9. REFERENCE AREA

The city of Kalamaria is the reference area for all street cases, and is therefore described only once, in this chapter.

9.1 Area and Data Description

The city of Kalamaria covers an area of 6,401,000 m². It is located in an advantageous side of the GTA, having a long coastal zone and a satisfactory geomorphology sloping gently to the sea. It is far from polluting industries and close to the State Airport "Makedonia" and has an easy access to the seasonal regions of Halkidiki.

Kalamaria has started to develop as a settlement in the beginning of the 20th century, in order to host the displaced population during the Minor Asia tragedy. By that time, the coastal zone of Kalamaria was mostly occupied by luxurious cottages owned by the wealthy families of Thessaloniki.

After an intense building activity, with small fluctuations, Kalamaria has been transformed into a modern residential region that attracted many new inhabitants and a significant commercial activity. At the same time, along the beach has been developed an area of recreation with supralocal character.

A high contrast can be observed between regions of Kalamaria with different construction characteristics. This lack of continuity is a result of the progressive integration in the city plan of regions with variable property arrangement and variable forecasted rate of growth.

Kalamaria is considered today a modern city with satisfactory conditions of residence, new and luxurious buildings, lack of arbitrary buildings, relatively low building density and wide space among building lines. With a number of spaces for people to congregate and a lot of possibilities for recreation, Kalamaria continues to attract new residents of intermediate and high incomes.
9.2 Performance indicators

As the graph illustrates, the registered population of Kalamaria is continuously increasing. The rate of population growth is not directly linked to the general trend of urbanisation, since many of the new residents originate from other regions of GTA.

The actual residential population exceeds the number of the registered. It is calculated that the actual population size in Kalamaria is 120,000 residents (2002).

The continuous increase of the population of Kalamaria in combination with the decrease of the number of people sharing a home caused a great demand for new buildings. To serve this demand, a significant building activity took place that continues up to date. Most of the old 1-2 floor buildings have been replaced by new taller ones (4-5 floors) of good built quality, decorated with balconies, windows and coloured metallic parts.

Some streets in Kalamaria have developed an important commercial activity with supralocal range such as Adrianoupoleos, Ethnikis Antistasis, Komninon, Passalidi, and Egeou, as well as the recreation zones of Plastira and Sofouli. The shops of the rest parts of Kalamaria are of local or neighbourhood range.

The only means of public transportation offered in Kalamaria, as well as in the GTA, is the bus and the taxi. There are 10 bus lines passing through Kalamaria and connect it with the city of Thessaloniki as well as with other municipalities of the GTA. In addition to the public bus, there are 3 lines of municipal bus service with smaller routes within Kalamaria area.

The rate of unemployment is stationary around 6.5% of the total financially active population in the decades 1970 and 1980.

All the data are collected in a consistent manner, during the national census. Data for 2001 census is not yet available except the registered population. Instead, we present data for 1998, taken from the project “Revised Traffic Management Plan of Kalamaria” in the following table.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered population</td>
<td>36,968</td>
<td>50,660</td>
<td>80,689</td>
<td>87,312</td>
</tr>
<tr>
<td>Number of homes</td>
<td>10,196</td>
<td>15,710</td>
<td>25,902</td>
<td>34,167*</td>
</tr>
<tr>
<td>Residents per home</td>
<td>3.46</td>
<td>3.12</td>
<td>3.00</td>
<td>3.15*</td>
</tr>
<tr>
<td>Number of financially active</td>
<td>11,460</td>
<td>16,941</td>
<td>34,663</td>
<td>55,829*</td>
</tr>
<tr>
<td>Number of working residents</td>
<td>10,684</td>
<td>15,867</td>
<td>32,488</td>
<td>52,032*</td>
</tr>
<tr>
<td>Number of unemployed</td>
<td>776</td>
<td>1,074</td>
<td>2,175</td>
<td>3,797*</td>
</tr>
<tr>
<td>Rate of unemployment</td>
<td>6.78%</td>
<td>6.34%</td>
<td>6.87%</td>
<td>6.80%*</td>
</tr>
</tbody>
</table>

*refer to year 1998, taken from the project “Revised Traffic Management Plan of Kalamaria”
Studying the graph of injuries and fatalities in the street of Kalamaria in the last years (1986-1997), it is unclear if the traffic safety situation has improved. A specific project, which included a road safety study ("Revised Traffic Management Plan of Kalamaria") has indicated streets where the safety index was stable or lower, and others where the safety index has increased from 1989 to 1999, and additional measures should be applied. Overall, it was concluded that the measures taken during the earlier study of 1989 did not have negative implications on road safety.

Most of the accidents that occurred over the years 1991-1997 were side-front collisions involving two vehicles. The second most common type of accident involves pedestrians being hit by vehicles. The data presented are those recorded by the police. The accident’s spatial distribution can be seen in this map, depicting the accidents in the streets of Kalamaria during 1995-1997.

