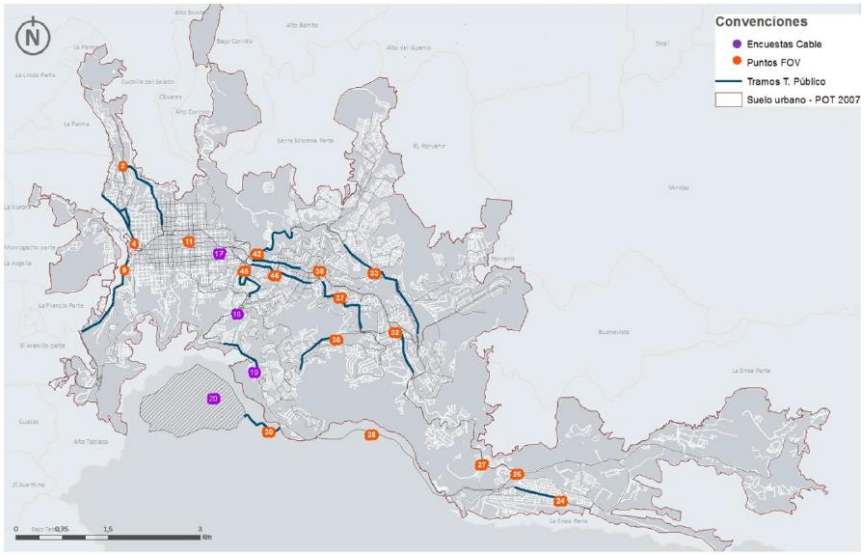
Figure 1 Location of volume points and intercept surveys to private transport, taxi and freight



Source: Steer Davies Gleave, 2017

- Origin-Destination Surveys of Public Transport, TPC, Aerial Cable carried out on board vehicles in service along certain sections, as shown in the following figure, and in the stations of the Aerial Cable with a total of 24 points for a total of 8,037 surveys on collective public transport and 1,922 in aerial cable stations. And the record of frequency of passage and visual occupation in public transport at 17 selected points.

Figure 2 Location of sections for public transport, FOV points and Aerial Cable surveys



Source: Steer Davies Gleave, 2017

- Origin-Destination Surveys of cargo vehicles carried out in addition to the intercept surveys carried out on cargo vehicles, three strategic points were chosen within the city where drivers of large and small trucks were interviewed, carrying out a total of 835 surveys.

Figure 3 Location of survey points for cargo vehicles

Source: Steer Davies Gleave, 2017

- Origin-Destination Surveys for Terminals, in order to classify the intercity and regional transport, were carried out in 3 passenger terminals and the Uribe station identified as a place where passengers arriving at the city of Manizales alight, obtaining a total of 1,126 surveys.

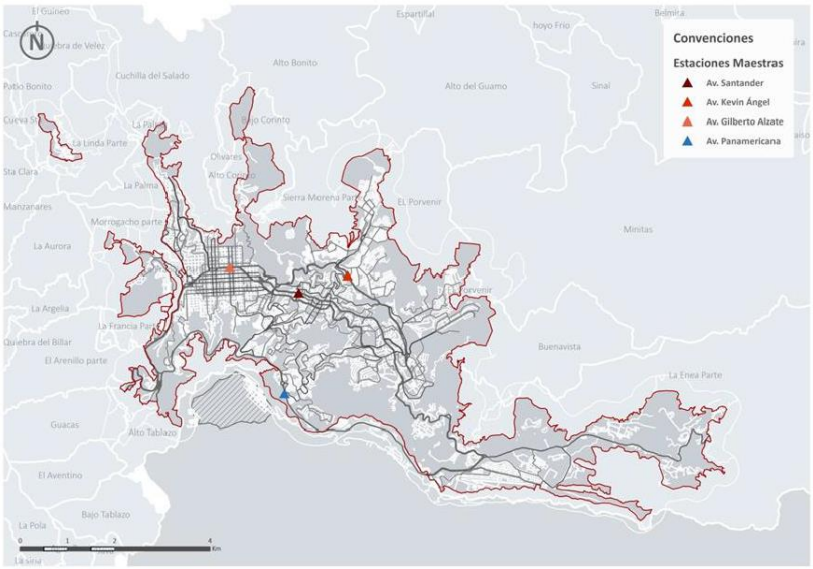
Figure 4 Location survey points in terminals

Source: Steer Davies Gleave, 2017

- Declared preference surveys: 1,275 in order to determine the valuation of each mode for different user segments.

