AN (IM)POSSIBLE SOLUTION:
A HEALTHCARE CENTRE FOR RARE DISEASES IN CYPRUS

TECHNISCHE UNIVERSITÄT WIEN
Vienna | Austria

DIPLOMARBEIT

An (im)possible solution
A Healthcare Centre for Rare Diseases in Cyprus

ausgeführt zum Zwecke der Erlangung des akademischen Grades
eines Diplom-Ingenieurs / Diplom-Ingenieurin
unter der Leitung

Ao.Univ.Prof. Dipl.-Ing. Dr.phil. Andrea RIEGER-JANDL

E 251-1

Baugeschichte und Bauforschung

eingereicht an der Technischen Universität Wien

Fakultät für Architektur und Raumplanung

von

BSc. Marios KASIOULI

01028735

Wien, am
31.10.2018

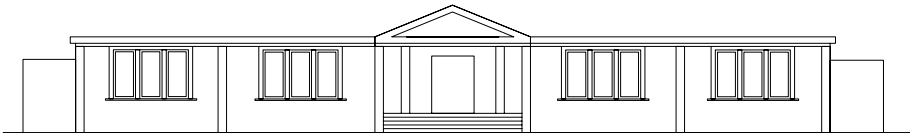
Abstract

This work attempts to explain the basics of the Cyprus problem which is still unsolved for 44 years and to introduce an alternative answer for its solution. For too many years Greek Cypriots and Turkish Cypriots have been trying hard to unite their island mainly on political level, although with no substantial results until today. The historical background of the problem, facts about Cyprus's people and their mentality, existing borders and previous bi-communal projects, as well as the island's nature have been important factors and catalysts for the development of this project, which is an example and a part of the solution's main concept. The architectural task deals with the context, sustainability, economy, ecology, cultural and social impact, authenticity and humanity. A fair solution could only be possible, when it comes from people for people.

Abstrakt

Diese Arbeit versucht, die Hintergründe des seit 44 Jahren ungelösten Zypernproblems zu erklären und alternative Lösungsansätze innerhalb eines Architekturkonzeptes aufzuzeigen. Zu viele Jahre lang haben sich griechische und türkische Zyprioten bemüht, ihre Insel vor allem auf politischer Ebene zu vereinen, wenn auch ohne wesentliche Ergebnisse bis heute. Der historische Hintergrund des Problems, Fakten über Zyperns Bevölkerung und ihre Mentalität, bestehende Grenzen und frühere bikommunale Projekte sowie die Natur der Insel sind wichtige Faktoren und Katalysatoren für die Entwicklung dieses Projekts. Die architektonische Aufgabe, der Entwurf eines medizinischen Zentrums für seltene Krankheiten, beschäftigt sich mit Kontext, Nachhaltigkeit, Ökonomie, Ökologie, kultureller und sozialer Wirkung, Authentizität und Menschlichkeit. Eine faire Lösung kann nur möglich sein, wenn sie gemeinsam mit den Menschen vor Ort entwickelt wird.

AN (IM)POSSIBLE SOLUTION
A HEALTHCARE CENTRE FOR RARE DISEASES IN CYPRUS



Content:


ATTENTION
PROHIBITED AREA
DON'T APPROACH
DON'T TAKE PHOTOGRAPHS
ΠΡΟΣΟΧΗ
ΑΠΑΓΟΡΕΥΜΕΝΗ ΠΕΡΙΟΧΗ
ΑΠΑΓΟΡΕΥΕΤΑΙ Η ΠΡΟΣΕΓΓΙΣΗ
ΚΑΙ Η ΛΗΨΗ ΦΩΤΟΓΡΑΦΙΩΝ
NO MAN'S
LAND
STOP

