

ON THE QUESTION OF LIMITS

The role of ecotones in the management and reintegration of transforming urban environments.
Urban ecotones as territorial indicators and interfaces of urban reconfiguration.

An applied study of the urban regional mosaic of the city of Thessaloniki, Greece

BOOK II - ANALYSIS ATLAS

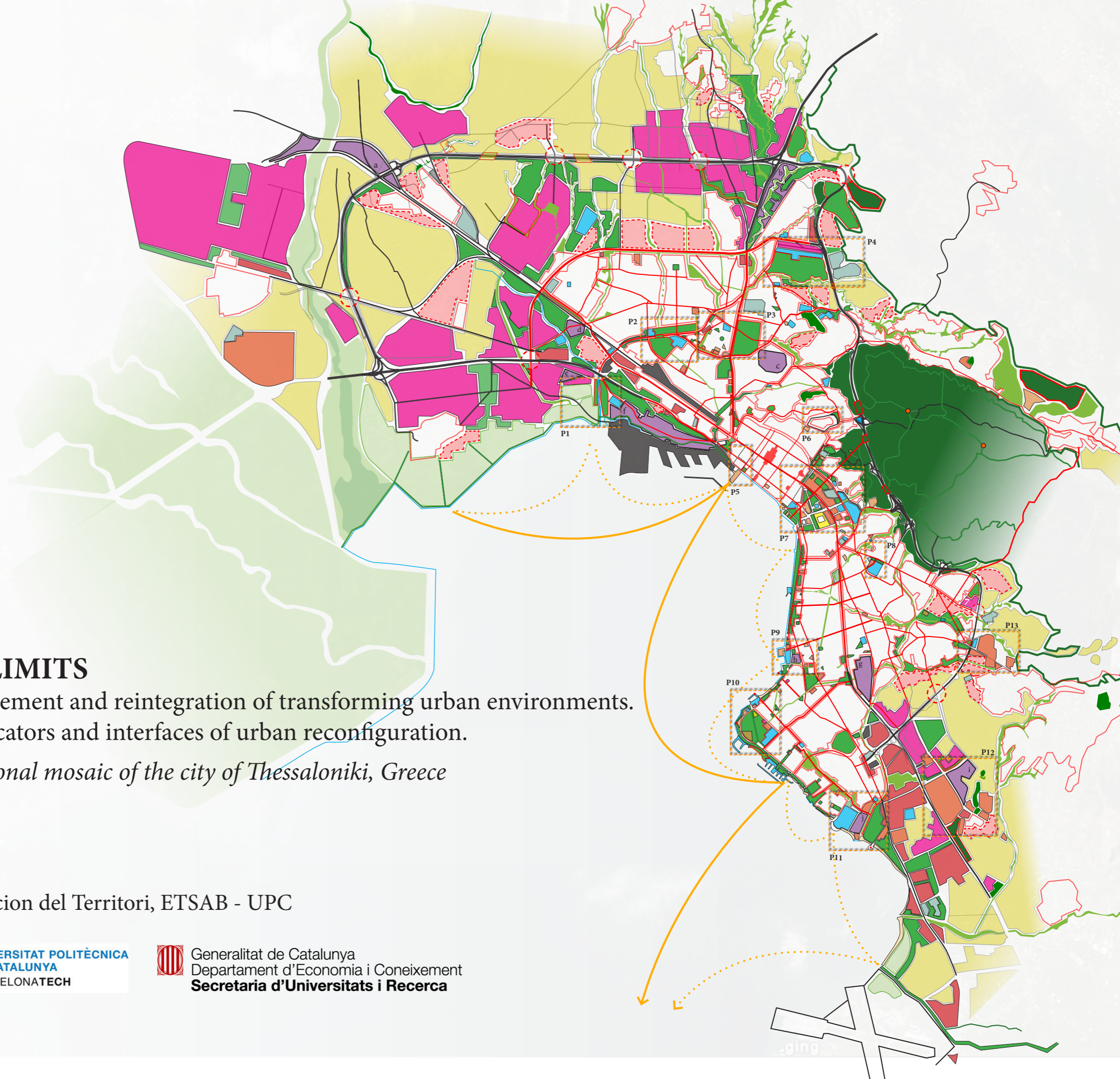
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location



The West Double Arch

A double arch for the larger regional structure.

images (top)

The oldest known photo of Thessaloniki, taken from the west of the city in 1863 by Dr. Josef Szekely (source: MIET)



This next analysis chapter will cover the next two ecotones or what this paper will call the **West Double Arch**: consisting of the *Inner Arch* (running along the western city walls) and the *Exterior Arch* or as it is already known *the West Arch* (Δυτικό Τόξο), two apparently co-centric arches in the western part of the city. The two arches have been chosen as analysis elements because both form important urban spatial structures (individually and combined) while at the same time they demonstrate characteristic activity holding numerous attractors and latent projects, thus offering the potential for an integral transformation and improvement of the local and wider urban structure. The West Arch had been the object of debate and theme of an international architectural competition realised in the frame of the European Cultural Capital in 1997, but most of the conclusions/results never materialized. On the other hand the inner Arch, has not received as much attention as an structural element apart from punctual / isolated municipal studies focusing principally on the restoration of the western walls and their surrounding spaces¹. The purpose of the choice of the parallel /joint analysis of the two arches as a double arch is to:

- a. Investigate the growth patterns on the western part of the city and their generating forces.
- b. Explain the formation and evolution of the radial spatial structures present in the fabric.
- c. Detect and analyse flows and dynamics active between the two arches

d. Identify settlement patterns and liveability / habitability indicators

e. Highlight local ecotones and their respective effects

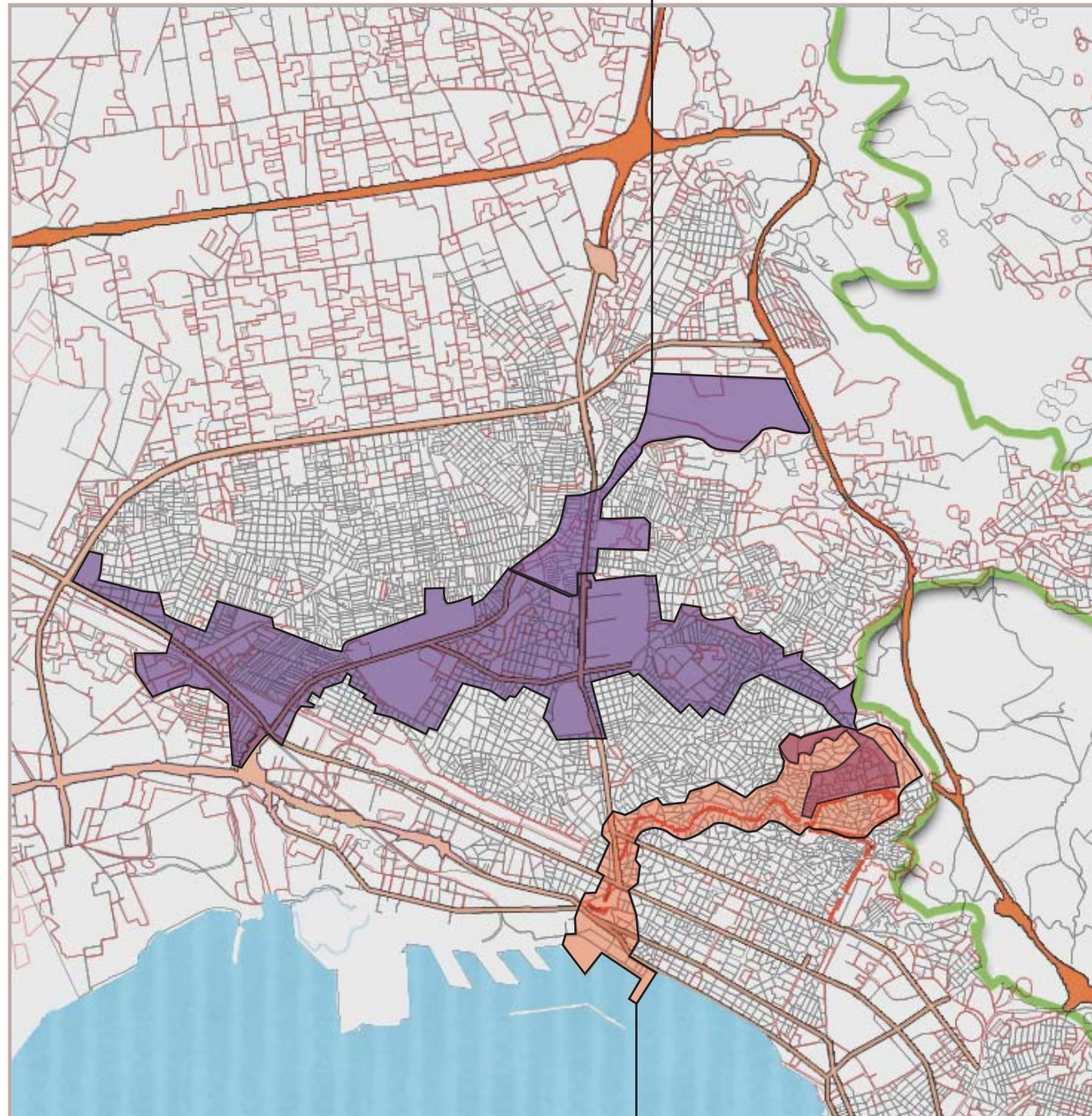
The double arch paradigm will thus help analyse the extensive western area of the city integrally. Investigate in detail the radial growth patterns that have formed, while taking into considerations local and wider plans or interventions that have contributed in the final synthesis of the contemporary mosaic. This claim can be further backed by the presence of ring road structure, inner and outer, that follow the radial trend mentioned. Nevertheless all forms and key elements need to be examined to verify this claim and discern present and future trends of the urban fabric.

As far as the local landscape is concerned, most of the areas of the Northwest Thessaloniki are characterized by the pronounced ground relief that gives special characteristics to each urban area allowing distant views to characteristic points / elements of the urban and peri-urban landscape: the harbour, the Gulf of Thessaloniki, the Eptapyrgio, the old city walls, the Seich-su Forest etc. Although the area traditionally served as a agricultural area in the antiquity, at the beginning of the 20th century it received a series of waves of incoming popu-

1. Municipality of Neapoli (2008)

The Exterior West Arch

(approx length: 7 km)

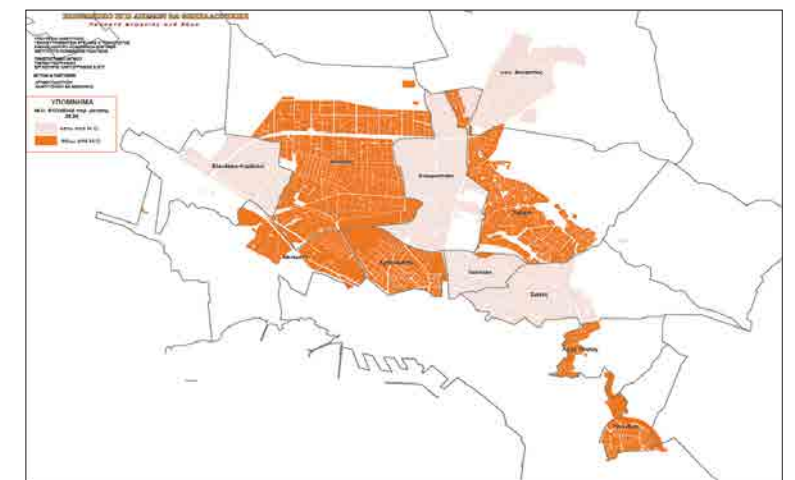
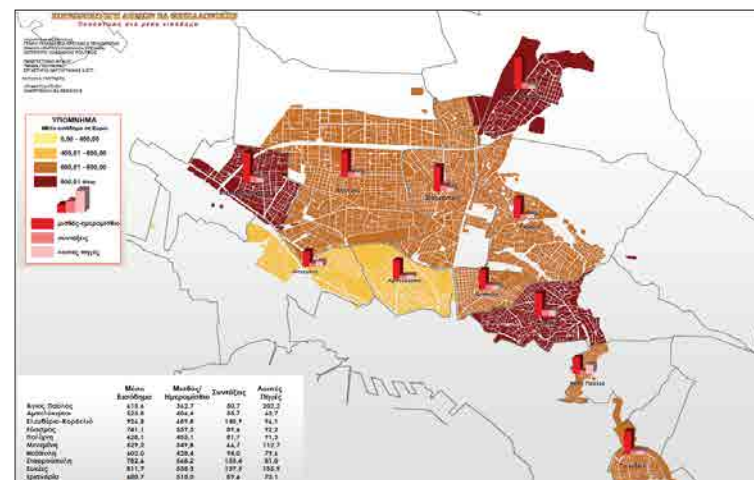
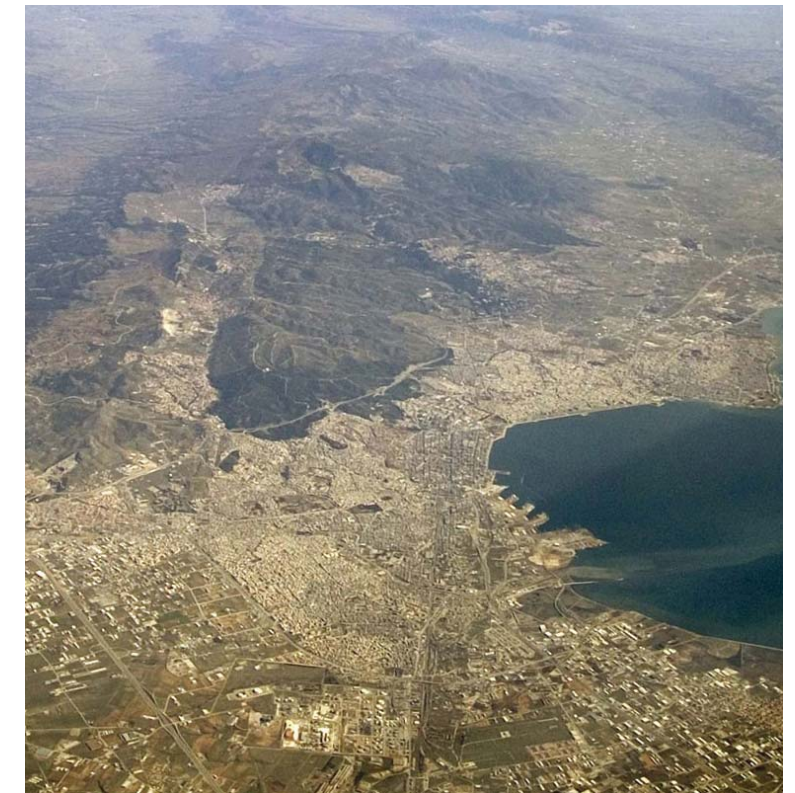


The Inner West Arch

(approx. length: 3.5 km)

The West Double Arch

An double arc for the larger regional structure.



(left) Map displaying indicators and economic inequality in the municipalities of northwest Thessaloniki (Municipality of Neapoli, 2003)

The map demonstrates with different colours the various municipalities according to the mean monthly income of its residents, and at the same time the source of this income (wage-red, pension-pink, other sources-light pink).

(right) Map displaying poverty indicators in the municipalities of Northwest Thessaloniki (Municipality of Neapoli, 2003)

The map demonstrates with an orange colour the municipalities that present a percentage of poverty above the average, while with the light purple the ones that present percentages below the average.

lation, first the wave of the Minor Asia refugees in the 1917-1922 period, and after the end of the second world war the incoming rural internal refugees. Also a great number of people affected by the 1917 Great Fire found refuge in these western areas. The increased housing needs of people who gathered *en mass* in the area, were met in an unplanned manner through the method of *valuable consideration*, creating a tightly built-up urban environment adapted to geomorphology and previous allotments and meant to primarily serve the residents' urgent needs and paying less attention to the aesthetic / design questions, as an improvised expansion took place. Despite past isolated efforts for regeneration of the area, the final outcome, that is the appearance and overall functioning of the streets, public spaces and neighbourhoods has not reached satisfactory levels. The lack of a plan for the organization, protection and connection of public and green spaces is made evident in the current state of the area.

From a spatial perspective, the double arch takes the form literally of a double arch connecting the seafront with the forest park of the city (Seich-Su), while connecting or crossing key areas along its double path. The two arches on an individual basis present different characteristics which will be considered beforehand and throughout the analysis. The **Inner Arch**, with an approximate length of 3.5km running along the western city walls, is a historic edge area, marked physically by the city walls, and today marked officially by the municipal limits between Thessaloniki and the adjacent municipality of Sykies, thus forming an interesting type of urban-urban ecotone, a contemporary latent urban interface. The **Outer Arch**, with an approximate length of 7km, on the other hand presents a different character, running through or along 5 municipalities, and acting as a structural element for the extended western region. The two Arches will first be analysed separately before correlating their joint effect. The interface-structural element dipole paradigm that is created will be the analysis vehicle for this area of the city., where the double arch, directly or indirectly, touches 7 municipalities², of different sizes and characteristics, but all characterized by inherent urban problems, lack of intramunicipal coordination on joint plans and contemporary conditions that could benefit from a possible restructuring.

The majority of the municipalities closer to the city centre present a predominantly residential use, some up to a 95%, while peripheral municipalities present other uses as well, such as industrial, manufacturing and tertiary uses. As far as services is concerned many of the municipalities, tend to present deficiencies in terms of hospitals, judiciary services and big commerce is concerned, with the majority of these activities concentrating either in the urban centre or in peripheral activity areas. At the same time many urban voids have emerged over time most of them obsolete military camps and with the majority located along the Outer Arch. The definition of new-uses and their integration in the urban fabric is an urgent question that can bring improvements

on a local and regional level. As mentioned earlier, the western municipalities are also found with increased residential densities that reach up to (438 hab/Ha)³ and at the same time with little and scattered open public space. The situation with the green zones is similar, with some municipalities presenting very small percentages of available green space per resident. Thus the overall conditions created in these areas for the resident are not favourable and at the same constitute any possible intervention problematic since the beginning. A more meticulous small-scale analysis of these areas could help highlight latent key areas projects that could help mend the burdened fabric, without needing grand - scale, awkward interventions.

From a socioeconomic point of view the Western areas of Thessaloniki are found in a disadvantaged position in relation with the city of Thessaloniki. The maps on the right demonstrates the situation on the western side of the city for the year 2003⁴. A number of the municipalities with the lowest incomes in the city are found on this side, with numerous demonstrating levels of poverty above the average mean (Menemeni, Ampelokipoi, Eyosmos, Polichni, Ag. Pavlos). At the same time municipalities located at key areas or along key axes present higher income statistics (Kordelio, Sykies, Eykarpia) and decreased poverty levels. This is due many times to the introduction of other activities not related with residential uses that increase income flows. Nevertheless it can be seen as a first observation that the presence of a strong urban structure and mixed activity has a direct relation with the economic status of each municipality.

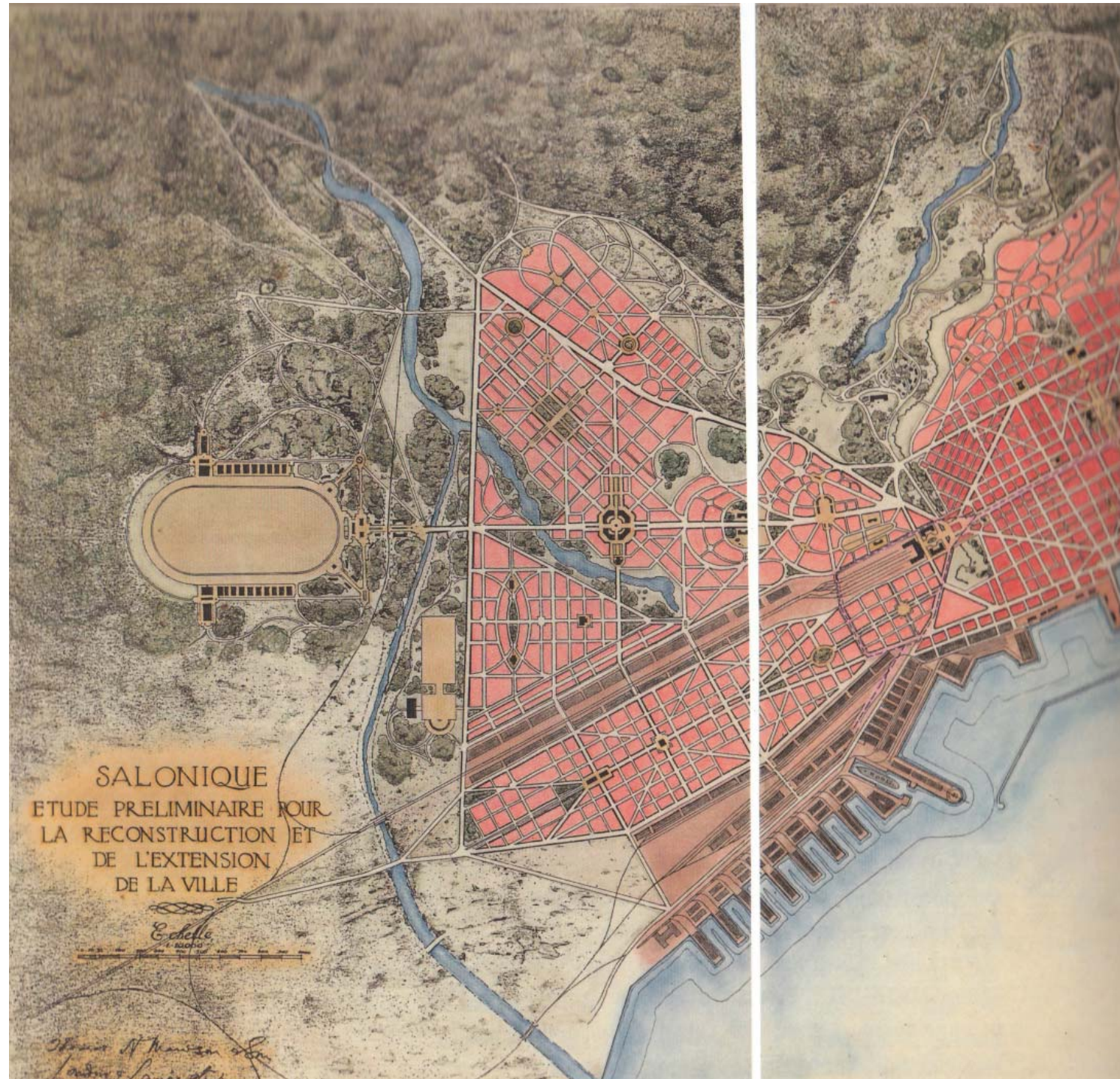
The analysis will then be split into two parts. First the Inner Arch will be analysed, investigating the situation and condition along and close to the western city wall, in an intend to evaluate the current state and possible restructurings. And at a second level, follows the analysis of the Outer Arch, taking into account the previous studies but reconsidering the updated situation of the contemporary local urban fabric. The results from the first part will be correlated with the second part to form the synthesis of the two. Before entering into the analysis of the contemporary conditions, an evolution of the extended area through the historic cartography will be presented, followed by a section looking at the Herbard Plan 's vision for the western part of the city.

2. Before the recent administrative law of Kalikratis that was passed in 2010 reducing the number of municipalities, the double arch would affect a total of 13 municipalities.

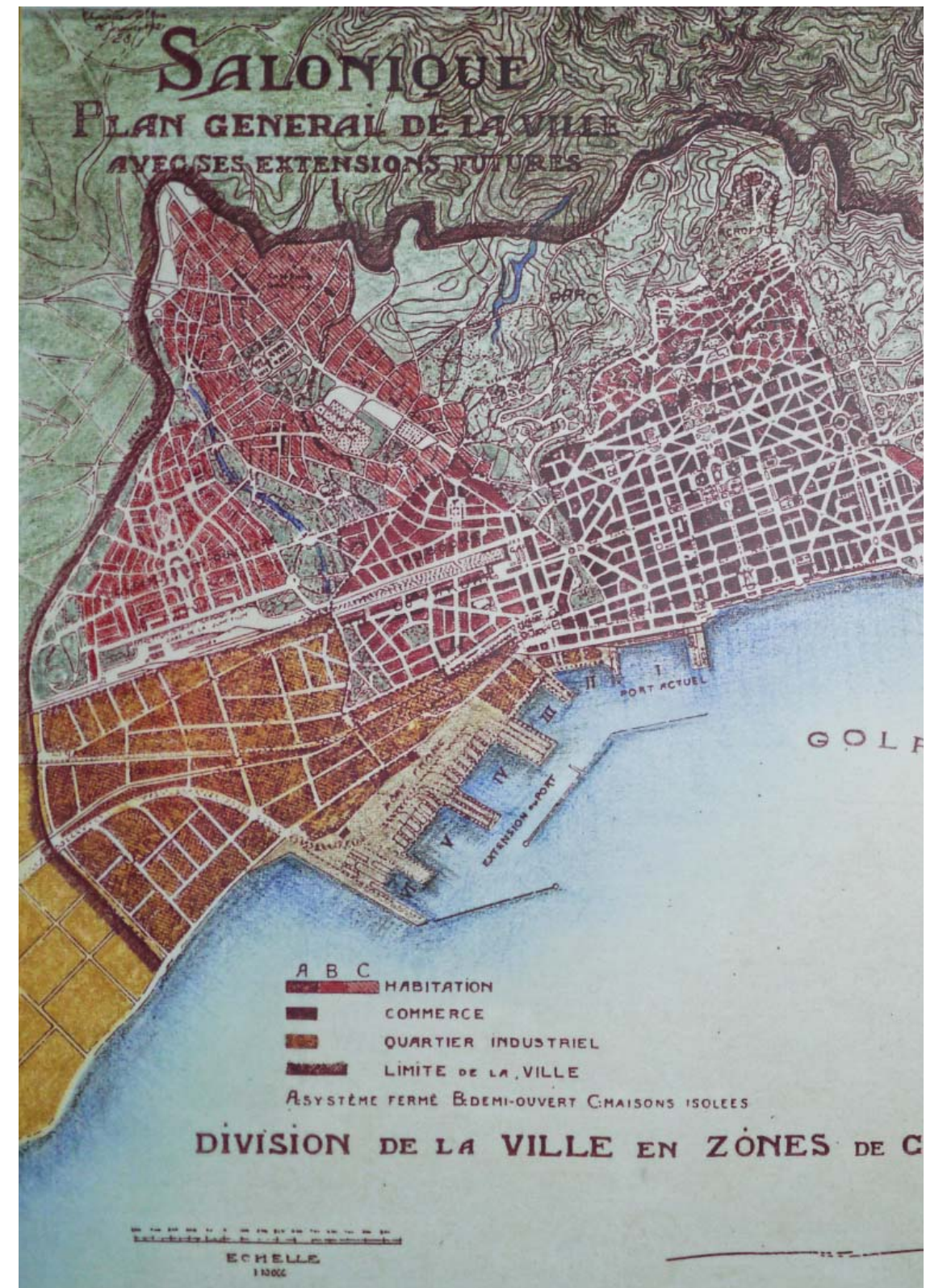
3, 4. Municipality of Sykies. Ολοκληρωμένο Τοπικό Πρόγραμμα Βιώσιμης Ανάπτυξης, 2007 (Integral Local Programme of Sustainable Development)

The Western expansion in the Hébrard Plan: *The planned dimension and the constructed reality*

1918



1919



(left): “Salonique étude préliminaire pour la reconstruction et de l’extension de la Ville” by Thomas Mawson in 1918 (source: National Map Archive)

(right): “Plan General de la Ville avec ses Extensions Futures” Land uses in the area as they appeared in the Hébrard proposal (source: Municipality of Thessaloniki)

The inheritance of the Hébrard Plan

Reconsidering the impact and influence of the Hébrard plan for the west area from today's perspective we can appreciate traces and elements that have survived and are still visible in the contemporary fabric as well as some relative benefits that came out of it, mostly attempts aiming to modernize and hygienize the areas west of the historic centre. The plan could not provision the arrival of such a great number of incoming residents, it nevertheless helped define and preserve key urban elements and establish a basic urban structure for the area. In more detail in the adjacent page the Proposal / Plans for the area:

The Thomas Mawson Proposal

i) part of the map of the proposal for Thessaloniki and the extended area signed by Thomas Mawson in 1918 “*Salonique étude préliminaire pour la reconstruction et de l’extension de la Ville*”. The city seems to be planned up to the Dendropotamos river limit. The residential areas are positioned along major structuring axes adopting to the local geomorphology. The western city walls can be seen conserved, except in the area of Vardaris and Ag. Dimitriou, and followed by a strip of green area on both of its sides. The Lagkadas avenue / axis can be seen marked on the map with another axis to the south, connecting Vardaris with the projected Hippodrome. The seaport can be seen expanding to the west, while the central Train station can be seen in its current position with its rail lines creating an important lineal axis, at intervals crossed by the urban fabric. On the west end of the city a Hippodrome can be seen that was never realised. The local streams are up an extend left to enter the urban fabric while the river of Dendropotamos, appears unaffected serving as the western edification limit for the city.

The Ernest Hébrard Proposal

ii) The western part of the city as shown in the approved version of the Plan in 1925 with the City Plan Gov. Decree 24/29-1-25. The future residential expansion to the west can be seen marked as *Agglomeration Ouvrière Future*. The industrial zones are located closer to the sea below the residential areas, with railway lines crossing a large part of its area. The seaport with its western expansion and its final 6 Piers, is seen almost in the state that it can be found today. The Hippodrome has disappeared and along the axis that connected with Vardaris. The green corridor along the western city wall can still be seen. No edification is planned along the walls, except for the lower part and the area of Kalithea that settlement formations can be discerned.

In an intend to outline the elements of the city that emerged as a result of the redesign one can discern two main focus areas:

A. The *Historic Centre* where the Hébrard plan provisioned the preservation and highlighting of key historic buildings along with the creation of a series of other key public buildings. It was also meant to serve as the commercial centre of the city, except for the part of Ano Poli, that was maintained for residential use.

B. The areas *Outside the walls*, covering an extensive area west, northwest of the historic centre and including various sub-areas:

i) the working class neighbourhoods located on the western and northwestern limits of the city following typical garden city patterns, occupying the open landscape of the western plains.

ii) The Vardaris area right outside walls presenting more of a mixed character and uses (residential / commercial). The area also hold various important urban elements such as the Vardaris square, an important node / space in the city structure, the new Rail station, the General Food Market among others.

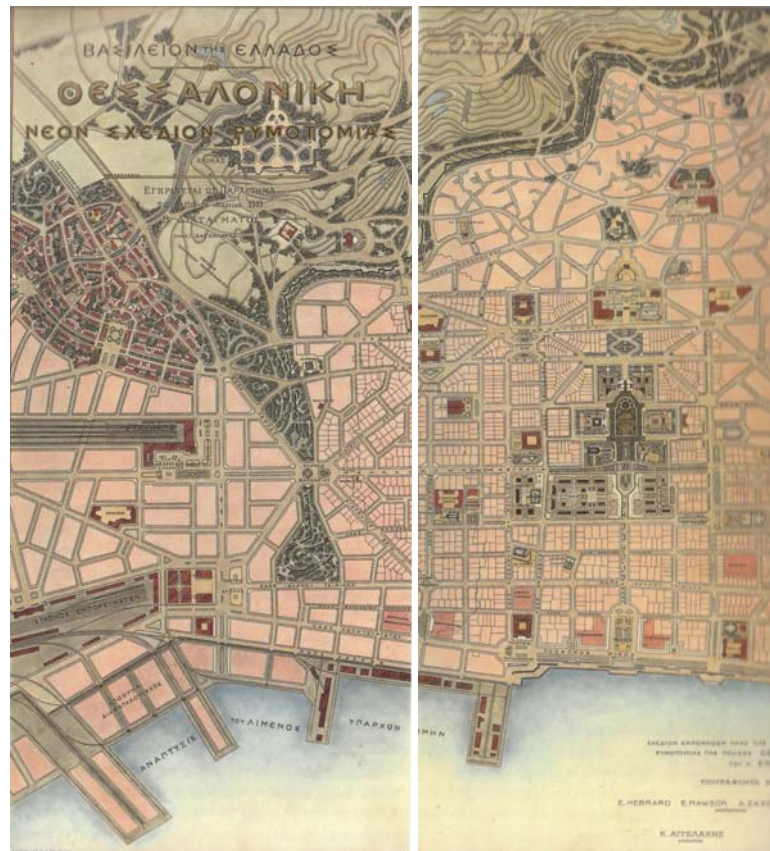
iii) the industrial area bordering the working class neighbourhoods to the south and separated by them from the inbound railway lines. It extended to the south bordering the port facilities. On its eastern end it penetrated this limit to reach the seafront, next to the existing port at that time. To the west it extended all the way to the Dendropotamos river/stream that served as the plan's west city limit. A separate rail line gave access to the area and the port.

The eventual installation of refugees and their imminent housing needs, as they occurred in two major waves, put increased pressure and reduced the extended green zones around the city and along the old streams that were provisioned by the plan. The local streams, similar to the eastern part of the city, were allowed to enter the urban fabric to certain extends except from the Dendropotamos river, which reached all the way to the sea. Two major road arteries are seen structuring the western extensions; on one hand Lagkadas Avenue (appearing as Lempét street) and on the other the continuation of the Egnatia that extended to the West along the rail lines. Along with these avenues a network of orthogonal or more organic roads aimed to facilitate traffic and access at this part of the city.

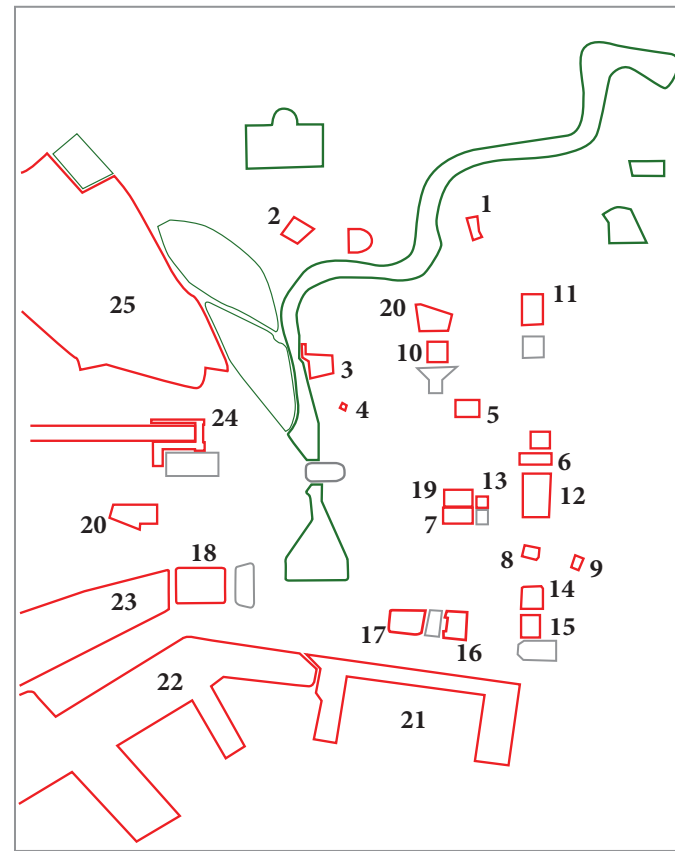
The Western expansion in the Hébrard Plan: *The planned dimension and the constructed reality*

1925

→ plan



source: National Map Archives

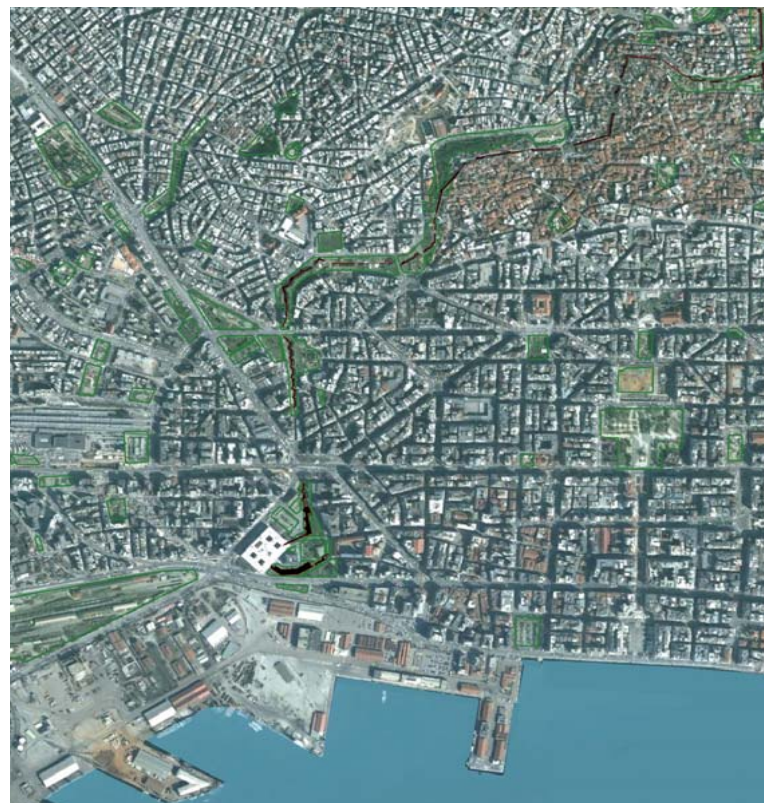


INDEX

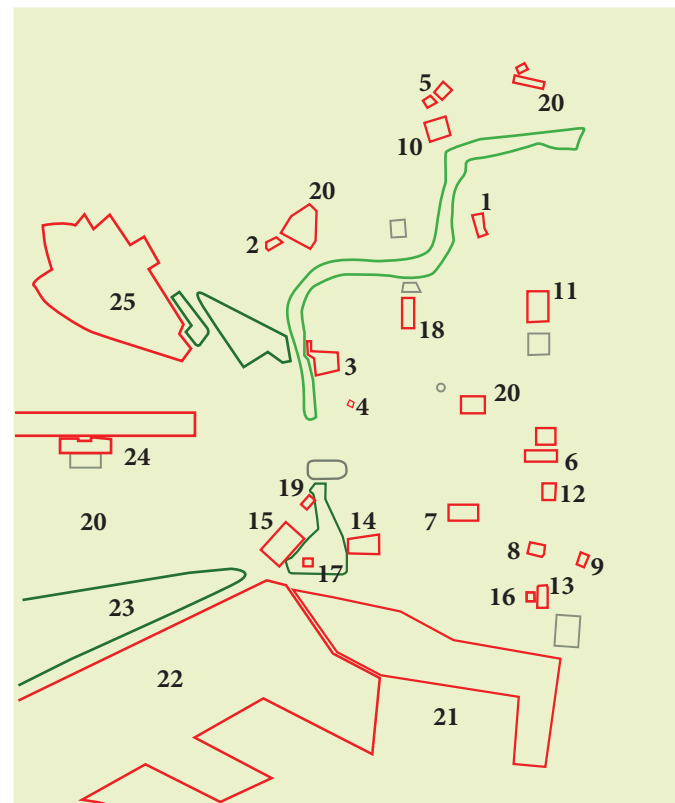
1. Agia Aikaterini Church
2. Mevalchane (Dervish Teke)
3. Ag. Apostoloi Church
4. Pasha Hamam
5. Synagogue
6. Hamsa-Bey Mosque
7. Catholic Church of the Immaculate Conception
8. Agios Minas Church
9. Yahoudi Hamam
10. Guilds' conference center
11. Governant's residence
12. Bezesteni Bazaar
13. Bank of Thessaloniki
14. National Bank
15. Post-office
16. Stock-market
17. Commerce Chamber
18. General Market
19. French Institute
20. Schools
21. Port
22. Port expansion
23. Cargo Train Station
24. Passenger Train station
25. Working Class Settlement

2012

→ reality



source: google maps



areas
 squares
 parks

INDEX

1. Agia Aikaterini Church
2. Panagia Phaneromeni Church
3. Ag. Apostoloi Church
4. Pasha Hamam
5. Agion Theodoron Church
6. Hamsa-Bey Mosque
7. Catholic Church of the Immaculate Conception
8. Agios Minas Church
9. Yahoudi Hamam
10. Gym
11. Governant's residence
12. Bezesteni Bazaar
13. National Bank
14. Administrative Court-house
15. Court-house
16. Stock-market
17. Social Security
18. Vegetable Market (abandoned)
19. Telecommunication Company (OTE)
20. Schools
21. Passenger Port
22. Cargo Port
23. Cargo Train Station (abandoned)
24. Passenger Train station
25. Working Class Settlement

C. The *City Walls*. Contrary to the east side of the City wall where the creation of the Central Axis was proposed, for the western walls area Hébrard did not plan respective structural elements. He preferred to give the protagonism to the city walls that following the local geomorphology, came down from the Akropolis in an organic manner, defining a equidistancial green corridor on both of its sides. Thus the City Wall walk proposed, fulfils the sea-mountain connection, that the respective axes of Aristotelous and Dimitriou Gounari, did for the historic centre.

D. *The Sea Port*. The plan proposed the extension of the existing port to the west towards Dendropotamos, a proposal that was finally adapted and realised and changed drastically the seafront facade and character of the historic centre. The port given its location would have easy road and rail connection, an adjacent industrial area and sufficient area to develop its activity. The proposed piers for the extension of the port match to a great extend the actual state of the first 5 piers, (the space of the contemporary 6th pier is seen unoccupied)

Apart from these broader elements the plan went in more detail to propose certain buildings and functions principally for the historic centre and adjacent area, where more emphasis was to be given. The plan first recognized the presence of various Byzantine and Ottoman monuments that need to be preserved, and highlighted, depending on their importance, by placing them along major axis or allocating public space next to them. Thus west of the Aristotelous Axis, we can see the following monuments starting from the sea: The Yakoudi Hammam, the church of St. Minas, the Catholic Church of the Immaculate Conception, the Bezesteni Bazaar, the Hamza-Bey Mosque, the church of St. Apostoles, the Pasha Hammam, the church of Ag. Aikaterini, and the Dervish Teké outside the city walls. All of the formentioned monuments except of the last one are conserved up to this day. The Plan also provisioned the location of a series of key public and administrative building in the area that are the following: The Technical Chamber Office next to the stock market with a square in between the two, a bit to the east the Bank of Greece next to the Post Office and the square that was planned to open to the sea. Following the Benizelou Street uphill, that with the presence of the rest of the monuments formed a secondary urban axis, led to the Dioikitirion (Governance House) and the public square in front of it. East of the Cargo Rail Station a closed Marketplace was planned out with an adjacent public square. The plan also goes to name a few other key buildings like a conference centre, or the French Institute and a series of school buildings.

As far as transportation infrastructures is concerned apart from the Seaport that was mentioned earlier, the plan provisioned the creation of a new Railway Passenger station north of the old train station that was to be converted to a cargo station, and have the city's market placed next it. The plan also called for the creation of a metro system, running along Egnatia Avenue, connecting local key points, before heading to the east towards the historic centre and the eastern expansions. Other works included the construction of boulevards along part of Egnatia and Nikis Avenue and the creation of key public spaces scattered throughout.

Observing the Hebrard plan, in its different conceptions, one can observe the green area provisioned along the city walls and was allowed to enter and cross the urban fabric and all the way to the Top Hane area, creating parks along its course. Apart from the lineal green area along the city walls, the plan provisioned the creation of other key green areas: **i)** the park running parallel to Lagkada avenue (Lempet) **ii)** The park on the site of the old Turkish cemetery, **iii)** a series of parks outside the walls on the northern side. Again at this point it is also worth mentioning the decision for the expansion of the city port to the west. This provision was important because it allowed the historic centre to open to the sea and permitted to avoid at a later stage expensive and extensive urban interventions many coastal Mediterranean cities had to undergo in order to liberate the waterfront from the port facilities and activities.

One of the most important contribution of the project was the provisioning for the maintenance of the Byzantine Walls and for the creation of a surrounding green belt around the city, part of which run across the western wall and the Akropolis, and penetrated the urban fabric along the boundaries of the historic center and almost reaching the sea front. Although the plan was only partially implemented, it resulted in maintaining in different aspects this continuity along the west limit of the city and at the same time an intrinsic activity along and near its course. It can also be deduced that most present free public spaces in western Thessaloniki are due to the proposal design of 1917 and redefined with subsequent modifications. Since then, following the general trend the available public space has decreased, while urban densities, building ratios and the number of cars in the city had been steadily increasing giving form to the contemporary fabric / mosaic of the western area of the city.



ii. The Inner West Arch

The western walls as a diachronic city membrane



The area of the Western city-walls presents, at a first glance, a different impression from that envisioned by the Hébrard Plan as demonstrated in the previous section. The plan could not provision the urgent need for housing of the incoming refugees that eventually took over all the area west and north west of the city walls whether through plan modifications or unofficial settlements. The vicinity to the historic centre - commercial centre of the city as well as the industrial areas and factories of the Western area made the settlement of incoming residents in this area a widespread phenomenon. This many times improvised, and more often unregulated expansion had its toll on the way that the Plan would develop and materialize in the area. As seen a consequence was that a great amount of green areas were sacrificed to the increased urban densities, and a series of key public buildings had to be relocated to new locations.

On the other hand more attention seems to have been given to the preservation of the historic / religious monuments that the plan aimed to preserve mainly inside the historic centre. The fire-stricken part of the city allowed for the relatively rapid implementation of the plan in this part of the city. An equal attention was put in highlighting these key urban elements with adequate accompanying public spaces. The majority of the monuments presented in the plan are conserved today with the exceptions of the Dervish Teké that was located in the current district of Kalithea in Sykies. The city wall as a monument was conserved to a certain extent but also with various types of interventions and changes performed on it in conjunction with the decay that came with time. The residential fabric, like in the case of the district of Agios Vasilios of Sykies and many areas in the Ano Poli, has reached and touched the wall fortification, has consumed designated green areas and vital urban space. Recent efforts on both part of the municipalities of Sykies and Thessaloniki have initiated an intervention to clear certain parts of the walls from illegal edifications and formulate green and public spaces. The rest of the residential fabric is seen in close distance from the city walls on both sides, giving this ecotonal area special characteristics, in terms of width and intensity of activity.

As far as the activities and uses defined by the Hébrard Plan, a lot of them are found today present in the local fabric along the ecotonal area in their original or modified positions, while some have never come to materialize. Thus today the following of the original uses can be seen: The port with its today's expansion followed the plan's proposals and extending to the west. North of the seaport the building of the Bank of Greece with the adjacent building of the Stockmarket of Thessaloniki. West of Vardaris Square the Central Train Station and the station square with the bus terminal, at the higher end of Venizelou street the Dioikitirion now serving as the General Secretariat of Macedonia and Thrace and finally the State Housing Settlement on the west

left: The inner arch as it appears in the contemporary urban fabric (source: Bing Maps)

side of Lagkadas avenue. Other uses that have appeared in the area over the years is the Courthouse/legal area in and around the Top Hané fort, the Ladadika recreation area just north of the port, the “China town” area west of the Vardari square, and the Lachanokipoi Business Park further to west. The Vardaris square has been converted to a major road node receiving and distributing the flows of numerous principal road arteries of the city on the west gate to the historic centre. The future addition of the metro station in this area will upgrade furthermore the formentioned node’s status and its hierarchy in the city structure. The access of the whole area to the sea is blocked to a great extent by the passenger and cargo port thus limiting the mental and physical connection. Only the area of the first pier of the port, with its recent opening have gradually allowed public access to the port facilities.

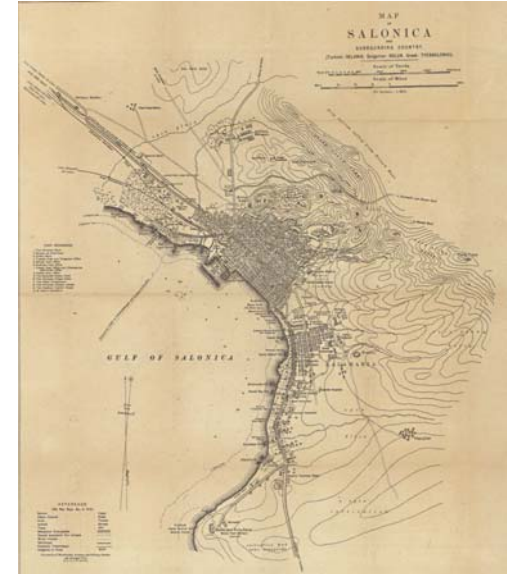
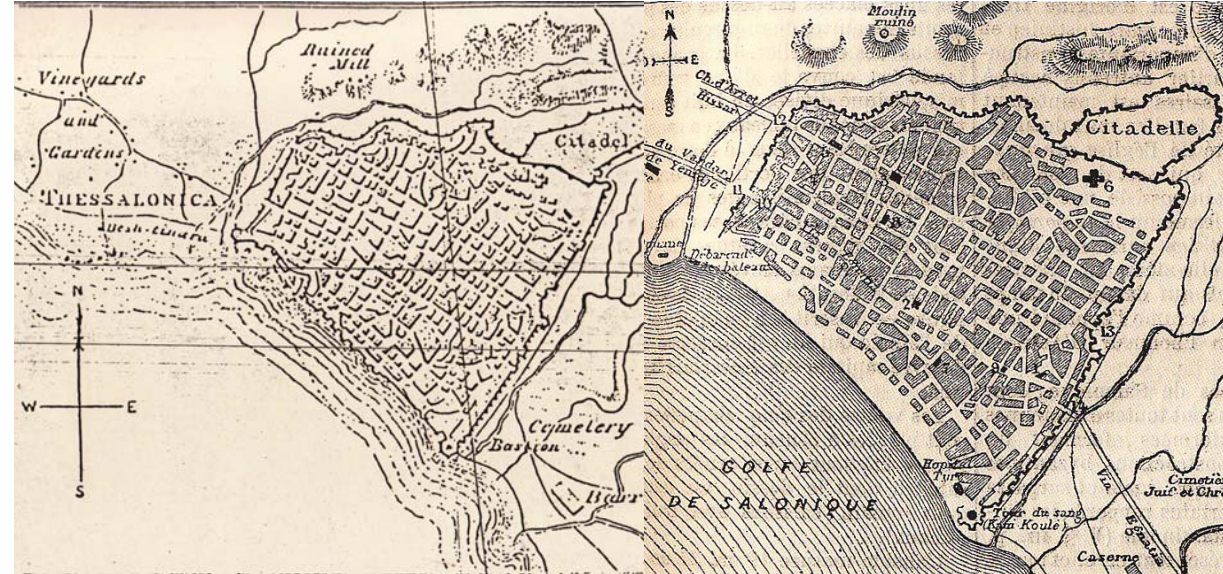
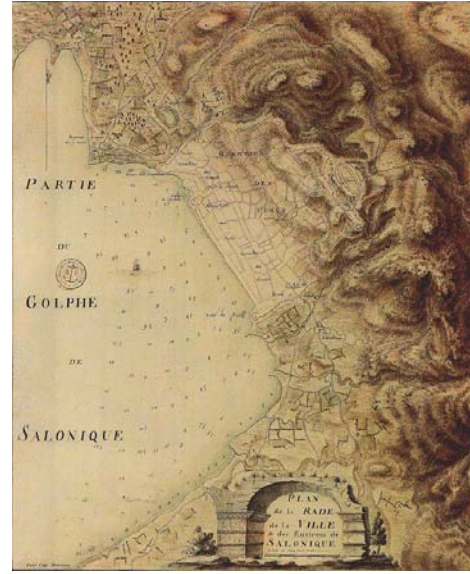
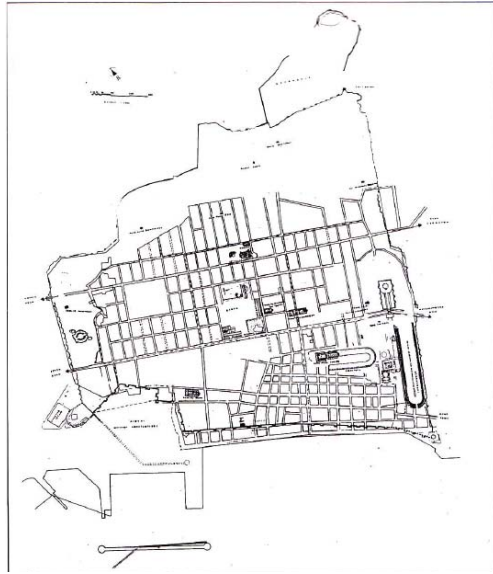
Taking into consideration the socio-economic characteristics of the area another interesting fact becomes evident. The socio-spatial distribution in the western area of the city has to a general extent followed Hebrard’s indication (working class neighbourhoods, historic centre as commercial centre) and come to demonstrate how the western walls as a whole presents special characteristics in the form of a socio-economic ecotone with specific barrier effects, serving as a socio-economic division line between the historic centre/east Thessaloniki and the economically weaker and less developed western areas. This ecotone can be seen with pronounced characteristics in an equidistancial area from the city walls, but its real impact area is in reality more extended, especially towards the western side. The dynamics that give rise to this phenomenon will be analysed in continuation.

The analysis of the area of the Inner Arch will follow the *Habitability-Activity-Mobility* scheme to investigate the overlaying uses and dynamics present in the area. This will be performed having in mind the biophysical matrix presented earlier, that will help present urban forms and features of the contemporary landscape. The conclusions produced by the analysis will be combined to produce the emerging local urban mosaic and kept in consideration when producing the next part of the analysis of the Outer Arch. The analysis will initiate with the pre-existing conditions along the walls before proceeding with the H.A.M assessment of the Inner Arch, entering in more detail in the conditions the conditioners present in the area. Before entering into the H.A.M. analysis the western walls as a diachronic structure will be looked at in more detail.

right-top : Map of Thessaloniki of (1919) showing the conditions in the area outside the western walls (Municipality of Thessaloniki)
right-bottom: TAerial view of the inner arch in 1938 (source: A. Karadimou-Yerolympou Archive)



The evolution of the territory



1784

Thessaloniki in the Byzantine Years

Map showing the city inside the walls during the late Byzantine years. A series of key monuments are demonstrated on the map situated on the old city grid. The city walls can be seen in their entirety, along with the respective gates and their names, including the seafront fortification. The old Byzantine port can also be seen on the east part of the city coast in an inlet created by the walls, approximately where the Ladadika area is located today.

1784

Plan de la Rade de la Ville & Environs de Salonique

Early map showing the condition of the area before any intervention. The seafront and the N-W city wall fortification can be seen intact with its corresponding gates. Adjacent to the walls cultivations bordering the local streams can be seen. Further out, concentrated and scattered cemetery sites can also be seen. The map exaggerates the surrounding geomorphology highlighting the local peak line, and giving a good indication of the adaptation of the historic center form to the local terrain. Also in the west the engulfment hints the presence of the lagoons that characterized the landscape of the western part of the city for a long time.

1850 - 1873

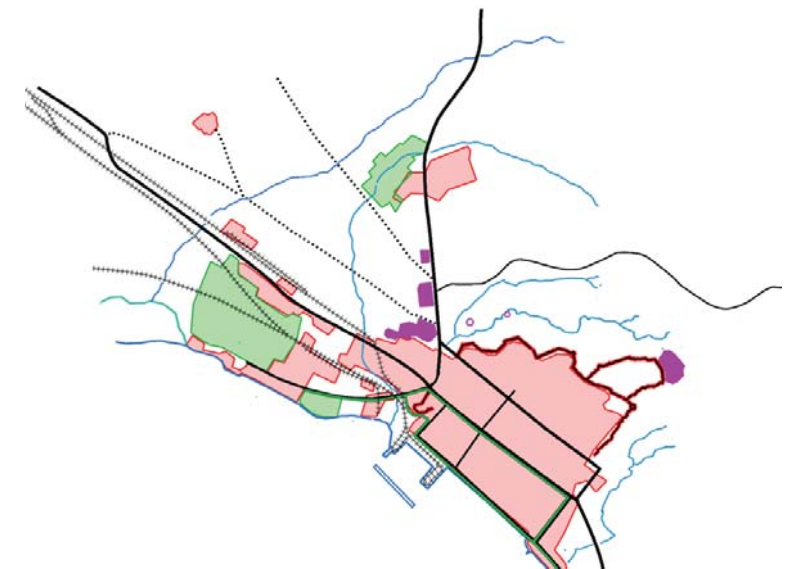
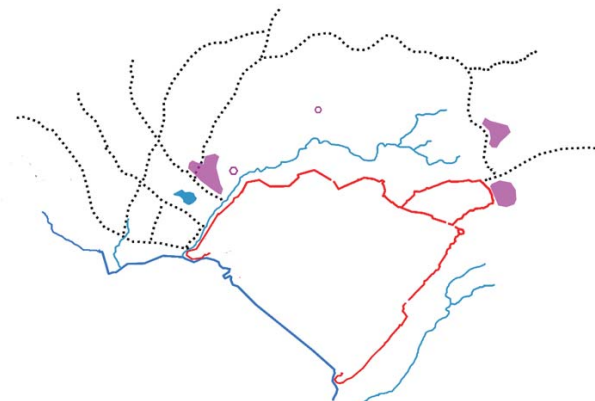
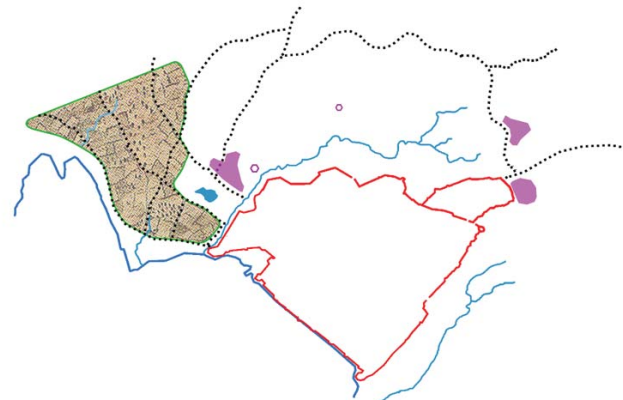
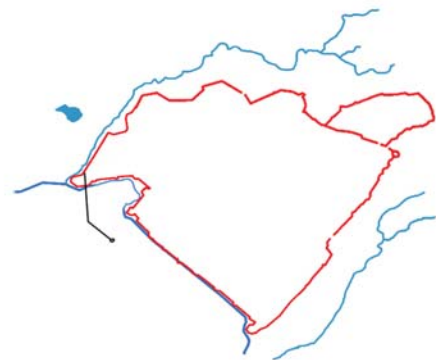
*Plan of Thessalonica - British Navy (left)
Salonique - Orient Grèce et Turquie D'Europe (right)*

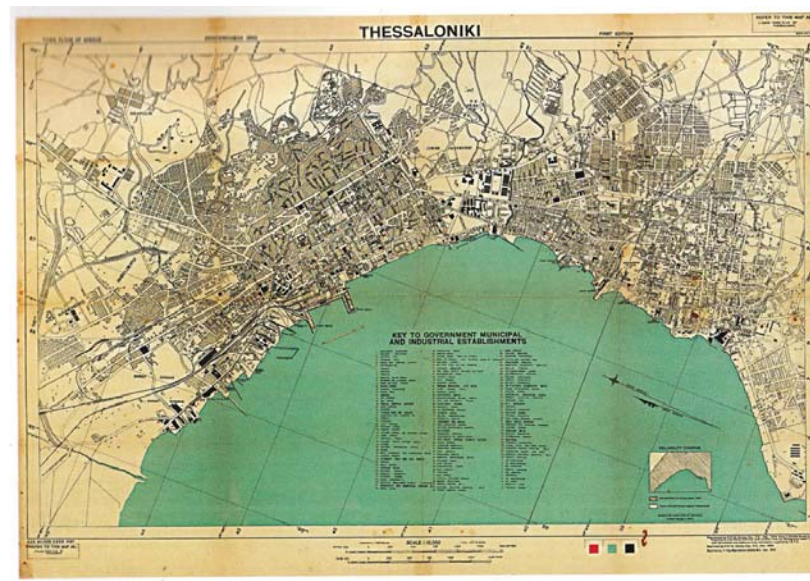
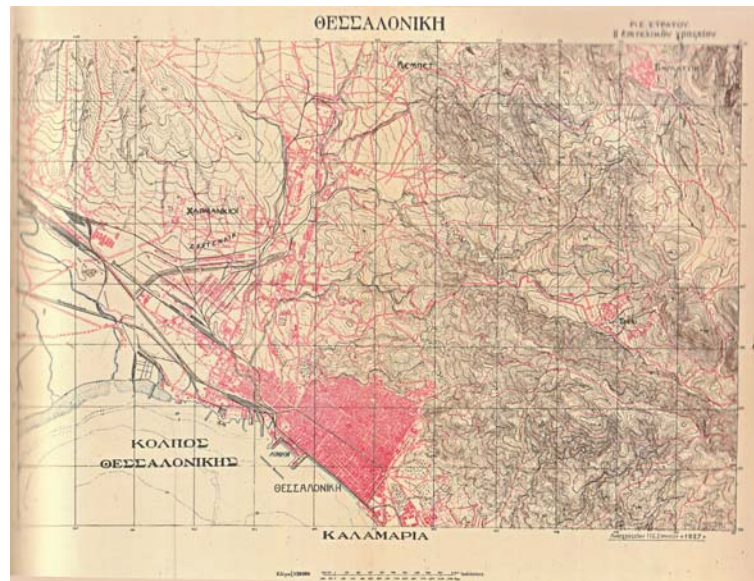
Set of maps showing Thessaloniki in the late Ottoman rule period. The local surrounding streams can be seen on both maps and their importance in containing the historic city. Inside the city fabric, the opening of the Egnatia street can be seen, as well as that of Venizelou crossing perpendicularly and forming the structuring axis of the modernization of the old city. The destruction of the sea-front fortification and the timid expansion towards the sea can be seen in the map of 1873. Surrounding features of the local landscape are also noted, along with major paths and routes to/from the city.

1909

Map of Salonica and surrounding country - War Office

The map demonstrated with significant detail a series of the developments on the urban fabric of the city. First, the destruction of the lower western and part of the eastern city walls. This has allowed the expansion of the city on both directions, but with a more increased rate towards the south east due to the more favourable conditions. The map also shows a lot of details of infrastructure (such as the tramline and major arteries), official buildings (administrative, consulates, hospitals etc.), cultural elements (cemeteries, religious buildings) and periurban gardens and cultivation areas.





1927

Χάρτης Θεσσαλονίκης - Γ' Σωμα Στρατού

Map showing the city of Thessaloniki and its western expansions with significant detail. The early drainage works along what is currently Dendropotamou avenue, has created improved conditions for the city to expand towards the west. A great amount of infrastructure development, especially railroad related can be seen appearing in these recent expansions, along with the expansion of the port towards the west. The water element remains quite pronounced in the area, although losing partially to the recent developments. The Lagkada avenue starts to take its definitive form and its structuring role as an important element for the future expansion of the city. The location of surrounding neighbouring settlements are also observed.

1944

Town Plan of Thessaloniki , Survey Coy. R.E

English map showing in great detail the urban unit of Thessaloniki towards the end of the second world war. The western expansion start to consolidate while newer ones appear further out. A great amount of infrastructure seems to be concentrated around the port area, which has by now reached almost its current expansion. The areas close to the city walls also start to get occupied, and blurring the distinct mark left before by the city walls. Along the Lagadas avenue a series of key features start to appear, while the Dendropotamos drainage canal still serves as an untypical city limit. Finally, the water streams, start to get covered up and losing drainage capacity, and passing to edification and other uses.

1956

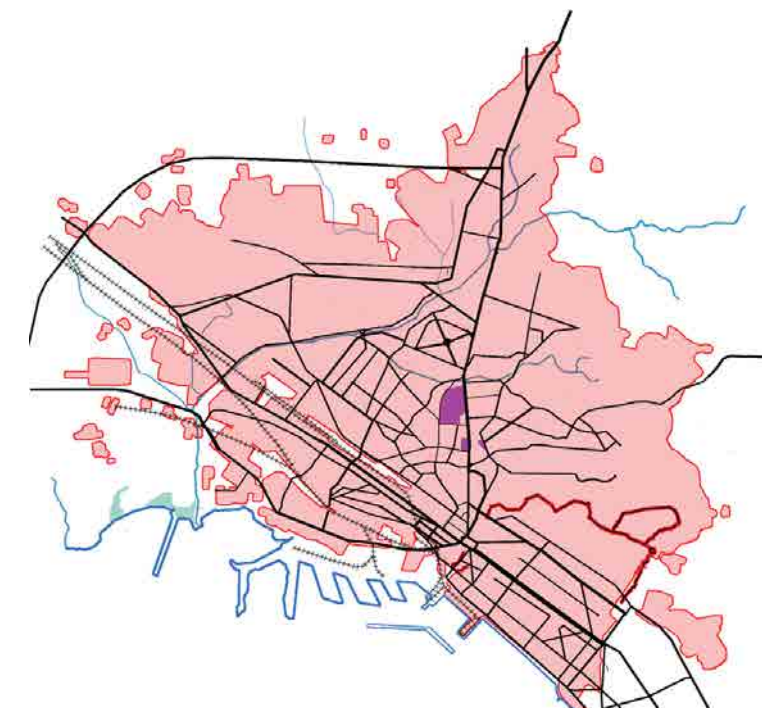
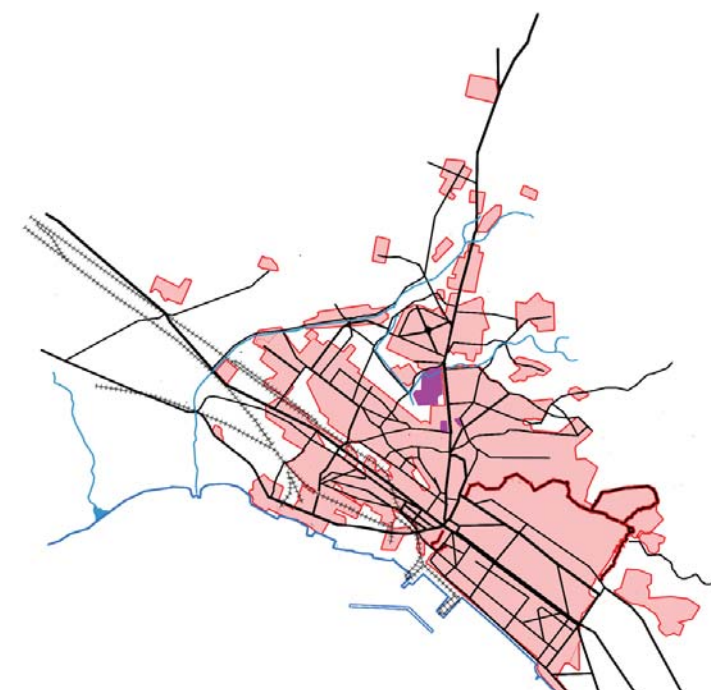
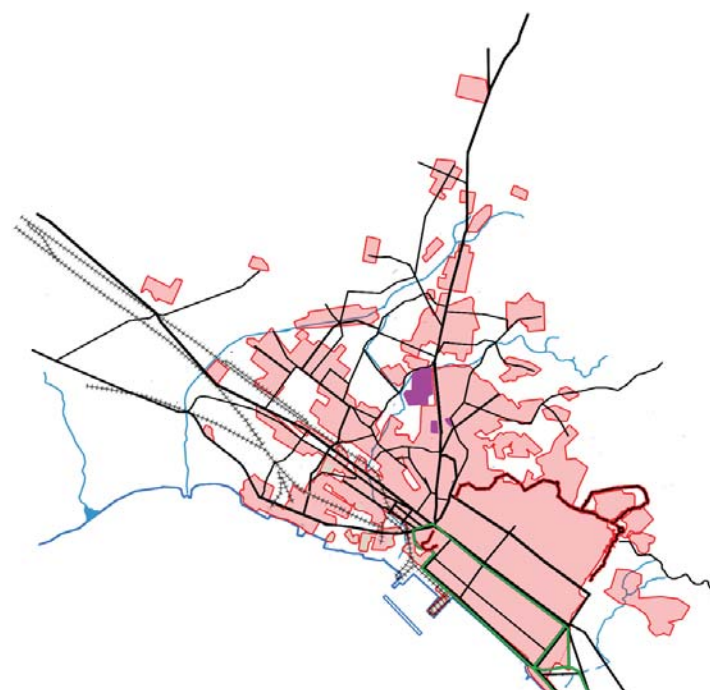
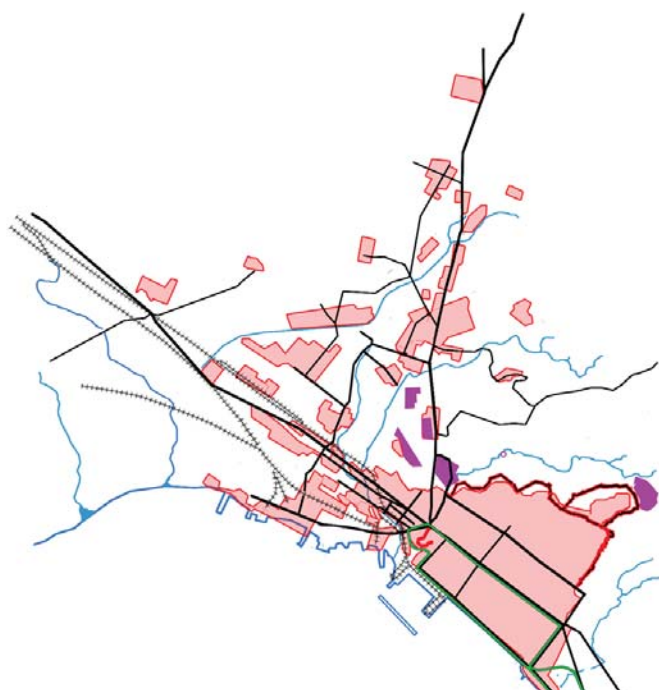
Υπουργείον Κοιν. Πρόνοιας, Γενική Διευθυνσις Οικισμού. Θεσσαλονίκη - Τομείς Υγών

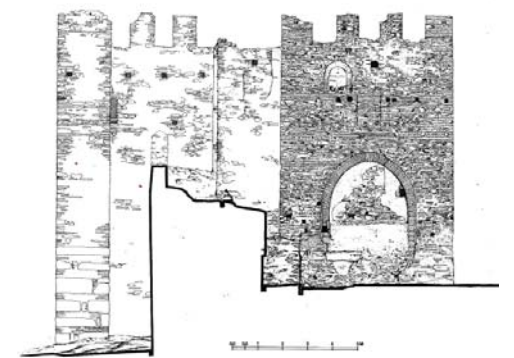
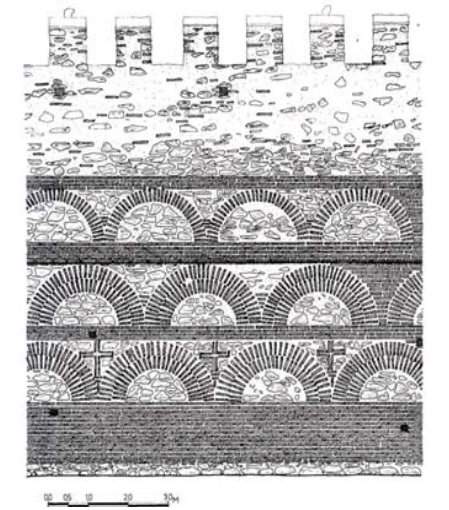
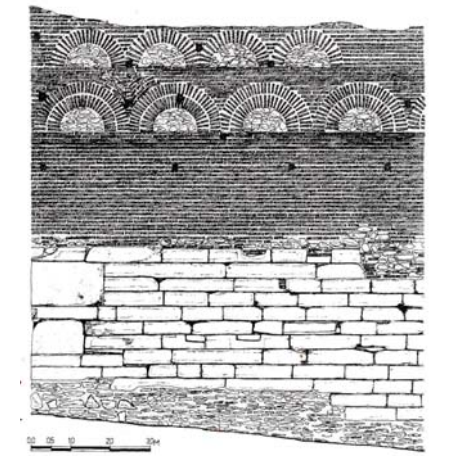
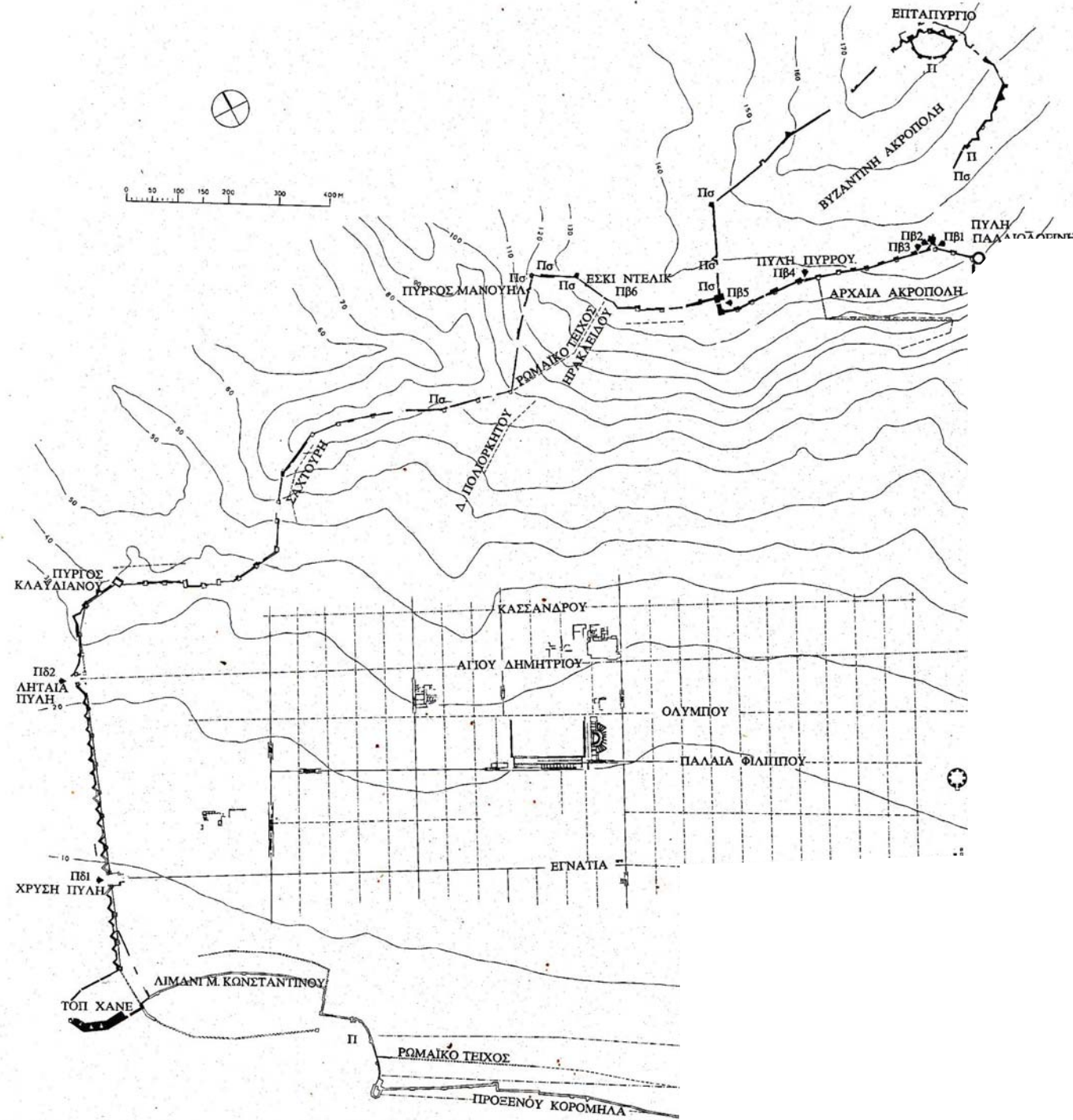
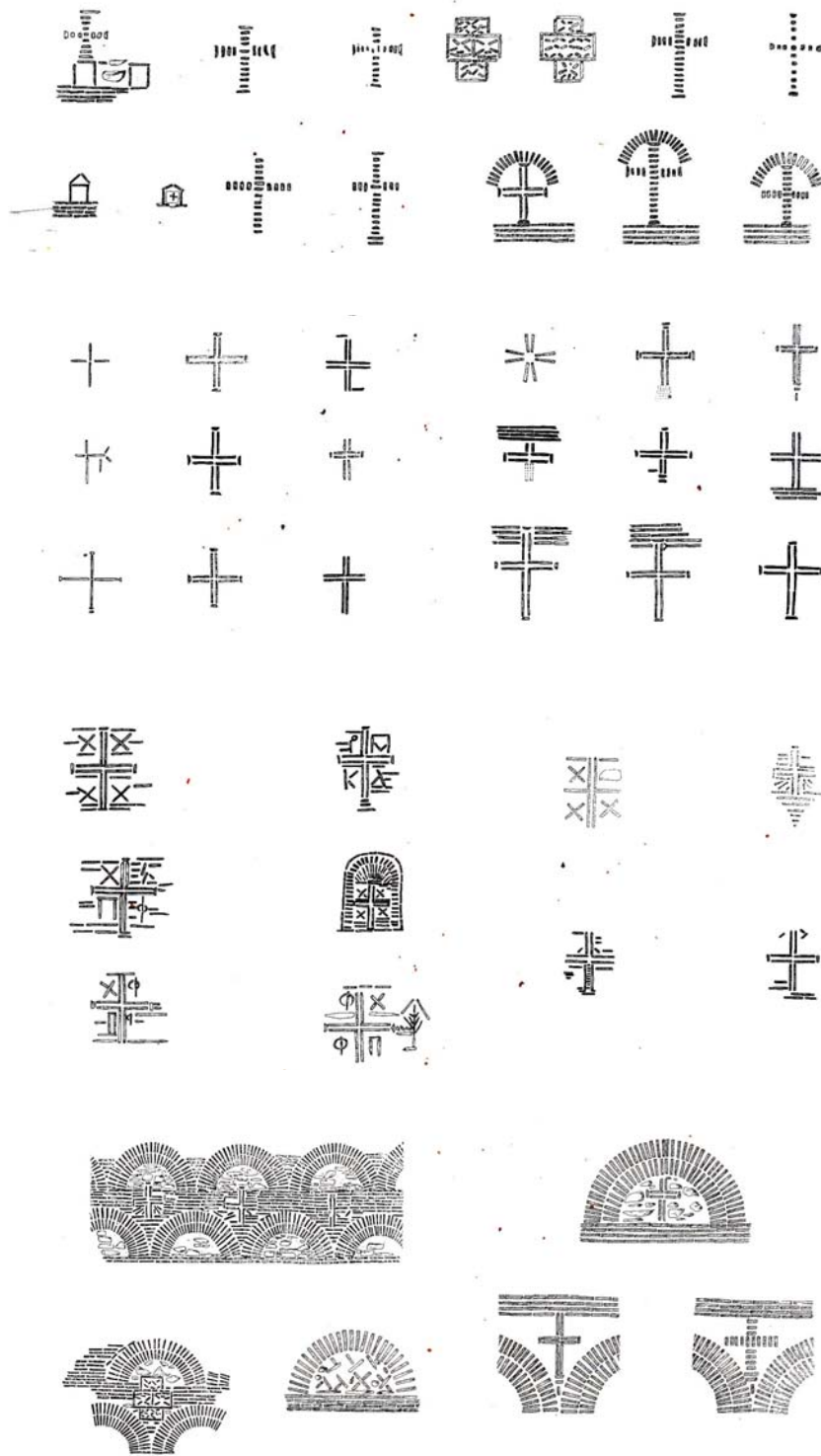
Map indicating the permitted edification heights for the existing and planned Thessaloniki area. The consolidation of the western expansions has advanced significantly with the areas along and adjacent to the walls displaying an increased development and activity. The district of Vardaris is being formulated along with other contemporary districts. The city is now facing a seemingly no-limit expansion with the influx of people in the city and boom of the construction related practices. The city at this point seems to opt for a compact form of high density, in order to maintain reasonable revenues to pay its expansion .

