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ELEONAS
ATTICA'S UNUSED POTENTIAL

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Abstract

Once an olive grove just outside the city of Athens, Eleonas has changed throughout time and is now a post-industrial zone, a transition space fragmented into pieces with no connection within itself, to the city and urban landscape or its historical background. Even though the area of 880 ha is only a short distance away from the historical center of Athens. Without any realistic plans for future development, Eleonas is still relatively flexible and affordable and therefore has great unfulfilled potential.

This thesis takes a closer look at the existing challenges in Eleonas while analyzing the needs and demands that the city of Athens has that could be eliminated or satisfied through an urban planning concept in Eleonas. Considering these theories the thesis aims to transform Eleonas by working with the two basic focus points of nature, including reducing the flooding risk, renaturation, and establishing green areas, as well as mobility and infrastructure. Intending to turn Eleonas into a clean, safe, and therefore attractive area that provides the framework to attract possible future investments and development projects. Consequently providing Attica with the possibility to profit from this neglected area before it transforms from neglected drosscape into a shameful eyesore.

Therefore the goal of this thesis is to develop a basic master plan that takes into consideration the rich historic background of the area as well as the current situation by proposing a loose and flexible framework for future development.

Abstrakt

Ursprünglich nur ein Olivenhain am Stadtrand Athens, hat sich Eleonas im Laufe der Zeit stark verändert und ist nun eine post-industrielle Zone, ein Übergangsraum, der in zahlreiche Einzelstücke zersplittert ist. Ohne Verknüpfungen innerhalb, Anbindungen nach außen oder Rücksicht auf die geschichtsträchtige Vergangenheit, obwohl vsich das Areal mit seinen 880 Hektar nur etwas abseits des belebten historischen Stadtzentrums Athens befindet. Ohne realistische Pläne für die nahe Zukunft ist Eleonas immer noch verhältnismäßig flexibel und preiswert und birgt deshalb ein großes und unausgeschöpftes Potential.

Im Zuge dieser Arbeit möchte ich die existierende Problematik in Eleonas untersuchen und gleichzeitig die Bedürfnisse der Stadt Athen analysieren um zu verstehen, welche dieser Interessen durch ein neues städtebauliches Konzept eliminiert oder befriedigt werden können. Die Kenntnisse aus diesen Theorien sollen in meiner Diplomarbeit entwickelt werden um Eleonas, ausgehend von zwei Schwerpunkten, zu transformieren. Hauptaugenmerk liegt auf der Natur, welches eine Reduzierung des Überschwemmungsrisikos, Renaturalisierung und den Ausbau der Grünflächen miteinbezieht. Der zweite Schwerpunkt widmet sich der Rationalisierung und Umschichtung von Mobilität und Infrastruktur in Eleonas. Der Grundgedanke dahinter bezieht sich auf die Theorie, dass zuerst eine saubere, sichere und deshalb attraktive Zone etabliert sein muss bevor sie potentielle zukünftige Projekte und Investitionen für sich gewinnen kann. Dies wiederum bietet Attika die Möglichkeit von diesem Gebiet auf mehreren Ebenen zu profitieren, bevor die Zustände in Eleonas die Zone zu einem Schandfleck machen.

Deshalb ist das Ziel dieser Arbeit, einen grundlegenden Masterplan zu entwickeln, der Bezug auf die reiche Geschichte des Areales nimmt und gleichzeitig die momentanen Situationen aufgreift in dem eine flexible Grundstruktur erarbeitet wird, die zukünftige Entwicklung gewährleistet.

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Introduction

1. Eleonas of Athens

Athens has been the capital city of Greece since its establishment as the independent Greek State in 1834. It is situated in the southern part of the Greater Attica Basin with a connection to the Aegean sea through it's main port Piraeus.[1] The Region of Attica is one of the 13 Regions of Greece entailing 8 regional units which consist of multiple municipalities. These municipalities serve as local authorities with an elected city council and mayor.

The Municipality of Athens, or City of Athens includes the central part of the city within its official limits while the Athens Urban Area or Greater Athens contains multiple municipalities and encompasses the whole urban fabric of the city. The urban area of Athens with a population of around 3 million inhabitant and an area of about 412 kilometers makes it one of the biggest urban areas in the European Union.[2]

Since Greece has a total population of 10,4 million inhabitants[3], almost one third of the greek population live in the Greater Athens Area which only encompasses about 4,5% of the country's area. Therefore making Athens more than just the capital city.

For the past 7000 years the historical city of Athens has been a site of continuous habitation. The available space is strictly defined by the surrounding mountains since the city is located in the Attica basin. The mountiains are, from west to east, Mount Aegaleo, Mount Parnitha, Mount Penteli and Mount Hymettus while the south is open to the Saronic Gulf. In the basin there are a few hills including the famous Acropolis and Areopagus. The geographic location acts as a natural protection and has made it easy to defend throughout history. In recent years the city has reached its spatial limits in the basin making expansion only possible past the surrounding mountains.

Athens:

Municipality
Population:
637,798
Area: 38.964 km²
Density: 16,400/km²

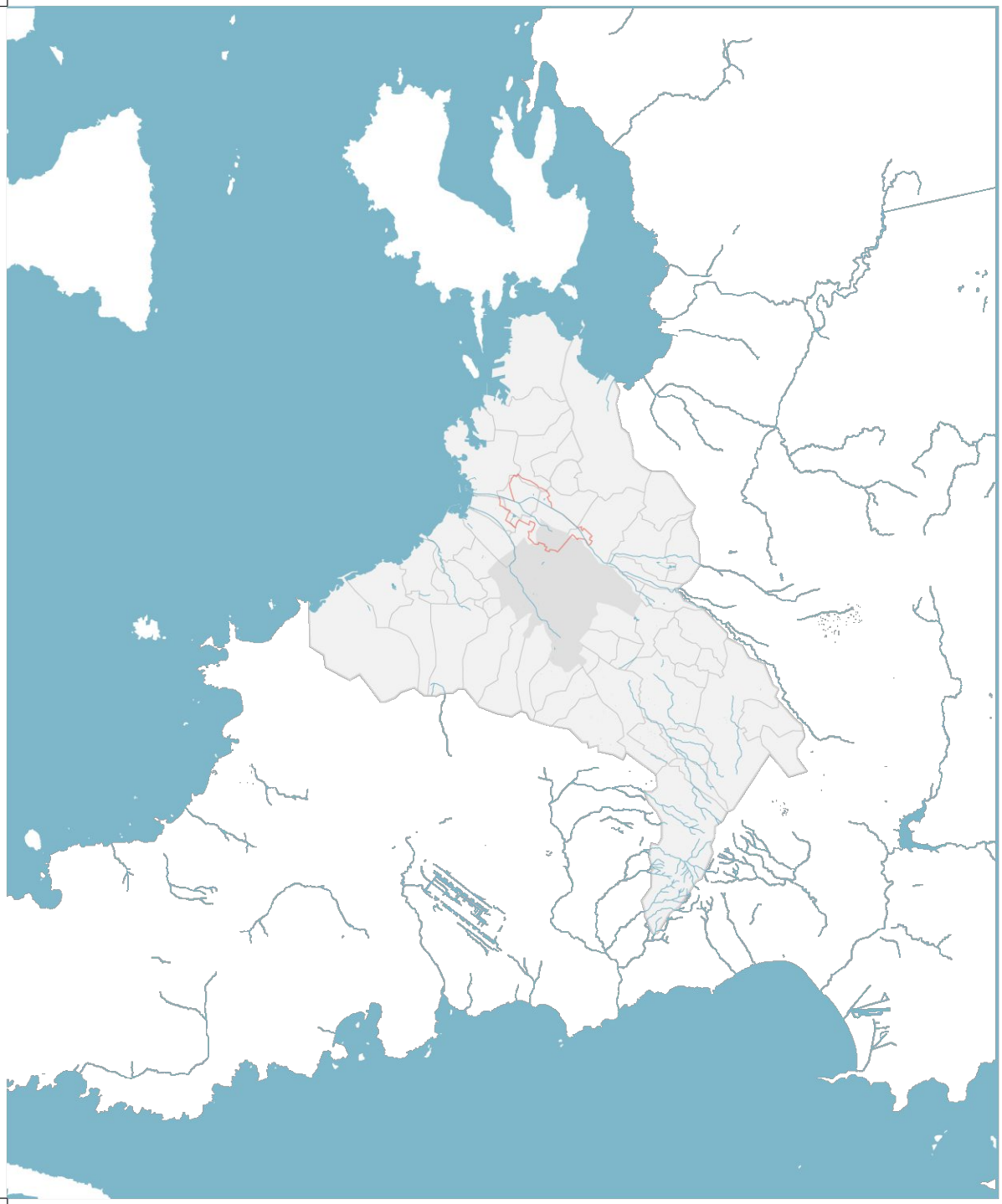
Urban
Population:
3,041,131
Area: 412 km²
Density: 7,400/km²

Attica
Population:
3,792,469
Area: 3,808.10 km²
Density: 1,000/km²

Fig.1 (top)
Map of Europe with Greece highlighted.

Fig. 2 (bottom)
Greater Attica Basin with Athens and Eleonas.

1 According to Fotakis, Eleonas: An Enclave in Athens 2013, p.13.
2 ibid.
3 https://en.wikipedia.org/wiki/Greece

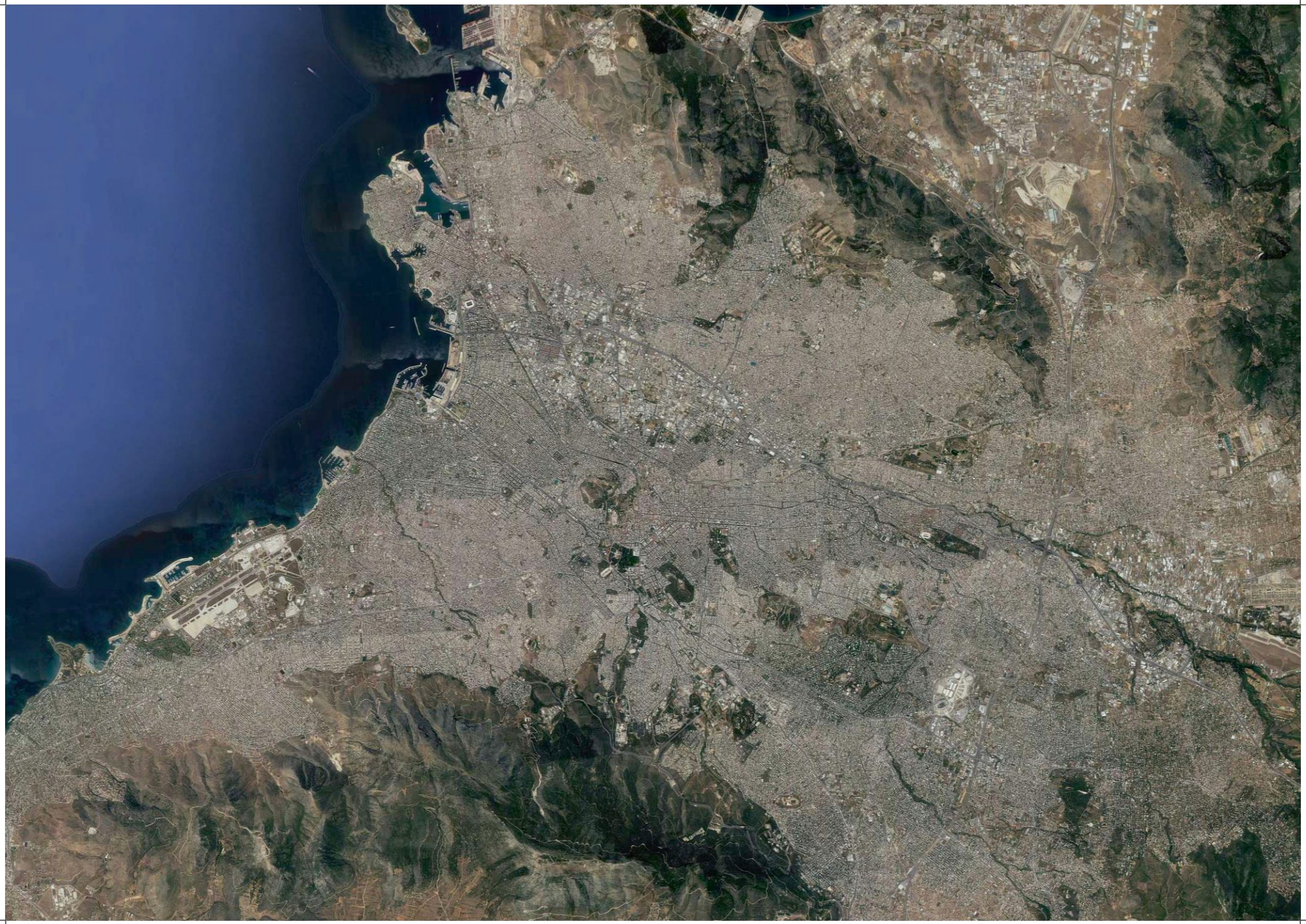


From the mountains in the north originates the main water body of the Attica basin, the Kifisos river. Acting as a natural barrier it runs parallel to the mountains until it reaches Faliro bay where it pours into the Saronic Gulf. East to Kifisos flows the second river of Athens, Ilissos which originates from Mount Hymettus until it also ends in Faliro bay.

Both rivers have had a great impact in history being highly affected by seasonality and therefore being very erratic and unpredictable. During the summer months they would have a very low water level while during the rainy season starting in November they would frequently flood the southern parts of their fluvial basins. Due to these flood problems Ilissos, which used to flow into Kifisos, was diverted directly into Faliro bay. Both rivers have now been completely canalised and therefore lost their seasonal characteristics. Not only have they been canalised, while Ilissos remains open for the last kilometers of his riverbed, the rest of both rivers has been covered in order to build roads over them. Parts of the Kifisos river remain open but have major highway lanes over the riverbed which have been build during the 2004 summer Olympics. The same has happened to the rest of the Attica streams resulting in additional flood problems during the winter months.[4]

Fig. 3
Satellite image of the urban fabric of Greater Athens.

4 According to Fotakis, Eleonas: An Enclave in Athens 2013, p.14,15.



The Evolution of Eleonas - Historical Background

1. The Olive Grove

Eleonas (Greek: Ελαιώνας) literally meaning "olive grove", was once the holy olive grove of the ancient city of Athens. The area followed the river Kifissos making use of the regular floodings and the therefore natural irrigation of the olive grove. The felling of trees was prohibited in the 6th century BC which facilitated the growth of forest.[5] Back then Eleonas was one of the peninsula's most significant manmade landmarks. It covered most of the area from Mount Parnitha in the north all the way to the south.

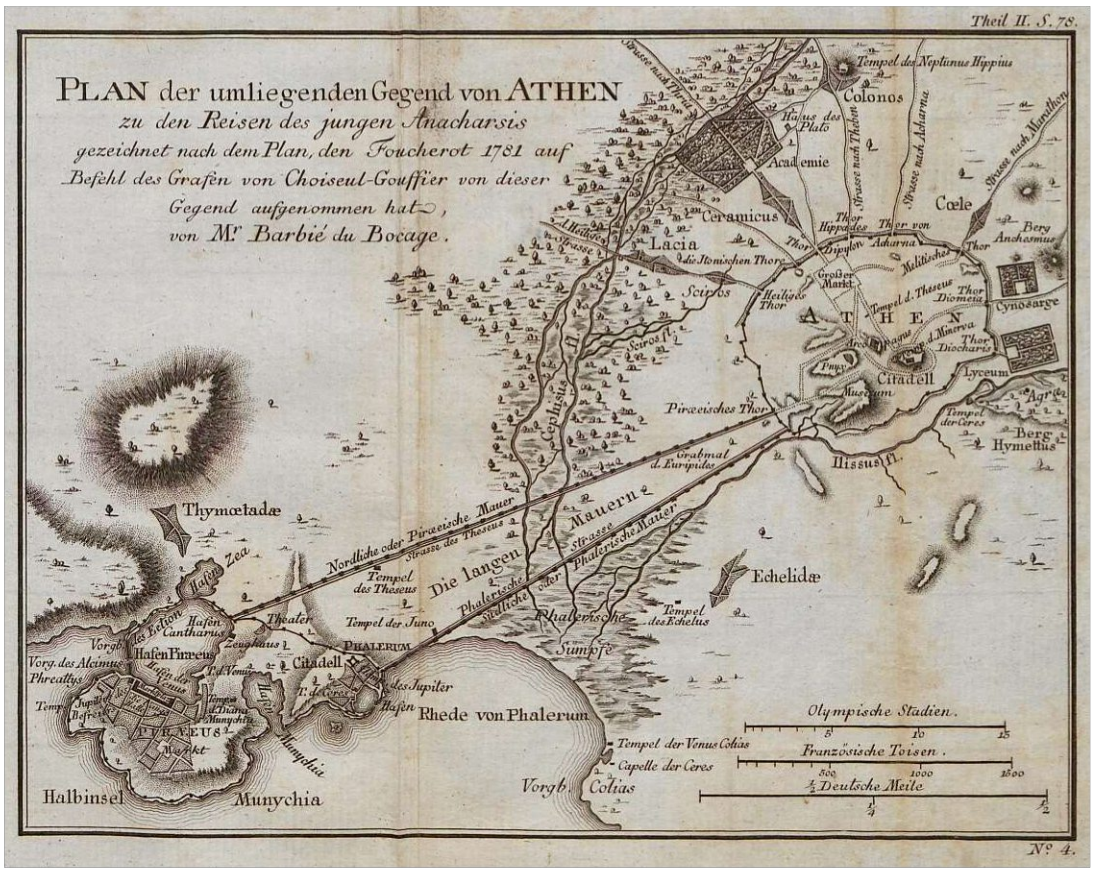
At the northern boarder, in the most sacred part of the olive grove, Plato established his famous Academy whose remains can still be found today. Eleonas is intersected by an ancient road called Iera Odos which was followed by the participants of the Eleusinian Mysteries, an ancient cult of Demeter, traveling from the athinian cemetery in Kerameikos to Eleusis. To this day this "Sacred Way" still exists and is a vital part of the most northern part of Eleonas. According to the Atlas of Eleonas, olive oil was the number one product of Athens during the ottoman occupation and Eleonas had the appearance of a dense forest.[6] The "most beautiful suburb" was deeply cherished by the Ahenians for its non existend boundaries and as a place of leisure.[7]

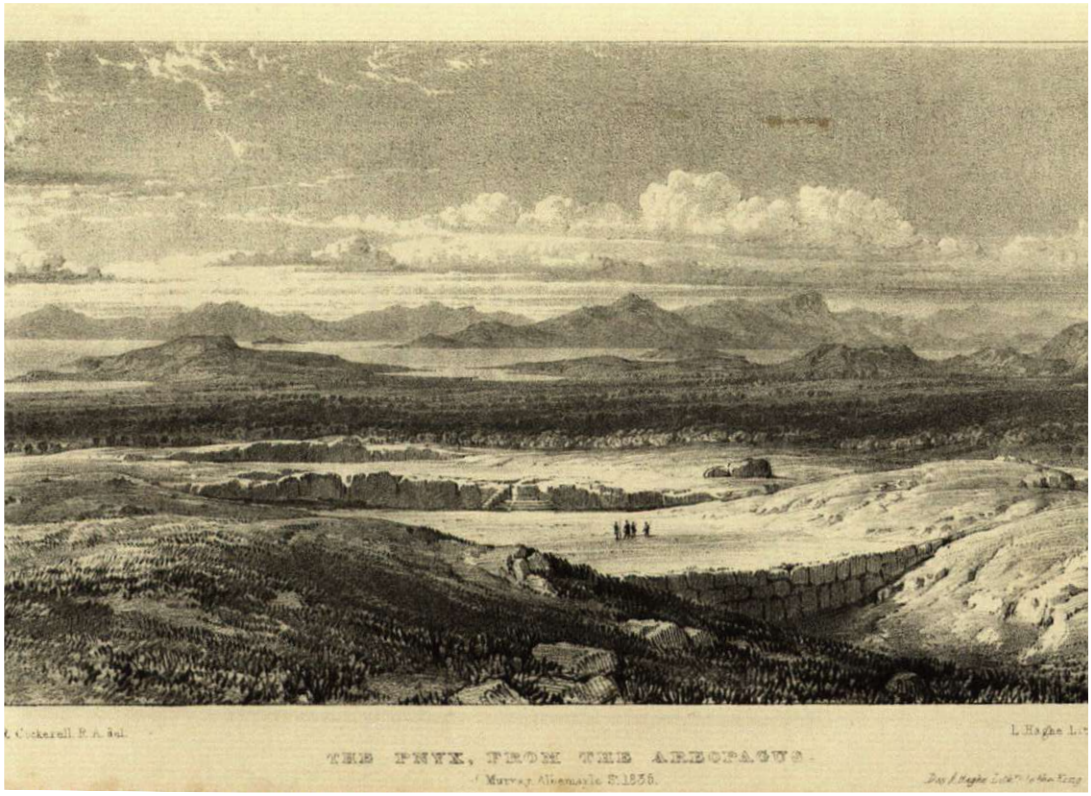
The olive tree has played an important role in the history of Athens beginning in it's founding myth of the dispute between Poseidon and Athena. According to the story Athena planted the first olive tree on the Acropolis giving the Athenians the plentiful uses of the olive tree as a divine gift. Following this myth the first 12 holy olive trees, one for each city gate, originated from this divine plant. Under Peisistratos more trees were planted in the area of Eleonas until the olive grove grew into a forest. According to texts from Dion Chrysostom Attica was, until Peisistratos enforcements, a treeless land.[8]

Fig. 4 (top)
Plan of ancient Athens and Piraeus with the Olive Grove to the west.

Fig. 5 (bottom)
View from the Aeropagus looking towards the Olive Grove.

5 According to Sapountzaki, P., Wassenhoven, L., Spatial Discontinuities and Fragmentation of Urban Areas. The exam ple of the Eleonas of Athens 2003, p. 9.
6 According to AEDA S.A., ENVECO S.A. Atlas of Eleonas, Athens, Greece 2011, p. 34.
7 According to Panayotopoulos, From "Void" to "voidness": a trans-scalar and relational approach to urban voids in post-industrial cities 2020, p.126
8 According to Z.Ropaitou-Tsapareli, Eleonas of Athens, the place and it people in the passing of time





Throughout history the olive grove, and the fertile land it grew on, were of great importance to Athinian rulers. Even Aristotle described the way these holy trees were harvested and maintained and how imporant they were to the Athenians in his "Athenaion Politeia".