- Master Stations of vehicular and passenger counts, in order to obtain a time profile of vehicles and passengers of a typical day in Manizales, four master stations located in main corridors and strategic points of the city were carried out during a typical day for 18 hours: between 5:00 a.m. and 11:00 p.m.

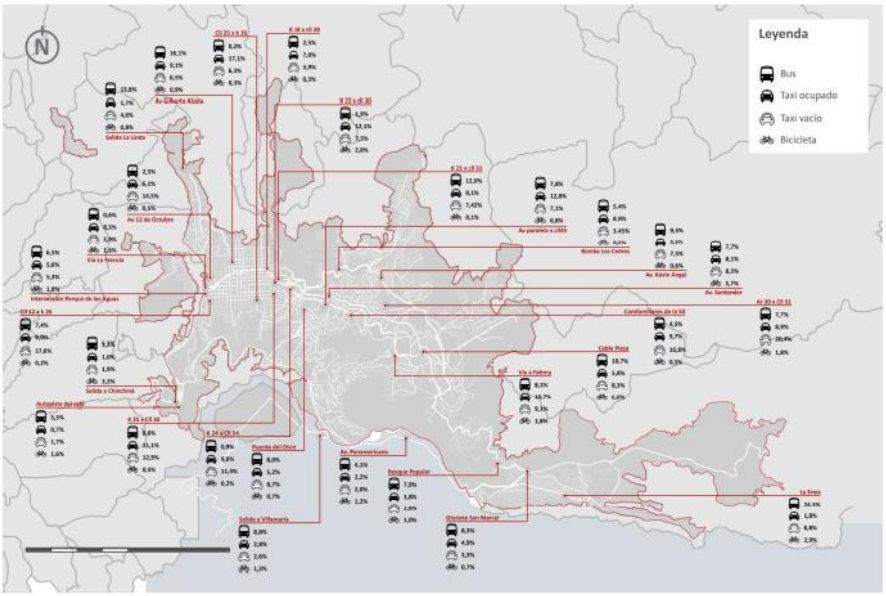
Figure 5 Location of master stations



Source: Steer Davies Gleave, 2017

- Vehicular volumes of public and non-motorized transport in the master and specific stations.

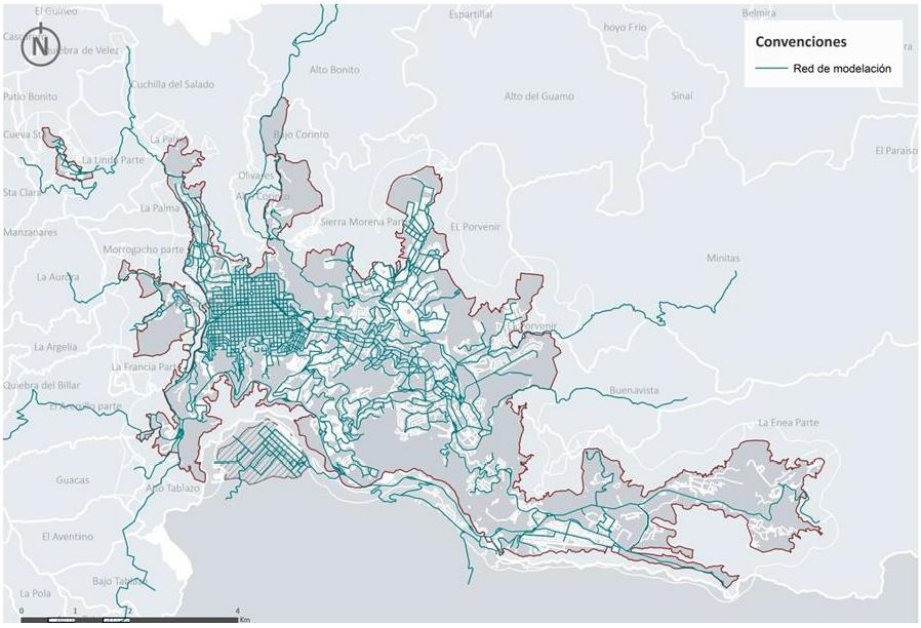
Figure 6 Vehicular volumes of public and non-motorized transport (bicycles)