1980

Θεσσαλονίκη 1 - Διάγραμμα πόλεων Γ.Υ.Σ.

Relatively recent map showing in great detail edification in the centre and western parts of the city. The main road/traffic arteries are displayed in red, and the eastern part of the ringroad appearing as well. Visible are the significant urban voids created by the military camps/installations within the urban fabric that would continue to trouble local city planning up to this day. The port continues its expansion to the west, reaching almost its final stage, while as far as rail transport is concerned, the focus is passed to the Central Rail Station in Egnatia, with the former cargo lines passing to disuse or low traffic. The urban fabric expands furthermore to the N-W direction with the new city limit set to the Inner Ring-Road limits.





The NW walls *The city walls as a city membrane*

i. The NW walls - *The city walls as a city membrane*

Thessaloniki, according to historical accounts, was fortified shortly after its foundation by King Cassander of Macedonia, in 315 BC¹. Early on the city walls protected the city from incoming attacks and gave shelter to citizens and officials in dangerous times. The city walls as a fortification structure has experienced different construction phases, each with its distinct style, extensions and modifications. These phases are:

i. Hellenistic period: The exact length and position has yet to be resolved. It was reinforced in various stages and was extended to the sea to include the districts closer to the sea. The Hellenistic acropolis was located on the north-east end of the walls, bounded by the contemporary streets of Xenokratous (to the South) and Sylla (to the west)².

ii. Roman period: The Roman fortification was primarily based on the existing Hellenistic fortification, complementing and repairing weak points. By the time of the completion of the Galerian Complex and the reign of Galerios (4th cent. AD) the fortifications' reparation and reinforcement had been completed and during the reign of Constantine the port and sea-wall fortifications were constructed (324 AD)³. It was not until the end of 4th century AD with Theodosios I (379-395 AD) that a significant extension and reinforcement of the western wall was realised⁴, satisfying the urgent defensive needs on that front.

iii. Byzantine period. During this period the fortifications extended and consolidated by consecutive interventions reaching the extension that we have come to know today. The Byzantine Acropolis was constructed during this time, along with considerable fortification improvements on the northern front and the construction of numerous smaller towers along the wall (calculation brings that number up to 70 towers during its peak time)⁵.

iv. Ottoman period. During the Ottoman period no significant extensions were made to the city fortifications (except from the addition of the Trigonio and White Tower at the site of earlier Venetian fortifications (1423-1430 AD)). Starting from 1869 parts of the city walls' fortification began to be demolished.

The diagram on the side page demonstrates a synthetic map of the city walls. The principal known gates along the western walls were the Litea gate (at the western end of Agiou Dimitriou), the Golden Gate (at Vardaris Square), the Gialou gate (near the sea)⁶. At the Acropolis, where the city's garrison was located, there were 14 small gates called *parapylia* or *paraportia* and served primarily for military purposes. Similar small gates existed in the coastal wall the most notable the Eski Ntelik gate that facilitated communication with the north. Along the western walls a small stream known as *Aron stream*⁷ used to pass in the area, following a course parallel to the walls and possibly serving as a defensive ditch that extended all the way to the area of Top-hané.

1-6. Belinis, G. (1998)

7. Mplionis, G. (1996)

8-11 Hekimoglou, E. & Papastathis, Ch. (2010)

The aerial photo of 1918 after the city fire (next page), and before the implementation of the Hébrard Plan, offers us valuable information for the Western Wall area and the pre-existing conditions of the investigated Inner Arch. The photo demonstrates the striking difference of the extra-muros area with its contemporary state. At the same time it offers important information with respect to the first refugee settlements and initial activity along the arch. In more detail these are:

The Eski Delik gate (Old Gate)

In Greek it was known as *Portara* (i.e. big door). Unlike the gates at the eastern and the western side of the walls, gates at the northern were a disadvantage from a defensive perspective. It remains unknown when and why the gates at the fortification's northern sides were opened. A road heading from the Eski Delik gate to the fields outside the wall, toward the north, is seen in early maps dating back to the 19th century⁸.

The Yeni Delik gate

Yeni Delik (New Gate) was an unofficial gate at the north-west corner of the city's walls

Mehlevi Hane / Tekke

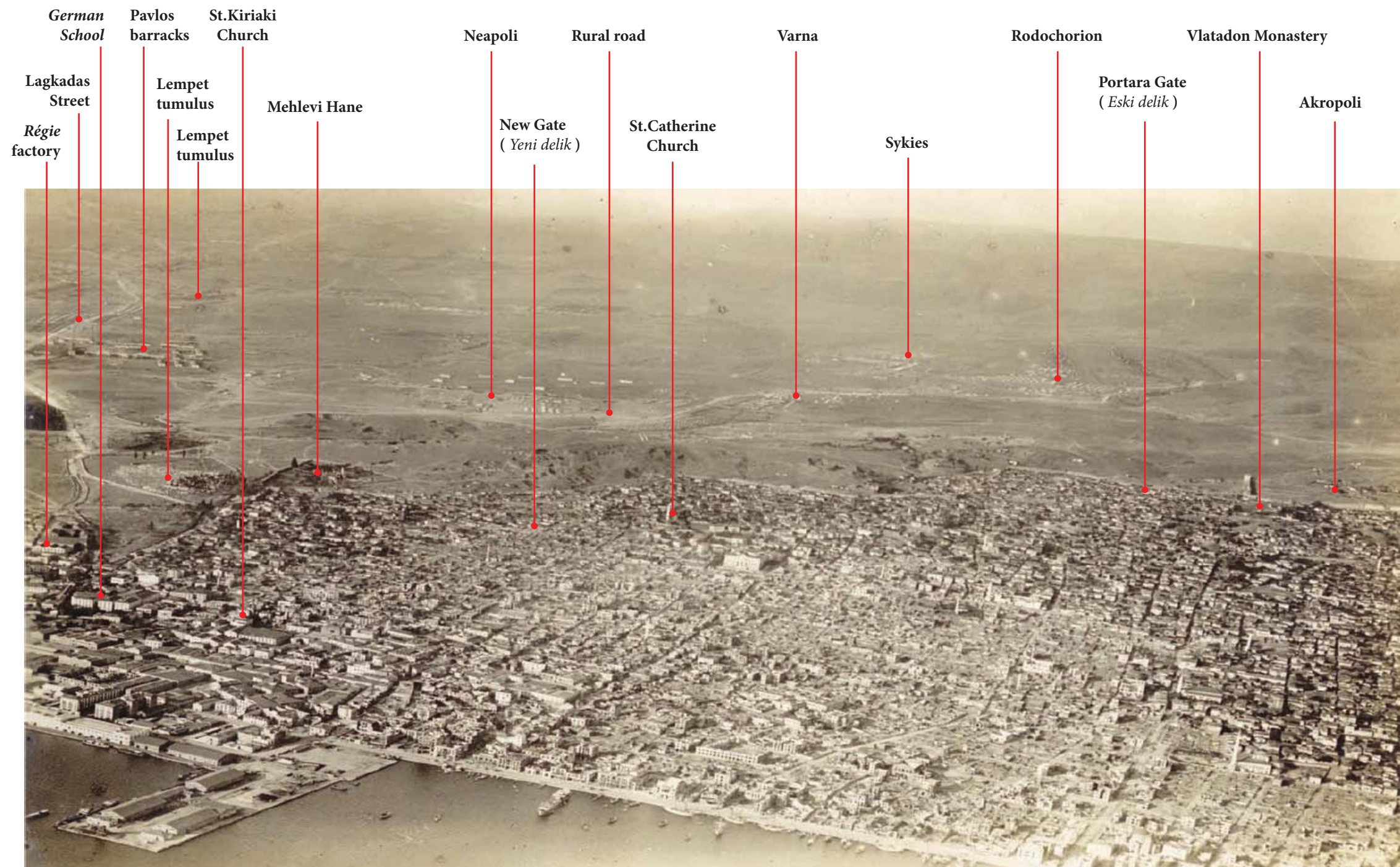
The Islamic order of the Mevlevi was established in Thessaloniki in the early 17th century. Their monastery was located near the New Gate. The aerial photo on the next page is the first published air photograph depicting the specific monastery, with its yard and all its premises and testifies to the hypothesis that the tekke was located in the plot where the modern Panaghia Phaneromeni Church is located today. In 1917 some dervishes still used to live in the tekke. In addition to the dervishes, many refugee families resided in the premises of the monastery⁹. It is believed that the tekke was demolished in the late 1920s¹⁰, following the population exchange between Greece and Turkey.

The Lagada Street

Lagada Street is considered to be a part of the original Roman *Via Egnatia*¹¹, connecting Thessaloniki with the East. The street was named after Lagada, a small town 20km to the northeast of Thessaloniki

The Islamic cemetery

The fenced Islamic cemetery ran from the today's Saint Nestor Street to Panaghia Phaneromeni Street. Although the graveyard abuts on the monastery (tekke), the photograph proves that they were two separate, individually fenced areas. This cemetery was one of the two major extra muros Islamic cemeteries (with the second one outside the eastern walls). The gate diametrically at the opposite site of the New Gate remained closed for many years and was re-opened in 1874. Perhaps the western cemetery («New» Gate) was related to the establishment of the Mevlevi Tekke in the beginning of the 17th century¹¹.



Vue aerielle de Salonique - Aerial view of Thessaloniki, from Lebet to Saint Sophia (1918)

This aerial photograph of the post 1917 city fire offers a unique perspective, not only of the greater part of the city but also of the north-west area outside the walls. Since many of the burnt buildings appear demolished, the photograph must be dated between June or July 1918. By June 1918, the Municipality was being criticized for delaying the clearing of the ruins. Thus, in the meantime, many owners had already knocked their burnt houses / properties down by their own means, in order to remove and sell the building material. (source: Hekimoglou, E. & Papastathis, Ch. (2010))

Vlatadon Monastery

The Byzantine Vlatadon Monastery complex can be distinguished from surrounding buildings because it is protected by high stone walls.

The Government Building (Διοικητήριο)

It was built in 1895 on the site of an earlier administrative building and was not damaged by the fire of 1917. In 1955 an additional floor was added

The Saint Catherine Church

An unidentified 13th century church was transformed into a mosque by Yakub Pasha (early 16th century) and was named after him. In 1912 the mosque was re-converted into a church, dedicated to Saint Catherine.

The Top-hané

The Top-hané was built in the 16th century to reinforce the defence of the city; its name betrays that originally it served as the artillery's headquarters¹².

The German School

The German School was situated near the city's walls, toward the end of Franks Street. The school was established by a team of German residents of Thessaloniki, mainly merchants. It was demolished for the widening of Vardari Square. Around 1935 the building of the Italian School was erected at the same site.

The Régie Co-intéresse des Tabacs

The factory of the company Régie Co-intéresse des Tabacs was located close to the north-western walls of the city, where nowadays the suburb Xerokrene is located. Until 1914 Régie had a monopoly on the tobacco industry in the Ottoman Empire and later liberated territories¹³.

The Ladadika quarter

Beginning in the early 19th century, the area to the west of Londja Mosque is mentioned by the sources as *ladadika* (olive oil market)

Military camps

The military camp, nowadays called Pavlos Melas, was established in 1881, in a 40-acres area. The camp was used originally by the Ottoman Army and after 1912 by the Greek Army. Other military camps, established by the Allied troops, were also established in the north-west area of Thessaloniki. After WWI, these camps were used temporarily by the refugees from Minor Asia and became the nucleuses for the formation of the contemporary western municipalities / districts of Sykies, Varna, Rodochorion and Neapoli¹⁴.

The Lebet tumulus

According to archeological findings, the lebet tumulus (tomba) was inhabited during the 3rd and 2nd millennium B.C¹⁵.

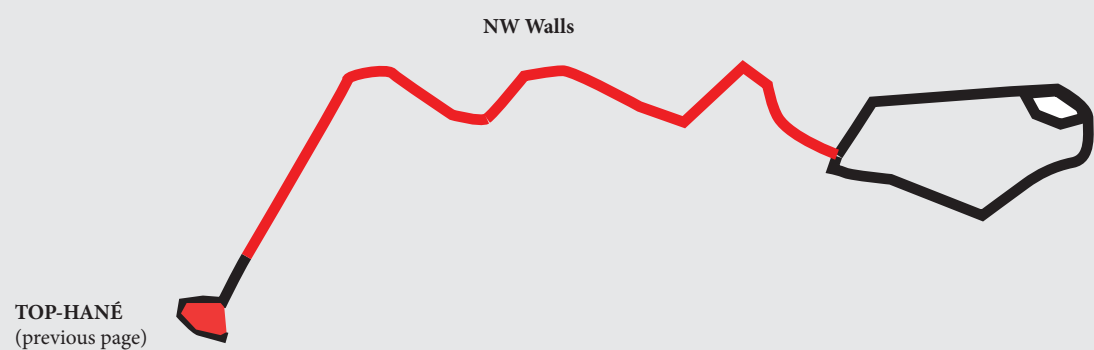
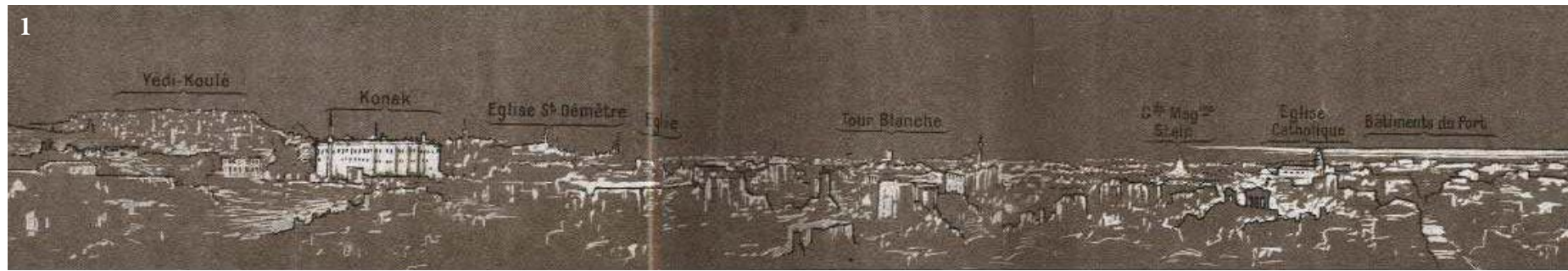
In continuation a series of historical impression of the west wall area will be presented in an attempt to identify conditions and activities along the Arch that gave form to the contemporary fabric, starting from the Top-Hané / seaport area and all the way up to the Eptapyrgion at the north-east end of the Arch

8-15. Hekimoglou, E. & Papastathis, Ch. (2010)



Top Hané - the fortress of Vardaris

1. Sea perspective of the Western Thessaloniki at the end of 19th century , with the Top Hané visible among other landmarks (Municipality of Sykies) 2. Gate of Top-hané, late 20th century (Municipality of Thessaloniki) 3. Plan of Top-Hané of 1925 when the fortress was still being used as a military camp. 4. Composite view (7 sheets) of the area of Top Hané and the adjacent port area in 1898-99 (National Map Archives) 5. View of the railroad area at the beginning of the 20th century (Municipality of Sykies)



The city walls as a permanence - *the NW walls*

1. Perspective sketch of the western Thessaloniki landscape from outside the western walls (Kostoglou V. & Mitsi, E.) 2,3. Photos at the beginning of the 20th century of the Western Walls (Municipality of Sykies) 4. Litea Gate (Municipality of Thessaloniki) 5. Golden Gate (Municipality of Thessaloniki) 6. Eski-Delik gate 7. The gate to Akropolis from Ano Poli before its widening (Belenis, G. (1998)) 8-10. Photographs of 1918 of the first settlements outside the western walls (Municipality of Sykies) 11. View of the Mosque of the Dervish (Meyla-hané) (Municipality of Sykies) 12. Photo of the NW Walls before 1912 (Ministry of Culture) 13-15. View of the outside NW wall area in 1910 (Municipality of Sykies) 16. View towards the west from Ano Poli, early 20th century (Municipality of Sykies)

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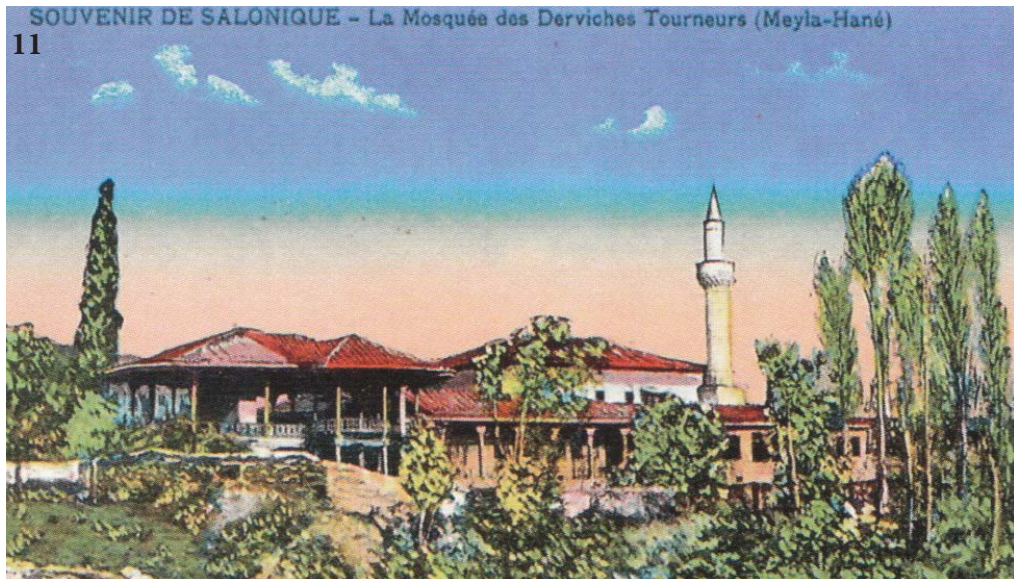


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SOUVENIR DE SALONIQUE - La Mosquée des Derviches Tourneurs (Meyla-Hané)

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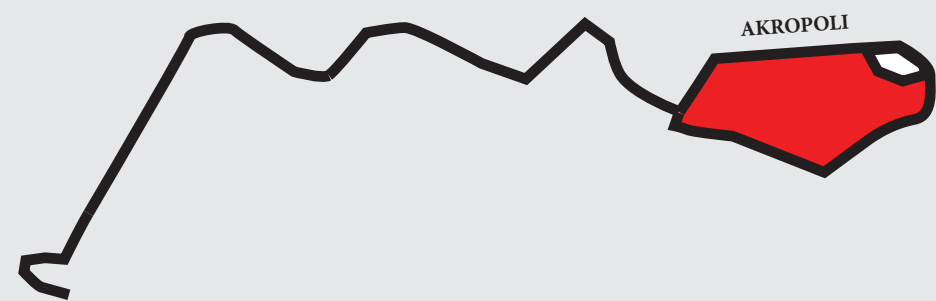
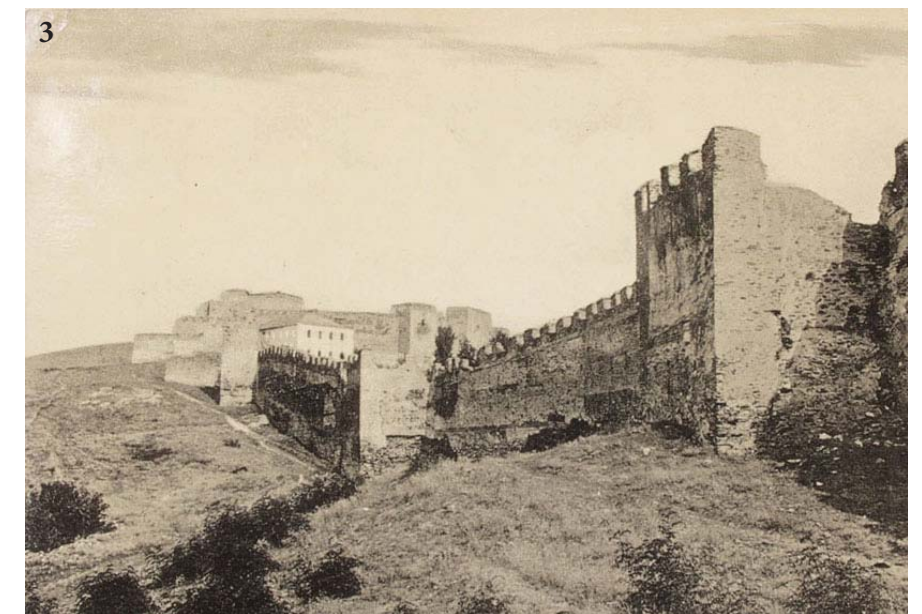
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SOUVENIR DE SALONIQUE - Panorama des vieux remparts au côté Nord

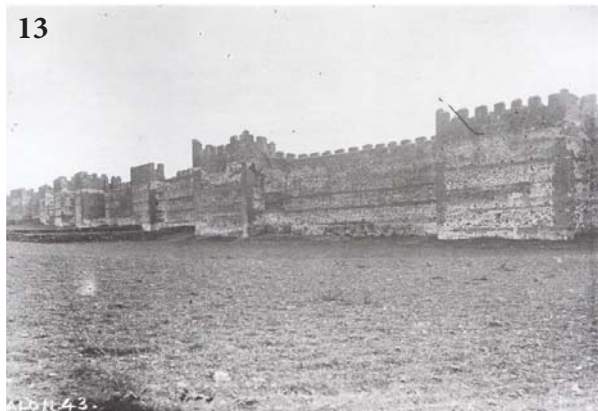
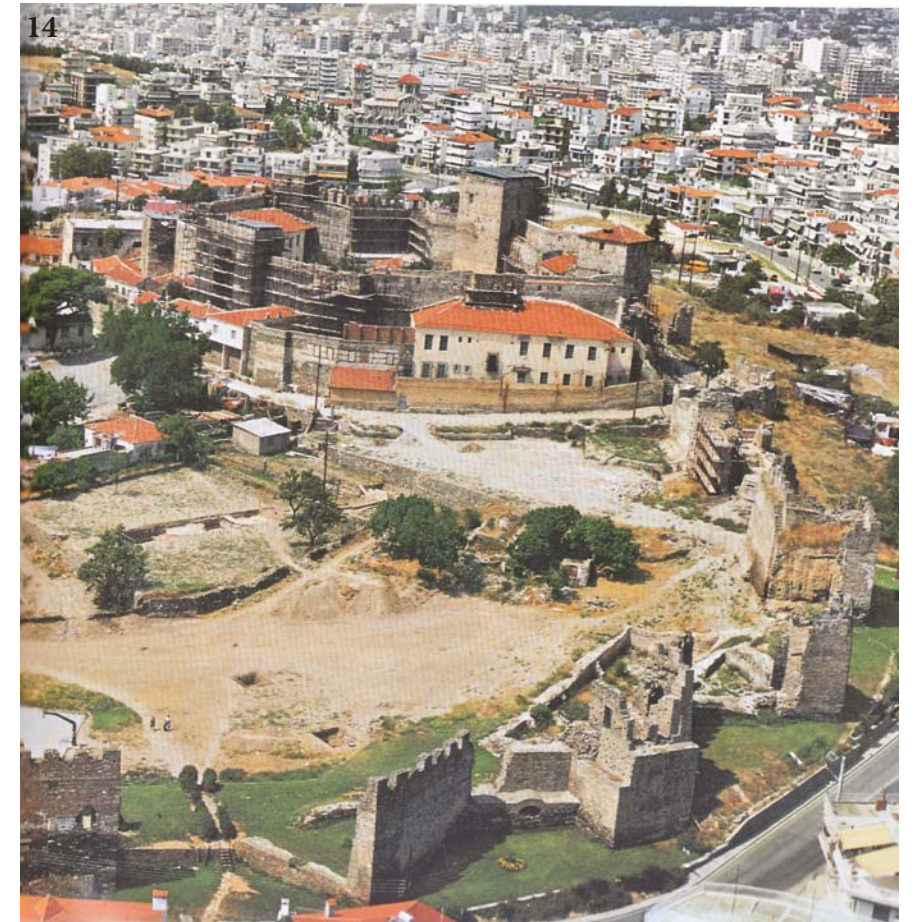
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The city walls as a permanence - *The Akropolis*

1. *Forteresse de Salonique*, Map of the Acropolis from 1899 showing the Eptapyrgion (*Prison*), properties and road grid along with other details (National Map Archive) 2. Aerial photo of the Acropolis between 1915-1918 (Ministry of Culture) 3. View of the northern side of the Acropolis walls (Municipality of Sykies) 4. View of the Acropolis from outside the walls (Municipality of Sykies) 5. View of the Acropolis from outside the walls (Ministry of Culture) 6. The Acropolis walls connects with the city-walls; early 20th century (Belinis, G.) 7-9. Scenes of everyday life along the Acropolis walls (Municipality of Sykies) 10. View of the walls separating the Acropolis from Ano Poli with the refugee settlements, early 20th century (Ministry of Culture) 11-13. Views of the Acropolis walls in the beginning of the century (Belinis, G.) 14. Low-altitude photo of part of the Acropolis with the Eptapyrgion in 2000, (Ministry of Culture) 15. Part of the city walls connecting the Trigonio tower with the Acropolis; early 20th century (Belinis, G.)

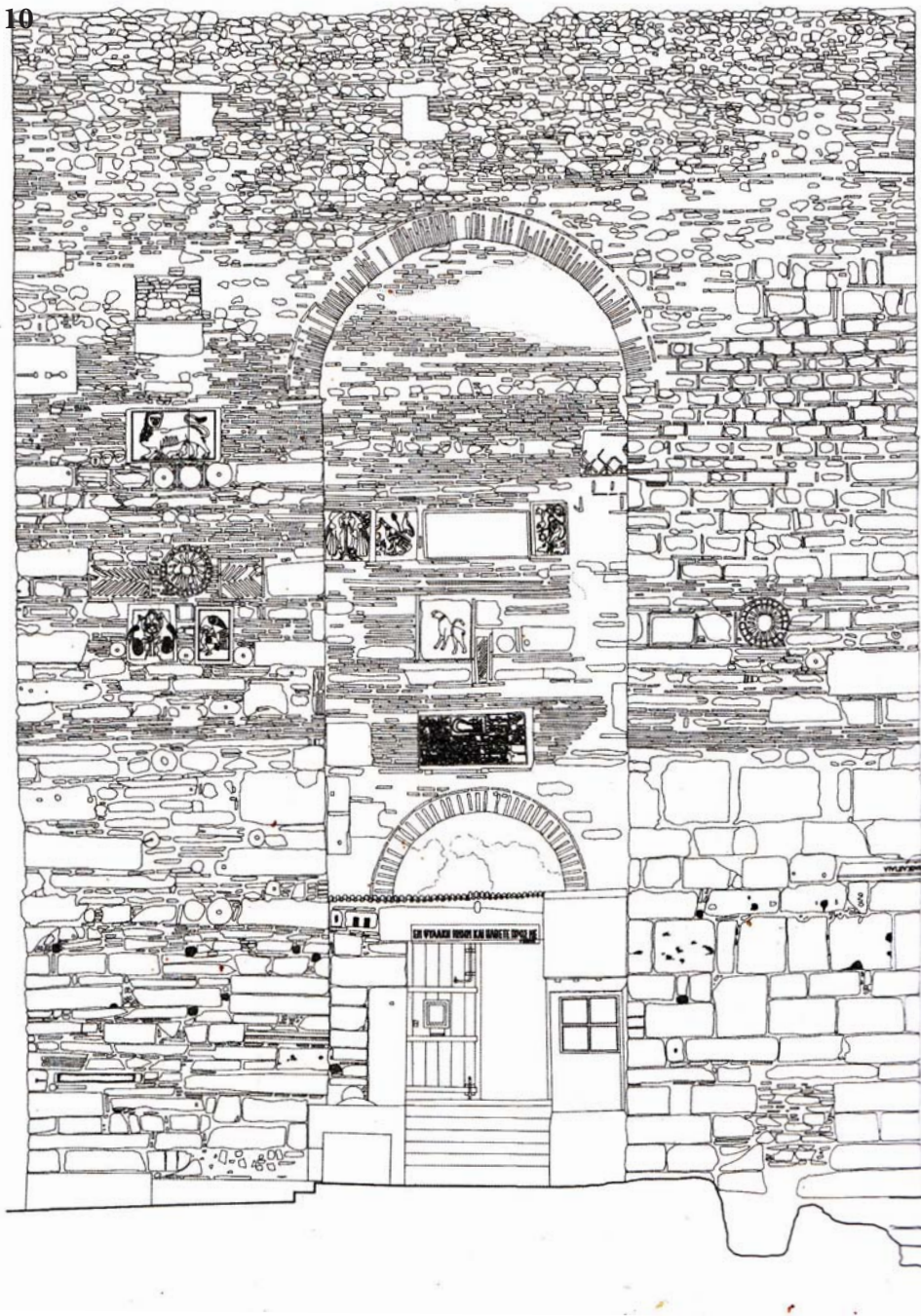




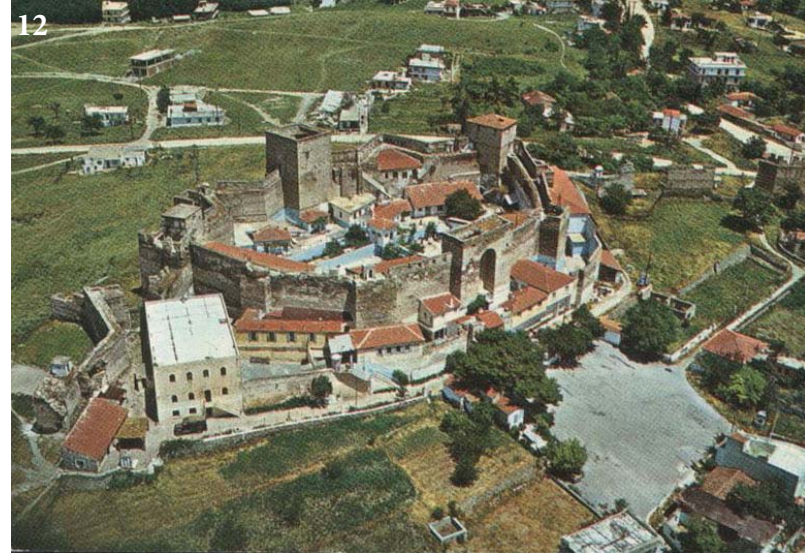
The *Eptapyrgion* fortress /prison

1. Plan of the Eptapyrgion with original and posterior additions 2-6. Views of the different towers of the Eptapyrgion 7-8. View of the Eptapyrgion from inside and outside the Acropolis from early 20th century 9. Decorative slabs on the Entrance tower 10. South Facade of Entrance tower 11. Different sections of Towers and wall fortifications of the Eptapyrgion 12-13. Aerial View of the Eptapyrgion functioning as a prison in the 80's 14. Prison board of Eptapyrgion 15. Courtyard of the prison (images source: Ministry of Culture)

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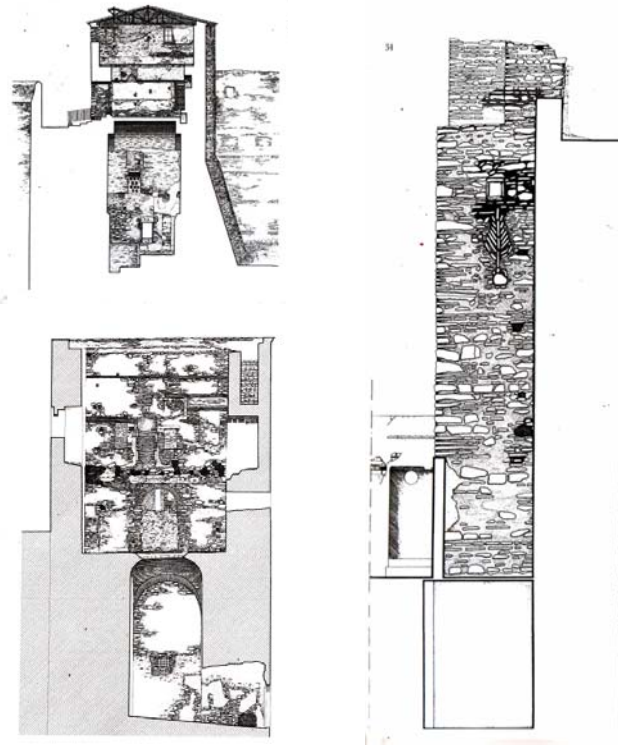
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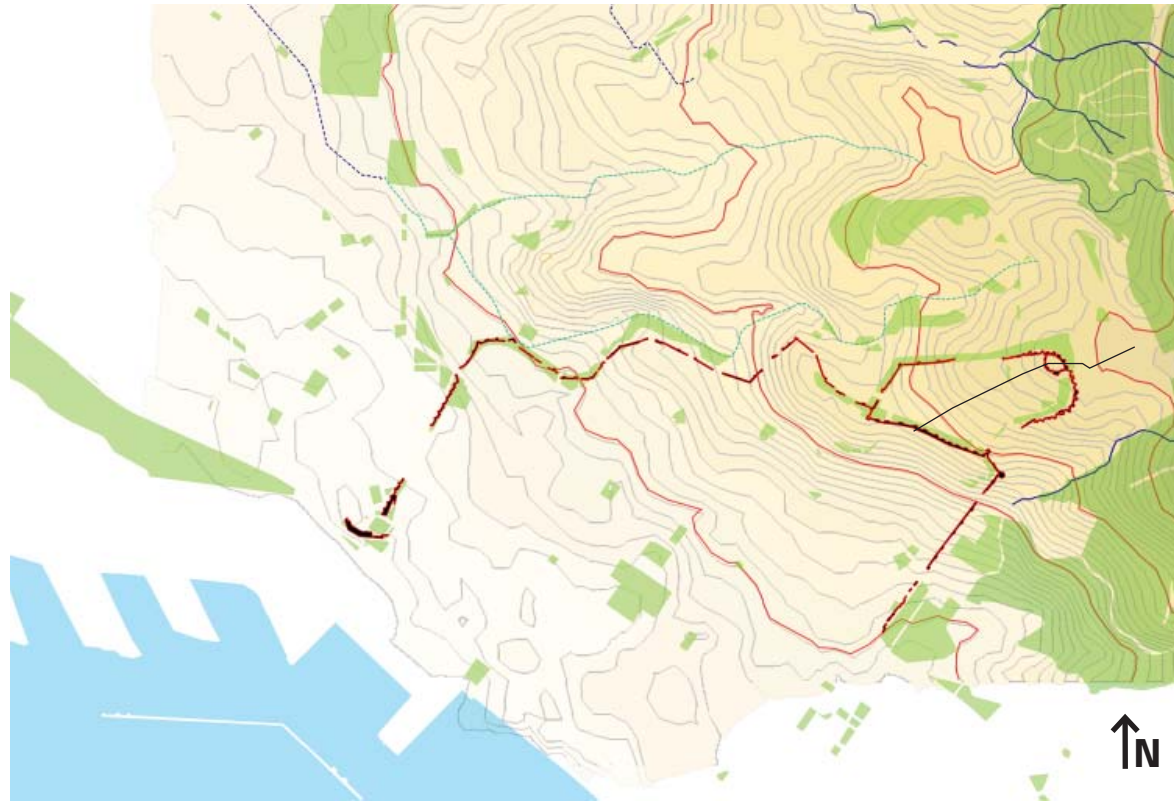


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Local geomorphology and hydrology



The original local streams superimposed on the contemporary urban fabric of the interior arc

ii. The Biophysical Matrix

According to accounts of Byzantine historians the wider area is characterized as a “paradisal valley with lush vegetation, water, birds”. Possibly the wider area to be identified with the area where the grand bazaar of Demetria was celebrated. The area around the Stavroupoli was the most important transportation hub in Central Macedonia. Here two major roads joined. The Via Egnatia from Durres to Kypsela, and the Great North Road starting from the Golden and Litea Gates of Thessaloniki to Sirmium, in the Belgrade area. The two roads joined here... and thus we understand the commercial importance of the spot.

P. Theodoridis, from the book by S. Lazaridis “From Vardaris to Derveni”

The situation before

The wetland formed by the Aliakmonas, Loudias and Axios rivers (and the former Lake of Giannitson) continued with the contribution of the tributaries of the Gallikos and Dendropotamos river and literally reached all the way to the western gates of the city creating at the time swamp-like conditions, and what came to be known as the *Mpara*, an area with unfavourable conditions for habitation, where most residents that eventually first settled there suffered from malaria and / or other swamp related diseases. Other texts describe the *Mpara* as a small natural pond with stagnant water which was fed by *Loksos Lakos* (or *Egri Dere*, or later known as the stream of P. Mela camp) starting from the city’s Acropolis¹⁶.

In the coming decades the railroad would arrive, and the rail infrastructure would start to occupy a significant amount of the local landscape as the rail connections and incoming cargo and visitors increased, while establishing the railway communications of Thessaloniki with European centers¹⁷. In the mentioned area of the *Mpara* the first rail-station of Thessaloniki was eventually created, setting the area in need of a radical

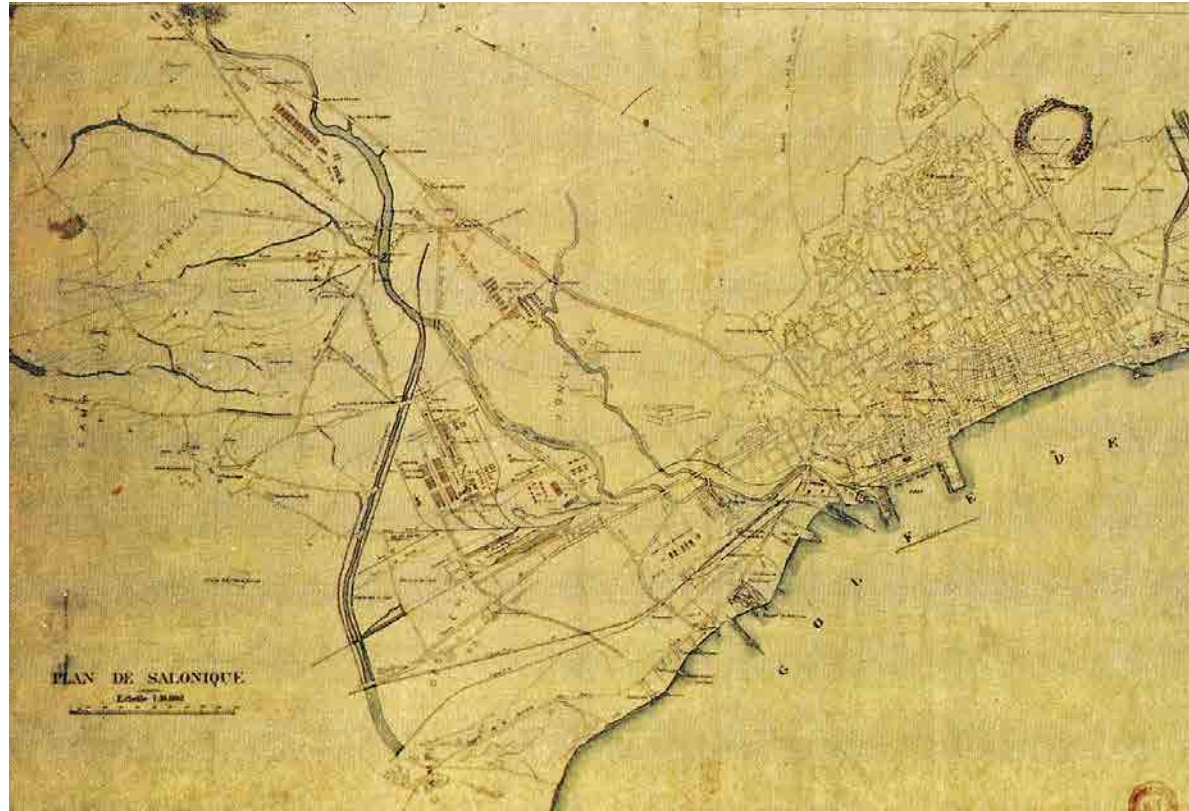
transformation. In 1893, the French engineers of the Eastern Railway, channelled the *Loksos Lakos* and with an artificial canal directed the water to the *Thermaikos* bay. Thus embankments were created both to cover the old scattered streams and swamps that covered the site. The stream creation, brought significant health benefits to the local residents allowing residential development and at the same time allowed the construction of the rail station and the expansion of the port to the east. The German *Adolf Struck*, of the German Archaeological Institute, describes his impressions of the area in 1908¹⁸:

“We left Thessaloniki from the suburb Tsairi, created some 30 years ago, when after the demolition of the fortifications, part of population settled in this area outside the walls. Previously, the area Tsairi, meaning meadow, and had still waters, resembling a swamp ... The construction of the railway, which made necessary the covering and redirection of the local streams in conjunction with the subsequent infills, contributed to the sanitization of the area. Currently covering the area from the city to the sea, one can see extensive vegetable gardens. The limit of the area is the stream channel located 4km west of the walls and ... serves to divert west to the sea and to keep away from the residential settlements the torrential water ...”.

In 1926, a second drainage canal was constructed leading water from the *Loksos Lakos* to the canal of *Dendropotamos*¹⁹. With the completion of these works, the marshes/swamps disappeared from the west side of town for good. Outside the west wall and *Litea Gate*, apart from the Turkish cemetery, and the *Teke* of the *Mevlevi Dervishes*, ran among tall trees a little stream known as a cascade of *Aron*. From that point, according to *Demetriades*, running parallel to the walls (and possibly a defensive ditch previously) and ended close to the area of the current *Courthouse*. Next to the mouth of this stream was also the *National Garden*, later known as *Bes Cinar* (= Five Platanus Trees) and after liberation of the city as the “*Garden of Princes*”. It was

¹⁶, ¹⁸, ¹⁹. Mplionis, G.(1996)

¹⁷. Skopje (1871), Belgrade (1888), Florina (1893), Monastiri (1894), and Alexandroupoli (1896) joining the line to Istanbul



Above: Plan de Salonique, of 1915 showing in detail the local streams and urban fabric
Right: Port Development and progression of the flood protection scheme for the city, with the covering of the local streams and expansion of the city fabric westwards.

constructed in 1867 by Sabri Pasa, prefect of Macedonia, in the effort to modernize the city (along with the destruction of sea walls and the widening of central streets). The garden was conserved until the WWII. On the eve of war, the Greek authorities would permit the construction of huge oil reservoirs in the area. As Drosaki E. describes in her book²⁰:

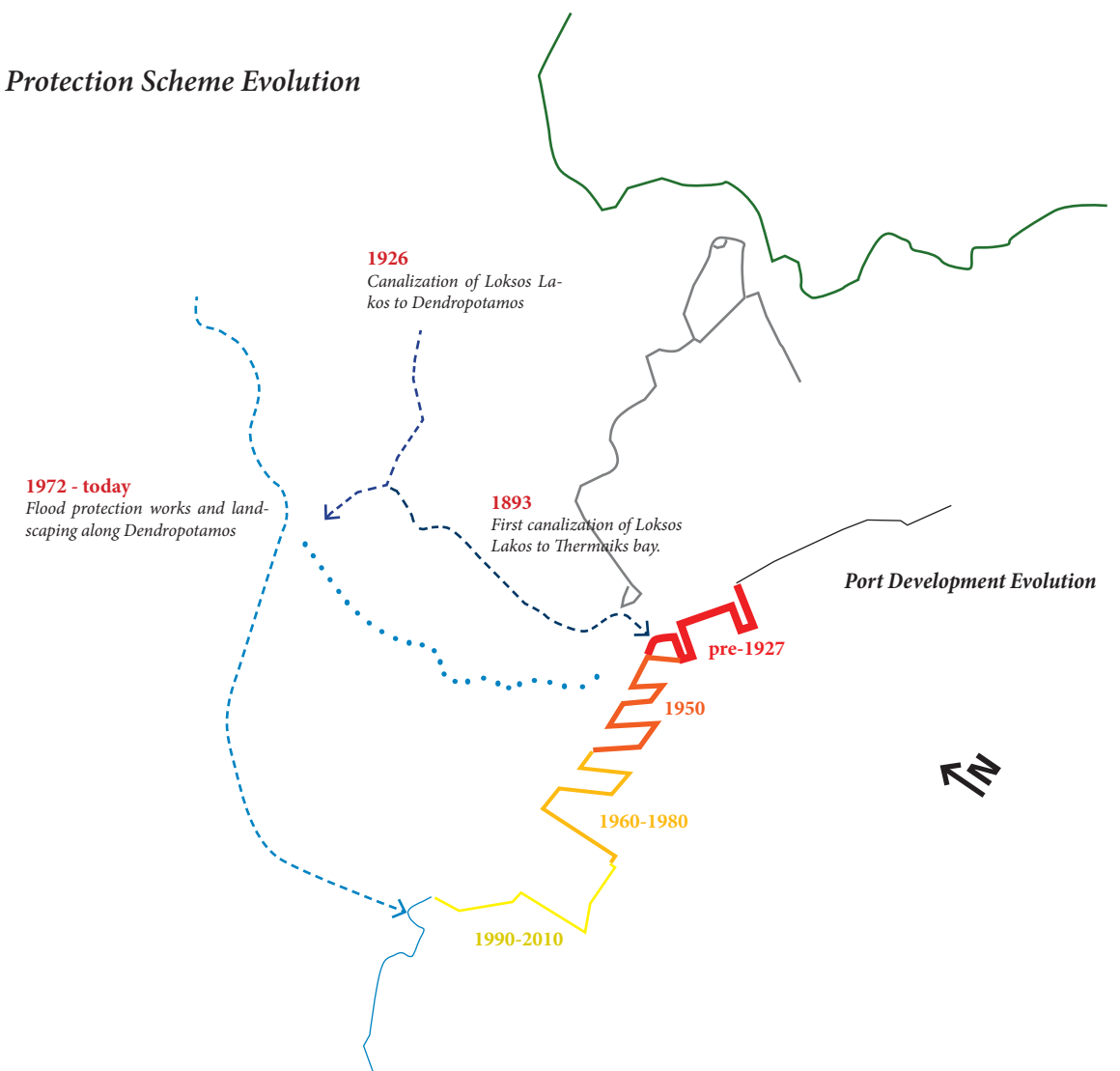
“The Bechtsinar was a large fenced area next to the sea, with large trees, flowering gardens, fountains filled with goldfish and an amusement park with swings and amusement rides. Scattered among the trees were built houses in hexagon forms, like a fairytale, gazebos and sheds with stairs and peculiar roofs. On the sunny days of winter and all the summer, countless people would come to walk or swim in the beautiful beach, on one side of the mens’ cabins and the opposite side the women cabins.”

The situation today

The extended western area of the city experienced a large influx of population in two waves, one in the ‘20s and the second one in the ‘60s, that resulted in the creation a lot of makeshift working-class neighbourhoods, with many illegal constructions, even inside the riverbed of Dendropotamos. The flood potential of the Dendropotamos river was known from before but in the past did not cause significant damage given that the majority of the riverbed was almost uninhabited/unoccupied. The damaging effects began to increase after 1960, keeping in pace with the construction development in the area and especially inside the riverbed area²¹.

Today, the greatest part of the Dendropotamos tributaries have been covered up while the only remaining uncovered section can be found mainly in Stavoupoli, and the section close to its exit to the sea. In its greatest part of its route through the city the stream has substituted by covered concrete bed. The series of subsequent interventions along its course resulted in the disappearance of the stream from the western landscape of

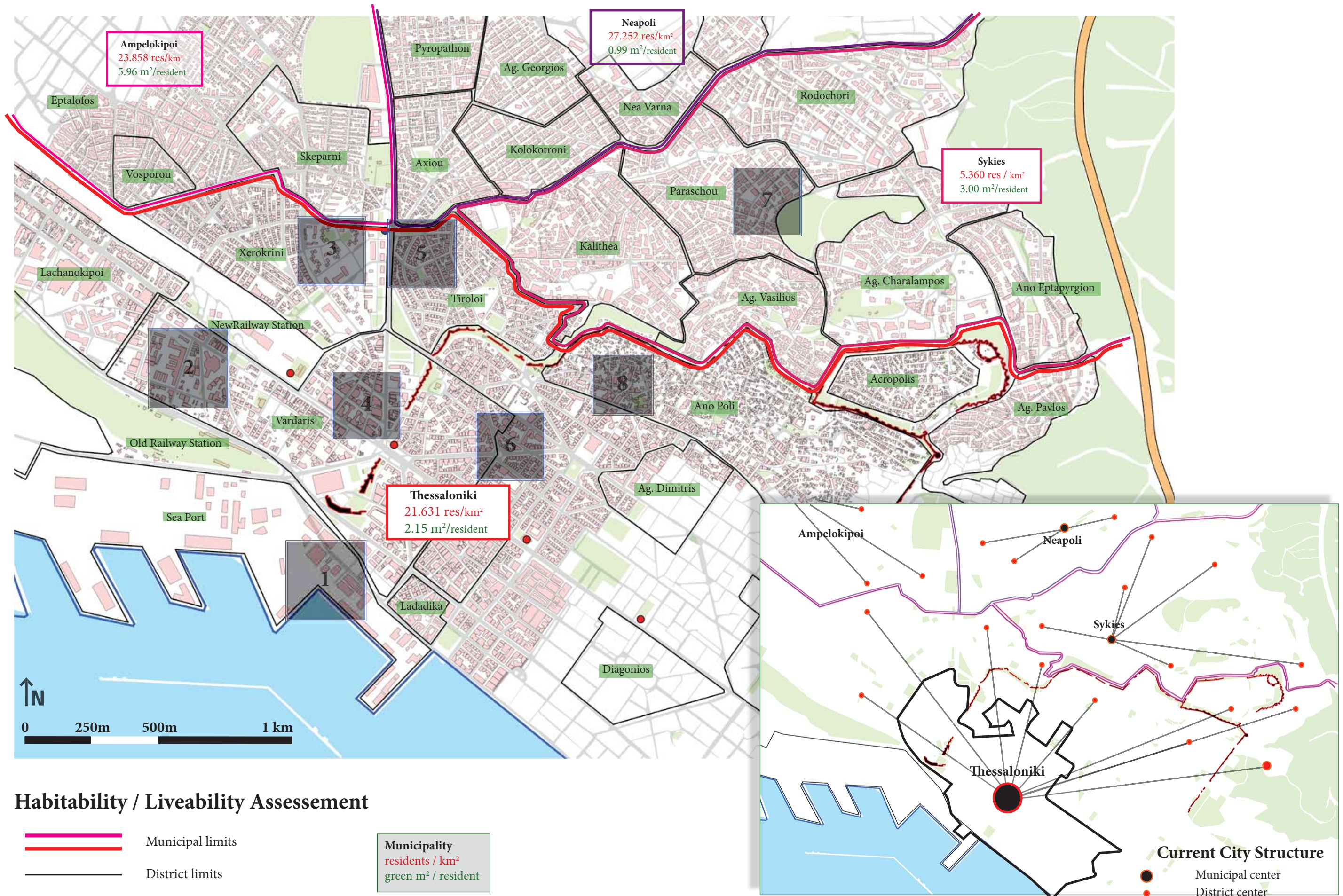
Flood Protection Scheme Evolution



the city. The morphology of the riverbed and the river path of Dendropotamos have undergone the greatest changes in the Efkarpias sections due both anthropogenic factors and the meandering of the stream. The stream of Asvestochori despite being declared a site of special attention, it is being continuously degraded.

The Dendropotamos is one of the most important streams of the city. It drains water from the entire west basin of the city acting a collector stream, but also from the north after the Xiropotamos joins its flow (total catchment area: 11,500 ha, of which 3,500 related to mountain areas). The total length of the stream within the urban area exceeds 25km and near the estuary area it has reached a maximum flow of 265 m³/sec (in 1995). Overall the last decade, the expansion of the city and the parallel shrinkage of forest and agricultural land within its drainage basin have created severe adverse effects, and floods under these circumstances have not been uncommon. The most serious occurred in 1970 and 1972 after which a study was prepared for the covering of the riverbed. Apart from the weather conditions the floodings were attributed to i) the absence of regulatory catchment vegetation within ii) Obstacles within the watercourse iii) build-up in the lower section of the basin, that resulted in a marked reduction in soil permeability²². Besides the threat of flooding, the Dendropotamos continues to be also recipient of both urban and industrial wastewater mixing with surface run-off. Quality analyses of the riverwater have demonstrated the severity of the situation as early as 1982²³.

The examination of the wider area and present conditions will help in contextualizing better the next step of the analysis, that will focus on the analysis of the two arches, and their surrounding areas. The next part, focusing on the Inner Arch will investigate the conditions and dynamics present and the functioning of the city walls as a contemporary urban interface along a historic and pronounced urban-social ecotone.



7. Sykies



8. Ano Poli



5. Tiroloi



6. Historic Center



3. Xerokrini



4. Vardaris Square



1. Vardaris



2. Passenger Port



□
scale

Local Urban Typologies

Picture table demonstrating a sample of urban typologies present in the local landscape around the western walls, arranged from a greater to a smaller scale, from bottom to top. For each area a aerial photo and a landuse map is provided.

iii. Habitability Indicators and conditions

The next section initiate the *Habitability - Activity - Mobility* assessment in the area in order to perform an more in-depth lecture of the contemporary fabric. Starting with the habitability / livability conditions along the inner arch area, it can be asserted that is depends greatly on the conditions that each distinct fabric was created. As seen earlier the outside the walls area was uninhabited until the beginning of the 20th century, when the drainage works permitted settlements on the grounds near the coast and the incoming refugees created an unprecedented demand in housing. The adjacent extra-mural areas were absorbed by expansions and modifications provisioned by the Hébrard Plan initially and subsequently by improvised refugee settlements that formed with the arrival of the Minor Asia populations. These settlements soon were to be recognized as communities (κοινότητες) and subsequently to municipalities: Sykies, Ampelokipoi (community - 1934, municipality - 1954)²⁴, Neapoli (community 1934, municipality - 1944)²⁵. Observing the contemporary fabric one can easily recognize two broad typologies that refer to *residential* and *non-residential* fabrics:

I. The *non-residential* typologies include infrastructure related areas like the sea-port area (2) by the seafront, the railway lines and stations (*new & old*) west of the walls and a series of other buildings hosting administrative, educational, services and commercial uses (1 & 6), existing and abandoned factories, and lastly archeological / cultural sites like the Eptapyrgion, the Twelve Apostoles etc.

II. The *residential* typologies include different types:

- a. the *Xerokrini Social Housing* (3), a sample of state housing in the area on Lagkadas Avenue with the characteristic three 12-storey buildings that dominate the local urban landscape, constructed over a previous working class settlement, provisioned by Hébrards plan.
- b. The *Historic centre / post - Hébrard fabric* (6). The reconstruction of the fabric of the historic-centre following the Hébrard plan created a dense urban fabric characterized by the diagonal and perpendicular city to the sea arteries that structure the fabric. A consolidated fabric with a diverse mixed use activity
- c. *The extra-mural / Hébrard fabric* (5). Similar to the earlier category, although with slightly distinct characteristics (dominantly of residential character) and a more improvised development in relation to the original plan.

24. Municipality of Sykies www.sykies.gr, Municipality of Ampelokipoi www.ampelokipoi.gr

25. Municipality of Neapoli www.neapoli.gr



Habitability perspectives. (sources: 1, 3, 5, 6, 11: Municipality of Sykies 2, 7: Panoramio.com 4, 10, 14: Municipality of Thessaloniki 8, 9, 12, 13: Y. Yerolympos)

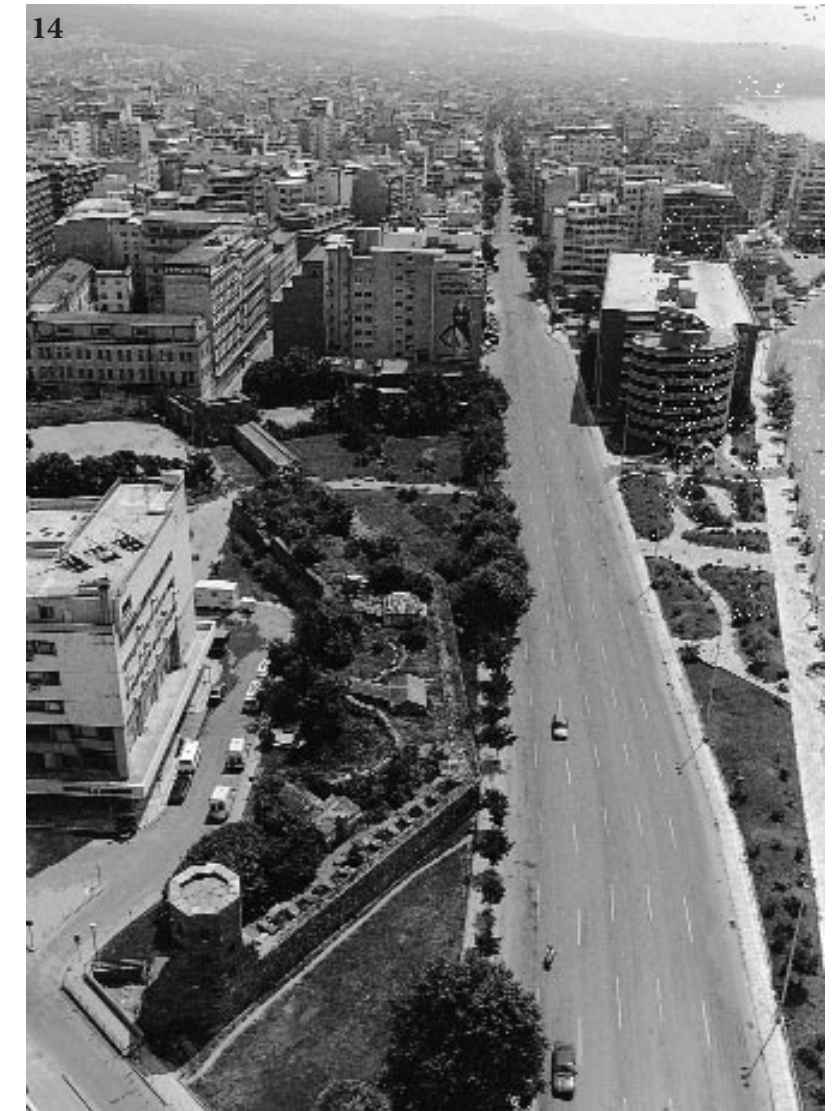
d. The extra-mural adjacent settlements (7). This typology includes lower type buildings, detached or semi detached, descendants of the refugee settlements. The fabric nevertheless presents a dense state with small streets and corresponding urban blocks. This type of fabric due to its improvised development also tends to presents lower availability of civic services / spaces.

e. The Ano Poli & Akropoli areas (8). This typology is the closest to a traditional / vernacular typology that the contemporary city fabric presents, although with considerable alterations / modifications. Its characterized by the low, detaches and tiled covered houses, the network of pedestrian streets connecting small squares and the tranquil environment that prevails in the area. The residential area of Akropoli can classify as distinct sub-typology due to the enclave character of the area given by the surrounding wall fortifications.

The building densities on both sides of the arch reach similar levels at corresponding levels, that is to say that the dense fabric of the historic centre is coupled by an corresponding dense fabric to the west, while in the area of Ano Poli with its smaller densities and distinct typology, a respective typology has developed on the other side as well. Thus density is related to intensity along the arch effecting both sides respectively, although with slightly higher level outside the city walls. Nevertheless there is a clear difference in the services / public amenities on each side of the ecotone, as well as quality of public spaces. The income / social gradient also follows an outward radiant pattern radiating from the historic centre, with it dominant role, to the west.

The western city walls with the corresponding arch that they form, mark a dividing line between slightly differentiated typologies, coinciding to a great extent with the municipal limits, that demonstrate a slightly increased population density moving outwards to the west. Therefore due to the intrinsic activity present in the ecotonal area (diversity, intensity), the differentiated patches on either side and its special morphological characteristics, it can be claimed that the inner arch forms a kind of an urban ecotone that is further intensified by the material presence of the city walls. The socio-economic gradients present in the current fabric and correspond with the ecotone delimitation demonstrate the added value, that is the Inner Arch functioning as a socio economic ecotone between the historic centre and the extended western Thessaloniki. This special nature of the inner arch, and its potential to act as a dynamic urban interface (mending spatial socio-economic disruptancies) and at the same time as a key green urban corridor (with a vibrant edge activity), gives added importance to the rethinking and the possible restructuring along its course.

The following sections of the analysis will investigate in more detail the activity and mobility along the arch and its adjacent areas. The detection of key activity areas, local centralities (present & latent) will aid to formulate a more precise impression of the emerging mosaic of the area, and the possibilities for restructuring that exist within the contemporary urban fabric.



iv. Activity Assessment *Fields and forces present in the urban fabric*

The next section will investigate the diverse type of activities that take place within the urban fabric in the vicinity of the Western City Walls. Registering the density and intensity of the activity on both sides of the city walls can help define the exact role that the city wall plays or could potentially play as an urban interface, regulating and equilibrating deficiencies and surpluses on a local scale and intramunicipal level. As seen earlier, the area under investigation until the end of the 19th century was an edge area of the city, offering access to the west and north-west areas. Consequently from the antiquity until recently a great concentration of commerce activities was located in the area given that most major commercial and transportation axis ended on this end of the city.

Centralities / Attractors (historic, existing & latent)

The immediate city expansions to the west tried to cover needed residential needs during the waves of incoming residents. Thus a lot of the immediate municipalities like Sykies, Neapoli and Ampelokipoi include a high percentage for residential use. Thus neighbourhood centres (*local centres*) are very important in satisfying basic resident needs (commerce, administrative etc) and structuring the urban space in conjunction with widespread mix-use on a vertical and horizontal level. The commercial centre of the urban district of Thessaloniki takes up a large area and thus proclaims a certain protagonism in the regional scheme. Nevertheless surrounding districts present different scale, municipal and districts centralities that almost always fall behind in terms of services in comparison to the centre, but have a key function on a local level. Other important

centralities is the so called *Chinese Town* on the west of the Vardaris square, the Neapoli central axis starting from the Strempenioti Park, the Ampelokipoi and the Sykies municipal centres, proximate to the city walls, where the city hall and a series of cultural and educational spaces are located.

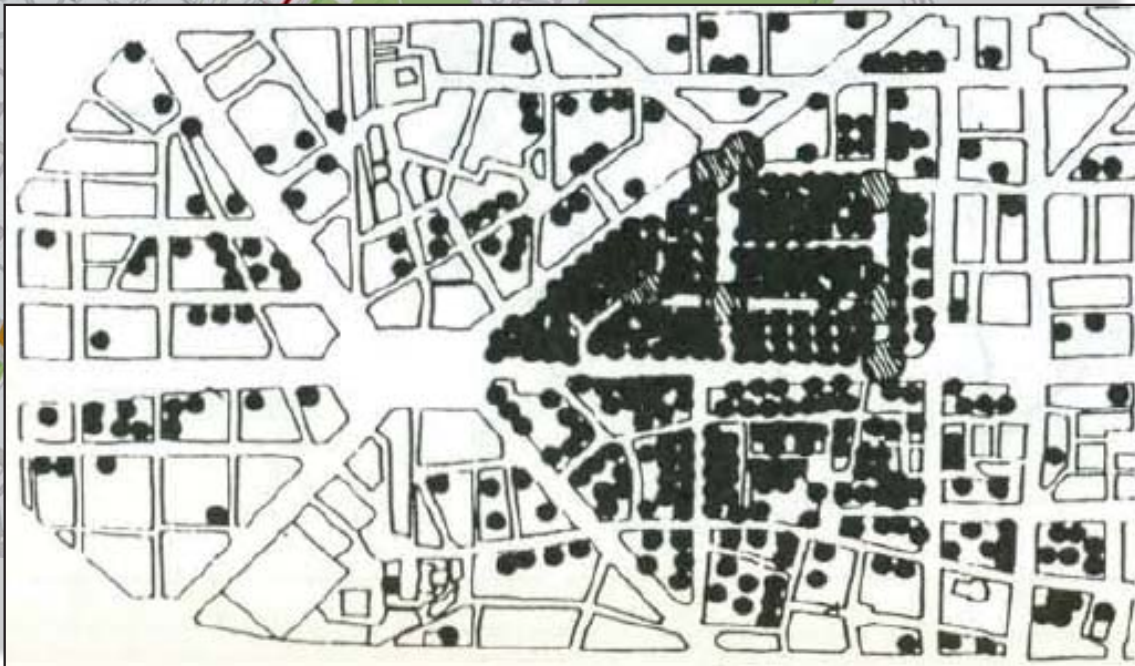
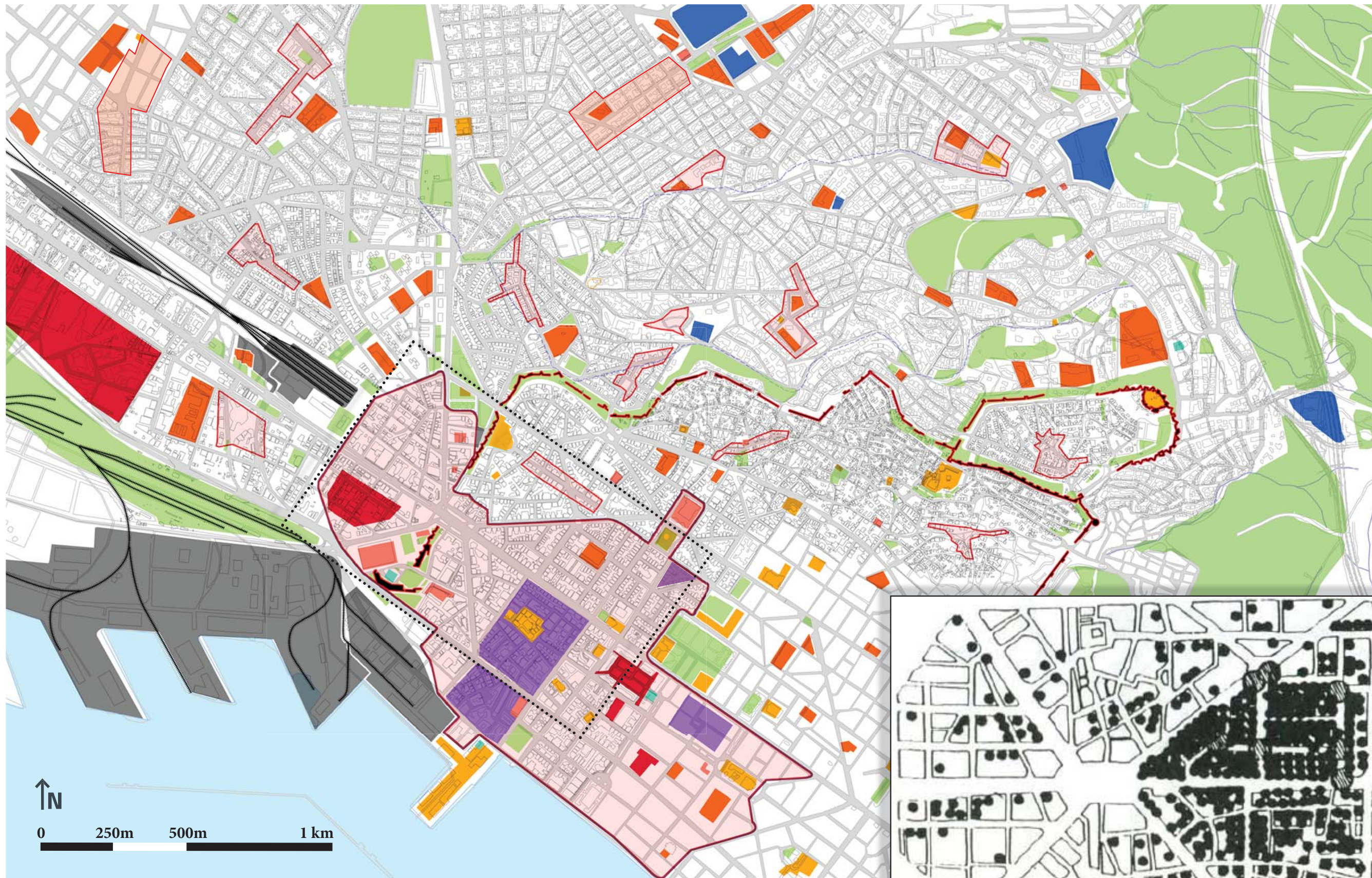
New Centralities are bound to emerge around planned metro stops, areas in transformation and nodes / crossings within the urban fabric. Given that the mixed use residential is the predominant use in the area, the propagating effect of existing centralities is easier to expand to other directions, where and when favourable conditions allow it. These areas are presented in the next page, where then some are covered in more detail. The key areas/poles that serve as activity generators/attractors are:

Cultural












The West City Wall lineal fortification, the Pier 1 of the port, Top Hané, The Churches of 12 Apostoles and St. Aikaterini, The Vlatadon Monastery, the Patriarchate, the Eptapyrgion, the rest of the archeological / cultural sites of the historic centre and the various cultural centres (municipal or not) that reside in a close radius to the walls, the Cultural neighbourhood of Sykies, the various Churches.

Transportation

The Central Train Station with the Passenger & cargo station and related infrastructure. A city bus terminal is also located next to the Train station and with the addition of the metro station in the future it



Activity Assesement

	Sport Facilities		Cultural		Administrative		Urban green
	Education		Education		Leisure / recreation		Local urban centers
	Commercial		Health		Transportation		

Above
 Map of 1993 displaying the diffused pattern of clothing and knitwear firms with more than five employees, in the Vardaris Area of the city centre at the time (source: Chronaki, Hadjimichalis, 1993)

will be converted into a key transportation hub. Another city bus terminal exists in Eleftherias Square²⁶, on the east of the Ladadika area, and another one on Eirinis street on the height of the Twelve Apostoles church. Smaller private and public medium-to-long distance bus terminal still exist in the area, mainly in the vicinity of the train station, while a great number have moved to the KTEL bus terminal/station in the west. Lastly, the seaport is located by the city walls. This is divided into two parts: the cargo part extending to the west, and the passenger terminal located on the western end of the historic city's seafront.

Recreational

Until recently the Ladadika used to be the only leisure/recreation dedicated area in the area. The mixed-use scheme has produced a diffused effect of this activity over the city fabric and a somehow delayed propagating effect to the adjacent area to the north, known as Fragkomachalas, or Fragkon. A great concentration of new bars/restaurants/clubs has emerged in this area, that justifies to classify it as an emerging pole of activity, and one of the most radically changing areas of the historic centre. Other areas that present such concentrations of activities are the Tsinari and Akropolis area in the Ano Poli, the seafront starting from Eleftherias square and smaller scattered points throughout.

Educational

The only major university faculty present in the area is the Veterinary School, that at the same time serves as one of the principal veterinary clinics for the city. Apart from that there are numerous schools of all grades scattered around and along the Inner arch, serving local residents' needs. A great number of them are located close to the western city walls, where availability of space was higher.

Administrative

The proximity to the historic city centre, the traditional administrative centre, justifies the numerous presence of administrative buildings and activity. In the Top Hané area, a judicial pole is created with the presence of the Civil and the Administrative Courts within a close distance, as well as the presence of numerous law offices in the vicinity. The Social Security (IKA) and the Telecommunication Organization of Greece (OTE) buildings can also be found in the same area. Higher up at the height of Ag. Dimitriou lies the Dioikitirion, now hosting the General Secretariat of Macedonia and Thrace and numerous administrative functions. The city-hall with many civic functions also used to lie in a short distance from the city walls, before moving in the Central Axis area.

Sport

The high densities and lack of available space have driven most sport facilities on the edges of the urban fabric like the Trigono Athletic Centre and the soccer stadium of Keraynos both located on the edge with the forest, the latter in the roundabout of the exit node of the Ring Road (K7). The Strempenioti park in the municipality of Neapoli also hosts a number of sport-related activities. Other smaller closed gyms are found scattered

Health

The immediate area west of the walls lack any major hospitals coverage. The majority of the health institutions are located or in the immediate zone east of the eastern-walls or on peripheral areas of increased access (eg. the Ring Road). Non urgent residents' needs are covered either by smaller attention centres or small private medical offices.