During the rule of Pericles Athens was at its historical high point with the two poles of Athens and Piraeus. Piraeus connects Athens to the rest of the world and the cities were united through the 'Long Walls' surrounding each city connecting them. These walls were 6 kilometers long and have been destroyed and rebuilt throughout history. These walls, offering a way towards the sea for Athinians during war, along with the fertile land of the olive grove gave Athens a major advantage in ancient warfare.[9]

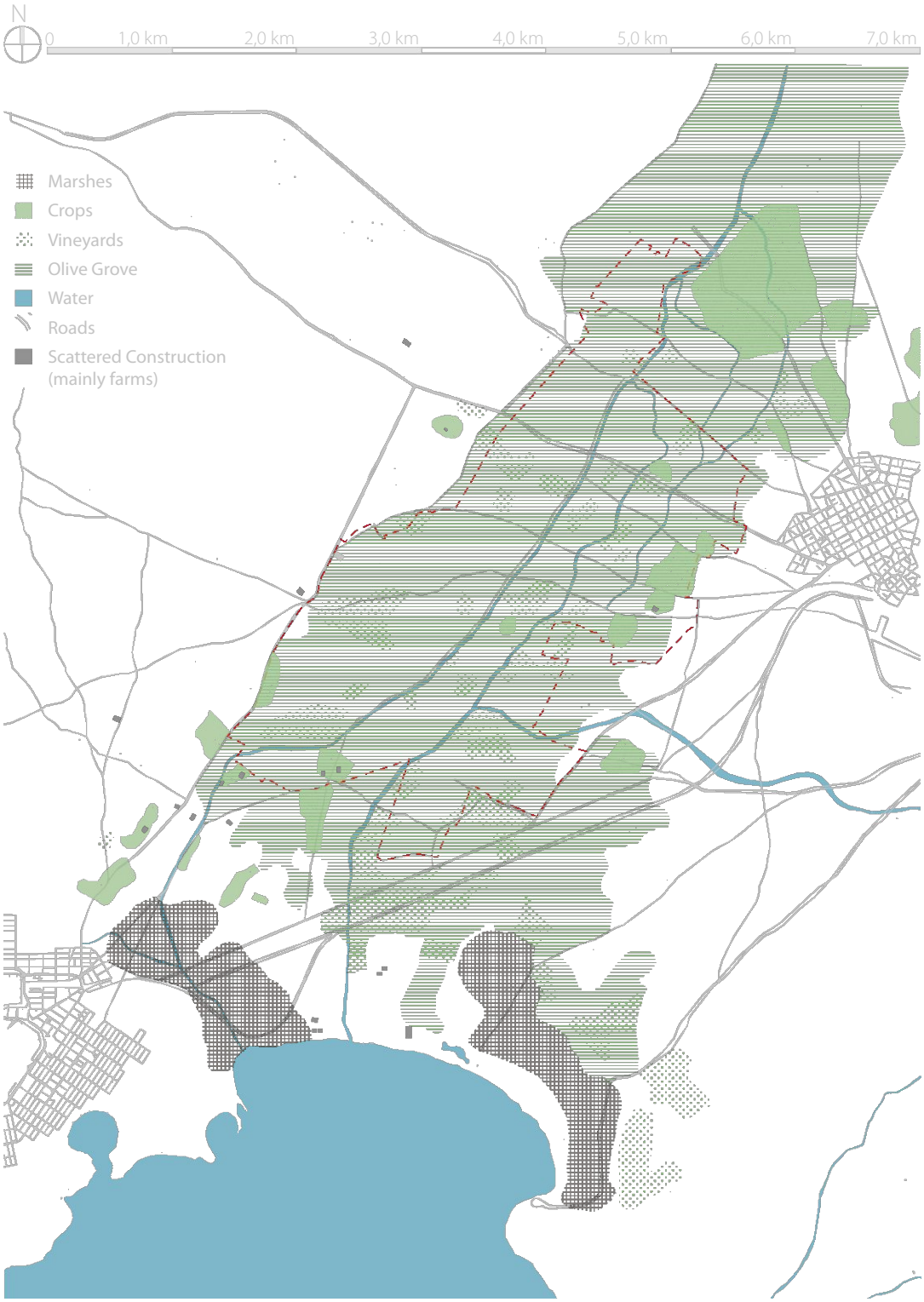
Even from mid 15th until the 18th century, during the Ottoman occupation, Eleonas retained its high importance as the breadbasket, feeding the city during occupation and continuing to remain unaltered except for a few small farms.[10]

During the greek War of Independence (1821-1828) the area was disturbed for the first time. Eleonas sustained casualites from arson and looting while a big part of Athens was evacuated leading to a reduce in agricultural production. However until the third quarter of the 19th century it contained almost 150.000 olive trees and remained a productive and fertile landscape.[11]

Fig. 6 (left)
Harbor of Piraeus and the Long Walls of Athens. The ancient olive grove is depicted in the west.

Fig. 7 (right)
Map of Eleonas until the early 20th century. With Athens (north-east) and Piraeus (south-west)being the only urban settlements.

9 According to Fotakis, Eleonas: An Enclave in Athens 2013, p.19.
10 According to Panayotopoulos, From "Void" to "voidness": a trans-scalar and relational approach to urban voids in post-industrial cities 2020, p.144.
11 idbid.



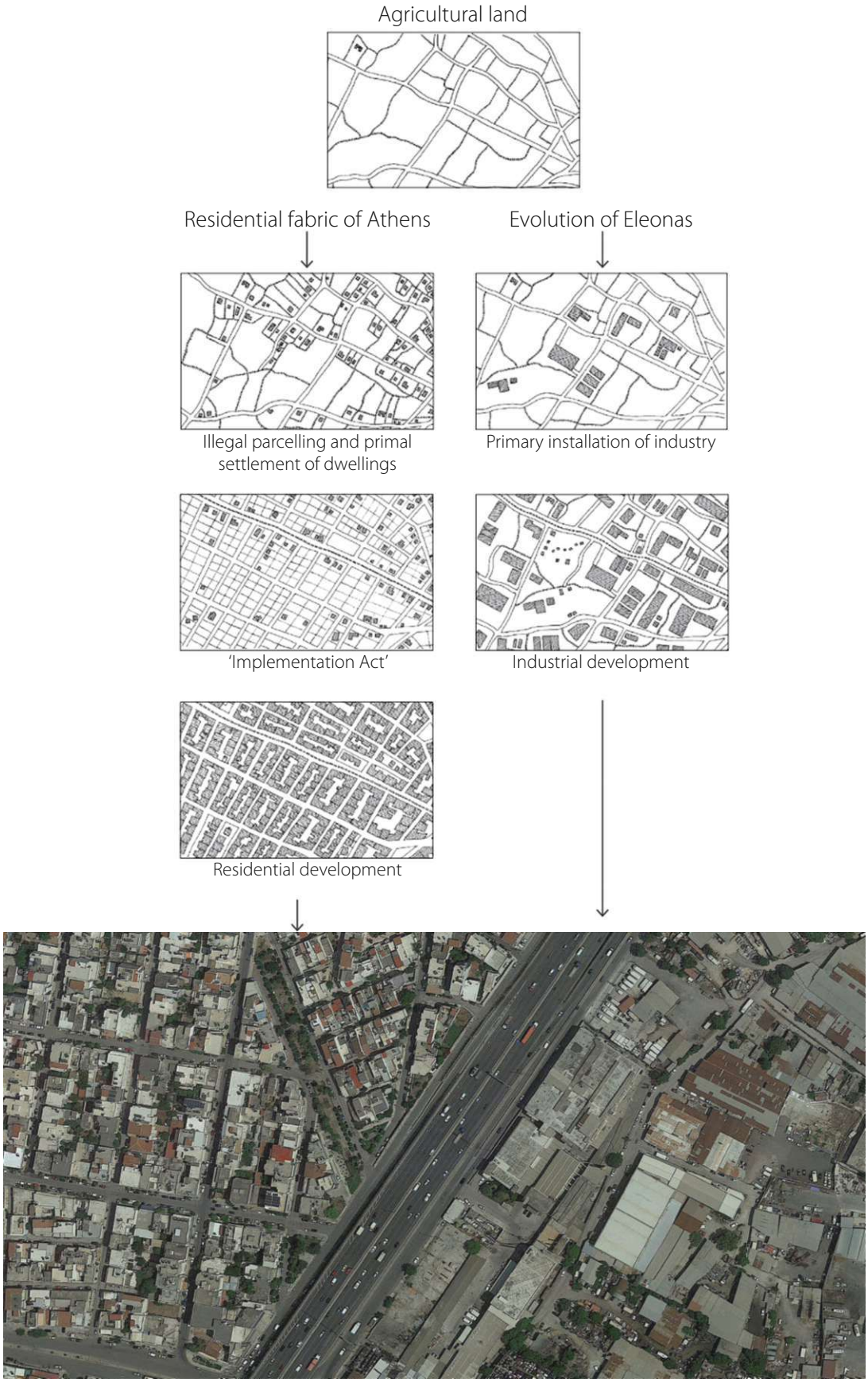
2. The Industrial Stage

The War of Independence (1821-1828) was the first event to distrub this rather tranquil area.[12] By the time Greece became an indepent state the olive grove consisted of numerous small chapels and small businesses linked to agricultural activities such as an olive press and a soap making plant. Up until this point the holy olive grove had, with the exception of a few minor changes, been very much the same. With the beginning of the industrialization in Athens and the railway and road constructions change started to take place.

Around this time agricultural land was divided into smaller plots for sale, by the time these areas reached a certain density they were legalised through a "Presidential Decree". Through expropriation they were rearranged into residential urban blocks which now form the Athenian urban areas. Legilasation of buildings and city growth were essentially unplanned.[13] However the protected area of Eleonas was never part of any development with it being a productive area instead of a residential one. Thus leading to a transformation from agricultural to industrial according to demand until the Eleonas we see now was built up decades later.[14]

Fig. 8 (right)
Illustration showing the development of two very different urban tissues within Athens which led to the unregulated industrial fabric of modern day Eleonas.

12 According to Panayotopoulos 2020, p. 126.
13 According to Loukopoulos, D., Kosmaki-Loukopoulos, P. Athens 1833-1979, the dynamics of urban growth 1980, pp. 72-75.
14 According to Panayotopoulos 2020, p. 127.



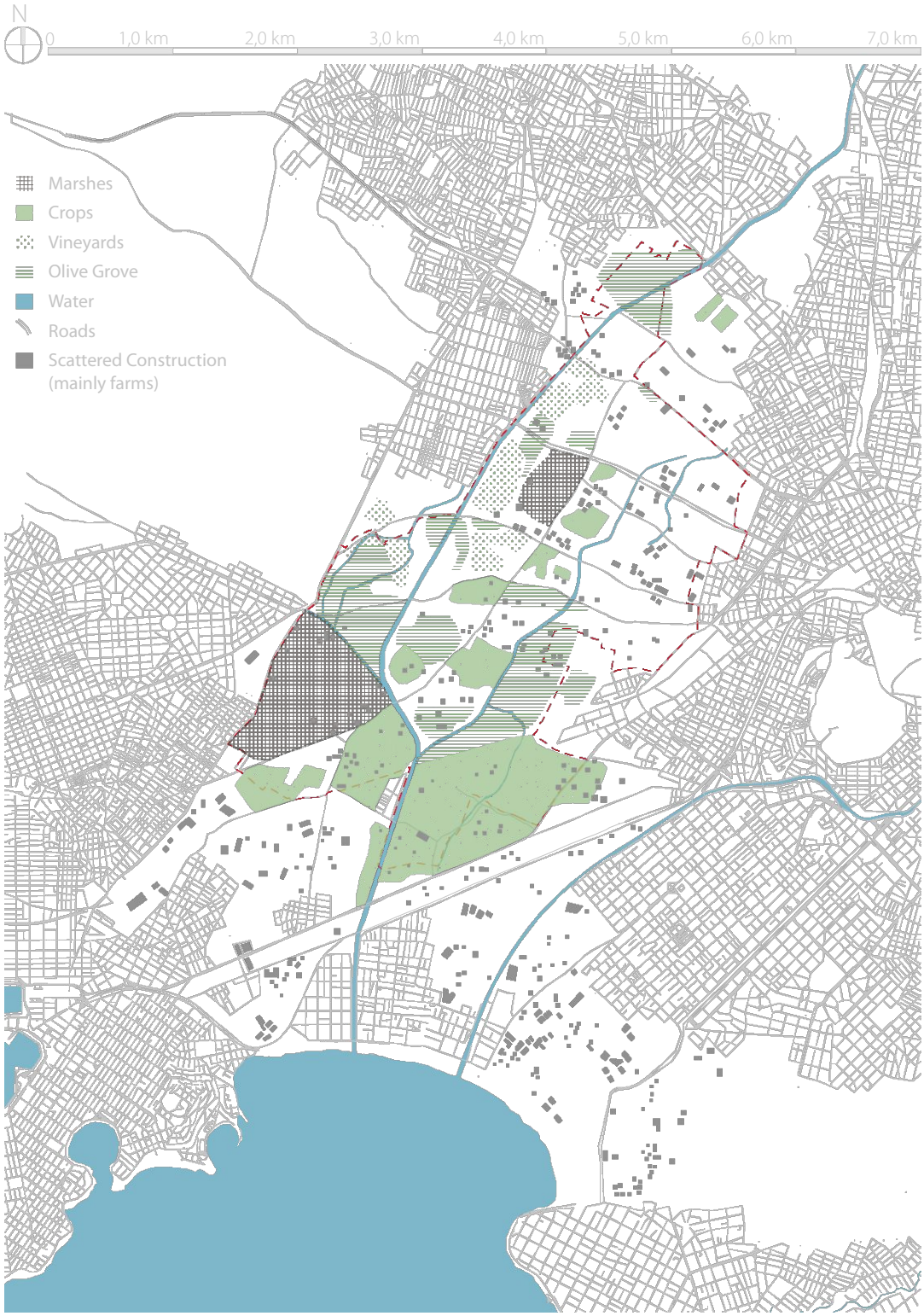
The construction of the railway and the main roads fom 1835 onwards were primary factors for attracting industry. At first they were mostly textile and gunpowder industries. When a gas factory opened close to Eleonas, olive oil started to lose its significance and was being outplaced by the new gas networks. During that time the river Kifissos had become part of an irrigation system that promoted the cultivation of vineyards and vegetables. These were part of the reason why many olive trees were now replaced by vegetable gardens which in turn led to the shrinkage of the ancient olive grove.[15]

The final upturn occurred when in 1922 greek refugees from Anatolia arrived and vitalized the already growing industrialization. Many of the refugees worked and settled in and around Eleonas and therefore shaped the image of the former olive grove.[16]

Around 1960, when all of Greece faced a rapid industrial development, Eleonas went through a major change. In addition to the vegetable gardens and the few factories and businesses a multitude of new industries opened. Food factories, electrical appliance factories, chemical industries, paper and textile industries were established, which are in part still functioning and operating to this day. While these big factories were mainly established along the major highway roads smaller businesses settled inside Eleonas. Mostly smitheries, tanneries and building material yards. The space in between was quickly filled with supporting infrastructure and supportive industries. Being almost cut off from the surrounding urban area by the highway and railway line Eleonas started to be transformed into an "island" that was disconnected.[17]

Fig. 9 (right)
Map depicting Eleonas around 1924. Athens and Piraues have expanded while Eleonas continues to be a 'protected area of free movement'. Small farms and manufacturerers begin to appear within. Kifisos and Ilissos are still flowing but the smaller streams had to make way for urbanisation.

15 According to AEDA S.A., ENVECO S.A. 2011, pp. 34-35.
16According to AEDA S.A., ENVECO S.A. 2011, p.35.
17 ibid.



3. Post-Industrial Landscape, Urban Void, Drosscape

Within 25 years Athens had skyrocketed from 1 million residents to 2.4 million by 1970. Industrial and manufacturing processes boomed in Eleonas because of the river Kifissos being able to power machines while also being a recipient of the industrial waste.[18]

While the general deindustrialization occurred during the 80s and 90s the same only became evident in Eleonas at the beginning of the 21st century. During the recession many industries went bankrupt which meant that landownership changed from individual to banks and realtors. Already being cut off from the bustling city life and incapable of connecting with the surrounding housing areas Eleonas was mainly identified by it's closeness to the highway and railroad. Thus many haulage companies and warehouses developed near these transportation axes. This primary activity attracted similar and interlinked businesses like gas stations, car and truck repair shops, wreckage yards etc. Up until now this was the predominant character of Eleonas. The post-industrial landscape is still apparent by it's abandoned warehouses and factories that are at best reused and at worst falling apart.[19]

The change within Eleonas from the holy olive grove to the post-industrial site it is now happened gradually over time and is still going on today. Big factories and businesses have relocated to other areas and existing structures are being neglected and abandoned. Existing open spaces are deserted and often not accessible to the public. Eleonas has become an urban void within the dense structure of Attica.

Fig. 10 +11(right) Eleonas in the 1950s. Housing boom around Eleonas as seen in the top picture. Very few agricultural plots remain today. Pictures from the archive of Nikaia-Agios Ioannis Rentia.

18 According to Panayotopoulos 2020, p. 131.
19 According to AEDA S.A., ENVECO S.A. 2011, pp. 36-37.

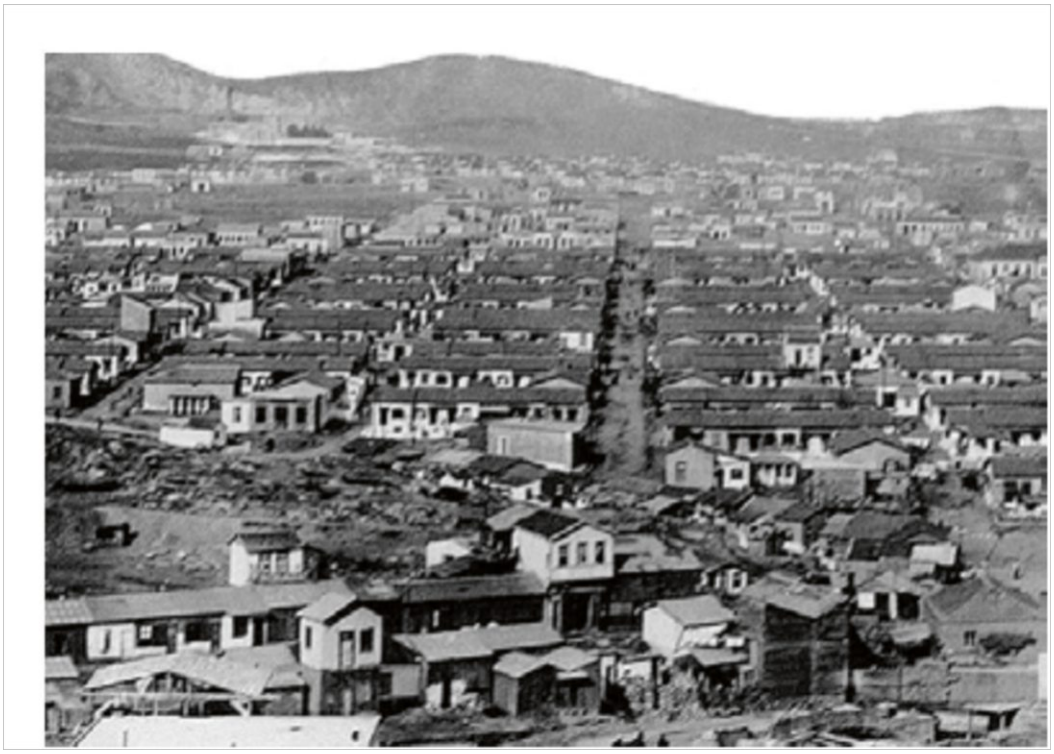


Fig. 12 (top)
A street in Eleonas.

Fig. 13. (bottom)
Abandoned industrial site.

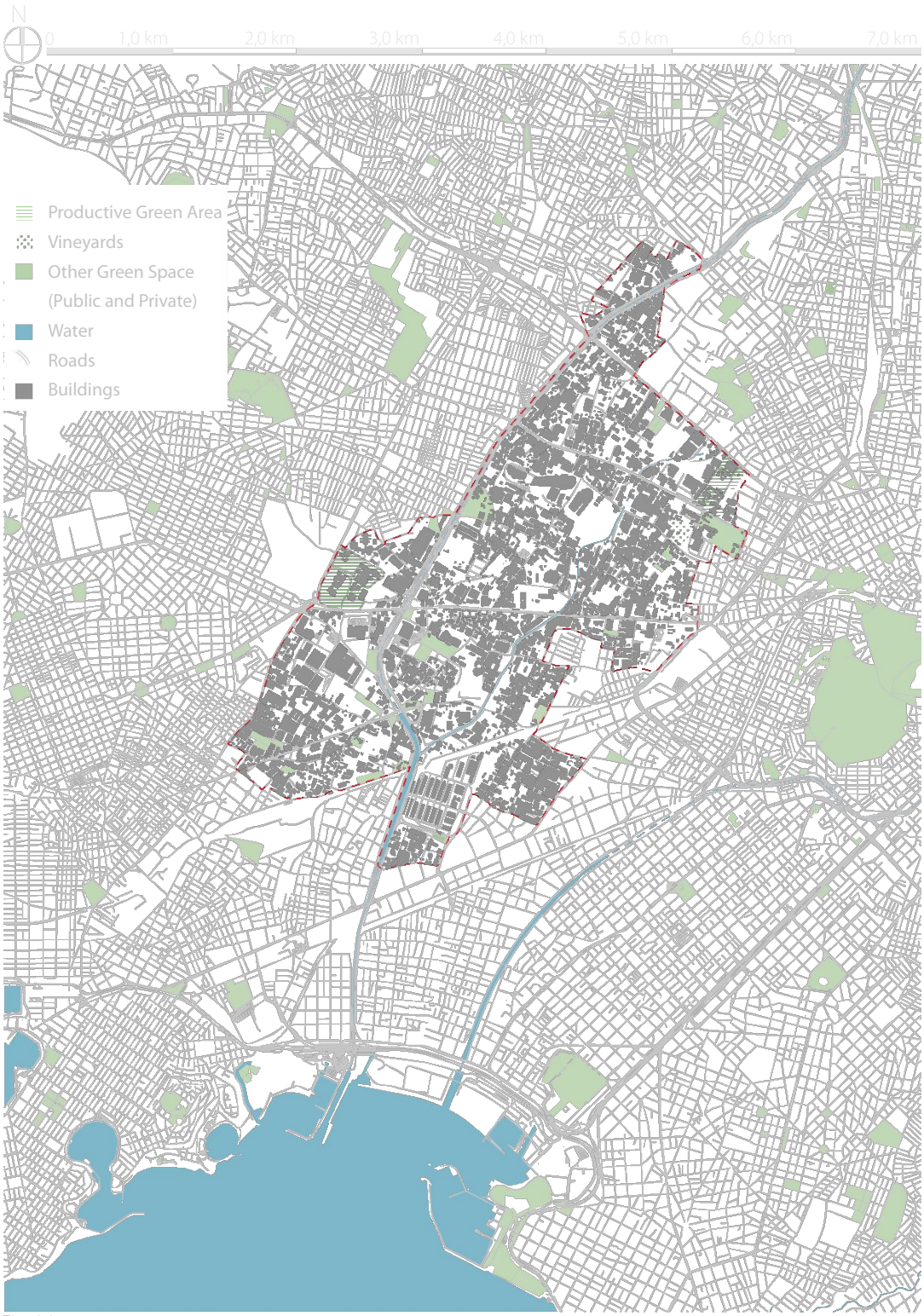


Fig. 14
Eleonas in the 21st century. The area is completely urbanised and Kifissos and Ilissos are mostly covered.