Source: Steer Davies Gleave, 2017

- Inventory of the road grid: gathering of approximately 639 km of road grid, including the main roads and the road network where public transport routes circulate, with the corresponding state of the paving, road directions, numbers of lanes by directions, average gradients.

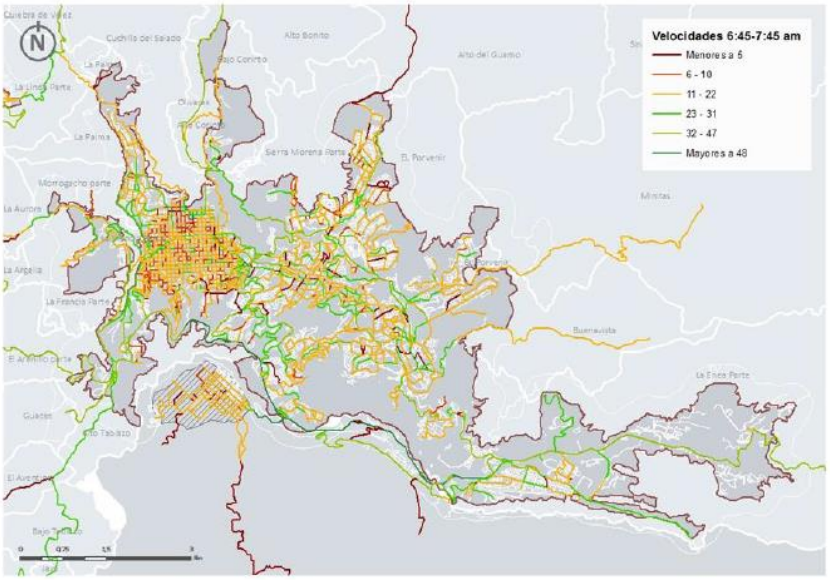
Figure 7 Inventoried road network



Source: Steer Davies Gleave, 2017

- Measurement of speeds through a platform that has as its base all the links of the network.