Urban voids / edge zones

As far as unoccupied land is concerned the majority of open spaces apart from the walls green areas can be found in small fragmented parcels that do not constitute a continuity or a network. The high densities and exhaustion of available urban spaces have resulted in consolidated urban spaces, limited on the east by the Forest and the inner ring road and all around by surrounding municipalities growth. There is a great number of abandoned or obsolete buildings, in their entirety or partially, especially spaces related with the manufacturing activity that has now eclipsed. Thus a great number of spaces are found in an empty or in transitional phase. The only big scale urban void that exists is the area is that of the old Railway station with all its rail infrastructure that currently have little if any use and could play a key role in regenerating the local fabric and landscape. There are no abandoned military camps in the vicinity of the Inner Arch area.

The synthesis of the above description is the presented in the side page, while in the next page selected zooms and analysis for some of the areas mentioned is provided. This closer look will help understand the emerging mosaic of the area and the project opportunities that arise through the analysis. The Mobility Assessment will follow up in the following part.

26. The bus terminal was to be removed from the area, once the intervention in Eleftherias Square is completed.



- | | | | |
|---|---------------------|--|---|
|  | Local urban centers |  | Transportation related areas |
|  | Poles of Activity |  | Existing peri-urban & urban green areas |
|  | Emerging poles |  | Emerging green connectors |

Existing & Emerging Centralities & Connectors

Map indicating the city's commercial center and surrounding local centers in the vicinity of the western city walls. The map also demonstrates the existing poles that generate and attract flows and activity of various types (cultural, educational, recreational etc.) as well as emerging or latent poles that have emerged through the analysis. Similarly existing and emerging green areas are marked as well. Lastly transportation related areas, like the Central Train Station, or the cargo and Passenger Sea Port can be seen marked with grey colour. Observing the sum of these areas, one can see patterns that emerge. A more in-depth analysis and presentation of these opportunity areas (emerging green and urban centers) can aid in a more detailed understanding of the situation, the opportunities and possible strategies of intervention.



1. Dikastiria (Top Hané) Administrative / Green

The Area next to the Courthouse, also known as Top Hané from the name of the fort that used to reside here as a seafront fortification at the time, forms the lower part of the city fortification. The site creates the impression of an enclave due to the surrounding fortifications and the adjacent dense urbanization.

The current uses of the site include apart from the civil court on the west side, the Administrative court on the eastern limit, the building of the Social Security (IKA), the building of the Greek Telecommunication Organization (OTE), and designated parking spaces, inside and adjacent to the site, and a small sport area. The rest of the areas, that have not been occupied by buildings give place to green areas either along the fortifications or in isolated patches.

The site holds potential to convert to an important green and public space enclave, upgrading the overall image of the area and the centrality that it constitutes.

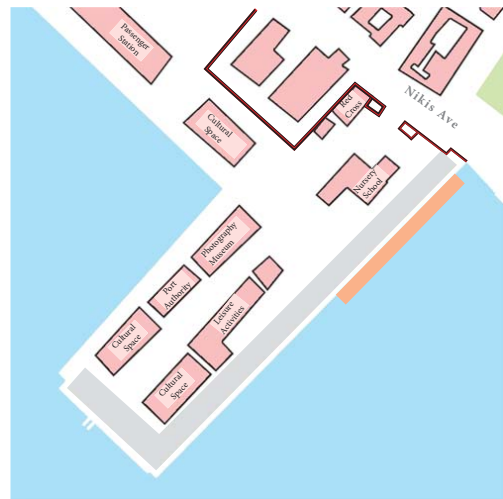
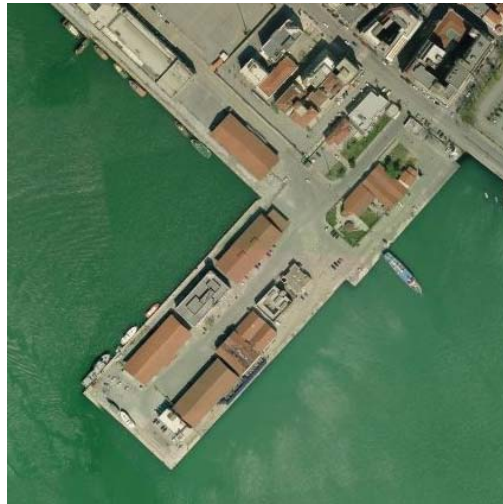


2. Ladadika Leisure / Offices

Ladadika has been the latest intend of an integral urban regeneration / intervention project.

The current uses include primarily leisure activities (bars / night clubs / restaurants) and some offices that reside in the more recent and taller edifications. All of the interior roads have been converted to pedestrians and given to use to the local business. Although the district of Ladadika traditionally held a direct connection with the port, due to its merchant nature, currently on its south border there is no connection or relationship established with the port. That is intensified by the presence of the port fences and the high traffic of Nikis Avenue.

The site holds a potential for regeneration by re-thinking its current functioning and introducing an increased diversity of uses and activities. Also its connection both with the adjacent, and emerging area of Fragkon, and the seaport need to be considered and re-examined.



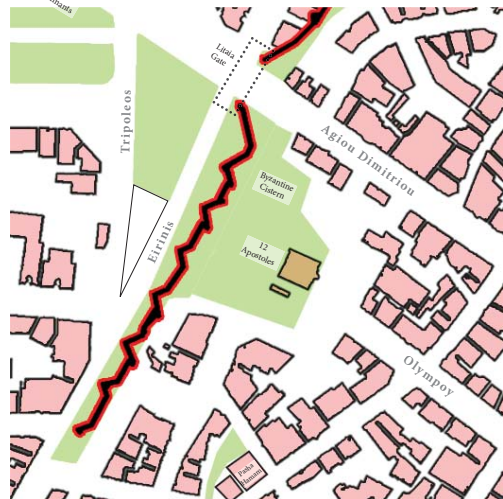
3. Port

Cultural / Leisure / Administrative

The Pier 1 of the port of Thessaloniki has since the 1997 Cultural Capital introduced civic and cultural uses apart from the traditional administrative and port related activities. The warehouses of the pier are annually used for the needs of the Thessaloniki Film Festival as well as other events and festivals that are realized in the city during the year.

The current uses include 3 warehouses that act as polyvalent spaces for exhibitions and different acts, the Photography museum, a couple of restaurants / bars, a nursery school and a building still occupied by the port authority. The site is fenced off on the north side by a fence that only allows limited access to city users. To the northeast it connects with the Passenger Terminal of the Port.

The site needs to introduce more civic use and transform to an open and accessible public space, facilitating access to the seafront and historic port buildings. Recent interventions have worked in that direction.



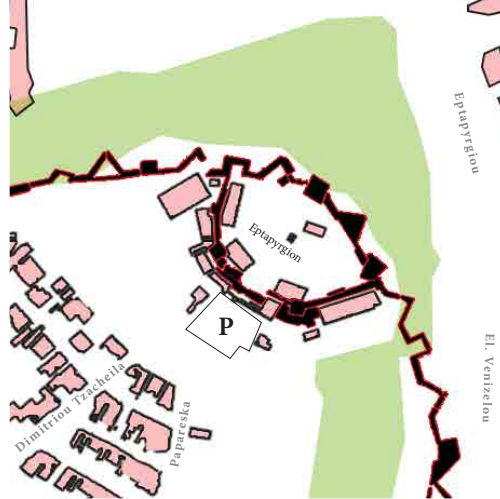
4. 12 Apostoles

Residential / Religious / Cultural / Green

The area of the church of the 12 Apostoles, bordering the anterior Lytaia Gate on the inside of the city walls, has traditionally been an area of worship since the Hellenistic times. This explains the numerous religious and archeological sites that are found up to this day scattered along the site.

The church of the 12 Apostoles or Saint Apostoles, is the principal element with open areas developing around it. Inside this area the archeological site of a Byzantine cistern can be also be found. A few passes to the south lies the Pasha or Bey Hamam now used for cultural events. On the outside of the walls, in the 12 Apostoles square, the remains of a paleochristian church can be found. The residential building have taken over a substantial part of the old site and have consumed the old buildings in the urban fabric.

Nevertheless the area possesses a great potential to produce a green enclave, connecting and organizing the sites interest in the area.



5. Eptapirgio (Yedi Kule)

Historical / Cultural / Green

The *Eptapyrgion* lies on the north-east corner of the Acropolis and has been constructed in phases, starting from the early Byzantine up to the more recent additions, when it was being used as a prison. It served as a prison until 1989 when it passed to the Ministry of Culture. In its current state, it consists of 10 square and triangular towers, the wall fortification and the prison buildings.

Since 1989, a major reconstruction, registration and research effort started in order to restore the monument and eventually return it to public use. In 1999 the Ephorate of Byzantine Antiquities of Thessaloniki was hosted in *Eptapyrgion* and organized and supervised, informational visits and maintenance of the monuments and the surrounding space. The space has also been used for various cultural events / festivals etc.

The reopening of the *Eptapyrgion* to the public and its use as a cultural space has already contributed to the upgrade of the area, and the 2012 competition will hopefully bring the desired upgrade to the area.



6. Old Vegetable Market

Residential / Public Space

The old vegetable market bears many years out of use, but for a long time served as a market for city residents. The site located close to the city walls, and through the opening in the walls connects with Sykies.

The current uses in the area are principally mixed residential, with a significant density. The Public Electrical Company also has offices and a sub-station along Agiou Dimitriou. The Mousxounti square, a small green patch, in reality serves as a traffic roundabout and parking islet. Green areas along the city walls are occupied to a great extend by cars, for parkings, while formulated parks exist only on the outside of the walls. The absence of available parking space constitutes a serious problem in this spot, with available public space being consumed to the formentioned deficit.

The old vegetable market provides a unique opportunity for regeneration of the area. Also the intra-extra walls question and relation can be contemplated accordingly.



7. Fragkon (Frankish Quarters)

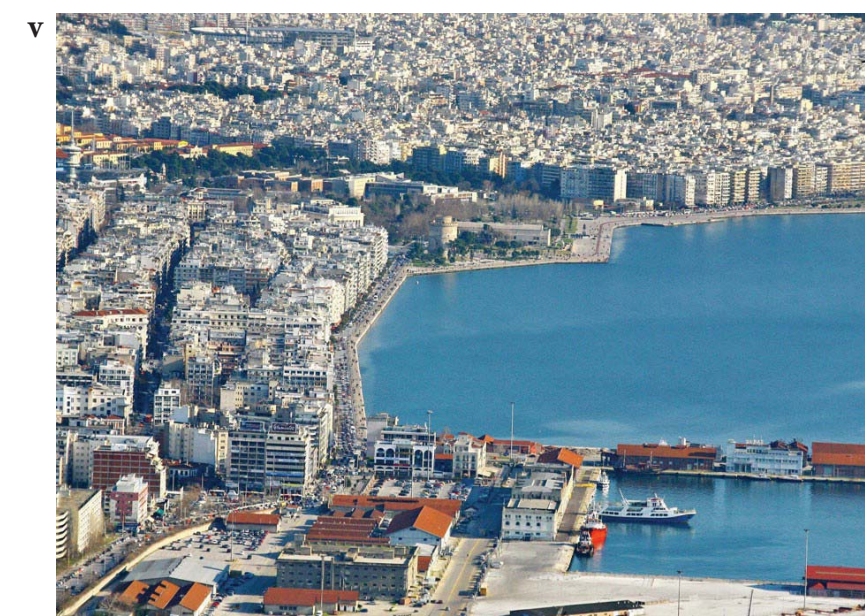
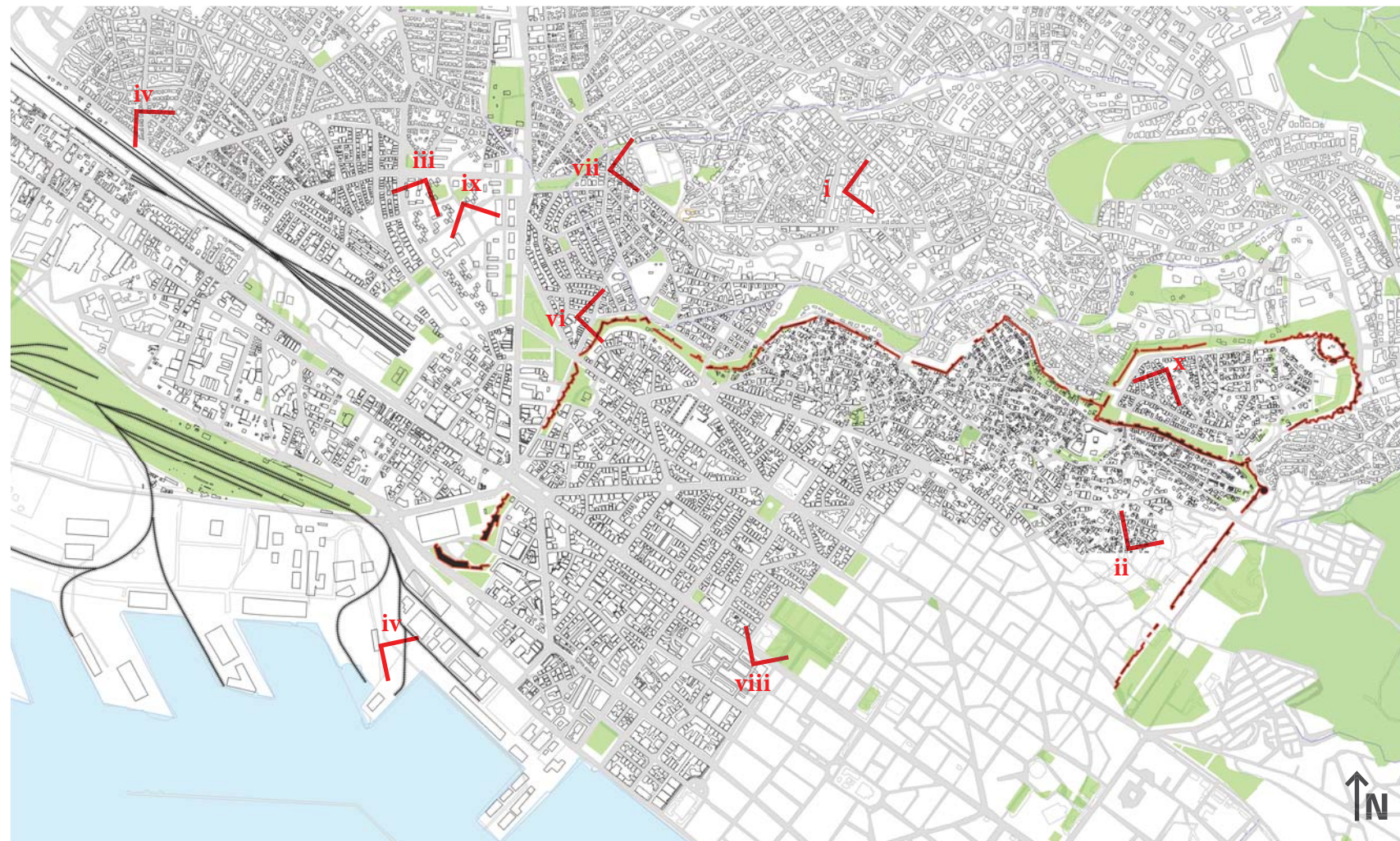
Manufacturing / Leisure / Offices

The urban block defined by Egnatia, Tsimiski (horizontal) and Ionos Dragoumi & Leontos Sofou (vertical) has been traditionally known as the Frankish Quarter and was one of the few areas of the city that was not touched by the Great 1917 Fire. For a long time it hosted various manufacturing and trade activities until recently that new, principally leisure, activities were introduced, propagating from the adjacent area of Ladadika.

Current uses include a mix of newly introduced leisure activities in a great density, and the remaining businesses that still reside in the area. Contrary to Ladadika there has been no coherent plan developed for the area and thus it lacks similar characteristics (the pedestrian character and availability of public space).

A municipal plan developed for the area, with a careful consideration of current and new uses, could aid significantly the attempt initiated by private initiative and coordinate it to successfully transform and upgrade the area.

The Western Walls - *Aerial perspectives*



images sources: **i-x** : airphotos.gr
iii : greekscapes.gr

vi



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x

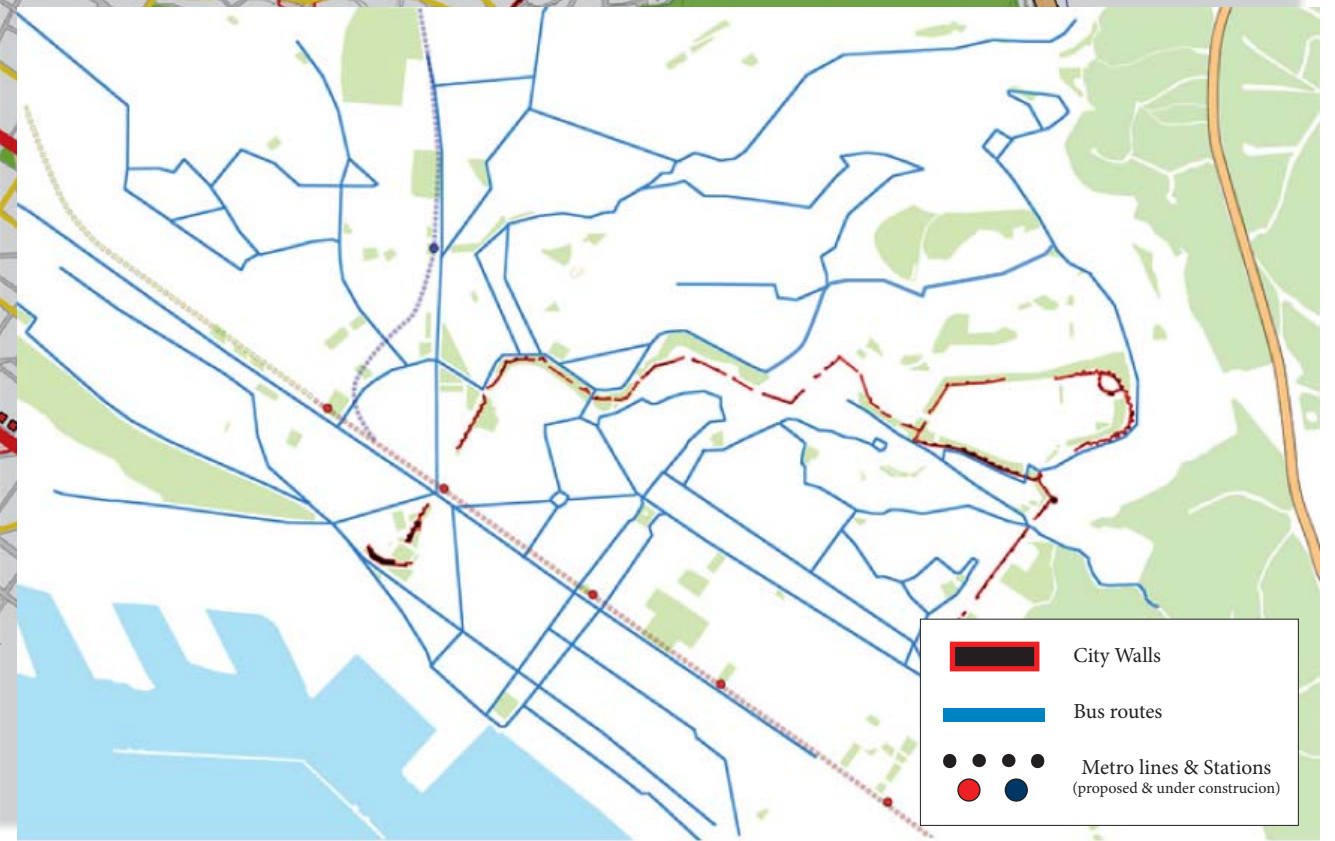
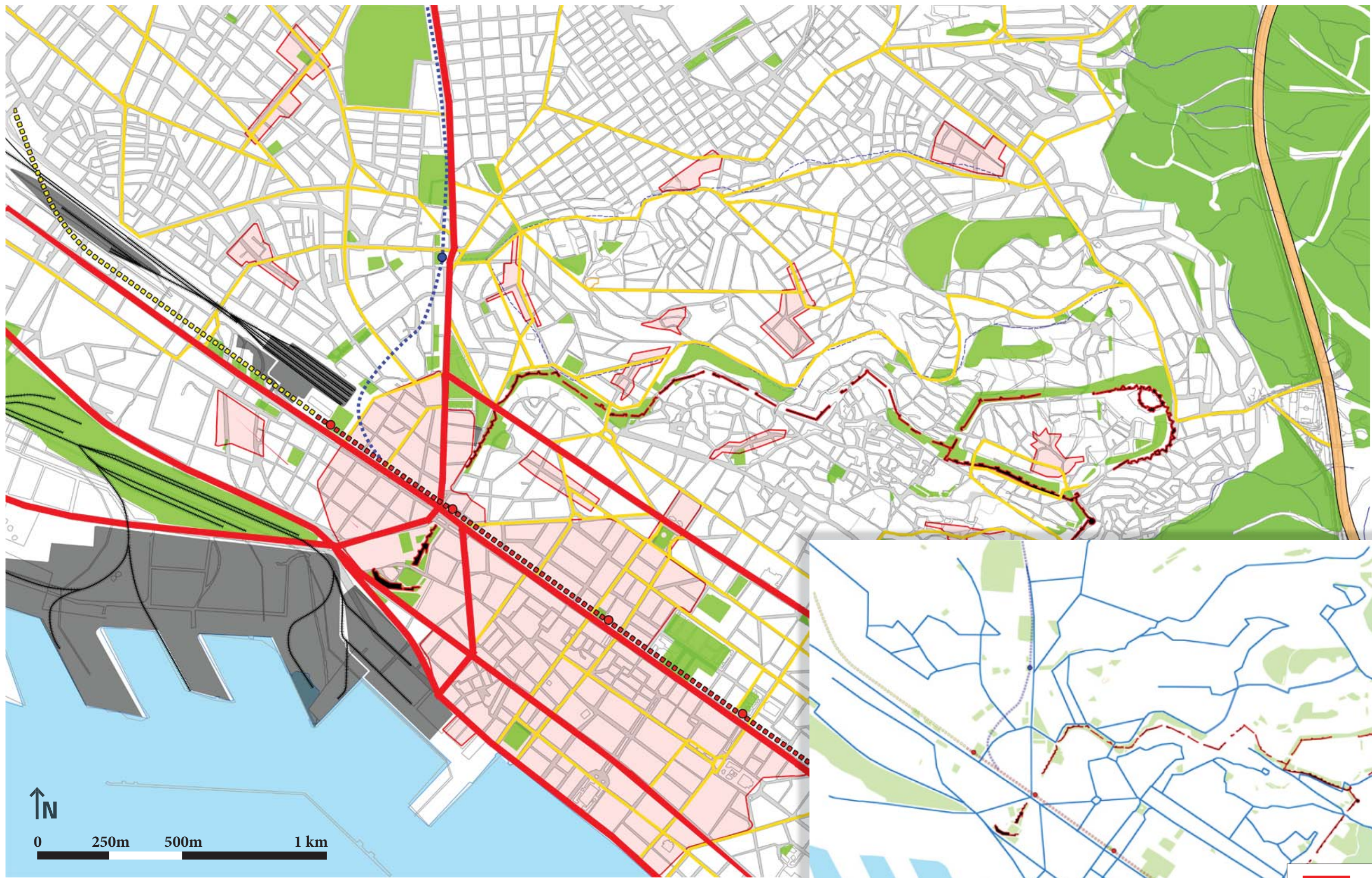


vii



viii





Mobility Assesment

- Inner Ring Road
- Major Roads
- Major Arteries
- Roads
- Local urban centers
- Existing peri-urban & urban green areas
- Transportation related areas

- City Walls
- Bus routes
- Metro lines & Stations
(proposed & under construction)

v. Mobility Assessment

Flows and Nodes

A respective analysis of the flows that are present in the area of the Western Walls will aid in understanding the mobility factor and investigate problems and prospects that could possibly arise under a future restructuring. As mentioned earlier the historic urban ecotone marked by the City walls has traditionally controlled incoming/outgoing flows and for a long time served as the limit for the city. The map in the next page shows the various flows that are present in the area as well as the various physical barriers that obstruct mobility and increase fragmentation of the urban fabric. Analysing the various flows in more detail we see:

- **A. Vehicular traffic :** The western expansions of the city of Thessaloniki, similar to the eastern expansions, were consolidated under a car-dominated scheme and even more an unregulated one that gradually neglected public infrastructures and public spaces while respectively influencing the urban growth forms. The Inner Ring-Road on the west side of the area serves as an important urban limit between the city and the Forest. The urban road grid is presented in a tight arrangement, sometimes in an orthogonal and sometime in more organic patterns, but nevertheless occupying a significant portion of surface area for car flow and parking needs. As a consequence public and green spaces have been sacrificed in this process with a subsequent degrading of urban quality. Again as it happens with other parts of the city, this tight grid combined with the high densities and mixed uses, with commerce activity on the ground floors, gives the street level an increased dynamic and capacity to carry public activity and act as vibrant public space.

As far as the local road network hierarchy is concerned: The Ring-road on the west of the area serves as a macro-structure element in the road network. There is no major artery connecting with the Ring Road, although there is a nod/exit (K7) Sykies - Eptapyrgion providing access for local users. The major urban arteries are found closer to the sea with Ag. Dimitirou, Egnatia, Tsimiski and Leoforos Nikis running parallel through the historic centre and continuing to the west or north-west. The Vardaris Square is an important node given that a series of important arteries converge here, which explains the serious traffic congestion problems that appear at peak hours. The Lagkada Avenue that also ends in Vardaris Square is an artery of urban / regional importance being a key urban axis for urban growth and development for many decades if not centuries, as seen in continuation. Next in the hierarchy, the major roads run through the diverse municipalities and their respective districts, many times structuring urban centralities along their path and crossings. The smaller roads then cover the rest of the fabric, providing access and parking space for urban residents and users.

- **B. Public & light traffic :** The public system for this part of the city is restricted to the public bus system that has served the area traditionally. The service runs along the major arteries of the city and covers if not in its entirety a considerable area of the urban fabric while the denser or less accessible parts of the city (eg. Ano Poli) are served by mini-buses. The metro transport system has not yet been completed in the area but provisions two lines for this part of the city: The main line and the two Western extensions that are planned to run all the way to Eykarpia on one end and Evosmos on the other. There are a series of metro stations planned for the area that could potentially increase activity and accessibility. The Vardaris station (*Dimokratias Station*) is destined to be a key station, given its location and the fact that the two lines meet here. Other stations are expected to have a similar generator effect for their adjacent areas, and their planning should be thought out accordingly to maximize accessibility, and related activities. Apart from the Metro, 2 train stations are found in the vicinity of the area: **a)** the Old railway station, that is out of use with partial use of the rail network **b)** the Central Rail station that provides International, National and regional connection.

Currently there are no bike lanes at this part of the city, apart from a short circuit in the historic centre. Thus the greatest part of current bike circulation is undertaken by the road network under variable conditions.

- **C. Pedestrian traffic :** Similar to other areas in the city, the pedestrian traffic in this part is not favoured given that very few pedestrian streets and areas exist and most pedestrian traffic has to be served by the sidewalks along the roads. Nevertheless the mixed use with commercial activity on the ground floor of the majority of the buildings creates an increased groundlevel circulation and activity and places the street as the principal stage for public and urban activity. Along the city walls there is a green area following the walls for a great part, along which a pedestrian path appears when not interrupted by housing and other constructions obstacles. This route along the walls can be seen starting almost all the way down to the port at Top Hané and following the walls heading all the way up to the Eptapyrgion area. This pedestrian axis that figures as the most important one in the local fabric, both for historic and structural reasons, will serve as the backbone for restructuring local mobility and accessibility along the Inner Arch based on connecting public spaces, green areas and other attractors.

There is a shortage of public spaces and most existing spaces are found scattered and unconnected and thus do not generate sufficient activity and flows. Similarly with green areas, there are numerous small parks scattered around, then some bigger green masses like the Sykies municipal Park or the Eirinis Park, while surpassing in scale the Seich-Su the forest on the Eastern end. As mentioned earlier a great number of green areas are found along the city walls, forming a type of green corridor. Also the area of the Akropolis and the surrounding areas present important green areas. The district of Ano Poli accommodates only light and slow vehicle flows, and pedestrian flows in often paved and pedestrian friendly or pedestrian-strictly streets. On the side of Sykies the situation is comparable although of different quality and appeal. The conditions and opportunities for pedestrian activity along the city walls will be investigated in detail in a later part of this chapter.

The Western City Wall corridor and the surrounding areas when reconsidered under the contemporary spectre, can aid in discerning emerging and latent solutions in the search for creating new significant spaces and connecting existing ones in a coherent network. With the area of the seaport as the starting point and the Eptapyrgion as the end, various possible ways of continuity and re-connection emerge along the path that can aid in configuring a pedestrian structure, connecting local key public space elements and establishing a sea-mountain connection.

- **D) Barriers :** When one considers the physical and mental barriers present in the area, the first most notable one are the city-walls that have served this function for centuries. Nevertheless today they serve the double function of barrier/corridor, that at the same time functions as an urban interface / ecotone. The city walls today have various openings that facilitate through-access either in **i)** pre-existing gates, **ii)** later added gates, or **iii)** through destroyed parts of the wall.

Apart from the city walls other major barriers are found around the seaport area, both the cargo and the passenger sections. Especially the latter which is located on the western front in contact with the historic centre, it is fenced, blocking free access and activity in the premises. Although various civic uses have been introduced especially in Pier 1, the process of integration and reconnection with the rest of the urban fabric has not been completed yet. As far as other barriers goes, one could consider some major arteries, like the Lagkada Avenue, or other infrastructural elements, eg. railways, that separate and eventually fragment urban fabric at different points.

A Walkthrough along the Western Walls

Conditions & Situations

A field visit and study of the western city walls is imperative to better understand the complex dynamics that have evolved over the time and at the same time verify the claims and results of the cartographic analysis. This next part will then investigate the potential role of the western fortifications to act as a contemporary interface located along an urban ecotone that can help restructure and reprogramme the fragmented urban fabric. This will include 3 parts , first the infield analysis, then the aerial analysis and finally the functional analysis. The pedestrian path along the Western city walls can be divided in 4 distinct zones:

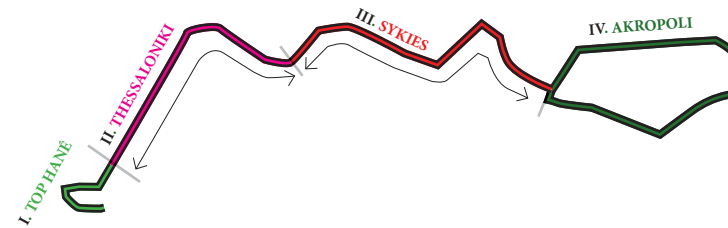
- a. from Top Hané to Egnatia avenue
- b. from Egnatia to approximately the height of Ag. Dimitriou
- c. the Sykies part and
- d. the Akropolis & Eptapyrgion section.

The first two belong exclusively to the municipality of Thessaloniki while the third and the fourth are along municipal limits (for the Akropolis on its north side) with the Sykies municipality.

The first area is marked by the old fort walls but evenmore by the triangled shape area marked by Dodekanisou, 26th of October and Polytechniou avenues. The area is dotted with green areas that give create an enclave impression. Nevertheless the presence of cars and the area consumed for parking purposes invade and degrade the quality of public space. The second part above Egnatia has been destroyed on the lower part, as well as the Golden Gate (Χρυσή Πύλη) that used to be one of the principal gates to the west. Access along the wall is possible along the green areas

Once one enters the third zone, the situation changes and that can one can notice the difference. Constructions appear directly on the walls, appropriating parts of the fortification and blocking view and access to the wall. The access is still possible through side routes. Interventions on certain parts by the municipality of Sykies have tried to clear the city wall off illegal constructions and to create new public and civic spaces in a overall attempt to upgrade the walls landscape.

The fourth zone around and through the Akropolis district presents green areas surrounding the walls and the whole district, and provides ample space for pedestrian and public space activity although available spaces are not of noteworthy quality.



Above: Diagram showing the distinct parts of the western city walls, based on their respective characteristics.

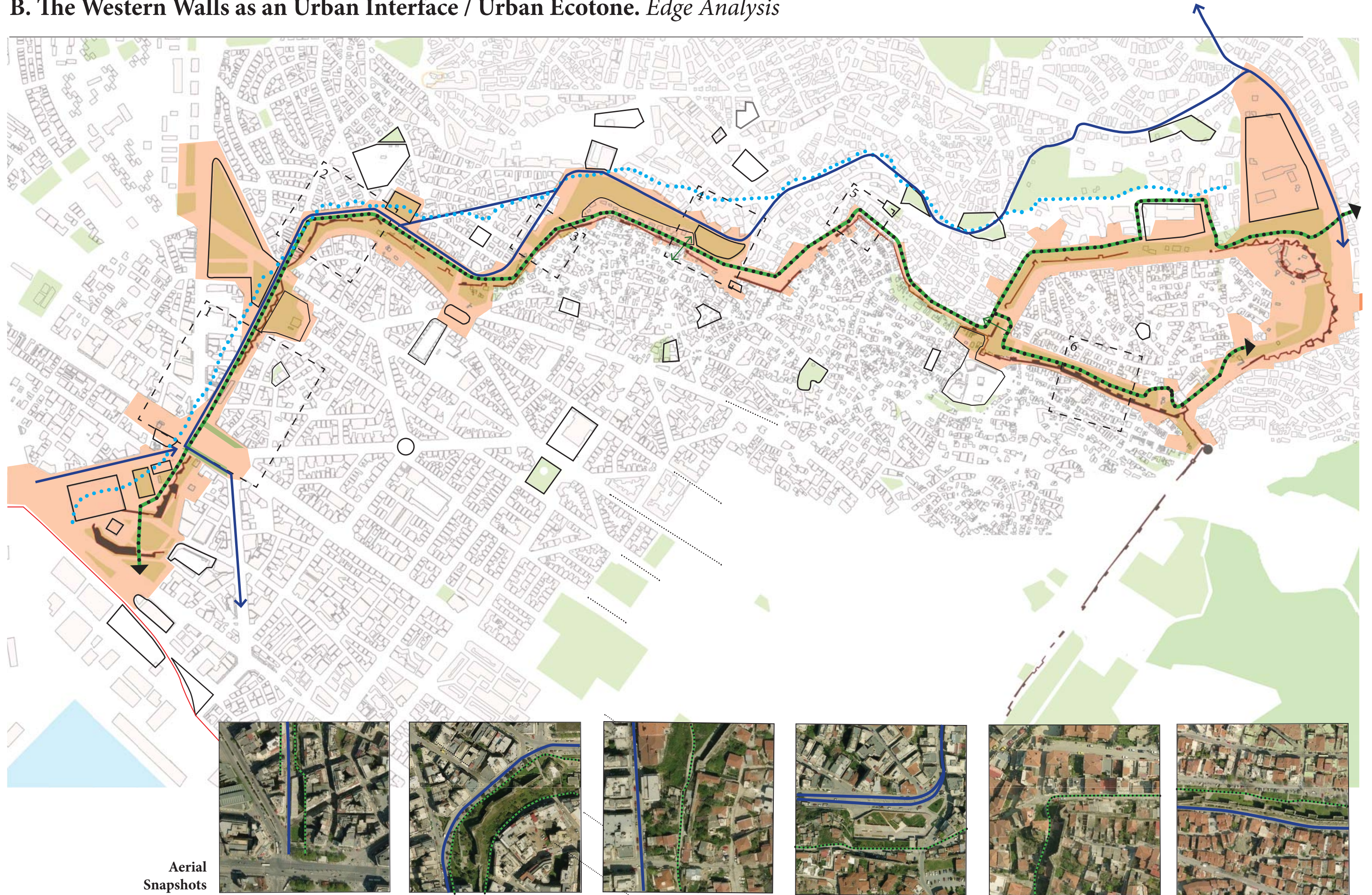


source: Thessaloniki360.com

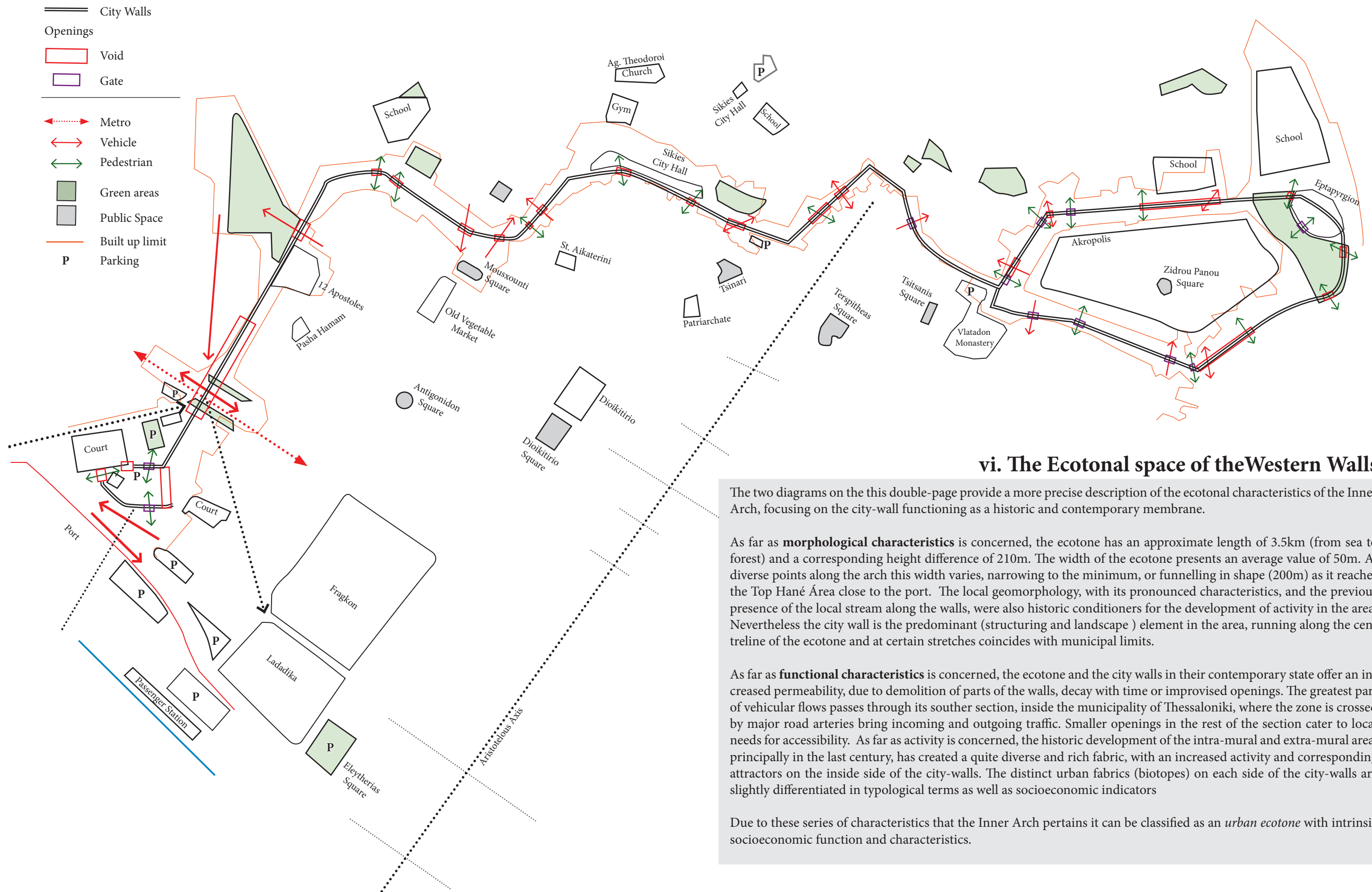




B. The Western Walls as an Urban Interface / Urban Ecotone. *Edge Analysis*



C. The Western Walls as an Urban Interface / Urban Ecotone. *Functional Analysis*



vi. The Ecotonal space of the Western Walls

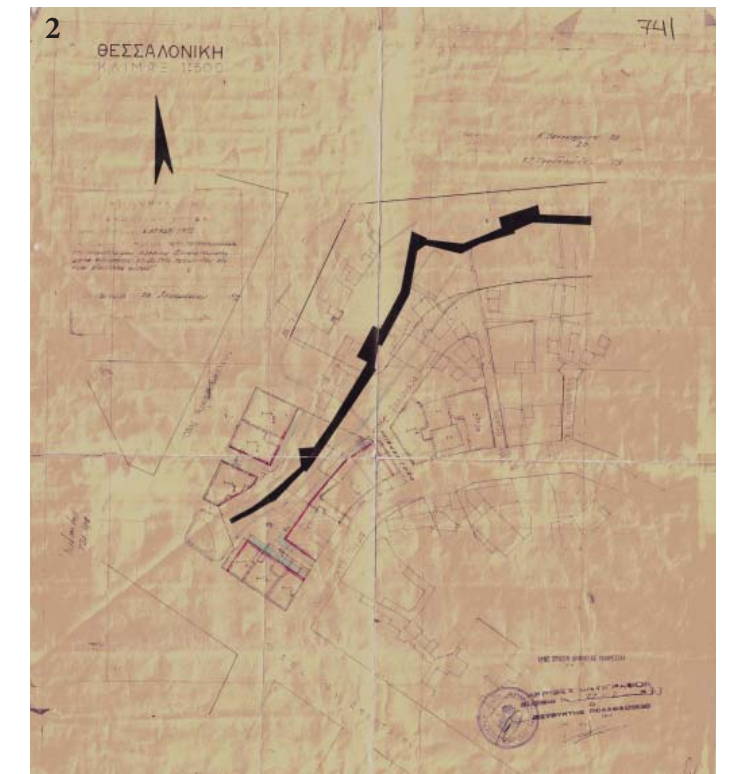
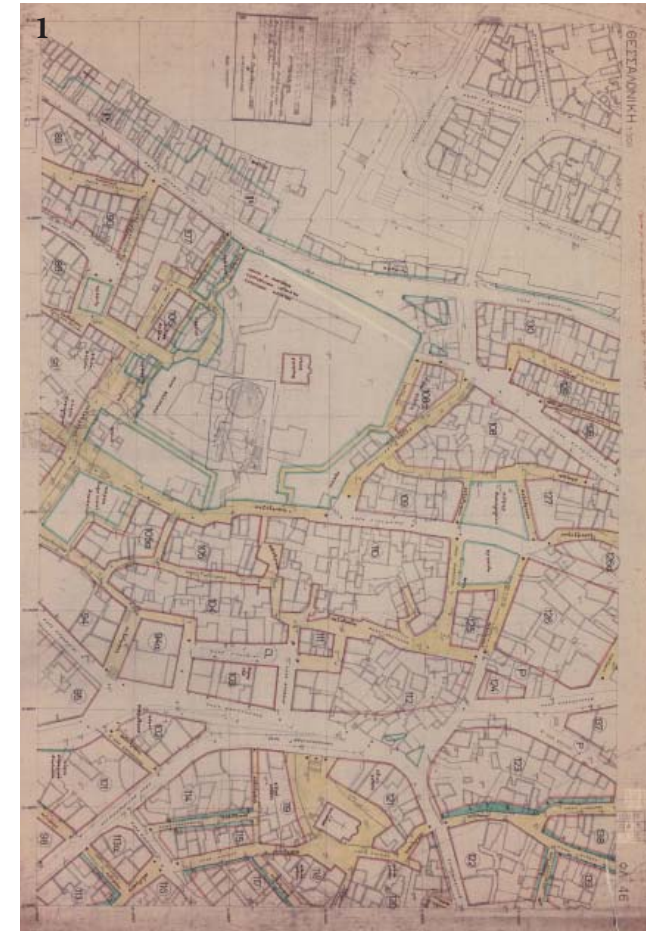
The two diagrams on this double-page provide a more precise description of the ecotonal characteristics of the Inner Arch, focusing on the city-wall functioning as a historic and contemporary membrane.

As far as **morphological characteristics** is concerned, the ecotone has an approximate length of 3.5km (from sea to forest) and a corresponding height difference of 210m. The width of the ecotone presents an average value of 50m. At diverse points along the arch this width varies, narrowing to the minimum, or funnelling in shape (200m) as it reaches the Top Hané Área close to the port. The local geomorphology, with its pronounced characteristics, and the previous presence of the local stream along the walls, were also historic conditioners for the development of activity in the area. Nevertheless the city wall is the predominant (structuring and landscape) element in the area, running along the centreline of the ecotone and at certain stretches coincides with municipal limits.

As far as **functional characteristics** is concerned, the ecotone and the city walls in their contemporary state offer an increased permeability, due to demolition of parts of the walls, decay with time or improvised openings. The greatest part of vehicular flows passes through its southern section, inside the municipality of Thessaloniki, where the zone is crossed by major road arteries bringing incoming and outgoing traffic. Smaller openings in the rest of the section cater to local needs for accessibility. As far as activity is concerned, the historic development of the intra-mural and extra-mural area, principally in the last century, has created a quite diverse and rich fabric, with an increased activity and corresponding attractors on the inside side of the city-walls. The distinct urban fabrics (biotopes) on each side of the city-walls are slightly differentiated in typological terms as well as socioeconomic indicators.

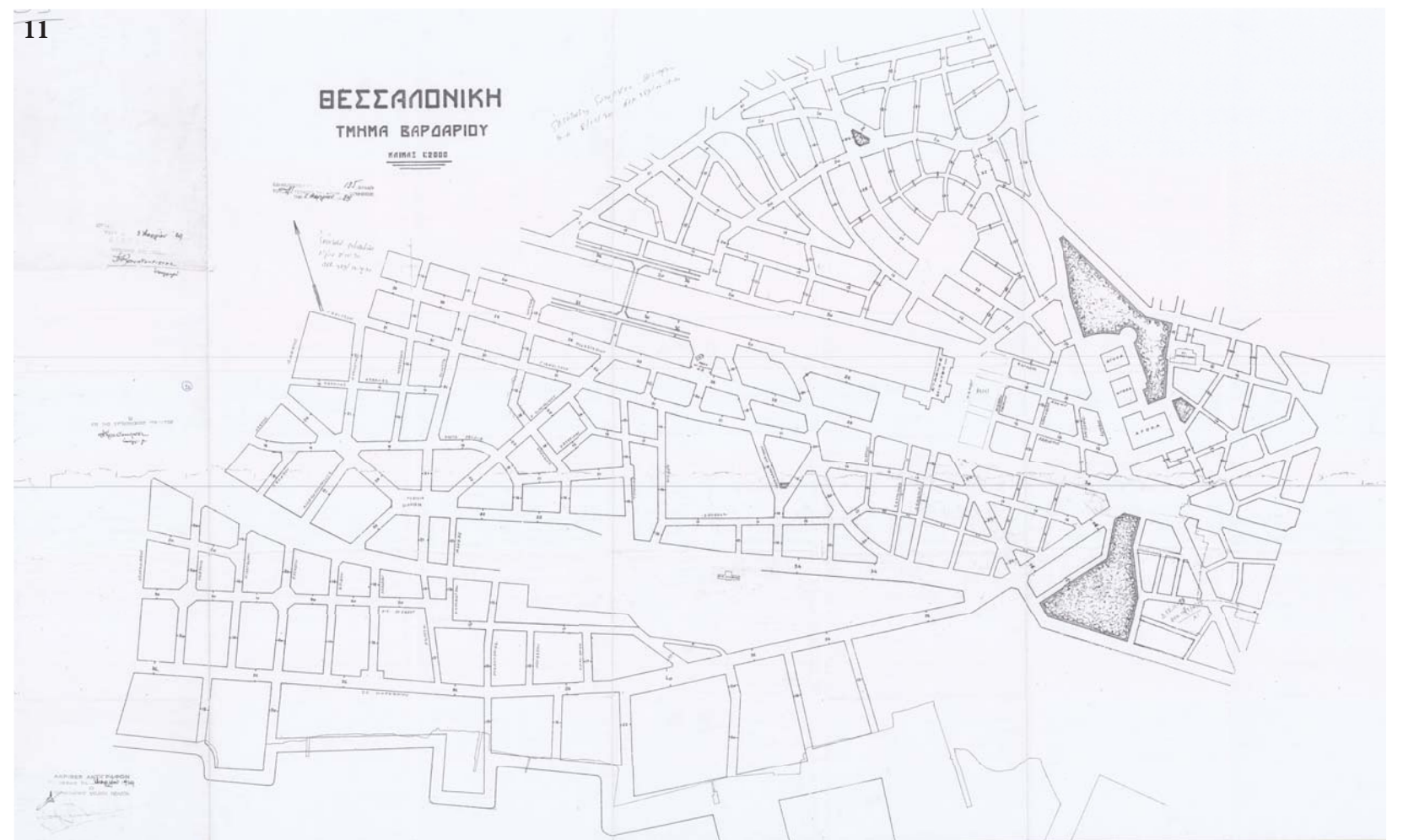
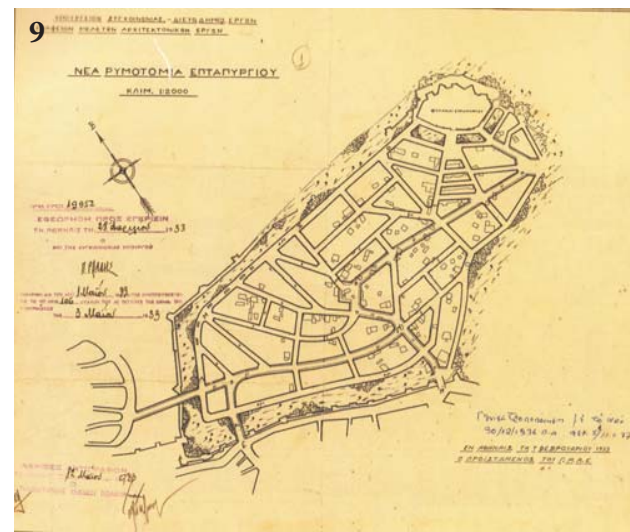
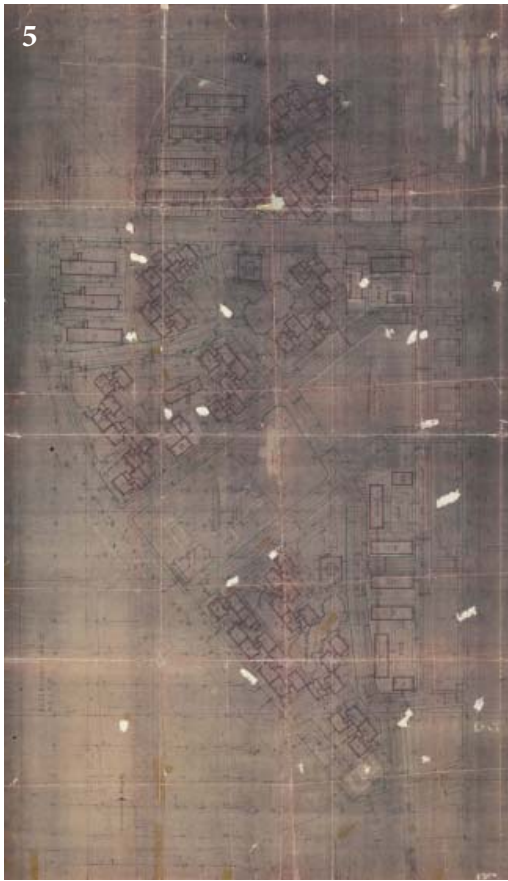
Due to these series of characteristics that the Inner Arch pertains it can be classified as an *urban ecotone* with intrinsic socioeconomic function and characteristics.

vii. The Western Walls - *The planned dimension* The formation through city plans

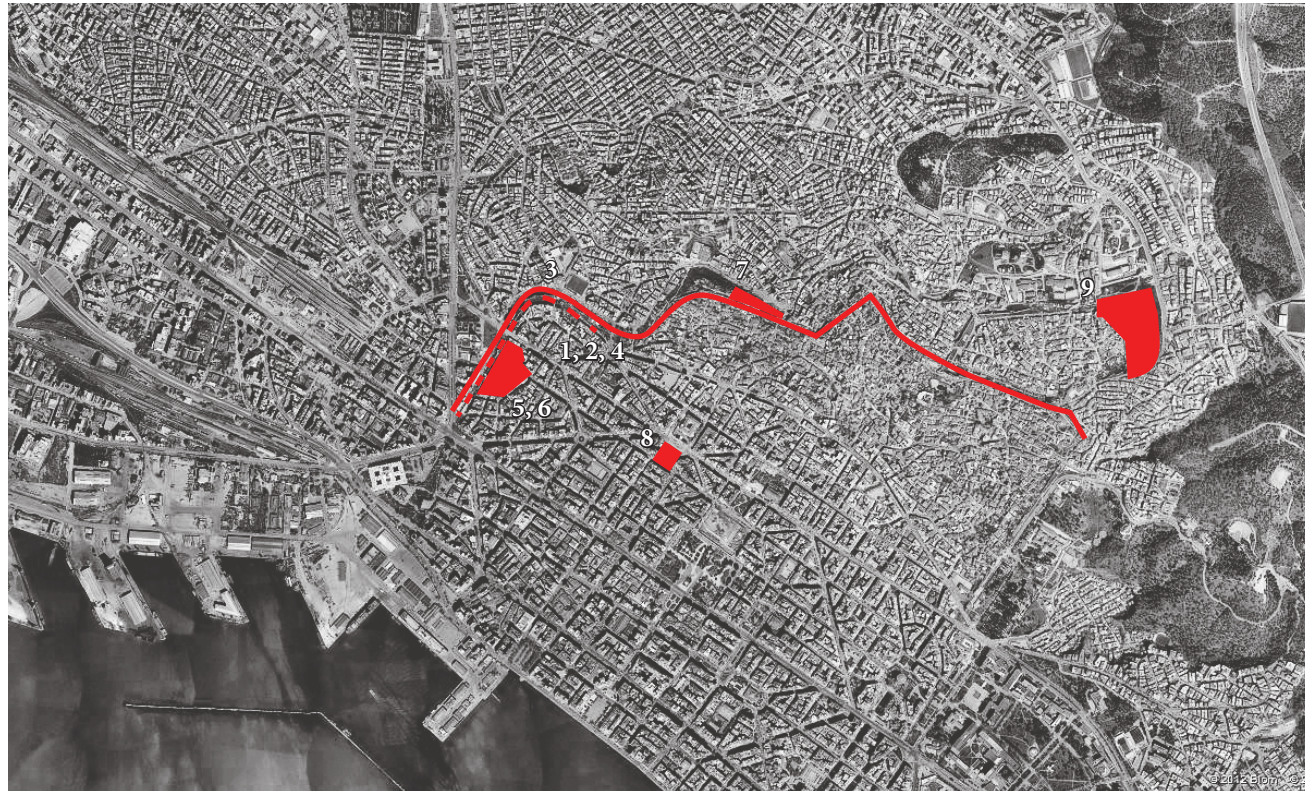


1. Revision of the city plan for the Ano Poli in the area of the Vlatadon Monastery (Gov. Decree 27/τ.α./13-02-86) 2. Modification of 1972 for the creation of a modern (σύγχρονου) green area along the wall at the height of Agiou Dimitriou Avenue (Gov. Decree 20/τ.α./27-01-73) 3. Detail from the city Plan of Thessaloniki for the area of Ladadika, imposing a special protection regime, of restrictions and uses. (Gov. Decree 112/τ.Δ./08-06-27) 4. Plan for the area of Vardaris at the former area of the Turkish Cemeteries (Gov. Decree 329/τ.α./04-09-279) 5. Modification of 1971 in the area of the residential settlement of Axios. The plan separated uses (education, health, commerce, and residence), locating the non-residence uses along a central strip perpendicular to the axis of Lagkadas. (Gov. Decree 173/τ.Δ./23-07-71) 6. Plan of 1939 for the square of the church of the Twelve Apostles 7. Plan of 1925, for Mevlehané, district of Kalithea. The plan dictates the new road grid with the proposed residential parcels and the parcels destined to be planted with trees (Gov. Decree 340/τ.α/ 4-11-25) 8. Plan of 1929 for the upper section of Ag. Dimitriou showing the new city plan for the Ano Poli district of Thessaloniki. The principal monuments of the area are displayed along the new road grid and the respective green areas. 9. New Plan for Eptapyrgion of 1933, demonstrating the streets of the new plan with their widths, superimposed on the existing edification. A peripheral green zone is designated along the walls on the inside The Eptapyrgion on the north-east corner is seen designated as a prison. (Gov. Decree 106/τ.α/ 3-5-33) 10. Modification of 1976 for the area of Top-Hané with updated uses for the area (Gov. Decree 364/τ.α/ 03-11-76) 11. Plan of 1929 for the district of Vardaris. The new city grid is drawn clearly indicating the widths of the new streets. The plan locates the train passenger station and a pedestrian bridge that connects Xerokrini with Lachanokipoi. The plan also displays a market, at the end of Lagkadas avenue next to city walls and adjacent to the Vardaris square that was never materialized (Gov. Decree 135/τ.α/ 5-4-29)

(source: Municipality of Thessaloniki)



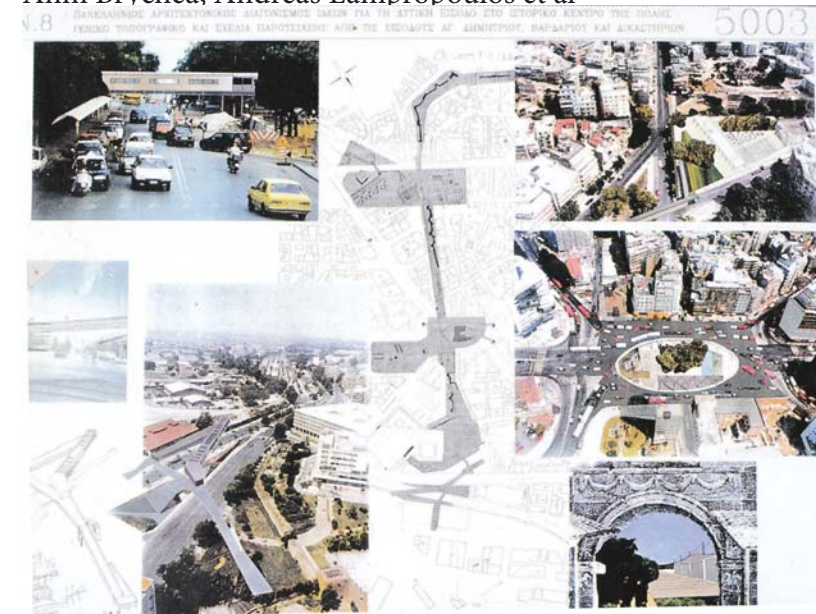
viii. National & International Competitions / studies



1. Study for the redesign of the West Archeological Route
(source: Ministry of Environment and Public Works, 1998)

2nd prize

Anni Brychea, Andreas Lampropoulos et al



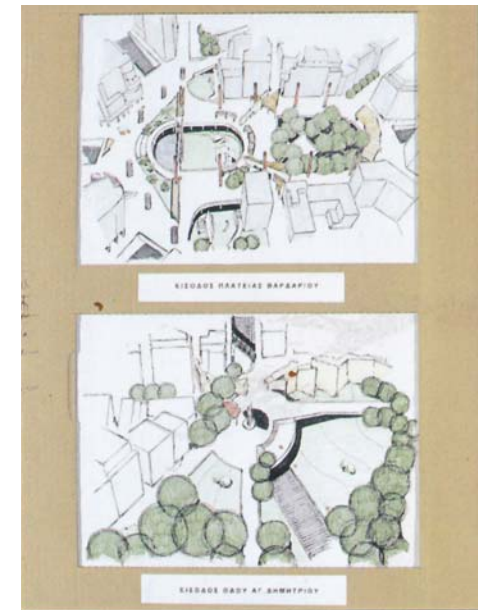
(top) *National Architectural Competition, 1998*

2. Redesign of the Incontinuity: Redesign of the building facades along the West Walls of Thessaloniki (source: Ministry of Environment and Public Works)

(bottom)

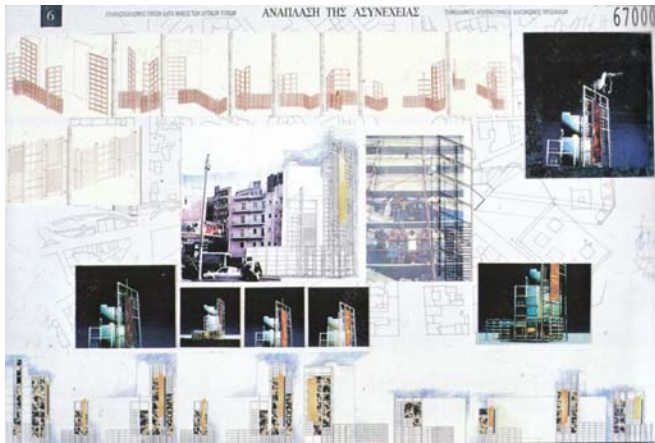
3. Study for the redevelopment of the green areas along the Byzantine Walls, 2008 (source: Centre of Architecture of Thessaloniki)

Mention



2nd prize

Anni Brychea, Andreas Lampropoulos et al



3rd prize

N. Gazepis, D. Kraniwtis et al



1 st prize

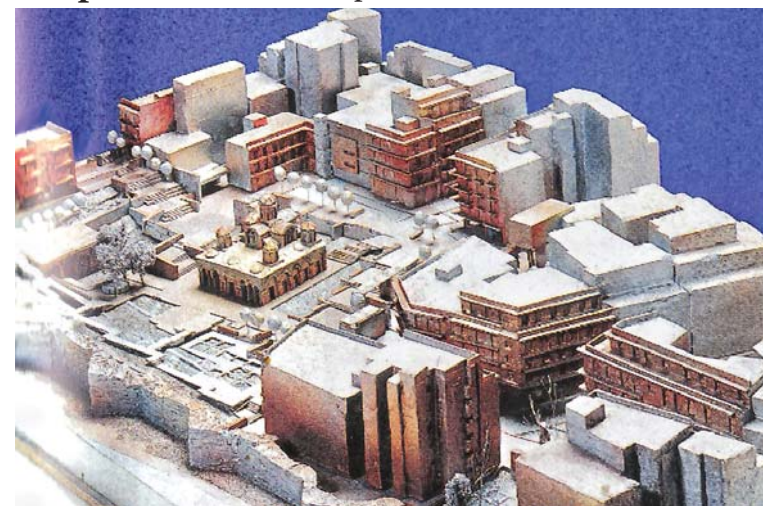
Tropalis & A. Tseranidis



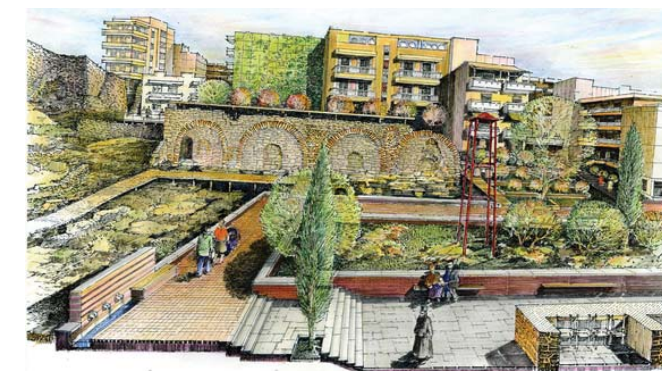
2nd prize - K. Giannopoulos, B. Kritikos



3rd prize - P. Grammatopoulos et al



Mentions



2nd prize - Metropolis Architecture



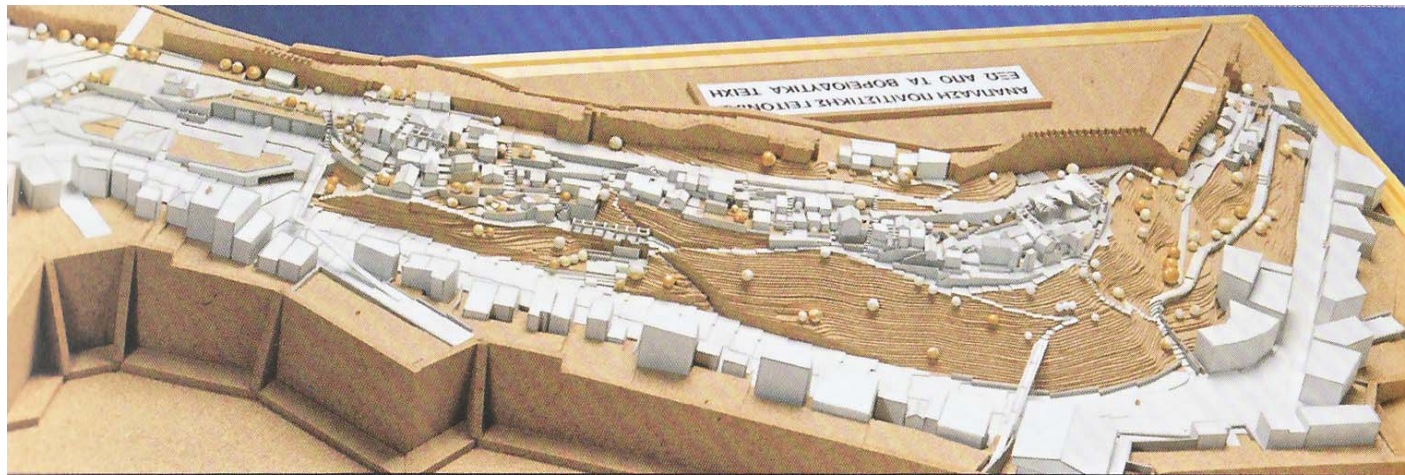
3rd prize - M. Kantidakis



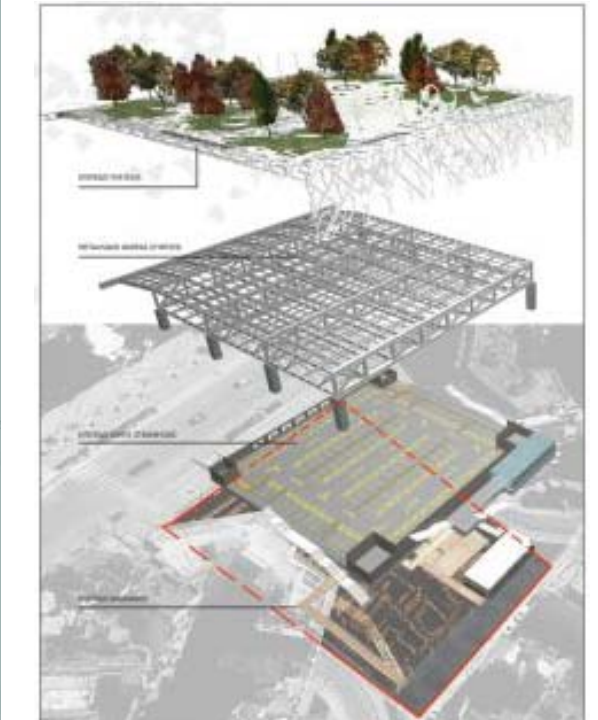
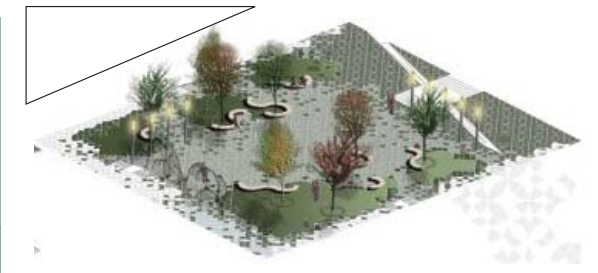
(top) *National Architectural Competition, 1998*
4. West gate for the Historic Centre of the City
(source: Ministry of Environment and Public Works)

(bottom) *National Architectural Competition, 1997*
5. Regeneration of the area surrounding the monumental complex of the Twelve Apostles of Thessaloniki
(source: Ministry of Environment and Public Works)

International Open Architectural Competition, 2008
6. Regeneration of the area surrounding the monumental complex of the Twelve Apostles of Thessaloniki
(source: Centre of Architecture of Thessaloniki)



Giannis & Stavros Anyfantis, Nikos Theotokis et al
1st prize



Eudoksia Georgiadou & Magdalini Segkouni
2nd prize

Schema 4 & I. Vlachos
1st Prize

National Architectural Competition, 1998
7. Reformation of the cultural neighborhood outside the northwest walls in the Municipality of Sykies
 (source: Ministry of Environment and Public Works)

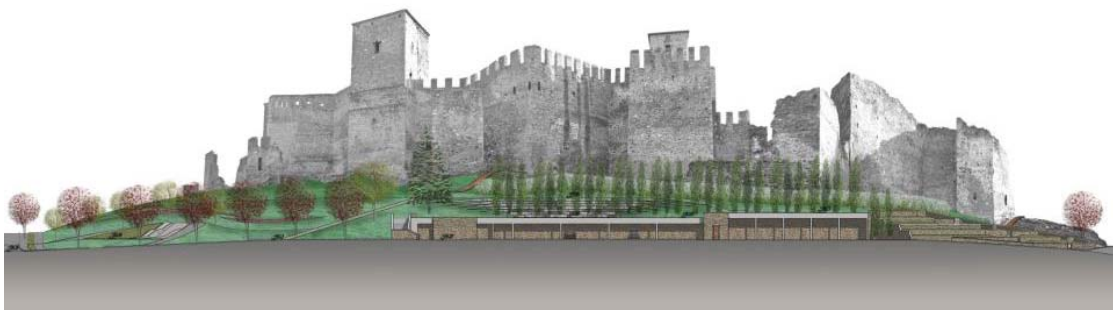
International Open Architectural Competition, 2008
8. Reformation of the Dioikitiriou Square
 (source: Centre of Architecture of Thessaloniki)



Chorodymaniki
2nd Prize



N. Soulakis & Tropalis ETE
3rd Prize

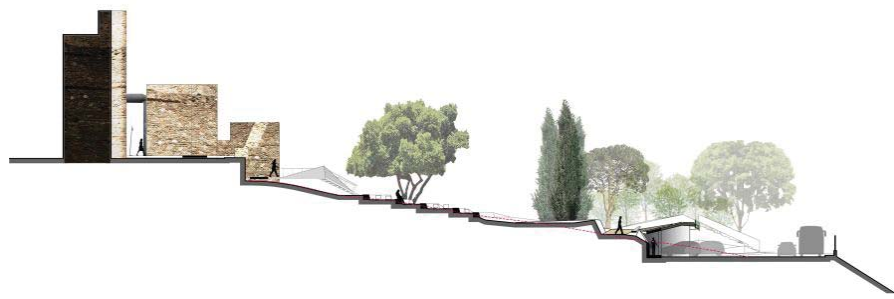


Simonis & Eftaxa Architects
1st Prize

International Open Architectural Competition, 2012

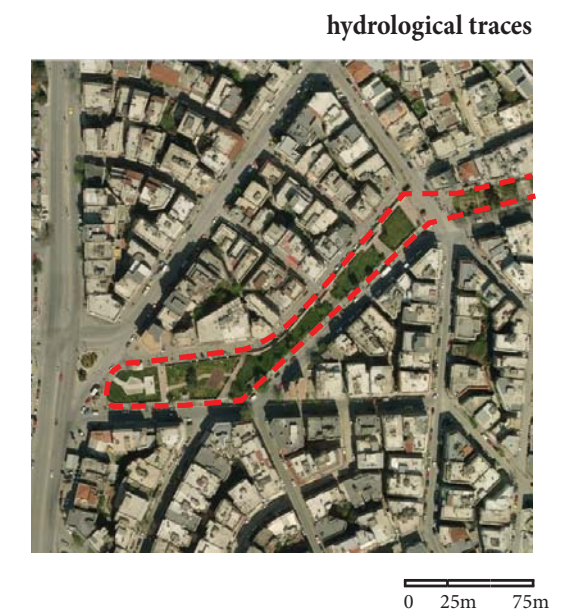
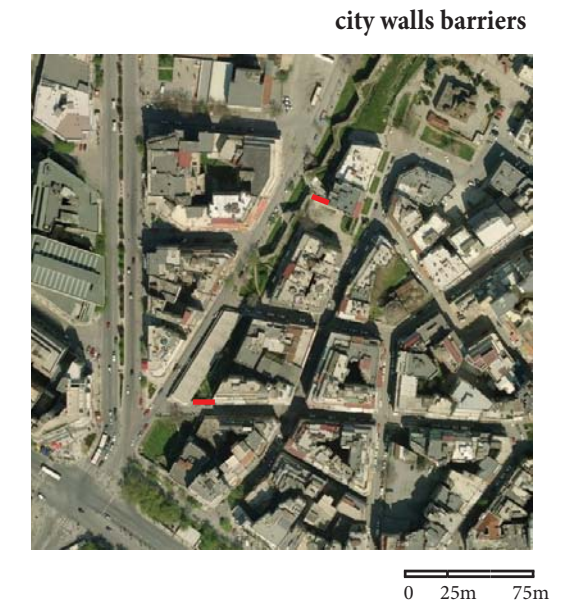
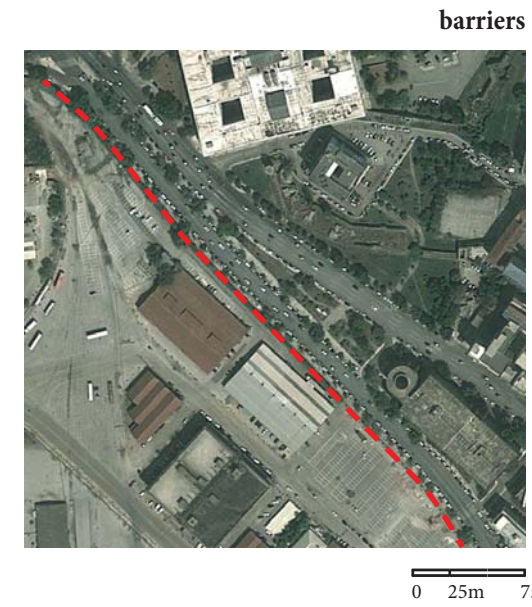
9. Competition for Landscaping of the monumental complex of Eptapyrgion in the municipality of Thessaloniki and Neapoli - Sykies

(source: Centre of Architecture of Thessaloniki)



Schema 4
2nd Prize

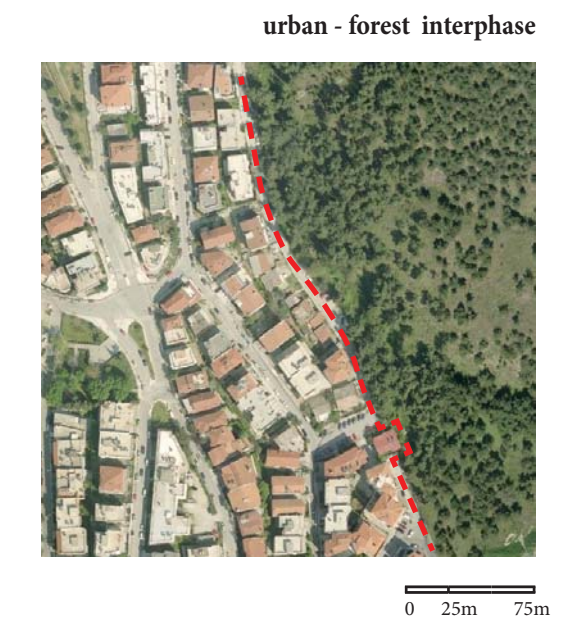
S. Axiotakis & V. Gialia
3rd Prize



Situations Detected *Risks and Opportunities*

legend

- ar: archaeological traces
- in: industrial remnants
- hy: hydrological traces
- la: latent spaces
- re: recycled sites
- ri: risk sites
- ba: barriers
- wb: city wall barriers
- fl: flow generator / attractor
- ce: regional centrality/pole
- lg: latent green spaces
- fi: fabric discontinuities
- p: poles of activity
- uf: urban-forest limit



ix. Situations Detected - Risks and Opportunities

Having analysed the western area in its different aspects and scales, this following section will make an indicative listing of the different kinds of situations detected, serving as a phenomenology of conditions and dynamics present in the contemporary mosaic. For each type of situation the risks detected as well as the possible opportunities that arise are listed:

archeological / cultural traces

Risk: The NW walls area holds significant sites of archeological and cultural interest that have survived in different forms up to this day, evidence of the rich historical activity along the walls. Most of them are found under different degrees of pressure from urban development.