Context and Prevailing Challenges

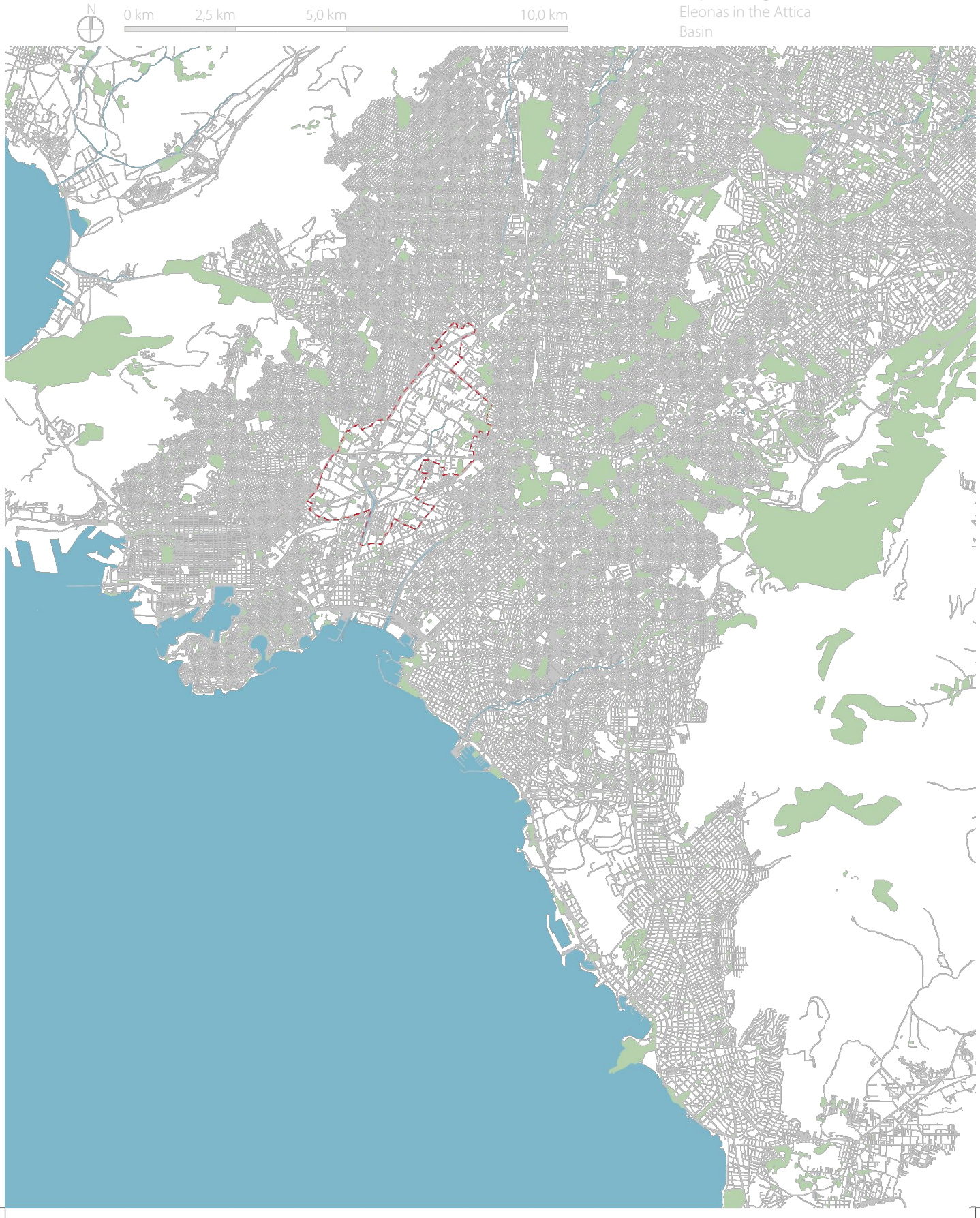
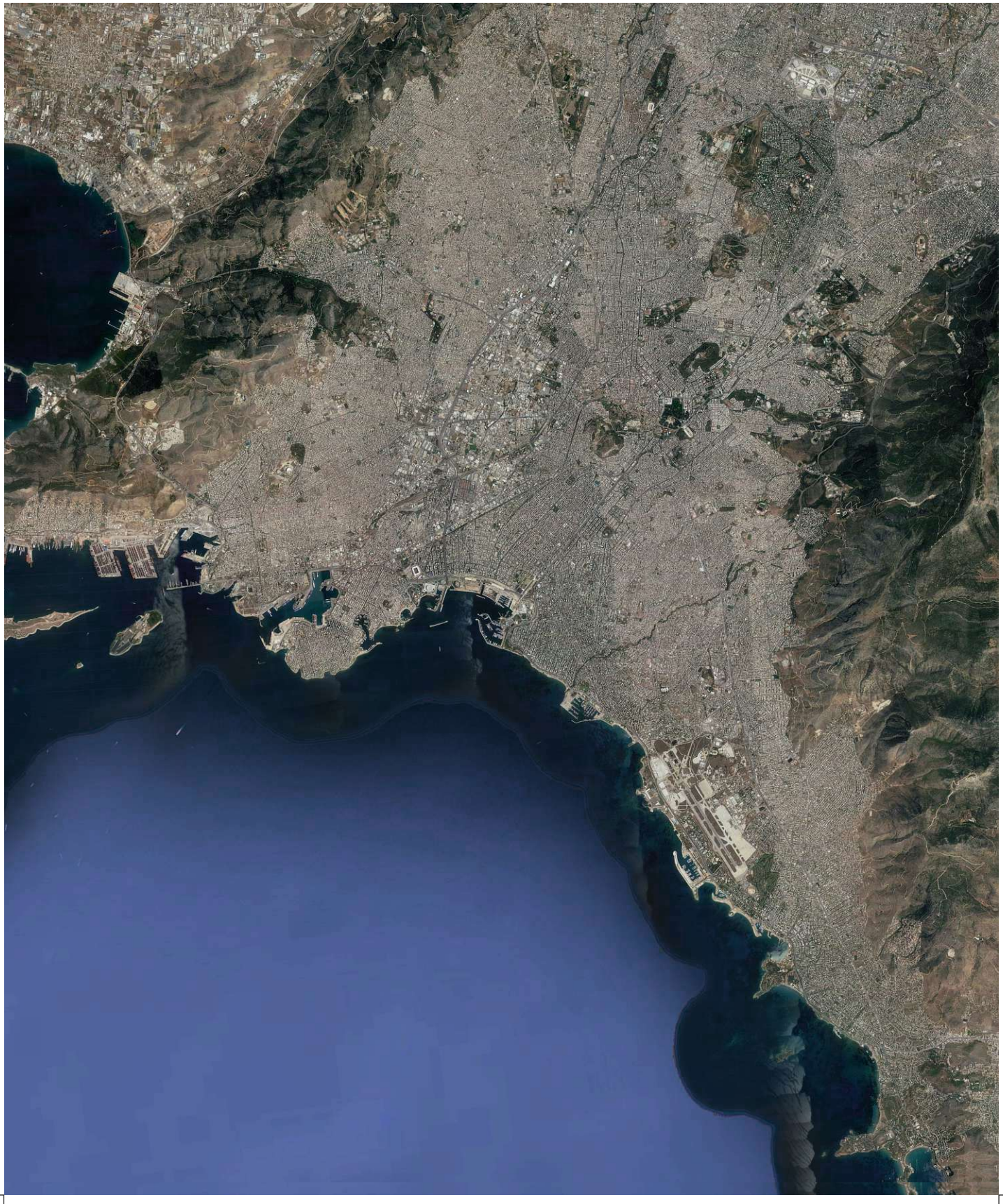


Fig. 15
Map outlining
Eleonas in the Attica
Basin

Fig. 16
Google Earth satellite image of Eleonas in the Attica Basin



1. Current Context

Almost 900 hectars big and within walking distance from Athen's historical center, Eleonas has the ability and potential to claim a prominent role in the heart of Attica. The area is the largest piece of undeveloped land in Athens and is even discernable to the untrained eye on satellite pictures. While the once prominent landmark changed over time from olive grove, to industrial space it now mostly contains abandoned buildings, unaccessible empty lots and junkyards.

The highway that borders Eleonas in the east connects Patras, Athens, Thessaloniki and finally Alexandroupolis and is the main south-north axis of Greece. Piraeus' and Patras' ports connect Greece to Europe and the rest of the world therefore turning this highway into a crucial transportation and traffic axis.[20] Eleonas is surrounded by metropolitan areas constisting of a dense mostly residential fabric which ist mostly cut off by the south-north highway axis and the railroad, thus isolating Eleonas from the rest of the city.

Geomorphically speaking Eleonas is part of a flat basin surrounded by hills in the east and west. This plane is divided by the river Kifissos which is partially, and in Eleonas mostly, hidden. This has not always been the case. Kifissos is the most important river of Attica and was the reason for the irrigation of the ancient olive grove and the later following vegetable gardens. Due to the river and its corresponding flooding Eleonas has never been very attractive as an area of settlement. Once being part of a major network of rivers and the main irrigation and water source of Attica Kifissos is now rather heavily polluted. The stream Prophitis Daniel also crosses Eleonas from north to south. Like Kifissos Prophitis Daniel has been degraded into more of a waste dump. Through canalisation, sewage and runoff drain from the industrial areas it is now heavily polluted which leads to the conclusion that the groundwater in Eleonas shares the same pollution problems.[21]

Fig. 17 (top right)
Railroad isolating Eleonas in the east.

Fig. 18 (bottom right)
Kifissos highway cutting Eleonas off in the west.

20 According to AEDA S.A., ENVECO S.A. 2011, p. 6.
21 ibid. pp. 21-23.

This in turn affects the local flora and fauna. Once an olive grove and afterwards home to large vegetable gardens, the lack of green space is evident. The few existing green spaces in Eleonas are mostly located on the outskirts.

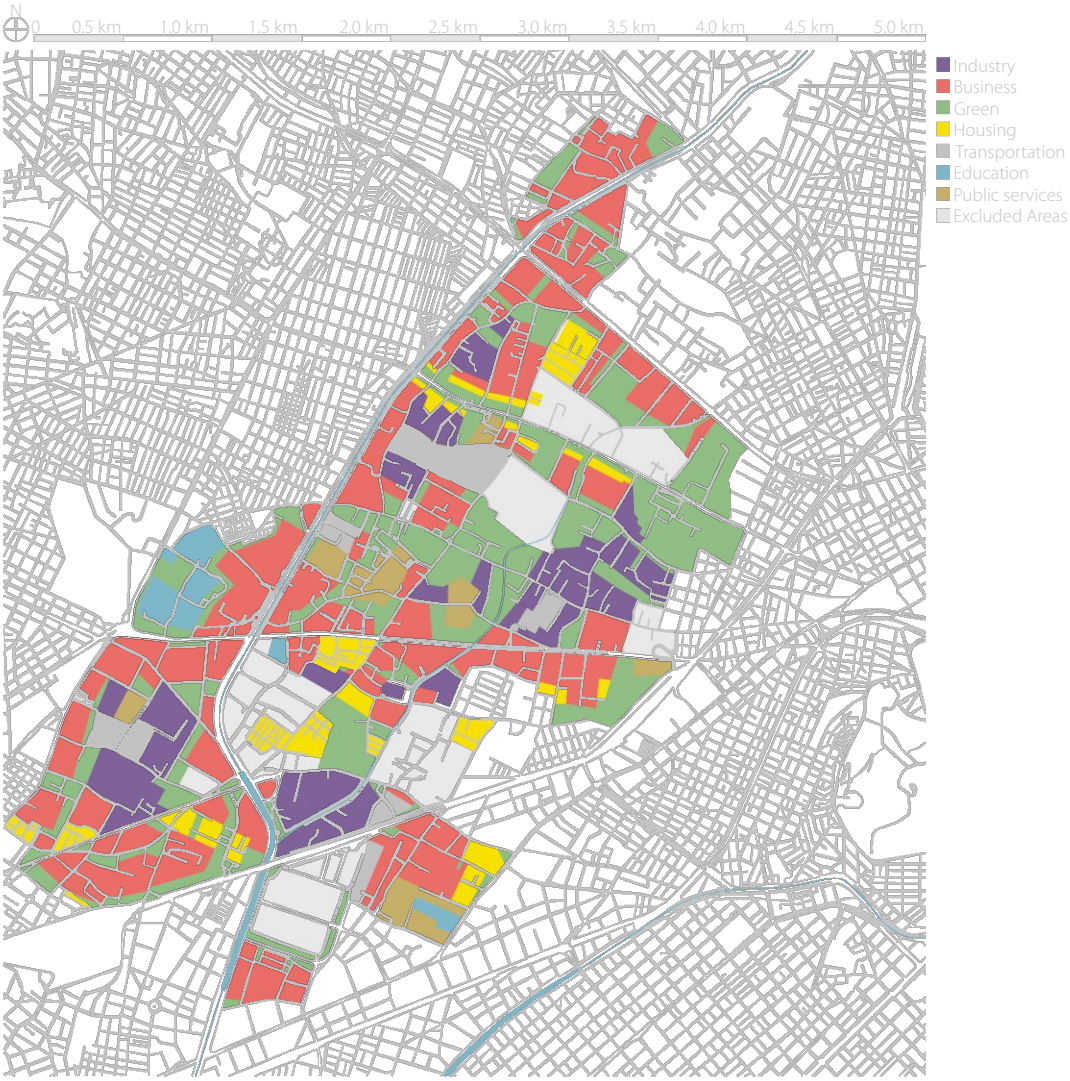
From inside of Eleonas the defining hills and mountains of the Attica basin can be viewed from almost every vantage point. The built landscape of the city can also be perceived from within Eleonas, most importantly the Acropolis, can be seen from many points in the area.[22]

14 According to AEDA S.A., ENVECO S.A. 2011, pp. 26-27.

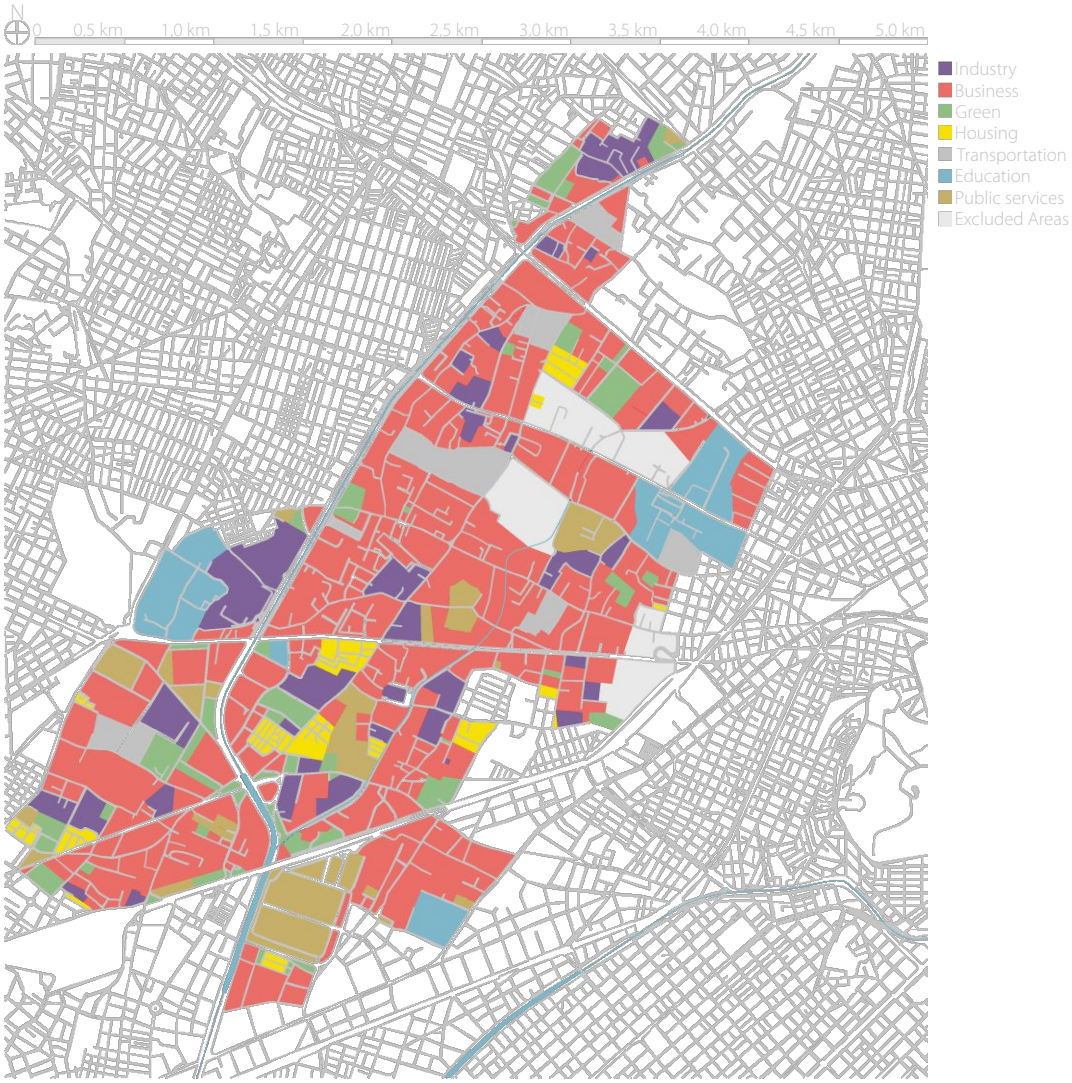
When the State begins to realize the condition Eleonas is in, it tries to counteract this transformation by going through a series of regulatory interventions (1965, 1979, 1980, 1981 and 1984). The biggest one in 1985 leads to the presidential decree in 1995 (Presidential Decree 1049/D/20- 09-95) which aims to include the restablishing of green areas, the re-establishment of the historical identity, improvement of the legislation concerning land use, sanitation and renewal of industrial production, the elimination of polluting factors, relocation of army barracks, the creation of underground parking spaces, general improvement of traffic and public transportation and the reuse of significant buildings.[23]

Fig. 19 (left)
Map depicting the land use in Eleonas according to the 1995 PD.

Fig. 20 (right)
Map depicting the actual current land use of the plots in Eleonas.



23 According to Patargia, P.A., Pouloudis, A.X., The Restoration of the Area of Eleonas (Holly Olive Grove) and its Contribution to the Upgrading of the Environment of Attiki 2002, p. 6.



2. Governmental Issues

When the first Presidential Decree concerning Eleonas was released in 1991 the area was included into the city planning regulations for the first time. Since the first decree was never enacted due to differences within the municipalities different research groups took action which concluded in the Presidential Decree of 1995 which remains the planning framework until today.

This decree includes the well known "Double Regeneration Plan" (Dipli Anaplasi) as well as objectives like removing sources of pollution, formulating a land use and development plan for Eleonas including much needed public infrastructure services and facilities. Another main objective was creating a large green area through increasing the existing green to almost 30% of the area while also readjusting the traffic inside Eleonas to avoid heavy vehicles circulation.[24] This would mean that a lot of industries would need to be moved and relocated to industrial pockets in order to not disturb the inside of Eleonas and put a strain on the traffic inside the area. The military camps would be relocated in favor of new green areas and recreational facilities.

According to the Greek legislation the application of plans like these are transformed through so called "Implementation Acts". In Eleonas instead of one implementation act for the whole area, each municipality was supposed to carry out its own which so far has not been fully accomplished due to lack of financing.[25]

Because Eleonas is split into 5 different municipalities (Agios Ioannis Rentis-Nikea, Athens, Eagle, Tavros Moschato and Peristeri). This makes it necessary to have an organization that is in control of these reforms and implementation acts to accomplish an all-over effective change within Eleonas. Besides the different municipalities the Ministry of Environment, Energy and Climate Change and the Organization of Athens also play an important role in the regulation of the area. In 2002 the 'Organization for the Development and

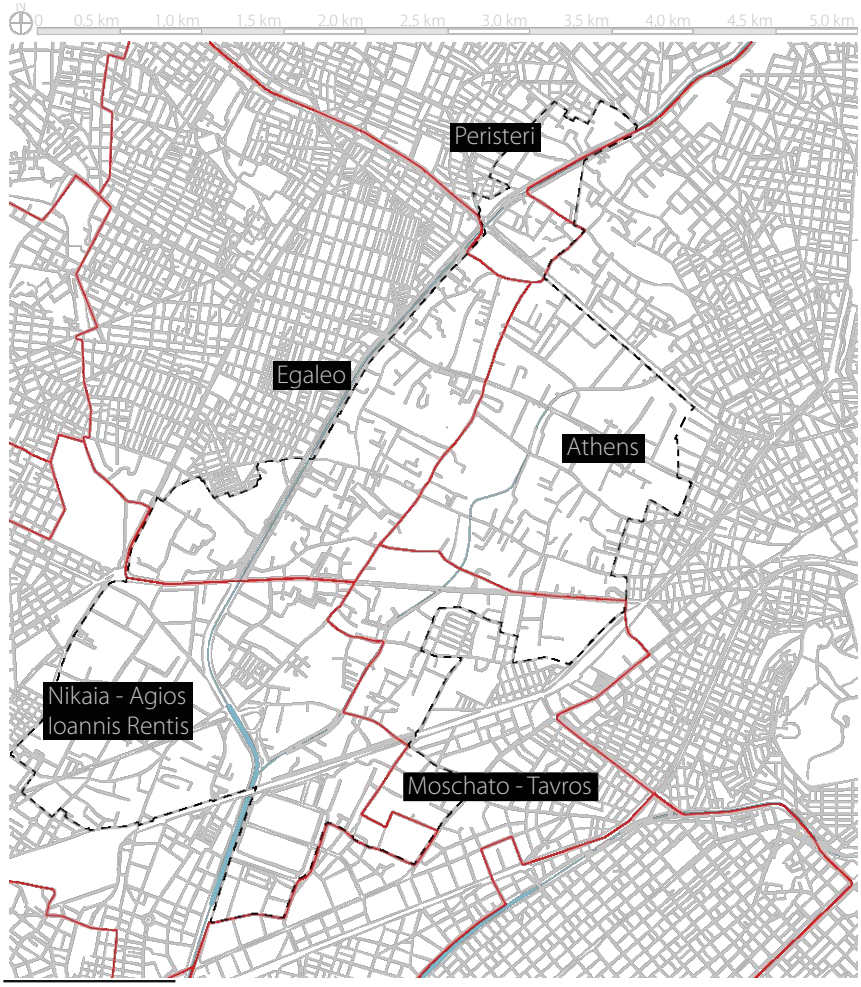
Fig. 21 (right)
The five different municipalities that are part of Eleonas.

24 According to AEDA S.A., ENVECO S.A. 2011, pp. 69-72.
25 According to Tsadari, S., Urban transformations in times of crisis. Eleonas as a case study 2017, p. 6.

the Management of Eleonas of Attica" was formed with a board that was appointed by the government in 2010 and still remains inactive until now. Again the main reason for the failure in founding this corporation was the lack of power to control the different municipalities.[26]

Most academic researchers[27] and experts[28] state that the plan is now outdated and agree with the statement made in Sapountzaki and Wassenhoven's conference paper:

"The 1996 plan was a conventional statutory plan, the best possible solution in the circumstances, for which the Athens Organization and the study team had to settle. But it was a compromise solution, which regulates land uses, but does not solve the problems of relocation, land management, industrial park operation, business initiatives and amenity creation. In effect, it is totally dependent on private sector initiatives."[29]



26 According to AEDA S.A., ENVECO S.A. 2011, p. 71.
27 According to Tsadari, S., 2017, p. 6.
28 According to AEDA S.A., ENVECO S.A. 2011, p. 72.
29 Sapountzaki, P., Wassenhoven, L., 2003, p. 9.