Fig. 0.01

Motivation

As a Greek Cypriot, I grew up in the city of Paphos where I spent my childhood and teenage years. After finishing school at the age of 18 and before I began my studies at the university, I had to serve my country by joining the army for 24 months, away from home most of the time and placed close to the borders, facing the Turkish military corps every day on the opposite side. Having no contact with Turkish Cypriots since then, I had always believed that half of my country was divided because of the Turkish invasion, which took place in 1974. I had always believed that the northern part of the island was an occupied, militarised area and no Greek Cypriots were allowed to visit. However, in 2003, the first checkpoints were opened and a lot of Greek Cypriots and Turkish Cypriots were allowed to cross the borders by showing their passports, and that's where many refugees were able to visit their former houses and villages after 29 years. At that point, I personally had no interest in visiting the "other side" as I thought I didn't have any reason to do so, as my family was lucky enough not to lose any of their homes after the Turkish invasion. Years later, while in Vienna studying at the university, I started to wonder what really happened and what is currently happening in Cyprus. At school, I was always interested in history of Cyprus, but our school books only focused on facts and wars that had happened long before the Turkish invasion in 1974, such as the ancient history of the Cyprus until its independence in 1960. Therefore, everything we knew about the Turkish invasion in Cyprus was through people's stories, national celebrations and narratives. So while in Vienna, I began to wonder and then started to read, watch and talk about our history and the Cyprus problem. My participation in a design studio in Nicosia, as the last divided capital of Europe, gave my the chance to visit the "other" side for the first time. That was the starting point of this project. The first chapter presents some general information about Cyprus, while the following chapters 2, 3 and 4 focus on the island's history, people and borders. My personal outcome and comments will be presented at the end of each chapter, which are relevant and important for the further development of this project. The impressions of my first visit to the "other" side is to be found in chapter 5. The main concepts and ideas of the project are presented in the chapters 6 and 7, while the location, the synthesis and its plans are shown in the chapters 8, 9 and 10. The last chapter 11 is the conclusion of this work. The aim of the project is to approach a different kind of solution to the Cyprus problem, which is still unsolved for 44 years, and furthermore to introduce an alternative and fair answer for Cyprus and its people.

“The architects don’t have any big influence. They don’t (..) But, if they do their work well, it helps (..)“

Peter Zumthor [1]