Opportunity: These elements could serve a key role in restructuring the imaginary / cultural landscape of the area, highlighting historic activity while introducing dynamic new uses, creating local cultural poles, structured and connected by the walls as the unifying element..

barriers

Risk: The NW historic walls themselves serve as the default historic barrier in the area. The different openings, official and unofficial, create permeabilities along its length. Another important barrier present in the area, is the fencing on the north side of the port that cuts access of the Inner Arch to the sea. Similarly the rail infrastructure fenced off and in many parts obsolete creates further fragmentations in the area.

Opportunity: The reconsideration of the barrier effect in its different manifestations is a key process for establishing continuity and connectivity along the Inner Arch. Selective penetrations along the formentioned barriers could improve significantly mobility and accessibility in the area.

city walls barriers

Risk: Buildings in close proximity to the city walls, often create additional barriers that cut off access to the adjacent green areas, disrupting continuity along the Inner Arch

Opportunity: Liberating the path from these obstacles would significantly enhance the continuity effect of the Inner Arch as a corridor.

hydrological traces

Risk: The traces of the local streams are still visible to some extends in the local fabric while their continuity is lost at various points along their path. The unoccupied spaces along the paths are found under continuous pressure from adjacent urbanization, private and official.

Opportunity: Despite the grave deterioration of the original ecosystems, these lineal spaces constitute prime opportunities for ecological restoration of the western urban fabric. The proper management and design could establish key green corridors for the wider ecological structure.

fabric remnants

Risk: The few areas, remnants of the original fabric and having survived the Great Fire, are found today in a constant state of pressure from surrounding fabrics. The Ano Poli primarily with the heavy modifications that has undergone recently, or smaller patches like Ladadika that are found in a constant state of re-identification within the contemporary fabric.

Opportunity: Protect and highlight these area as samples of the typological diversity of the contemporary urban fabric.

interstices

Risk: The uncontrolled development of infrastructures has created interstice areas, fragmented pieces of the local fabric trapped between lineal infrastructures, found in an occupied or unoccupied state.

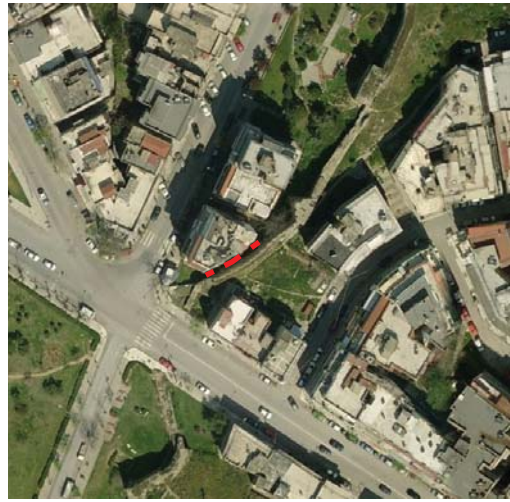
Opportunity: Revise the function, use and integration of these areas with the rest of the western fabric to improve overall fabric cohesion.

residential islets

Risk: Another manifestation of the fragmented fabric are the residential islets that have formed, disconnected from the main fabric by infrastructure barriers. The lack of services and civic infrastructure intensifies the isolation effect of these areas.

Opportunity: These areas are in urgent need of integral plans for their development and reintegration with the urban fabric, as special residential units in the peri-urban area.

wall proximity



0 10m 30m

archaeological traces



0 10m 30m

enclaves



0 25m 75m

latent spaces



0 50m 100m 250m

wall permeability



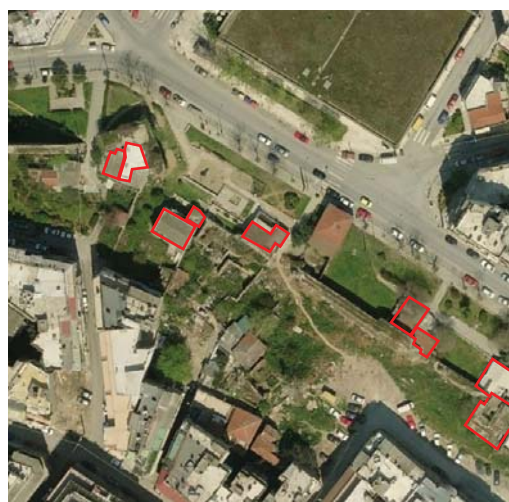
0 10m 30m

fabric discontinuities



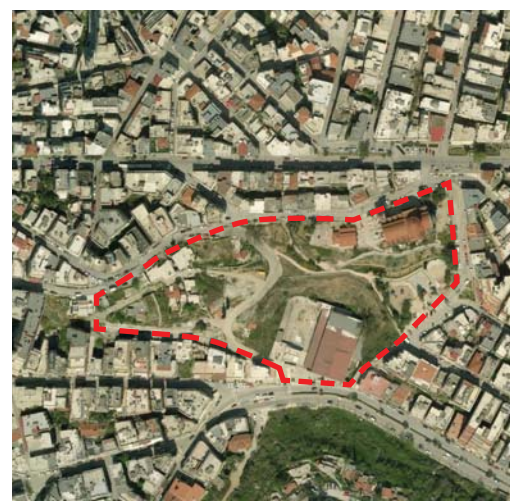
0 50m 100m 250m

wall dockings



0 10m 30m

emerging / existing poles



0 25m 75m

transverse connection



0 25m 75m

connections / inconnections



0 50m 100m 250m

emerging public spaces

Risk: Scattered throughout the NW area there are numerous emerging public spaces, principally in the vicinity of municipal and local centres and key green areas. The lack of a proper public space structure for the Western area, retains the development of the full potential of these areas.

Opportunities: Utilize these areas as structural points in combination with the exterior arc, to formulate an extended and cohesive public space structure covering the entire Western area.

wall dockings

Risk: Several buildings / edifications over the time have *docked on* the city walls for different reasons (structural support, weather protection etc), causing in many cases severe damage to the city walls, while at the same time obstructing continuity along the arch and highlighting of the walls as a major archeological artefact.

Opportunity: Clean the walls from incompatible edifications. Consider uses/functions for selective cases.

latent spaces / latent green spaces

Risk: Present voids and unoccupied areas in the western fabric are presented today as key spaces for guaranteeing green areas and for structuring and extended and intra-connected open spaces system. The green areas along the walls are by default the priority for establishing the continuity along the Arch and guaranteeing the conditions for establishing a wider network of open spaces.

Opportunity: Reconsider current and new uses for these area taking into consideration the importance of the unoccupied space in these areas, while procuring for the careful integration of these areas in the urban structure, through the creation of carefully and quality designed spaces.

flow generators / attractors

Risk: Certain transport facilities such as the Central Train Station, or the port, create considerable amount of incoming and outgoing flows, while holding the potential for accommodating higher flows and accessibility for the area.

Opportunity: Configure these mobility poles are key areas for the further development of the area, establishing public spaces and infrastructure for increased accessibility.

poles of activity

Risk: The concentration / grouping of similar activities in small radius has given rise to the emergence of various thematic poles (sport, cultural, commerce, religious etc) of different sized. Although usually located close to infrastructures, they still lack formal access and importance in the majority of cases.

Opportunity: Structure internally and externally this emerging poles to enhance their effect and improve their functioning and scope. Consider connectivity with public transportation options as well as pedestrian and bike flows to further improve territorial efficiency.

wall permeability

Risk: The existing green spaces and parks within the western urban fabric are found in a scattered state, isolated and unconnected. The lack of a proper green space structure for the western area, intensifies the effect of isolation and degrading for these areas.

Opportunity: Connect these spaces on a local as well a wider scale, formulating in conjunction with the green corridors and the exterior ring an initial green structure for the wider western area.

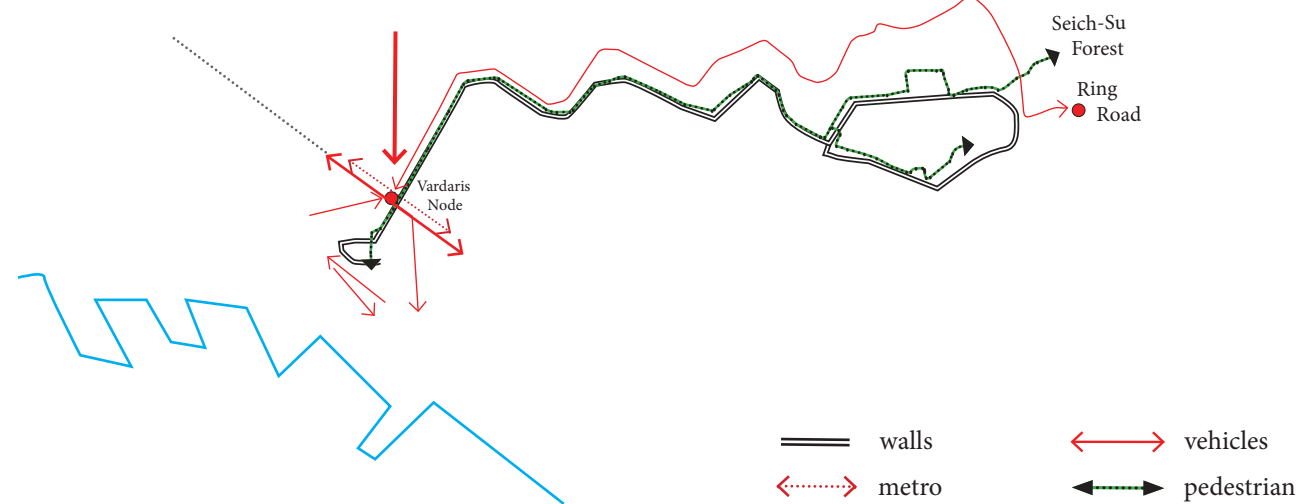
fabric discontinuities

Risk: The historic development of diverse transport infrastructures in the area, (primarily rail and secondarily road) have also given birth to the appearance of numerous discontinuities in the urban fabric of various magnitudes / impact.

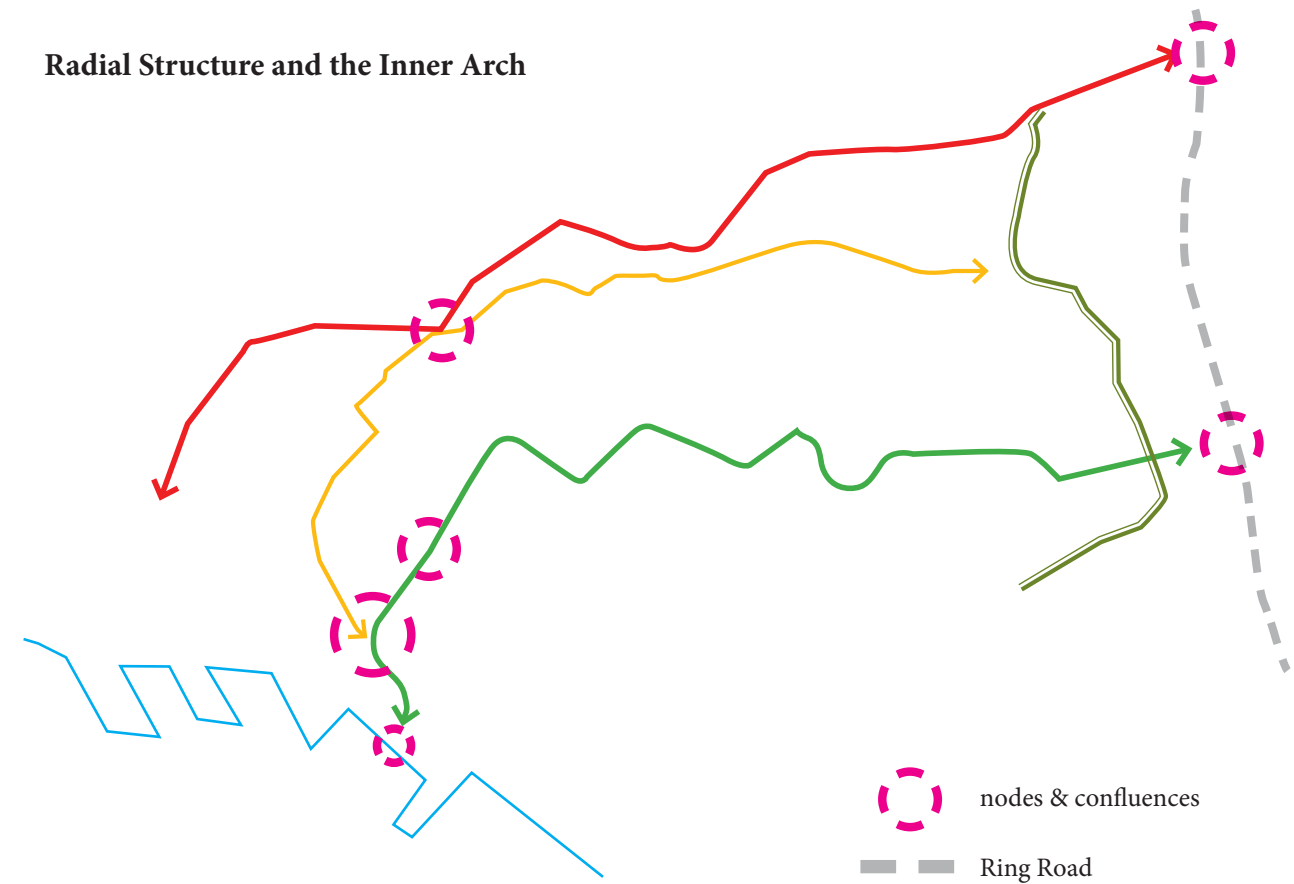
Opportunity: Consider ways to mend the functional discontinuities produced while taking advantage of the formerly lineal infrastructural spaces for establishing dynamic corridors.

Following this detection of the distinct situation detected in the western fabric, the next part will intend to apply the observations and recommendations produced by the analysis, in the presentation of the proposed restructuring of the area.

The Western Walls as an Urban Corridor



Radial Structure and the Inner Arch



x. The Inner Arch Mosaic Restructuration

Given the previous analysis of the area, a better understanding of the current situation and functioning of the area along the inner arch can be reached. This understanding can aid and serve as a base for rethinking / reimagining the overall functioning of the area, and set the base for proposals / interventions. A transformation of the local mosaic can and should be thought out utilizing the inner arch as a structuring urban element, aiming to restructure and reactivate the dense urban fabric (urban interface) on both sides of the city-walls, and at the same time establish continuities (corridor function) and interconnections of open and green spaces (eg. sea-mountain connection, trans-wall connections / connectors) . This task can be achieved by connecting public and green spaces with the inner arch (serving as the structural spine) and with each other forming a network of public/open spaces for the area. The various existing and projected flows will also need to be considered and managed accordingly to adjust the mobility factor to the updated conditions. The restructuring has two aspects: *first* the restructuring of the urban layer and *second* the restoration of the green layer.

City Structure Reconfiguration

The reconfigured inner arch maintains and pronounces evenmore the radial urban structure that appears on the west extra-mural area. The updated radial structure consists of 3 co-centric corridors each one with distinct characteristics: **i)** The arch along the city walls of a principally pedestrian-public space character **ii)** The urban civic artery that runs along Riga Feraiou street can host an increased activity and reactivate the urban fabric **iii)** the avenue that runs along Andrea Papandreou and Eleftheriou Venizelou can carry an important traffic flow towards the Ring Road node. Interconnection and inter-relations between the three can help to knit a even tighter and more coherent urban fabric. All three arches encourage the forest-sea connection while crossing important / key areas of the west Thessaloniki area.

The updated situation along the interior arc as it emerges from the analysis and the restructuring proposal is presented in continuation. The individual parts/ elements that compose this reprogrammed city structure are the following:

Inner Arch

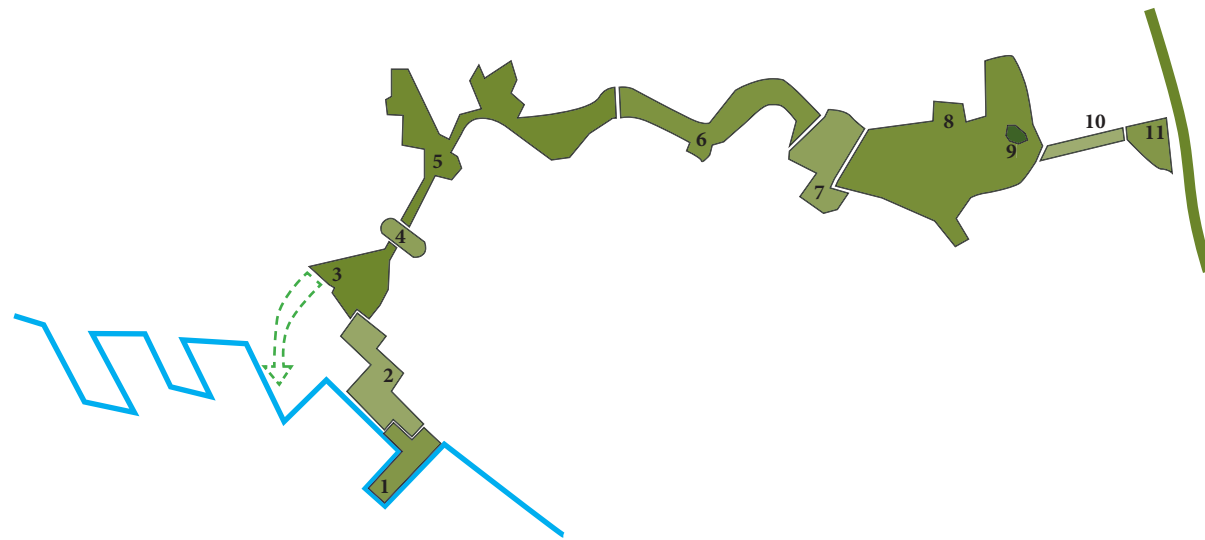
As seen earlier the western city-walls can be divided into four broad sections / parts: **i)** The *Top-Hané* enclave **ii)** The Thessaloniki municipality section, that more or less follows the Hebrard Plan grid, **iii)** the Sykies municipality section, that presents different typologies and densities as well as adjacency of the urban limit to the city walls, **iv)** the Akropolis section, a well defined area / enclave, with low residential densities, **v)** the Eptapyrgion at the eastern end, in a key position with easy access to the Ring Road. Focusing though on the Inner Arch as an element we can see the formation of sequences of different ambients that are created, from the sea to the Seich-Su forest: **1.** Port Cultural Pier **2.** Connector **3.** Top Hané **4.** Vardaris node **5.** Thessaloniki walls **6.** Sykies Cultural Neighbourhood and city walls **7.** Vlatadon Monastery **8.** Akropolis **9.** Eptapyrgion **10.** Connector **11.** Agios Pavlos Sport Center where it reaches the Ring Road and continues to the Seich Su-forest.

Pedestrian Axes

The pedestrian axes make reference to transverse paths that make trans-wall (and thus trans municipal) connections, structuring and potentially generating significant urban activity along their course. At the same time they act as connectors / corridors and structuring elements for the creation of the local public/ green space network.

Ambients along the inner arch

The continuity along the inner arch can be achieved through the transition of different ambients/sections starting from the port and reaching all the way to the Ring Road exit and the access to the Seich Su forest.



Edge Activity along the inner arch

Existing (red fill) and emerging poles (red outline) of centrality and connectors



Urban Arteries

This category makes reference to existing urban arteries that hold an important position as mobility corridors and could in a wider reconfiguration of the area scheme play an upgraded role, combining existing activities with introduction of new ones, and an overall improvement of public space amenities and accessibility. The radial structure arteries are one sub-category while another one are the transverse arteries like Lagadas or Egnatia Avenue.

Open & Public Space network

One of the main objectives of the restructuring of the Inner Arch should be to create a network of interconnecting public and green spaces, forming thus a coherent and resilient urban / civic structure. The Inner Arch can serve as the central spine for interconnecting existing and new space on either side of the city-walls, enhancing connectivity and interaction.

Voids / Latent spaces

These term refer to the areas that are present in the contemporary fabric and especially in the vicinity of the Inner Arch, and are currently holding no use or are bound to change use due to their latent state. Given the importance of the area and the special occupancy terms that exist, these areas although small in size could play a key role in transforming and dynamizing the existing fabric introducing new and provisioned activities and increasing the attractability and activity along the Inner Arch.

These elements are destined to affect the socio-economic aspects of the Inner Arch and its overall function as an effective urban interface, increasing efficiency along this key ecotonal area and between adjacent patches. Key to the efficiency issue is the management of ecological functions and flows seen in continuation

Ecological restoration

Following the analysis of the proposed reconfiguration of the urban structure, a respective presentation of the potential restructuring and restoration of the ecological layer of the area will be performed. The analysis of the ecological layer (biophysical matrix) of the area was looked at the beginning of this chapter, but its correlation with the anthropogenic layer of urban activity at this point can provide more insightful conclusions and highlight unseen opportunities.

On a first level the inner arch can serve as a lineal structuring element that creates can create an ecological corridor that connects the city-port and seafront with the Seich-Su forest, through the interconnection of existing and new green spaces. With a approximate length of 3.5 km (and an average width of 40-50m) the Inner Arch can contain a considerable amount of accessible green areas. The importance of these areas is even greater considering the high density of the adjacent areas and the low ratio of green areas per citizen. The completion of the liberation / restoration of the green areas along the walls needs to be completed for the effect to fully materialize. The connection of the corridor with the forest over the Ring Road Barrier is another question that needs to be considered.

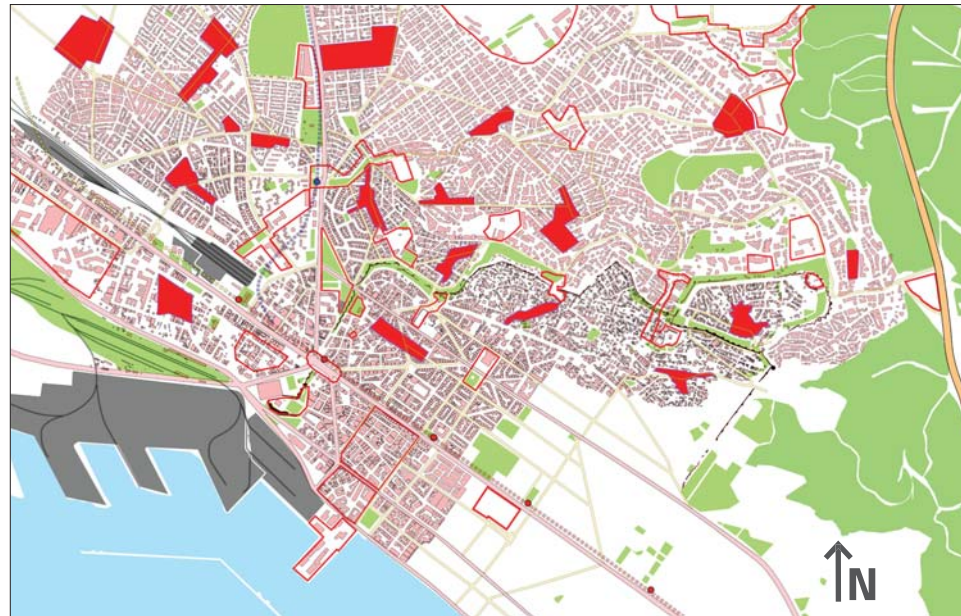
On a second level the Inner Arch can serve as an element for the regeneration of the extended area by acting as the backbone of a wider network of green spaces. This network apart from the Seich-Su forest and the city walls corridor includes the rest of the patches of different sizes present in the fabric: **i.** the grove/forest of Sykies **ii.** existing parks **iii.** unoccupied lots with vegetation **iv.** interior patios of urban blocks **v.** streetside vegetation (acting as connectors) and **vi.** interstice vegetation.



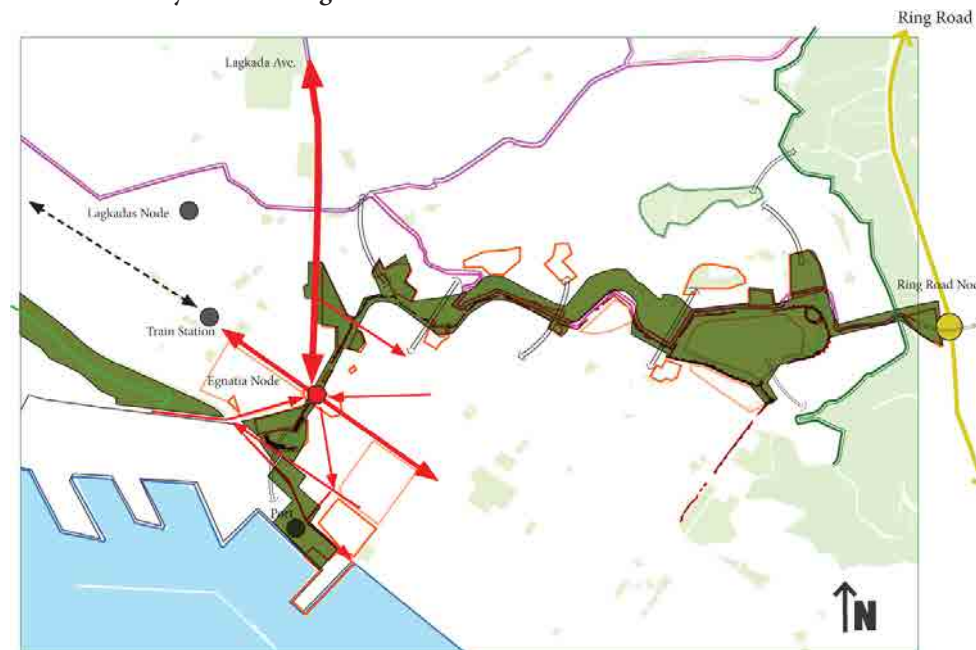
The Inner Arch local mosaic

The local mosaic along the inner Arch as it emerged through the analysis. This slim urban ecotone with its special characteristics and considerable spatial impact can play a key role in increasing permeability of the historic center effect towards the western districts. Large number of flows have to be handled by the Vardaris square serving as a major node of local & regional importance, while transverse connections across the city walls permit transmunicipal connections and interactions. At the same time a mountain-sea corridor is established along the arch, guaranteeing continuity as well as diversity of ambients across the course.

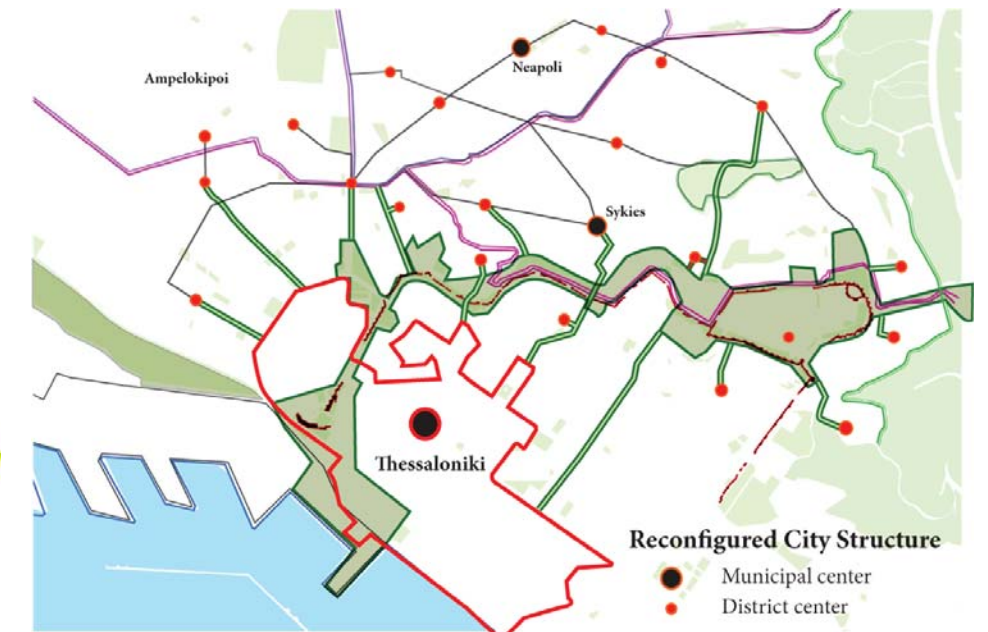
A. Present and latent urban activity



B. Flows and dynamics along the inner arch



C. The Inner Arch as a green and urban structuring element.



Putting in relation existing and new green spaces by inter-connecting them on a micro (district) and macro (sea-forest connection) scale should be the two principle objectives of the restructuring effort.

As far as hydrologic functioning is concerned the situation along the inner arch with the high densities and scarcity of large open areas creates unfavourable and complicated conditions for an integral restoration of the hydrologic scheme. Nevertheless in conjunction with the network of green and open areas in the area it can offer alternative ways to handle the water urban cycle and protect the area from unwanted situations (flooding, erosion etc). The pronounced geomorphology along the Inner Arch can provide many clues for its proper management.

Resuming, the principle characteristic of this ecotonal area is the socio-economic implications and overlayer present along. Accordingly the primary strategy for its restructuring is the increase of connectivity along the axis, continuing with the ongoing effort to liberate the city wall space, pronounce the corridor aspect of the inner arch; and on a parallel level knit together a network of public and green spaces for a more efficient and resilient urban structure.

The map on the opposite page presents the synthesis of the emerging mosaic as it has formulated through the analysis while adjacent diagrams provide further details of the proposed strategies and functioning.

Diagrams

A. Present and latent urban activity.

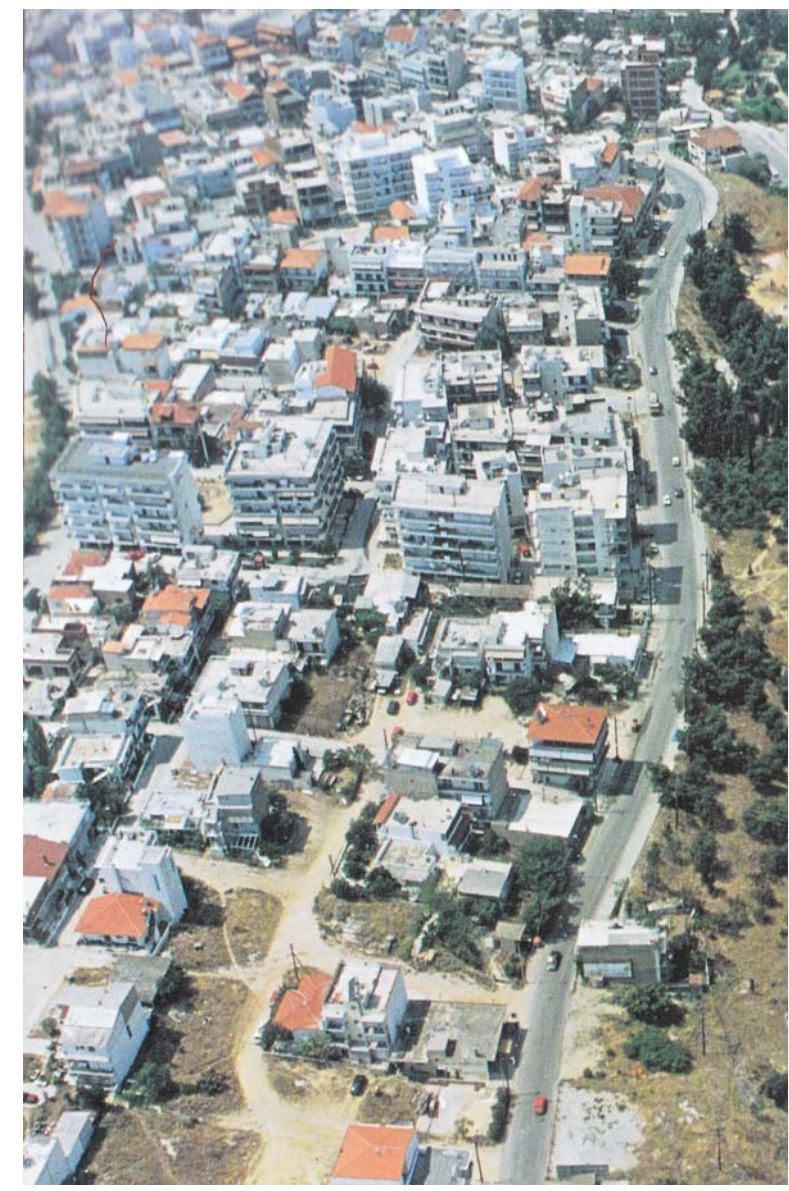
Existing (red fill) and emerging poles (red outline) of centrality and connectors

B. Flows and dynamics along the inner arch

Diagram showing the principal nodes and flows across the inner arch interface line. The Egnatia node and the Ring Road node are the most important ones, receiving important vehicular traffic flows of different kinds. Emerging nodes also emerge around the projected metro stations and other transportation stations creating intermodal nodes. The green corridor that the inner arch creates is also seen in marked in green.

C. The Inner Arch as a green and urban structuring element.

The updated urban structure utilizes the inner arch as structural element, an urban spine that pedestrian / green arteries can dock onto. Thus intramunicipal connections and relations can be established, eliminating administrative limits that have hindered urban urban diffusion so far. The urban structure taking the form of an urban network reticulated throughout the extension of the urban fabric.



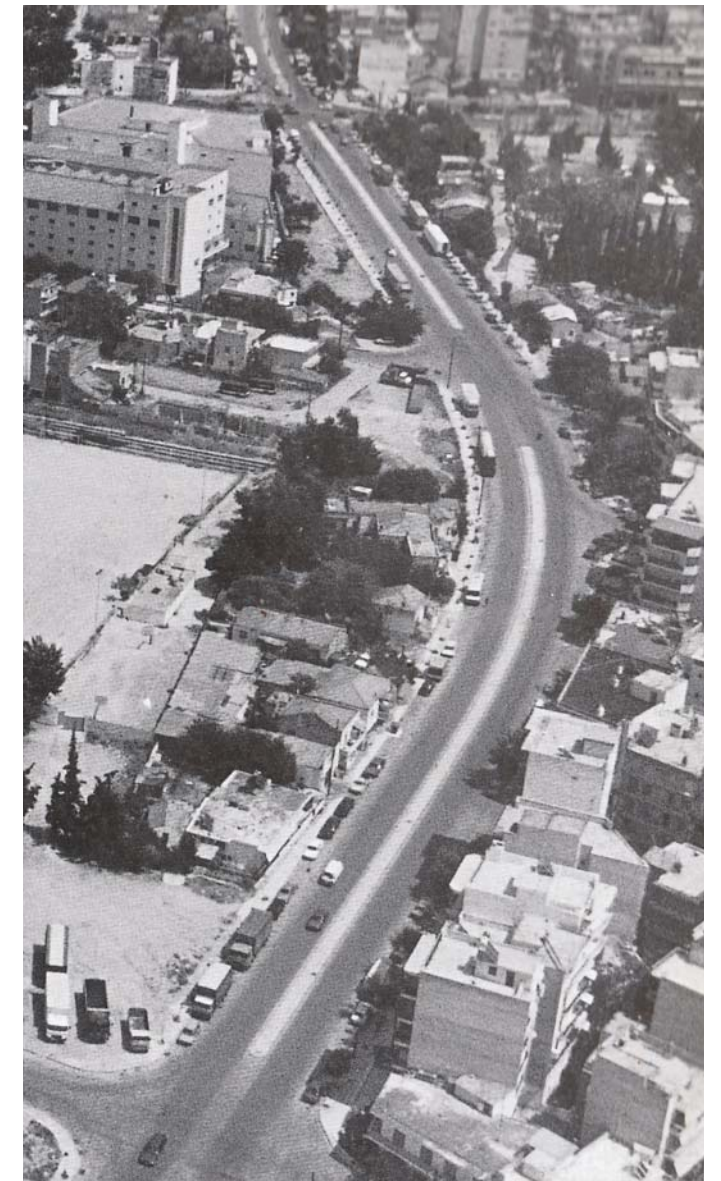
location



iii. The Exterior Arch

The latent structure of west Thessaloniki

(top) Aerial views of distinct ambients of the exterior arch (source: Simeoforidis, Y., 2000)



The Exterior Arc is a, co-central to the Inner Arc that has formed along the path of the Dendropotamos river. It starts at the seafront west of the port and following the river's original path it heads to the north-east crossing the Lagkada Avenue at one point and continuing further east to reach the Seich Sou forest. At the same time along its course it encounters large urban voids, created by the abandoned / obsolete military camps, as well as smaller voids created by obsolete manufacturing / industrial activity.

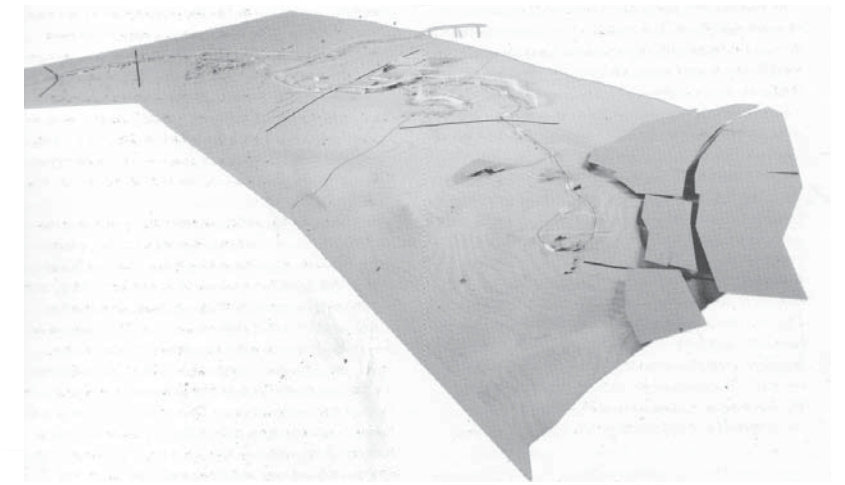
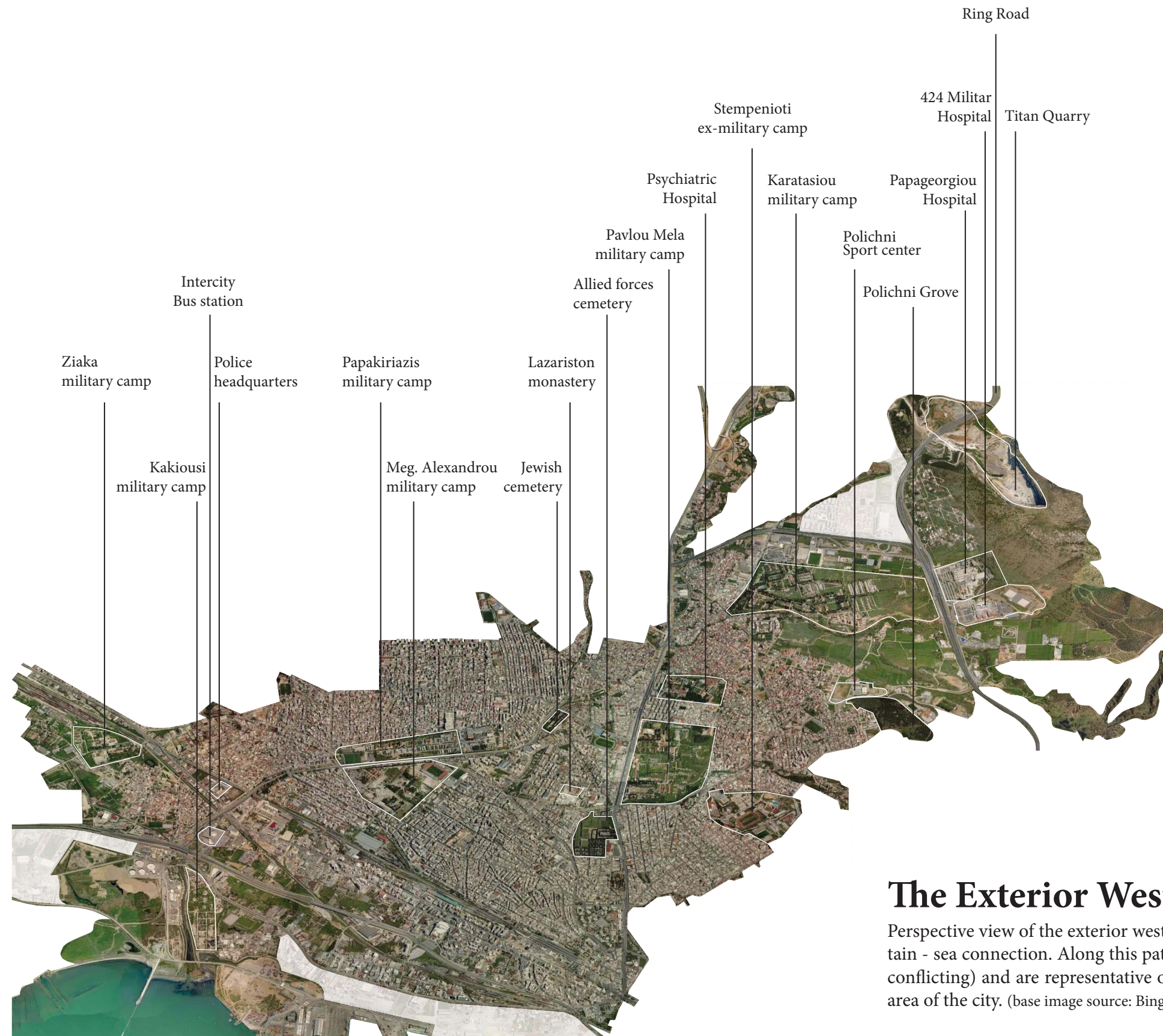
Conceptually it creates a key structural element for the urban structure, providing a sea-mountain connection and an axis along which diverse activities have located over time. It is easier to understand the process of formation and consolidation of the fabric around the axis, taking a look at the conditions that have led to its formation and its passing from a urban limit to its contemporary state. The corresponding limit on the eastern side of the city would be the Regional canal; the comparison and analysis of the two can highlight differentiations in development dynamics on both sides.

The original and approved version of the Hébrard plan provisioned the current Dendropotamos /Marinou Antypa avenue as the western urban limit for the city, with the Dendropotamos river serving as a natural element - barrier. The flood-protection works in 1926 first allowed for settlements to be installed in the

area¹. The Dendropotamos avenue was the first ring-road of the city, and being on the outskirts of the city limits, a series of industries installed there at the time. The arch maintained its importance for a long time, until the city expansion overcame the limit line and absorbed the edge (with part of the river been covered up) inside the urban fabric. The construction of then interior first and exterior later Ring-Road have diverted the traffic flows considerably out from the city.

The area today is characterised by a loose and often informal structure, as well the absence of pronounced centralities. Accordingly although the last years the situation has improved, the area still presents shortage in social infrastructure, most notably quality and accessible open and public spaces. The barriers visual and functional (created by road and rail infrastructure, the port and industry), are also an important consideration factor, and is evident in the contemporary fragmented fabric and landscape. Nevertheless, the exterior Arch has maintained a key role in the urban structure due to historic presence of key areas along its path, the connection that it offers on a transmunicipal and regional scale, and the relatively dense residential urban fabrics that it crosses, creating one of the most dynamic parts of the city.

1. Municipality of Neapoli website



Maquette of the local geomorphology of the exterior arc from the 1997 competition (source: Simeoforidis, Y. (2000))

The Exterior West Arc landscape

Perspective view of the exterior west arc as it crosses the NW Thessaloniki fabric establishing a mountain - sea connection. Along this path numerous key areas are found in different states (active / latent/ conflicting) and are representative of the intrinsically rich cultural and natural mosaic of the western area of the city. (base image source: Bing maps)

i. Analysis Structure

As seen the Exterior Arc holds a key role and position in the contemporary urban structure. For this reason at certain time points attention was paid to the area, through the realisation of studies and workshops focusing on the needs and potentials of the area. Despite all the effort put in investigating the conditions along the exterior Arc, and all the conclusions that were produced, very little of it was finally implemented. Major obstacle in the implementation of the decided strategy was the halting or slowing down of the process of the passing of the military installations to civic use, as well as other bureaucratic process that hindered any significant advances. Nevertheless, the arc, did not lose its potential for transformation, on the contrary one could argue that its latent character has been intensified due to new activities and pressures that have appeared in the area. The exterior arc and adjacent spaces, remain to this day a space / axis in transition 15 years after the original architectural competition. This chapter of the analysis will try to investigate the contemporary conditions and dynamics present along the arc in order to formulate an updated and more precise image of its role and potential in the urban structure. For this reason, the scope of the analysis is not limited strictly to the area and path of the exterior arc, but it opens up to include the wider western area, investigating the potential regional effect that the arc can play. At the same time, try to connect this investigative process with the previous chapter of the inner arc, in order to find possible points of connection and interaction between the two, amplifying any potential results as well as the posterior analysis of the ring road structure.

The analysis will cover the following topics in order to formulate an impression of the contemporary mosaic along the exterior arc and the extended area:

0. Previous Investigations / proposals

This first part will look at the previous attempts that have been made to investigate the conditions and dynamic along the exterior Arch. It will principally focus on the interventions developed on the frame of the European Cultural Capital of 1997 and the diverse activities and proposals produced with this objective in mind.

I. Habitability Assessment

Investigate conditions and factors affecting the habitability of the distinct areas that compose the urban fabric of the western area of Thessaloniki

II. Activity Assessment

Investigate the various and diverse activities and uses, and their respective poles that serve as attractors and generators of urban activity.

III. Mobility Assessment

Investigate and analyse flows and dynamics that condition accessibility and connection within the urban fabric, and the respective activities that reside within.

IV. Corridors Analysis

An individual analysis of the transverse corridors, in order to investigate activity along the axes and the lineal effects that they produce.

V. West Arc Analysis

An more detailed analysis of the current and emerging conditions along the exterior west arc

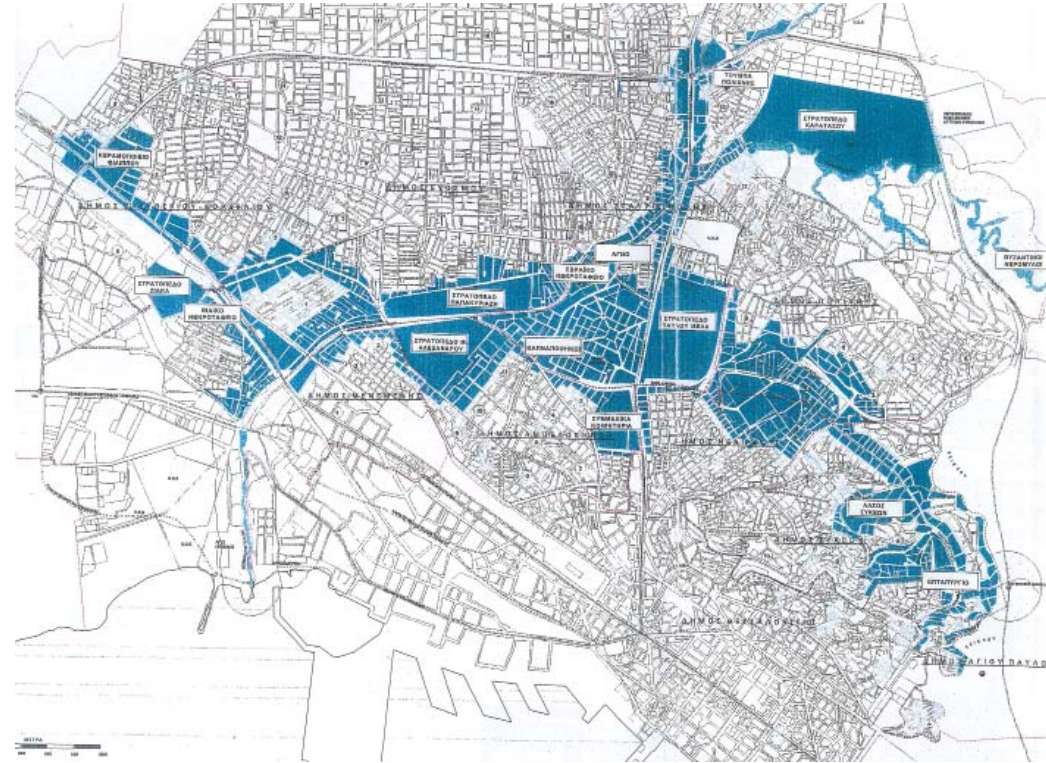
VI. Emerging Structure & Mosaic

The synthesis of all the previous analysis categories, to produce the impression of the synthetic final mosaic of the western area of Thessaloniki. (interior + exterior arc)

Location



Coverage



Structure & Activity



Operational Plan - Metropolitan Thessaloniki

West Arc and special works

(Department of Urbanism, Aristotle University of Thessaloniki & Organism for the European Cultural Capital Thessaloniki 97, 1998-1999)

ii. The Exterior Arc in the 1997 Cultural Capital Context

The structure of the western Thessaloniki, with the serious lack of formulated public open spaces and coherent city structure provided the starting point / theme for the competition and ground for considering the implementation of new strategies and the design of innovative urban planning and management tools that went beyond the traditional at the time urban design.

1. EUROPAN Competition 1996

a. The city authorities decided to initiate this process by the means of the pan-European architectural competition EUROPAN (September 1996). The objective was to create the conditions for development of social & leisure space, the reorganization of the urban and regional and the reconnection and communication of the peripheral municipalities. Out of 216 entries, 5 prizes of equal merit were awarded¹. (i. Stefano de Martino ii. Franco Defrain, Olivier Souquet, Catherine Brunet, Refki Chelly, Catherine Guillot iii. Hélène Mehats-Grutter, Alexandre Grutter iv. John Lonsdale v. Karl Meinhart, Georg Huber)

b. The winning teams were invited in continuation to participate in a joint workshop, in 3 meetings (June 1997- January 1998) that aimed in formulating a comprehensive proposal, a joint conceptual project. At the same time it intended to create a common consulting/investigative approach to the development of similar studies, projects and actions. The results and conclusions from the competition were presented in a common publication².

2. West Arc and Special Works (1998-99)

Then, taking into consideration the synthetic presentation of the axes of urban and architectural intervention highlighted by the EUROPAN competition, the main developing axes were delineated for the further realization / implementation of the program and were presented methodically and synthetically in the study “West Arc & Special Works” by O.R.Th in conjunction with the Department of Urbanism of the Aristotelean University (1999). (see left page.)

3. Exploitation of existing military camps study (1999)

Simultaneously, the study ‘Exploitation of existing military camps’ created an incision point for the investigative promotion of this pending issue and the development of the studies necessary for its implementation. To this end, the establishment and operation of the “Development Agency of NW Thessaloniki (ANAITTYEIAKH A.E)” between the municipalities of Northwest Thessaloniki and the actions that it could promote, for a strategic planning of the west area of Thessaloniki, could offer the framework for implementing an integrated program of urban regeneration. This came out of the belief that the authorities expressed, that the integrated urban

regeneration of Northwest Arc should be implemented with a corresponding complete investigative approach, but also to appoint the promoter of the proposed actions and the management of the activities - spaces that would come out of this process³.

4. Joint Workshop (2001-2003)

a. Subsequently a , architectural/urban workshop was realized on 17-19/11/2001, (through the NW Development Agency) inviting chosen EUROPAN participants, to investigate an urban strategy for the local development plan of NW Thessaloniki , involving four European architectural offices: *Boeri Studio* (Milan), *LABFAC* - Finn Geipel (Berlin - Paris) , *Reichen* - Robert (Paris), *Ed. Bru* (Barcelona). The rehabilitation of the military camps and the development of a network of intra-municipal public sites was still the principal goal. Additionally an evaluation of the key role of the region as a centre / gateway to the Balkans was realized along with best practices in similar type projects⁴:

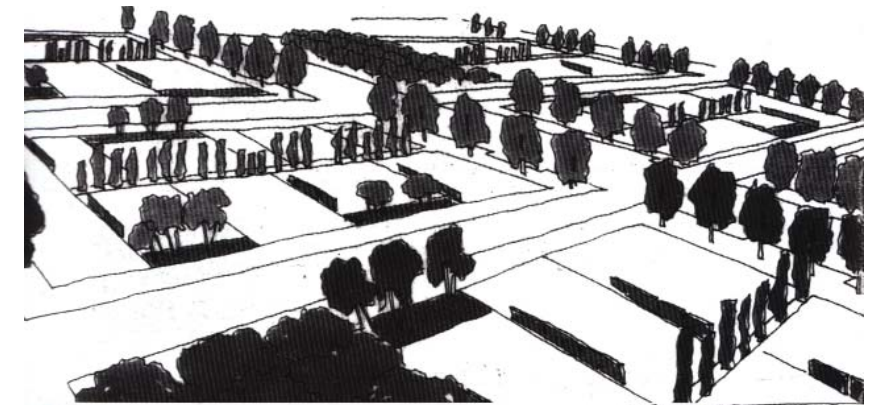
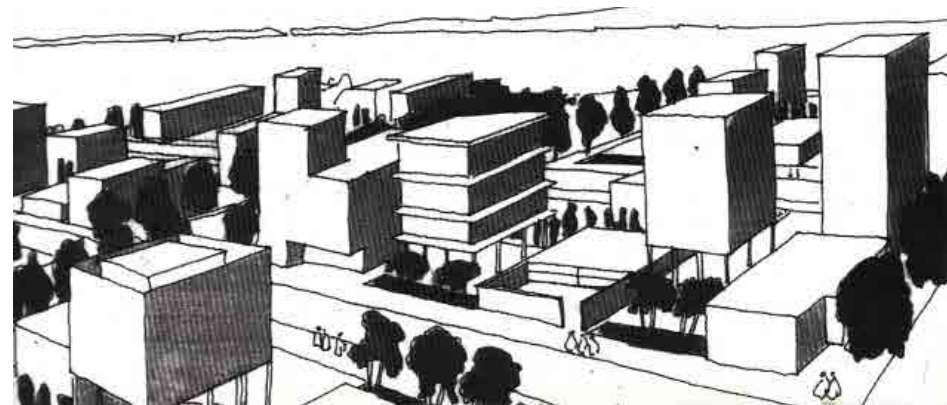
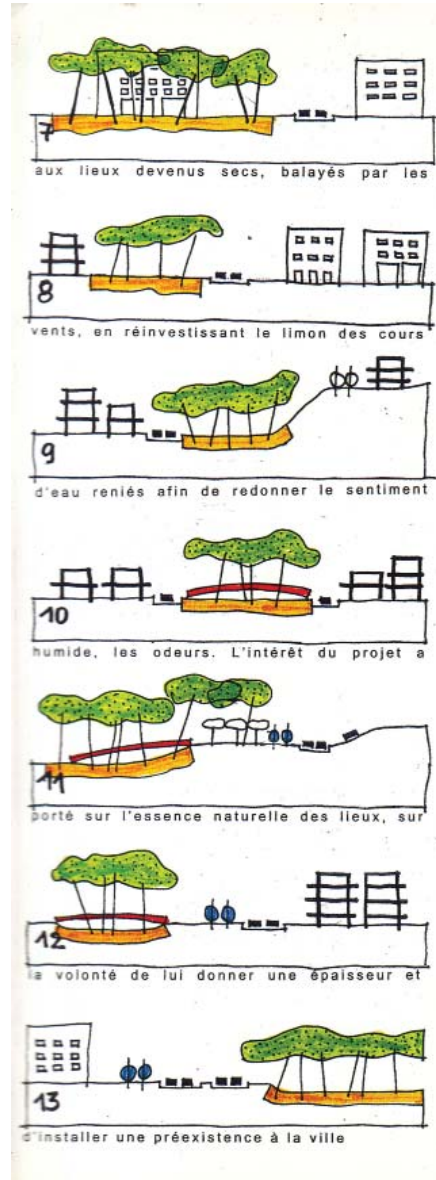
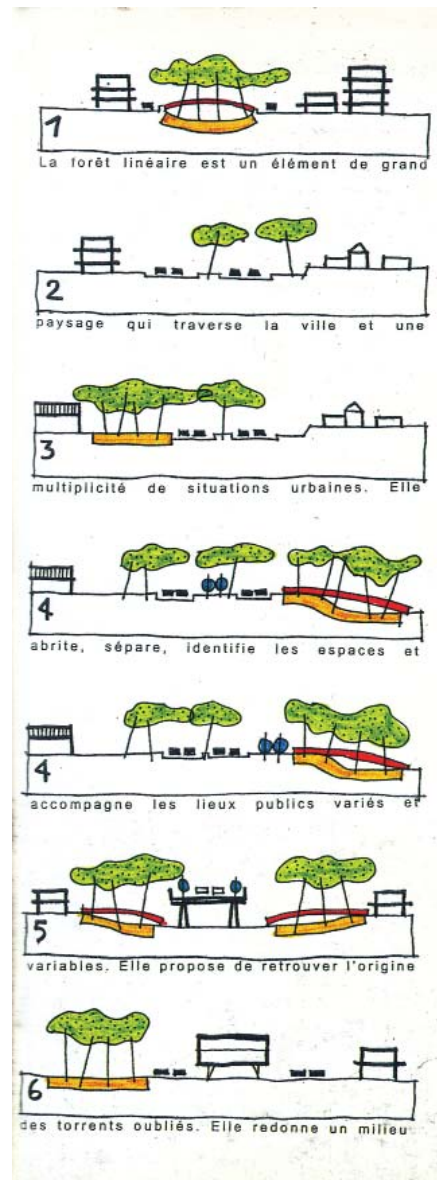
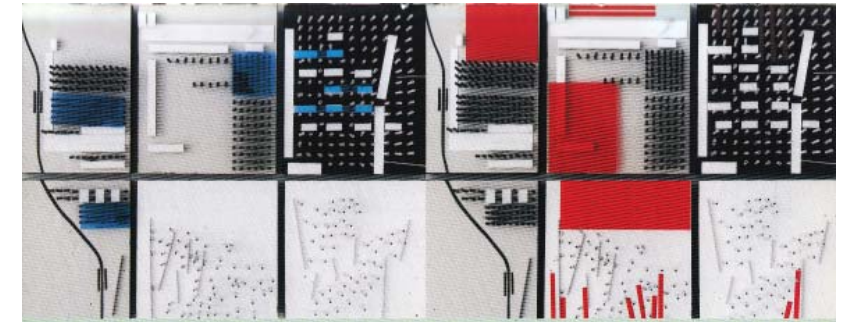
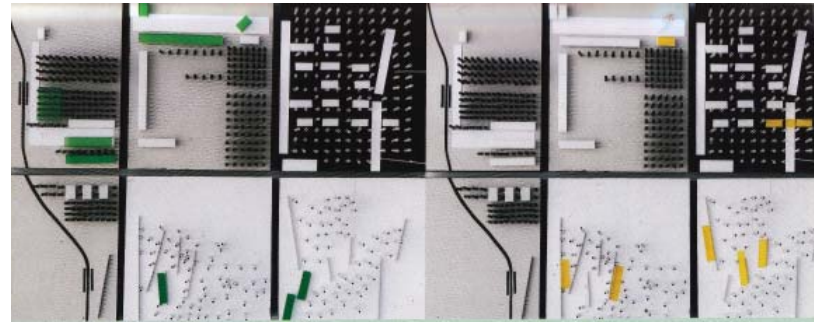
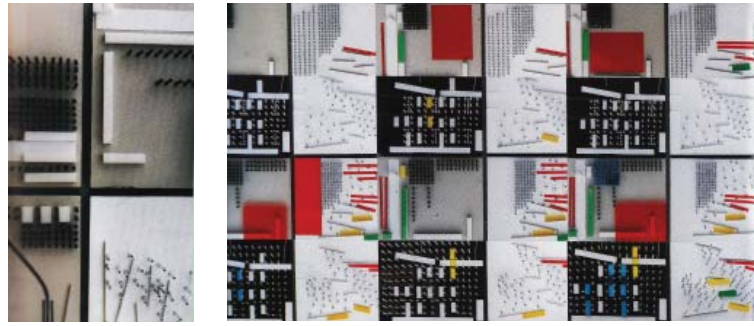
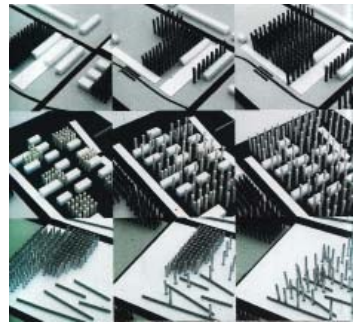
b. Finally, in a next phase after the above synthetic approach, two architectural offices were invited (*Boeri studio*, *LABFAC*_Finn Geipel) to further develop specific proposals for extending the vision around the development of areas with specific programmatic functions, with indicative design proposals of an exemplary nature. The submission of proposals was made in September 2002 and finalized in May 2003. In the proposals, the areas of the military camps were treated as urban voids and focal points of development, which are able to create a system of local and metropolitan public spaces that can lead to the transformation and urban cohesion of the region. As the final study concluded the *camps themselves created a potential for public development projects over the course of time since they permit the freedom to alternate and adapt new urban roles and functions in successive time phases*⁵.

In continuation the winning proposals of the competition will be presented highlighting their main features. In continuation the analysis in the next part, will try to investigate the updated conditions along the exterior West Arch 15 years after the original competition for the area. The conclusions reached by previous studies are to be taken into consideration to see how the conditions in the area have evolved with the passing of time. At the same time the analysis will not be limited in the strict limits of the exterior arc, but will extend to cover the whole western area. At the end the results of the analysis will be correlated and synthesized with the results of the analysis of the interior arc.

All images from the 1997 competition are from the Simeoforidis, Y. (2006) book on the West Arch competition

1, 2. Simeoforidis Y. (2000)

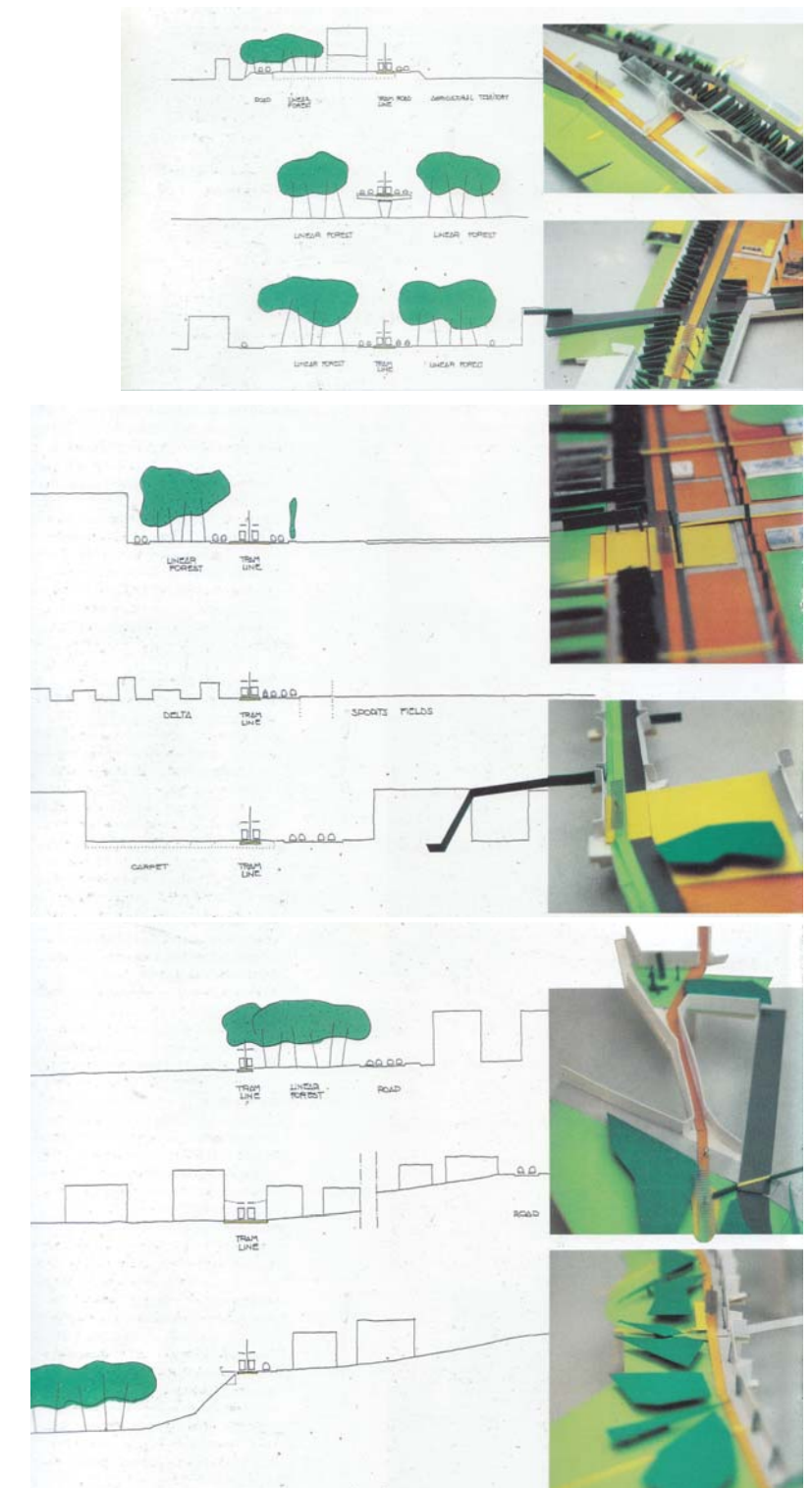
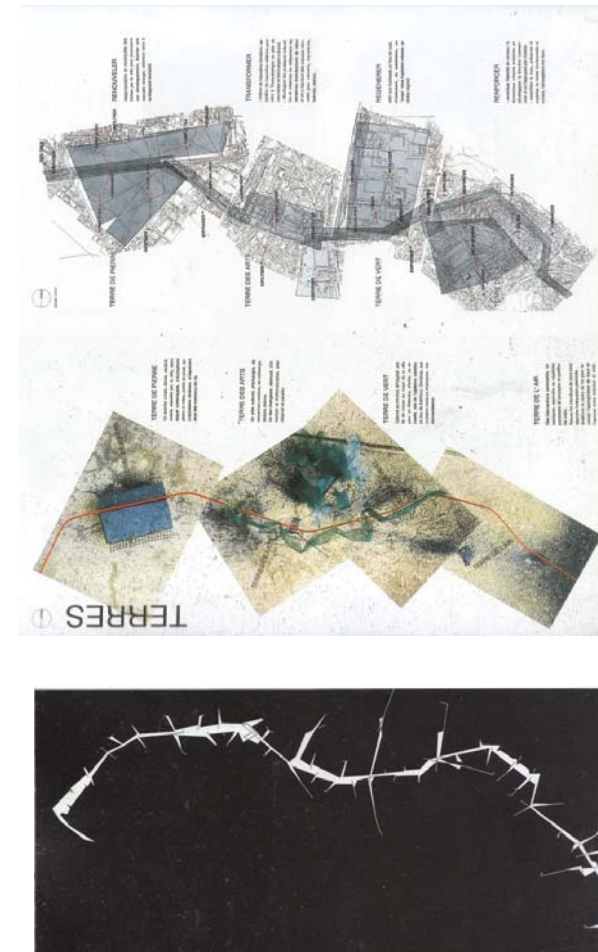
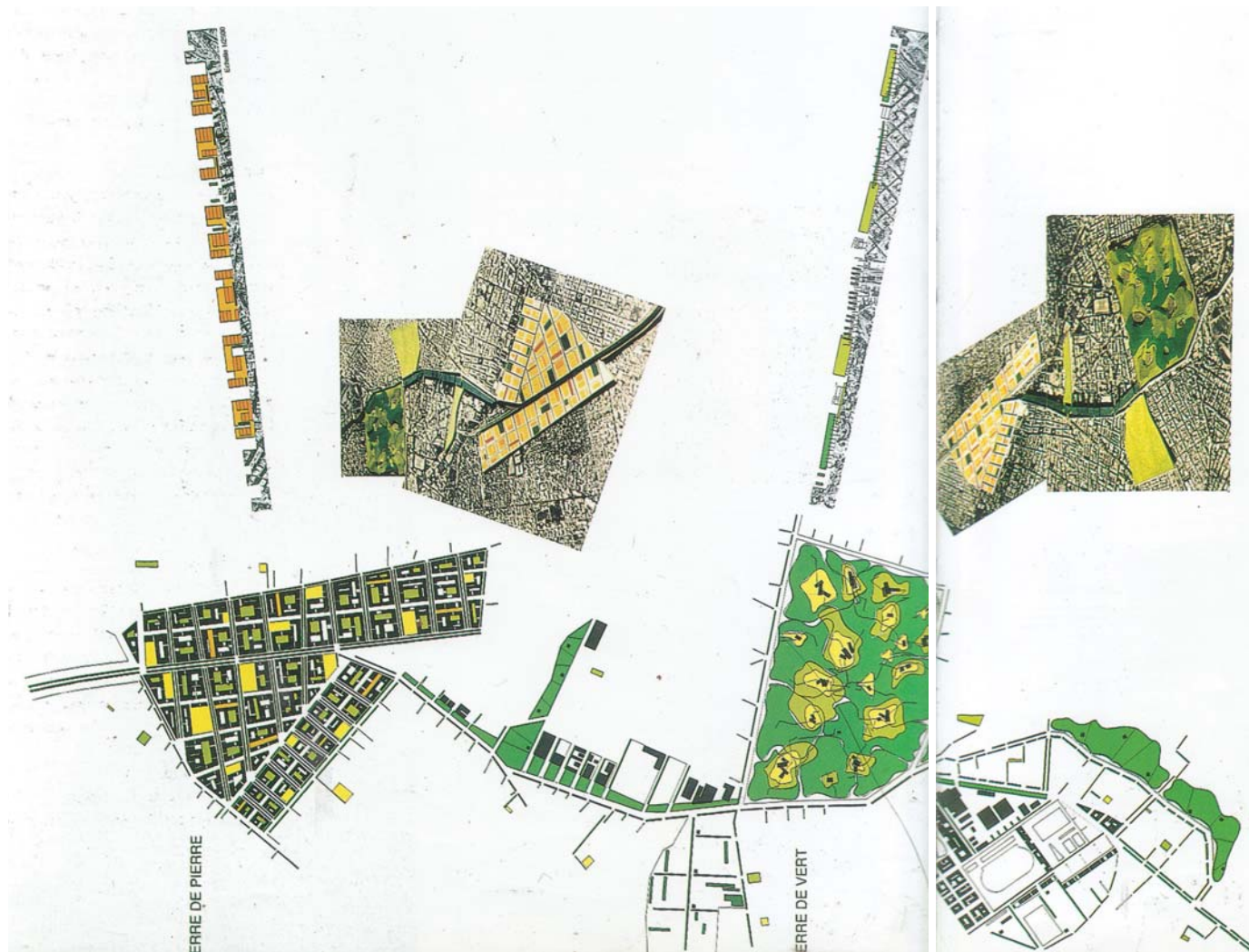
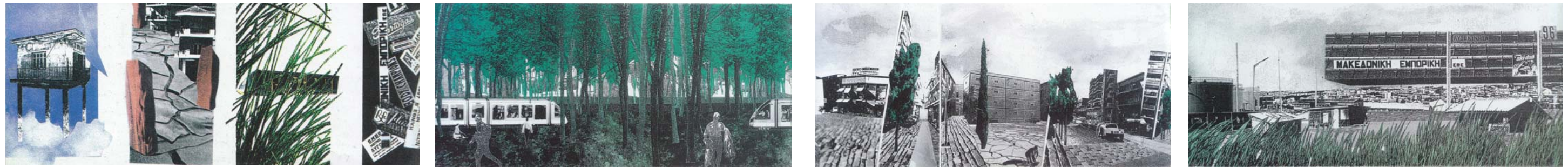
3, 4, 5. Pappas A. (2006)



Francois Defrain, Olivier Souquet, Catherine Brunet, Refki Chelly , Catherine Guillot - Prize Lines and surfaces

The main aim of the proposal was to establish an environment that will guarantee the future existence of these last vacant spaces: “ .. the double nature of the project lies on one hand in the identification of the natural essence of the sites and on the other hand, in the inevitable acceptance of the built spaces...”

The reactivation of the of the local landscape is based on the control of the hydrographic network and functioning, the humidification of the soil through massive planting and the application of agricultural and horticultural technologies along the arc. “... Architecture will no longer be dominant, it will become secondary ...”

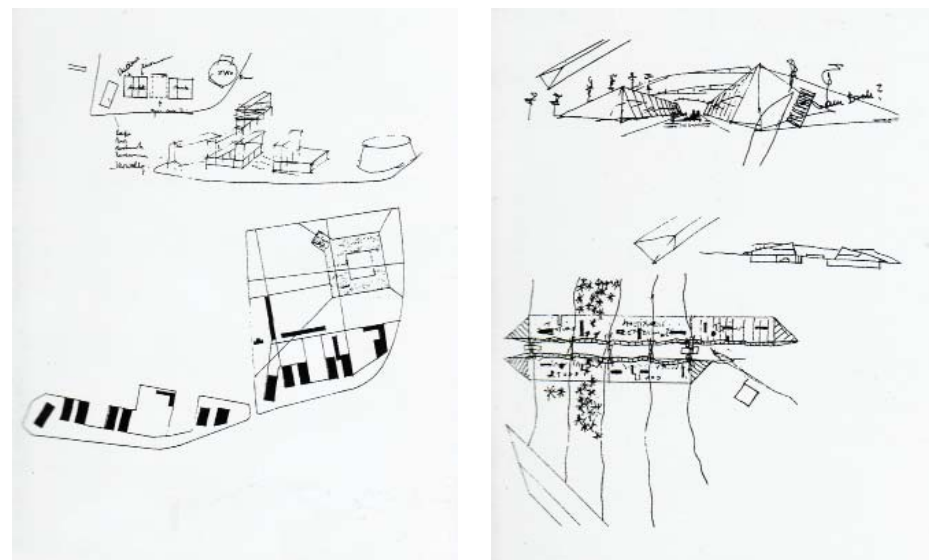
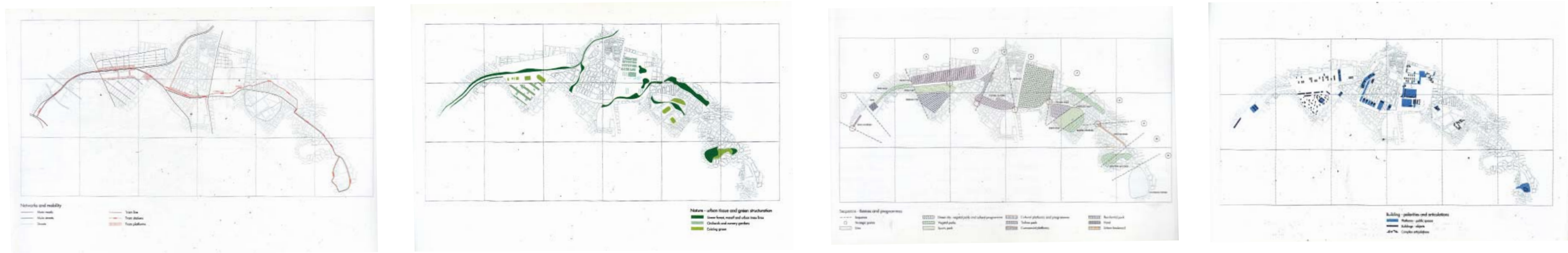
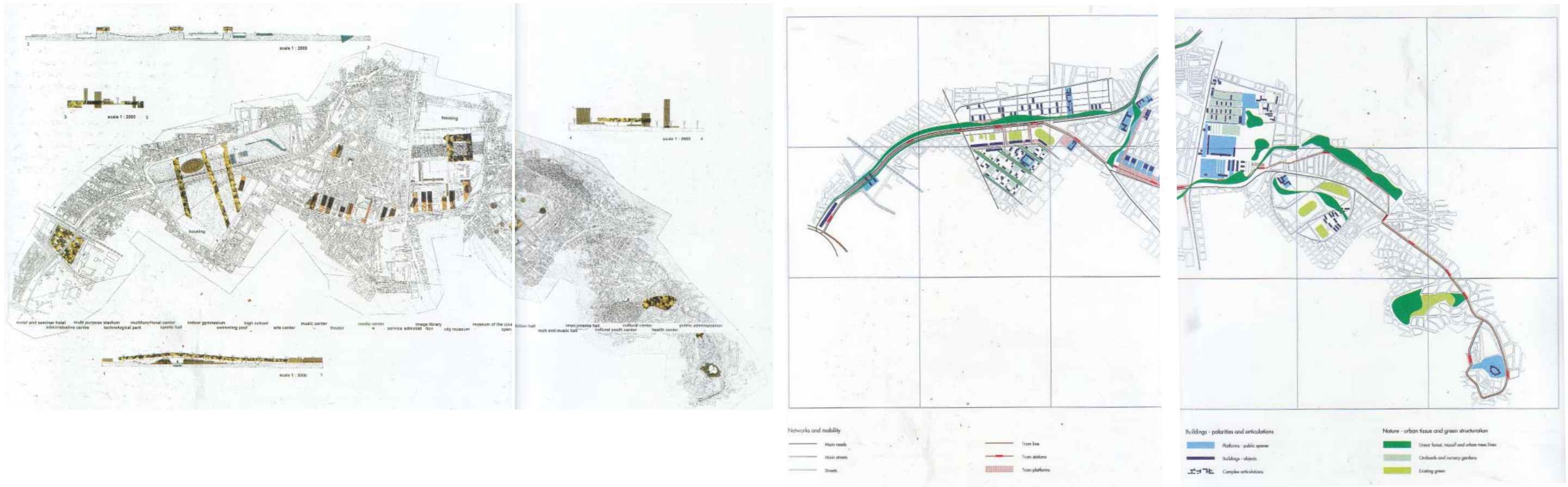


Hélène Mehats-Grutter, Alexandre Grutter - Prize

Linear space and movement

The main idea behind the initial proposal was the articulation of the various components of the Arc in a symbolic manner along a thematic itinerary called *Ariadne's Thread*, along which a tramline is proposed, "... as a pretext for the application of development processes, giving the arc a new identity." A new identity that is making the most of the diversity present in the area.