3. Economic Activities

Since the Kifissos Avenue highway is the major transportation and traffic axis of Greece, which connects the northern part with the southern and the rest of the world, many companies related to this business sector have emerged along the highway. Haulage companies, warehouses, car repair shops and many others play a major role in this area of Eleonas. Because of the easy accessibility supra-local commercial and entertainment functions have also developed along the edges of Kifissos Avenue. Large supermarket chains, an Ikea and even an amusement park are already established in the area.[30]

There were also specific future public and private projects which were supposed to promote the economic activity in Eleonas. The most important one is known as the "Double Regeneration" plan which focuses on the current location of the Panathinaikos football stadium and an area in the Athens municipality of Eleonas. According to the plan the new stadium, a shopping center and other sports facilities are to strengthen and develop the area. While the construction for the shopping center began, difficulties arose and the "Double Regeneration" plan has been inactive for years. In November of 2020 it was announced that construction was to resume.[31] The current goal (Sept. 2022) is for all construction to be finished by 2026.[32] The north-eastern part of Eleonas has slowly transformed into an area of bars, restaurants and galleries while the south-eastern part is home to increasing cultural activities like the Athens School of Fine Arts, the Benaki Museum, the "Hellenic Cosmos Cultural Center" and galleries.[33]

While the border of Eleonas in the West, through supra-local commercial and entertainment functions, and the border on the East, through cultural movements, provide Eleonas with economic activities so much more would be possible on the inside. So far these areas just highlight the border between the outside and inside of Eleonas.

Fig. 22(right)
Map showing the multitude of logistic companies vs. the few metropolitan activities

30 According to AEDA S.A., ENVECO S.A. 2011, pp. 38-40.
31 https://ktimatoemporiki.gr/athens-urban-regeneration-project-to-start-with-panathinaikos-stadium/
32 https://ypodomes.com/gipedo-panathinaikoy-to-2026-tha-einai-etoimo-olo-to-chronodiagramma-toy-prot-zekt/
33 According to AEDA S.A., ENVECO S.A. 2011, pp. 38-40.

4. Mobility and Infrastructure

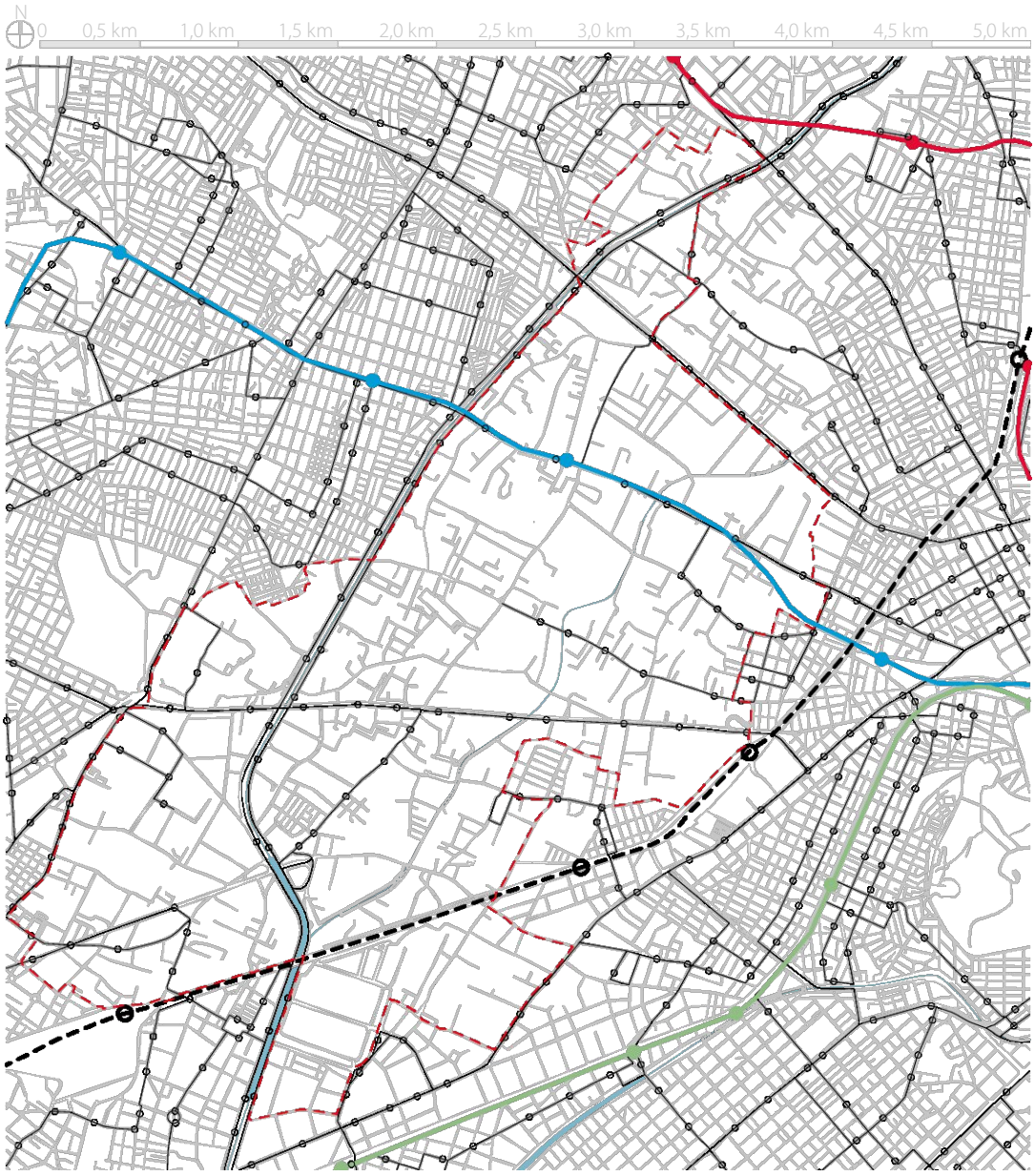
As mentioned before Eleonas is surrounded and crossed by major highway and railroad networks. Beside these north-south borders there are also Iera Odos and Petrou Ralli Avenue, two very busy roads, crossing Eleonas in the middle from east to west. In addition to all of them cutting through Eleonas and establishing boundaries they are heavily congested during rush hours. While the major road network connects Eleonas to the rest of Greece they cut it off from the immediate neighborhoods and make Eleonas barely accessible and hard to navigate on the inside. Besides these highways the middle scale road network inside of Eleonas is completely insufficient. Most of these roads are narrow streets in bad conditions with many dead ends. The most noteworthy street inside the area is Agias Annis which acts as a connecting north-south axis and can be seen as the backbone or spine of Eleonas. It is a heavily congested two-way road without any pedestrian zones therefore making it difficult to navigate through Eleonas from the north towards the south e.g. from the inter-city bus station to the train-station.[34]

Regardless of the transformation Eleonas will go through, may it be the "Double Regeneration" plan or another it will have a serious impact on the mobility and infrastructure problem in Eleonas. Therefore improving the public transportation within the area is essential. Right now Eleonas has one metro station in the north where Iera Odos, Markoni and Agias Annis meet. Since there are metro lines running north and south of Eleonas it would be beneficial to incorporate additional metro stations within the area. Public buses only include specific parts of Eleonas and are not frequent and adequate enough. The railway in the east has two stations in the area which connect Athens with Piraeus. Over the course of a public transportation expansion and improvement in Eleonas these train-stations would need to be connected to other ways of public transportation, the same applies to the metro station.[35]

Fig. 23(right)
The public transportation network of Athens. Only a few stops are located inside Eleonas.

34 According to AEDA S.A., ENVECO S.A. 2011, pp. 42-45.
35 ibid.

At the moment the movement of pedestrians inside Eleonas is hardly possible or advisable. The poor condition of the roads, non-existent pavements and the heavy traffic cause Eleonas to be a dangerous area for pedestrians. If the "Implementation Act" would be completed roads could be opened and pavements created. While this is at a stand-still at the moment navigating inside Eleonas as a pedestrian and being able to reach a certain destination is extremely difficult.



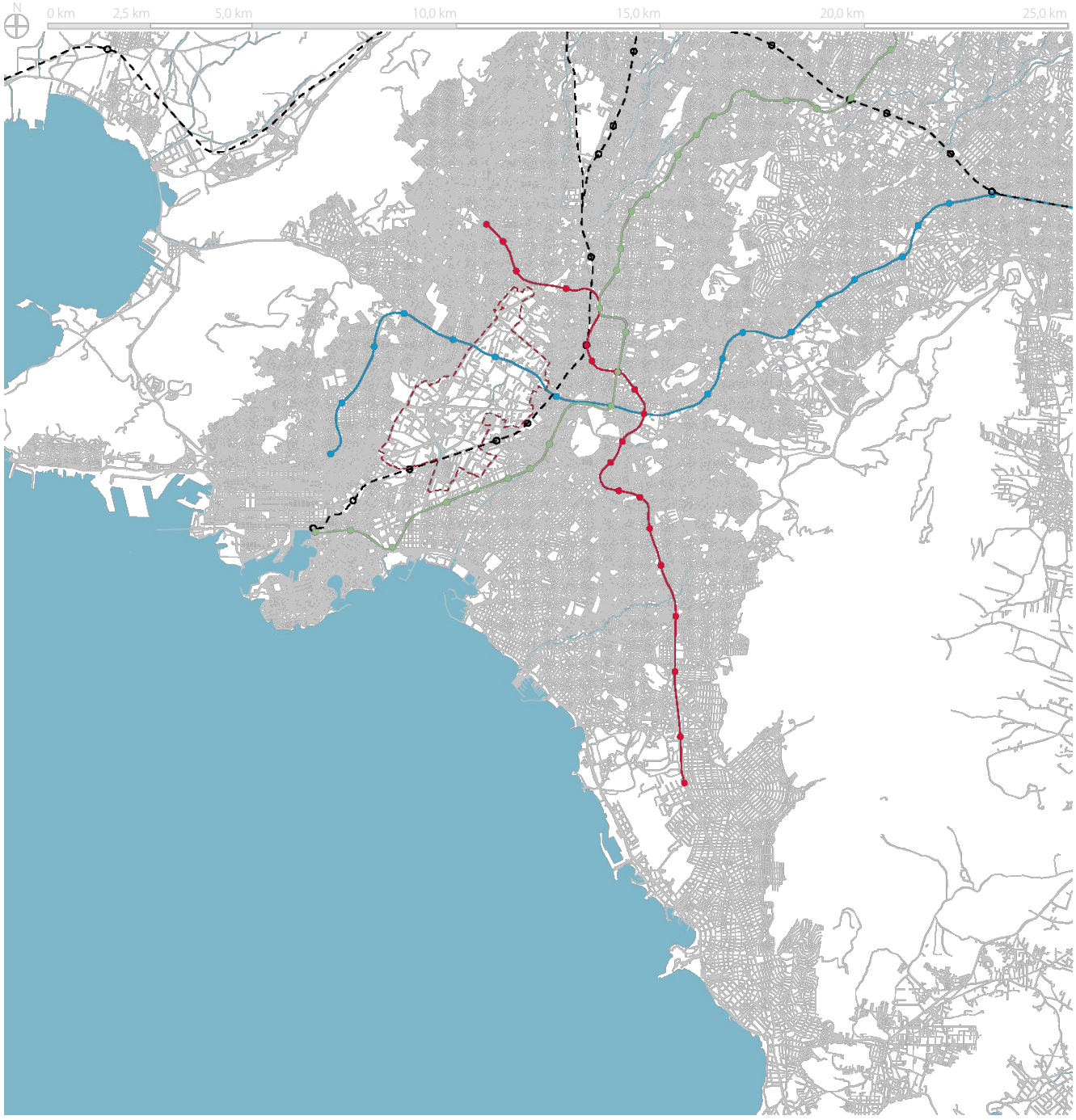
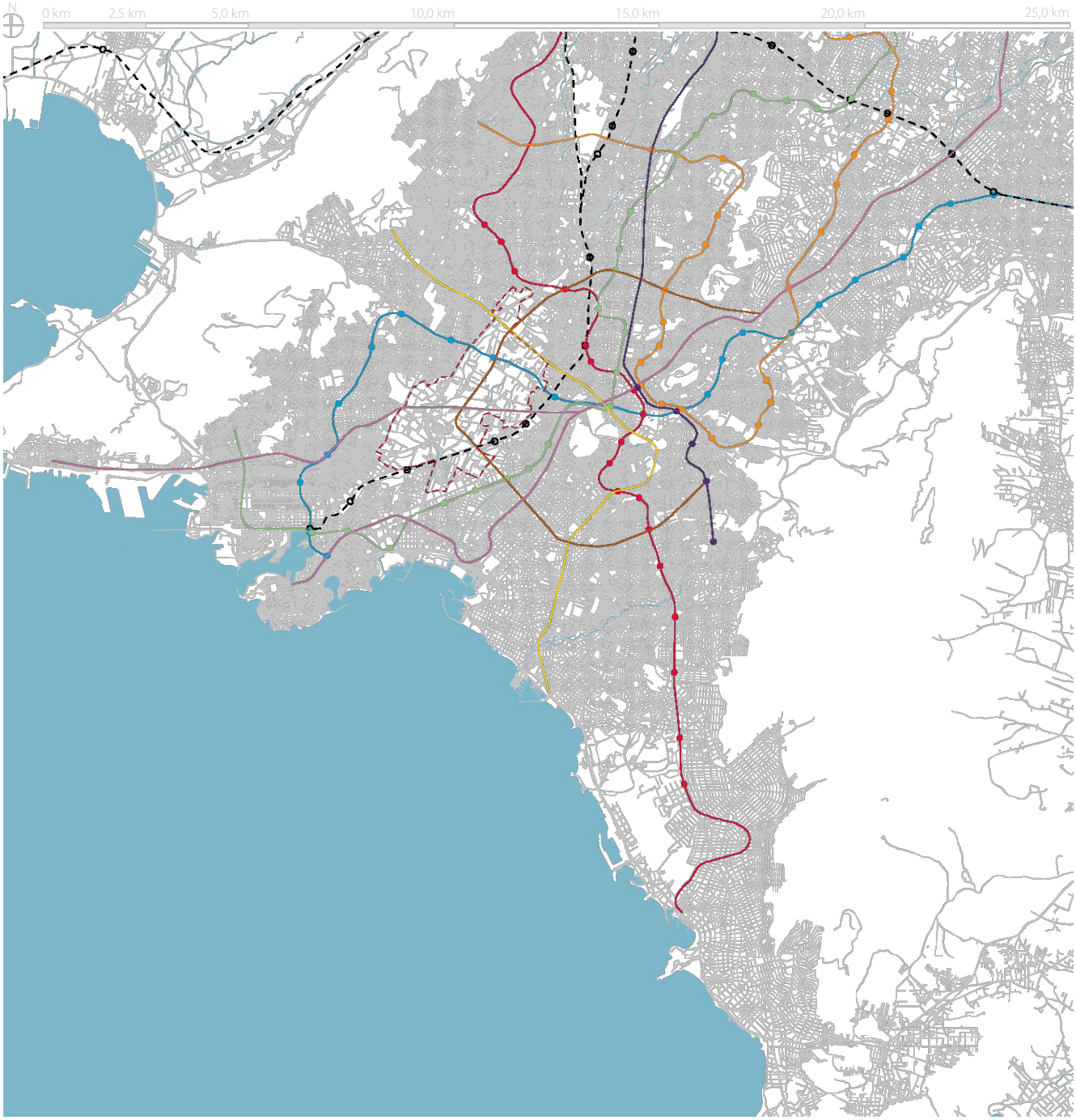


Fig. 24 (left)
Existing metro and train system in Attica.

Fig. 25 (right)
Planned new metro lines. (Attiko Metro S.A.)



5. Flooding

Floods pose a significant threat as they cause extensive economical damages and can even threaten human life. Up till the 19th century Eleonas was an olive grove and later on an agrarian area that profited from the natural floods provided by Kifissos River and other small streams in the vicinity. The surrounding mountains of the area (Parnitha, Penteli, Eagle and Ymittos) make Kifissos River into the main drainage channel for the largest part of the plain of Athens. It is approximately 33,7 km long and discharges into the Saronic Gulf.[36] Ilissos River was one of the tributaries of Kifissos River until the 20th century when it was diverted directly into the Saronic Gulf east of Kifissos River.

Fig. 26 (top right) Map showing the rivernetwork of Greater Athens. in the denser urban area the rivers and streams are fully covered. (Source: Bathrellos, G.)

Kifissos River and its seasonal flooding were one of the reasons why settlement in that area was averted for a long time. It used to be an important recreational facility and used to be clean to an extent that fishing was an activity until the 1960s. At that time the river was canalized and mostly covered and now runs under the Kifissos highway. The increased levels of noise, air pollution and drainage water from the streets changed the rivers microclimate.[37]

Redirecting Ilisos River and covering most of the rivers in the area in addition to poorly planned development of the city without drainage and sewage plans can be listed as reasons for the flood prone area.

"Therefore, a combination of poor planning, extensive urbanization, reduction of soil infiltration capacity and building in flood-prone areas led to a rich record of floods events in the city. In fact, detailed study of the temporal evolution of floods in the basin has shown a positive trend during the last century, and even though immediate loss of life is not showing clear increase, fatalities still remain an issue."[38]

Fig. 27, 28 (bottom right) Stream of Prophitis Daniel on the left and the semi covered river Kifissos under the highway in the Agios Ioannis Rentis municipality.

36 According to Bathrellos, G., et al., Urban flood hazard assessment in the basin of Athens Metropolitan city, Greece 2016, p. 3.
37 According to AEDA S.A., ENVECO S.A. 2011, p. 22.
38 Diakakis, M., et al., Using a Spatio-Temporal GIS Database to Monitor the Spatial Evolution of Urban Flooding Phenomena. The Case of Athens Metropolitan Area in Greece 2014, n.a.

Dimitrios Panayotopoulos-Tsiros points out three types of roads and their contribution to the flooding problem in his thesis: a capillary system of off-grid, disconnected alleys, three major east-west arteries and finally a massive infrastructure of Kifissos Avenue.

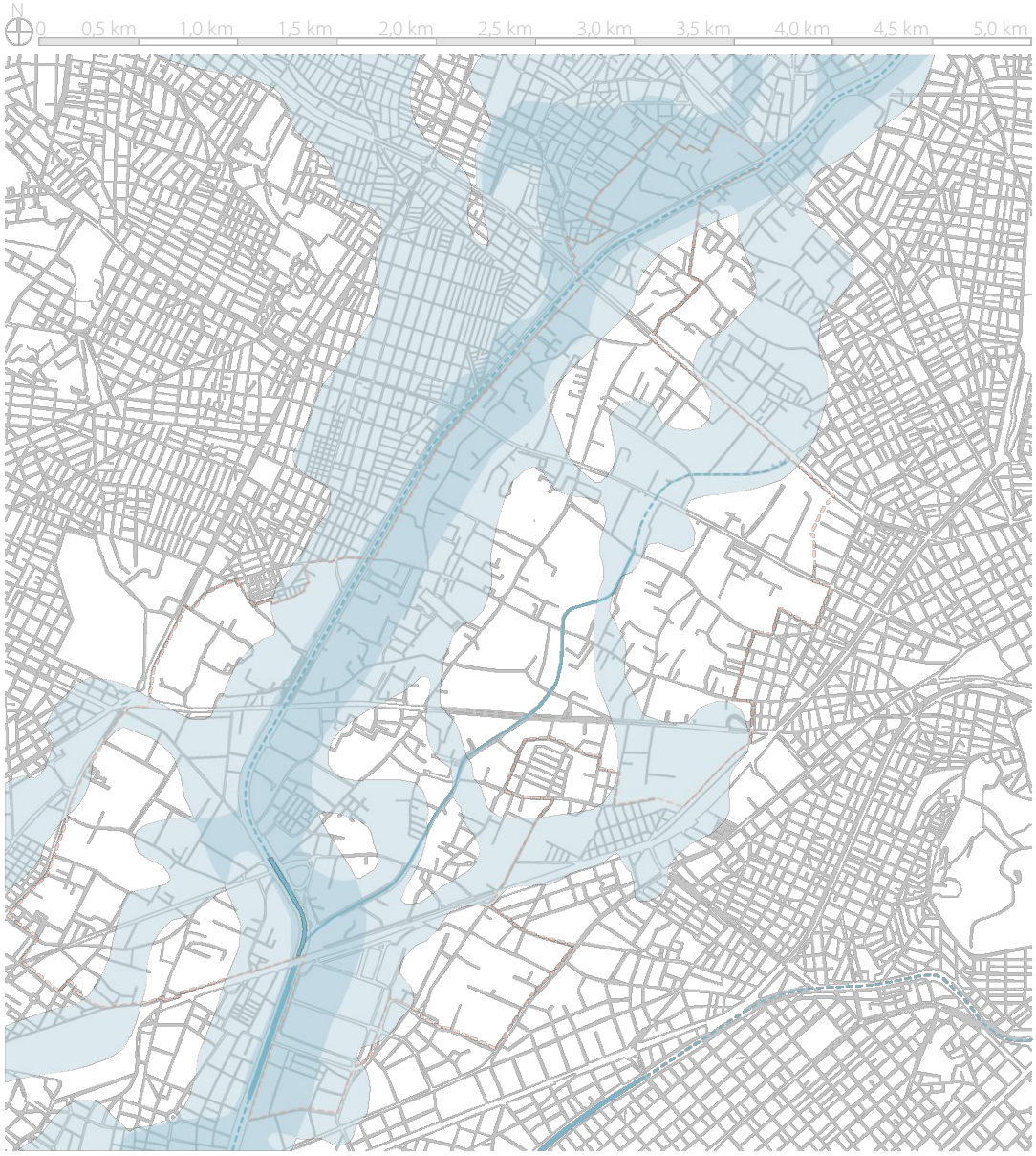
Fig. 29
Two different sources of flooding have been overlayed showing the high risk area around Kifissos river and Eleonas.

These small dead-end streets trap stormwater because they lack a water infrastructure in addition to the boundaries within Eleonas which make it difficult for the water to be eliminated efficiently. The secondary road network consisting of the three east-west roads connect Athens to the western suburbs and are the only streets connected to the drainage network of Athens. The problem with these roads is that in addition to their own water the runoff from the surrounding tissue is also added. This in turn often leads to the critical capacity of the combined sewage and therefore both rain and wastewater overflow into the streets, causing not only floods but also sanitary problems. The third component, Kifissos Avenue, is a massive 8-lane highway which was constructed in 2002 but lacked water management and planning. Since then Kifissos River has been polluted by the excess untreated water from the surrounding streets and industrial discharges. Not only did this impact the once clean and recreationally important main river of Attica but it also led to major flooding issues in the area.[39,40]

Numerous studies of the area show that while in the city center of Athens flooding is slowly decreasing the area around Kifissos River still depicts an increase in flooding.[41,42] Therefore any plans regarding the future of Eleonas should include a way to deal with this problem or at least be aware of the possible dangers it poses.