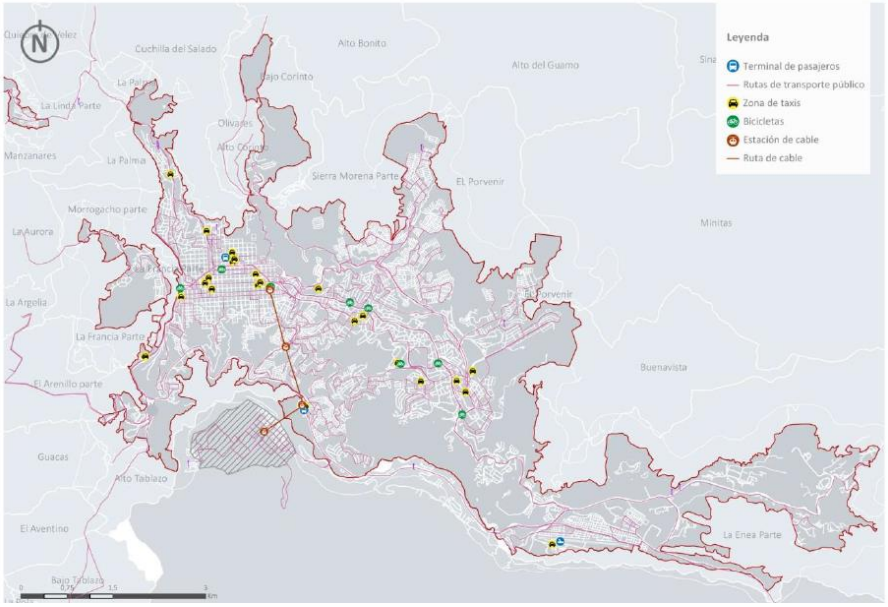
Figure 8 Peak hour speed record



Source: Steer Davies Gleave, 2017

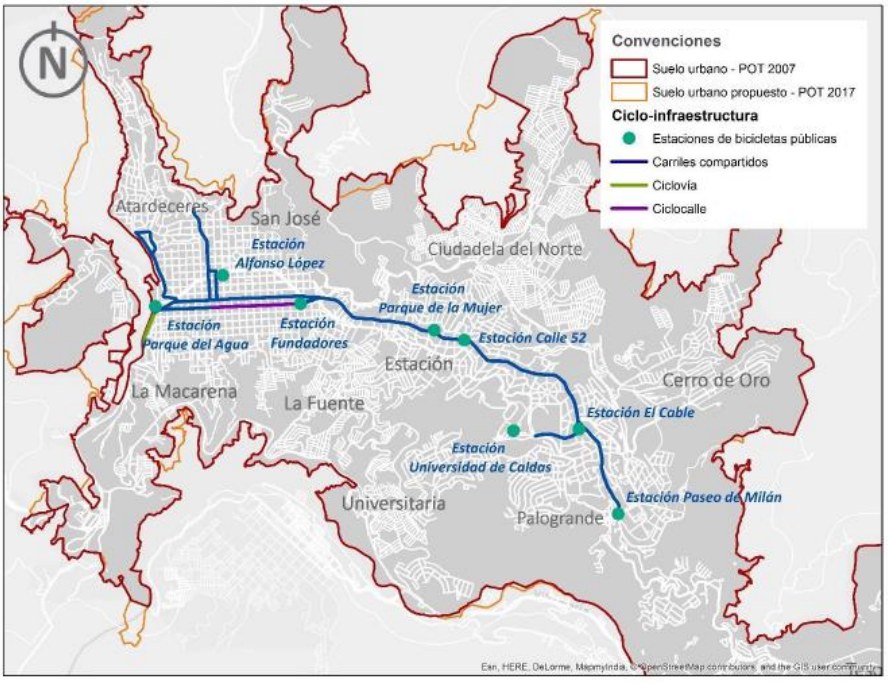
- Public transport infrastructure inventory available as passenger terminal, public transport routes, taxi areas, public bicycle stations, cable station, cable route.

Figure 9 Public transport infrastructure available



Source: Steer Davies Gleave, 2017

Figure 10 Cycle-Infrastructure of Manizales

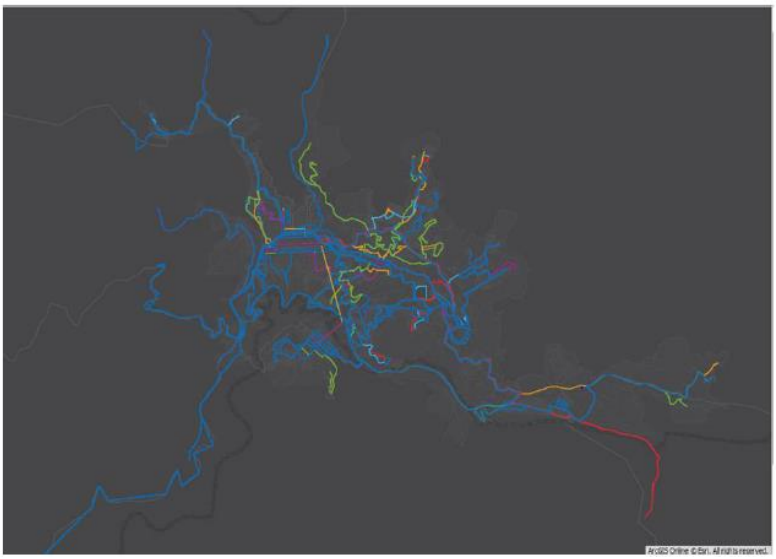


Source: Steer Davies Gleave, 2017

- Public Transport additional information:

- Results of interviews carried out to the operating companies of the TPC (Socobuses, Unitrans and Sideral, follwed by Autolegal, Gran Caldas, Serviturismo and Metropolitana) to diagnose current operational schemes.
- Inventory of current routes using GPS for each of them, taking 66 routes in total with 349 kilometers of coverage and a fleet of 973 vehicles.