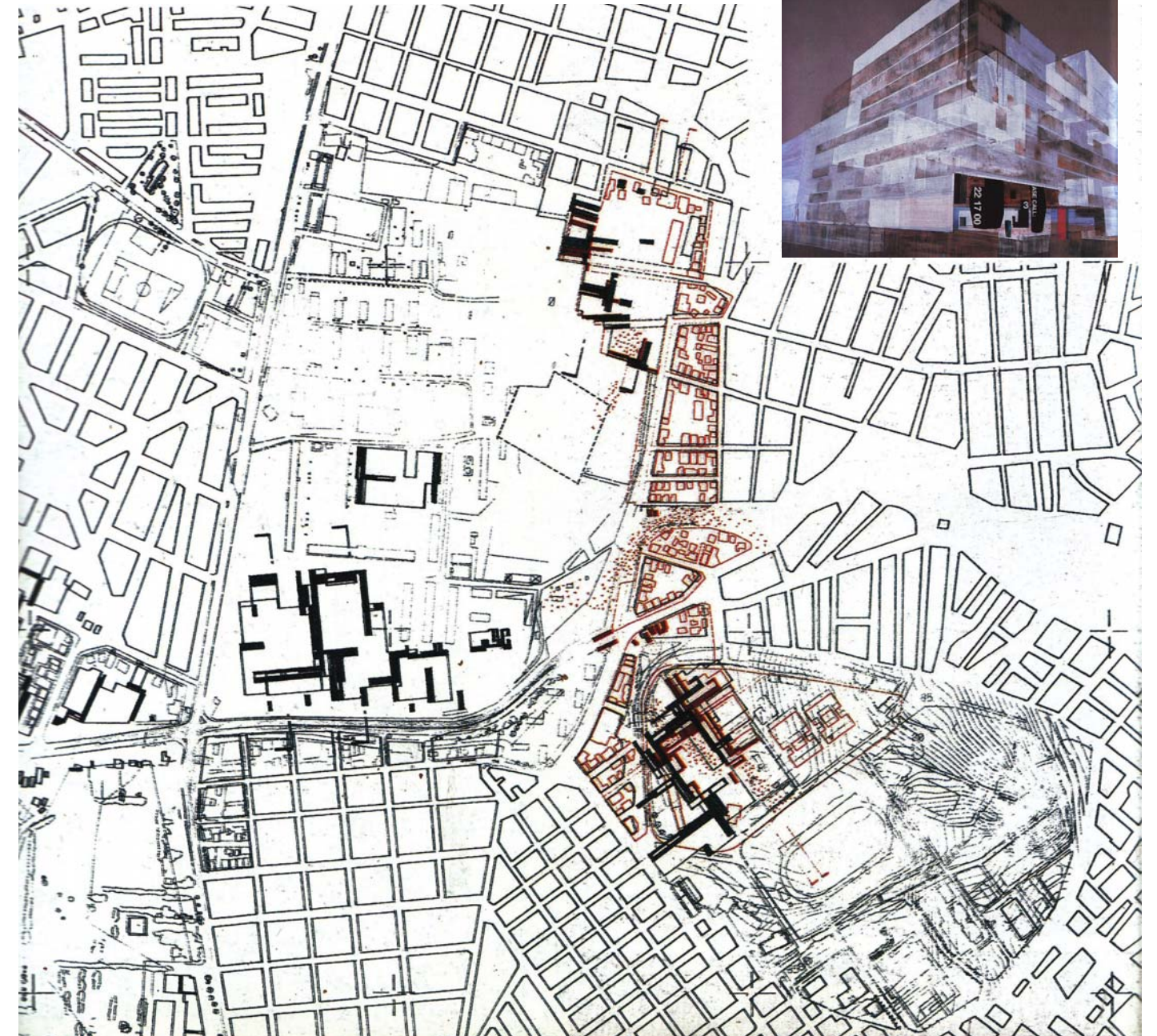
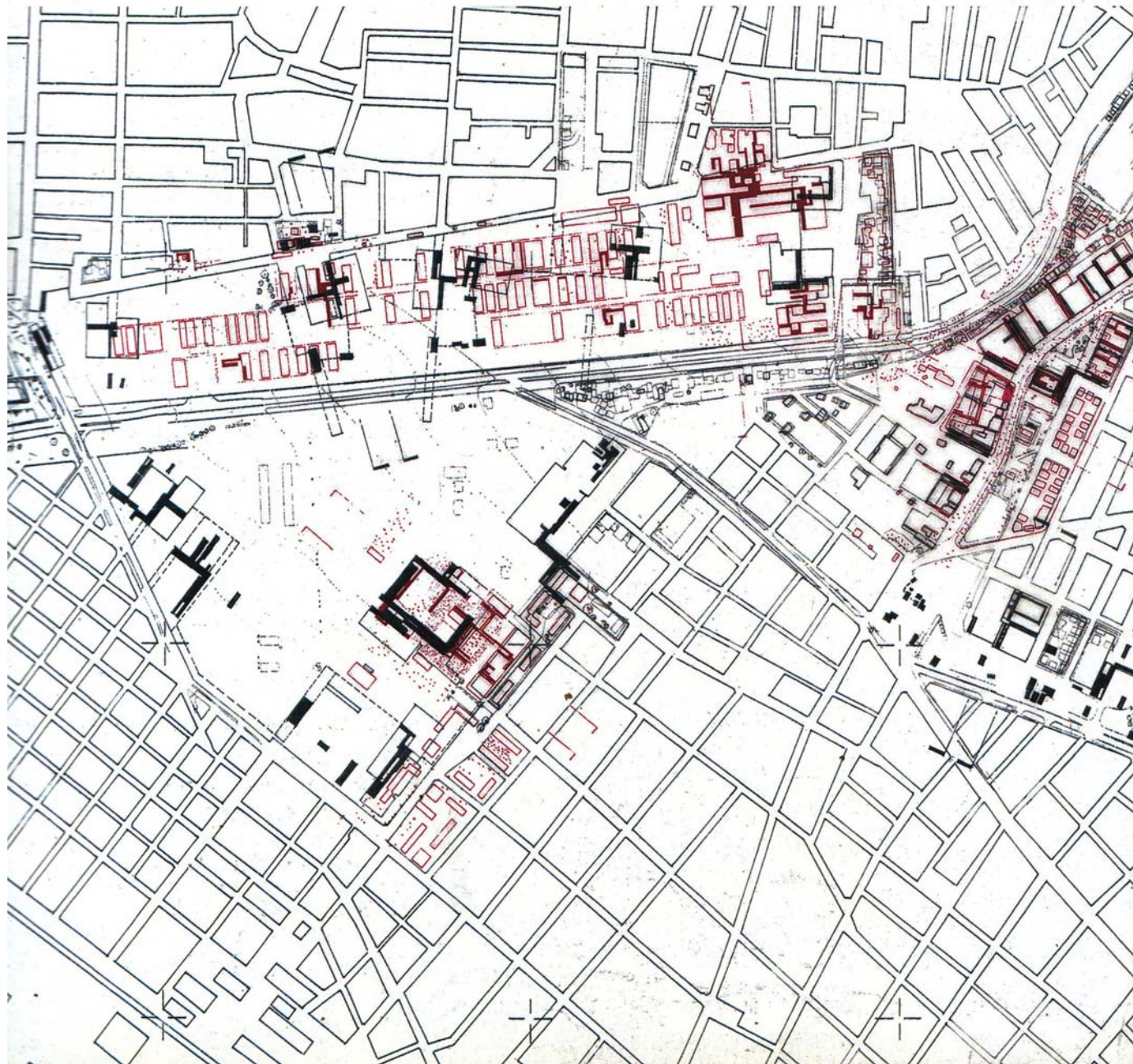
In the workshop stage this idea was further developed around the creation of a *policy image* of the emerging area. The west Arc is converted into a corridor, with a clear public transport project and the West Arc as a collective space for movement, "... a geographic delimitation which permits an enclave to communicate with the outside."



Karl Meinhart, George Huber - Prize *Public and collective spaces*

The proposal design is based on two existing elements: the road network surrounding the distinct areas, and the imposing warehouses with their simple lines. The lighting of the public space, introduced as a new element, includes the entire West Arc, connected and related to the new tramway.

The proposal provides for "... the creation of compact units for utilization which will have inherent possibilities for public space and will thus give rise naturally, as it were, to further stages leading to the desired mixture and intensification of urban vitality [...] it is important to offer the possibility for further reconstruction on a fragmentary basis, and with immediate measures to be taken utilizing existing resources. This process arises logically from the existing structure and scale of Thessaloniki..."

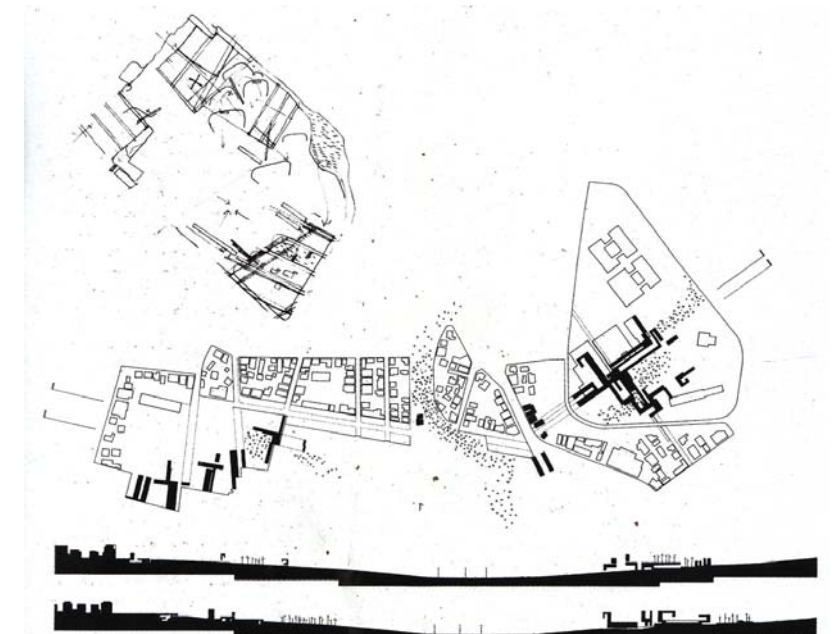


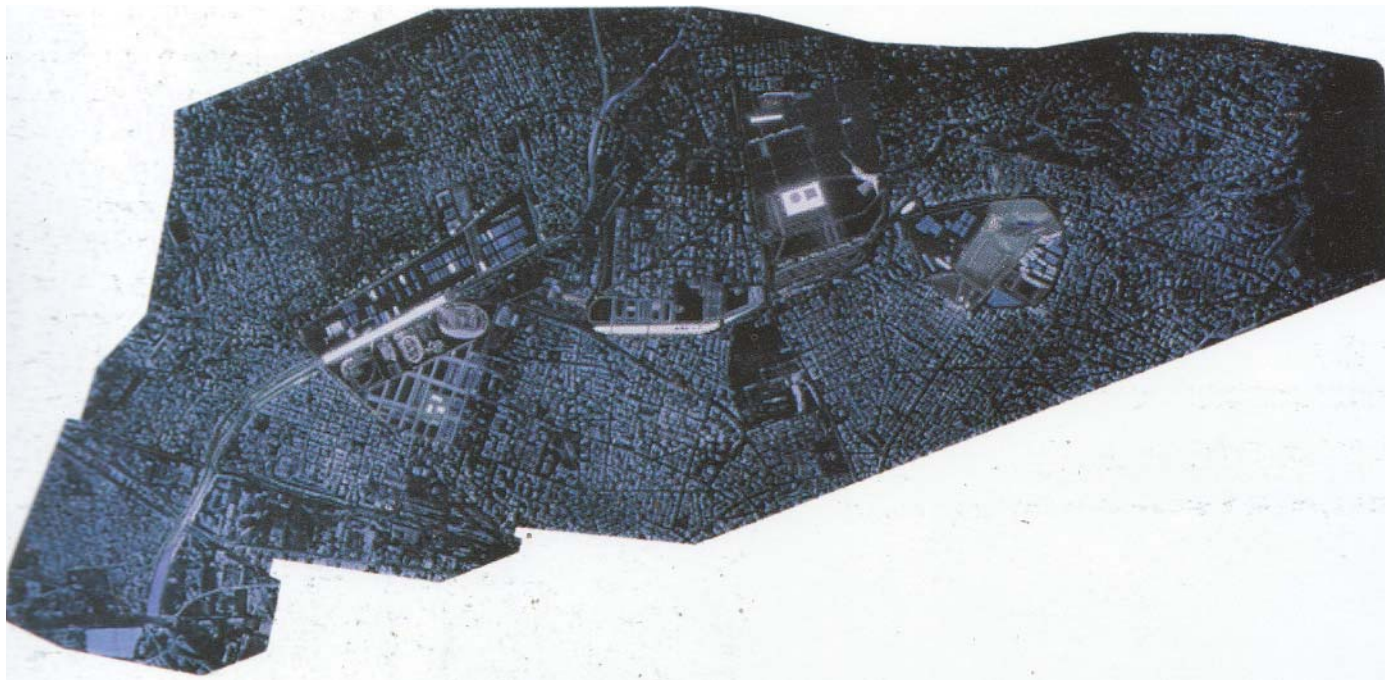
John Lonsdale - Prize

Big Houses - Six Scenarios towards an evolving physical planning strategy

*“...As traditional craft industries remove themselves to the outer edges of the city the possibility of the restoration of the variously located warehouses carries with it the broader ambition of re-structuring the newly inherited inner edges of the city, around both restored and strategically located new warehouses (collectively know as **Big Houses**) creating a layered and sheltered series of public spaces, connected by a tram line and upgraded public roads.”*

The proposal by arch. John Lonsdale incorporates the concept of up-cycling of the obsolete manufacturing and industrial building stock, seeking a way to activate inner urban edges utilizing the elements of the **Big Houses** as articulating elements and reactivating agents at the same time.

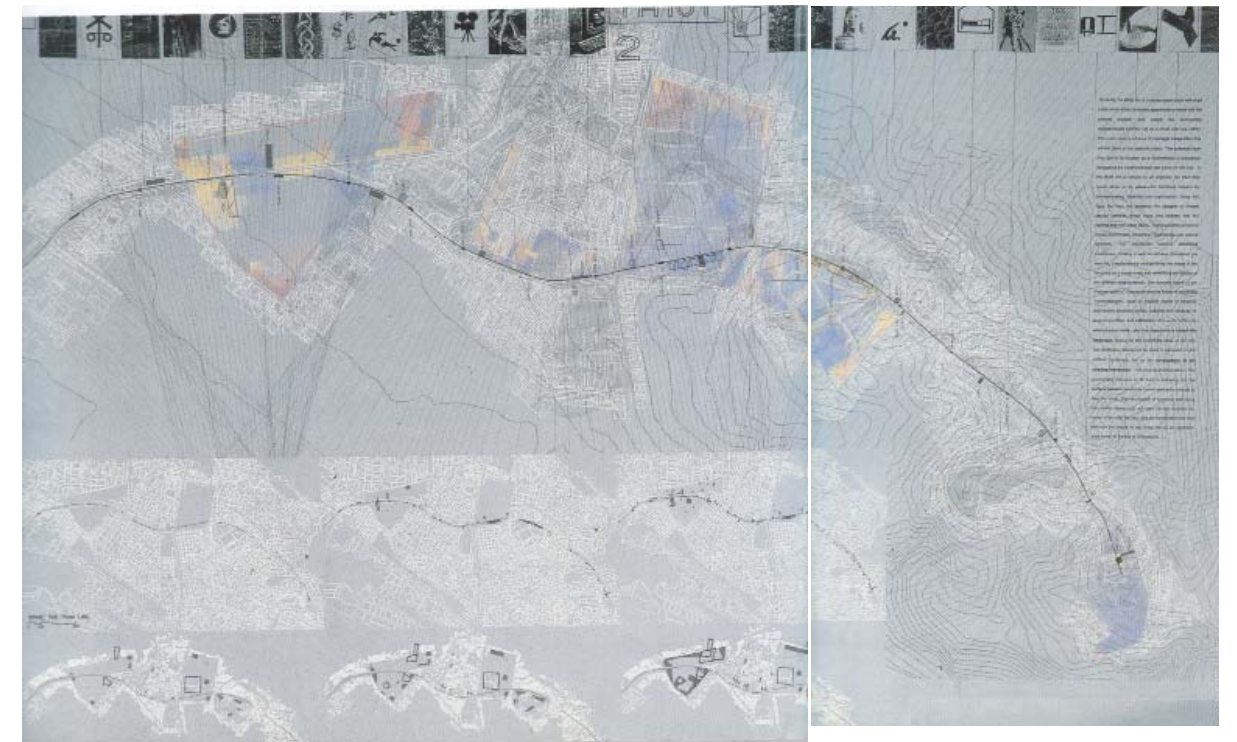
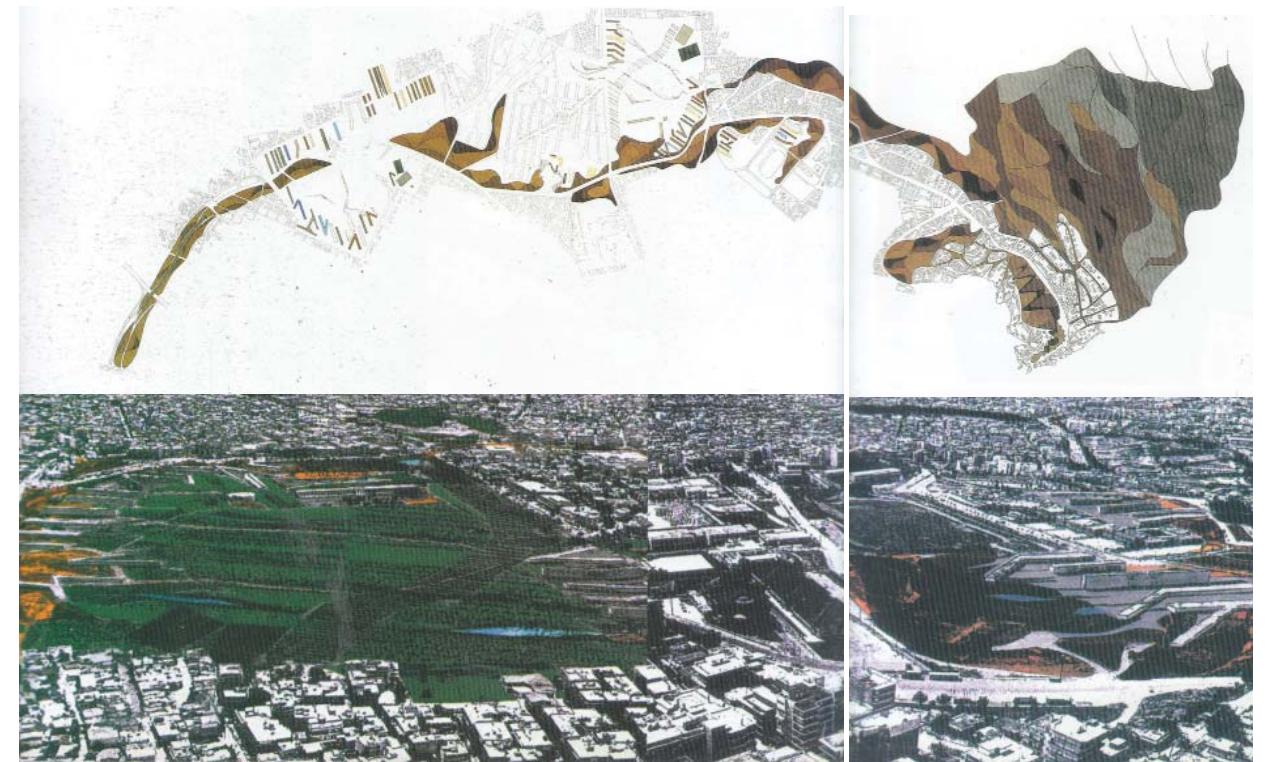




Stefano de Martino, Giancarlo Caruso, Angelo de Luca - Prize
A linear sequence

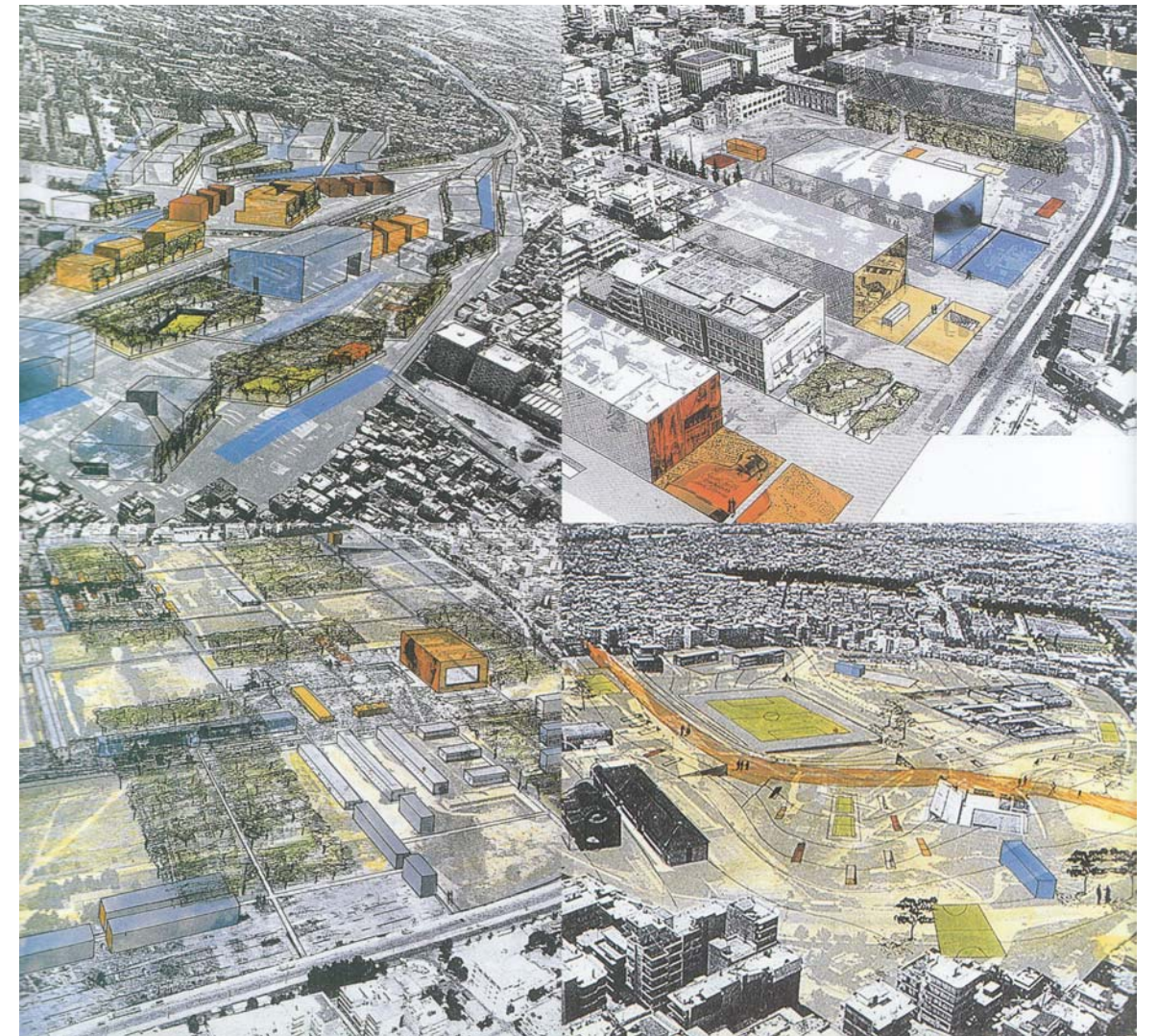
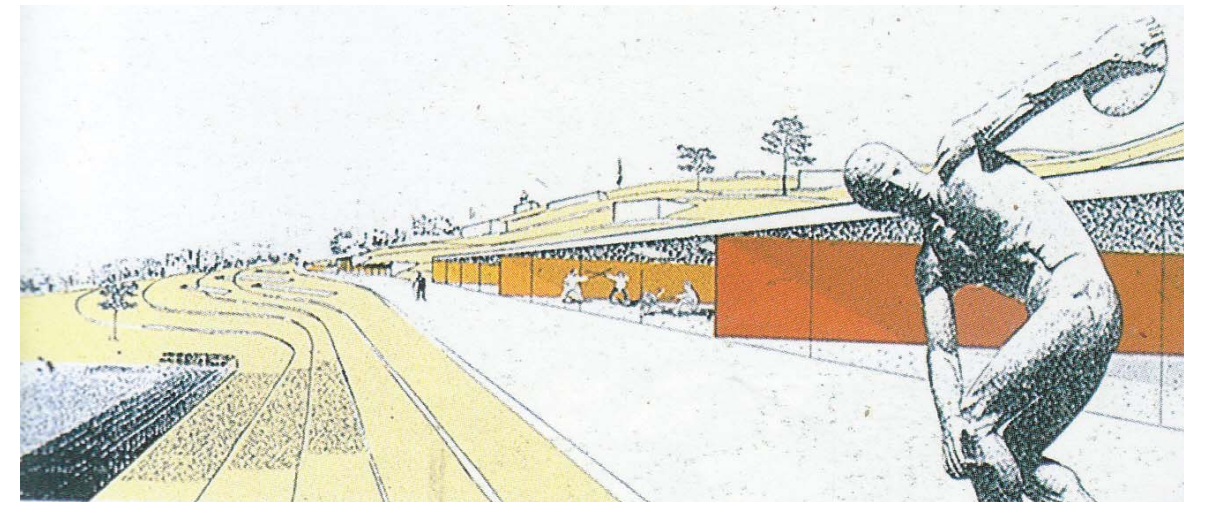
(from the proposal description)

“The dusting of construction over its restless topography of the bay of Thessaloniki constitutes an artificial landscape, fragmentally controlled, often spontaneous and mostly transgressive, yet cohesive, in its metropolitan density and continuity, an energy barely containable within the timid planning boundaries. The sites defining the West Arc have survived by virtue of being exclusion zones: army camps, cemeteries, ravines. Like dams streaming water into reservoirs of energy, these enclaves intensify the surrounding city. The west Arch as a linear sequence is an abstraction based on a streetcar, there are more sites, more gaps, more resistance points which form a non-deterministic, random network. The premise of the project is the maximisation of existing conditions : it makes evident underlying characteristics, peculiarities, structure, to which new programmes are associated in a process of re-signification. To each site corresponds a development potential which operates on different scales and across different orders, a re-appropriation of the voids into the social domain of the West Arc. In the artificial landscape of the city, the crust of the earth will be its architecture.”



(bottom): Marina Lathouri, Maurice van Eijs - Runner-Up

(top): José Morales Sánchez, Juan Gonzalez Mariscal, Felipe Palomino Gonzales - Runner-Up



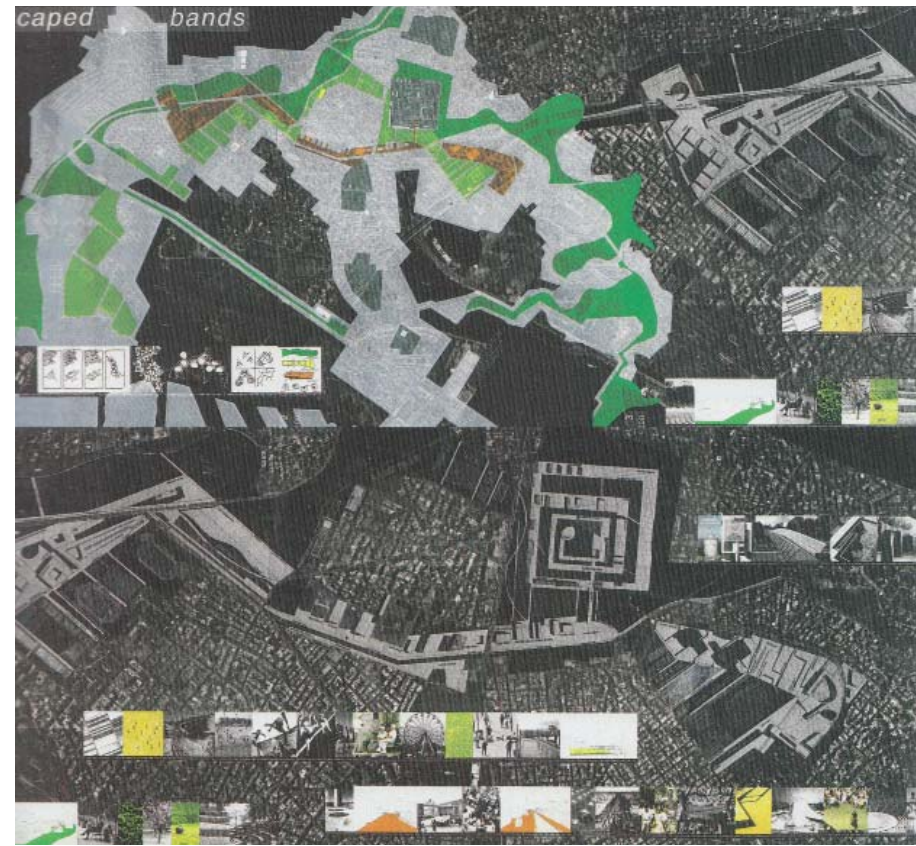
Sylvaine Glaizol, Alain Perez, Aspasia Kamberou, David Solis
Runner-Up

Ellen Monchen, Inge Bobbink, Agnes Burk, Carolien Bijvoet - *Runner-Up*

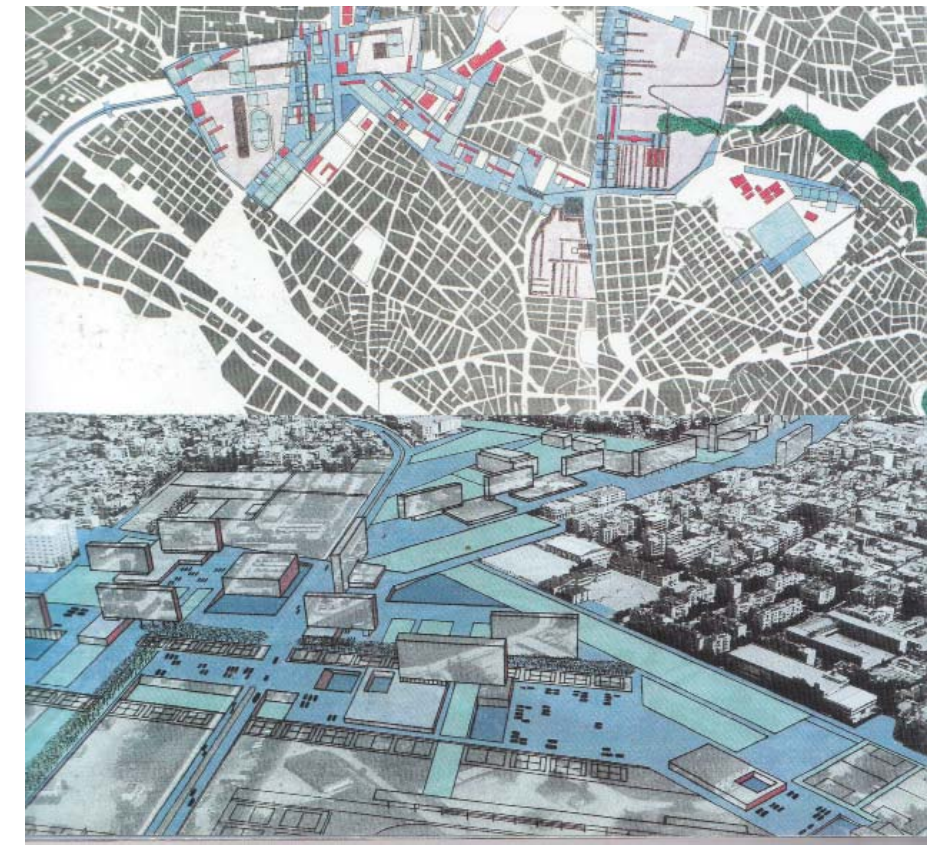
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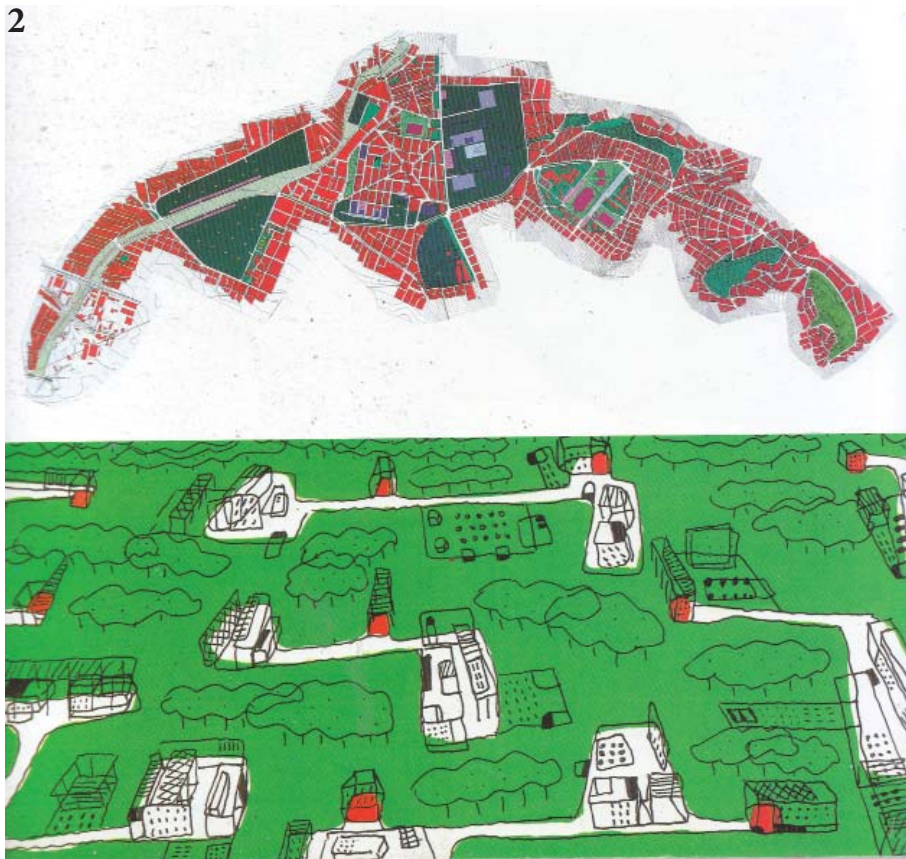
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4



2



Selected Cited Entries

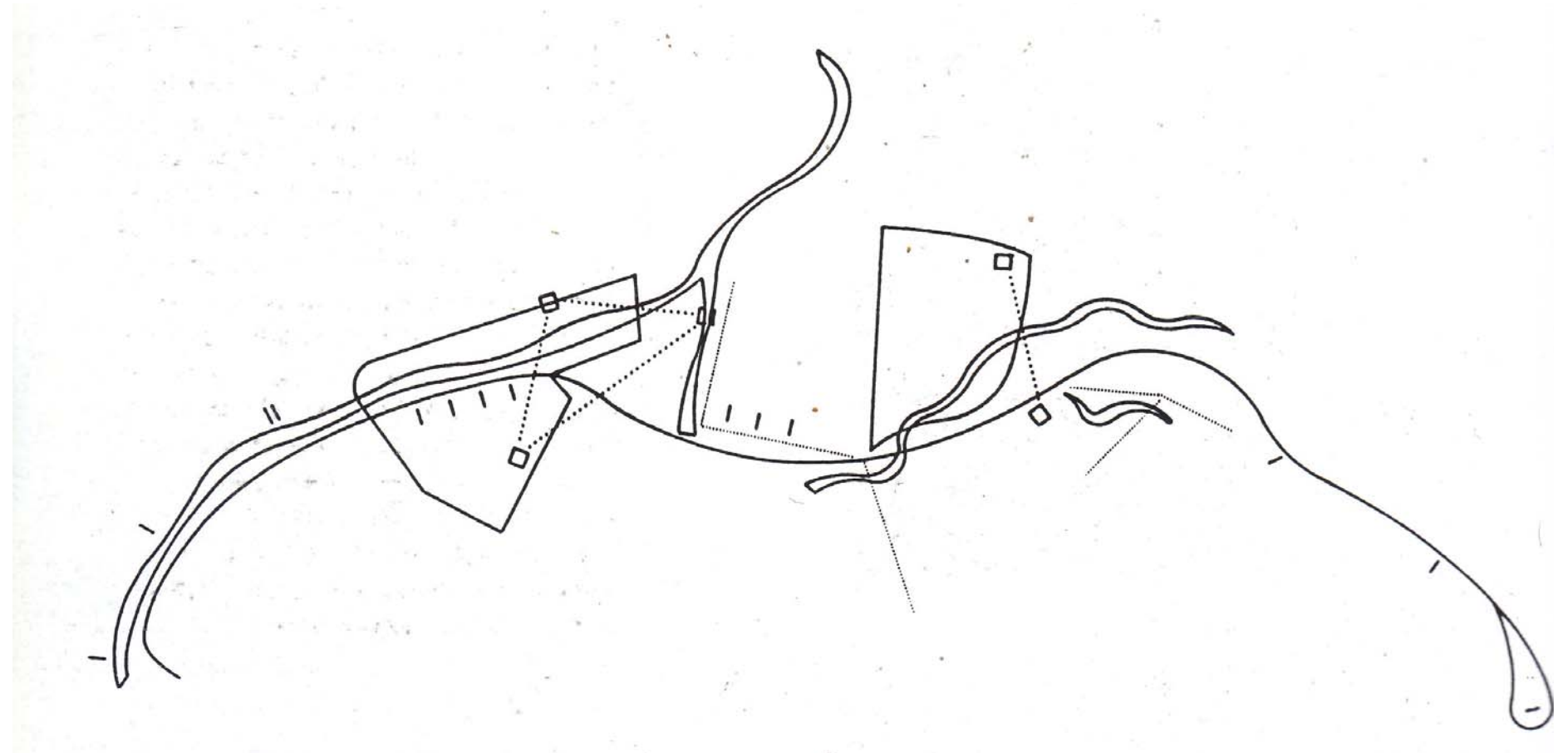
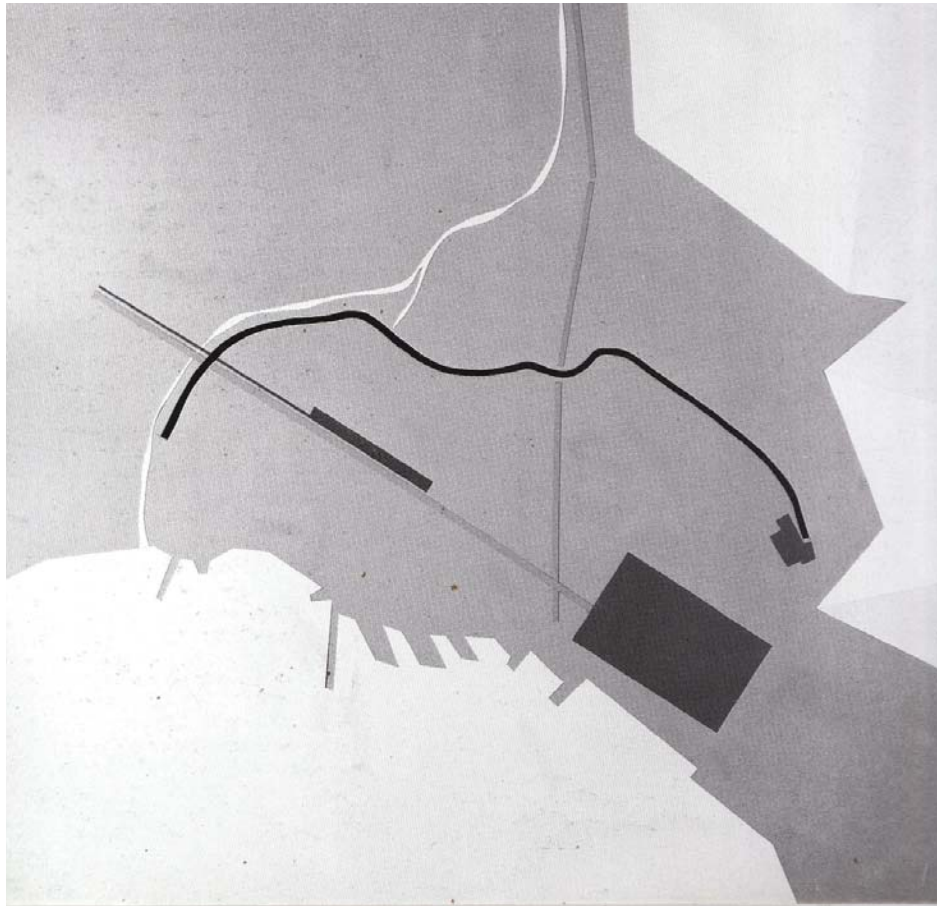
1. Jurgen Bauer, Katja Beiss

2. Roberto Verdelli, Lapo Lani, Paolo Lucattini

Selected Finalist Entries

3. Annete Braüer, Ulrike Braüer

4. Nicoló Privilegio, Marialessandra Secchi.



The Workshops and Joint Project

Hélène Mehats-Grutter, Alexandre Grutter, Francois Defrain, Olivier Souquet, Catherine Brunet, Refki Chelly , Catherine Guillot, John Lonsdale, Karl Meinhart, George Huber

After the 1997 competition, the prize winning teams and the respective administrations and organizers of the contest held three meetings in the form of a workshop that was to produce a *Joint-study* to be eventually delivered and submitted to the corresponding West Arc municipalities⁶.

The first meeting of the series was held in Thessaloniki in June 1997, the second in Paris in August 1997 while the last one in Lausanne in January 1998. During these meetings the group considered the various proposals in search of basic and fundamental ideas and concepts. The objective was to achieve a *shared conceptual space* of the accumulated knowledge produced, and on the basis of that formulate new proposals. For this reason three different conceptual models were created to describe the proposed transformations⁷:

“The joint undertaking involved proposing an urban framework which would be open to the evaluation and transformation of the area by means of the organization of the collective space and time presented by conditions in the megalopolis. It also meant making up for the shortage of high-quality urban space by valorising the potential of the open empty areas along the Arc, which were to become new public spaces.”

Model 1: Point of Reference

A more large scale and abstract analysis intending to bring a active approach to the transformation. The seafront, the forest, the Dendropotamos forest, the historic centre, Lagkada and Egnatia Avenue, all these are elements taken into consideration.

6, 7. Simeoforidis, Y. (2000)

Model 2: Space and time in the Arc

The space along the arc is describes using the three following elements:

- lines* (tram line, rectilinear forest, lins / passages)
- surfaces* (parkland, living quartes, cultivated city)
- points* (big houses, light/beam, public spaces)

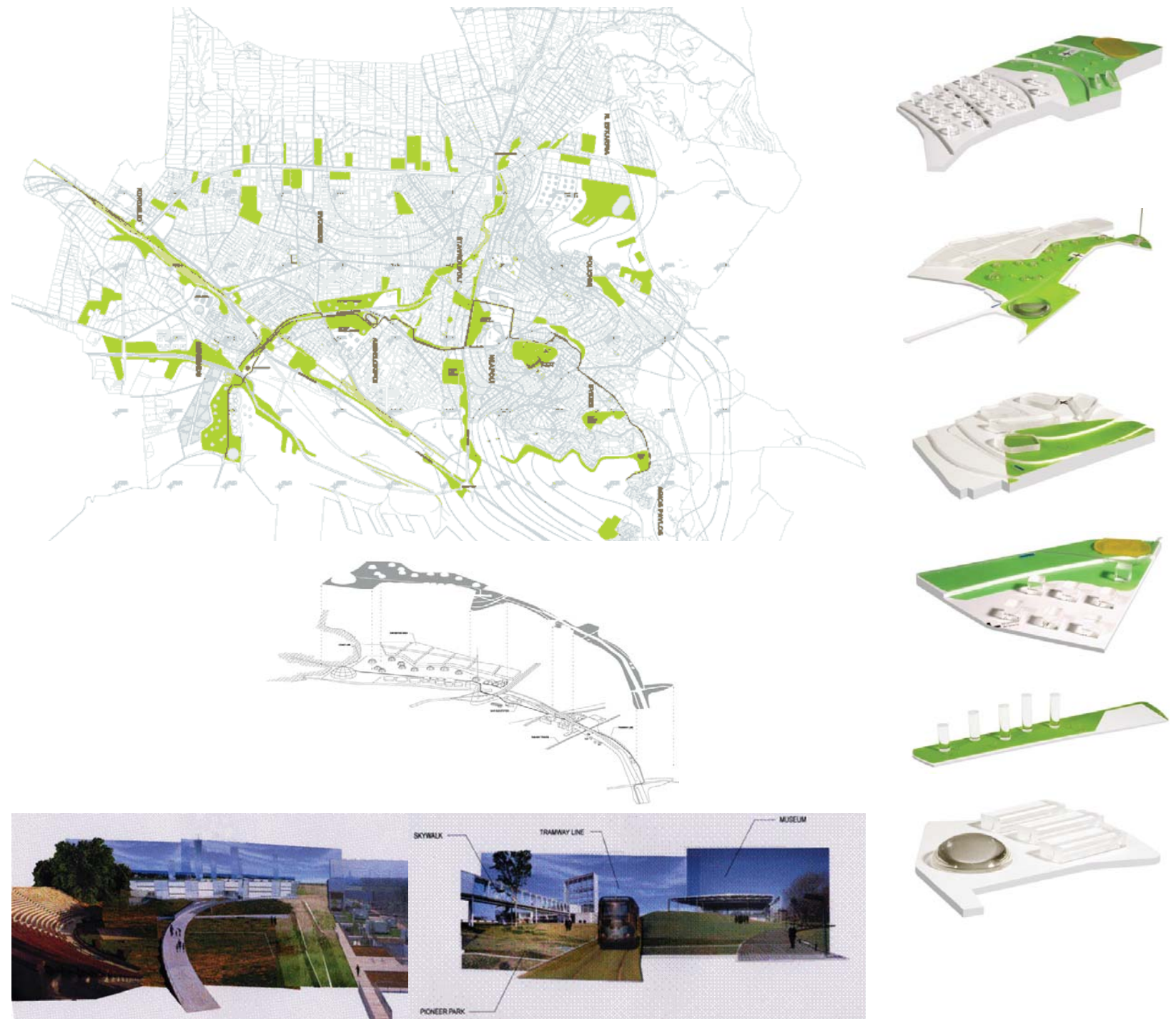
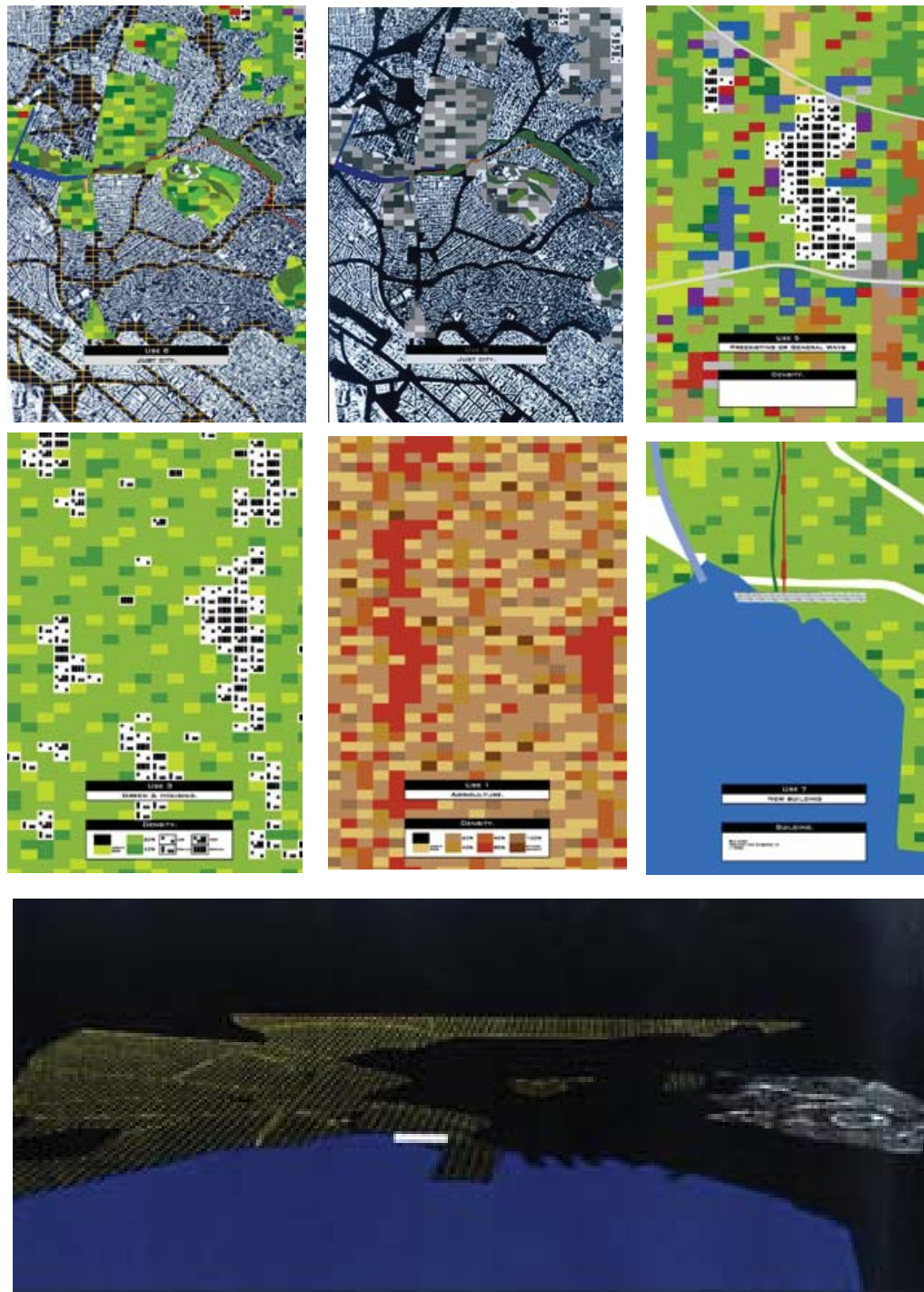
And four times present along the arc:

- i.** time of mobility **ii.** archaeological time **iii.** time of events **iv.** time of nature

Model 3: Collective space on the West Arc

The schematisation out of time of the collective spaces along the Arc; the formalisation of multiple and variable situations, taking into consideration diversity, density and mobility as key indicators. These new collective spaces can accordingly be divided in three categories:

- i.** the enclosed **ii.** the covered and **iii.** the base

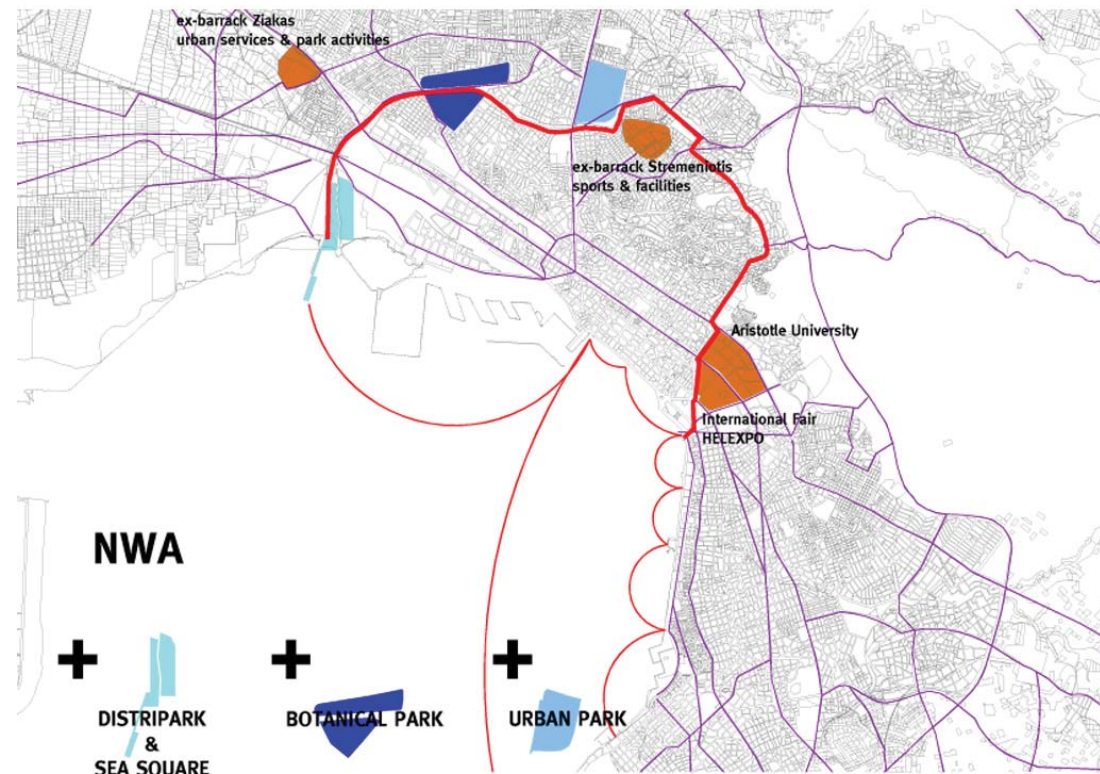


Eduard Bru & associates

LABFAC (Finn Geispel & associates)

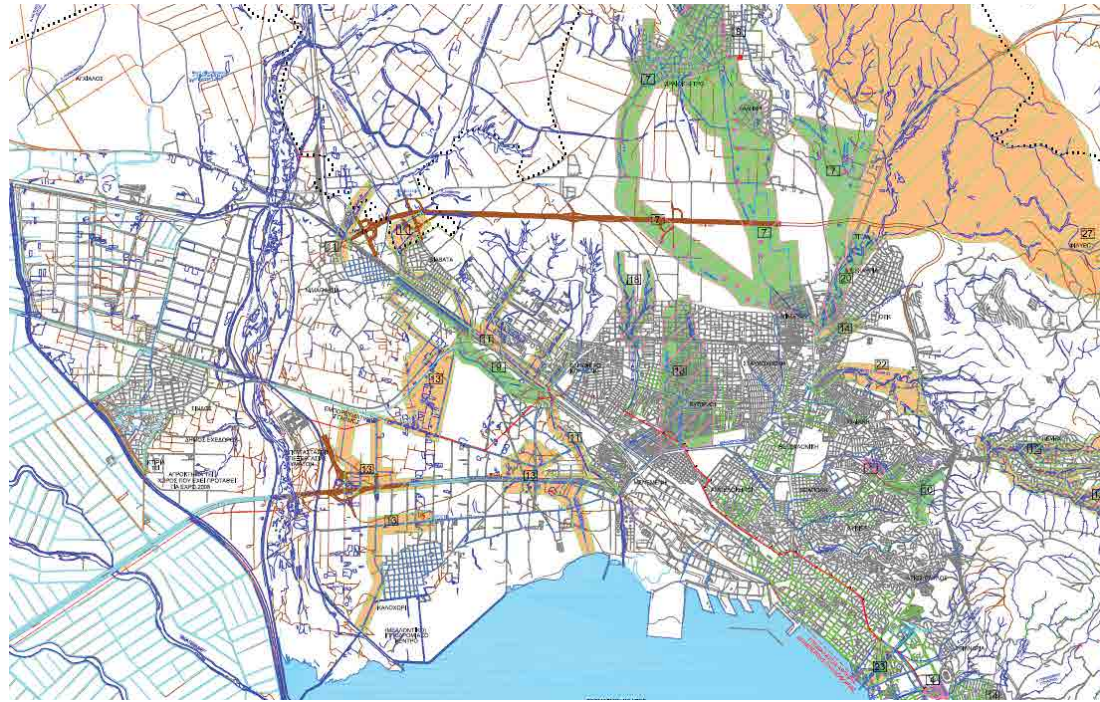
Guidelines for North West Thessaloniki Strategic Plan (2002)

(source: N.W.T. Thessaloniki Development Agency)



BOERI STUDIO (Stefano Boeri, Gianandrea Barreca, Giovanni La Varra)

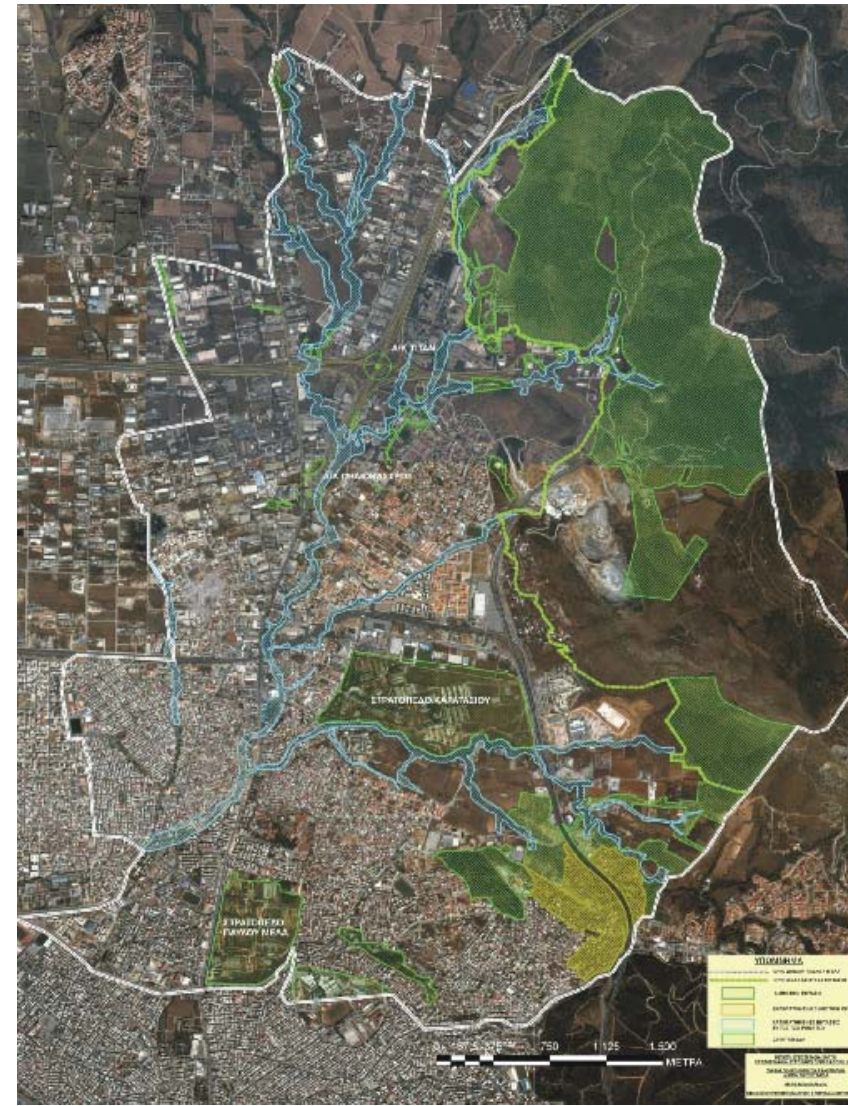
1



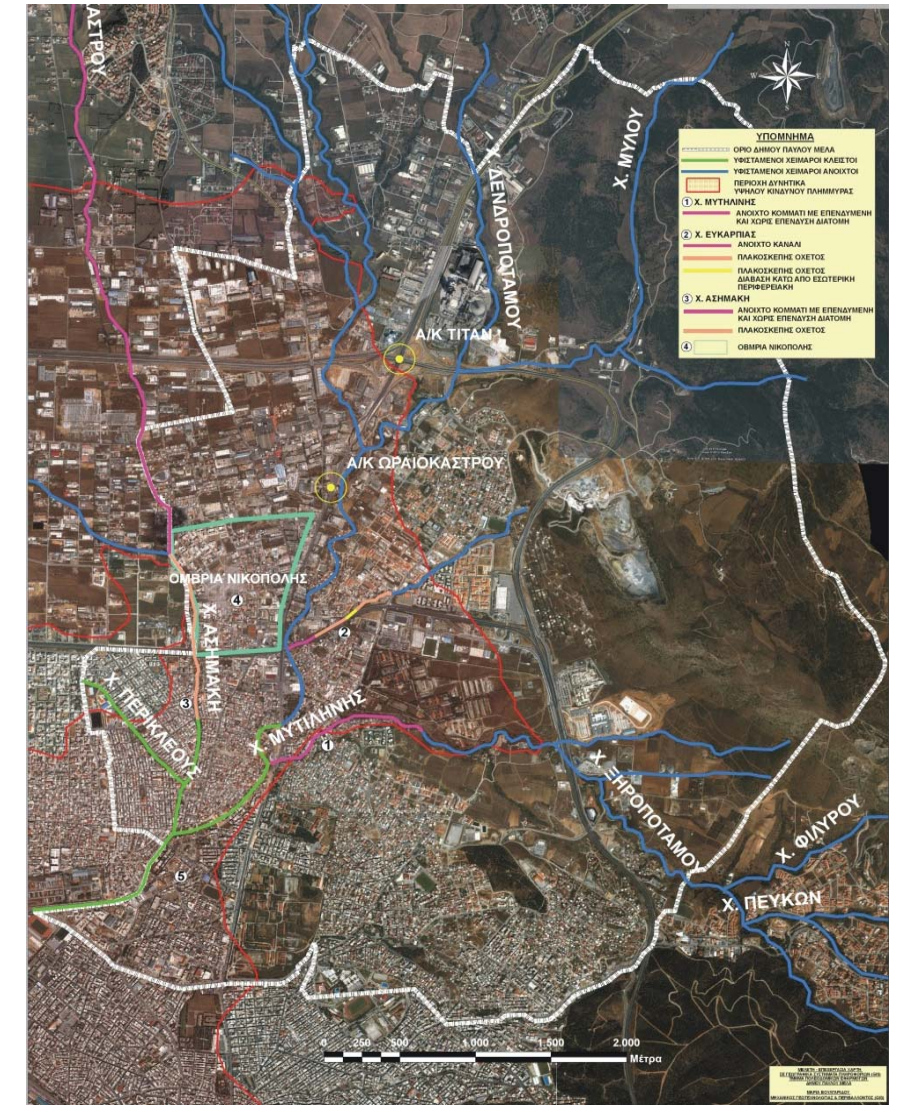
2



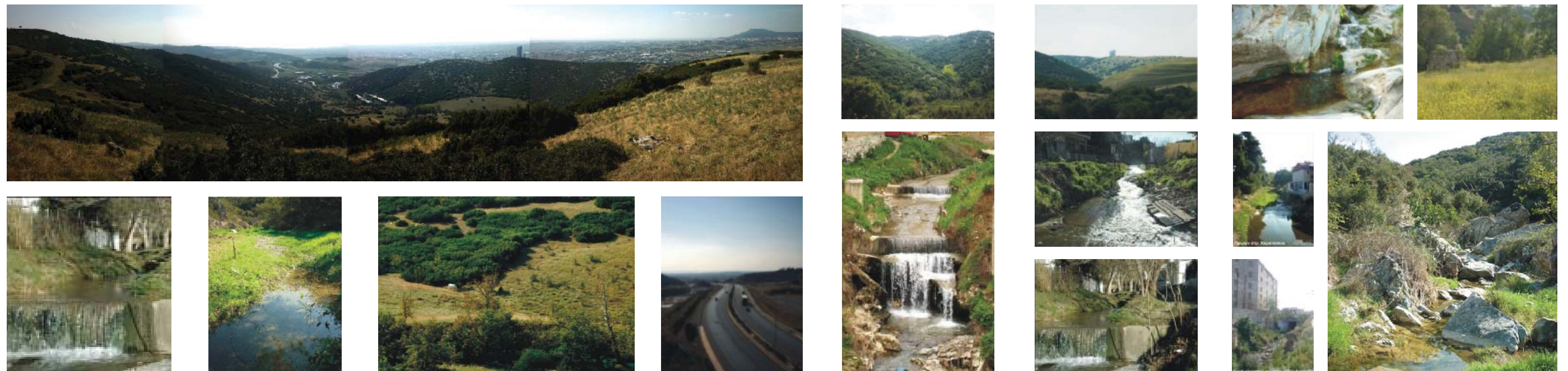
3



4



1. Flood Protection Plan for the Thessaloniki, West Thessaloniki zoom section (TEE/TKM, 2009) 2. Dendropotamos river tributary area / flood risk areas / geomorphology (Municipality of Pavlos Melas, 2012) 3. Public land and 4. hydrological scheme for the municipality of Pavlos Melas 5. Panoramic View of the periurban area of Eukarpia and selected shots along Dendropotamos and tributaries (Municipality of Pavlos Melas, 2012)



iii. The biophysical matrix of West Thessaloniki

The stream ecosystems that run through the western area in combination with the semi-mountainous geomorphology (and the reforested area) create a single (unitary) natural ecosystem particularly interesting due to its proximity to the residential fabric. The remnants of these ecosystems at the same time serve as testament of the earlier lavish conditions that prevailed in the area.

This potentially critical and valuable natural ecosystem has undergone multiple degradations⁸ such as the centuries long replacement of local tree species (pine, oak, etc.) with extensive areas of low vegetation and bare soil due to logging activities and forest fires or the land consumption for agricultural purposes, uncontrolled grazing and informal occupation by individuals for housing needs; as well as the existence of environmentally incompatible uses such as the now abandoned dump sites, the inactive and abandoned quarries and heavy / polluting industries.

A great part of the peri-urban green and key ecological areas is found on the NW limits of the analysis area, within the Pavlou Mela Municipality: 420 hectares, of which the majority within the former municipality of Eukarpia (375) and the rest in Polichni (45)⁹. Great part of this area is designated forest area thus forming a major ecological patch for the extended Thessaloniki area, in proximity with the Seich-Su forest. In addition to that the numerous obsolete military camps hold an additional critical area of green spaces (approx. 132 hectares) found principally within the dense urban fabric, giving them different characteristics and potentials accordingly.

The diagrams on the side page show the different kinds of public land in the (Kapodistrian) municipality of Pavlou Mela, demonstrates at the same time the riverbed grounds occupied illegally, within the municipal limits. It also shows regular public land occupied illegally as well as available unoccupied public land (parks and old military camps). The second plan shows the stream paths present in the area and their current state (uncovered or types of cover).

The stream of Dendropotamos is the most prominent stream in the Western area (largest tributary area in the extended Thessaloniki area¹⁰), crossing it throughout on a NE to SW direction before reaching the sea next to port. Traditionally the Dendropotamos stream has presented serious flooding problems, affecting principally the residential area occupied now by the municipality of Pavlos Melas. The flooding intensity and extension has been affected greatly by the anthropogenic interventions inside its tributary area. The 2012 study by the municipality of Pavlos Melas identified the following reasons for the current situation¹¹:

1. the uncontrolled residential (ekistic) development inside the tributary area and the actual streambeds.
2. the significant capacity reduction of the streambeds of Dendropotamos.
3. the inappropriate technical works and excessive road infrastructure
4. the conversion of the stream to the waste sewage of the entire west Thessaloniki
5. the removal / destruction of ley functional ecological areas with flooding control capacity along the Dendropotamos and tributary streams
6. the overall negligence for the flooding problems of West Thessaloniki.

The principal tributary streams of Dendropotamos are: **i) the Xiropotamos / Mytilinis stream** originating in the Retziki / Peuka area, running along the Karatasios Military camps and joining Dendropotamos at the height of Lagkadas avenue, **ii) the Mylou stream**, originating from the north, and running parallel to Lagkadas avenue until it joins Dendropotamos south of the Titan factory **iii) the Oreokastro stream**, originating north of the town of Oreokastro and running parallel to Dendropotamos and joining it in the Eukarpia area **iv) the Diavata Stream**, originating on the west by the town of Diavata and connecting with Dendropotamos at the junction with National Highway, next to the Central Bus Station. The Mylou stream will serve as a pilot case for the Dendropotamos Flood Protection plan / scheme implementing exemplary protection measures upstream the Dendropotamos stream. Successively the other two streams will be included in the plan¹².

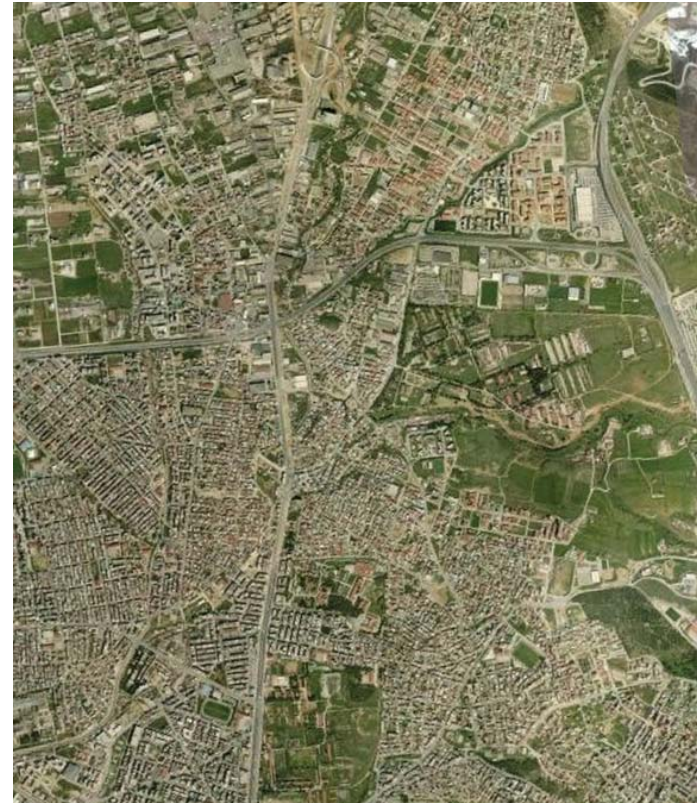
The general conditions prevalent in the area make obvious the absence of a coherent plan and accordingly a structure for the regional open and green spaces, resulting in the further fragmentation, occupation and degradation of these spaces. Future efforts need to focus on the establishment / creation of a green network structure, that could potentially offer ecological resilience on a regional scale, and facilitate the improvement of urban conditions on a macro and local scale. The hydrological management on a regional level and integral manner is another pending issue, incorporating diverse questions such as flood control / protection, fire protection, irrigation and leisure opportunities. These issues / questions when considered in conjunction with the urban fabric make more evident the present difficulties / obstacles but at the same time highlight latent opportunities as it will be demonstrated in continuation.

8, 9, 11, 12. Municipality of Pavlos Melas (2012)

10. TEE / TKM (2009)

Territorial transformations

Polichni & Stavroupoli (1971-2012)



Polichni's Meteora (1960-2012)



Evosmos & Kordelio (1959-2012)



West Thessaloniki (1945-2000)

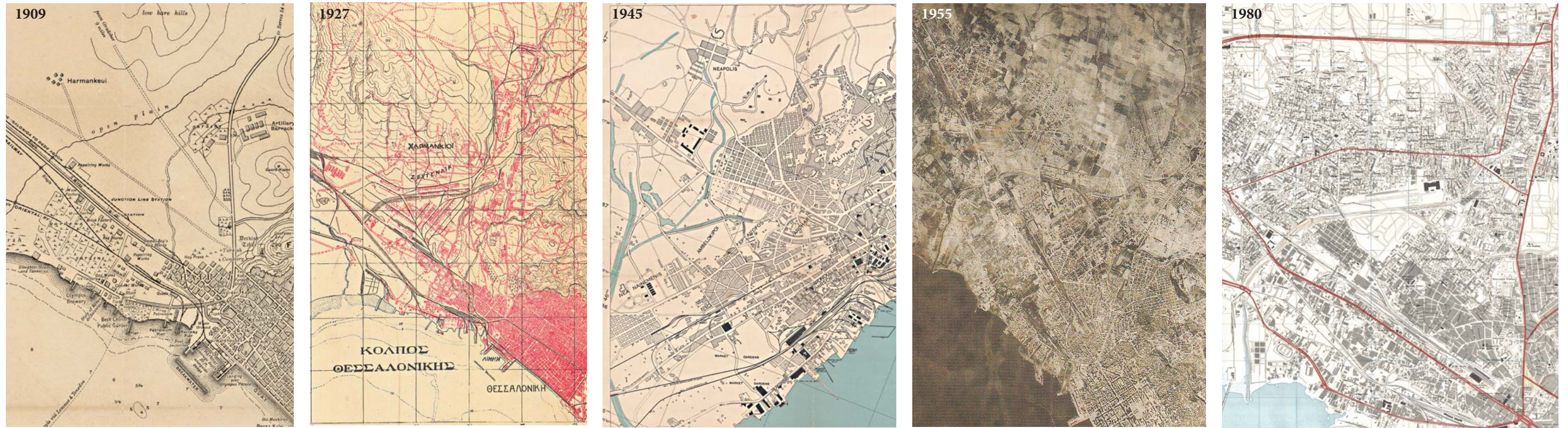


Population evolution and distribution

Municipality	Population (2001)	Population (2011)	Surface (m ²)
Thessaloniki	385,406	322,240	19,292
Ampelokipon - Menemenis	58,349	51,670	9,792
Kordeliou - Evosmos	77,714	101,010	13,358
Neapolis - Sykewn	89,270	84,500	12,903
Pavlou Mela	87,587	98,870	23,763
Total (west)	312,380	336,050	59,816

source: Municipality of Pavlos Melas (2012)

Territorial transformations



iv. Habitability Assessment

The habitability / liveability conditions along the exterior arc and the extended western area in general vary greatly depending on the conditions under which each distinct fabric was formulated. Contrary to the Interior Arc area that due to its proximity to the historic centre followed to a certain extent the original Hébrard Plan, the area further west did not develop accordingly. For this reason, the fabric of the extended west area presents certain characteristics distinct from the respective eastern Thessaloniki area.

The area of West Thessaloniki covers today half of Thessaloniki's urban agglomerate total surface, while hosting $\frac{1}{3}$ of the city's population¹³. The urban mosaic of the western area is presented today in an increased fragmented state, and less cohesive than the rest of Thessaloniki's urban fabric. This is due both to the processes of settlement in the territory as well as the legal framework and administrative conditions in force, linking to the social and economic position / capacity of local residents¹⁴. The open areas outside the respective urban limits of each period, followed a typical succession pattern, a process of transformation from agricultural (primarily) to fully urbanized of residential or secondary or tertiary uses. The pronounced residential development took place in three general periods: the first, 1912-1922; the second, 1950-1960, and the third during the decade of 90s.