Fig. 30
Light flooding at the east-west streets. (Source: Panayotopoulos).

39 According to Diakakis, M., et al., 2014, n.a.
40 According to Panayotopoulos-Tsiros, D., Eleonas: Urban Voids as Opportunity for a Water Sensitive Approach to the Design of Cities, Athens 2016, p. 8,9.
41 According to Diakakis, M., et al., 2014, n.a.
42 According to Bathrellos, G., et al., 2016, p. 11,12.



6. Environmental Pressures and Pollution

WATER

Since the Presidential Decree of 1995 has never been implemented there are no sewers in the inner area of Eleonas which in turn means that industries and housing still use cesspit pools which pollute soil and groundwater.[43]

As mentioned earlier the drainage network is rather inadequate too. Prophitis Daniel and Kifissos River act as the natural drainage and as a result are now heavily polluted. Especially Prophitis Daniel now functions more as a liquid waste dump and less than a natural stream.[44]

Fig. 31
Sewage and drainage network inside Eleonas.

SOIL

With a lack of sewage and drainage networks comes not only the pollution of the ground water but also of the ground and soil itself. Eleonas itself is heavily contaminated because of its abandoned and active industrial plants. The main contributors of this pollution were the Athenian Papermill and the textile industry of ETMA. This uncontrolled and undisclosed disposal of liquid waste has caused soil and groundwater degradation to a critical level which was discovered during an excavation for the construction of new projects in the area. Consequently Eleonas is in dire need of soil and groundwater rehabilitation.[45]

Fig. 32
Environmental pressures in Eleonas. Liquid and solid waste has been disposed by the abandoned and active industrial plants.

28 According to AEDA S.A., ENVECO S.A. 2011, p. 62.
29 ibid., p. 63.
30 ibid., p. 62,63.

AIR

The industrial pollution of Eleonas did not only affect groundwater and soil but also the air quality. A large percentage of it, especially in the past, was caused by two categories: Fuel combustion for energy production and pollution from industrial activities. It is worth mentioning that by the end of the last century smoke emissions from the industries in Eleonas accounted for 18% of smoke emissions in the Athens basin. In the last few decades however this pollution has decreased since the deindustrialization and the removal of heavy industry from the area. However while the air pollution through industries has declined road traffic has had an increasing impact. The high traffic volumes and traffic congestions at the main roads and Kifissos Avenue have exceeded industrial pollution and are now the main source of air pollution in Eleonas.[46,47]

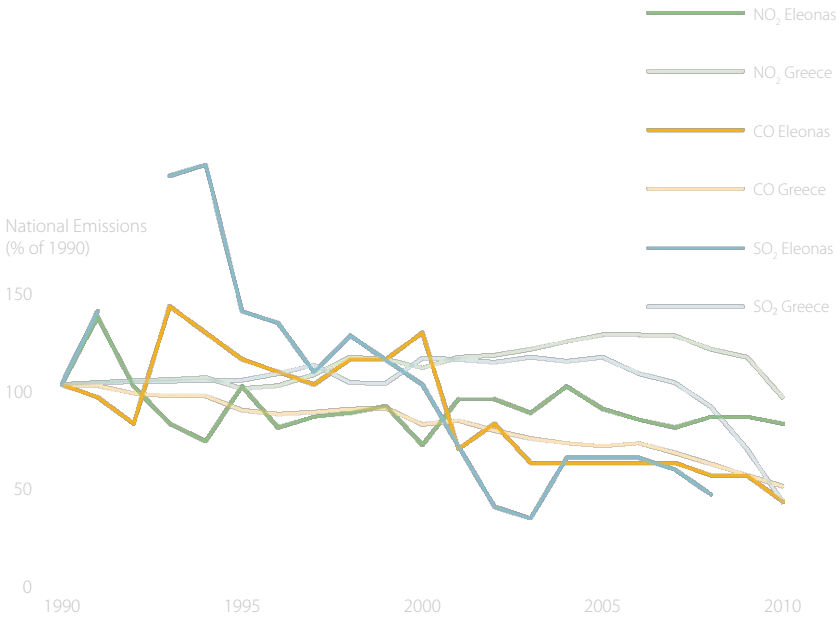
Fig. 33
Reduction of emissions which compares Eleonas to Greece.

NOISE

The main source of noise emissions in Eleonas, especially during rush hour, are along the borders around Kifissos Avenue, Iera Odos, Petrou Ralli and Athinon Avenue. While in these areas noise levels often exceed the maximum limit inside Eleonas the noise levels are relatively low. As a result of these poor road conditions with many dead ends these networks do not create high volumes of traffic. Nonetheless at the same time heavy traffic congestions often lead to high noise levels because of extensive use of car horns.[48]

Fig. 34
Noise levels due to traffic in the area of Eleonas.

31 According to AEDA S.A., ENVECO S.A. 2011, p. 59, 60.
32 According to Patargia, P.A., Pouloudis, A.X., 2002, pp. 4-6.
33 According to AEDA S.A., ENVECO S.A. 2011, p. 61.



Existing Proposals

1. Double Regeneration

The city attempted to reanimate Eleonas through a project called the "Double Regeneration" project, which deals with two areas in the municipality of Athens and undertakes a simultaneous rehabilitation.[49]

For the area outside of Eleonas this means that the Panathinaikos football stadium will be demolished and replaced with a green public park, a museum and underground parking. This is meant to promote open and green spaces in this area of Athens.[50]

In Eleonas the "Double Regeneration" project has a new football stadium for Panathinaikos planned with underground parking, a large shopping and recreation center and open and green space with additional sports facilities.[51]

The project came to life in 2008 and as of 2011 a new structural plan for Athens is active which includes Eleonas. There were further objectives added like the foundation of a "Scientific and Technical Park", promotion and enhancement of the cultural heritage of the area and many more. This led to a revision of the original "Double Regeneration" project which now was to be implemented in an even bigger scale master plan.[52]

After encountering a few different problems the project reached a stand still until 2020 when it was announced that the 'Double Regeneration Project' would indeed finally resume construction. New renderings and pictures were released and advertised. It is said, that Panathinaikos will be able to play it's first game in the new stadium in 2026.[53]

Fig. 35 (top right)
Locations of the old stadium Leoforos and the new site in Votanikos in Eleonas.

Fig. 36 (middle right)
Rendering by A&S Architects of the new stadium in Eleonas.

Fig. 37 (bottom right)
Location of the new stadium from birds eye view.

49 According to AEDA S.A., ENVECO S.A. 2011, p. 73.
50 ibid.
51 ibid.
52ibid. p. 74.
53 https://ypodomes.com/gipedo-panathinaikoy-to-2026-tha-einai-etoimo-olo-to-chronodiagramma-toy-protzekt/

2. An Urban-Agrarian Vision for Eleonas

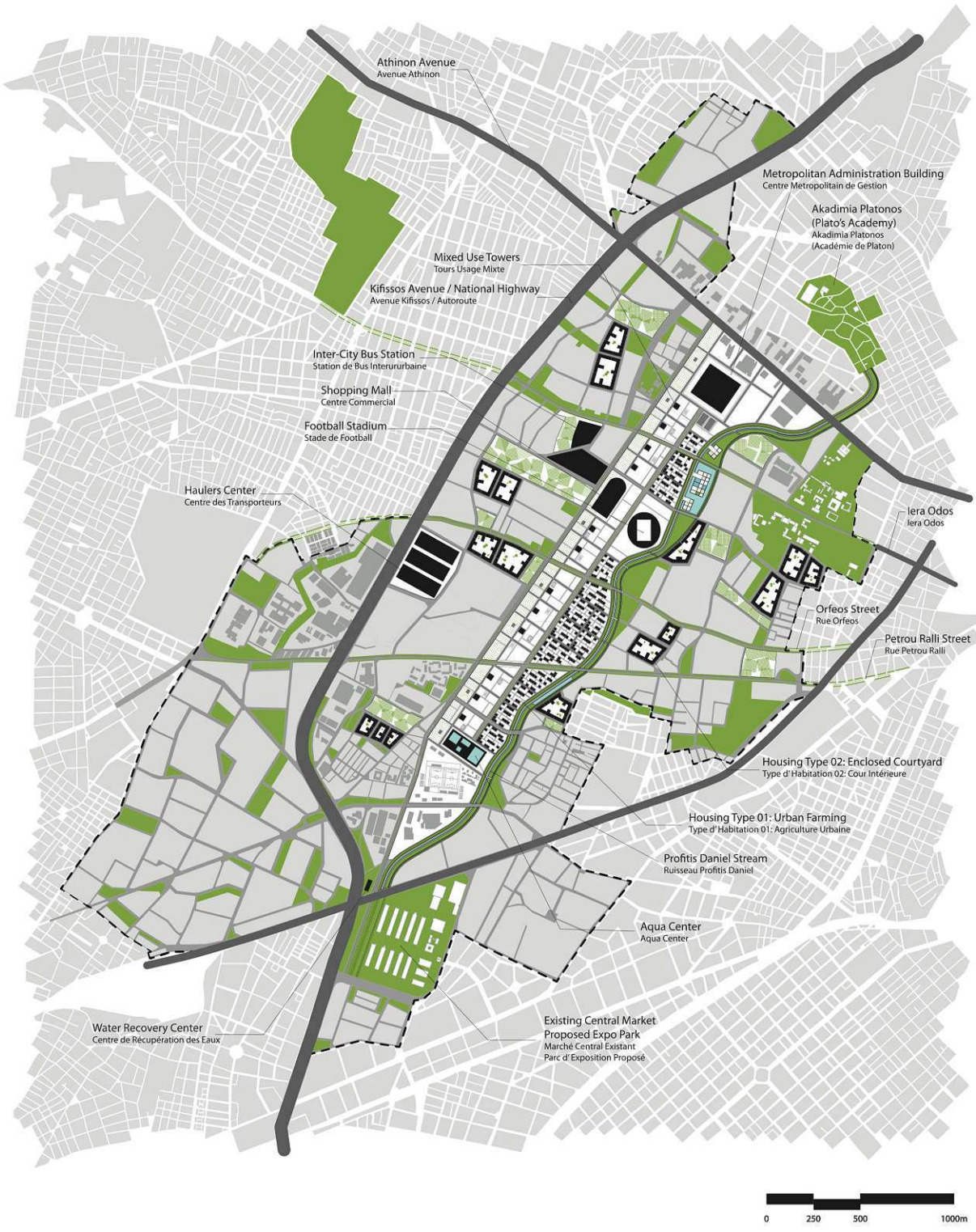
Along with the new objectives in 2011 Yannis Aesopos Architecture was commissioned to create a master-plan for Eleonas. The vision for this project was to preserve the area while ensuring that a new urban-agrarian environment would be established through reinterpretation of the history. Urban farming and housing are also major components of this new master-plan to preserve and at the same time reanimate the area of Eleonas. Different master-plan scenarios were discussed and examined before settling on the urban-agrarian plan.[54]

Main focus of the urban-agrarian proposal by Yannis Aesopos Architecture is the central "Green Core". This idea aims to uncover the entire length of Prophitis Daniel from Plato's Academy to the Athens Central Market in the south. This "soft", curving axis would stand in contrast to the "hard" axis that presents Agias Annis. The are in between these two spines is defined as "Green Core". The mobility and infrastructure, including large scale buildings and activities are placed along Agias Annis and the new LRT (Light Rail Transit) to stimulate development in this area.[55]

Inside this "Green Core" along Agias Annis a series of twelve 20-storey towers are planned to enhance recognizability from far away and provide space for offices, housing and commercial facilities. These large-scale buildings are placed periodically along the axis without obscurring the view towards the Acropolis. Additionally they are interrupted by other large-scale buildings like a large administration building, the football stadium and mall and an aqua-center in the south.[56]

Fig. 38
Urban-Agrarian Master-Plan by Yannis Aesopos

54 According to CREPUD MED (ed.), Working with the territory: strategies for the new territorialities / Travailler avec le territoire : stratégies pour les nouvelles territorialités 2012, p. 250.
55 According to CREPUD MED (ed.), 2012, p. 254.
56 ibid.



While the housing units inside the "Green Core" are characterized by openness being only one, two or three.storey housing buildings with urban farming areas the housing outside the Core is enclosed. These courtyard housing types are inserted into Eleonas' environment. They symbolize closure and protection and mirror the previous interpretation of Eleonas as a closed off or walled area. This second type of housing is meant to include green courtyards and is seen as little "islands" outside the central "Green Core".[57]

Fig. 39
Master plan through bird's eye view from the south

The proposed landscape concept aims to create more green open space which will be widely accessible and used by the citizens. While reviving the stream of Prophitis Daniel it also supports natural regeneration of the flora and fauna to create a strong and healthy landscape. The central "Green Core" can be viewed as a park including, playgrounds, gyms, open-air theatres etc. It will also include a "new Eleonas" consisting of new olive trees and shrubbery. This "olive grove" will be following the linear axis of Agias Annis while other strips to the east will also feature orchards and lower planting.[58]

Prophitis Daniel will be an essential part of the master-plan and therefore requires major work. Aesopos Architecture proposes the construction of all necessary technical works like overflows and wells to seperate the stream from sewage and drainge water. The idea is to enhance the natural character while maintaining a steady flow, through the support of pumps, to ensure water supply for irrigation of the surrounding urban agricultural land.[59]

Fig. 40
View of the towers with urban farming plots

57 ibid., p. 258.
58 ibid. pp., 260-262.
59 ibid., p. 263, 264.

3. Older Proposals

DOXIADIS+

In 1997-1998, shortly after the Presidential Decree, Thomas Doxiadis and his team were commissioned to create a master-plan for Eleonas. Intense research was conducted in order to avoid destroying the area and it's unique character. It was proposed, that landscape corridors would be developed along areas that already belong to the Greek state or would easily be acquired. These corridors would provide a new urban reality with public spaces. The main axes would remain unmodified, still acting as a connection to the rest of the city.[60]

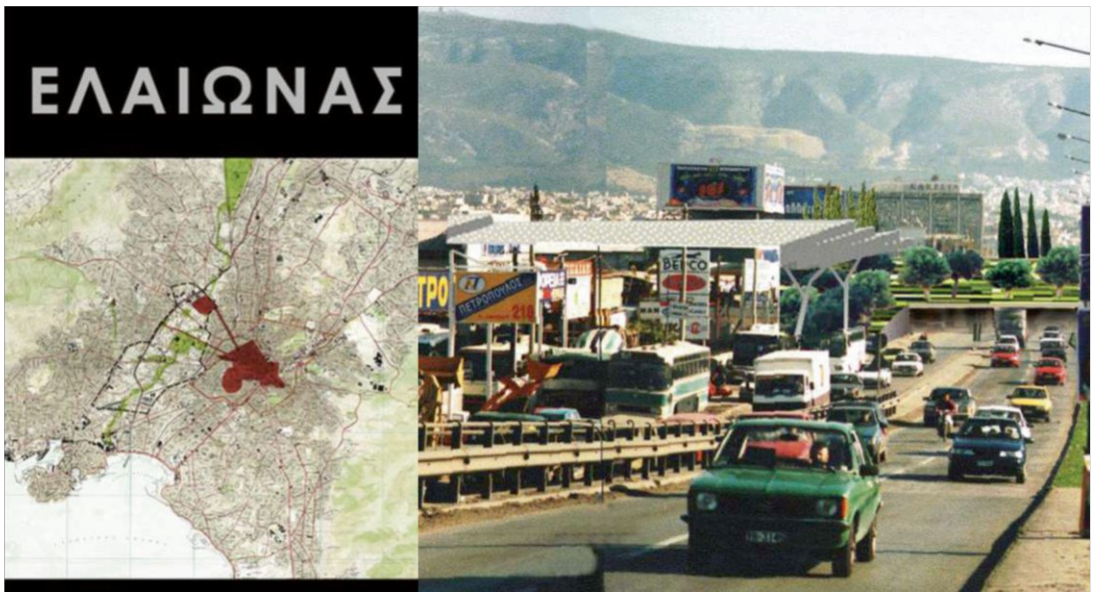
Fig. 41
Photocollage by Doxiadis+

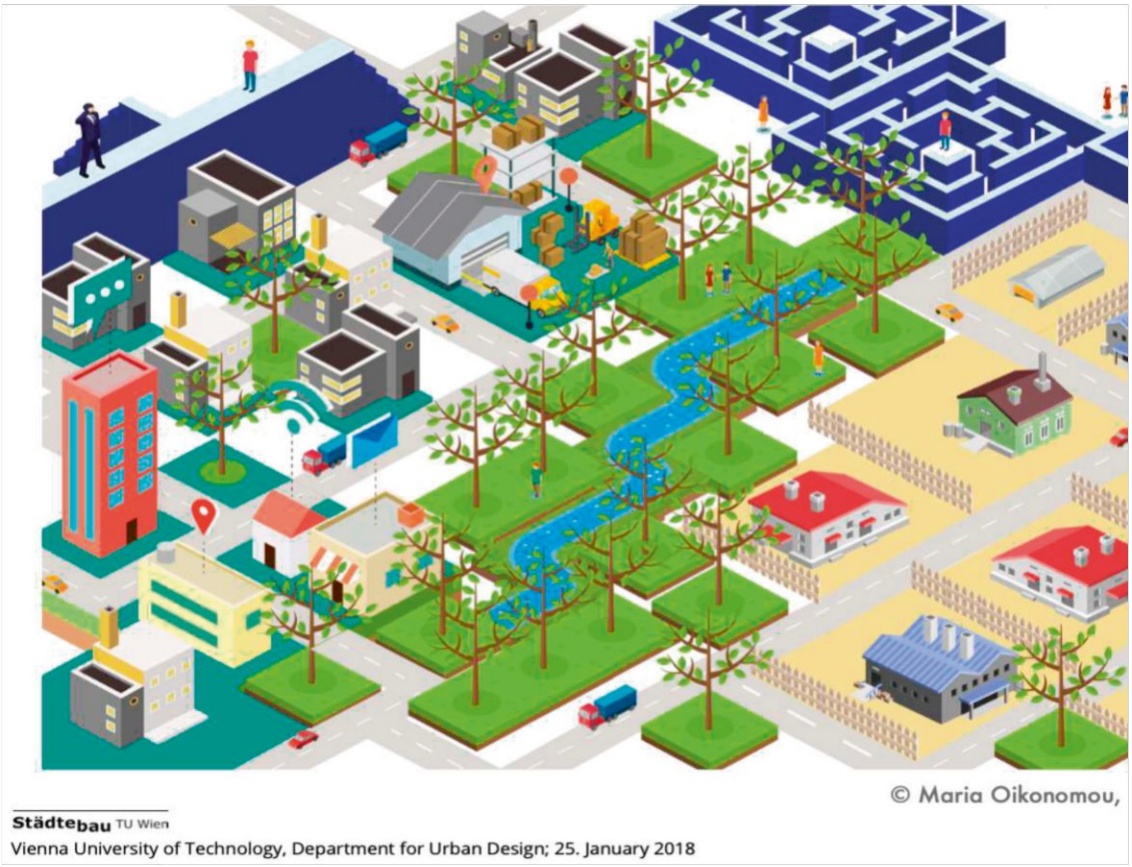
4. Academic Works

Multiple academic papers have been published that deal with the different challenges Eleonas is facing. These can be divided into thesis' which have been written after the Presidential Decree but before the idea of the Double Regeneration Project started[61] and thesis' after which sometimes refer to the Double Regeneration Project or discuss it. [62, 63, 64, 65] There was also a doctorate thesis written in 2020 by Dimitrios Panayotopoulos.[66] Additionally many urban design studios at different universities (TU Wien, NTUA) have looked into Eleonas with a multitude of different outcomes. Most of these urban design labs dealt with a certain area of the 880 hectar area of Eleonas.

Fig. 42
Collage by Maria Oikonomou for the final presentation of the first urban design lab at the TU Wien in 2018 depicting the four different results (industry, green velvet, backyard and lost in transition)

60 http://doxiadisplus.com/masterplanning-the-future-of-eleonas (Zugriff am 4.10.19)
61 Kotsikou, E.A.: De-fragmenting Athens: Drosscape as a device for integration between the metropolitan and the local scale, Master Thesis, TU Delft 2010.
51 Fotakis, A.,Eleonas, an enclave in Athens, Greece 2013 n/a.
52 Georgoula, K., Eleonas of Athens: Searching for a relation between the residual and the city, Master thesis, TU Delft 2014 n/a
53 Samartzopoulos, G., Drosscape and the city: the case of Eleonas in Athens, Master Thesis, Massachusetts Institute of Technology 2014 n/a.
54 Panayotopoulos-Tsiros, D., 2016, n/a.
66 Panayotopoulos-Tsiros, D., 2020.





MOBILITY AND INFRASTRUCTURE

1. Mobility and Infrastructure

One of the main problems concerning Eleonas is the lack of mobility and infrastructe within Eleonas as well as connecting the area to the outside. With the highway and river in the west cutting it of from the urban neighborhood as well as the railway in the east disconnecting it from Athens and the historic sites. The north and south connections are also hindered by busy perpendicular streets or intersections. All of these manmade boundaries lead to the general isolation of Eleonas.

Since most the of the streets were created naturally as and when required of local industry they build a capillary network which restrains movement from the outside in. What were useful and practical streets for the farming and industrial plots are now too small, and often dead-end, streets that cannot accomodate the heavy traffic due to the logistic activities in the area.

All of the above adds up to question the saftey and attractiveness inside Eleonas. Ways to enter the area via public transportation are scarce and once inside it is dangerous to move around. Therefore in order to make Eleonas attractive as an area for the public these issues need to be adressed first.

2. Metro System

During the preparations for the Olympics in 2004 new metro lines and stops were added to the metro system with one of the lines crossing through Eleonas. Originating in a stop called 'Eleonas' which showcases a very modern and neat metro stop where Markoni and Iera Odos streets cross. Attiko Metro S.A. has plans for an extensive increase of the metro system adding alltogether five lines to the existing three.[67] Out of these five new lines three cross through Eleonas, with none of them having any stops depicted in the existing planning matrial. Therefore stops at converging metro lines and important street intersections are suggested, which would increase the stops inside and just on the border of Eleonas to up to six metro stations.

In turn Eleonas would be more accessible to the inhabitants of Attica just by being on their way to the city oder back home. Having more metro stations inside Eleonas is a vital point to revive the area and make it more attractive to the people of Attica. Without any means to get inside Eleonas there will never be a true chance to activate the already very abandoned area.

Fig. 43
Existing and new metro lines crossing through Eleonas will help the area become more visible and accessible.