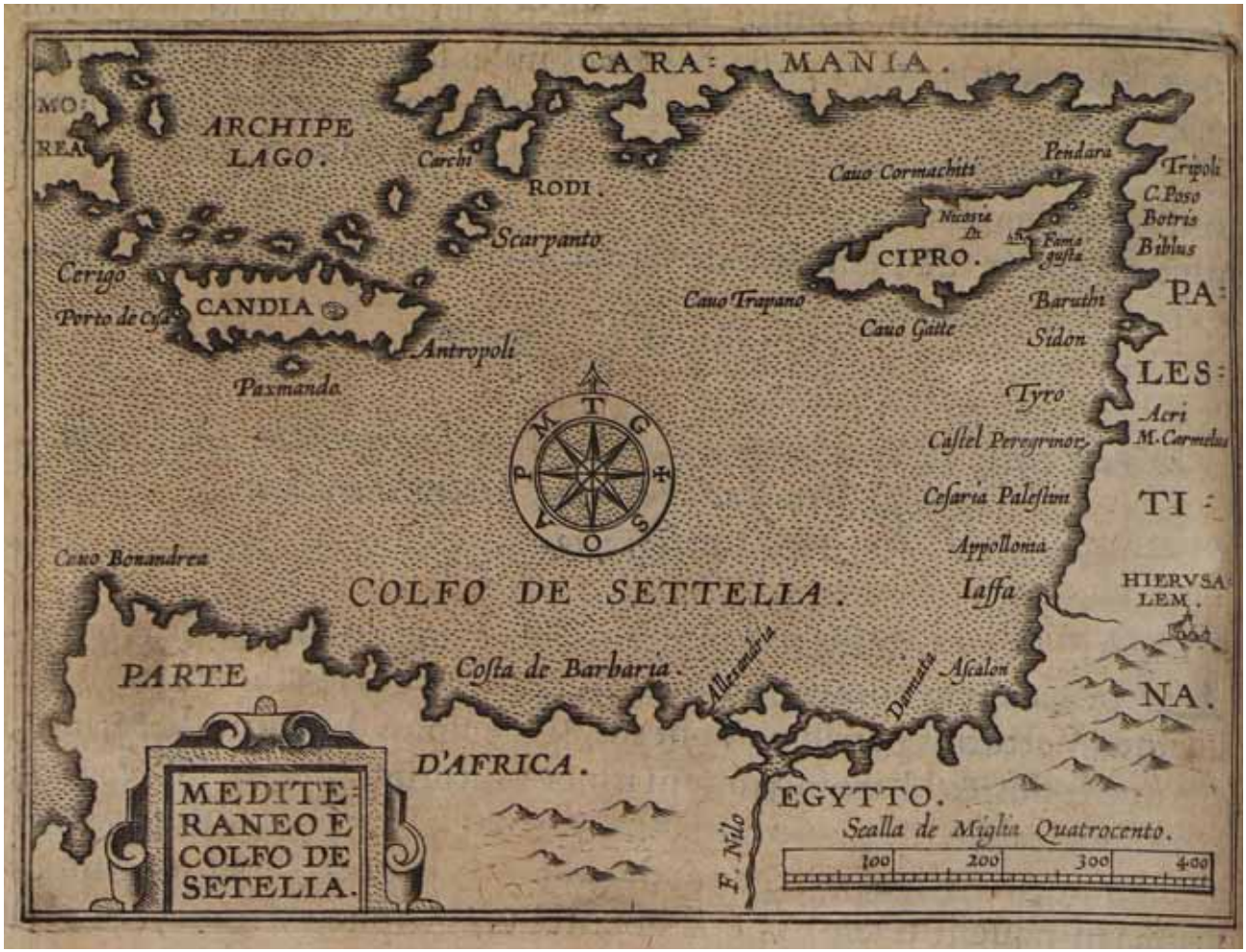

CARAMANIA.
ARCHIPE
LAGO.
Carchi
RODI.
Scarpanto
Cerigo
Porto de Cya
CANDIA
Antropoli
Paxmando
Cauo Cormachiti
Pendara
Tripoli
C. Passo
Botris
Biblus
Nicosia
Famagusta
CIPRO.
Cauo Trapano
Cauo Gatte
Baruthi
Sidon
Tyro
Acri
M. Carmelus
Castel Peregrinor.
Cesaria Paleſtina
Appollonia
Iaffa
HIERVSALEM.
Cauo Bonandrea
COLFO DE SETTELIA.
PARTE
Costa de Barbaria.
Alexandria
Damata
Ascalon
D'AFRICA.
MEDITERANEO E COLFO DE SETELIA.
EGYTTO.
F. Nilo
Scalla de Miglia Quatrocento.
100
200
300
400

Fig. 1.01

1. Cyprus and its facts

About Cyprus

Location:

From its first appearance during the Neolithic period in the seventh millennium B.C., Cyprus is laying in the north east corner of the Mediterranean basin and it is the third largest island in the Mediterranean sea (9,251 sq. km) with 648 km coastline. It is located at the crossroads of three continents, between Europe, Asia and Africa.[1]

Terrain: Two mountain ranges, Troodos mountains and Keryneia mountains, and between them the central plain, Mesaoria, dominate Cyprus topographically. The highest elevation point in Cyprus is located in the centre of Troodos range, mount Olympos at 1,952 meters. Troodos mountains cover the southern and western portions of the island, while the narrow band of Keryneia mountains slice across the northern edge of Cyprus.[2]

Climate: Cyprus enjoys an intense Mediterranean climate, with long dry summers and mild winters, which are separated by short autumn and spring seasons. Summer is a season of high temperatures with cloudless skies. Winters are mild with rain and snow on Troodos Mountains. In winter there is an average of six hours of bright sunshine per day, whilst over the "summer" months, there is an average of 11.5 hours of bright sunshine per day.[3]

Districts: Nicosia, Limassol, Larnaca, Famagusta, Paphos and Kyrenia. Nicosia is currently the last divided capital in Europe.

The Cyprus Problem

The Republic of Cyprus emerged in 1960 as a Greek Cypriot and Turkish Cypriot bi-communal independent state. After the inter-communal dispute in 1963, the crisis of 1967 and since the 1974 Turkish invasion in the north, the island is de facto administratively and territorially divided into two zones; the Republic of Cyprus in the south, which is controlled by the Greek Cypriots without the participation of the Turkish Cypriots, and the Turkish Cypriots in the north, which unilaterally declared independence in 1983 in the northern part of the island, as a sovereign entity that remains isolated and still lacks international recognition with the exception of Turkey. For nearly 50 years many tries, mainly on political level between both communities and their representatives, have taken place and continue to do so with the hope that some day the island will be unified again and its people will live in peace.[4]

One island, seven flags

CY, TRNC, GR, TR, GB, UN, EU*

There are currently four different territories on the island: The area controlled by the Republic of Cyprus (Greek Cypriot area), the self-declared Turkish Cypriot-administered ("TRNC") area (Turkish military), the British Sovereign Base area and the UN buffer zone. The Republic of Cyprus adopted the Cypriot flag as soon as it emerged, which is now often flying alongside the Greek flag.