The northwest region of Thessaloniki until the arrival of refugees in the beginning of the 20th century consisted of large land estates such as the Lebet, the Charmankioi, the Kara-Isin etc. with sparse signs of residential activity and overly without a recognizable residential network³. With the uncontrolled

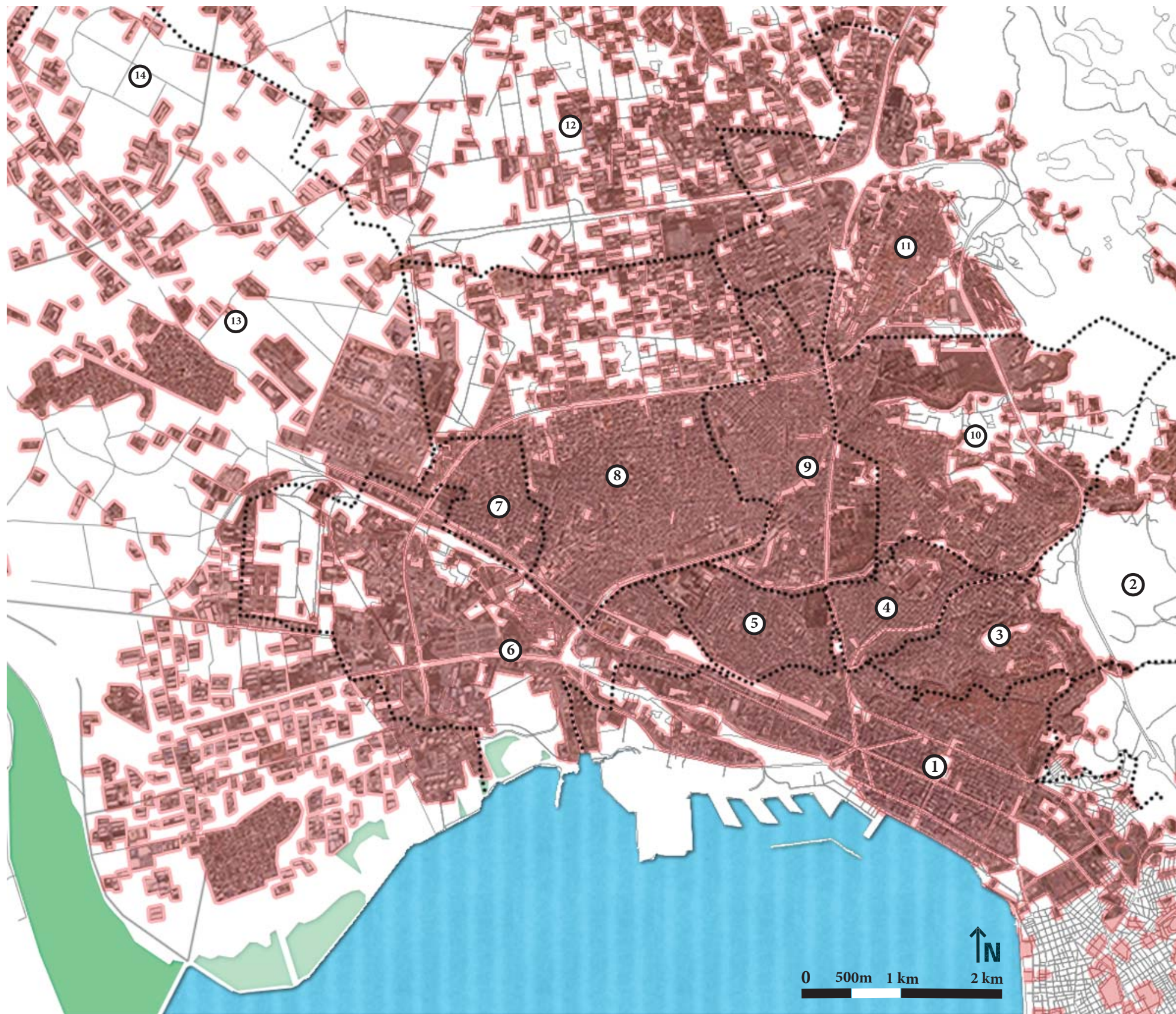
edification on a local level of the earlier agricultural lots, the initial refugee settlements were gradually incorporated into a spontaneously developed urban continuity. The areas proximity to key transport infrastructure (port, railway station) as well as the diverse spaces of production / employment in combination with traditionally low land values, converted it to a place of residence convenient for all the different and diverse waves of refugees and immigrants in the recent history¹⁶. These same reasons also rendered it historically into a degraded/inferior urban landscape. Key role in this process played the state land policy through successive distributions of rural allotments in various categories of beneficiaries were offered, which encouraged cross-division and their conversion to residential use. The diffuse and polycentric spatial structure of western Thessaloniki was more receptive and at the same time uncontrollable for receiving new settlers. Finally, the networks of kinship, friendship and mutual support among immigrants also played a key role in the continuing influx of settlers in specific locations¹⁷.

The first settlers that installed in the area arrived in 1914 from East Thrace and Minor Asia and set up in the middle of an area called Ζευτινλικ (Zeytinlik = olive grove in Turkish) in close proximity to the Lazariston Monastery. Soon they adopted the name Lempet, from the Christian land estate that was located a few kilometres to the north¹⁸. Many of these initial refugees left in 1919 only to return again for good in 1922. In 1917 the people affected by the great city-fire also found refuge in the area installing in two phases¹⁹; first in immediate settlement in camps that were set up earlier in Lempet and Kara-Isin (Polichni), and later in smaller settlements along the length of Lagkada avenue. That second phase served as a test ground for the great influx of the refugees of 1922, that caught the Greek state

13, 14, 16. Municipality of Pavlos Melas (2012)

15, 17. greeksapes.gr

18, 19. Lazaridis, S. (1997 & 2012)

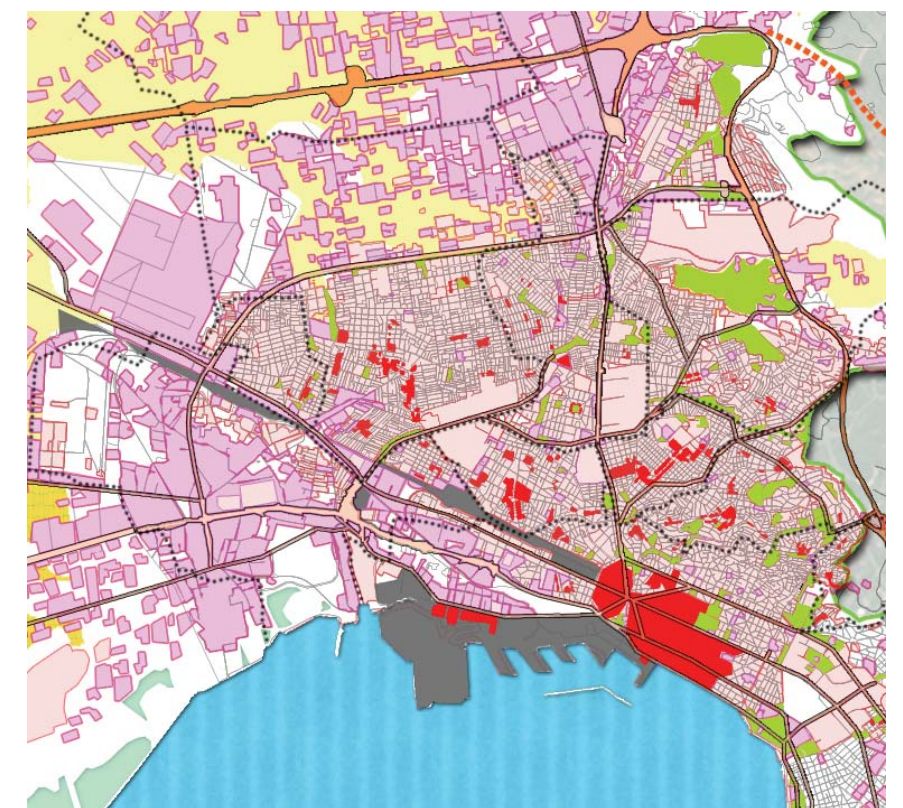


Urban cover & densities (urban | green)

- | | |
|---|---|
| 1. Thessaloniki (21,631 res/km ² 2.15 m ² / res) | 8. Evosmos (5,523 res/km ² 6.27 m ² / res) |
| 2. Peyka (3,592 res/km ² 30.62 m ² / res) | 9. Stavroupoli (13,725 res/km ² 14.33 m ² / res) |
| 3. Sykies (5,360 res/km ² 3.00 m ² / res) | 10. Polichni (5,129 res/km ² 8.71 m ² / res) |
| 4. Neapoli (27,252 res/km ² 0.99 m ² / res) | 11. Efkarpia (486 res/km ² 5.00 m ² / res) |
| 5. Ampelokipoi (23,858 res/km ² 5.96 m ² / res) | 12. Oreokastro (548 res/km ² 55.48 m ² / res) |
| 6. Menemeni (1,894 res/km ² 14.35 m ² / res) | 13. Echedorou (229 res/km ² - m ² / res) |
| 7. Eleytheriou (6,514 res/km ² 0.83 m ² / res) | 14. Kalithea (60 res/km ² - m ² / res) |



Surrounding Environments & Green Areas



Urban Centers & Structure

- municipal centers
- local centers
- industrial / manufacturing areas
- green areas
- transport related areas

unprepared and consequently unable to implement the Hébrard Plan for the Western area, resulting in an improvised settlement and the chronic degradation of the area.

Until the 70s the extreme urban space was determined solely by the Legislative Decree of 1923 “On the plans of Cities and Settlements of the State and their edification” (“περί σχεδίων πόλεων και συνοικισμών του Κράτους και οικοδομής αυτών”) and was complemented with the decree of 1928 “on the definition of the conditions and constraints within and outside the limit of cities” (“περί καθορισμού των όρων και περιορισμών της εντός και εκτός σχεδίου ζώνης των πόλεων”)²⁰. The decrees of ‘23 and ‘28 were the basis for the national planning legislation and up in the mid ‘70s most Greek cities continued to grow with successive partial extensions of the city plan in accordance with formentioned decrees. Those decrees would define the basic street grid with provisions for allocating only some communal spaces and utilities and without entering in great details and justifications. Usually they were realised under the pressure of already formed condition of illegal building or interests of different sorts. They involved orders of parcellation without a theoretical support for the necessity and feasibility studies and a broader correlation with the general planning for the development of the entire city. These plans also experienced significant problems in their implementation in practice, partly due to problematic/erroneous surveying studies and disregard for the natural elements of the terrain (slope, streams, etc.) and the legal status quo, that lacked the framework that would provide the necessary funding for the urban infrastructure works of the respective areas²¹.

In Thessaloniki, while the debate on the Regulatory Plan was still in development and the problem of out-of-plan residential areas remained unresolved, the prefecture of Thessaloniki initiated a process for the promotion of the integration of the western areas in the city-plan. Under the pressure of an ambitious mayor, solely the Urban Plan of Evosmos was established by a Presidential Decree of 1979. The plan extension did not respond to the problematic areas of the illegal settlements but exceeded them by far. For the rest of the western districts the plans were halted in anticipation of the enactment of new law for residential areas. Under the law 947/79 “On residential areas” (“περί οικιστικών περιοχών”) the extensions of the city plan and new residential areas were to obey to the logic of a general master/regulatory plan or a documented plan of structural interventions. The Article 10 of this Act referred to “...urbanization of exclusively densely built-up areas of primary residence as extensions of already approved city plans in accordance with the Ordinance of 1923...”, provided of course that they were in accordance with existing plans and decrees and had gathered the necessary financial provisions²². In the region of Thessaloniki the residential areas that were urbanized under the designation *densely built*, were the extension of the refugee settlements of El.Kordeliou, of Menemeni and Nea Efkarpia, the extensions of Terpsithea, Omonia in Stavroupoli, the areas of *Ano Asilou* and *Kato Nicopolis* in Polichni and Stav-

roupoli, the extensions of Meteora in Polichni, of Krioneri in the Municipality of Sykies and Kifisia in the Municipality of Thessaloniki²³. The Urban Reconstruction Operation (*Επιχείρηση Πολεοδομικής Ανασυγκρότησης*) was launched in 1982 and was a unique historically coordinated effort to unblock and to address city problems integrally and in their entirety, while establishing a new framework of legality and rationality for future urban development. Nevertheless the program gave almost exclusive emphasis on the need for vital residential space. Growth in non-urbanized spaces was not seen as a first priority, since there were still small and controllable pressures, and thus left untouched the jurisdiction of the previous institutional framework, namely the Decree of 1923 and its implementing ordinances²⁴. Thus the areas of the western Thessaloniki, went expanding consecutively accommodating political and market pressures, while ignoring the need for a coordinated planning, which has led to the contemporary fragmented and differentiated mosaic. Today the urban mosaic of West Thessaloniki in terms of habitability is characterized by a series of problematic conditions which can be summarized in the following list²⁵:

- Excessive urbanization with parallel extinction of open spaces
- The absence of a regional green and public spaces network
- Overall aesthetic and landscape degradation
- Excessive road infrastructure but restricted mobility
- Deficiencies in social infrastructure / Increased unemployment
- Presence of large urban voids (industrial / manufacturing / military)
- Increased pollution (air & ground)

This differentiated mosaic includes a series of spaces of special use that due to the development of the city got trapped or reached in close distance to the urban fabric, such as military camps, tobacco factories, cemeteries, forests and water streams. Thus the present typologies in the area cover a wide range of possible typologies; from residential, to infrastructure, to industrial or even natural fabrics. Even within these groups the subgroups present a great diversity, evidence and result of the fragmentation and heterogenization process of the local landscape. This diversity, subtle and latent, present in the area can serve as a handle for its own regeneration, highlighting and protecting its cultural and historical heritage. In continuation an indicative demonstration of the different fabrics present in the contemporary mosaic, will demonstrate the complexity, particularity and intrinsic richness of the territory. Starting with the non-residential typologies these include :

20, 21, 22, 23. Christodoulou, Ch (2008)

24. Kafkalas (1998)

25. Municipality of Pavlos Melas (2012)



LEGEND

source: Bing Maps, 2011

1. Nea Magnisia / Gallikos River 2. Ano Evosmos 3. Oreokastro Industrial Area 4. Efkarpia node & Titan factory 5. Papageorgiou & 424 Militart Hospital 6. Filyro
 7. Nea Magnisia agricultural area 8. EKO refinery & Agia Irini district (Eleftherio- Kordelio) 9. Evosmos center 10. Kirilos-mehodios distric (Evosmos) 11. Nea Efkarpia 12. Pefka / Retziki
 13. Gallikos Estuary 14. Highway node / Menemeni 15. Neapoli 16. Terspithea district (Stravroupoli) 17. Meteora district (Polichni) 18. Seich - Su forest (Sykies)

- Agricultural areas & related activities (1, 3, 6, 7)
- Natural or Seminatural Areas (6, 12, 13, 18)
- Infrastructure related areas (4, 11, 14)
- Great Industrial Areas (4, 8)
- Regional Attractors (5, 14)
- Diffused Tertiary Activity (2, 3, 4, 5, 14)

The residential typologies on the other hand include different types of typologies as one moves outwards from the historic centre. These typologies also tend to demonstrate increased densities on the radius of the exterior arc and then go down as they reach the interior Ring-Road. Some indicative typologies are the following:

- Dense Urban Fabric (15)
- Western Extensions (2, 9, 10, 16)
- Detached housing (11, 17)
- Peri-Urban Extensions & Towns (12)
- Diffused rural housing (6)
- Social Housing (11)

The exterior arc with its corresponding spatial extension, marks an important urban corridor / artery that traverses distinct urban fabrics and typologies and offering a radial sea-forest connection. Complementary to the corridor effect, the respective ecotone effect is more subtle. There is a clear built- density difference on the two sides of the arc, with lower densities on the N, NE side. Similar trends are also observed in terms of social / employment terms. The typological (architectural & urban) differences are also discernible but less visible due to the large discontinuities created by the existing voids (principally the military camps that are the biggest in size) blurring / masking the ecotone effect. Nevertheless the effect is not as pronounced as in the case of the Interior Arc. Considering the extended west area in its entirety, the city division on a east-west plane is made visible, with the West side undertaking the degraded - lower side throughout the last century of development. A degradation in terms of habitability but also in terms of natural landscape with the disappearance of the streams, urban and peri-urban green areas. In terms infrastructure and more specifically mobility and public transportation provisions (actual and future) the western area is seen neglected by central planning authorities. The latter have traditionally chosen to utilize the area as a spatial and social waste site of unwanted activities within the extended Thessaloniki region²⁶.

No matter the already recognized importance of the exterior arc and all the research and planning effort put into it, the arch has yet to consolidate as a urban structuring element, and unexplainably was not included in the recent revision of the Regulatory plan as a planning objective²⁷. Nevertheless, the position of the arc, in the contemporary city structure, in such close proximity with diverse typologies / conditions, verifies its importance and its potential in reconfiguring / restructuring the local and regional mosaic. Further analysis of different aspects of the arc (activity/mobility) will examine this claim, isolated and in relation with the extended western area.

In continuation the next two pages provide a series of low-height aerial photos of West Thessaloniki that demonstrate the conditions described earlier in this section. Following this feature, the *Activity Assessment* will enrich the lecture of the local mosaic, considering the range of activities present on both sides of the exterior Arc and at the same time within the West Thessaloniki limits.

^{26, 27}. Municipality of Pavlos Melas (2012)



Aerial photos of the NW area

(image sources: 1. Simeoforidis, Y. (2000) 2, 4, 5, 6, 8, 9, 10. aiphotos.gr 3, 7. greekscapes.gr)

4



5



6



7



8

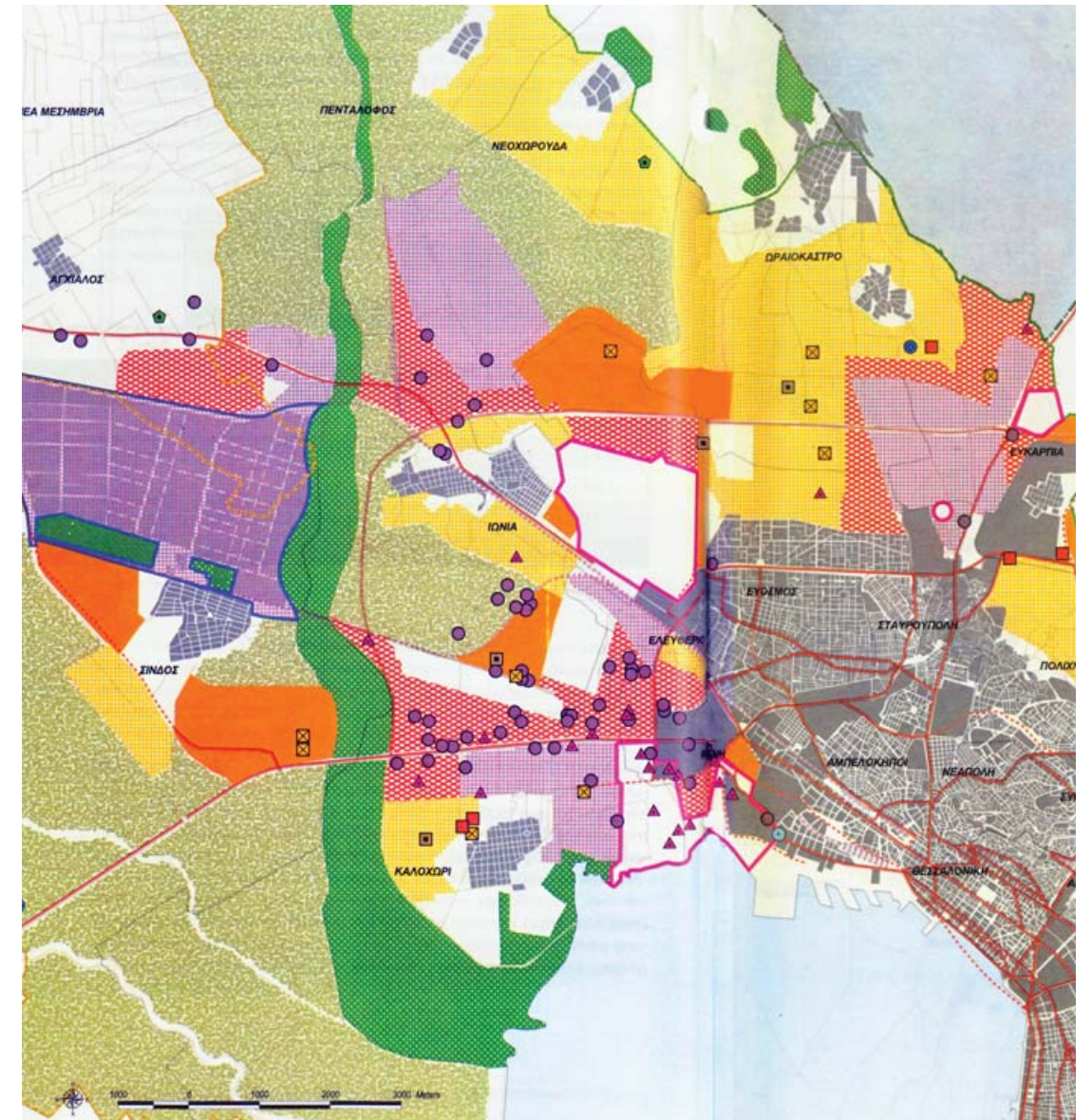


9



10





Activity & Uses (data source: CORINE land cover)

Tertiary sector activities and land use in West Thessaloniki

(source: G. Kaykalas et al, 1999)

- | | |
|--|--|
| commercial | transportation |
| cultural | road arteries |
| educational | railways |
| military | |
| administrative | |
| industry & manufacturing | |
| health | |
| green | |

v. Activity Assessment

This next section will accordingly investigate the diverse types of activities that take place and form the urban fabric, in the vicinity of the exterior arch and the extended western area. Registering activity on the extended area around the exterior of the wall can help define the exact role that the arch can play for structuring the entire western area, regulating and equilibrating deficiencies and surpluses on a local and intramunicipal level.

At a first observation, one can observe the role of the radial city structure in dictating activities and the transverse axes in diffusing these activities in lineal growths, outside the radial scheme. This radial structure is analogous to the distinct growth phases of the city. The detection of the voids produced from each era in combination with historical and contemporary cartography allow to define these phases:

1. *The Vardaris area* - with the traditional smaller artisan manufacturing units and industries typical of the beginning of the 20th century. Both kinds present different degrees of abandonment from partial to complete. Transformations and changes of use have masked a lot of these areas.
2. *The Dendropotamos area* - serving as a city limit temporarily attracted two kinds of activities
 - small industries characteristic of the development of the 50s-60s. A special type of industries are the tobacco warehouses in Stavroupoli, the majority found in an abandoned state.
 - military installations, dating principally from the first world war. Today found in majority in an obsolete or abandoned state²⁸.
3. *Inner ring road* - associated with growth starting from the 70s to the 90s. The units start to grow in size with polluting or conflicting uses also moving out in the periphery, e.g heavy industry.
4. *Outer ring road* - associated with latest developments and the Egnatia highway, and with an increasing through traffic rate.

Attractors and areas of activity

The urban centralities can be found all the way to the exterior ring road, developed around civic & urban services or major road arteries all over the western city fabric. These centralities often present a diffused effect due to the mixed use scheme that prevails in the majority of the urban district.

Cultural

Municipal cultural Centres, (Menemeni, Stavroupoli, Eleytherou-Kordeliou, Neapoli, Evosmos, Polichni, Sykies), Conservatories (Ampelokipoi, Stavroupoli), Moni Lazariston, Botanic garden (Stavroupoli)

Educational

Various schools of all grades scattered in the fabric, the Technical University of Thessaloniki west of the exterior ring, Institute of Vocational Training of Neapoli, Thessaloniki and Evosmo, the department of Cinema of the Fine Arts School (Stavroupoli).

Administrative

Regional Government of Central Macedonia Headquarters, Police Headquarters, city-halls of the respective municipalities, public administration and services buildings.

Commercial / Recreational

Central Meatmarket of Thessaloniki, Central Vegetable garden of Thessaloniki. Sfagia (Mylos, Fix etc), Lachanokipi, smaller commercial areas around ring road nodes / exits.

Health

Numerous local health centres, Papageorgiou and 424 Military hospitals by the inner ring road, The psychiatric hospital of Thessaloniki.

Sport

Municipal Sports Centres (Ampelokipoi, Eleytherou - Kordeliou, Stavroupoli, Sykeon, Neapoli, Polichni), numerous sport stadiums.

Historical / Archeological

Allied Forces Cemetery Complex (French, Italian, British, Serb) Roman Catholic cemetery, Jewish Cemetery, Indian Cemetery, Ag. Paraskevi cemeteries, Derveni burial site, Toumpa Polichnis, the Byzantine Mills of Polichni.

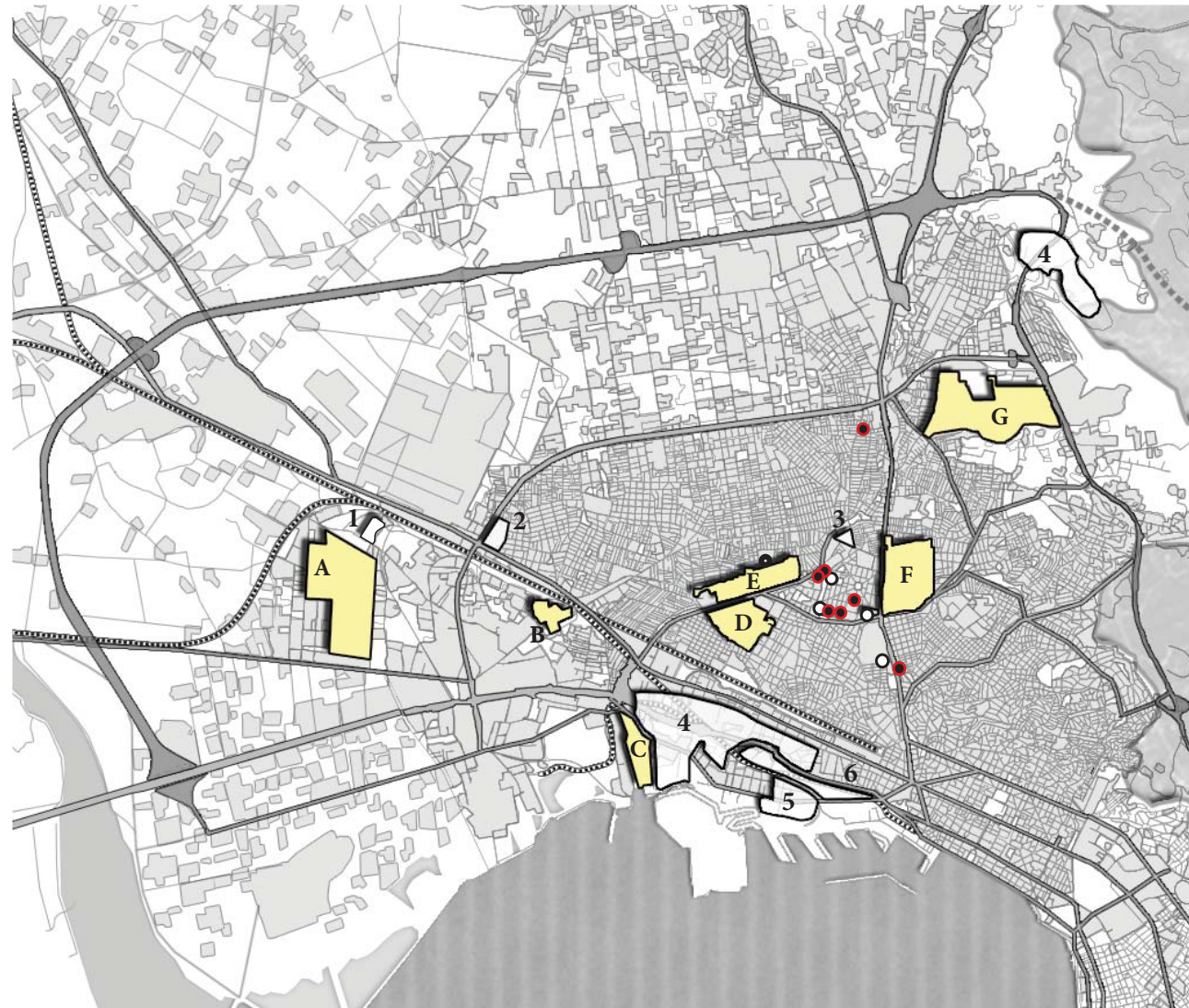
Industrial

Sindos - Thessaloniki Industrial Park (Ext. Ring Road), Kalochoi Industrial & Commercial Area, Oreokastro Industrial Area, Menemeni Industrial Area, as well as industrial installations of great size such as the EKO refinery (interior ring road), Titan Cement factory (Int. Ring-road & Lagkada Avenue), Sewage Treatment Plant.

Transport

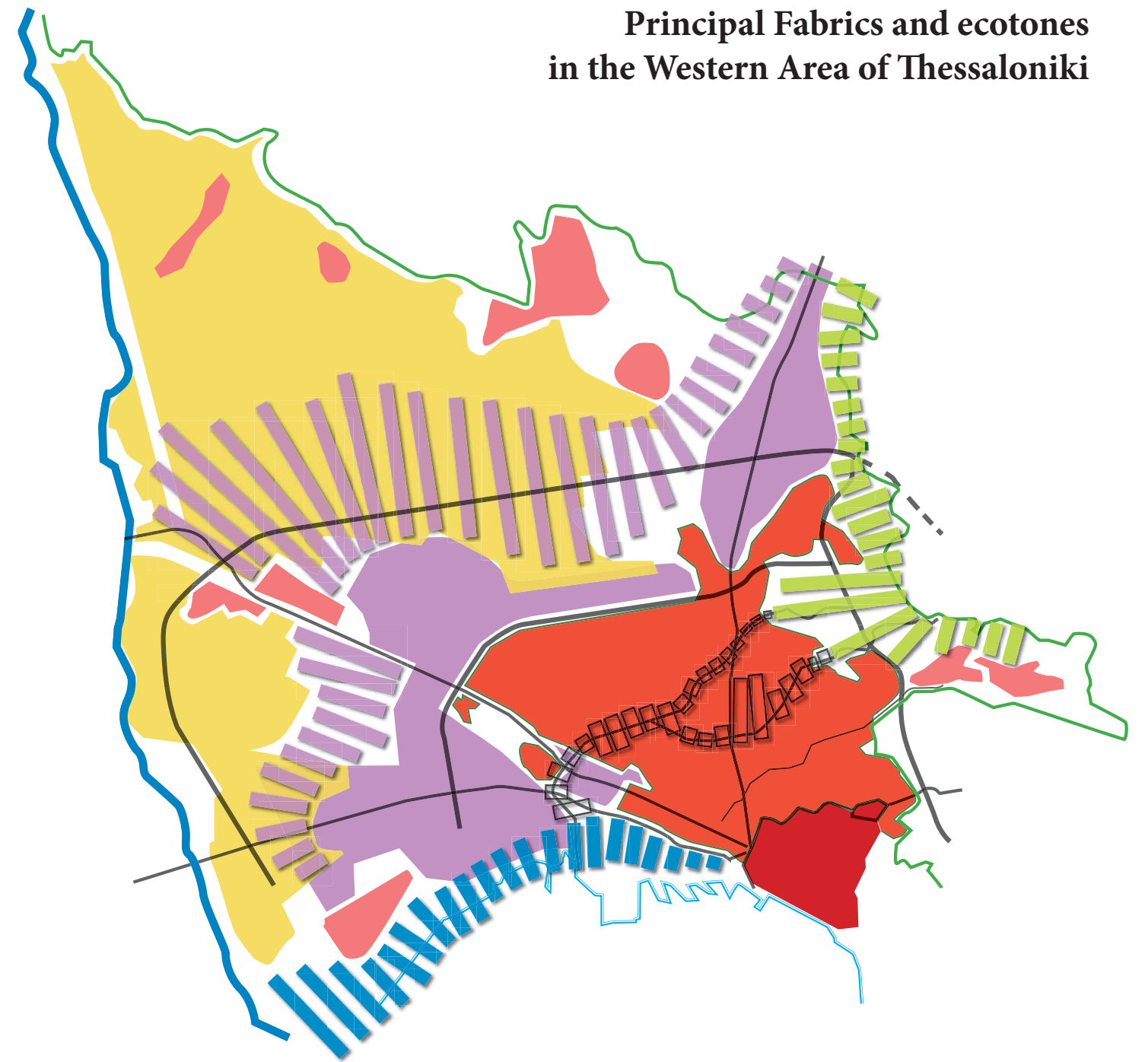
The central train station on Egnatia, the out-of-use old train station and related infrastructure. the central bus station (KTEL), The port, with the passenger terminal on the east, and the cargo and transport section extending to the west all the way to the Kakioussi military camp.

28. Zygomas (2006)



Activity & Residual Spaces

- Abandoned Military Installations**
 A. Gonou B. Ziaka Camp C. Kakiousi Camp D. Mega Alexandrou Camp
 E. Papakiriazzi Camp F. Pavlou Mela Camp G. Karatasiou Camp
- Abandoned Industries and Opportunity Sites**
 1. Xilopan factory 2. Filipou brick factory 3. Agno Factory 4. Lachanok-
 ipoi Business Park 5. Port Development Area 6. Old Train Station
- Tobacco Industry Buildings**
- Functioning units
- Refurbished units to commercial or cultural uses
- Abandoned units



Fabrics

- Historic Center
- Western Expansions
- Peri-urban towns
- Agricultural
- Industrial / Manufact.

Ecotones

- Urban - Rural
- Urban - Forest
- Urban - Sea
- Urban - Urban

Urban Voids

The area of the exterior arch, mostly in Stavroupoli is characterized by the presence of old and abandoned factories, many of which Tobacco factories, a key sector of the manufacturing industry in the past in the area. The abandoned industry installations can also be seen repeated in smaller or bigger scales in older industrial areas of the city (eg. Sfageia, Lachanokipoi). The military installations are another distinct type of what have come to become urban voids, that are analysed in continuation. (see diagram in adjacent page)

Military Camps

With the current institutional framework, (Law 2745 / 10.27.1999) there is sufficient potential for the further development of the camps²⁹. Also with the Ministry's approval the redevelopment of the sites of the abandoned military camps is approved under the National program for the strategic Redeployment of the Military camps. The determination of land use in the camps decided by is through the Ministry and the O.R.Th. The law 1561/85 for the Regulatory Plan of Thessaloniki provisioned for the removal of the military installations from the urban area of Thessaloniki for the creation of free spaces³⁰. Concerning the question of the reclassification of the military installations of the extended urban region, the first step was made with the case of the Pavlou Mela in Stavroupoli and Kodra camp in Kalamaria. In both camps, their building stock went under the protection of Ministry of Culture, serving as a demonstration of the capacity of military installations, to serve as reference points for the historic memory and the regeneration of the urban landscape.

Anticipating an answer to the question concerning the fate of the military installations, the Architectural committee of the Technical Chamber of Macedonia Central (TEE/TKM), prepared in April 2005, a study group with the objective of registering significant buildings and building complexes in a total of six camps: *Ziaka*, *Kakioussi*, *Papakiriazi*, *Megalou Alexandrou* and *Pediou Areos* (covered in the Central Axis chapter). The team explored six camps and isolated 99 buildings and 10 building complexes as worthy of attention. These *highlighted* buildings can be seen in the respective map of each camp in the following set of pages. Continuing with the forementioned study, apart from the on-site survey performed on the six selected camps, at the end it offers 3 major observations / conclusions that are to serve as the results of the analysis³¹:

First: As a general rule, the outstanding building that have been identified have been found in a state ranging from *good* to *very good*. Their rehabilitation in order to host new uses does not raise questions of extended and costly reparations.

29, 30. Pappas, A. (2006)

31. Zygomas, D. (2006)

Second: The special qualities of the buildings can be divided into *three* groups: **i) the historic value** (ranging from the beginning of 20th century to the post WWII years **ii) typological value** : providing characteristic examples of military buildings and the spatial organization of military installations. **iii) construction value:** with few exceptions the majority of the buildings have been constructed in the period between two World Wars and post WWII era using typical techniques of the era, providing a bridge and a passage to the modern construction techniques.





Third: Based on the special qualities mentioned earlier, it is considered that the conservation can be achieved with considerable degrees of freedom. The complete protection and restoration is needed in only in the camps found in the camps of Pedio Areos (in the central axis area) and Ziaka. In the rest of the cases, the preservation of the special qualities can be assured with milder form of interventions, that permit more space for modernization and hosting of new uses and activities.

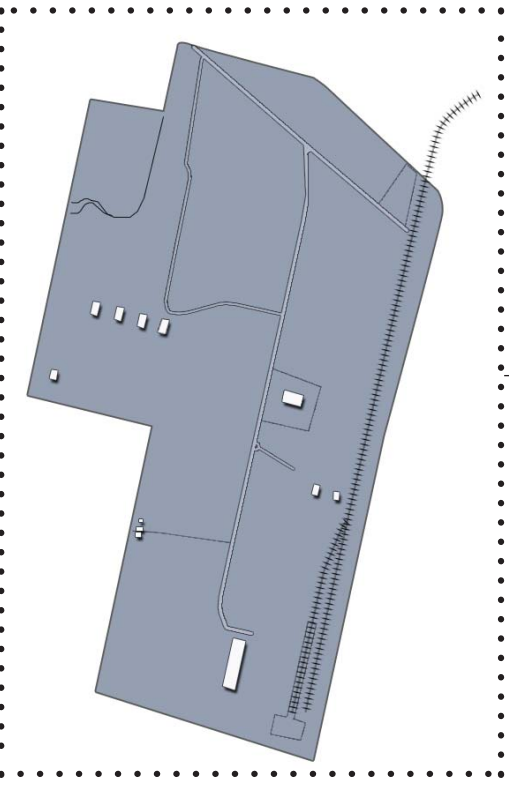
Resuming, a simplified version of the different fabrics present in the western area appear in the diagram on the left, where one can see the consolidated urban fabric radiating from the historic centre on the south-east corner, while an exterior band of industrial / manufacturing facilities surrounding the urban fabric along the Ring-road and following the principal arteries. The remaining area east of the Gallikos river and west of the formentioned areas is utilized for agricultural means, and is found under pressure from the expanding city. Apart from the two arches, this is the first important ecotone that can be recognized in the region, is the interface area between existing agricultural and semi-natural areas with the expanding tertiary diffused growth. The obvious situation which can be identified in this case is the diffused sprawl in this area as a manifestation of the conditions and dynamics along this rural-urban ecotone marked on the territory. Similarly, on the eastern limits of the western urban fabric lies a different kind of ecotone, between the urban fabric and the dense forest mass of the Seich Sou forest. This ecotone is has a narrower band while at the same time a more pronounced effect than the first one. The last important ecotone is the seafront ecotone., which up to a certain extend results the most problematic. The presence of the industrial facilities with their corresponding contamination along with decaying estuary ecosystems and the difficulty of public access, define this fine stretch that starts from Gallikos River and goes all the way to the city's seaport.

The military installations present in the fabric of the western Thessaloniki, can be seen in the two following pages, along with a short description for each camp and the individual building qualifications (for the camps where it was performed), followed by the typologies presentation present in the western fabric.

Survey index

(source: Zygomalas, 2005)

-  Need for protection of building shell
-  Need for protection of shell and internal arrangement
-  Need for total protection
-  Noteworthy building groups



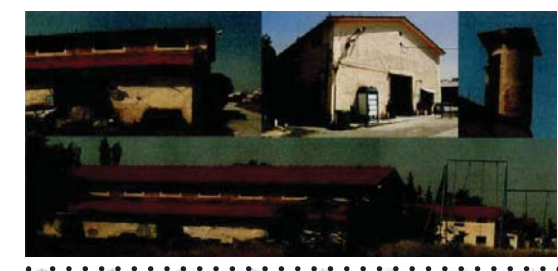
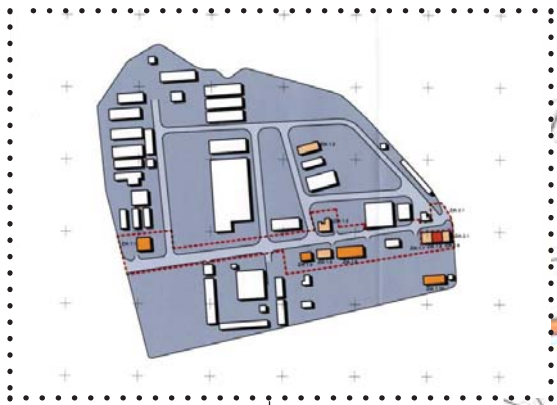
Gonou Military Field (73.6 hect)

The area of the camp today presents a small building stock of little interest and a large unbuilt area. The camp also includes railways on the eastern limit providing railway connection with the main rail line. For this reason the abandoned has been considered to host one of the two freight centres of the port of Thessaloniki.



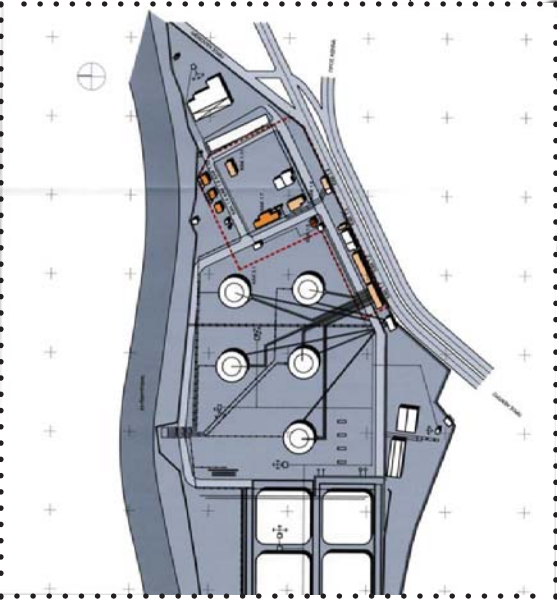
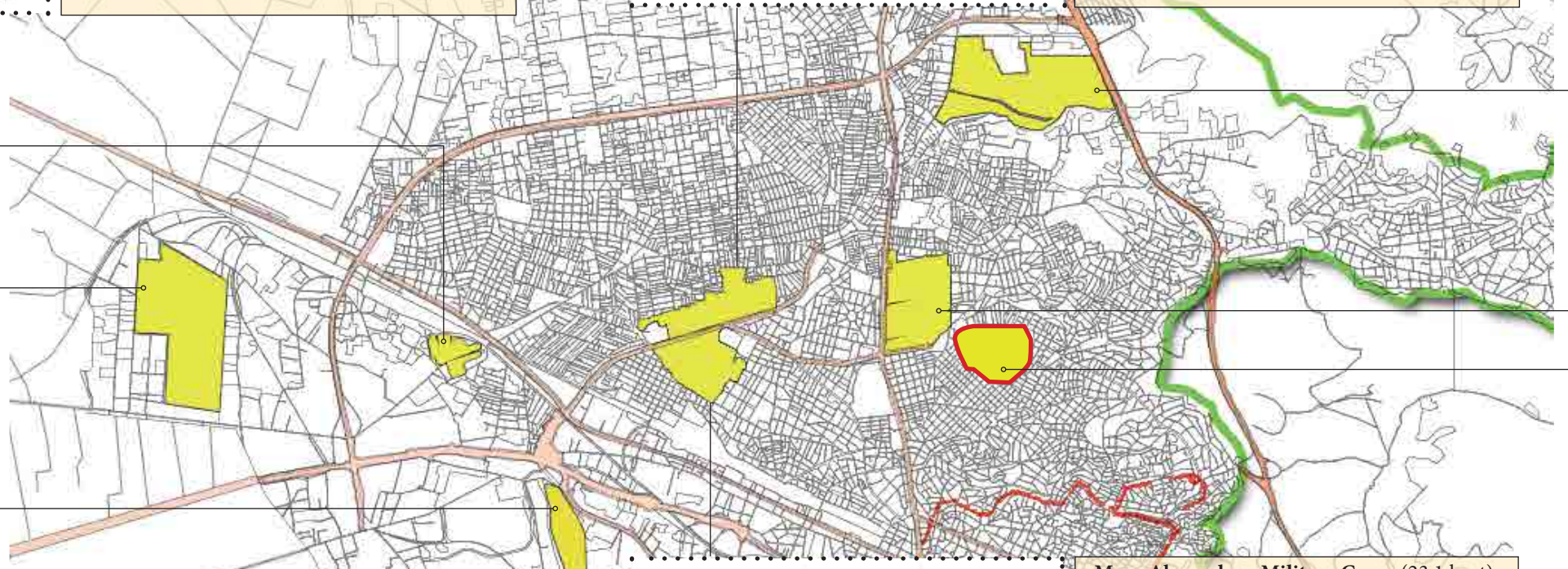
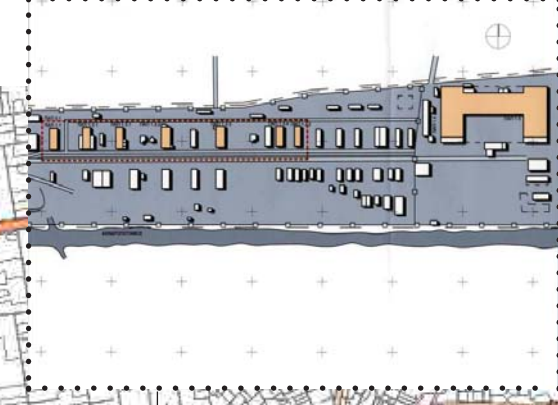
Ziaka Military Camp (12.4 hectares)

The camp is structured around a principal street around which the important buildings are located and lined with trees of old age, typical of the climate of Thessaloniki. On the west side lies the Commanding centre, typical of the era of the refugees arrival, while on the east lies a complex of three building, of which the middle presents similarities with the urban residences of Thessaloniki in the beginning of the 20th century. In the middle of the street lies another group of four modest building volumes that go back to the end of WWII. Apart two more significant building have been found, the Carpentry building, with the characteristic notched roof found in industrial building of the Era, and the rectangular Storage building close to the central gate.



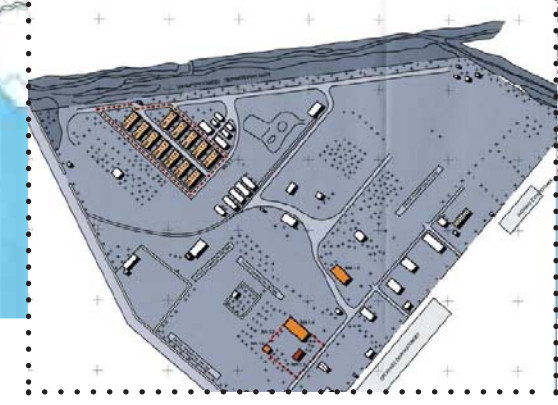
Papakiriazi Military Camp (22.3 hect)

The first and most prominent building in the camps is the factory on the east sector, one of the biggest covered and internally unified spaces in the whole city of Thessaloniki. Next to it lies a building dedicated to reparations, with an elaborated facade, while on the other side of the military camp, lies a series of warehouses, typical of the era between the Wars. These warehouses are lined perpendicular to the railway line, that crosses transversely the camp, and from which the warehouses were restocked. These are 7 building units in total, that constitute 3 different variation of the same building type. On the west limit of the camp the Sports Park of Kordelio Evosmos is found, while on the north-eastern part the building of the tobacco industry SEKE, one of the last remaining of its kind in the city.



Kakiousi Military Camp (14.0 hect)

In the central sector of the camp a group of coherent from a morphological and constructive perspective was detected. In this group, 10 of them were constructed at the end of the 50s, with the exception of 2 buildings that were constructed later, before 1980. All of them are arranged along a grid of parallel and perpendicular road, east of which, a significant are of unbuilt area is delimited.

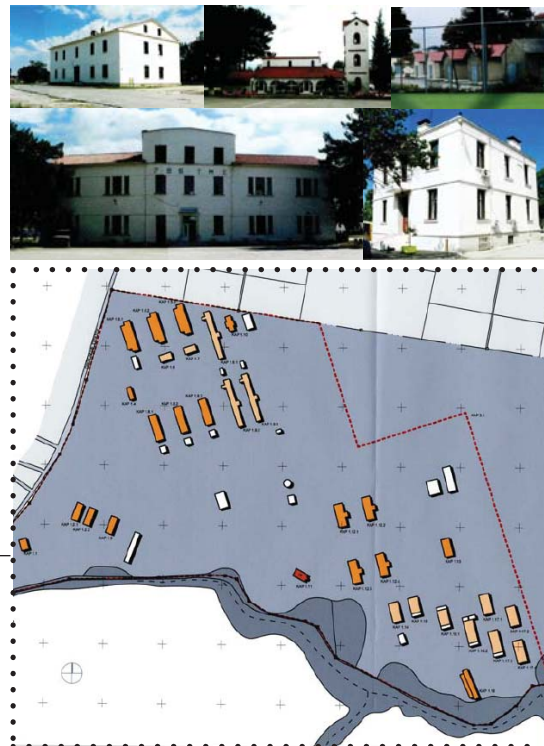


Mega Alexandrou Military Camp (23.1 hect)

The camp hold two noteworthy building groups and a characteristic two-floor barracks, that is repeated all over the greek space. As far as the groups is concerned, on the south sector of the camp, next to the central gate, lies an interesting composition of built and unbuilt spaces. The buildings consist of the Commanding centre and the barrack, both from the era between the two Wars, and the post-war era temple of the camp, between which a series of areas of low and high vegetation. On the north-west sector of the camp, another group of 12 similar warehouses that date back to 1960 can be found, lined symmetrically on each side of the central road.

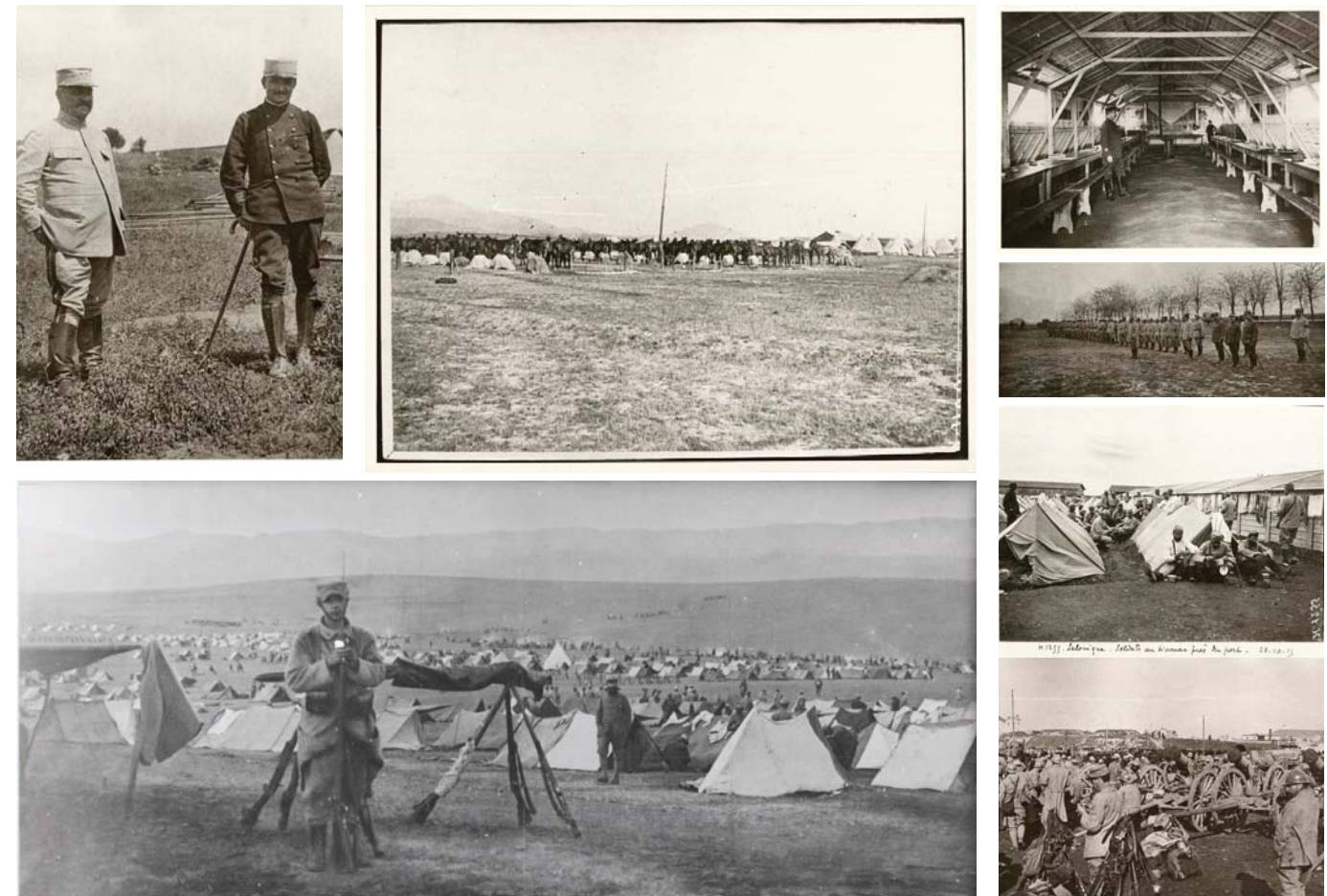


Military Installations Analysis & Assessment



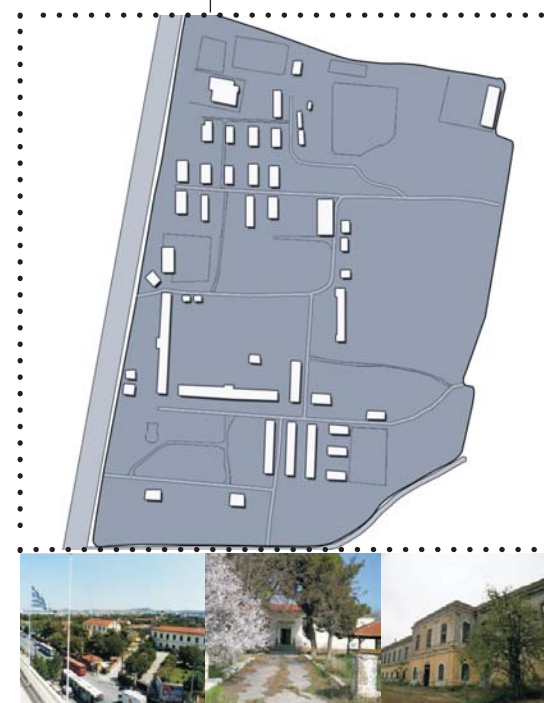
Karatasiou Military Camp (60 hect)

The west side of the camp, demonstrates a special variety of buildings, that summarize with a unique way the recent architectural military styles in an evolutionary manner. The camp is located next to the Seich Sou forest, and its south limit, is defined by the local stream that crosses the area. Thus a lush environment of natural vegetation and a great variety of tree stock can be found, amongst four distinct building unit groups. On the west limit of the camp the Commanding Centre can be found, while a bit to the east three barracks are found built perpendicular to the slope of the ground. Further to the east two big groups of buildings can also be located. On the northwest sector, with 13 significant building, all strictly arranged around a central unbuilt area, and the south with 15 significant buildings. North of the camp a series of athletic and commercial activities have been established, bordering the exit to the Ring Road.



Military landscapes

source: Municipality of Thessaloniki Digital Archives



Pavlou Mela Military Camp (38.3 hect)

The building stock in the camp can be dated in two distinct periods, a first one from the end of the 19th century to 1912 (the camp was created by the Ottoman Army in 1881) : four main building types can be discerned, the mosque, the eclectic buildings of the barracks and the Stables, all of which present their original configurations, with smaller or bigger interventions on their body. The second period corresponds to the era up to 1944, where at least 8 different types, one storey buildings in their majority, that have been erected gradually to cover different needs of the camp. They are elongated, modest one-storey buildings that can handle different uses and activities. After 1944 military uses started to move out of the camp, and the area was gradually abandoned to reach its current state.



Strempeniotei Leisure Camp (22.7 hect)

The old Strempeniotei Military camp was the only camp of the western Thessaloniki that was rehabilitated to host civic uses, providing the municipality of Neapoli at the time, with a lot of vital space to develop different activities on its grounds. Today the area hosts different activities, all of them non-residential which are the following:

1. Kindergarten & Schools
2. Technical School of Neapoli
3. Sport Facilities
4. City Hall of Neapoli
5. Church of St. John
6. Water Reservoir of Neapoli
7. Boy Scouts building
8. Ocean Club (pool bar)



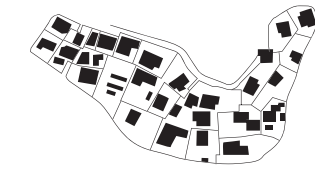
Forms of habitat in the NW. Thessaloniki

Forms & Typologies

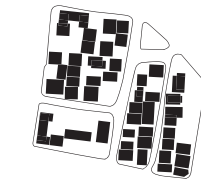
Following the analysis and presentation of the existing and obsolete military installations, this two next pages will demonstrate a representative selection of building typologies present in the western area (from the Inner Arch to the Inner Ring -Road). The historic activity and development in the area is made evident in the diversity of forms and configurations found in the contemporary fabric. Similarly the different types of activities / poles of activities as well as the distinct historic phases corresponding to each typology are represented throughout the fabric.

Before proceeding with the mobility analysis of the area in the following section, the next 2 pages demonstrate impressions and photos of representative imaginaries / landscapes within the area.

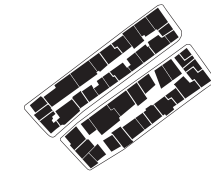
1. unofficial settlements



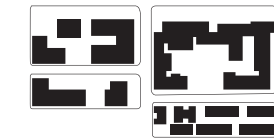
3. peri-urban II



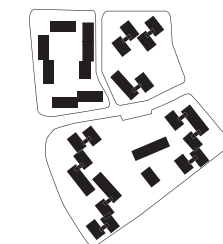
5. elongated blocks



7. free distribution



9. Social Housing I

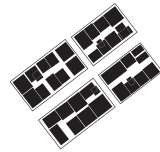
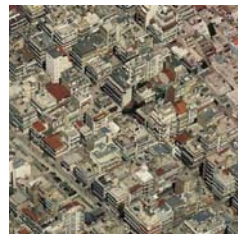


Forms of activity in the NW. Thessaloniki

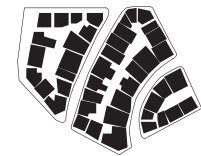
2. peri-urban



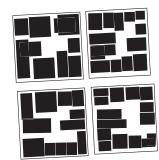
4. small blocks



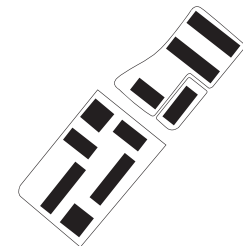
6. elongated blocks



8. square blocks



10. Social Housing II

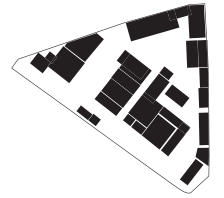


50m

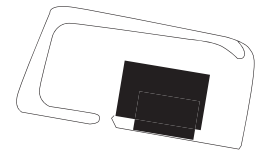
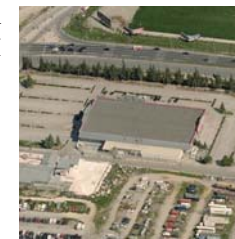
A. peri-urban



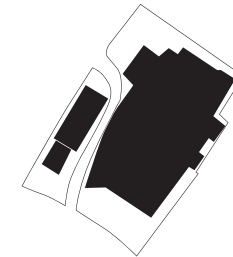
B. post-war voids



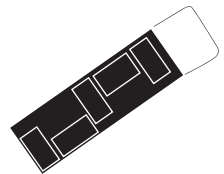
C. commercial center I



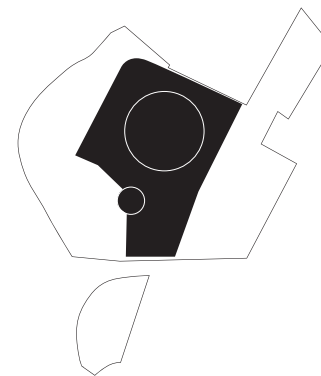
D. commercial center II



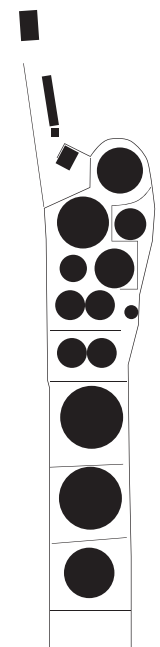
E. commercial center III



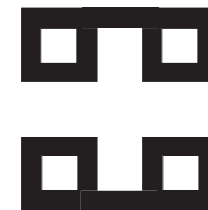
F. Central Bus Station



E. Refineries



G. Central Food Market



50m



Industrial landscapes in the Western Thessaloniki

1. Painting (12 x 2m) by A. Tassou & L. Maggiorou titled “ *the cultivation of the tobacco*” created in 1960 for the factory of the National Tobacco Organization of Western Thessaloniki. (art22.gr) 3, 8. Mylos facilities in its original and contemporary state (kathimerini.gr) 5, 6, 7, 9. Tobacco warehouses in Stavroupoli (Municipality of Stavroupoli) 10. Vilka (thesstoday.gr) 4, 11. FIX (Olympos) brewery (kathimerini.gr)



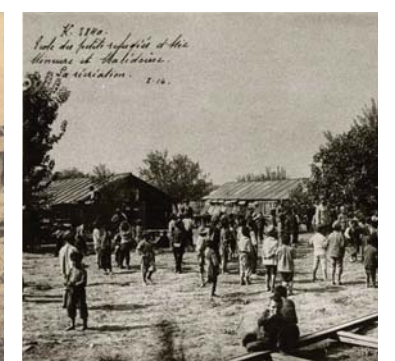
CAMPAGNE D'ORIENT 1914-1917
Rassemblement de Réfugiés sur les bords du Vardar



8 SALONIQUE — Quartier Vardar, Vue générale - Vardar district, General view

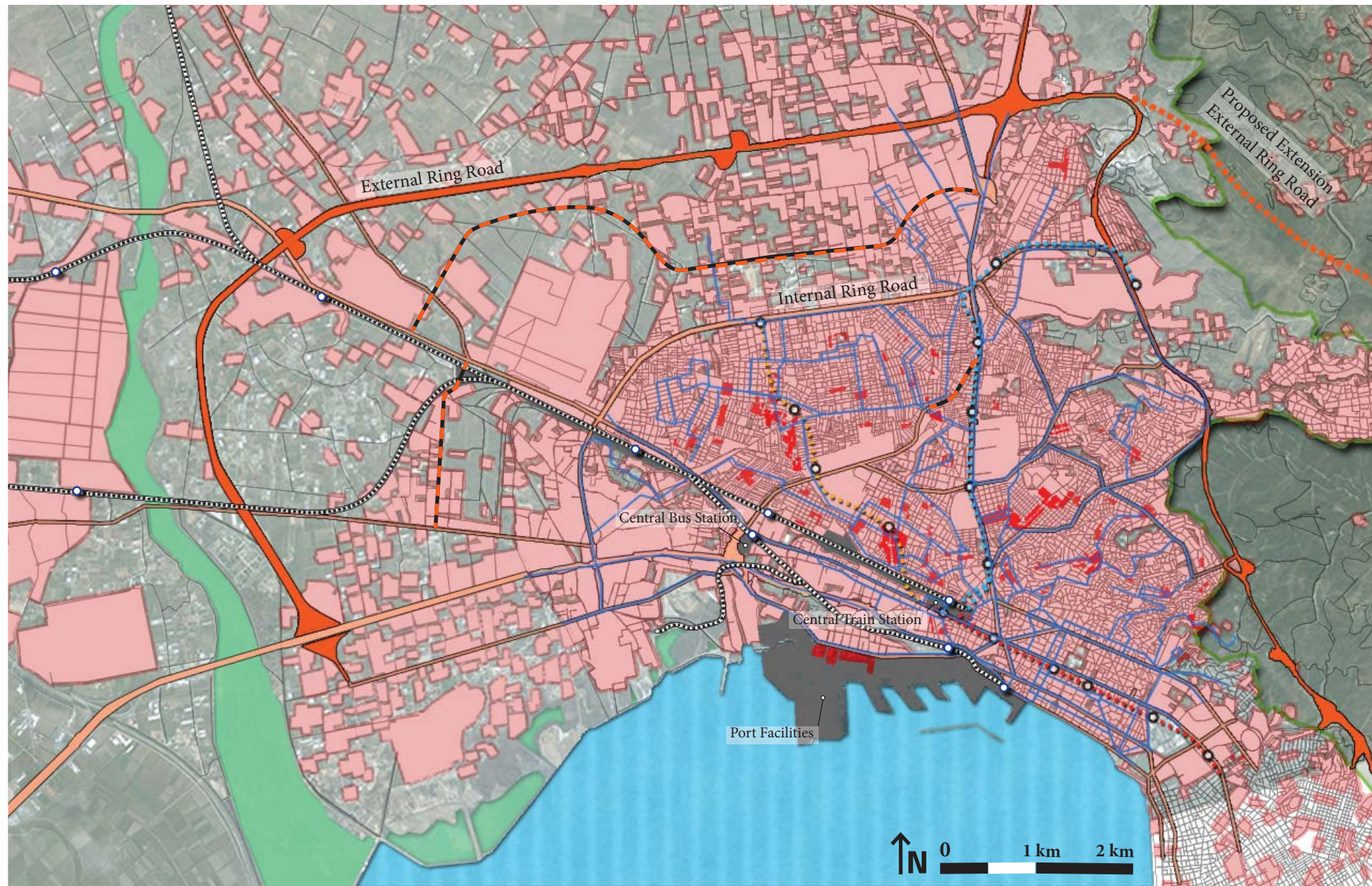


6 SALONIQUE — Quartier Vardar, Vue principale - Vardar district, Principal view



Refugee landscapes in the Western Thessaloniki

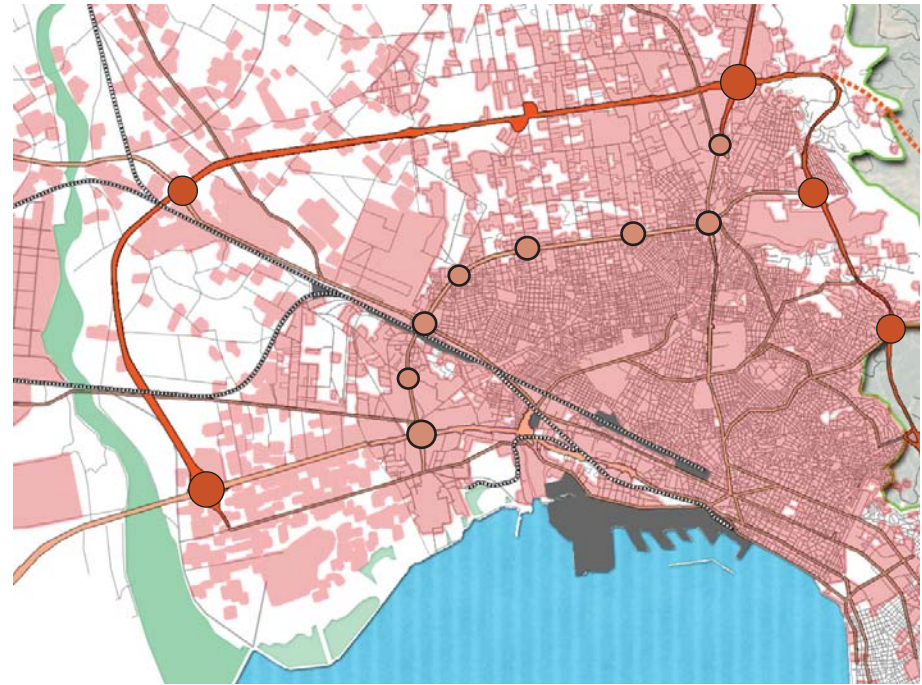
(image sources: Makedonia newspaper, Municipality of Thessaloniki Digital Archives)



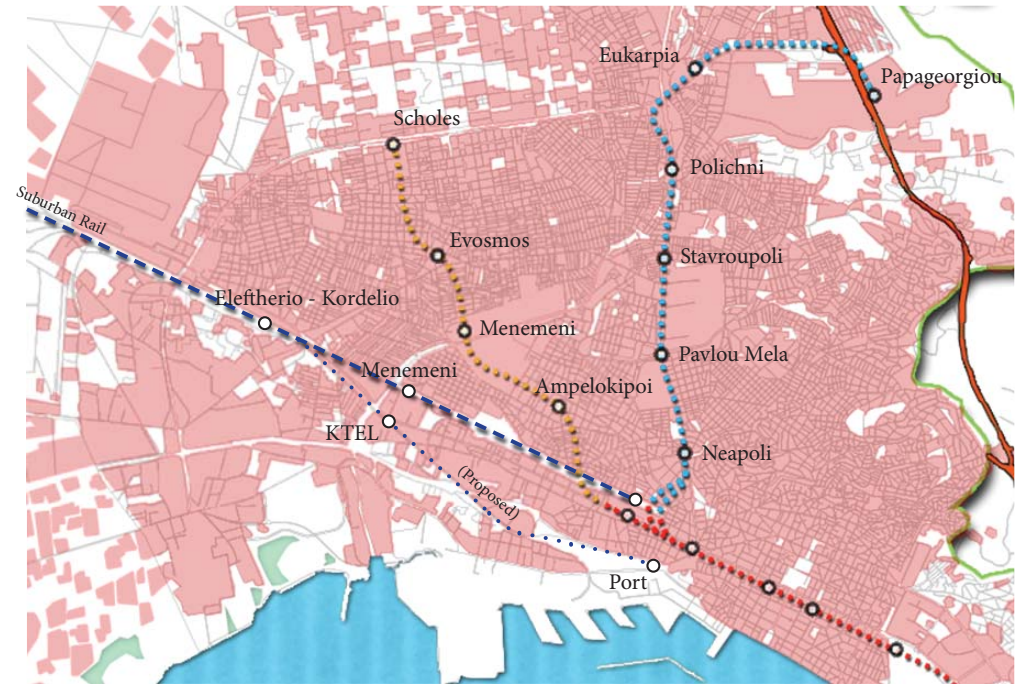
Mobility Scheme

- External Ring Road
 - Ext. Ring Road Proposed Extension
 - Road Arteries - Proposed & Under Construction
 - Roads Arteries - Existing
 - Roads
 - Bus Routes
 - Metro lines & Stations
 - Rail & Suburban Rail Stations
-
- Municipal centers
 - Local centers
 - Transportation Infrastructure
 - Aquatic areas

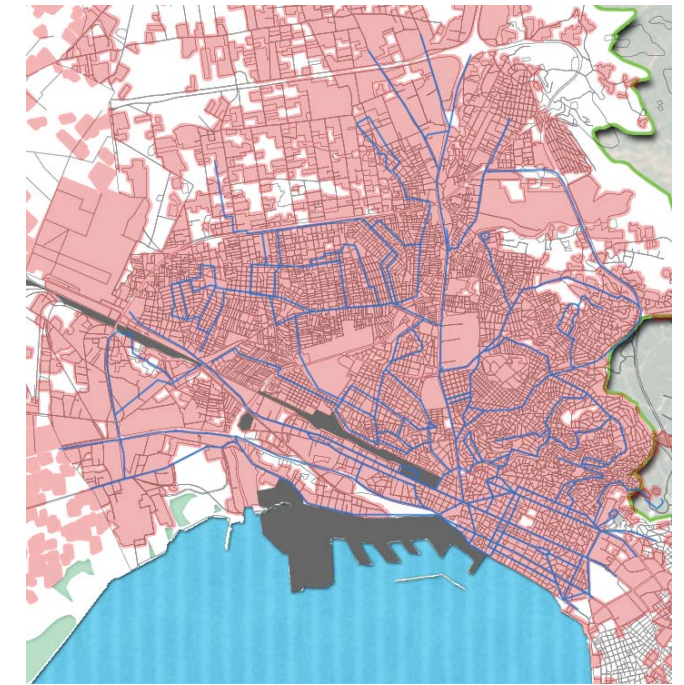
Urban Arteries



Projected Metro Lines



Urban Bus Coverage



vi. Mobility Assessment

This next section will perform an analysis of the flows present in and along the extended area of the exterior arch. This lecture will help understand better the mobility factor and investigate problems and prospects that could potentially arise following tendencial dynamics or under a possible future restructuring. As seen earlier the exterior arch area served once as an urban limit, and an area that hosted diverse industrial/manufacturing installations as well as the various military camps. The map on the side page shows the principal structure of the urban mobility and flows as encountered in the current state. Analysing the flows present within the area in more detail we observe the following types:

A. Vehicular traffic

The exterior arch, with the Dendropotapos / Marinou Antypa Avenue had once served as the western exterior urban limit for the city, concentrating at the time the majority of industrial/manufacturing activity along its path. With the rapid expansion of the city after the post war era and up to the late 90s, in order to satisfy the need for residence of the incoming population, this urban limit gradually shifted concentrically and outwards. The construction of the inner ring road and the exterior later on, took on the role of accommodating non-residential activities, along arteries that would provide easier and unobstructed access to them. Nevertheless the rapid and unregulated nature of this expansion, and the car-dominated scheme under which it took place, has influenced urban growths and compromised the urban quality accordingly. The resulting urban landscape is characterized by the lack of adequate public infrastructure, especially transport and public open spaces. The urban road grid is presented in a tight arrangement, sometimes in an orthogonally arranged and sometimes in more organic patterns, but nevertheless occupying a significant portion of surface area for car flow and parking needs. As a consequence public and green spaces have been sacrificed again in this process with a subsequent degrading of urban quality. Again as it happens with other part of the city, this tight grid combined with the high densities and mixed uses, with commerce activity on the ground floors, gives the street level an increased dynamic and capacity to carry public activity and act as live public space.

As far as the local road network hierarchy is concerned: The Ring-road (exterior and interior) on the west of the area and the eastern limit with the Seich-Su forest serves as important elements of hard infrastructure in the road network. The exterior ring serves as an atypical limit line for the tertiary activities and expansion and at the same time serves as part of the Egnatia Highway as it passes close to the city. The inner ring road, serves a great amount of vehicular traffic and serves at the same time as the urban limit of the urban district and the continuous & consolidated urban fabric. Both ring roads host various activities (non-residential) that serve as attractors of traffic and activity. There are three major transverse road arteries that provide connection of the urban district with the ring roads and complete the hard infrastructure structure of the city: **A)** The *Lagkadas Avenue*, a traditional commercial entrance to the city from the west-north-west, **B)** the *Monastiriou / Konstantinou Karamanli Avenue*, that is the physical extension of the urban Egnatia Avenue, that runs parallel to the train lines and provides access to major industrial facilities on the western fabric of the city, and **C)** the *New West*

Gate / Stathmou Avenue that provides direct access/exit to the west and has significant tertiary and secondary activity, principally in its western section. On the eastern side smaller avenues like the Agnostou Stratioti & Andrea Papandreou provide access to the inner ring road, crossing the urban fabric through residential sections, but are having a less important role than the three formentioned arteries. The three arteries are analysed in more detail in the following section. All of these three major arteries confluence in the Vardaris Square, converting it to an important node that receives all corresponding traffic loads and diverts them accordingly in the urban fabric.

Next in the hierarchy are the major urban roads that run through the various municipalities and their respective districts, many times structuring urban centralities and activities along their path, rendering them as important urban elements. Next, the smaller roads that complete the grid, cover the rest of the fabric providing access and parking space for residents and local users.