67 https://www.ametro.gr/wp-content/uploads/2016/08/AM_Sxedio_Anaptiksis_Jan2012_en.pdf

3. Bus Lines

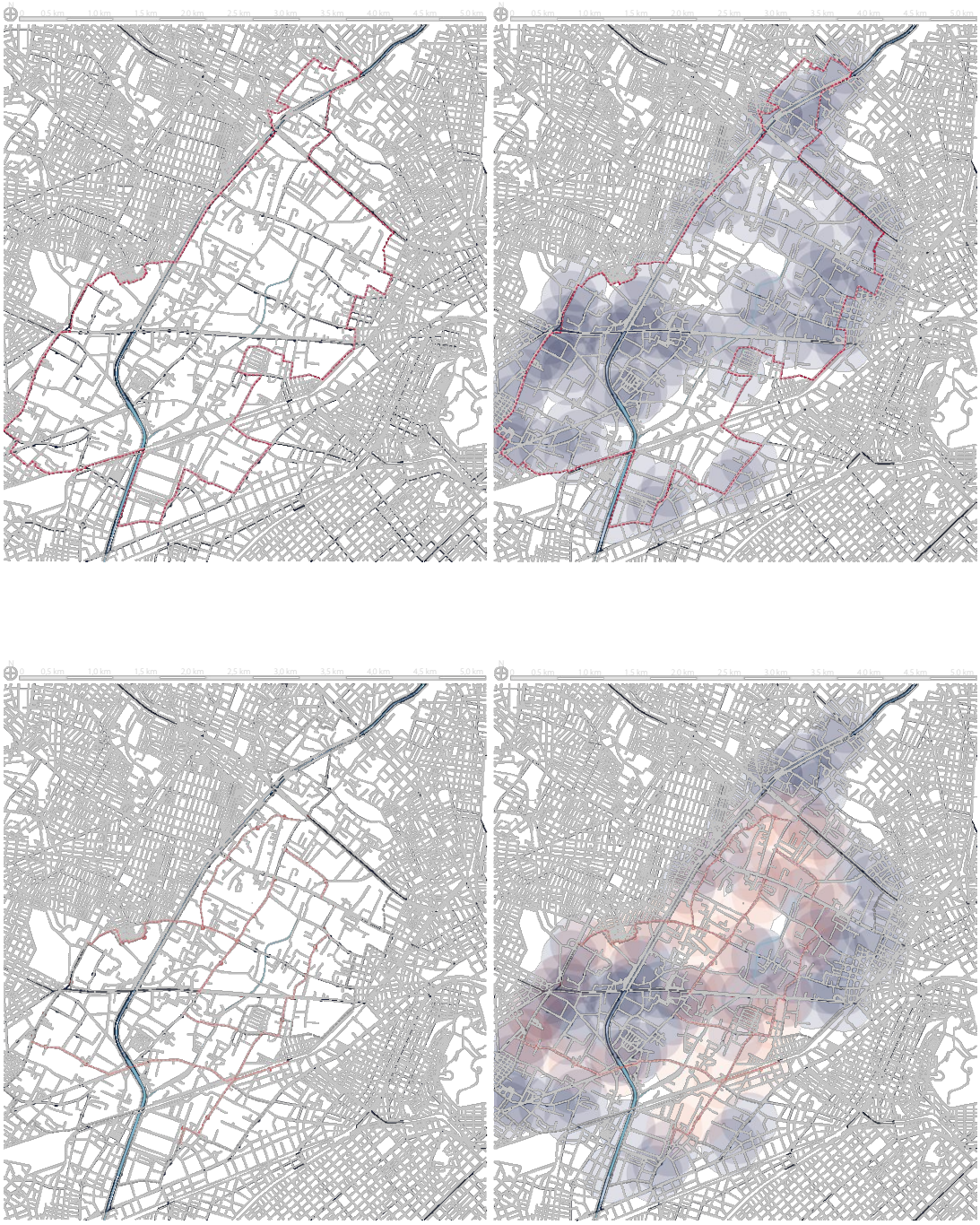
While the metro lines and stops would make Eleonas more accessible to people living further away or even outside of Athens, busses would improve commuting from closer neighborhoods or even the historic center of Athens.

The existing bus lines mostly avoid Eleonas with only a handful reaching inside. Nearly all of the stops inside the area are along the main axes crossing through namely Kifissos highway, Petrou Ralli, Iera Odos and Leof. Athinon. Looking at the zones of attraction for these stops with a radius of 300m clearly shows that the central parts of Eleonas are not included in this local public transportation network.

Fig. 44, 45 (top right)
Only a few bus lines cross through Eleonas.

In order to connect the inner parts with the rest of Eleonas and Athens new bus lines and stops are considered which would make it possible to cover the majority of Eleonas with zones of attraction thus making it realistic to reach all neighborhoods of the area and vice versa. Especially the north -south connections would be attractive, now offering public transport to important areas like the new mosque, the Double Regeneration Project, the universities from inside Eleonas and connecting the bus system to the train stops in the south.

Fig. 46,47 (bottom)
Additional bus lines and stops would increase access to all areas of Eleonas.



4. Bicycle Lanes

Greece often ranks last compared to other european countries when it comes to driving matters and was the only country to exceed the EU target of road deaths. [68] According to the European Commission Data each day on average two people die and about 50 are wounded.[69] These are not really statistics that invite the Athenians to use a bike in their city. Very few bike lanes exist inside Athens and they are not connected to each other.

Nevertheless it has been a goal of the city of Athens to strengthen and improve their urban cycling. In their resilience strategy for 2030 biking is part of their strategy for a greener city.

Since there is an active desire to strengthen the bicycle network in the city it would only be natural for new bike lanes to develop inside Eleonas. The suggested lanes would connect the western urban fabric with the historic city center while also linking green areas like parks, schools, the cemetery and housing. The new bicycle zones would avoid high traffic routes and lean towards green areas and secondary street network.

Naturally in addition to building and making space for these new bike lanes there would need to be an improvement of the drainage system and street lighting. Considering that most months in Athens reach high temperatures, shading the bike lanes at least in parts should be included in the planning process.

Fig. 48
Existing and succested bike lanes crossing through Eleonas.

68 https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1767?utm_source=ETSC&utm_campaign=71073a749a-20200709-PIN_corona_briefing_COPY_01&utm_medium=email&utm_term=0_3a7b55edbf-71073a749a-307151937
69 https://www.hellenicparliament.gr/UserFiles/510129c4-d278-40e7-8009-e77fc230adef/ΕΚΘΕΣΗ_1_2_3.pdf

5. Pedestrians

Navigating through Eleonas is hardest as a pedestrian for many reasons. Because Eleonas was never designed or intended for pedestrians or public use per se it can be quite difficult to access. As mentioned before most of the existing street network stems from practical use of the industry, it is now not only congested but also very unsafe.

Traffic infrastructure has never been properly planned in the area leading to not only a lack of traffic lights or crosswalks but also pavements, drainage and streets lighting. This in turn makes Eleonas not only unattractive for outsiders but also extremely dangerous. Even if there were a multitude of desirable activities or events in Eleonas, getting there would prove to be quite precarious.

In order to make Eleonas interesting to inhabitants there are certain measurements that need to be taken. Basic needs would be rectifying the drainage and sewage situation and also installing pavements in the area for the sake of being able to maneuver Eleonas at all. Street lightning is also a concern since nighttime makes it impossible to navigate through Eleonas without proper lightning. Pedestrian safety would also increase through regulated traffic with traffic lights, crosswalks and less congestion.

Having met these basic needs additional pedestrian quality would increase through connection to public transport (train, metro and bus stations) with appropriate bus shelters. Seating accomodations, shading and access to drinking water would also lead to a rise in accessability and attractivity.

Fig. 49
Basic pedestrian needs and concerns inside Eleonas.

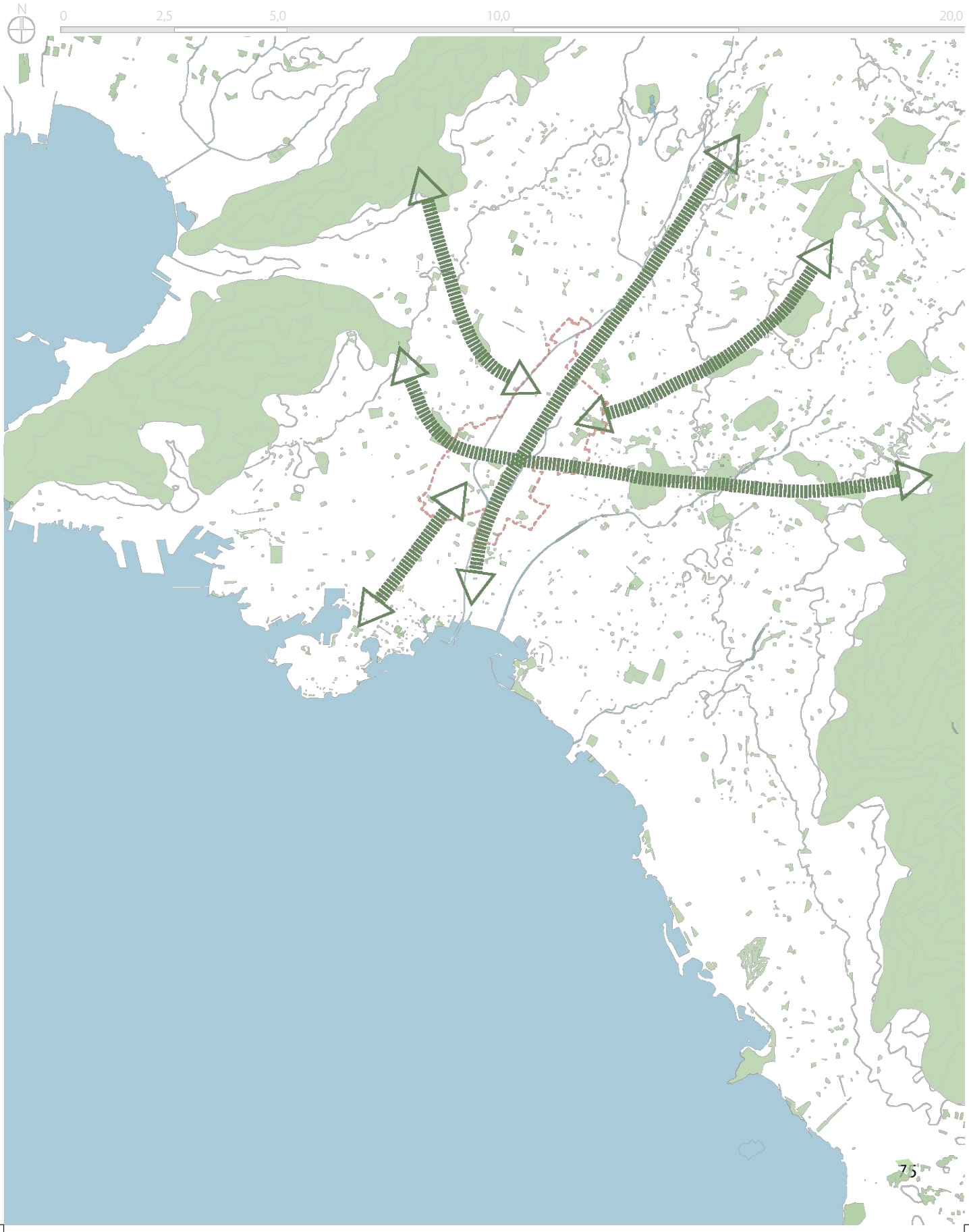
GREEN SPACE

1. Connections

In order to create lasting green areas of quality a connection to existing green and recreational areas would be beneficial. Attaching Eleonas' existing and planned green areas to the surrounding mountains and parks allows for stability and visibility. Whether it be from a historic site to the mountains or a park to the cemetery green axes will increase attractivity as well as comfortable commuting.

Fig. 50 (right)
Map of Attica showing the surrounding mountains.

Fig. 51 (left)
Green axes through Eleonas, connecting it to existing green zones.



2. Existing and Planned Green Space

In comparison to other european capitals Athens ranks second to last, barely ahead of Nicosia the Cypriot capital, with a tree cover rate of 11%.[70] While Attica benefits from the surrounding mountains and national parks the urban fabric lacks green spaces.

Eleonas is surrounded by a few of the existing green areas. In the north lies the ancient Academia Platonos (a) a historic site enveloped by a park. To the east are the Acropolis (b) and Filopapou Hill (c), two of the most visited sites in Athens. On the western side of Eleonas there area cemetery providing public green space (d) and a park in Egaleo (e) with a myriad of different public uses.

Inside Eleonas however green space is also rare. There are a few existing areas with most of them being either sports facilities (soccer fields, basketball courts), parks or wasteland. On the other hand the Presidential Decree from 1995 designates a big part of Eleonas to green spaces. Since the Presidential Decree has never been implemented and it is not noted what kind of green typolgies would have been appointed it is difficult to image these green spaces in Eleonas.

Fig. 52
Map of Eleonas showing the surrounding and existing green spaces and areas dedicated to green space by the Presidential Decree in 1995.

70 https://www.weforum.org/agenda/2022/08/green-space-cities-climate-change/

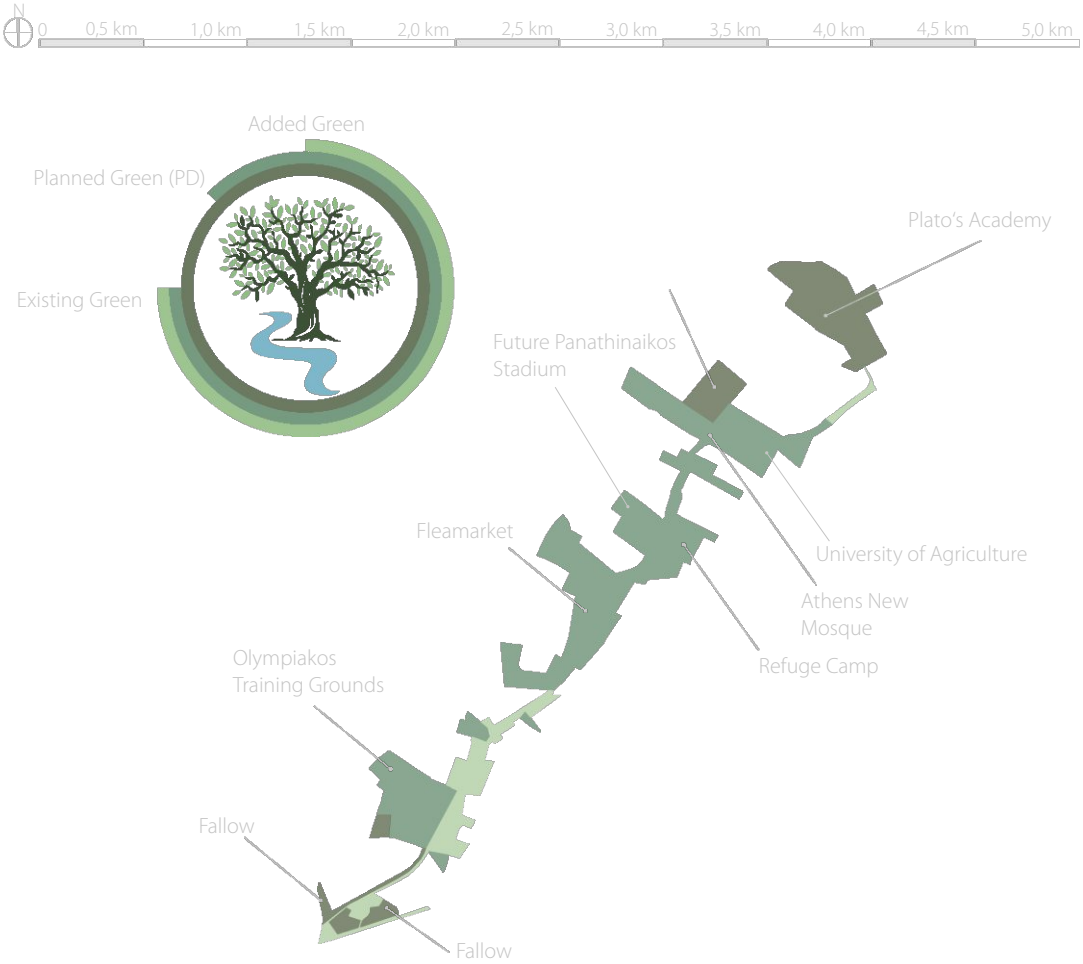
3. A Green Spine

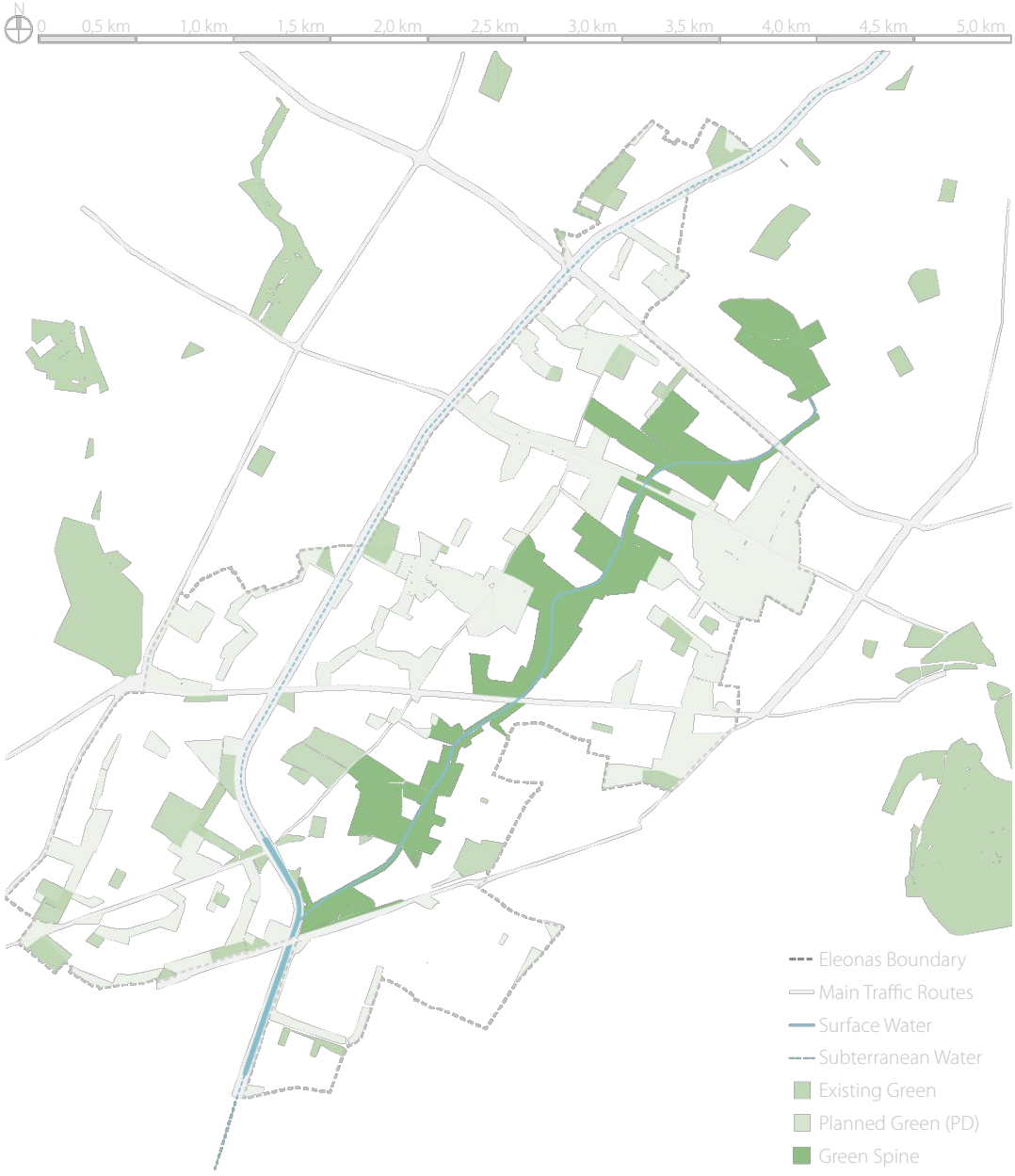
In order to make Eleonas more attractive for future investments while also generating green public spaces the idea of a green spine along the Profitis Daniil stream would provide Athens and the surrounding urban fabric with those qualities.

The idea is to connect existing, planned and new green areas along the stream while anchoring it in already flourishing green spaces. The goal is to stay in legaslative regulations (though outdated nevertheless still active) by using PD green space as dedicated with new uses and added areas.

Fig. 53 (right)
Map of Eleonas with the existing and dedicated green areas. The green spine links green space from the Academia Platonos to where Profitis Daniil flows into Kifissos river.

Fig. 54 (left)
The green spine divided into the three green zones depicting anchor points.





The first idea was to connect the green areas along the river while benefitting from the closeness to accessible water in Athens. The stream itself is subjective to seasonal changes with heavy rainfall and flooding in the winter months and almost drying out during the summer. Therefore actual access to the stream itself was not included in the design. Nevertheless the idea at the beginning was to uncover the stream up until Academia Platonos in order to have the river present throughout the whole Riverwalk.

Surfaces in the area would not only be unsealed but the stream would have to be excavated. Seeing as most of the planned green spaces are former industrial or logistical sites and therefore have sealed surfaces, in order to reduce flood risk and create usable green space they would have to become unsealed. This would, as mentioned, help in reducing flood risk but at the same time raise an awareness of the contamination of the area. While dealing with contamination is a very scientific approach for the time being these areas would only be used to grow non-edible vegetation and be avoided for recreational activities. After the needed measurements were taken and the contamination has been reduced to a minimal percentage these areas would undergo a new planning stage.

Fig. 55 (top right)
Contaminated areas and flood risks shown along the green spine.

Most of the very few buildings along the Riverwalk are light structures and sheds, not designed, and often unserviceable, for reuse. These constructions would be demolished while freee and usable buildings could be repurposed. Active and used buildings will keep their functions and location. Most of the industry and logistic centers would be relocated closer to Kifissos highway creating new logistic and industry hubs closer to main traffic arteries making space for the new green zones.

Fig. 56 (bottom right)
Map indicating the quality and usage of the building inside the green spine.

In the end, the idea to uncover the stream up to Academia Platonos was discarded with it being too expensive and not needed as the main point of attraction. The shape of the green zones along the stream have also been readjusted upon closer inspection and after comparing them to usage. The final shape of the green spine oder Riverwalk now adheres to the PD and actual plot sizes and uses making it much more realistic.