Fig. 1.02

After the Turkish invasion in 1974, Turkish Cypriots rejected this flag and raised the Turkish one instead. However, in 1983, they created the TRNC flag which usually flies along with the Turkish flag.[5] Britain has been controlling two sovereign military bases; a territory which covers a 92 square-miles area inside the territory of the Republic of Cyprus.[6] The buffer zone between both communities is monitored and controlled by the United Nations Peacekeeping Force in Cyprus (UNFICYP).[7] Since 2004 Cyprus has joined the European Union, as a de facto divided country.[8]

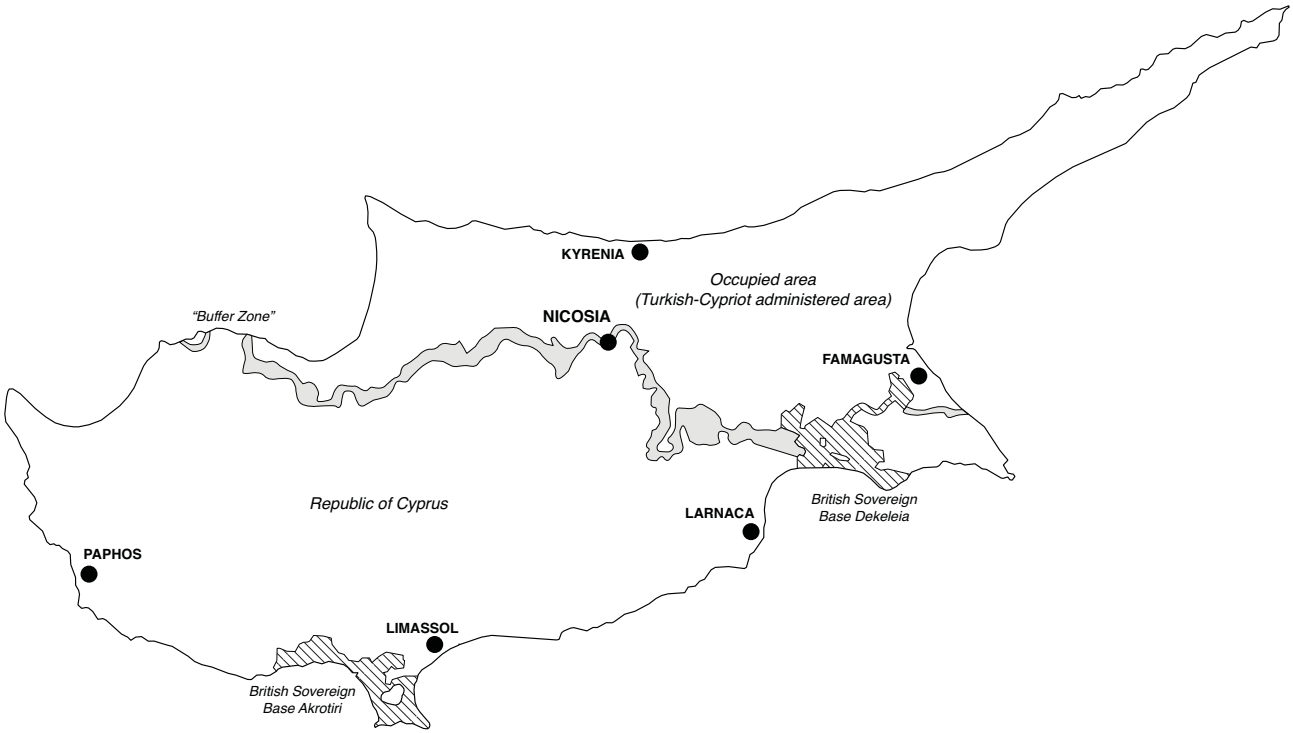
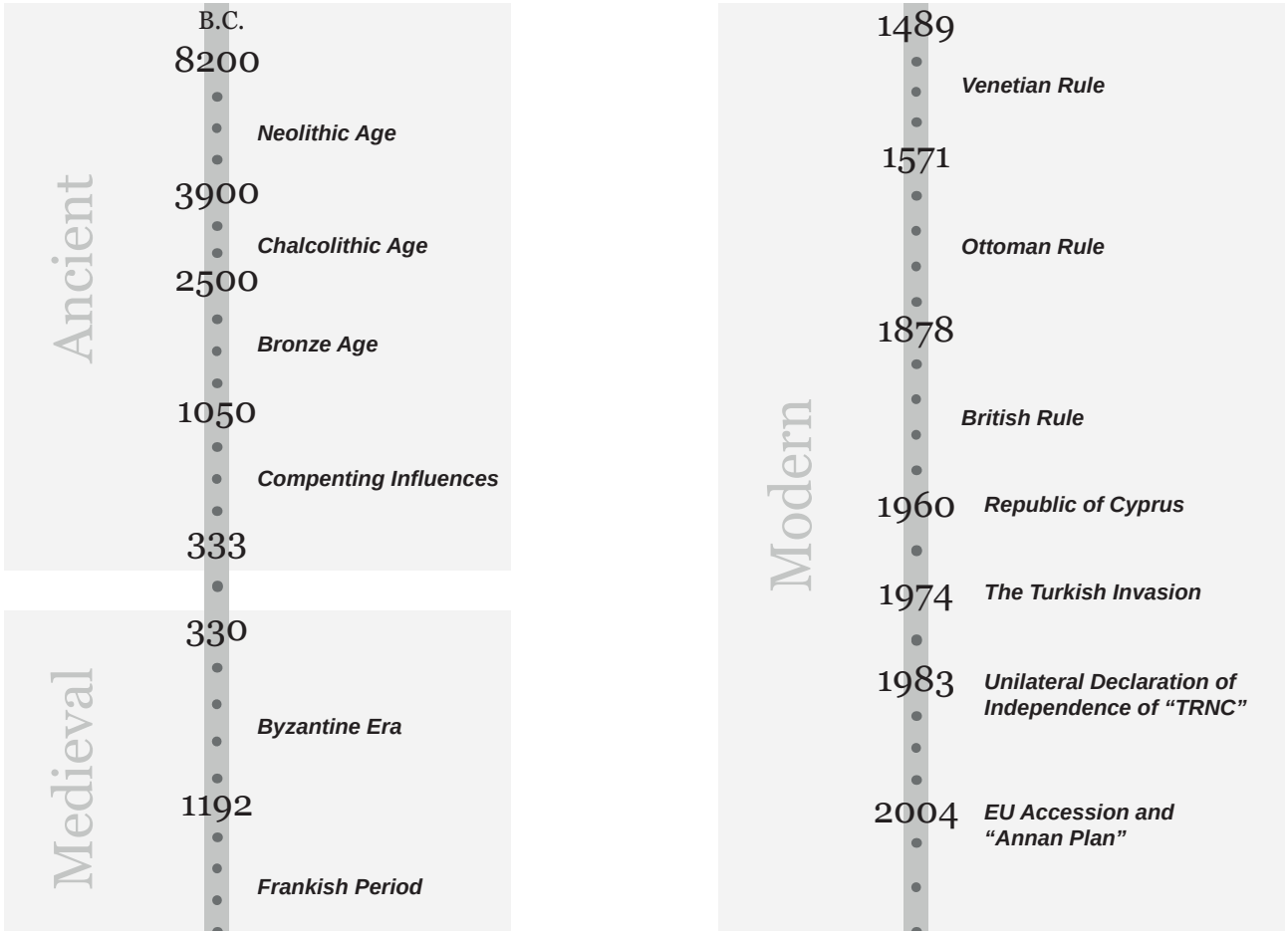