B. Public & Light traffic

As seen, the metro transport system has not yet been completed in the area but the plan proposal provisions two lines for this part of the city: The main line and the two Western extensions that are planned to run all the way to Eykarpia on one end and Evosmos on the other to the height of the inner Ring-Road. There are a series of metro stations planned for the area that could potentially increase activity and accessibility. The Vardaris station (*Dimokratias Station*) is destined to be a key station, given its strategic location and the fact that the two metrolines will meet here. Other stations are expected to have a similar generator effect for their adjacent areas, and their planning should be thought out accordingly to maximize accessibility, and related development activities. The suburban rail line also projected for the suburban rail network of the city, utilizing the existing train infrastructure, is also another potential rail axis with development potential, generating new flows and potential activities and dynamics. The different studies for the Exterior Arch also highlighted the potential for a tramline development along the arch as a tool for regional regeneration. Apart from the Metro and suburban rail systems, there are 2 train stations are found in the vicinity of the area: **a)** the *Old Railway Station*, that is currently out of use with partial use of the rail network **b)** the *New Central Rail Station* that provides International, National and regional connection.

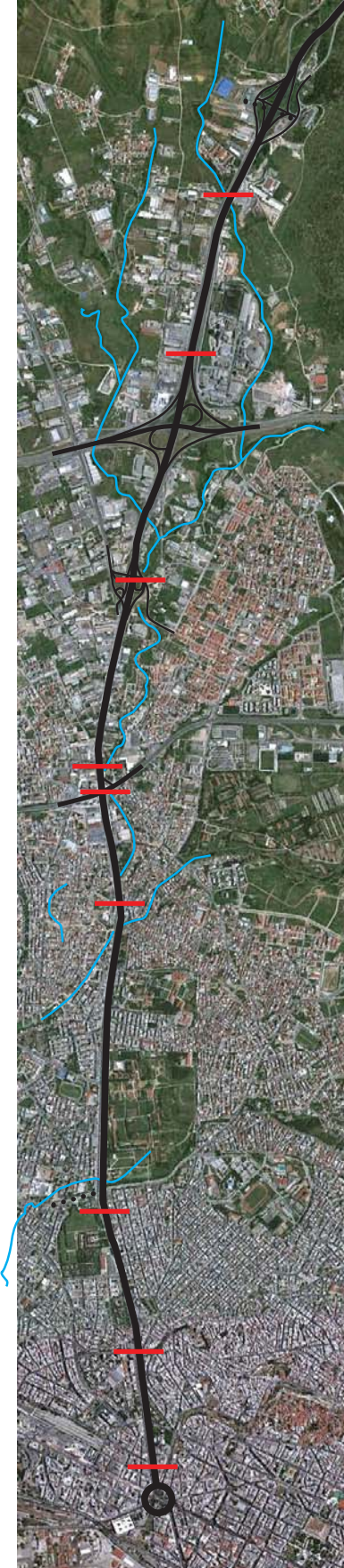
The public transport system for this part of the city is currently restricted to the public bus system that has served the area traditionally and extends within the limits set by the inner Ring-Road. The service runs along the major arteries of the city and covers a considerable area of the urban fabric. The bus system being the only public transportation option for the area is also vital for the urban functioning. Also, as far as bus-related transport is concerned the Central long-distance Bus Station on the southern end of the exterior arch / Dendropotamos avenue is also an important pole of attraction and generation of traffic flows, outside the city.

A. Lagkada Avenue

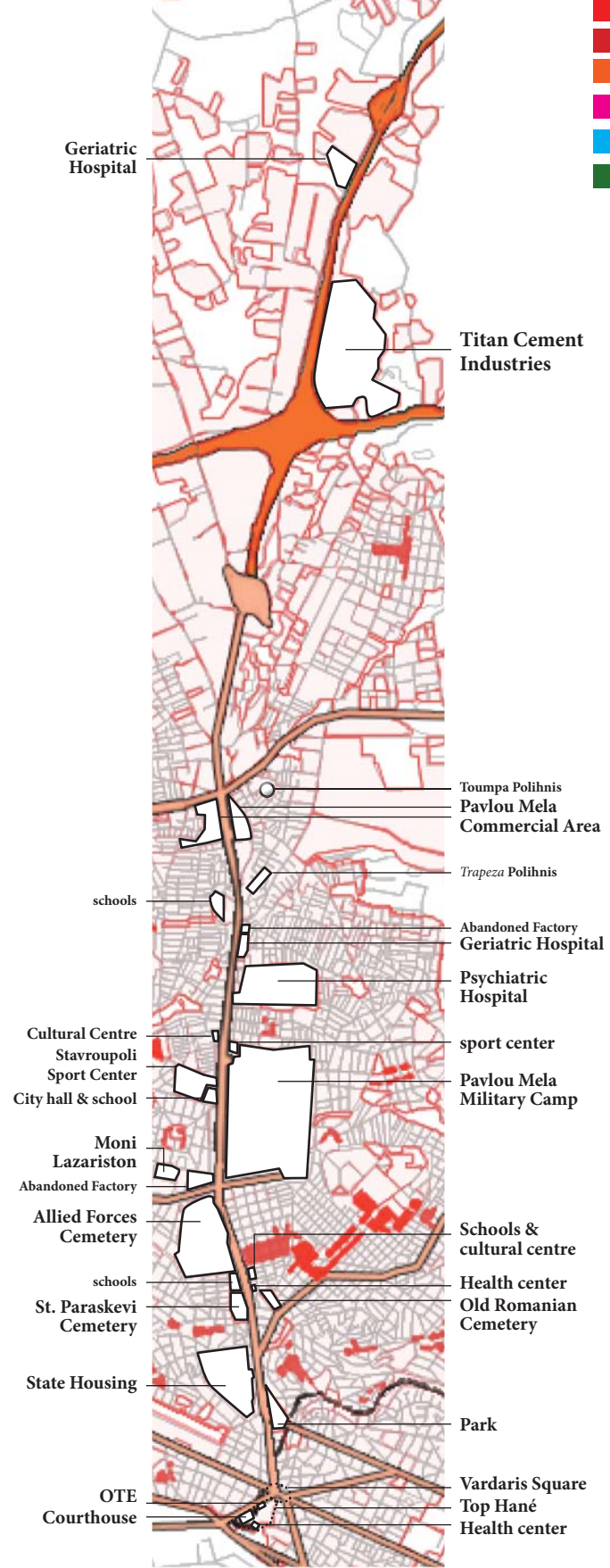
Isometric Views



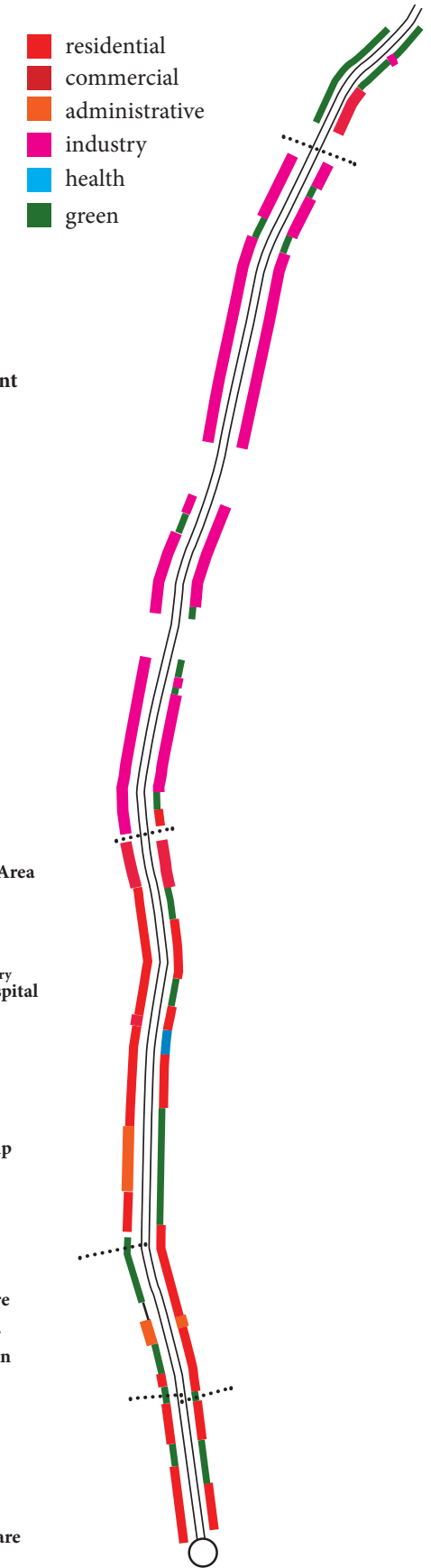
Aerial Photo / State



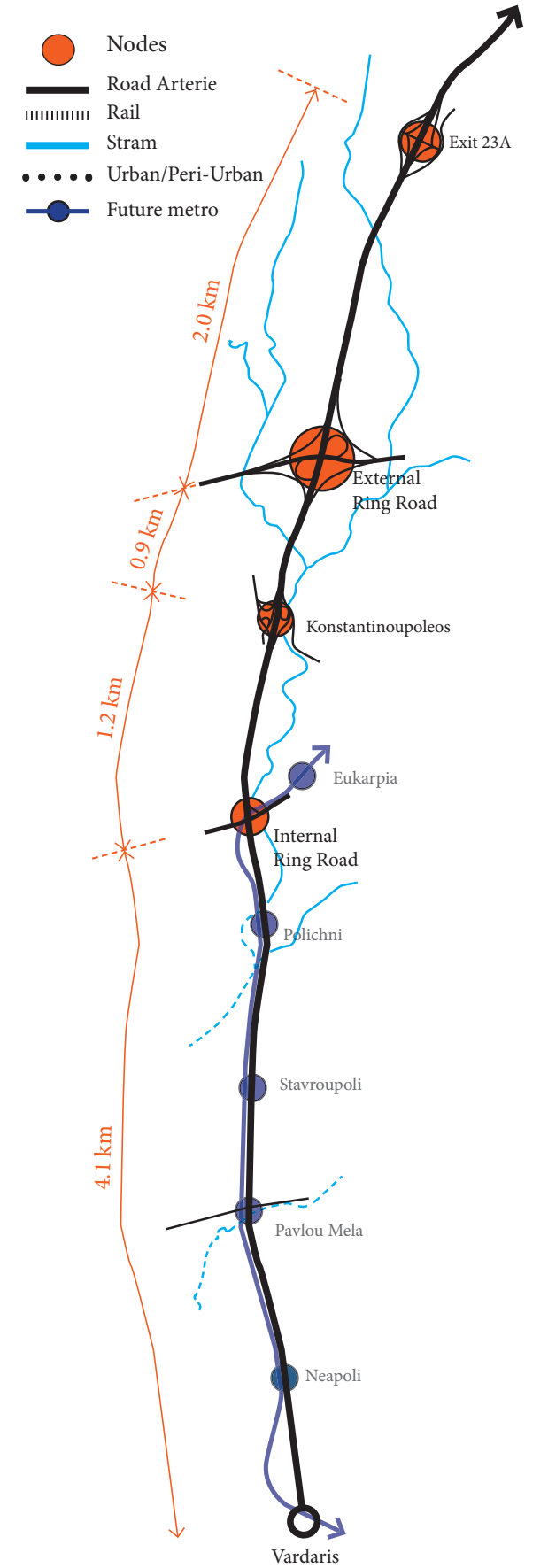
Cover & Centers



Nodes & Connections



Nodes & Connections





left: Modification of Lagkadas avenue of 1963 from Vardaris square to Ag. Eleytherios church, establishing porticos /galleries along the ground floor of edifications along the avenue.

middle: Modification of Lagkadas avenue of 1963 from Vardaris square to Ag.Dimitrios district in Polichni

right: Plan of 1977 showing the urban fabric extension along Lagkadas avenue and the northern areas.

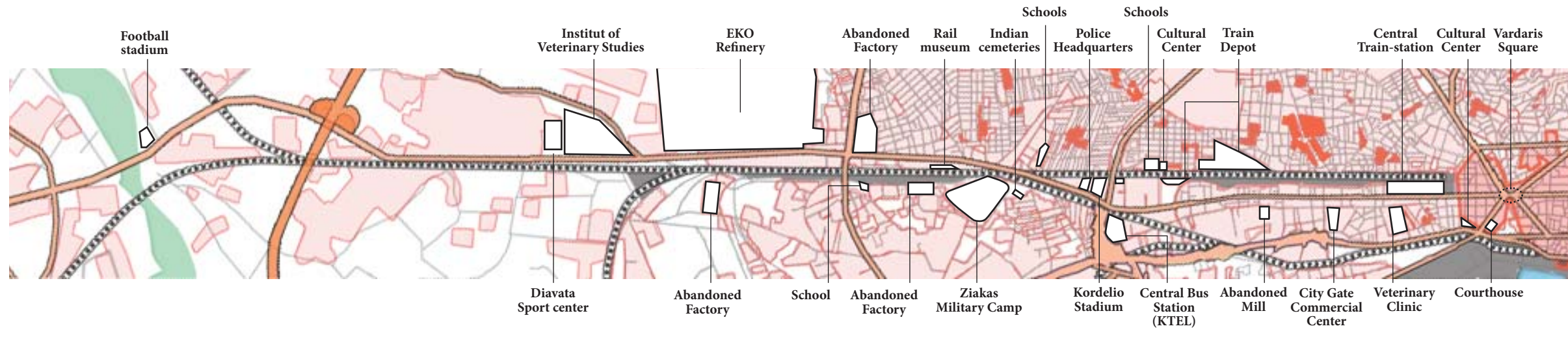
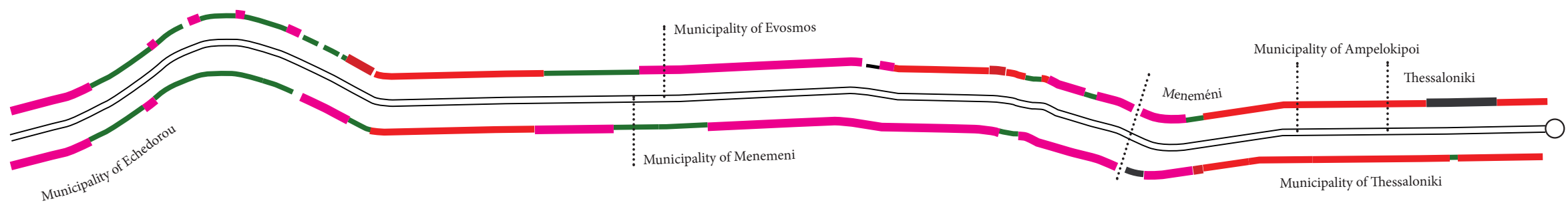
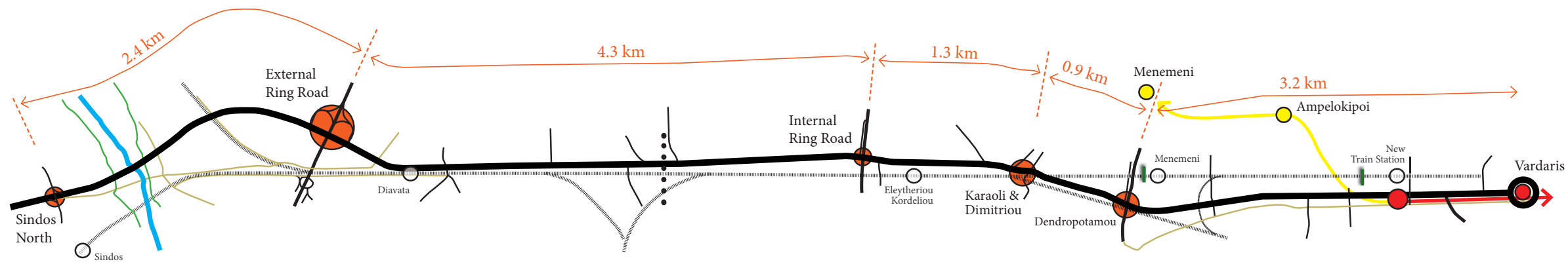
(source: Municipality of Thessaloniki)

C. Pedestrian / Bike traffic

Similarly to other areas in the city, the pedestrian traffic in this part is not favoured by the car-dominated planning that resulted in the absence of pedestrian only streets, and the serving of all pedestrian flows by the respective sidewalks in bigger roads, or the roads themselves in smaller and less trafficked roads. Nevertheless the commercial activity that exists on the ground floor of the majority of the buildings creates an increased ground level circulation and activity and places the street as the principal stage for public and urban activity. Along the exterior arch there are considerable green and unbuilt areas as well as existing poles/attractors starting from the eastern limits with the inner Ring-Road and reaching all the way to the south-west in the estuary of the Dendropotamos river. Along this route of exterior arch, a significant amount of pedestrian and soft flows can be accommodated in order to enhance mobility and access to the formentioned existing and potential poles of activity, as highlighted already by the numerous studies. This pedestrian axis figures as the most important one in the local fabric, both for historic and structural/functional reasons, and can serve as the backbone for restructuring local soft mobility and accessibility in the interspace between the historic centre and the inner Ring-Road.

At the same time there is a shortage of public spaces observed, most of them being scattered and unconnected and not generating sufficient activity and flows. Most importantly they do not constitute a defined and well structured public space system, guaranteeing connection between the different spaces and overall cohesion. Similarly with green areas, there are numerous smaller and bigger parks scattered around, but most do not reach the size to constitute important green patches. The majority of these green areas, are found located along the paths of the old city, now covered, streams, presenting a lineal nature, but not necessarily continuous. The Seich-Su forest on the east and north of the area, is the most important green patch in the area. As observed also earlier a great number of green areas are found inside the obsolete military installations, most of which are with a close radius to the exterior arch, forming a type of a latent green corridor. Along the exterior arch there are no designated pedestrian streets, but there are conditions that can favour pedestrian activity. In the districts of Omonia (Stavroupoli), Dendropotamos (Menemeni) and Terspitheas (Stavroupoli), exist conditions that can accommodate the creation of small scale pedestrian networks due to the light and slow vehicle flows, the direct connection of residences to the streets and the increased pedestrian flows generated by the high densities of the urban fabric. This potential that the conditions and opportunities create for pedestrian activity along the exterior arch will be investigated in more detail in later on in this chapter.

B. Monastiriou / Konstantinou Karamanli Avenue



Nodes & Connections

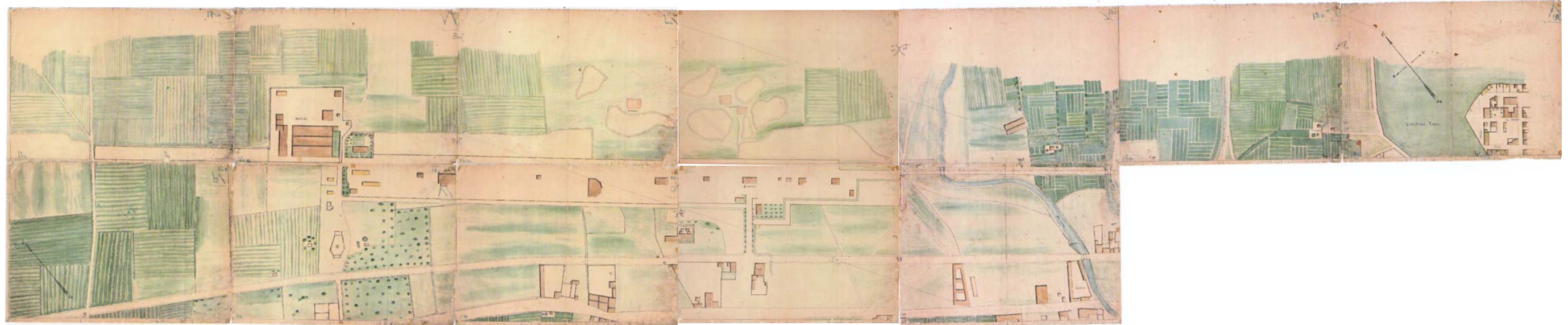
- Nodes
- Road Arterie
- Rail
- Stram
- Urban/Peri-Urban
- Future metro

Uses & Ambients

- residential
- commercial
- administrative
- industry
- health
- green

Cover & Centers

Aerial Photo



Series of sheets from the maps of 1898-99 showing the western area of Thessaloniki along the Monastiriou avenue. It extends on the east from the area of the New Railway station to the west to the district of Menemeni and Dendropotamos. The map shows in great detail the agricultural lots and the first activities located along the axis: Atelier, Moulin, Station etc. (National Map Archives)

As far as bike mobility is concerned there are no provisions for bike lanes in the area. Bike flows share space with vehicles along the road arteries. Nevertheless the increasing bike usage asks for urgent provisions. The exterior arch, similarly with pedestrian flows, is presented as an optimal corridor that can hold significant bicycle flows and at the same time structure an extended bicycle lane network.

The Exterior Arch and its surrounding/adjacent areas when reconsidered as urban macro-elements in the contemporary context, can aid in re-structuring and interconnecting emerging and latent spaces in the area in the search for creating new and significant spaces and a coherent urban structure for western Thessaloniki. Initiating at the area of the Dendropotamos estuary and the Kakiousi military camp as the starting point and extending along the Dendropotamos avenue all the way to the Ring Road nodes in Efkarpia as the other end, there are numerous possible ways of re-connection and re-integration that emerge along the path. These can help configure a pedestrian and soft mobility structure connecting local key public spaces with regional spaces, while at the same time establishing a strategic sea-mountain connection.

D. Attractors

The most important traffic attractors and flow generators in the area are the big industrial sites (like Sindos and Kalochori) that create significant commuting loads. Commercial areas are mostly situated near nodes that facilitate easier access to them or along major arteries. The central vegetable and meat-market are also key elements.

As far as mobility attractors is concerned, the central bus station and the central train station are important attractors and generators of large-distance flows. The port (cargo & passenger) is also another major multinodal attractor occupying a big part of the western seafront.

E. Barriers

When one considers the physical and mental barriers present in the area, the first element that comes up from the analysis are the major road arteries (both ring roads and transverse axes) that serve both as mobility carriers but at the same time as important local and regional barriers. These barrier effect is intensified in the peri-urban and the western urban areas, where the lack of provision of planning has left a number of areas, residential included, isolated and disconnected from the rest of the fabric. Similarly, a number of urban voids, especially the ones bigger in size, also constitute important spatial barriers. This effect is intensified by the fencing of the properties, and the lack of public and civic uses within and around them.

Similarly the train lines and related infrastructure present a similar type of barrier penetrating inside the urban fabric. The lack of adequate number of pedestrian crossings and bridges, makes crossing quite problematic, both in terms of mobility and cohesion of the urban fabric. At the same time the obsolete and abandoned lines and infrastructure break the continuity of the urban fabric.

Apart from these other major the seaport and its facilities area, both the cargo and the passenger sections, present an important barrier towards the seafront. This barrier is extended to the west with the numerous industrial facilities and refineries that develop following the seafront line. Although as seen various civic uses have been introduced especially in Pier 1 of the port, the rest of the port, especially in the western port does not contain any civic uses and nor does the extended western seafront.

F. Arteries analysis

In this last section an analysis of three structural elements of the area will be analysed. The analysis will investigate the state, activity and mobility along the three transverse axes that confluence in Vardaris square, and the urban transitions that exist along its course (and the respective gradient). In more detail, the situation along the three transverse axes is presented in continuation, along with the corresponding diagrams in the side pages.

C. West Entrance / Gate



Nodes & Connections

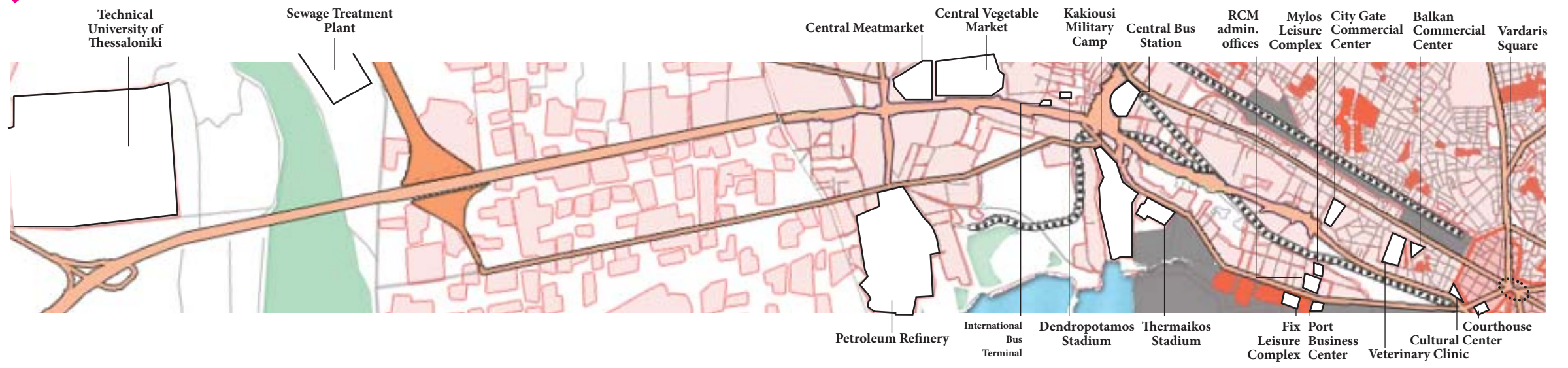
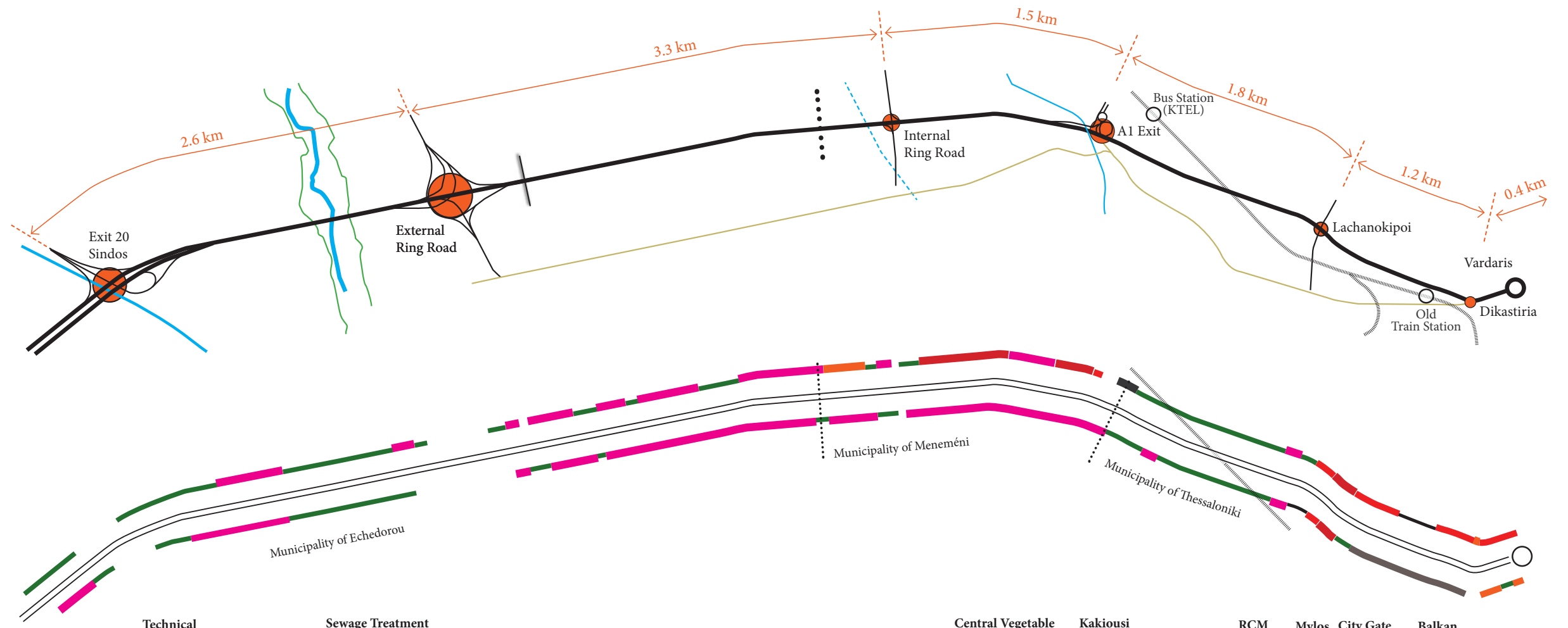
- Nodes ●
- Road Arterie —
- Rail ▬▬▬▬▬▬
- Stram —
- Urban/Peri-Urban ●●●●●

Uses & Ambients

- residential ■
- commercial ■
- administrative ■
- industry ■
- health ■
- green ■

Cover & Centers

Aerial Photo



I. Lagkadas Avenue

The Lagkadas avenue is a historic commercial and trade route which can be seen by the numerous and diverse activities that are present along its path today. It runs parallel and crisscrosses many of the old streams of the city, part of which are still visible and uncovered. It runs from the Vardaris square to the exterior Ring Road where it converts to Egnatia Highway, crossing the mountain and passing close by the city of Lagkadas, before continuing to the east. It is the entrance to the city from the north and thus receives considerable loads throughout the day. The Lagkadas Avenue runs through urban fabric for a considerable length (4.1km) before its surrounding landscape starts changing into a more industrial / manufacturing sprawl type landscape. The Titan cement factory by the node with the Exterior Ring Road is a major industrial installation that has a major impact both in environmental and landscape terms. The avenue plays a very important role in structuring the west side of the city, and offering intramunicipal connection and interaction.

The axis also includes the north line of the projected metro-line that runs through the west urban fabric, making 4 stops before heading east towards the interior Ring-Road.

II. Monastiriou Avenue

The Monastiriou avenue is the second key artery that starts from the Vardari Square as a continuation of the Egnatia Avenue, and runs parallel to the train lines in a north west direction. It runs through urban fabric for 5.5km more until it reaches the inner Ring Road node. The last 2.2 km part host various tertiary and administrative facilities on the southern side of the axis. Right after the inner Ring Road node, lies the EKO refinery on the north side of the axis that occupies a great amount of area and the axis continues all the way to reach the city of Diavata and Nea Magnisia.

As far as mobility is concerned the axis used to have a more important role before the completion of the West Gate, but it still maintains a key role, in structuring the urban and regional fabric, receiving important load of traffic from the North-West and West. The axis for a small section includes part of the underground metro line before it stirs to the north. The suburban rail line is also included here with a 4 stops from the exterior Ring Road to the central train station. The axis plays an important role as a intramunicipal and urban/peri-urban connector, and thus of a regional reach.

III. New West Entrance/ Gate

The West gate is the last artery under analysis. It also starts from the Vardaris Square and runs in a westward direction. Until its completion the part from Vardaris to the Inner Ring-Road was served by the 28th of October avenue that run through the Sfagia district. After its completion it offers a direct connection to the west running through the Railway property of Lachanokopoi to reach the inner Ring-Road node, and continuous west crossing the Kalochori industrial and commercial area and the exterior Ring-Road node. After that it converts to Egnatia Highway, crosses the Gallikos river and continues to the west. The avenue in its first part till the inner Ring-Road (4.9km) for the first 2.6km presents urban functions on its north side, while on the north side lie the Old Rail Station and the property of the Rail company in Lachanokipi occupied by abandoned rail infrastructure. The Lachanokipi area extends all the way to the inner Ring-Road node, running on both sides of the axis for the last 2.3km of this part. In this last part diverse green areas can be seen (cultivations, greenhouse, wild vegetation etc.) along with abandoned factories and other buildings. On the height that the axis crosses the Exterior Arch lies the Central Bus Station and moving westwards before reaching the inner Ring-Road node are the Central Meatmarket and Vegetable Market of Thessaloniki. The space between the inner and outer Ring-Road is occupied by the Kalochori Commercial and Industrial Area, where a diffused growth of tertiary activities can be observed all along the axis. Past the outer Ring-Road and the Gallikos river lies the Technical University of Thessaloniki on the north side of the axis and south of the Sindos town.

Concerning mobility the axis receives all incoming traffic coming from the west from Egnatia Highway and distributes them on the two ring road nodes and littoral avenue of the city. The completion of the eastern section has improved access significantly inwards and outwards of the city and have given an added value to the axis as structural element for the extended urban and regional scheme.

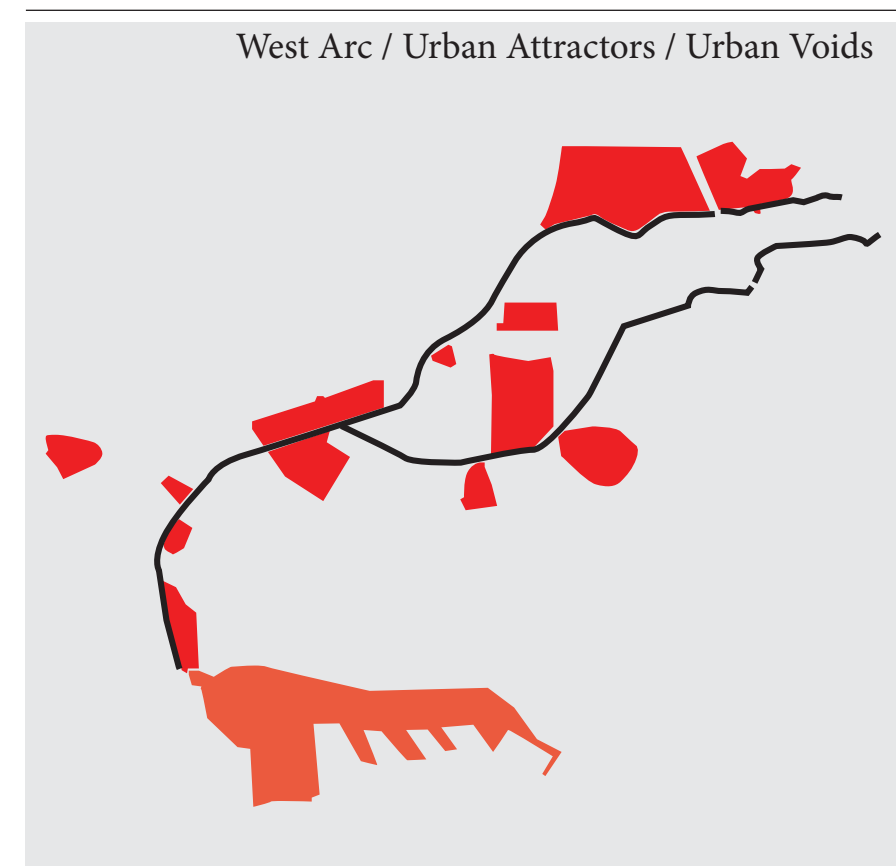
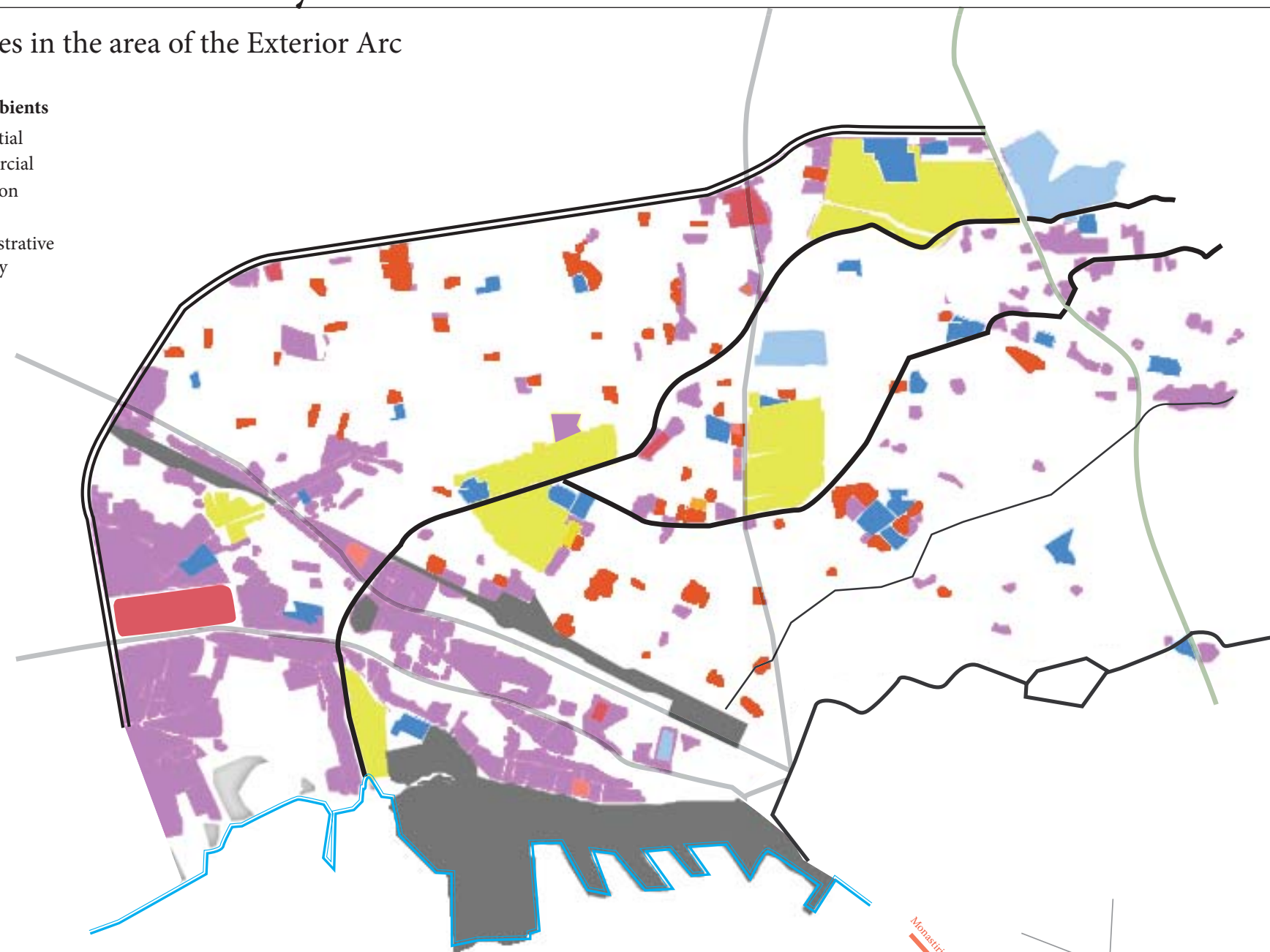
Concluding the mobility analysis, we can observe the impact of the mobility infrastructure in the western Thessaloniki. The diverse road and rail axes fragment and divide the urban fabric, serving diverse flows but not necessarily delivering mobility and accessibility uniformly for all local and regional users. The last section before the conclusions will present the situations detected in the extended area of the exterior arch and the risks and opportunities associated with them.

The West Arc - Analysis

Activities in the area of the Exterior Arc

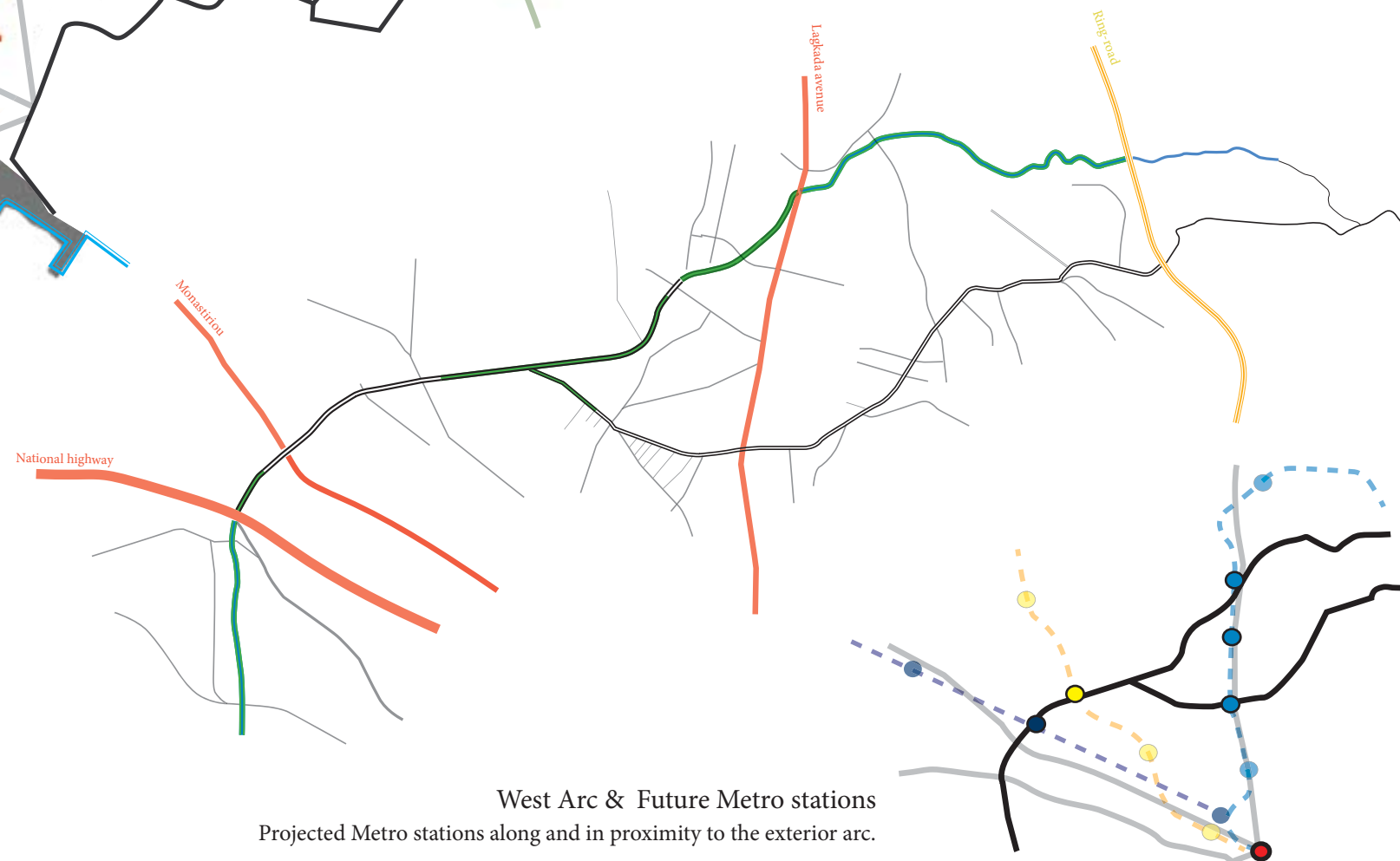
Uses & Ambients

- residential
- commercial
- education
- culture
- administrative
- industry
- health
- sport
- green



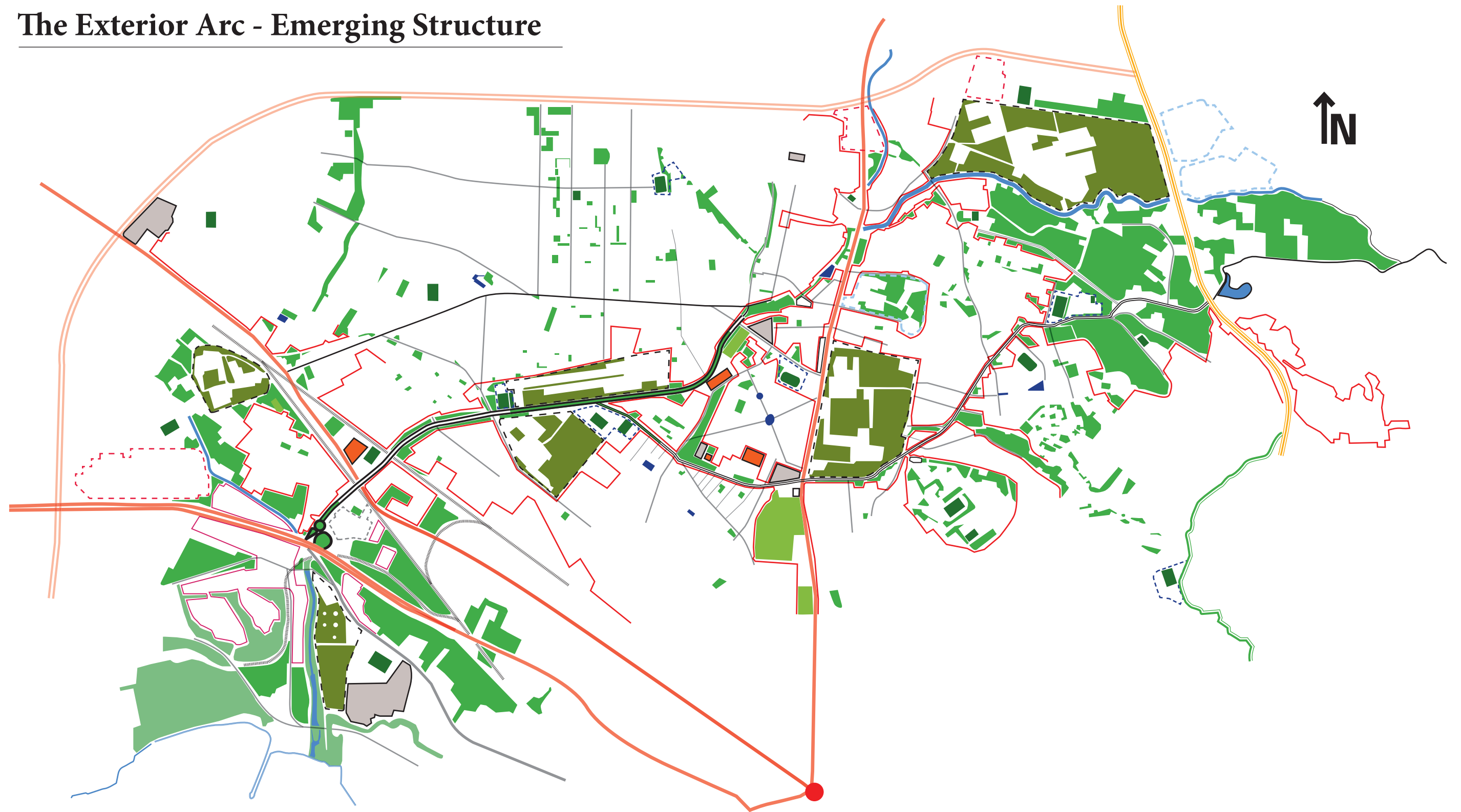
West Arc Corridor & Crossings

The exterior arc has passed three distinct phases/ functions from a water corridor to an urban limit and consequently to an urban corridor. Today functional traits from all these functions can be discerned in the exterior arc. Firstly its function in the general hydrological and flood protection scheme reminds us its importance for the local water management strategy. The limit function is visible in the few transverse connections as well as we the change of typologies on the two sides of the arc. Lastly, the urban corridor function, is highlighted by the key forest-sea connection that the arc establishes, and the considerable urban flows that it accommodates along its course.
























West Arc & Future Metro stations
Projected Metro stations along and in proximity to the exterior arc.

The Exterior Arc - Emerging Structure



Index

	Green Areas		Military Camps		Public Space		Inner Ring Road		Superficial Streams
	Aquatic Areas		Sport Complexes		Attractors		Arteries		Seafront
	Military Camps Green Areas		Health		Urban limits		Roads		Forest Limits
	Cemeteries		Commercial		Industrial limits		Rail		
	Soccer Fields		Transport						

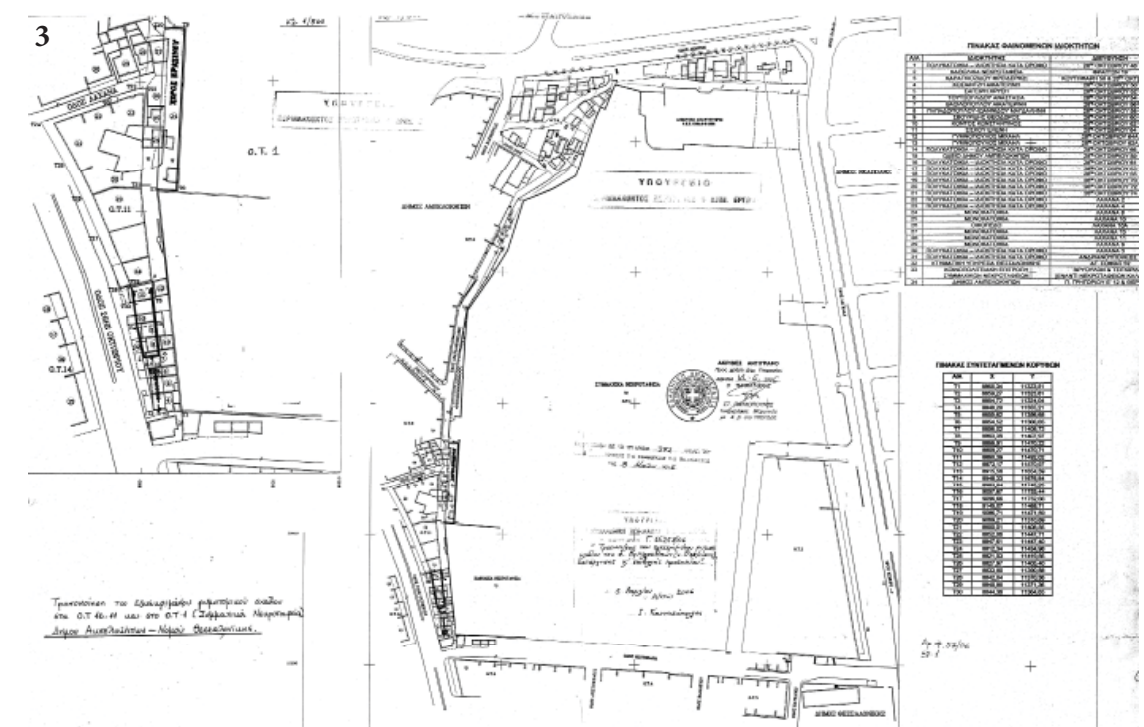
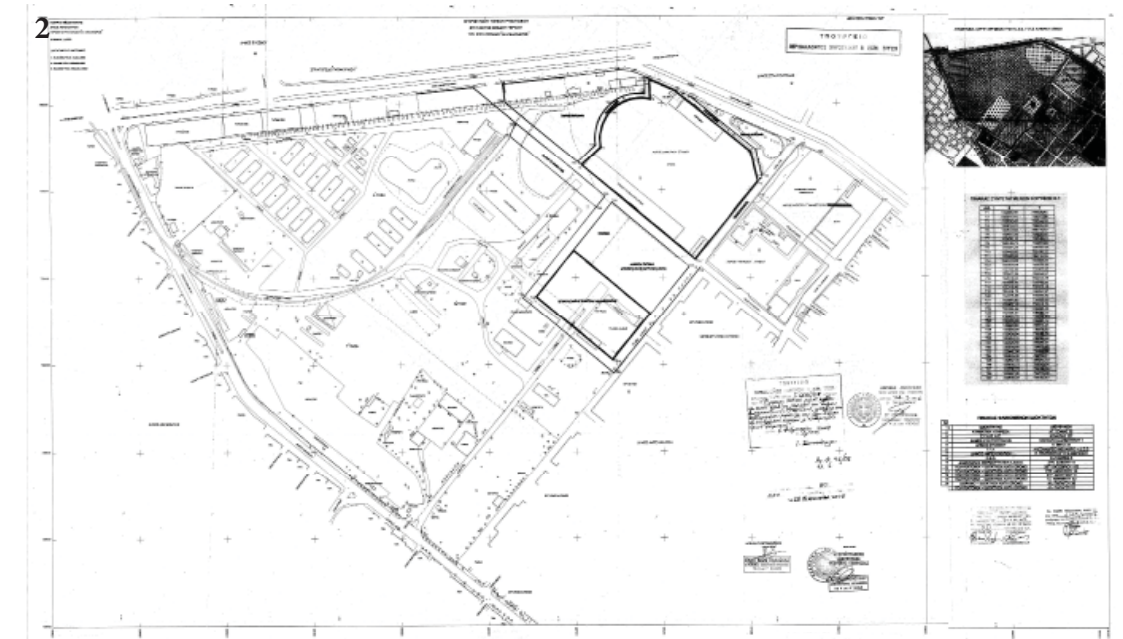
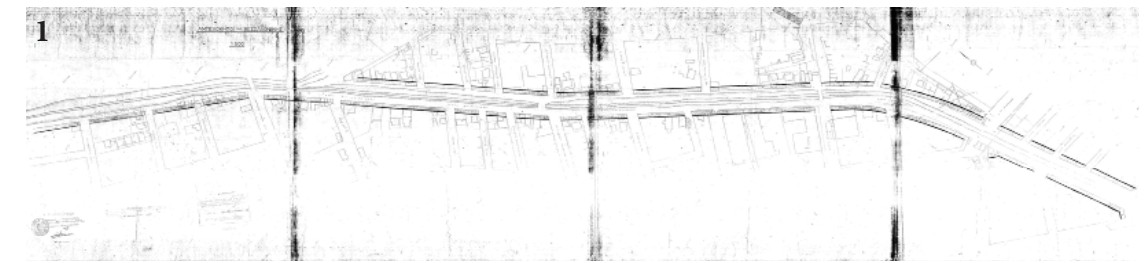


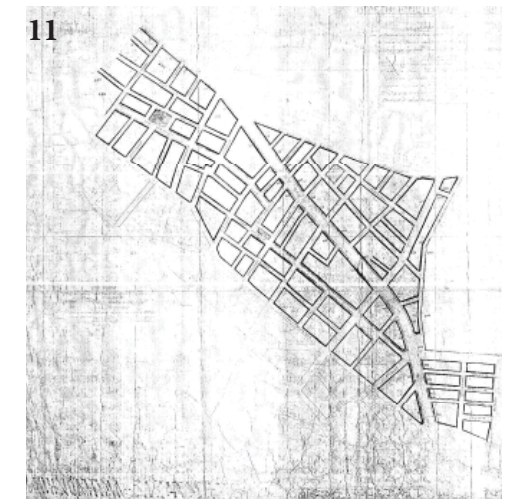
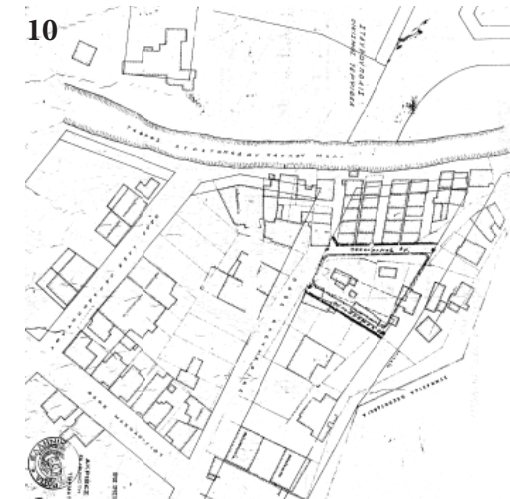
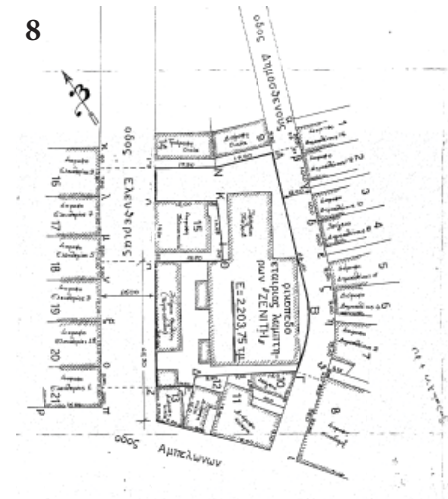
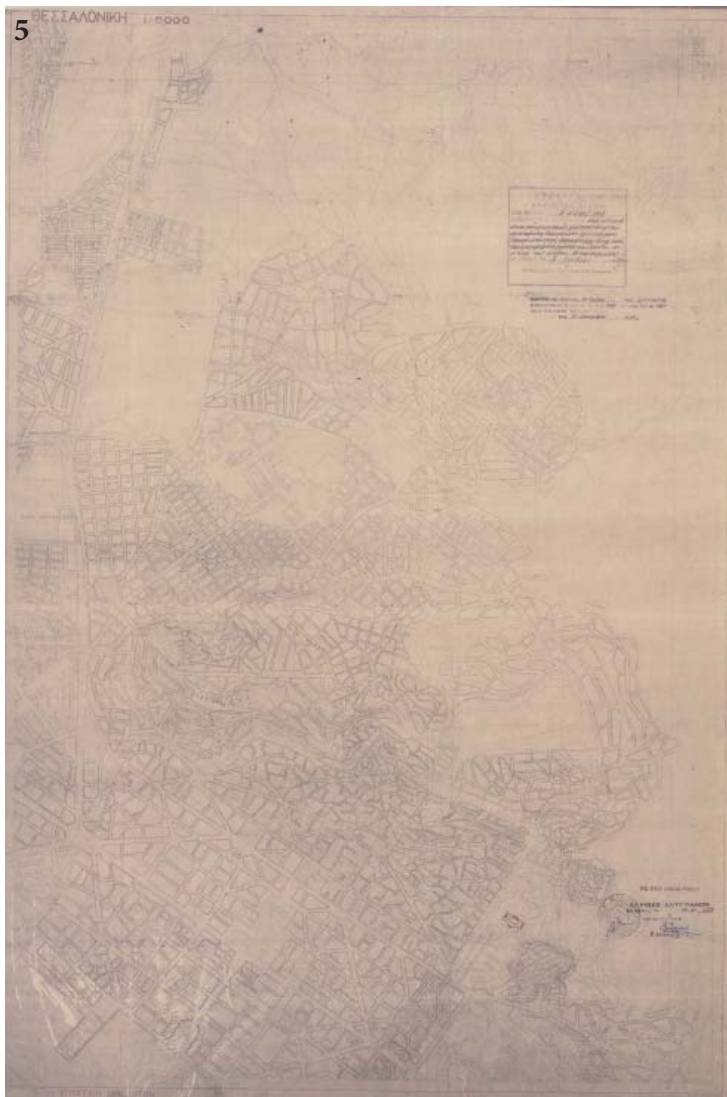
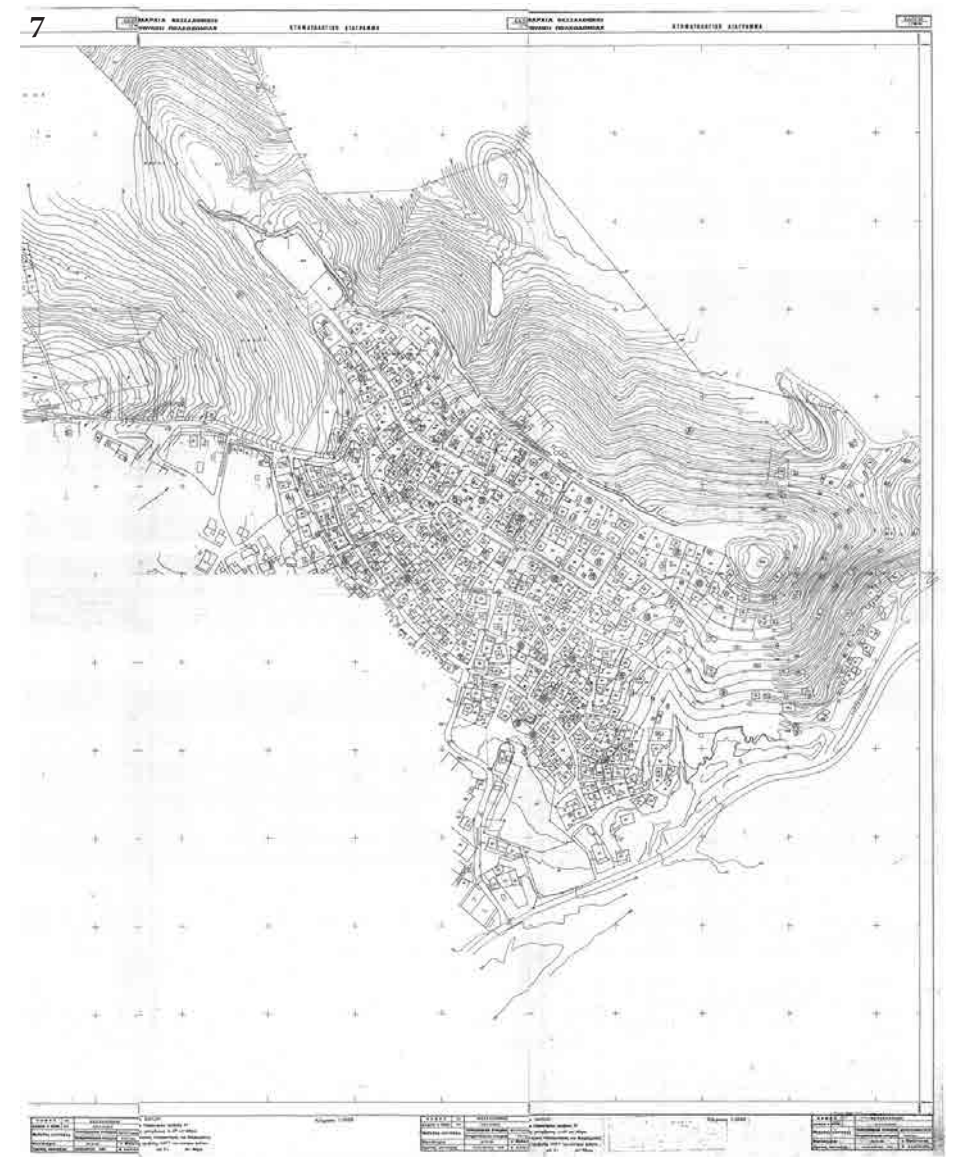
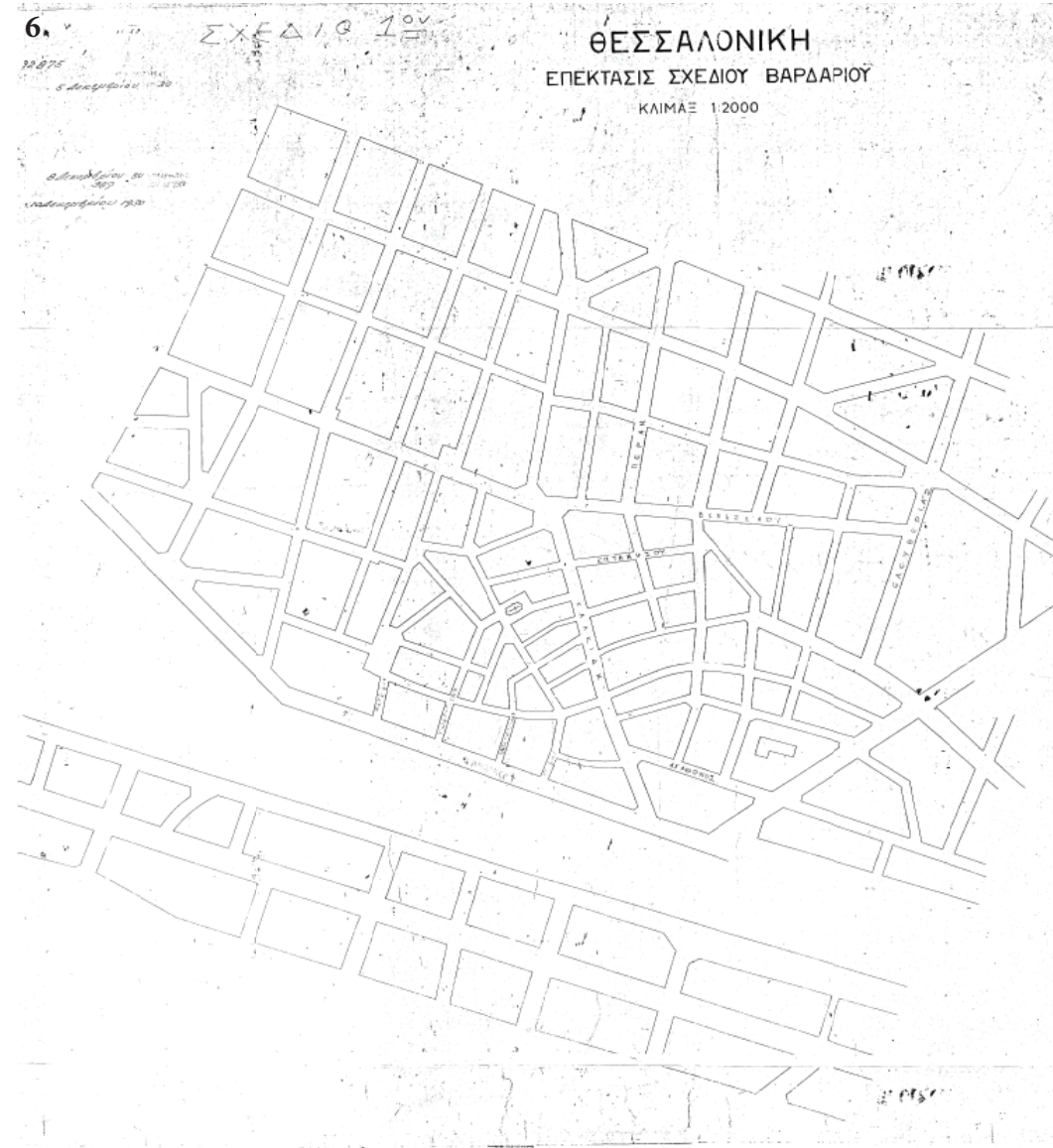
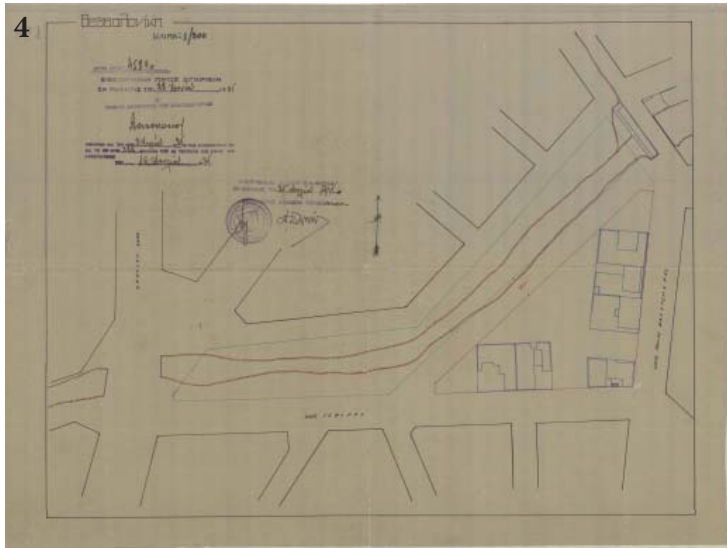
vii. Western Thessaloniki - The planned dimension

Selected Plans in the municipalities of Ampelokipoi-Menemeni & Thessaloniki

1. Modification Plan for the creation of green areas along the current 28th of October avenue, at the time Ilioupoleos - Thessaloniki street. The local stream is still visible at the time. (Gov. Decree 238_27-09-1972) 2. Plan for the military camp of Me. Aleksandrou designating the areas for the construction of the municipal swimming pool and the municipal stadium (Gov. Decree 80_28-2-2008 & 584_15-7-2002) 3. Modification of city plan of Ampelokipoi for the area of the Allied Forces cemetery (Gov. Decree 392_8-5-2006) 4. Local plan, showing the local stream that crossed the area. (Gov. Decree 326_19-7-1935) 5. Plan for the extension of the Ag.Dimitrios Hospital that at the same time provides information on NW Thessaloniki at the time (Gov. Decree 342_27-9-1977) 6. Extension of the Vardaris plan and approval of the settlements of Ampelokipoi, Eptalofos & Bosporos (Gov. Decree 389_10-12-1930) 7. Survey of the Meteora settlement in Polichni in 1989 8. Plan of the Prefecture of Thessaloniki provisioning for the creation of a green area with an underground parking space beneath (13-3-1985) 9. Modification of the city plan of Sykies in the area of Petrou Levanti (Gov. Decree 696_9-11-1989) 10. Modification of city plan of Ampelokipoi, the stream of Xiropotamos is visible on the north part (Gov. Decree 436_7-11-1977) 11. Modification and extension of city plan of Ampelokipoi past the Allied Cemetery area (Gov. Decree 113_20-9-1961)

(source: 1, 2, 3, 6, 8, 10, 11. Municipality of Ampelokopoi-Menemeni 4, 5, 9. Municipality of Thessaloniki 7. Municipality of Polichni)

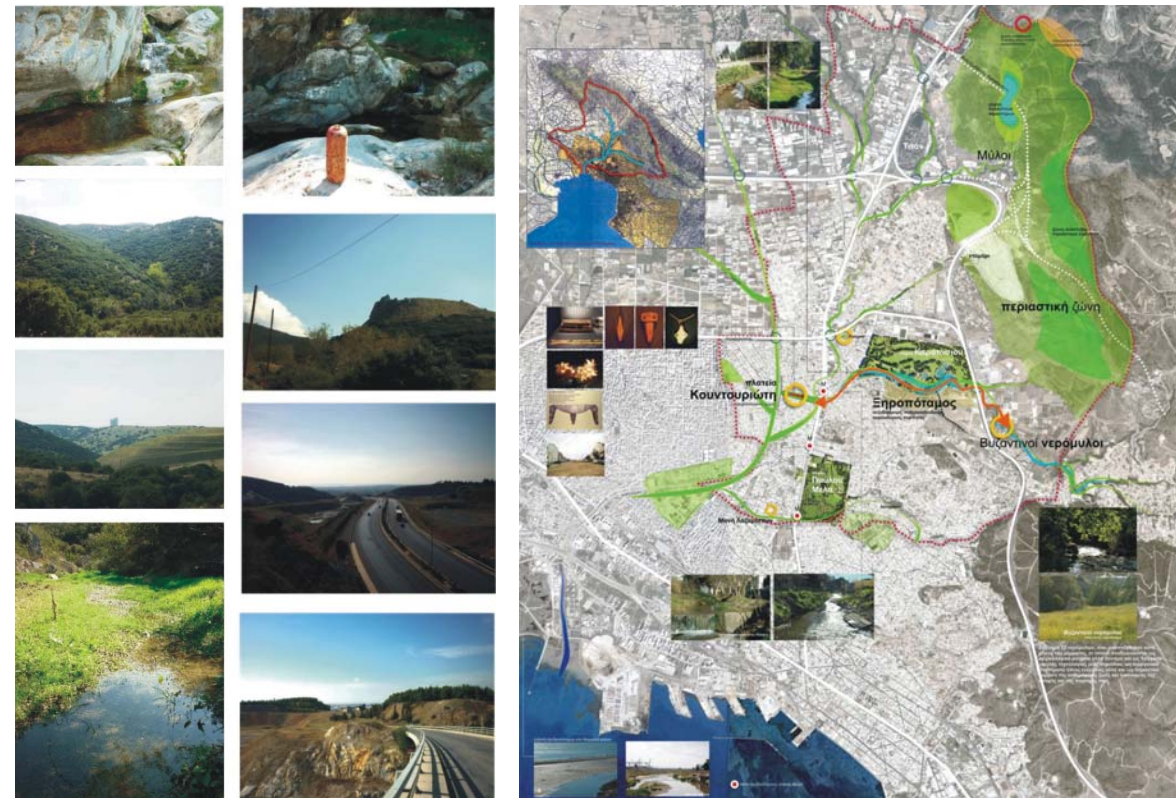






Interventions in the fabric of West Thessaloniki

- interventions in the framework of the European Cultural Capital 1997
- interventions posterior to 1997

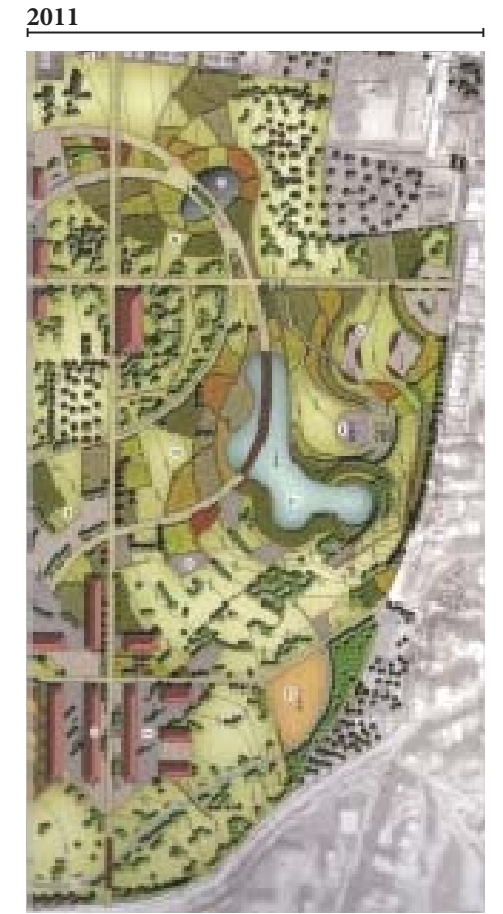
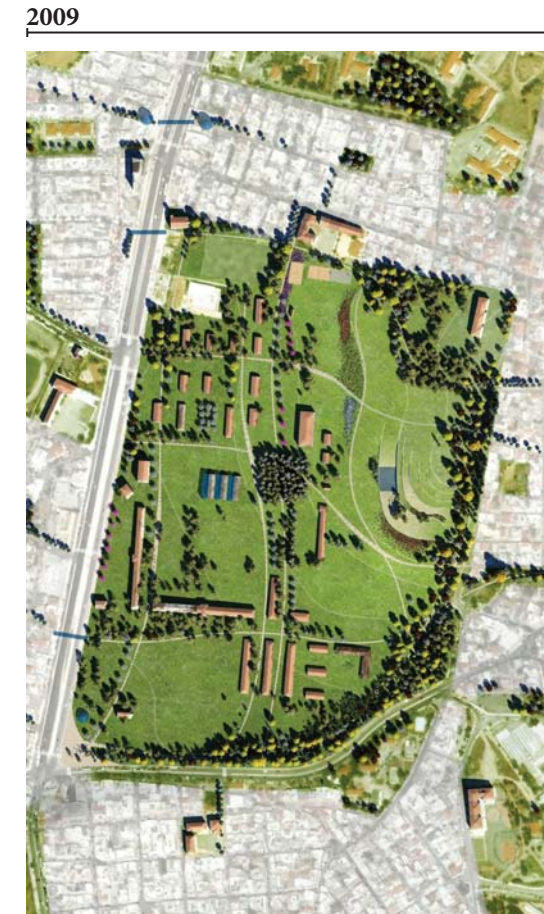
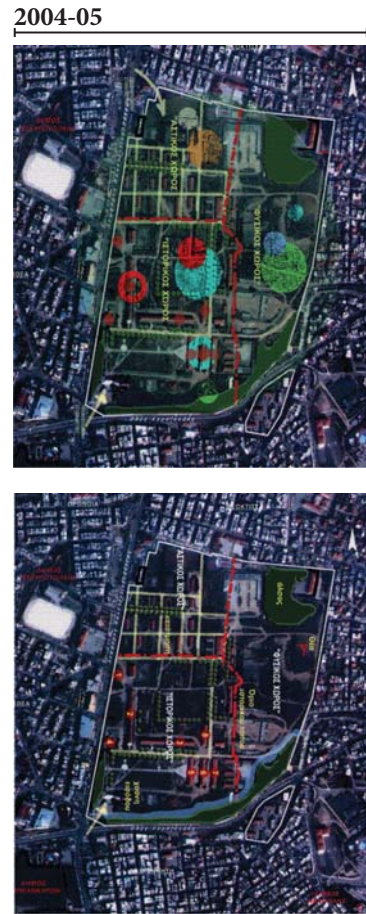


Right-top

1. Proposal for the creation of a metropolitan park in the site of the Old Karatasiou Camp
 (Municipality of Pavlou Mela, 2010)

Right-bottom

Proposal for the upgrade of the Western neighbourhoods of Thessaloniki including a flood-protection study for the river of Dendropotamos and the peri-urban green
 (Municipality of Pavlou Mela, 2012)



2. Series of Actions for the development of a plan for the old Pavlou Mela Military Camp

The Pavlou Mela camp is a representative example of processes developed for the spaces in west Thessaloniki. The camp included in the West Arc 1997 competition, was the object of study and design of different types, engaging public participation directly and indirectly. The complications that have risen concerning the passing of the camp to civic use have postponed any implementation acts, but at the same time have allowed the design and debate to develop over time. The processes associated with the camp are the following:

2004 - 05: *Principles and Objectives for the camp's redesign*

(Technical Office of Municipality of Stavroupoli - A. Palli & D. Papadopoulos)

2006: *Preliminary Study* (N. Soulakis & Municipality of Stavroupoli)