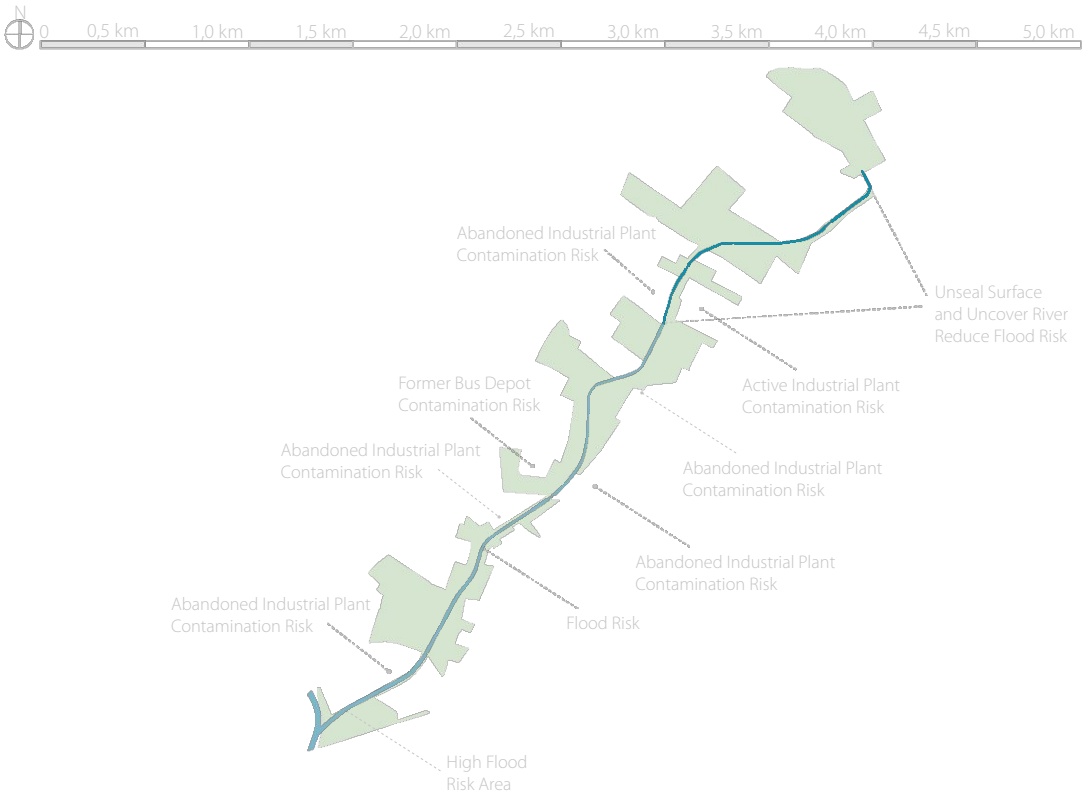


Fig. 57
Original shape of the green spine following the dedicated plots in the Presidential Decree.

Fig. 58
Revised and final shape of the green spine in Eleonas.

Fig. 59 (right)
Satelite image of the green spine.

HOTSPOTS

1. Akadimia Platonos

This area just outside of Eleonas' boundaries contains a park with many different uses. Specifically it has been an important and holy place since ancient times. Like the name suggests Plato's academy was located here and even before this there were excavations of an ancient gymnasium. These archeological sites and ruins can be visited in the park.

The park itself is full of greenery and many different trees, it contains a playground, archeological sites and a church. It is often used for private gatherings or as a meeting point because of its extensive green space. At the same time it is a retreat from the dense urban fabric surrounding the area.

Because of its history and location the park continues to be active and functioning without becoming a deserted wasteland. However at the same time additional shading and maybe cooling spots would increase the popularity of the area. The park is easily reachable by foot from the surrounding neighborhoods but access by bike would have to be improved with bike lanes leading to and corssing the park.

Since the park has a lot of natural foliage and high growing trees while also offering wide open spaces it could be used for more public events or installations. Tourismwise the ancient archeological sites should be updated including e.g. digital features to attract more of the tourists visiting the ancient city.

Nevertheless the park is a vital green spot for the city and has been functioning for many years. Improvements can always be made but the strong active character of Akadimia Platonos makes it a perfect starting point for the green spine along Profitis Daniil through Eleonas.

Fig. 60
The green spine with the Akadimia Platonos highlighted in the north. Existing (grey) and future (green) uses are located

2. Community Hub

Just underneath the Akadimia, between Leoforos Athinon street and Iera Oos, is another fascinating area. Most of the plots there belong to the Hellenic Navy and are therefore pixelated in satellite imagery like Google maps etc. Like the academy this area also falls under the jurisdiction of the municipality of Athens and therefore has more or less detailed future plans.

The most controversial one of those future uses was the construction of the first official mosque in Athens since the Greek War of Independence. This project encountered a heavy wave of resistance from many Athenians and was a taboo subject. Finally it was decided to build the new mosque on land the Hellenic Navy granted. Furthermore it was exclusively built with national funds and is under the control of the Greek state. The new mosque of Athens finally opened it's doors in November of 2020.[71]

In the same neighborhood the municipality also has plans for a crematorium, another much discussed and delayed taboo topic for the very orthodox greeks. Untill today (Sep. 2022) no crematorium has been approved in the area. Along those lines a big warehouse is also to be located in this neighborhood showing how the municipality of Athens treats Eleonas as it's own backyard for unwanted or taboo topics that would cause too much disruption in the dense city.

Seeing as the mosque and a few Hellenic Naval buildings and parts of the Agricultural University are the only active parts of the area there is much potential for a mixed space of interaction and coopteration.

This could be achieved or stimulated through public and social meeting spots, shaded spaces, public sports facilities, a safer infrastructure and easier access by public transportation and bikes, since the area is located between two rather busy streets.

Fig. 61
The green spine with the community hub highlighted. Existing (grey) and future (green) uses are located

71 https://www.kathimerini.gr/society/891331/telos-aprilioy-etoimo-to-tzami-ston-votaniko/

3. Double Regeneration Project

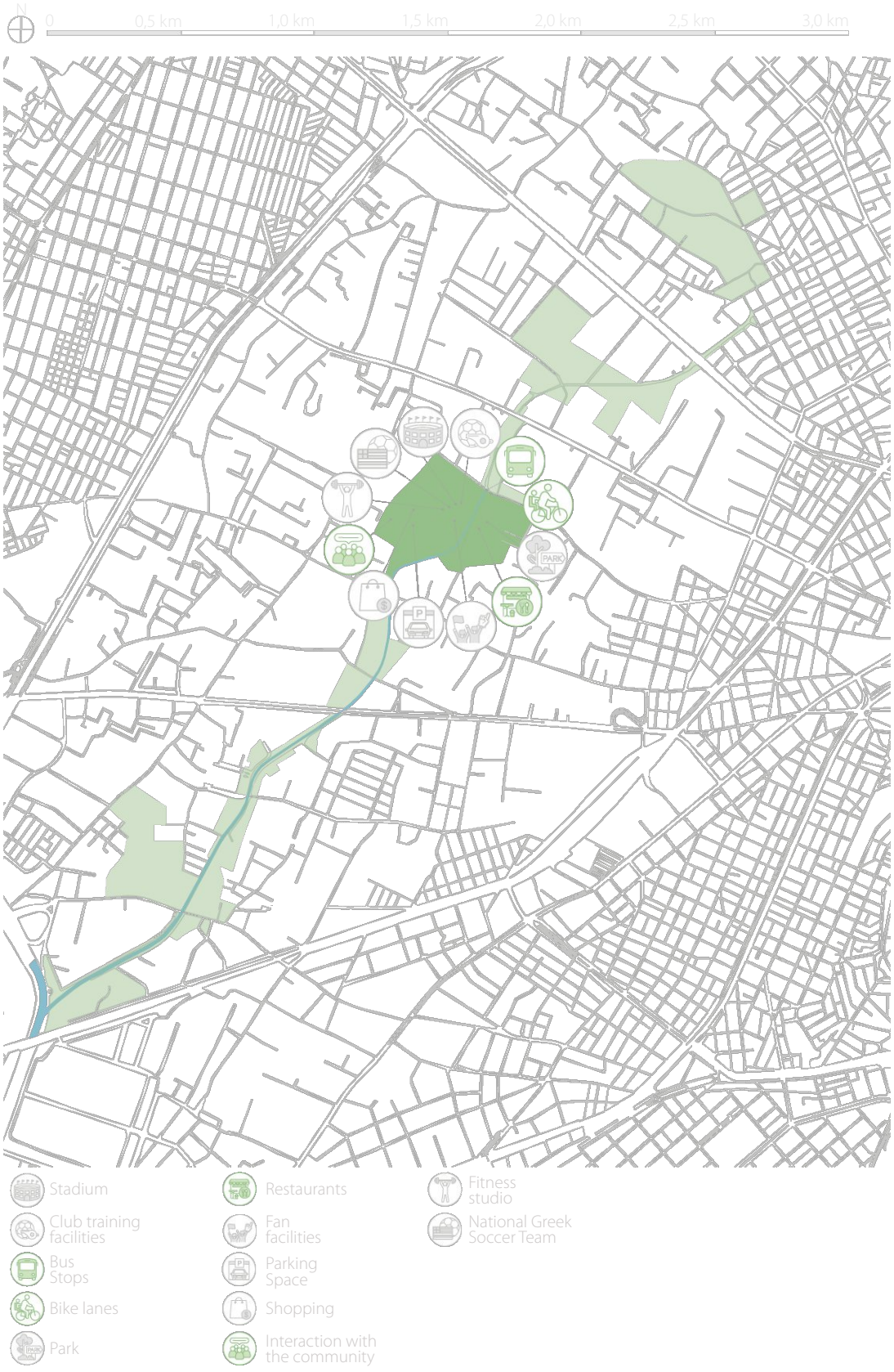
Similar in many ways to the two aforementioned hotspots this area is very unique in character. Like the area surrounding the cummunity hub this project has also been long discussed and been inactive for years. Contratry to the community hub the general public was very enthusiastic towards the project and there is a lot of excitement from the local football fans. It is similar to the Akademia Platonos in ways of being cared for by the municipalty since this was a very costly project for Athens with many expectations.

The existing refugee camp on the eastern part of the area will not be part of the Double Regeneration Project and what will happen to the inhabitants and the camp is unclear. According to construction plans the area will be part of a green space and park.

Not much is known about the connection to the surrounding neighborhoods but it is expected that the public transportation will need to be adapted to the stadium and the connected activites. With a big project and modern implant like this the seams between the new project and the existing surrounding neighborhood are critical areas which should be implemented in the planning process.

Along the river elements and the green park a bike lane would be beneficial to make the space not only attractive to sports fans but also the general public for any day of the week. With small scale installations for the public not directly inside the stadium or the adjacent facilities to give life to the area even at times when there is no soccer game or the mall is closed.

Fig. 62
The green spine showing the area of the Double Regeneration Project. Existing (grey) and suggested (green) uses are located



4. Sports Hub

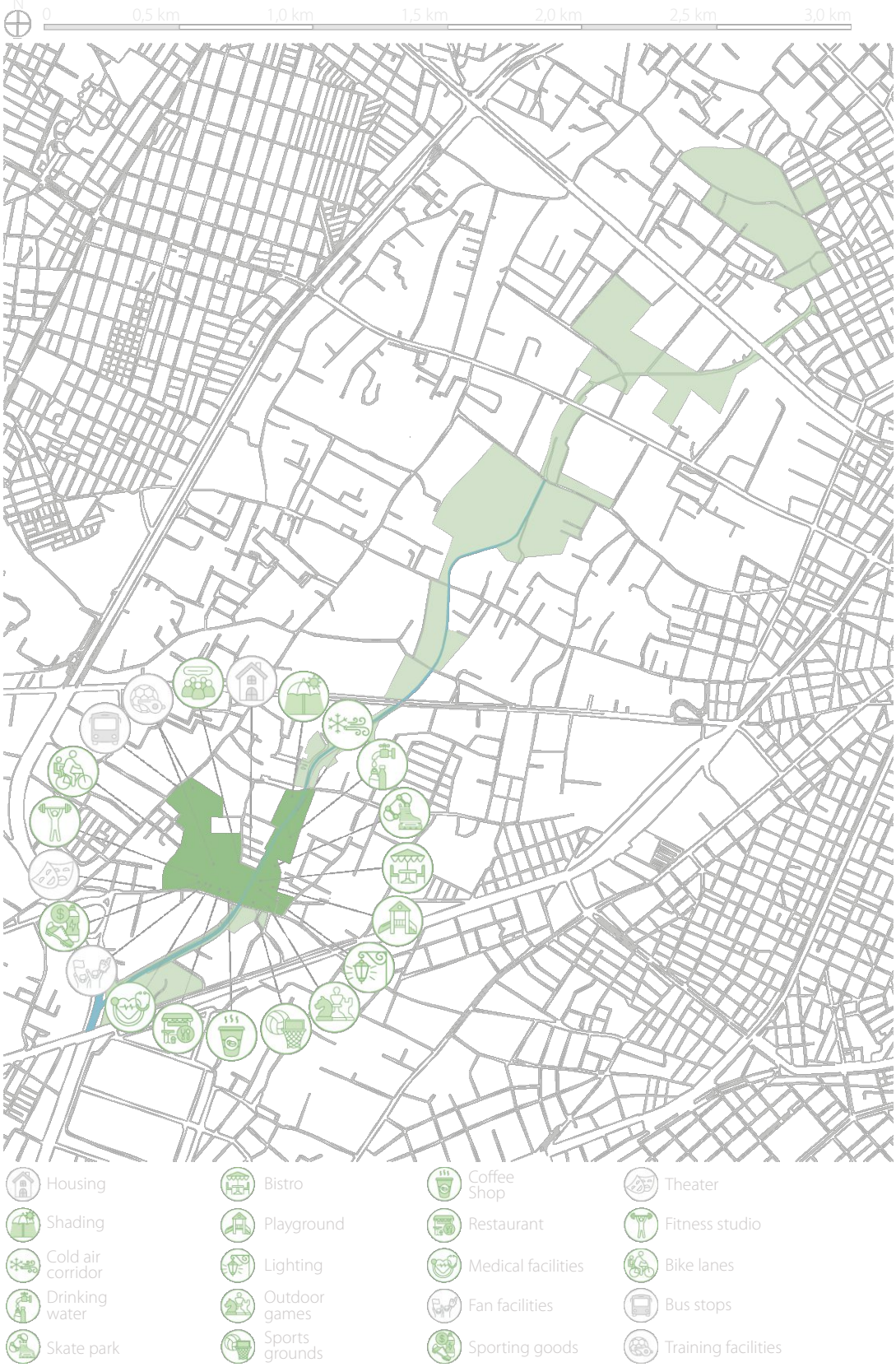
Most football fans in Attica are either fans of Panathinaikos Athens or Olympiakos Piraeus. Panathinaikos' new grand stadium will be the one in the Double Regeneration Project while Olypiakos has their stadium in Piraeus close to the harbor. However Olympiakos' main training facilities are located in Eleonas in the municipality of Nikaia - Agios Ioannis Rentis along Profitis Daniil. Land in Eleonas is cheap and the football club keeps expanding their training area. On the other side of the stream in the municipality of Moschato-Tavros is a former logistic warehouse and some wasteland.

Because of the training facilities the area is frequently visited and relatively well known. There are also small housing neighborhoods on both sides of the stream which is very rare for Eleonas. The area is rather close to the railway and connected to public transportation on the west through multiple bus stops.

These qualities offer possibilities to expand the green space and include the surrounding communities. Since the training area already attracts a steady flow of visitors it stands to reason to open the area to a wider category of visitors and age groups while also making it accessible and attractive at different hours of the day.

Unsealing the surfaces along the stream would reduce the flood risk while simultaneously creating green open space. This area then could be used for cafes and bistros but also public sport facilities and because of the closeness to residential areas even farming and a park.

Fig. 63
The green spine showing the area of the Olympiakos training facilities and the planned sports hub. Existing (grey) and suggested (green) uses are located.



5. Green Typologies

Research Space

Green space dedicated to various research topics in connection to the Agricultural University of Athens.

Recreational Green

Parks, playgrounds and sport facilities immersed in green space.

Private Green

New and existing housing areas with a focus on green spaces like small gardens, urban farming, vertical green, green roofs etc.

Nature Reserve

Open space with scattered high vegetation. For a connection and awareness of history mostly olive trees.

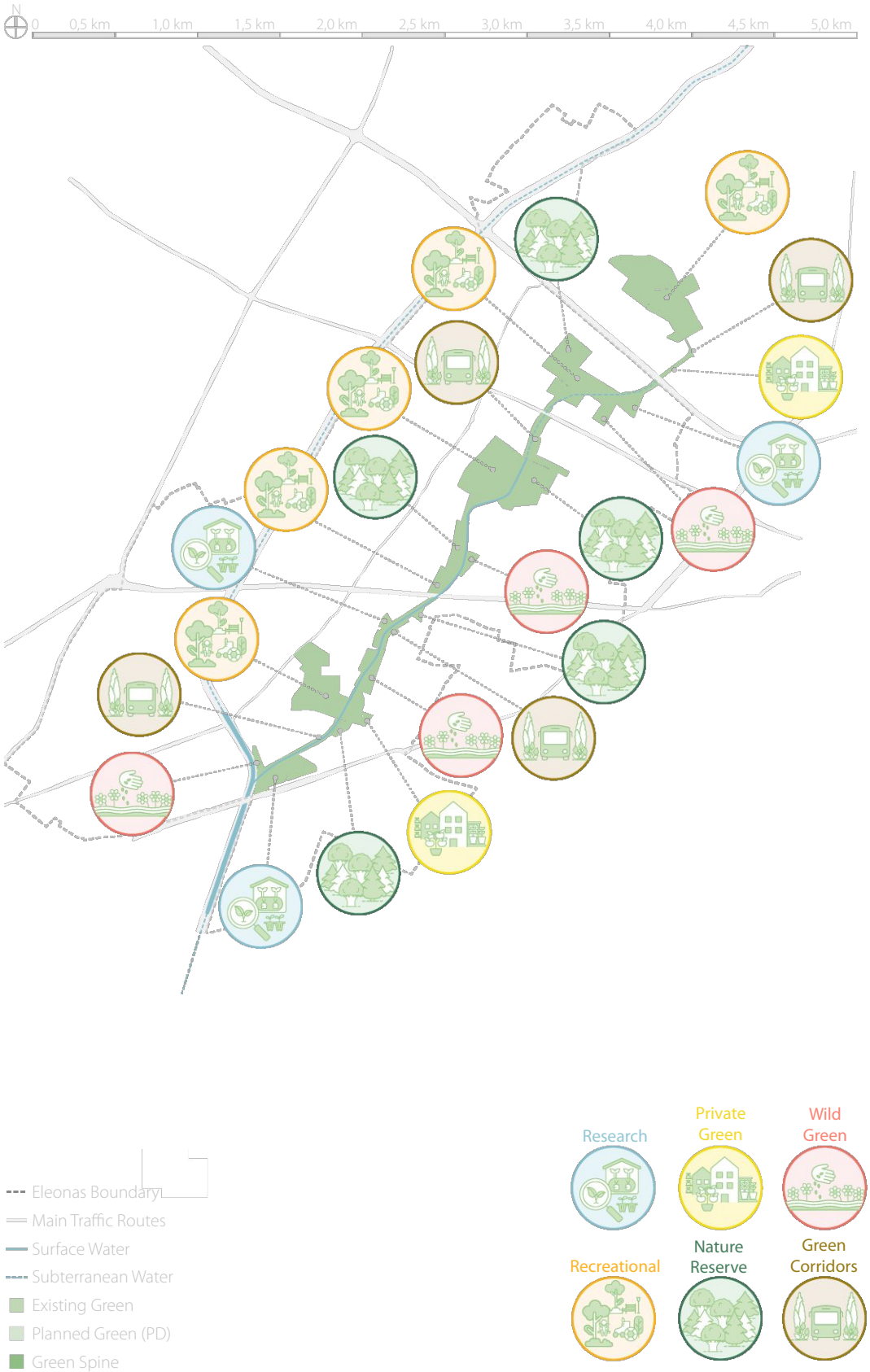
Wild Green

Green area with medium to low vegetation like shrubbery, bushes, flowers and gras.

Green Corridors

Necessary mobility infrastructure surrounded by green elements like swales, green buffers, bushes and trees.

Fig. 64
The green spine divided into different green typologies.



Current situation
Timeline step 0

Step 1: + x years

6. Timeline

In order to create a realistic and long term functioning green spine a timeline with respective construction stages is needed. The period of these sections is conditional on the situation in Greece concerning construction and investment times.

Starting point of the timeline is the actual situation of Eleonas at this moment (fall 2022). Existing green space is scattered throughout Eleonas and the surrounding areas. Akadimia Platonos in the north is already established and the Double Regeneration Project along Profitis Daniil is under construction.

The first step will be to realize the rest of the hotspots since they create important anchor points along the green spine and can function autonomously.

Fig. 65
Composition timeline of the green spine.

After the four hotspots have been established, are functioning and drawing people inside Eleonas the first missing connections between the green spots are made. The northern hotspots are linked together through green infrastructure and wild green while the sports hub will be connected to the end of the green spine in the south.

At last the two green segments are linked together by the remaining green areas including a reasearch zone, a forest and wild green.

By strengthening and using the existing green zones inside Eleonas and adding different uses and areas over time the goal is to grow the green spine naturally while creating a lasting and durable space, improving not only quality of life but also reviving Eleonas as a desireable space inside Greater Athens.