Figure 11 Public transport routes

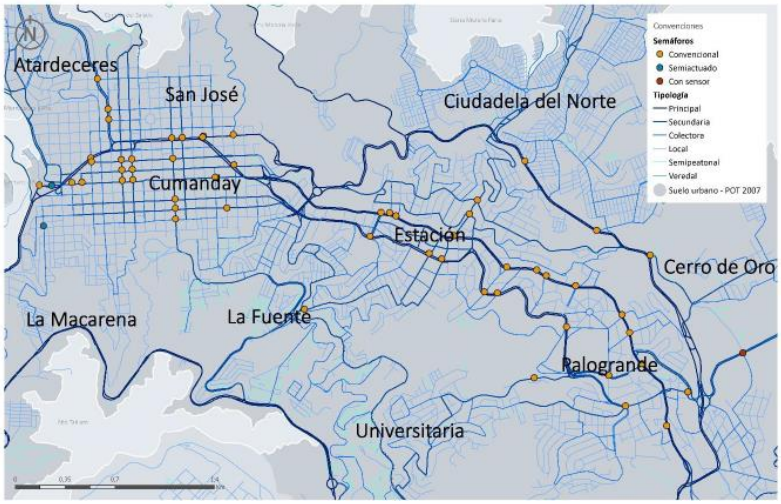


Source: Steer Davies Gleave, 2017

- Revision of the conceptual design of the SETP of 2013.

- Inventory of traffic control measures: gathering the information of the vertical and horizontal signage, traffic lights and transit devices along the road grid studied in the exercise of the road grid inventory.

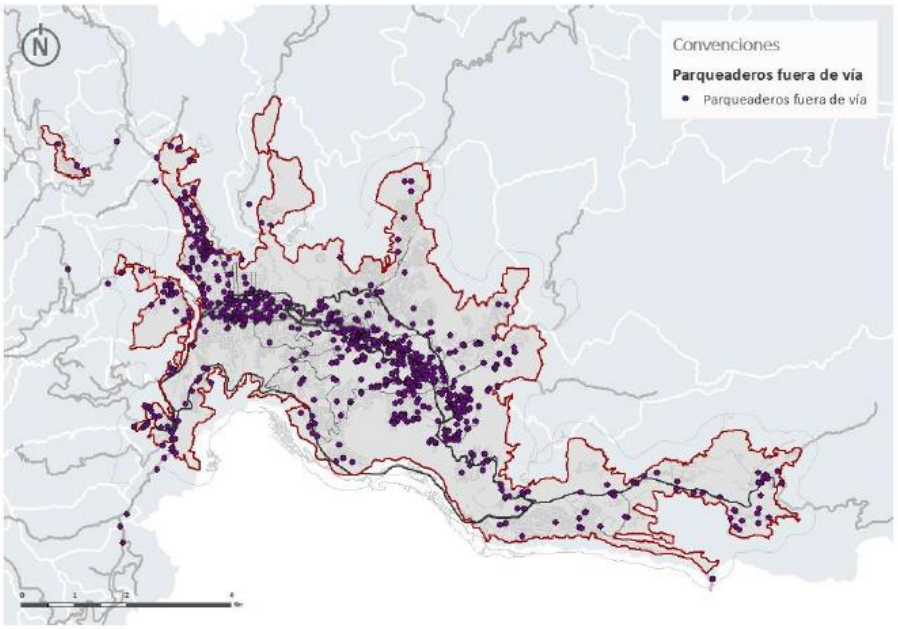
Figure 12 Location of traffic lights in the city