Data are also available for indicators such as the people movement and vehicle ownership (1998), as seen in the table below:

<table>
<thead>
<tr>
<th>People movement</th>
<th>Motor vehicle km / index of flow</th>
<th>12,445</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total people movement (persons per day)</td>
<td>203,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vehicle ownership</th>
<th>Number of two-wheelers</th>
<th>6,124</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of private cars, pick-ups, vans</td>
<td>34,043</td>
</tr>
<tr>
<td></td>
<td>Number of heavy vehicles like lorries, buses etc.</td>
<td>428</td>
</tr>
<tr>
<td></td>
<td>Total number of vehicles</td>
<td>40,777</td>
</tr>
</tbody>
</table>

Indicator of vehicle ownership: 305 vehicles/1000 residents.
10. DISCUSSION

Existing situation

One of the main problems of Kalamaria is that some of the important arterial streets of Greater Thessaloniki Area pass through its central area. Two of the case study streets, namely Ethnikis Antistasis and Adrianoupoleos connect Thessaloniki’s CBD to the city’s airport and the nearby resort places. High traffic volumes and high vehicle speeds create very important problems to the vulnerable street users, i.e. the residents and the pedestrians.

“Out of balance” indicators are:

- Traffic safety: Traffic safety problems are due to high vehicles’ speeds. One-way operation of an arterial, results in high speeds, and the lack of traffic police control allows drivers very often to exceed the speed limit. The problem is more intense near places with high pedestrian concentration, like school areas, parks etc.
- Environmental impacts, including traffic noise and pollution, due to high traffic volumes. Kalamaria, in general, has a rather wide street network and low building density, therefore air pollution is not a very serious problem. On the contrary, traffic noise levels along arterial streets exceed the legislated limits for residential areas.
- Lack of on-street parking spaces, which are necessary for arterial streets with commercial land uses at the ground floors.
- Difficulties in the catering process of the commercial land uses across the streets.

The above problems characterize most of the arterial streets in Thessaloniki and Kalamaria, since many activities and by different actors take place along the streets, and most importantly these actors have conflicting interests.

Ethnikis Antistasis and Adrianoupoleos are one-way arterials with commercial land uses at the ground floor of the buildings, and mostly residents at the upper floors. Both have traffic capacity problem, because illegal on-street parking reduces the street width. The sidewalks’ width, the level of service of public transport, the street lighting and building aesthetics are satisfactory. Traffic safety problem, both for vehicles and pedestrians, is very serious.

On the other hand, Plastira street is characterized by recreational land uses at the ground floor of the buildings, which attract high pedestrian volumes, especially during the evening. Even if there are many protected pedestrian crossings, pedestrians use to cross the street at any point. This is a very risky situation for pedestrians as well as for the car drivers.

Short and long term effects

During the last decade, Kalamaria is developing rapidly. The Municipality’s population has been increased by 50% between 1981 and 1991, and by an additional 50% between 1991 and 2001. New housing areas are developed and new residents are moved here from the centre of Thessaloniki, because Kalamaria offers a highly advantageous living area. The increase in population has been followed up by increase in the number of commercial uses, since many businesses have been moved from Thessaloniki’s CBD to Kalamaria.

The city’s development as well as the increase in the car ownership index resulted in traffic volumes increase all over the road network, and increase in parking demand. In addition, all traffic impacts to the living environment have been increased. The results are obvious especially along the arterial streets and the surrounding neighbourhoods.

The main problem in terms of the operation of an arterial is that this street category should accommodate many user types with opposing interests and needs. That is:

- Car traffic should be allowed to use the street moving with a satisfactory speed without delays, and in the same time the vehicles’ speed should not exceed the speed limit for residential areas.
- The street width should be used by the moving vehicles and in the same time the parking demand and the catering process should be accommodated.
• Pedestrians should be provided with a safe, clean and comfortable environment, while cars which create noise, pollution etc. cannot be removed from the street.

To achieve a more sustainable environment for all the users of the arterial, it is important that everybody realizes the following:

• All road users have equal rights and priority while using the street.
• The use of public transport is a way to diminish the car traffic impacts.
• Public involvement in the decision-making process is very important, since it helps Authorities to recognize better the situation and in the same time to inform people about the plans and projects that are to be implemented.

**Decision-making and design processes (and statements)**

Sofouli and T. Ikonomidi streets were reconstructed because of the capacity problem of Sofouli Street. The majority of traffic control measures and works in T. Ikonomidi Street were implemented because of the modification of the street category, from collector to arterial. It was urgent to take care of the increased traffic volumes and vehicle speeds, since the purely residential street was modified into an arterial. This was the main reason that the reconstruction was of high priority.

Although Ethnikis Antistasis and Adrianoupoleos streets have many environmental and safety problems, the Municipality has done very little about it. The reasons are:

• There is an obscure determination of responsibilities among the authorities, since the two arterials belong to the Basic Road Network of Thessaloniki, for which the Ministry of Public Works is responsible.

• It is not very easy to take measures in arterial streets to restrict traffic and control speed, since arterials are classified streets that should offer a high level of service to car traffic.

The latter is one of the reasons why Kalamaria participates in ARTISTS, that is to find out the right way to reconstruct an arterial without creating problems to any users group of the street.
References

[1] Presidential Decree No 410 of 1995 about the responsibilities of the local authorities of first degree, (In Greek)