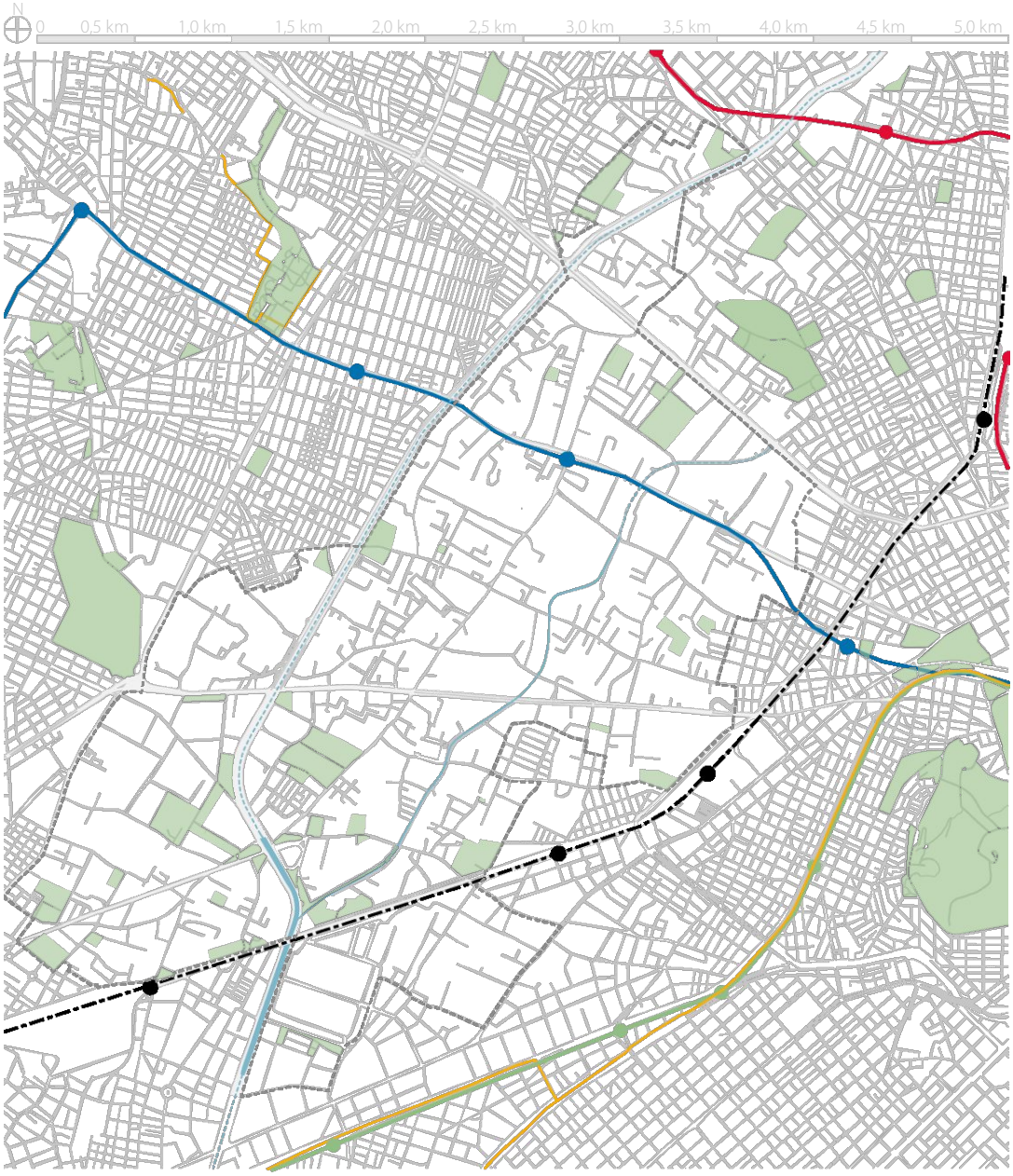
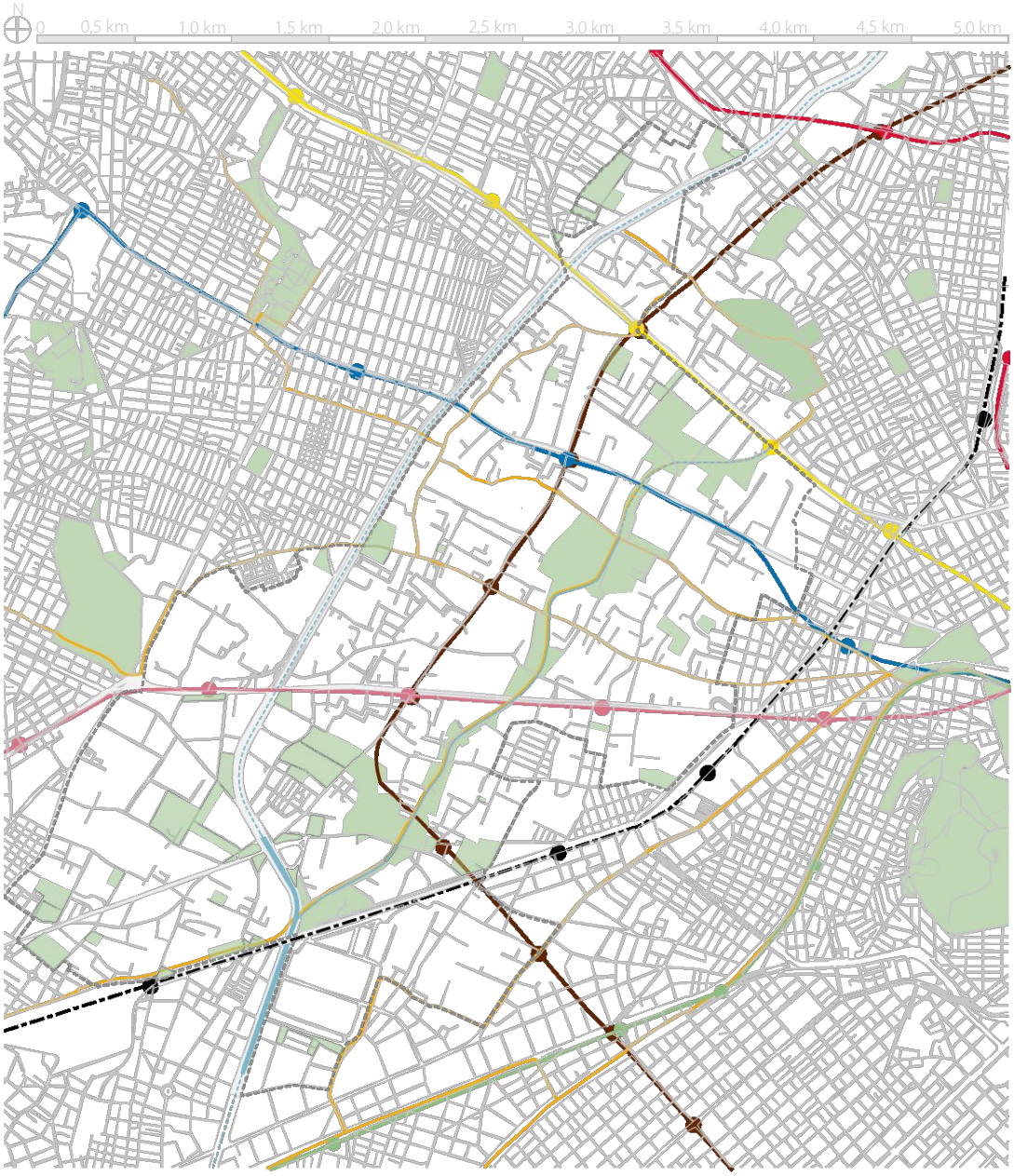


Fig. 66 (left)
Current state of green zones and public transportation in Eleonas.

Fig. 67 (right)
Eleonas with the implemented design proposal.



- Eleonas Boundary
- Streets
- Surface Water
- Subterranean Water
- Green Space
- Train Line
- L1
- L2
- L3
- L6
- L7
- L8
- Stops
- Bike Lanes

PILOT AREA

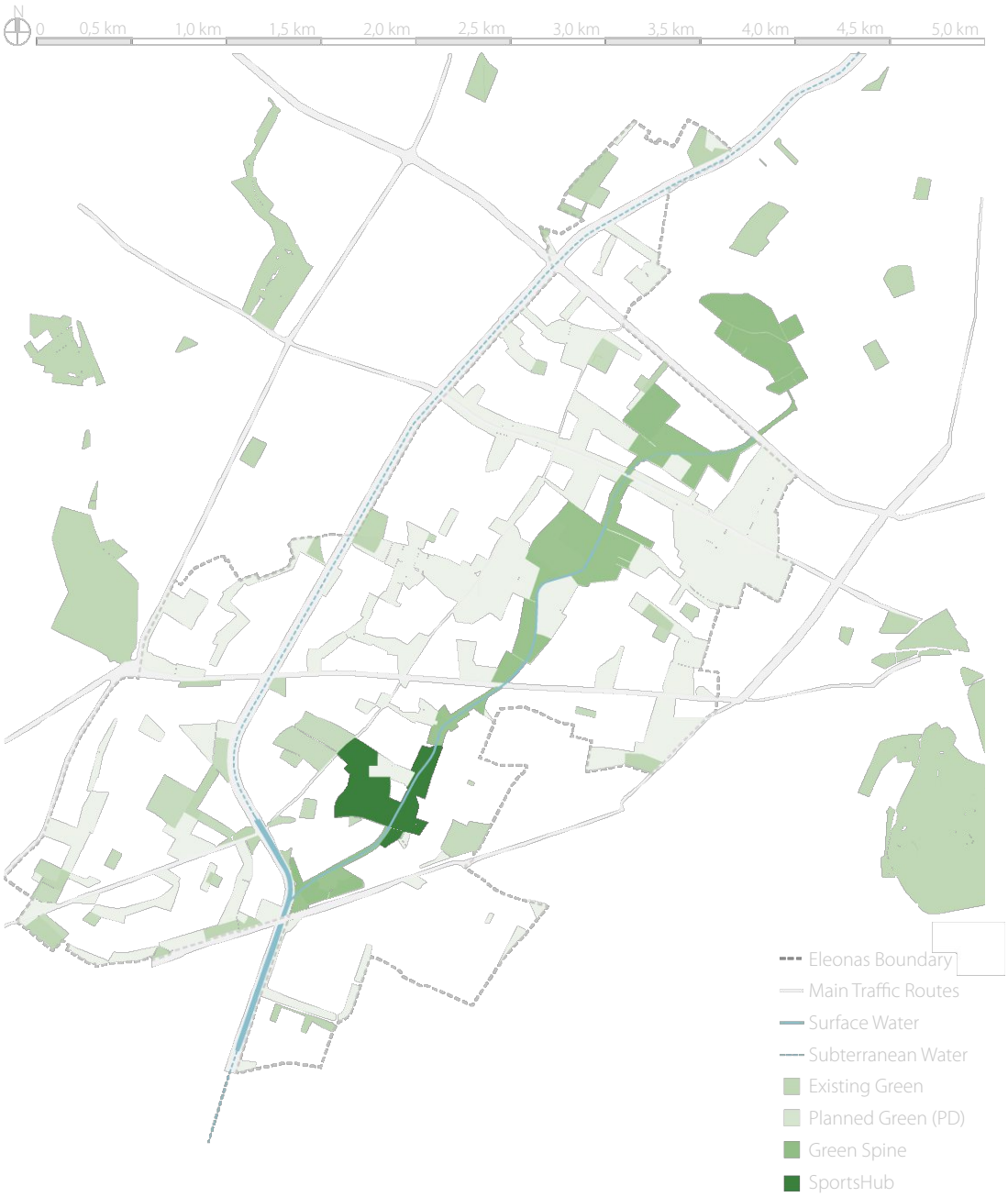


Fig. 68
Map of the green spine with the Sports Hub highlighted.

Area included in the green spine

Fig. 69
Close up of the Sports Hub and its surroundings.

1. Pilot Area

Considering that Akadimia Platonos and the Double Regeneration Project are both in the hands of the city and have a cared for and planned future this only left the community hub around the mosque or the sports hub around the football fields for a design propsosal.

For this design proposal the area next to the Olympiakos training grounds was chosen since the area of the community hub is very protected by the navy. . With the football area in the west the neighborhood receives a lot of activty and movement. Olympiakos is still expanding to the north and building more facilities and football fields. Therefore it makes sense to elevate the areas close by in order for them to benefit from each other.

In the north and east of the pilot area are small housing areas while the rest is mainly logistic companies. They are fenced and closed off from their surroundings with no access to the plot itself of through it. Traffic is affected by this and consists mainly of trucks and other haulage vehicles.

The bridge across the stream only allows one vehicle at a time to pass but that seems to be sufficient for traffic in this area. Because of the storage and logistic companies most of the surface is sealed and used to store containers or even just piles of raw materials or spare parts.

The stream is neglected and almost forgotten and plays no major role. Along the stream however is wild greenery and a couple of trees. Depending on the season the stream is almost empty or carries a lot of water.

The artificial green and modern appearance of the walled training grounds are in stark contrast to the other side of the river with a very rundown image. Most of the access roads are not even roads but just openings in fences.

Fig. 70
Map of the pilot area with existing conditions.

2. Proposal

Along the stream Profitis Daniil bike lanes in both directions are planned with additional and seperate space for pedestrians. The street between Olympiakos and the stream will be closed with a skate park and the area in the south will now offer public restrooms, a repair shop for bikes and skating equipment. There will also be a coffe shop truck (5) and a small shop selling sporting goods and nutritional supplements. Two bridges will connect both sides.

The east side of the stream will be lowered into two retention basins. During the rain season starting November flood water will be able to extend into these basins while during the rest of the year they will be able to be used as recreational zones closer to the water.

The existing buildings will be demolished and a new one will be built in the north part of the hub. It will include a cafe, a gym and some storage space for the private green areas. On the south side of the park there will be a volleyball, soccer and basketball court, public green boxes for small scale farming and bigger, private garden plots for the residents. The new green zone will mainly be for pedestrians and bikes with a new bus station in the south and only feature few parking spots for deliveries.

Shading will be granted through additional trees and installments in order to make the area enjoyable during all seasons and times of day. The park features a water installation, a playground, chess boards and seating options.

Not all parts of the green spine are destined to be parks or recreational areas. The green plot in the south was a former logistic company that will have some transplanted olive trees growing there bringing back parts of Eleonas' history.

Fig. 71
Design proposal featuring new public uses.

Fig. 72,73,74
Public transportation connecting the sports hub.

Section and collage of the area

3. Retention Basin

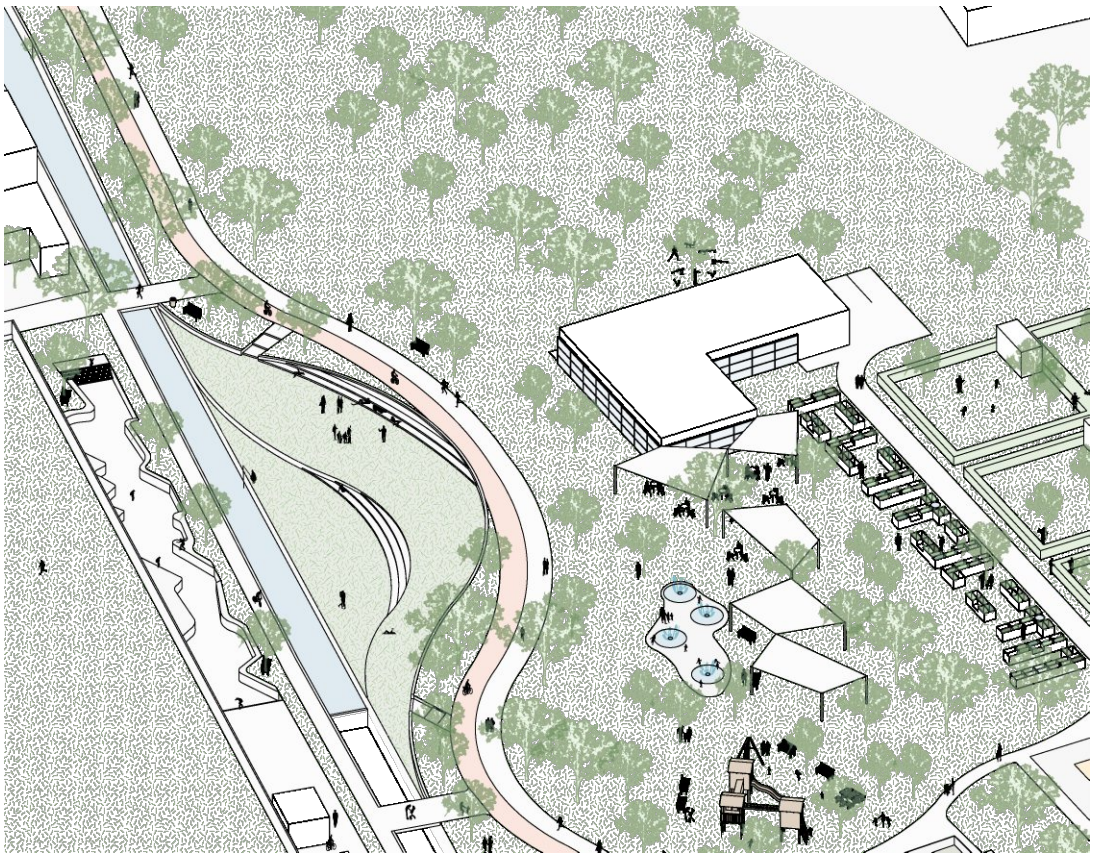
During the month of November Attica receives its most frequent rainfalls often leading to flooding in the area while during the rest of the year the stream of Profitis Daniil even almost dries out.

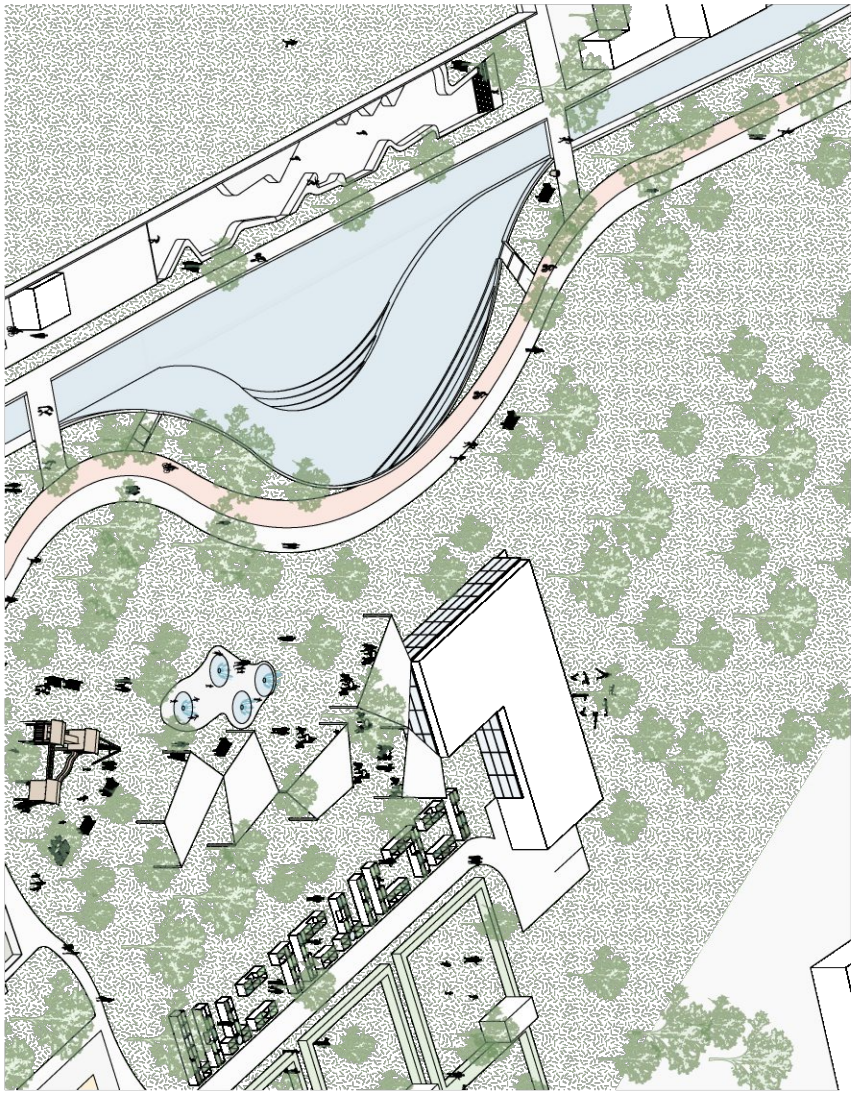
The new retention basins along the canal will be used as a recreational space offering proximity to damed up water. In case of heavy rainfall these areas will flood first and diminish the flooding of the surrounding areas.

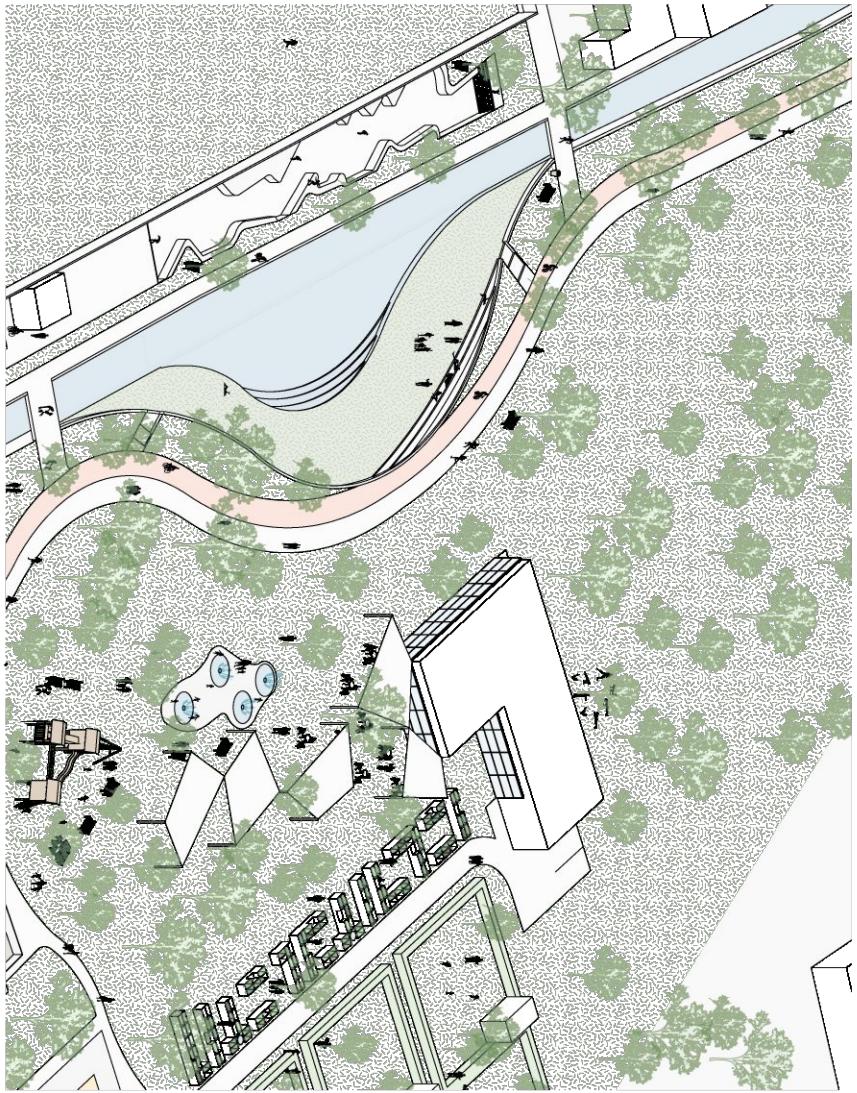
The seasonal flooding of green space also connects the area to its history of the olive grove where the trees would depend on the flooded, nutrious soil of Eleonas.

Fig. 75, 76, 77

Profitis Daniil and the retention basins showing different water levels and scenarios.







Conclusions

After thorough examination of the area and intense research a multitude of conclusions can be reached. Eleonas itself has an immense potential for different needed uses in the Greater Athens region.

Renaturation has to take place in order to properly make use of the green space and recreational facilites in the long term. If Eleonas continues down the path of a polluted urban void change will be extremely unlikely. Along side the green spaces comes the need for access and decontamination of the existing water sources. This in turn opens up an almost infinite amount of potential for the increase of green space and quality of life in the greek capital.

Existing infrastructure is in need of dire improvement and restructuring. In addition the development of a proper functioning and safe street network and public transportation has to be encouraged and planned. Without easy access to the inside of Eleonas an exchange with the city and surrounding urban patches will not be achieved.

The location of Eleonas close to the city center of Athens will at one point or another have an impact on the city. Should the government neglect to deal with the challenges Eleonas presents at the moment, the greek capital could suffer from the proximity. However since the desire to improve the area is palpable in Athens the future of Eleonas will be a thrilling observation.

Fig. 78
Isometric graphic showing the new sports hub in use.

APPENDIX

1. Literature

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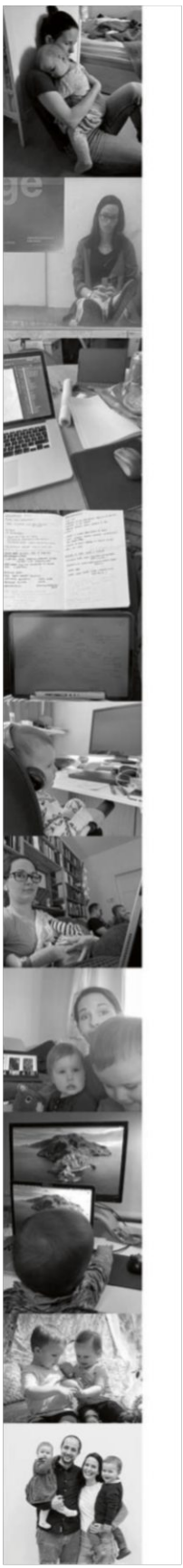

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