Source: Steer Davies Gleave, 2017

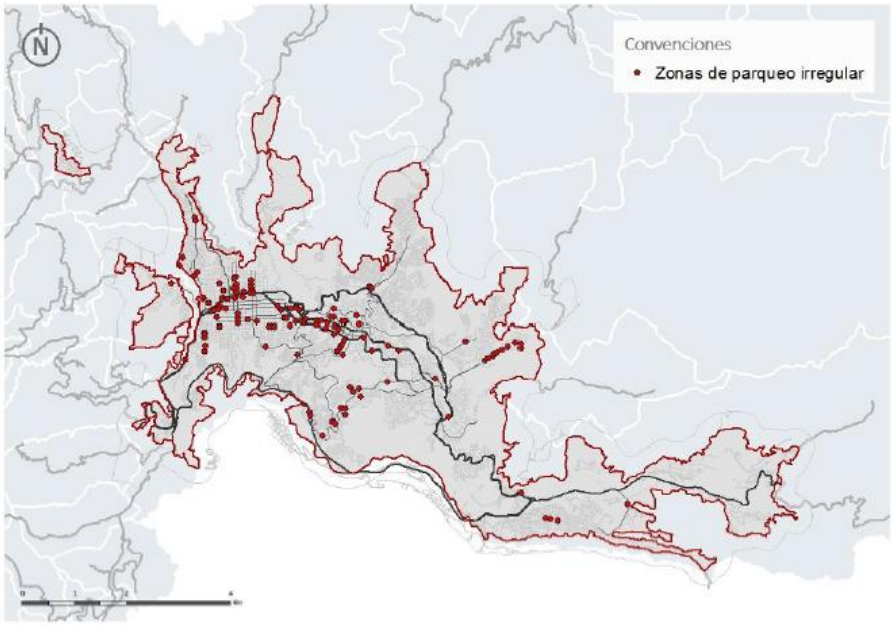
- Study of supply and demand of parking: registration of supply and demand in a sample of parking (on and off road), to establish current conditions of supply and demand in the area.

Figure 13 Parking Inventory



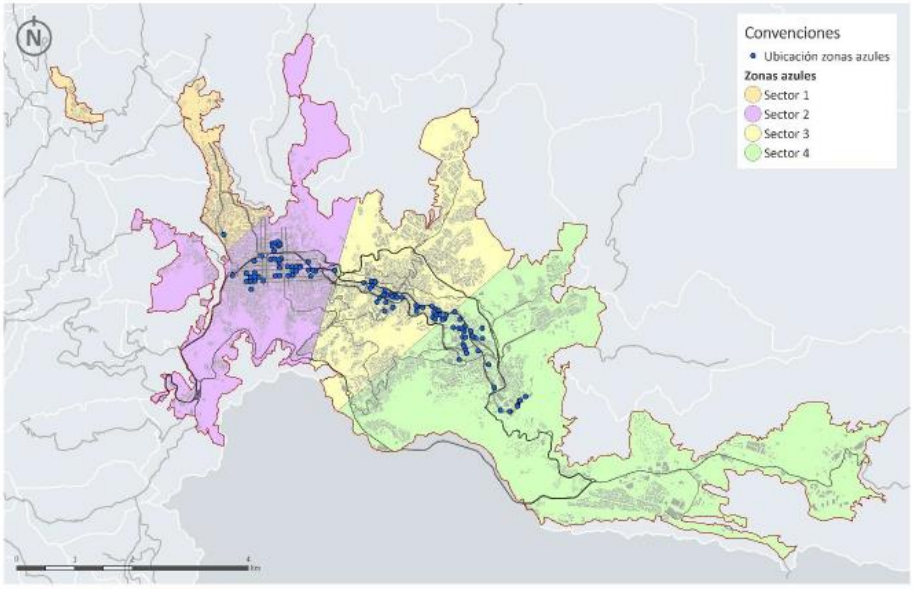
Source: Steer Davies Gleave, 2017

Figure 14 Irregular parking inventoried by sampling



Source: Steer Davies Gleave, 2017

Figure 15 Blue areas



Source: Steer Davies Gleave, 2017