2009: *Preliminary Study* (Municipality of Stavroupoli - E. Seira & F. Tsakmakis)

2011: *Investigative proposal - Botanic garden* (Municipality of Stavroupoli & A. Tsalikidis)

(image source: Municipality of Stavroupoli, Municipality of Pavlos Melas)

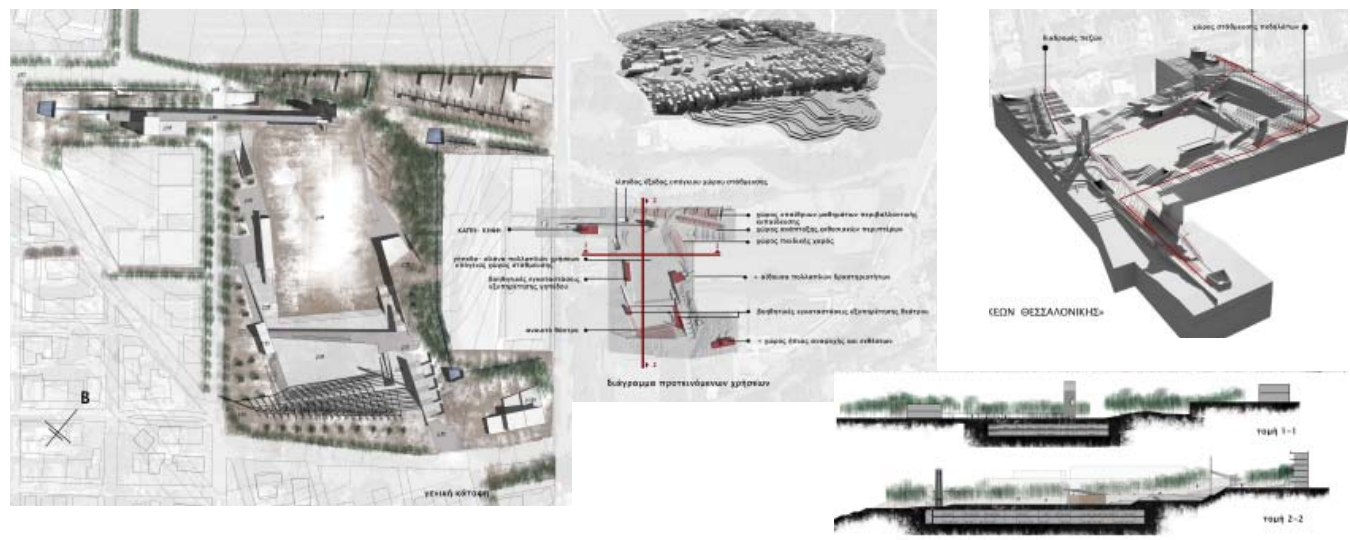
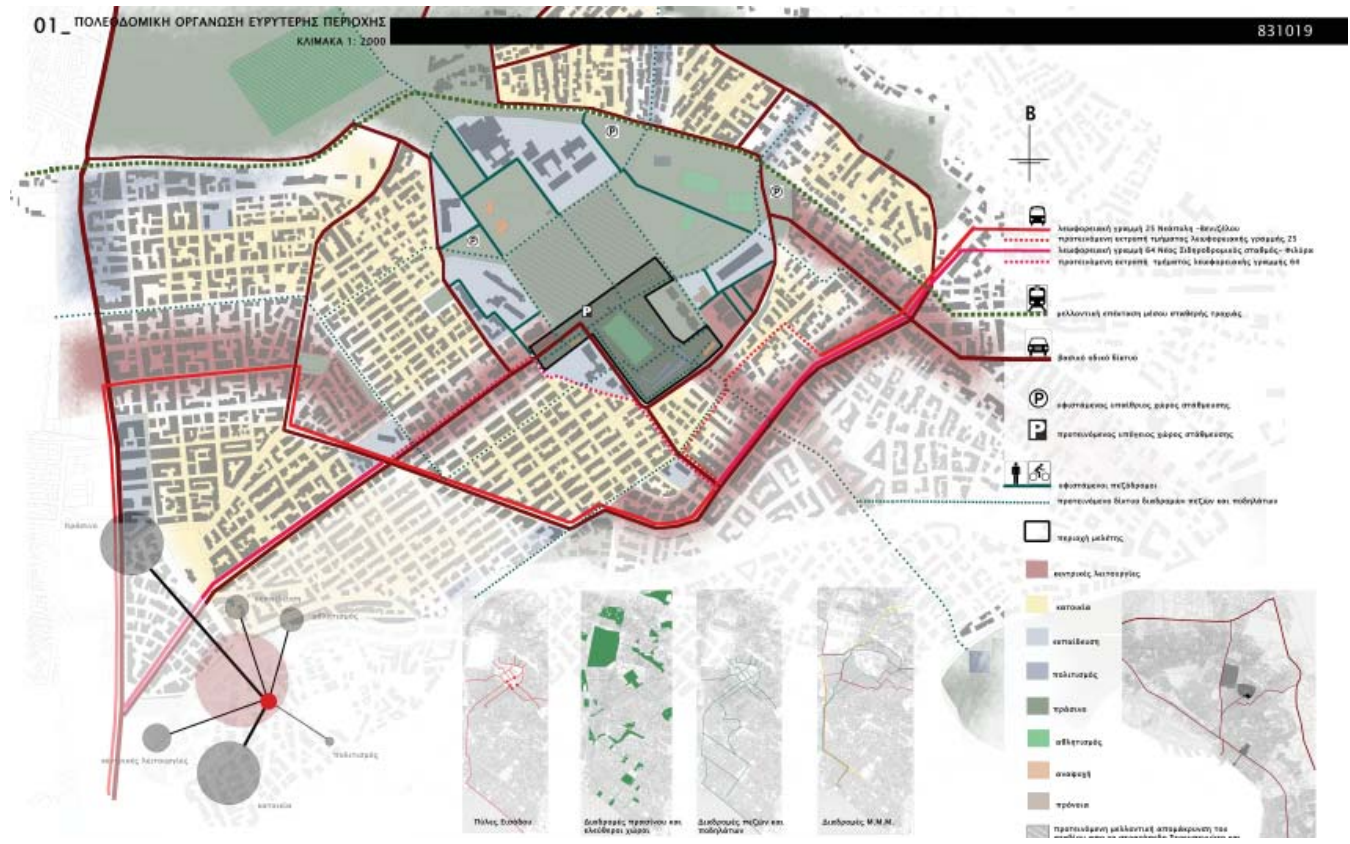
Photos of the Pavlou Mela camp



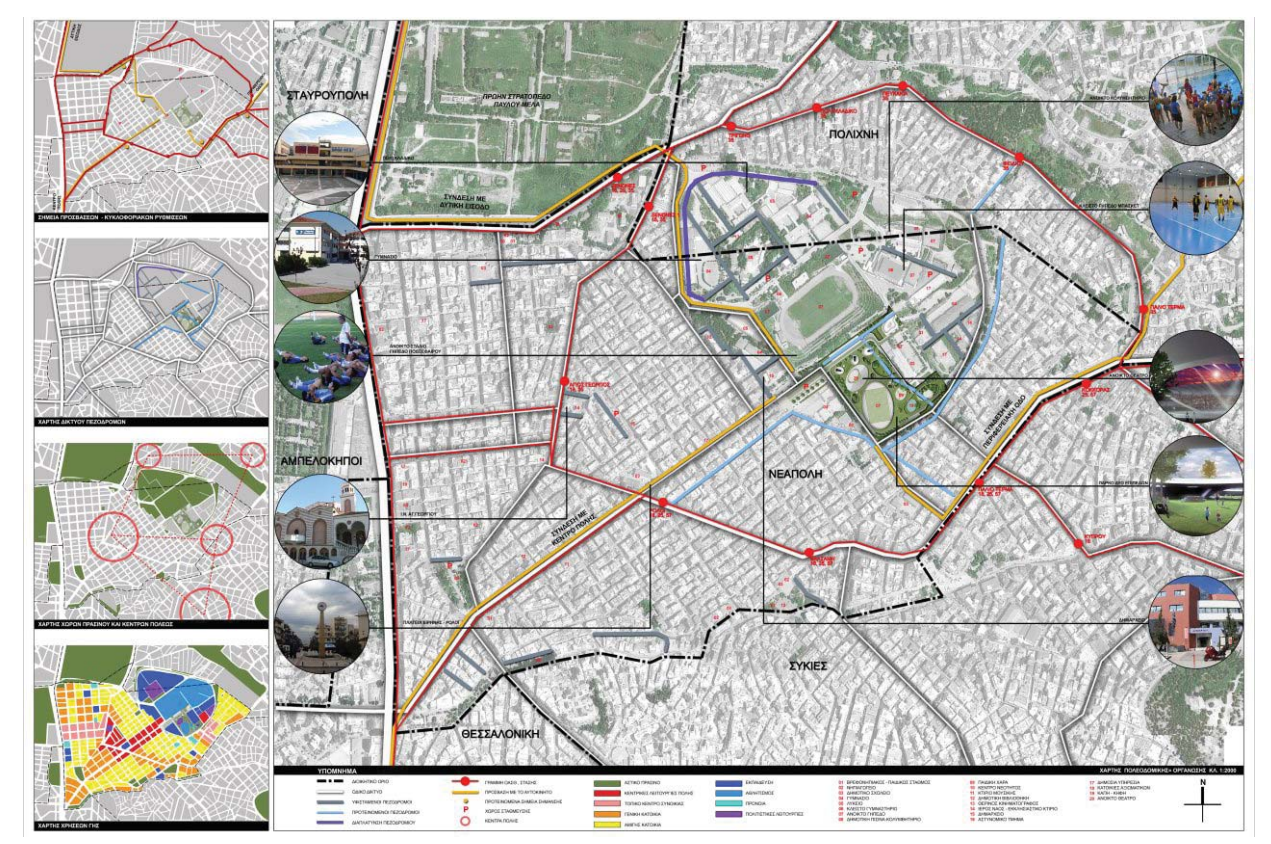


40.22 Architects (*architectural study*) & **Geochoros Meletitiki** (*urbanistic study*)
1st Prize

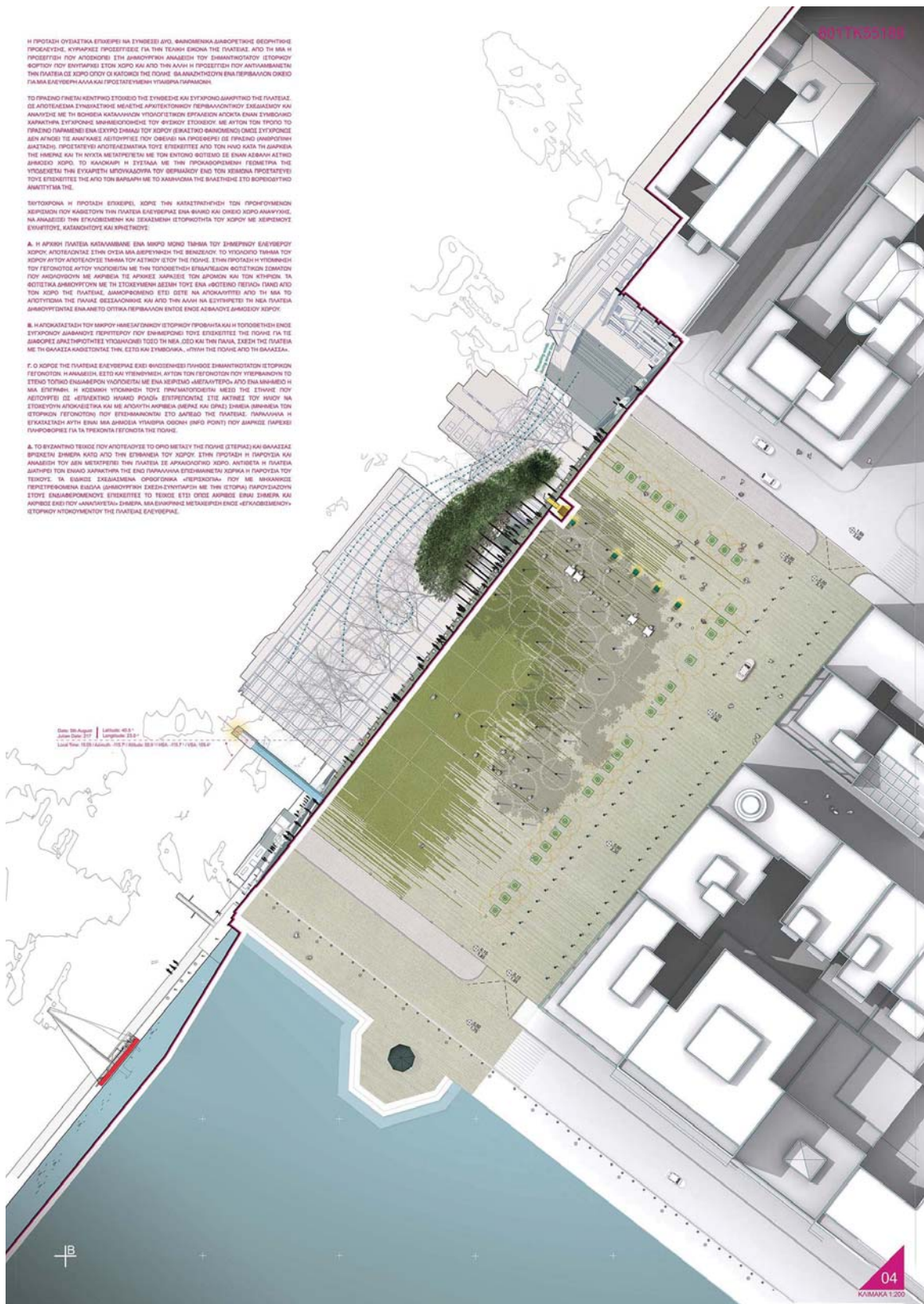
3. National Architectural Competition
Reformation of the *Balkan Square* in the former Strempenioti Camp in the Municipality of Neapoli - Sykies, Thessaloniki
 (YPEKA, 2012)



Papathanasiou G, Stavridi E., Stefanatou P. (arch) & Spiropoulos I. (urban)
2nd Prize

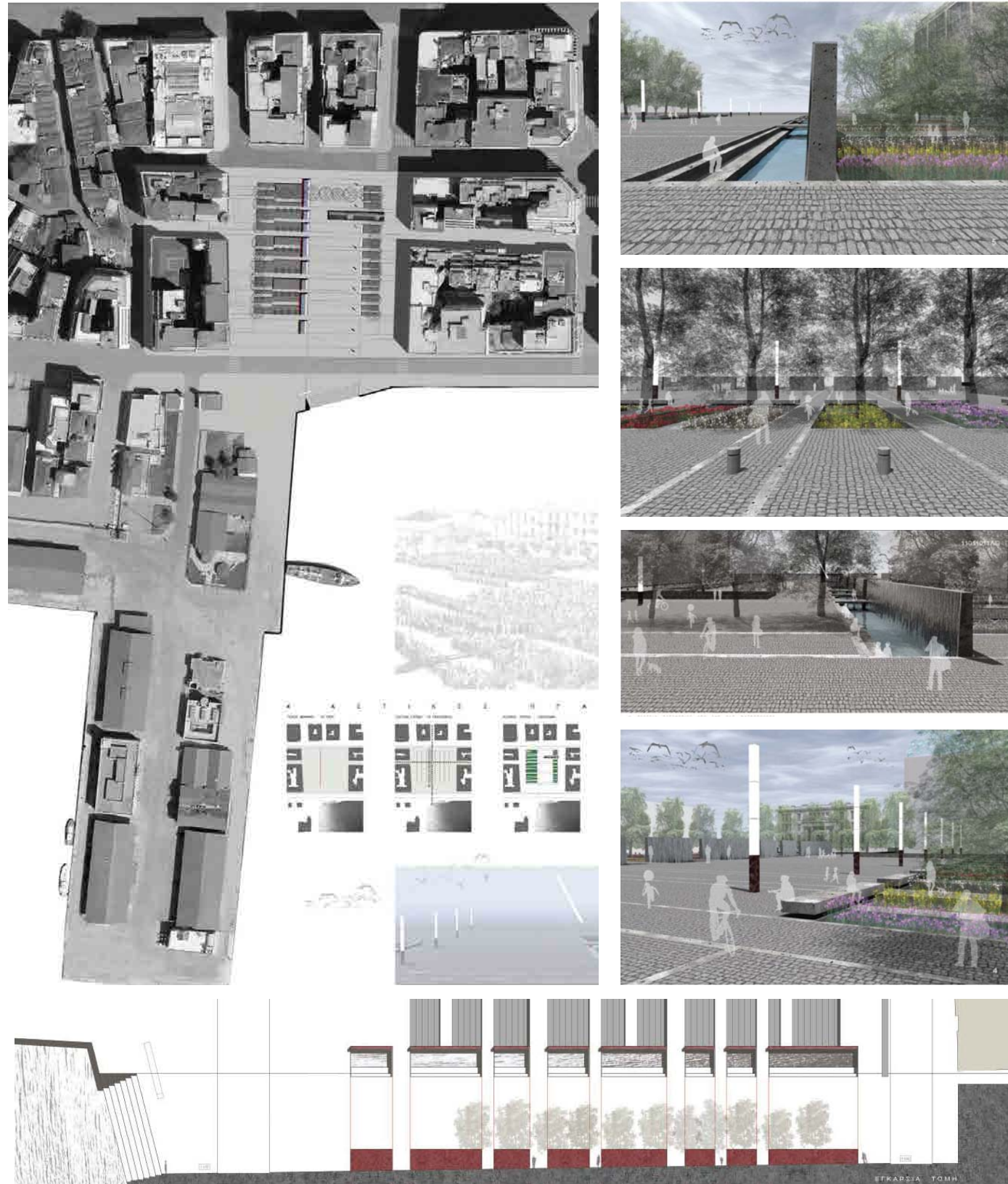


OFFICE TWENTYFIVE ARCHITECTS (O25Ax)
3rd Prize

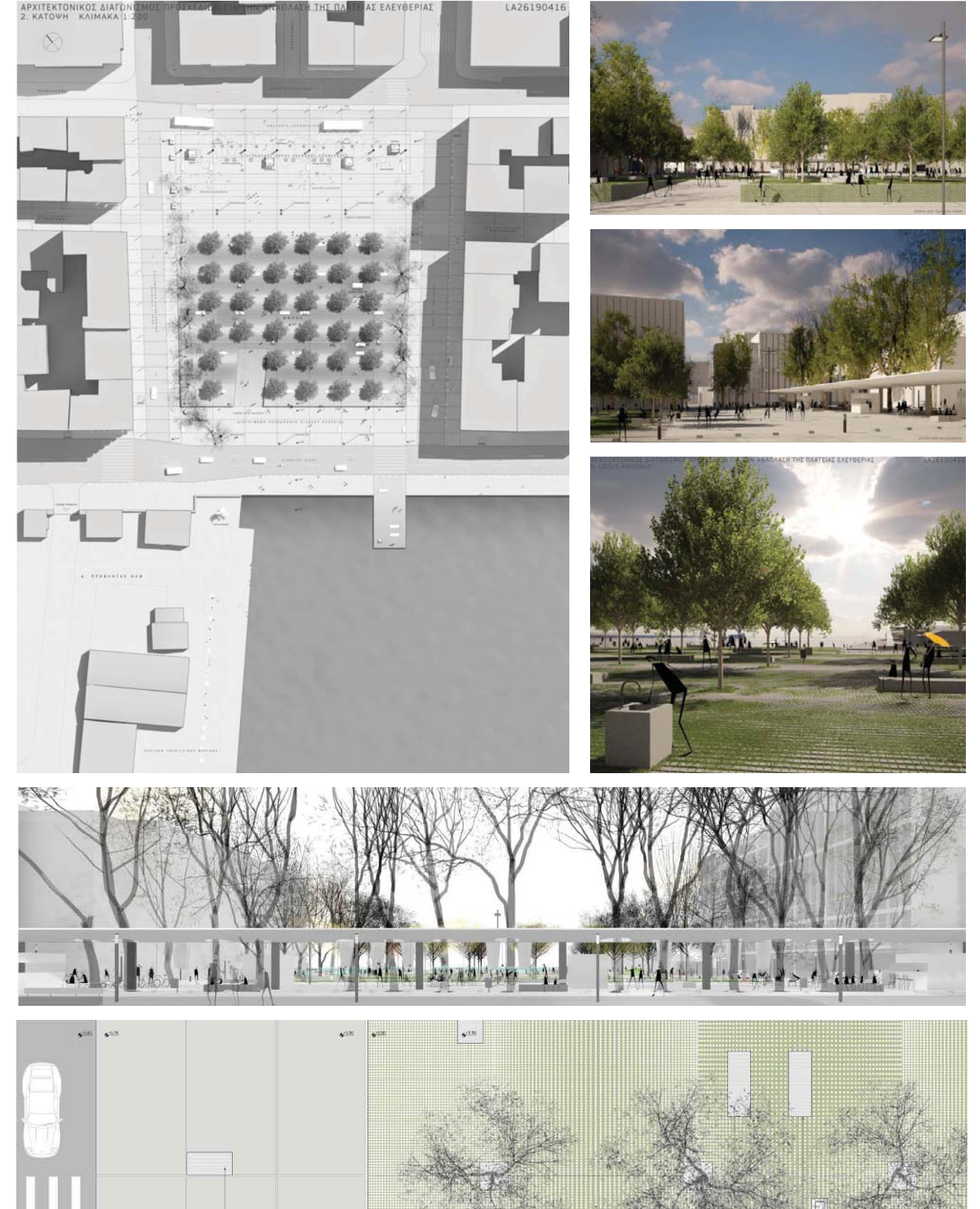


Chatziagiannopoulos Th., Charalampidis K.
1st Prize

4. National Architectural Competition
Preliminary rchitectural competition for the "Rehabilitation of the Eleftherias Square ' in the Municipality of Thessaloniki
(YPEKA, 2013)



Gkikapeppas V., Anastasopoulou A., Paraskeva D.
2nd Prize



Loukopoulou Ch., Bertaki I., Adrimi F., Kalisperakis V.
3rd Prize



Situations Detected *Risks and Opportunities*

legend

- ar:** archaeological traces
- in:** industrial remnants
- hy:** hydrological traces
- la:** latent spaces
- re:** recycled sites
- ri:** risk sites
- rs:** residential islets
- fl:** flow generator / attractor
- pu:** emerging public spaces
- lg:** latent green spaces
- fi:** fabric discontinuities
- in:** incontinuities
- p:** poles of activity
- ac:** lack of accessibility

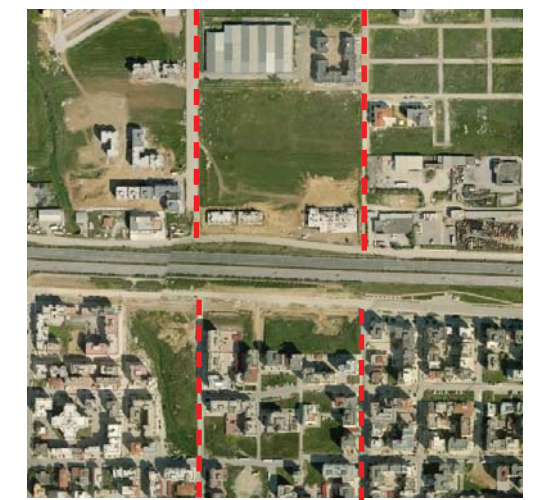
military camps

archaeological traces



0 50m 100m 250m

lack of accessibility



0 50m 100m 250m

industrial remnants



0 25m 75m

hydrological traces



0 50m 100m 250m

viii. Situations Detected - *Risks and Opportunities*

Having analysed the western area in its different aspects and scales, this following section will make an indicative listing of the different kinds of situations detected, serving as a phenomenology of conditions and dynamics present in the contemporary mosaic. For each type of situation the risks detected as well as the possible opportunities that arise are listed:

archeological / cultural traces

Risk: The NW Thessaloniki area and especially the Polichni and Stavroupoli area hold significant sites of archeological and cultural interest that have survived in different forms up to this day. Most of them are found under different degrees of pressure from urban development.

Opportunity: These elements could serve a key role in restructuring the imaginary / cultural landscape of the area, highlighting historic activity while introducing dynamic new uses, creating local cultural poles.

lack of accessibility

Risk: At several points in the NW area, there are obvious problems of accessibility and connectivity. They appear with more frequency along pronounced infrastructures (ring road, rail) contributing to the further fragmentation effect in the local fabric.

Opportunity: The creation of new traffic or the improvement of existing ones along the interior ring road could improve significantly the regional mobility factor and enhance flows.

industrial remnants

Risk: The abandonment of industrial buildings and sites as a result of the consecutive phases of des-industrialization of the city have produced numerous voids in the western fabric, of different architectonic and cultural qualities

Opportunity: Perform an analysis of vacant facilities and consider recycling or upcycling possibilities for existing areas. Provide the legal framework and conditions for the development or transformation of these areas.

hydrological traces

Risk: The traces of the local streams are still visible to different extends in the western fabric. The continuity of the traces is lost the closer to the centre. These spaces are seen under continuous pressure from adjacent urbanization, private and official.

Opportunity: Despite the grave deterioration of the original ecosystems, these lineal spaces constitute prime opportunities for ecological restoration of the western urban fabric. The proper management and design could establish key green corridors for the wider ecological structure.

ecological space occupation

Risk: Many areas of ecological importance (stream beds, Dendropotamos wetlands) have been occupied by intruding uses with a negative impact on ecological functioning.

Opportunity: Liberate these critical areas from intrusive edification and incompatible uses, aiding in the ecological restoration of these areas.

interstices

Risk: The uncontrolled development of infrastructures has created interstice areas, fragmented pieces of the local fabric, found in occupied or unoccupied state.

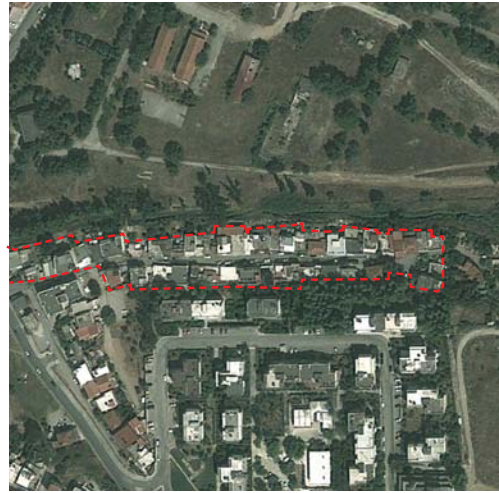
Opportunity: Revise the function and integration of these areas in the western fabric to improve overall fabric cohesion.

residential islets

Risk: Another manifestation of the fragmented fabric are the residential islets that have formed, disconnected from the main fabric by infrastructure barriers. The lack of services and civic infrastructure intensifies the isolation effect of these areas.

Opportunity: These areas are in urgent need of integral plans for their development and reintegration with the urban fabric, as special residential units in the peri-urban area.

green space occupation



0 25m 75m

interstices



0 50m 100m 250m

residential islets



0 50m 100m 250m

emerging public spaces



0 25m 75m

risk sites



0 50m 150m

latent spaces



0 50m 100m 250m

scattered green areas



0 50m 100m 250m

flow generators / attractors



0 50m 100m 250m

fabric discontinuities



0 25m 75m

poles of activity



0 50m 100m 250m

emerging public spaces

Risk: Scattered throughout the NW area there are numerous emerging public spaces that have emerged, principally in the vicinity of municipal and local centres and key green areas. The lack of a proper public space structure for the Western area, retains the development of the full potential of these areas.

Opportunities: Utilize these areas as structural points in combination with the exterior arc, to formulate an extended and cohesive public space structure covering the entire Western area.

risk sites

Risk: The urban development has reached in close proximity to heavy industrial uses creating functional incompatibilities. These areas apart from risk to nearby residences can also present risk for key ecological areas (such as the Dendropotamos estuary)

Opportunity: Revise strictly present functioning and socio-ecological compatibilities with adjacent fabrics. Consider recycling of sites.

latent spaces / latent green spaces

Risk: Present voids and unoccupied areas in the western fabric are presented today as key spaces for guaranteeing green areas and for structuring and extended and intra-connected open spaces system.

Opportunity: Consider the careful integration of these areas in the urban structure, through the creation of carefully and quality designed spaces.

flow generators / attractors

Risk: Certain transport facilities such as the Central Bus Station, the seaport, or commercial facilities like the central Food Market, create a considerable amount of incoming and outgoing flows, often creating traffic congestion in their vicinity.

Opportunity: To enhance to the functioning of these facilities, improving the overall urban functioning. The creation of adequate traffic nodes and an adequate traffic management scheme are necessary steps to achieve this.

poles of activity

Risk: The concentration / grouping of similar activities in small radius has given rise to the emergence of various thematic poles (sport, cultural, commerce, manufacturing etc). Although usually located close to infrastructures, they still lack formal access and importance in most cases.

Opportunity: Structure internally and externally this emerging poles to enhance their effect and improve their functioning and scope. Consider connectivity with public transportation options as well as pedestrian and bike flows.

scattered green spaces

Risk: The existing green spaces and parks within the western urban fabric are found in a scattered state, isolated and unconnected. The lack of a proper green space structure for the western area, intensifies the effect of isolation and degrading for these areas.

Opportunity: Connect these spaces on a local as well a wider scale, formulating in conjunction with the green corridors and the exterior ring an initial green structure for the wider western area.

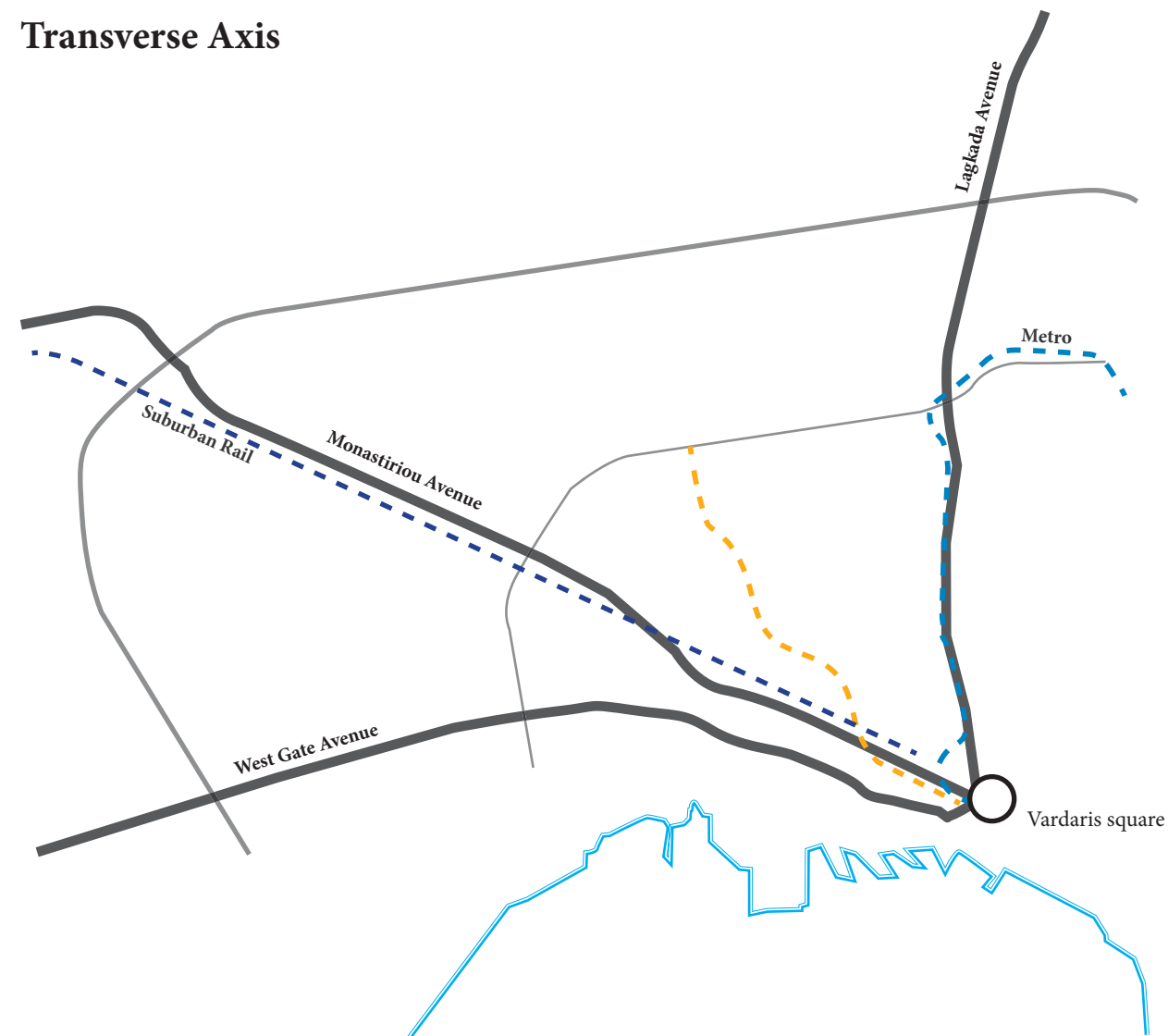
fabric discontinuities

Risk: The historic development of diverse transport infrastructures in the area, have also given birth to the appearance of numerous discontinuities in the urban fabric of various magnitudes / impact.

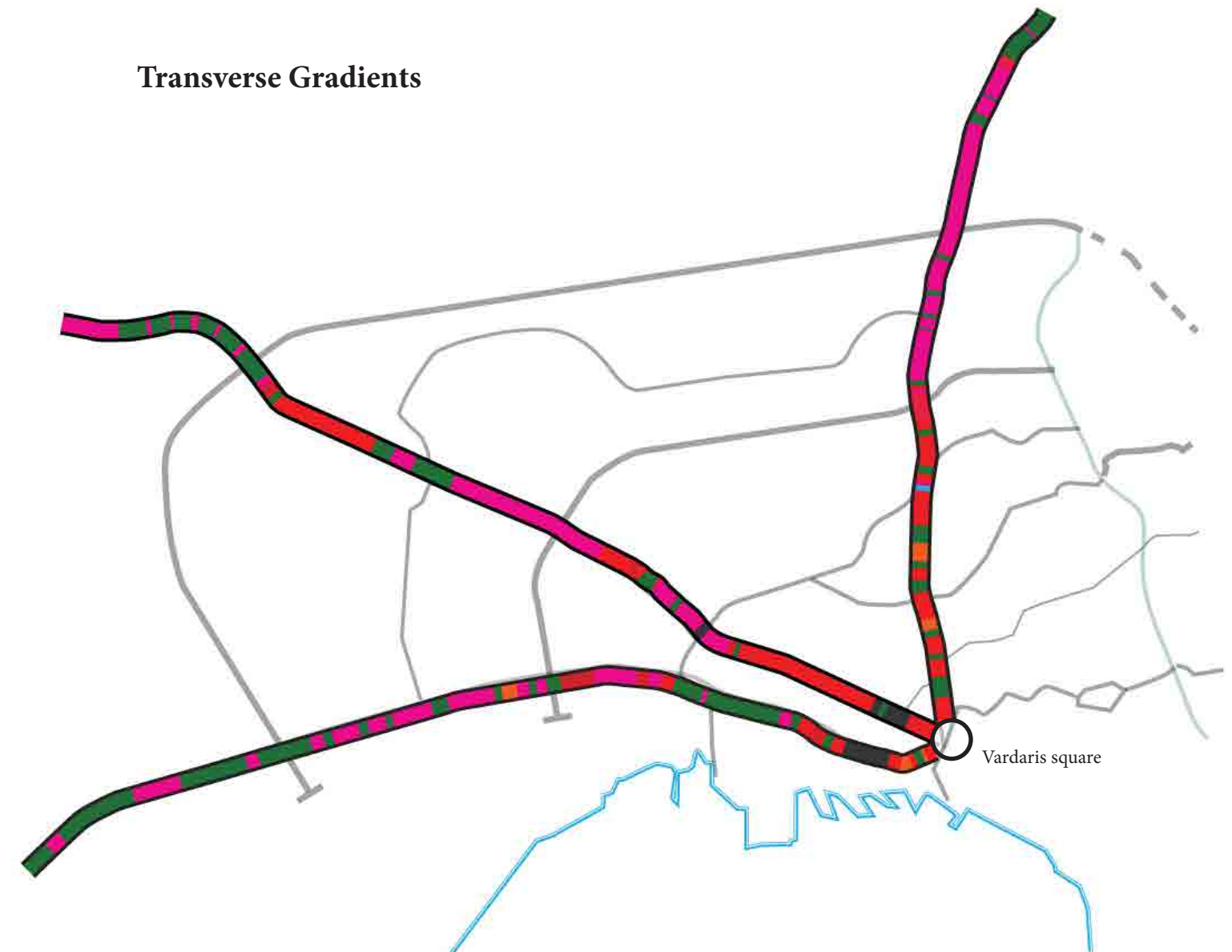
Opportunity: Consider way to mend the functional discontinuities produced while taking advantage of the formerly lineal infrastructural spaces for establishing dynamic corridors.

Following this detection of the distinct situation detected in the western fabric, the next part will intend to apply the observations and recommendations produced by the analysis, in the presentation of the proposed restructuring for the area.

Transverse Axis



Transverse Gradients



ix. Conclusions - *the emerging structure & mosaic*

This part of the analysis will synthesize the results from the earlier analysis chapters in order to formulate the final impression of the regional mosaic. Meanwhile it will try to correlate and interpret them in conjunction with the results of the analysis of the interior arc to produce a complete and more precise impression of the extended western area, and the potential scheme of reconfiguration that emerges from the contemporary latent conditions present in the fabric. Main objective of this synthesis is to highlight the position / function of the exterior and the interior arc in the contemporary fabric, on an extended regional scale, searching for the true regional potential of a possible reconfiguration. The synthesis will follow next steps before reaching the final conclusions :

- i. **Macro Regional Structure** (Hard infrastructure / Activity Poles / Gradients)
- ii. **Urban Structure** (Soft infrastructure / Public Space / Civic Space)
- iii. **Ecological Structure** (Continuities/ Patch-Corridor-Matrix Scheme)
- iv. **Final Mosaic Synthesis**

i. Macro Regional Structure

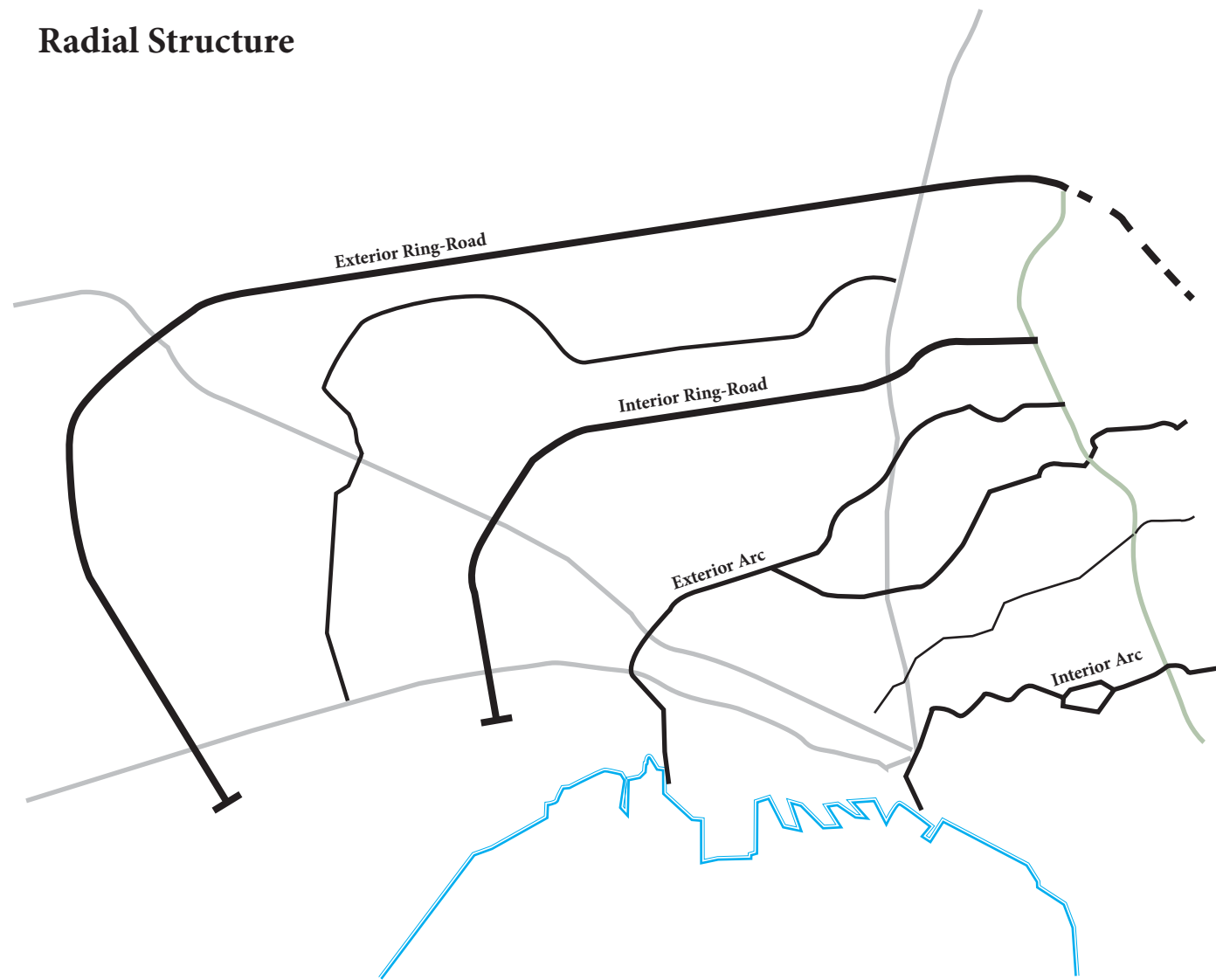
The macro urban structure is articulated by the principal hard infrastructures elements that propagate and dictate the urban effect over the entire regional area. This structure can be divided into two basic categories, based on the directional and formal nature of these elements; **i)** the transverse axes that stem from the historic centre, and more specifically from the Vardaris Square, and provide a transverse connection with the peri-urban and exterior area of the urban region, and **ii)** the radial elements and the corresponding radial urban structure that is formed by the series of co-central arches that appear on the western part of the city. These two systems seem to coexist on the territory, superimposed on each other both in spatial and functional terms.

The Transverse axes

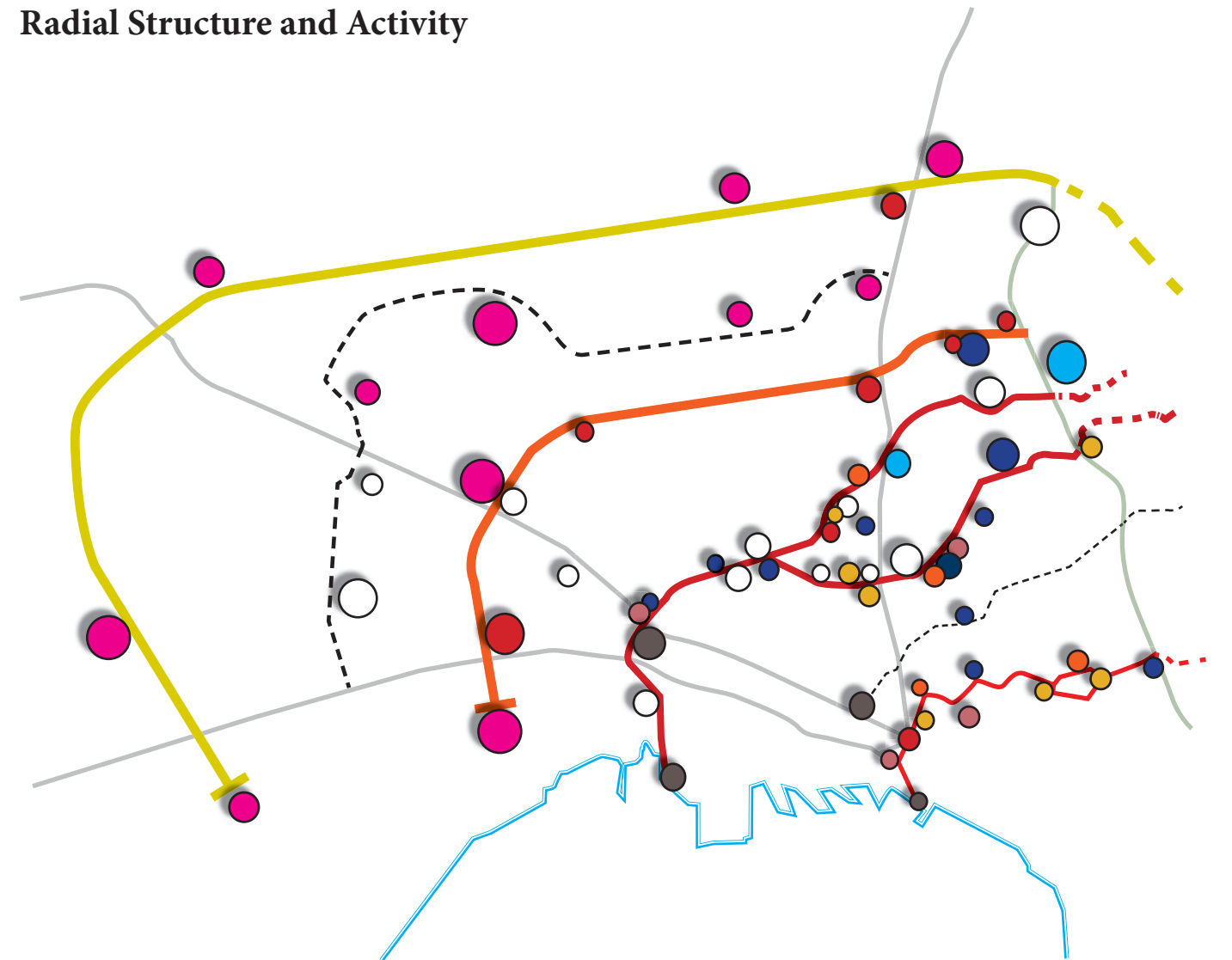
The transverse axes that were analysed in the previous section, provide indicative examples of elements of regional / transregional reach. All three are located along major incoming/outgoing routes, that have been formed gradually over the passage of time. This can be seen by the type of activities that have been located along these axes and have created lineal growths and spawl in a parallel direction to them.

In the case of **Lagkadas Avenue** this effect can be seen clearly. Inside the urban fabric (6.2km) the axis creates an elongation of the urban fabric to the north. An observation of the situation outside the

Radial Structure



Radial Structure and Activity



exterior Ring Road (when it merges with Egnatia highway), demonstrates that the effect changes to a lineal growth associated with tertiary uses that extends firstly until the town of Liti and Lagyna (5km) and even continues further along the old national highway (and parallel to the vertical Axis of Egnatia) north to the town of Assiros (+11km). This growth demonstrates the importance of this axis as a traditional commercial route that existed in the area way before the construction of the Egnatia Highway.

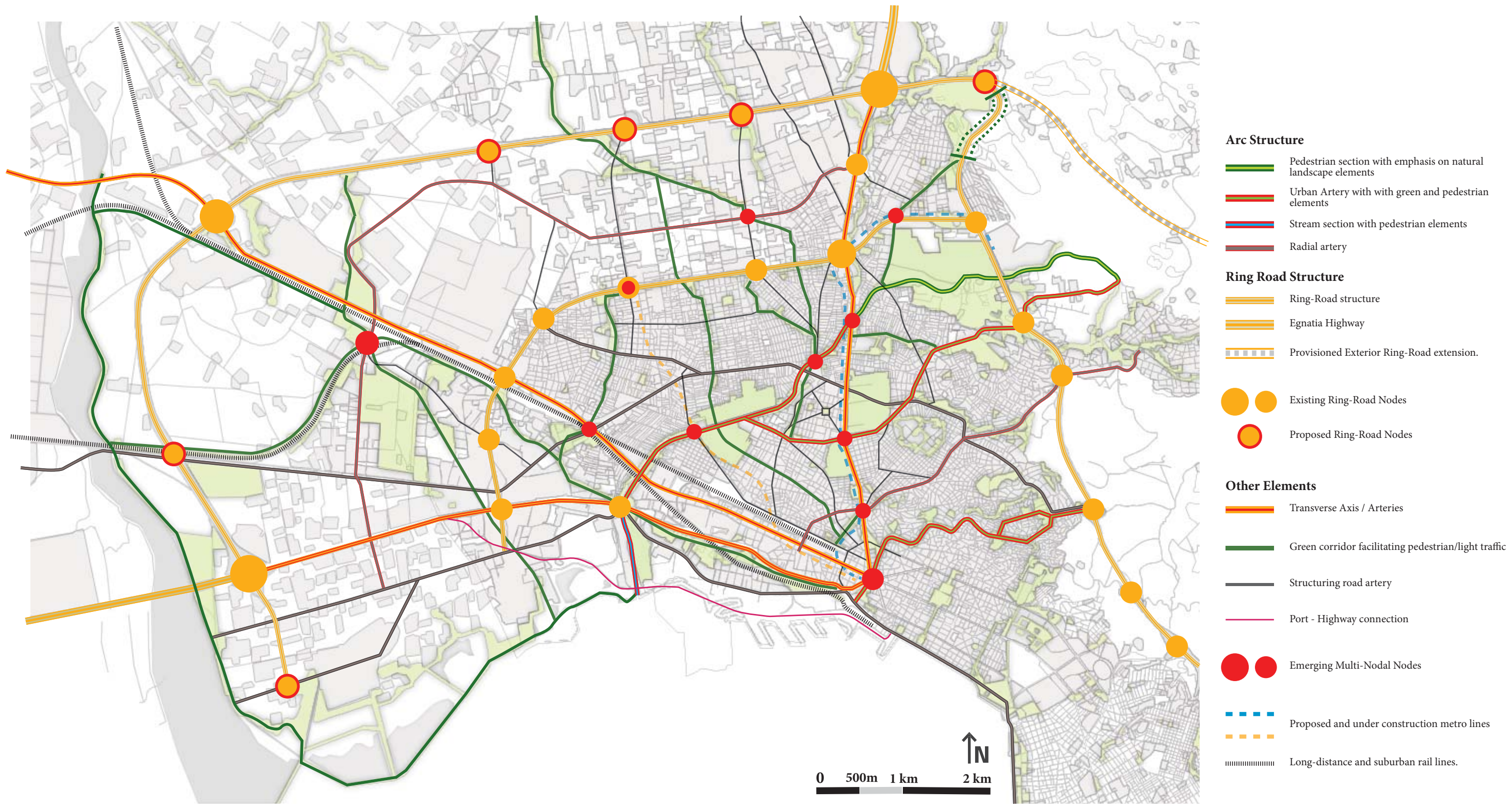
The **Monastiriou / Konstantinou Karamanli** Avenue presents distinct characteristics from the Lagkadas axis. The avenue developed along the Monastiri-Thessaloniki rail line, with a NW direction connecting the city with peripheral towns (Diavata, Nea Magnisia). The axis maintains today this transmunicipal character, but with considerable tertiary developments covering the space between the urban fabric of the city of Thessaloniki and that of the peripheral towns. This double road-rail character of the axis attracted a series of key areas and activities to be located along, offering quick and easy access to the city centre directly from the exterior area of the urban region.

Lastly, The **West Gate / Entrance** is an axis distinct from the two formentioned axes and the newest one in order of appearance. This has to do both due to the recent completion of the artery and also because of the distinct areas that it crosses, resulting in different characteristics altogether. The axis has

a West direction crossing the Kalochori Commercial and Industrial Area, north of the town of Kalochori, and after passing the Gallikos River, it passes south of the Sindos town. As seen in the analysis a number of recent key areas have been located along this axis, which create additional / increased loads on the axis. The avenue converts to Egnatia Highway on the height of the exterior Ring-Road node after running 8.2km in urban and peri-urban fabric. The eastern section of the axis, east of the exterior arc, that was the last part to be completed, runs through the Lachanokipi district and the area the is planned to host the Lachanokipi Bussiness Park. In the same section, south of the axis runs the 26th of October, that borders the port area and port-related facilities.

Radial Structure

The radial elements that form this second spatial structure are a series of concentric arcs that have the historic centre as their common central point. The main arcs in this structure are four (starting from the east to the west) : **i**) the Interior Arc **ii**) the Exterior Arc **iii**) the interior and **iv**) the Exterior Ring-Road, and there are two minor -intermediate ones: **a**. the Andreas Papandreu Avenue and **b**. the *intermediate Ring Road* that has not been constructed but has been considered in the past. Each one of these principal arcs have served as urban limits at their respective moments, with the progression of time and the expansion of the city outwards/westwards. This outward movement also resulted



Urban Structure Reconfiguration
Synergies and continuities

in the progressive expulsion of certain activities each time to the periphery of the city and the creation of respective voids / infills.

In today's context, the analysis demonstrates that each arc has taken distinct functions in the contemporary fabric. This distinct character makes reference to the flows and the activities that each arc carries (or has carried) along its course. Starting from the east, *the Interior Arc*, following the city walls course, marks as seen a special type of urban interface, bridging and the same time separating the historic centre from the western expansions. A series of historic sites and civic uses have resided along the arc over the course of the time, giving the axis a clear urban character. *The Exterior Arc* has more of a double structural function. On a first level, that of an urban spine articulating urban activity and second that of an important ecological corridor, given that the arc runs over the original Dendropotamos rivercourse. The presence of important green patches and unoccupied spaces along this axis is another important factor backing the previous claim. *The interior Ring-Road*, serves today as a rough limit for the urban fabric of the city, although elongations of the fabric surpassing this limit appear at various points eg. along Lagkadas Avenue or the area of Rentziki. It serves great amounts of flows on a daily basis, and for that reason many tertiary type activities and uses have installed, primarily on the exterior side of the axis, creating accordingly a diffused tertiary type growth in the interspace between the interior and exterior Ring-Road. *The Exterior Ring-Road*, the last radial element in order, presents a slightly different character than the previous one. It crosses principally agricultural land dotted with tertiary uses/activities and the only close contact it has with urban fabric is with the towns of Diavata and Nea Magnisia. This particular arc will be analysed in detail in the following chapter.

The form of this radial structure, and especially the inner parts, is a result to a great extent due to the local geomorphology and the course of the local streams that it created. The Dendropotamos river that corresponds to the course of the exterior arc and the streams of Giannitson and Rigas Ferreos that corresponds to the interior arc. In both cases the drainage and hydrological works that have taken place have converted and covered the water courses to give ground to the later urban arcs. The double Ring-Road arcs, followed the same concentric scheme already established, but utilized more functional and structural criteria for continuing with the radial structure. The next part will take the above conclusions into account while formulating the impression of emerging urban structure.

ii. Urban Structure

The updated role of the exterior arc in the wider city structure as it emerges from the analysis can be seen in the map on the left, demonstrating the relation of the double arc (exterior arc & interior arc) with the rest of the radial city structure (connections / relations) and transverse axes (nodes / synergies). The prospect of the completion of the public transport works in the immediate future creates additional points of considerations and a potentially more complex and rich structure & fabric. Along with additional punctual interventions this creates the final emerging structure that is demonstrated in the side page. The individual parts/ elements that composing this reprogrammed city structure are described in continuation:

Ring Road Structure

The interior and exterior Ring Roads need to be configured in a coherent intercommunicated structure. At the same time, the unobstructed flow along its course is key to its functioning. The completion of the exterior Ring Road to the east, is a pending issue for the completion of the mentioned scheme. A series of modifications are proposed : eg. the extension of the exterior Road to Kalochori, addition of nodes in the Exterior Ring, or the conversion of the connector ring of Eykarpia to a green corridor. The Ring Road structure will be analysed in more detail in the following analysis chapter where its problems and potentials will be highlighted accordingly.

Transverse Axes

The three principal transverse axes play a key role in completing the city structure integrating and unifying with the parallel radial structure. The axes are recognized as major urban elements that have traditionally influenced urban form and activity and reclaim the potential to do so in the future. Traffic and landscaping interventions along the course of these axes can have a great impact on the overall city functioning and perceived landscape of regional users.

Exterior Arc

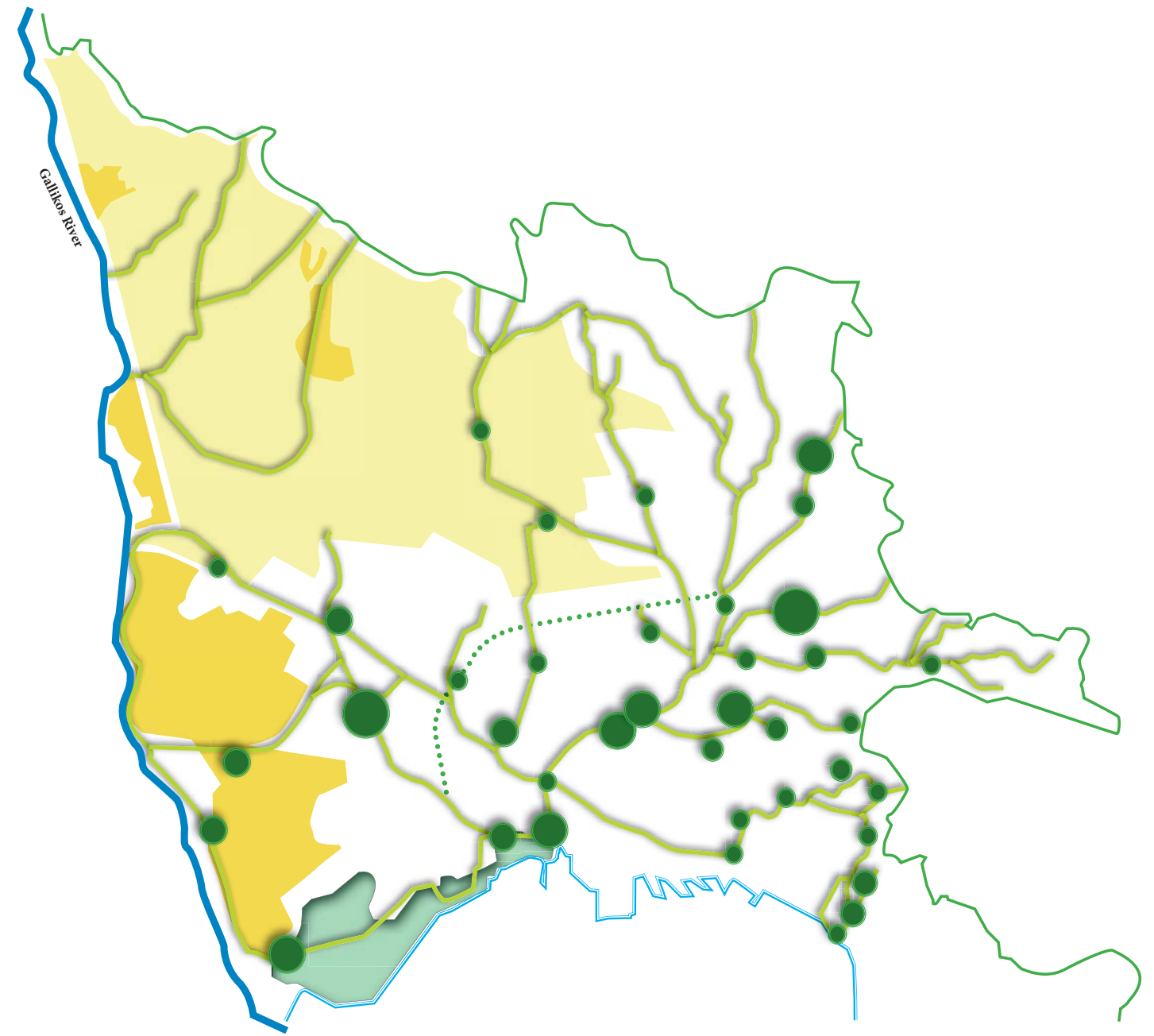
The exterior Arch can be divided into three distinct parts: **i)** The Dendropotamos section, **ii)** Xiropotamos branch, **iii)** and the Stavroupoli / Polichni branch. It is covered in more detail in continuation.

Public Transport

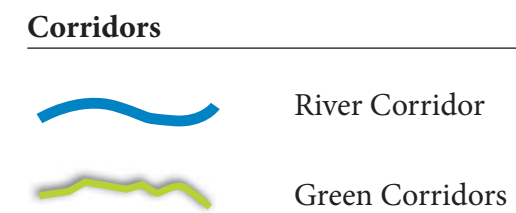
The completion of the metro system in combination and in harmonization with the suburban rail can bring a radical transformation and reconfiguration of the urban mobility scheme. The promotion of a transport oriented development strategy along the growth of this system can also aid in reticulating a more cohesive and dynamic urban structure. The map on the left demonstrates the system with the provisioned lines and the ones that emerge through the analysis.



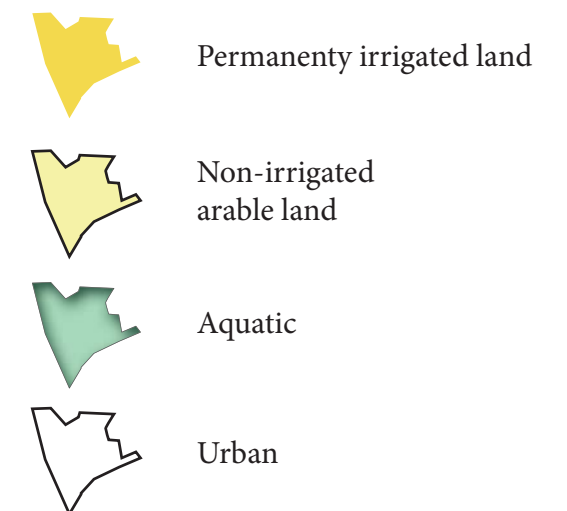
Ecological Structure
Spatial Distribution



Ecological Structure
Configuration



Matrices



Corridors

Exterior area



Peri-urban area



Urban area (visible)



Urban area (semi-visible)



Patches

Large



Medium



Small



Micro



Different scales and relations

Territorial ecological elements (corridors & patches) in a descending scale and a natural-to-urban transition order.

Pedestrian Axes

Based on the emerging ecological mosaic of the area, a series of new and existing green or pedestrian paths emerge. The pedestrian axes make reference to transverse paths along rural and urban routes of transmunicipal character that offer the potential of structuring and potentially generating significant urban activity along their course and structure open peri/urban space. Local streams, especially still open / unoccupied ones, offer optimal opportunities for structuring such activities and for re-enacting in this way the debate on their management and restoration. Bigger green areas can serve as connecting points as well as important patches of the local landscape. Patches at the same time act as connectors and structuring elements for the creation of the local public/ green space network.

Urban Arteries

This category makes reference to the re-activation and reconnection of existing urban arteries in order to transform them to important mobility corridors that could in a wider reconfiguration of the area scheme play a key role. That is to combine existing activities with the introduction of new ones, an overall attention on public space amenities and microspaces and the establishment of a sense of continuation along the urban fabric, achieving thus a urban reticulation on a local and a macro scale. In this category are also included the two intermediate arcs (Andrea Leoforou Ave & intra-ring) of the radial structure.

Key Areas / Attractors

These term refer to areas that are present in the contemporary fabric, and are in a transient/ latent state or voids that currently hold no use. The military installations are prime example of such examples in the area. Other examples include abandoned industrial buildings and fabrics, absorbed to different extents by the urban fabric. Given the total potential urban surface that could be returned to civic uses by the integration of such areas, it adds great urgency to the task of re-consideration and management of these areas.

iii. Ecological Structure





After having looked at the reconfiguration / restructuring of the urban structure, the subsequent potential restructuring and restoration of the ecological layer of the area needs to be considered, on a diversity of scales. The analysis of the ecological layer of the area in the earlier stage, demonstrated the predominant role that the aquatic element had in the past, and the mark / influence that it has left on the contemporary regional and urban fabric.

The exterior arc as an urban structural element can serve a key role in integrating diverse activities over a considerable length through the western urban fabric. At the same time, from an ecological perspective it can also form an important lineal green element for connecting existing green spaces, generating new ones and ultimately restoring the sea-forest connection.







Legend











Arc Structure

-  Pedestrian section with emphasis on natural landscape elements
-  Urban Artery with with green and pedestrian elements
-  Stream section with pedestrian elements
-  Radial artery

Ring Road Structure

-  Ring-Road structure
-  Egnatia Highway
-  Provisioned Exterior Ring-Road extension.
-  Proposed New Ring-Road Nodes

Other Elements

-  Attractors
-  Transverse Axis / Arteries
-  Green corridor facilitating pedestrian/light traffic
-  Structuring road artery
-  Port - Highway connection
-  Port - Railway connection
-  Proposed and under construction metro lines
-  Long-distance and suburban rail lines.
-  tramline (as proposed in the 1997 competition)
-  tramline (alternative or complementary line)



Mosaic of West Thessaloniki -
Spatial Distribution and configuration.

The local streams in the contemporary fabric are found in a compromised condition under a constant pressure from conflicting uses along and inside their course. Past the limits of the interior Ring Road the streams start to disappear but their course can still be discerned by the superficial green patches and corridors that form along their past course. While in the peri-urban zone, the streams are found in a varied state, from natural, semi-natural or endangered. Nevertheless as stated, the hydrological memory of the terrain is still discernible. and can serve as the basic grid for structuring a regional green system. Along the exterior arc and the extended western area a series of interventions have been planned for by the flood protection master plan of 2009, with regards to water management issues. These are³²: **i) Arrangement of Polichni stream** with respective studies for the a) Covered section and section open stream the limits of the City Polichni and b) Open section within the limits of Municipalities and Polichni Sykeon. **ii) Bridge on the crossing of Lagada Ave. with Dendropotamos:** Planned construction of a bridge on the road Lagada and Dendropotamos with cross section sufficiently large to receive the entire flow of Dendropotamos. (The project was realised in 2004). **iii) Arrangement of Dendropotamos and its tributaries:** Proposed by a TEE working group in 2003 to launch a project of arrangement of the Dendropotamos, the section between the inner ring road up to the bridge at the community of N. Efkarpia close to the Titan cement plant. Subsequent substudies were performed to investigate and propose solutions for the Dendropotamos tributaries. These were: a) Torrents region Oreokastro b) St. Panteleimon torrent c) torrent Pefkon d) torrent Xeropotamou - Filiro e-f) stream Milou and Filira. **iv) The flood protection study for Dendropotamos river** and the Study for the overall upgrade of West Thessaloniki, realized by the Municipality of Pavlos Melas in 2012.

The flood protection plan specifically and the hydrological management, in more general terms, are key themes with regards both to the ecological and the urban functioning of the local and regional landscape. The addition and re-integration of new green areas, should also contemplate the possibility of the utilization of natural restorative technologies and development of fluvial ecosystems. Individual consideration of each stream can only reveal the real potential for restoration and healing of the local hydrological circle. Nevertheless the streams' courses in combination with the new green patches allows for the rethinking of a network of green and open areas for the area with a considerable potential effect for the hydrological functioning as well.

Characteristics / considerations

Certain characteristics need to be taken into consideration when recomposing the natural system, based on the existing and potentially recovered green areas. The principle objective of the proposed structure should be:

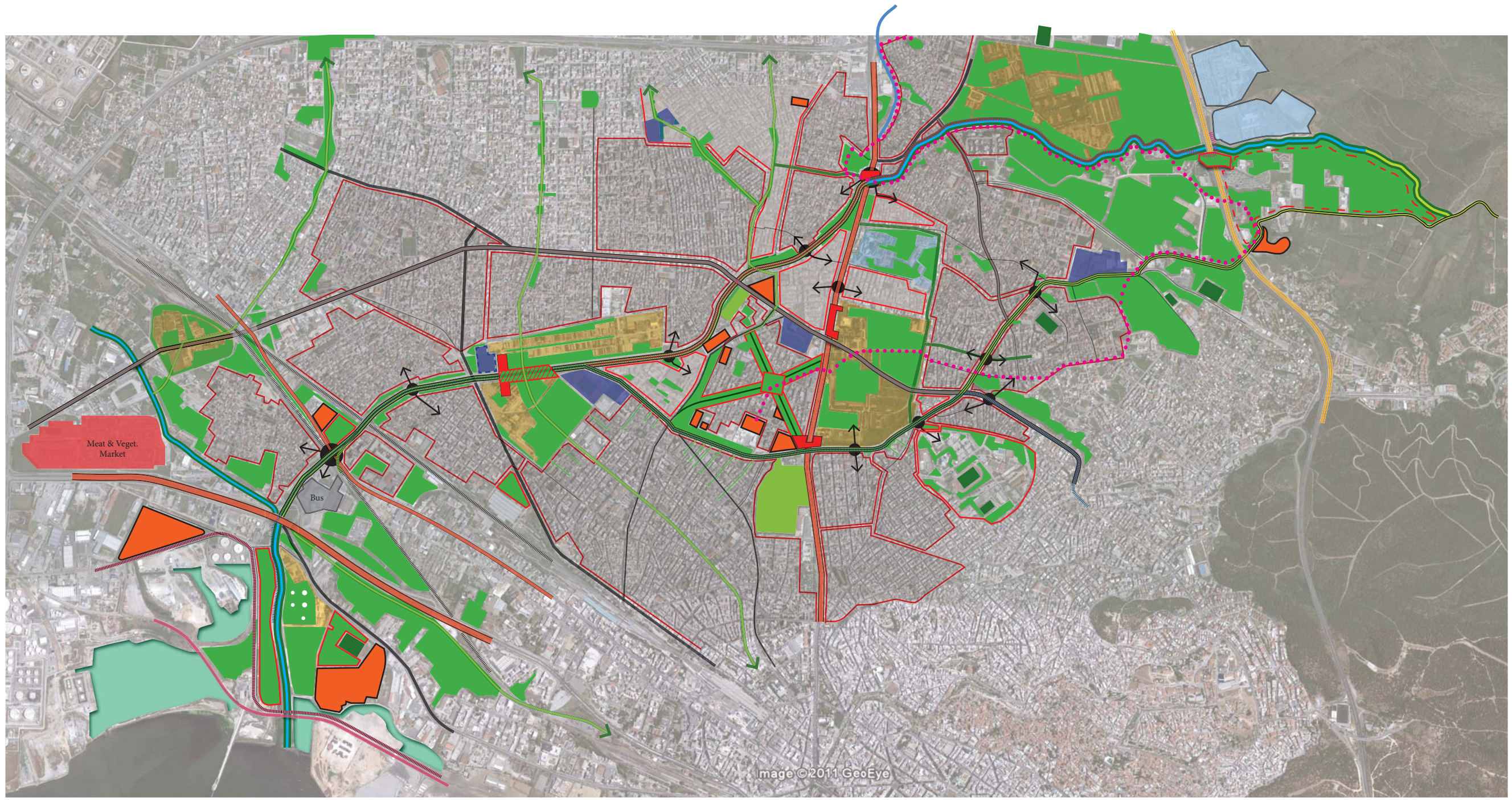
1. to establish **continuity** along the green corridors / connectors, resolving any conflicts along the course, and providing possibilities for urban regeneration and overall upgrade.
2. increase **interconnectivity** between the green patches and corridors advancing towards the creation of a network of open spaces.
3. pronounce the corridor aspect of the exterior arc as a key element of the urban structure
4. achieve a maximum **extension** over the regional fabric increasing accessibility and regional resilience. The maps on the opposite page present the synthesis of the proposed ecological structure (spatial distribution & functional scheme) as it emerges from the analysis.

Corridor - patch scheme






















The composition of the spatial scheme of the ecological structure / system is based on a respective patch-corridor-matrix composition that guarantees the considerations expressed earlier. In this structure, the axis of the Dendropotamos river and its respective vegetation, appear having a protagonistic role, attributed to a great extent to the local hydrological hierarchy. Connecting to this core artery are the branches of Xiropotamos, the branch of Polichni, the branch of Oreokastro, and the branch of Evosmos-Kordelio.

The principal and larger patches are primarily found in the areas of the old military installations. These areas that already host important patches of vegetation, with their re-entry and reintegration of their surface to the urban fabric, can provide an additional 243.7 hectares of potential green areas. Even with the maximum 30% of occupation, that has been proposed for these spaces, by and for urban /civic uses that still leaves 170 hectares that can be dedicated to hosting ecological systems, creating important natural reservoirs inside the dense urban fabric. The periurban green is another key issue, since it is located on critical urban interface zones and at the same time is testimony of the underlying biophysical matrix. A proper arrangement and management of these areas, should aim to uphold sprawl expansion by putting a limit and at the same time increase urban - natural interaction. Overall, it maintains the radial structure for the interior and exterior arc, and as it moves outward, it creates transverse connections that connect the local green system to the Seich-Sou forest, the principal regional green patch. The correlation of the proposed urban structure with the ecological structure presented here, will produce the synthesis of the final mosaic of the western Thessaloniki, that is presented in the map in the side page. Finally, the restructuring of the exterior arc is presented in detail in the next and last section of this chapter.

32. TEE (2009) : Flood Protection of the Urban unit of Thessaloniki - Revised proposal TEE/TKM



Legend

	Arch Path		Inner Ring Road		Metro stations
	Stream corridors		Transverse axes		Attractors
	Existing Open Streams		Arteries		Sport Areas
	Pedestrian routes		Roads		Health
	Archaeological / Cultural Walk		Access Points		Green Areas
			Rail / Suburban		Aquatic Areas
			Tram I		Cemeteries
			Tram II		Soccer Fields

x. The updated Exterior Arc - *Reprogramming the western fabric*

Lastly, the potential reconfiguration of the Exterior Arc appears in the image on the adjacent page where its distinct parts and connections can be seen in more detail. In the effort to re-structure the exterior Arch into a key regional and urban element four factors are taken into consideration: **i)** continuity, **ii)** mobility/ accessibility, **iii)** fabric integration and **iv)** urban rehabilitation/reprogramming.

The first factor, **continuity**, needs to be fulfilled in diverse aspects: *first*, establish the primordial sea-forest connection through the establishment of a principal key green corridor along the course of the exterior arch; and *secondly* in guaranteeing continuity for secondary axes connected to the exterior Arch, while at the same time resolving conflicts and taking advantage of latent and emerging potentials in the area.

The second factor, **mobility / accessibility**, can be achieved by connecting existing and emerging key areas of the urban fabric through public transportation and multinodal stations combining hard and soft mobility flows. The question of accessibility of public spaces and services is another vital question that can be satisfied only through the establishment of an interconnected and coherent open space system connecting open public spaces, and areas of activities through vibrant dynamic urban corridors / arteries.

The third factor, **integration**, refers to a multifaceted question. From one hand, it makes reference to the ecological integration of local ecosystems: existing, decaying, latent and historical. The water management question of the local hydrology scheme is a key aspect for this factor, that goes beyond mere landscaping interventions considering additional issues such as flood protection, aquifer recharge, hydrological equilibrium etc. At the same time, the local streams offer an excellent opportunity for es-

tablishing and structuring a regional green network. Integration apart from the ecological perspective, also makes reference to the integration of local uses and activities in the wider urban structure. The exterior arc acting as a structural spine for the west urban Thessaloniki can host new uses and activities and rejuvenate the entire local urban fabric of West Thessaloniki. The term integration also refers to integration of flows and modes of mobility in the western area. Apart from the provisioned metro lines, the proposal contemplates a light rail system crossing a considerable part of the arc, as proposed in the original 1997 competition and envisioning transport oriented development options along its course.

Lastly, the term **rehabilitation / reprogramming**, refers to a coordinated effort that needs to be done on many levels, considering the three earlier considerations, in order to achieve the planned vision. The intramunicipal and regional character of the arc within the wider urban structure, requires the harmonization and compromise of diverse actors that can jointly undertake the project and invest a consistent effort and energy to reach its realization .

The collaborative experience of the 1997 competition, with its positive (diversity of activities, expert participation) and negative experiences (low public participation, incapacity to realize), can be a helpful experience for re-initiating the debate on intervening in the exterior Arc and the extended Western Thessaloniki. Similarly the 2012 study from the Pavlos Melas municipality moves in the right directions with regards to ecological restoration and overall urban upgrading. The results of this part will be considered in the final synthesis of the entire mosaic.