Fig. 1.03



Cyprus: A historical overview[1]

Fig. 2.01

2. Cyprus and its history

From Ottoman to British empire..

"The island presents a lot of advantages (..) it's has a mixed populated synthesis (..)"
British Colonel Robert Home, 1877[2]

The geographical position of Cyprus in addition to the fact that it was an area of mixed population synthesis made Cyprus the best strategical place to have a base or even better a colony. This was the reason I chose to have a closer look at the events that happened after the Ottoman empire and during the British occupation; to understand the causes, reasons and strategies, which led to the current status on the island. *"To possess Cyprus its not a move that concerns the Middle east, but India."* The words of Benjamin Disraeli on 18.07.1878 prove the importance of Cyprus for Britain.[3] In 1878 Cyprus was leased to the British empire in order to support and protect the Ottoman empire against Russia. At the beginning, Cypriots welcomed the British rule with joy and with the hope of "Enosis" (Unification with Greece). In 1914 Cyprus was formally annexed to Britain and the following year the island was offered to Greece on the condition that Greece will give its full and immediate support to Serbia. Zaimis, the prime minister of Greece, had rejected this offer. Two years after the Treaty of Lausanne in 1925, Cyprus was declared as a British crown colony.[4] The following years up until 1955, demonstrations have taken place by Greek Cypriots for "Enosis", starting in 1931 (Oktovriana) with the first riots against Britain. In 1943 the first Turkish Cypriot organisation was formed under the name of Cypriot Turkish Minority association (KATAK) which was superseded by the 1945's Cyprus Turkish national party. The main purposes of these organisations was to avoid "Enosis", which was only possible by supporting the British rule on the island. However, both communities formed their fighting organisations. In 1955 Greek Cypriots formed EOKA (Εθνική Οργάνωση Κυπρίων Αγωνιστών) - National Organisation of Cypriot Fighters - with the demand of freedom and unification with Greece. A year later, Turkish Cypriots formed Volkan, or later TMT (Turk Mukavemet Teshkilati) - Turkish Resistance Organisation- which was calling for "Taksim", the partition of the island. It is worth saying, that the objective of EOKA was clearly the liberation of Cyprus from the British yoke, without affecting the Turkish Cypriots. Grivas, the leader of EOKA, was strongly opposed to any action which would affect the Turkish Cypriots. The first actions of EOKA caused no reactions from Turks or Turkish Cypriots.[5] It is also a fact that unlike EOKA, TMT consisted mainly Turks from Turkey and Turkish Cypriots auxiliary policemen.[6] The strategy *"divide and conquer"* allowed Britain to rule the island, which caused tensions between the Greek and Turkish Cypriot communities.[7] For example, during 1955-1959 the Cypriot police consisted of 80% Turkish Cypriots, 15% British and 5% Greek Cypriots.[8] During that time, the population of Cyprus was 577,615 of which the 77.7% were Greek Cypriots, 18% Turkish Cypriots and 4,2% others.[9] The violence between both communities started when Britain transferred its Middle-Eastern headquarters from

1878 **From Ottoman to British Empire**
Cyprus was leased to the British Empire. As exchange that Britain would protect the Ottoman Empire against Russia

1914 **Cyprus was formally annexed to Britain**

1915 **Britain offers Cyprus to Greece**
Greece should give full and immediate support to Serbia. The offer rejected by the Greek prime minister Zaimis.

1925 **Declared as British crown Colony**

1931 **First Riot against Britain**
Greek Cypriot demonstration for "Enosis" (Union with Greece)

1940 **World War II**
37.000 Cypriots fought in the British Army "For Greece and Freedom"

1943 **The first Turkish Cypriot organisation**
Cyprus Turkish Minority Association (KATAK)

1954 **Headquarters to Cyprus**
Britain moved their headquarters from Egypt to Cyprus (Degrease the chance of "enosis")

Until 1955 Violence between Greek and Turkish Cypriots was minimum

1955 April: Formation of EOKA Organisation (National Organisation of Cypriot Fighters) Aim: "enosis", to become part of Greece.

August: London Conference between Greece and Turkey after tension between the two communities (No cypriot delegate was invided)

Cyprus Turkish national party was changed to Cyprus-is-Turkish party

1956 **"Mason-Dixon Line"**
May: "Mason-Dixon Line"- Shift from anti-colonial to intercommunal discord British military installed barbed wire fencing and five checkpoints to "prevent clashes between the Greek turkish factions". Barricades through Ermou str. (commercial artery)

February: Formation of VOLKAN (TMT - Turkish Resistance Organisation) TMT was calling for Taksim, or partition of the island (in the north side)

1958 **Violence worsened**
June: Strick separation and curfews along the Mason-Dixon Line, after high tensions around the capital
September: Prime minister Macmillan suggested administrative division by autonomous municipal councils. Greece and Greek Cypriots rejected the plan

1959 **London & Zurich Agreements**
Britain will retained two military bases in Cyprus. The Republic will be guarded by the Guarantor Powers Greece, Turkey and Great Britain.

1960 **Republic of Cyprus**
Cyprus as member of the UN under the leadership of Makarios III. Independence day: 16 August

1963 **"Green Line"**
November: Makarios proposed constitutional amendments and renewed violence between paramilitary personal from both sides

21. December: Killings in the red light district in Nicosia

29. December: Creation of the Green Line: The line constituted the double-layered partition line between the two communities with a sub-spatial no man's land inbetween

1964 **Creation of UN peacekeeping force**
British and Americans recommended the creation of NATO peacekeeping force in Cyprus. Makarios rejected the proposal. Proposal at the beginning with the "double-enosis" plan. After that the proposal was the permanent division of the island with northern and southern sectors by Greece and Turkey

1967 **Military coup in Greece**

1968 **Bi-communal meetings**
G. Clerides and R. Denktas leaded the meetings. A possible agreement was fighted by EOKA B and destroyed after the coup aginst Makarios.

"The turkish intervention continues to be viewed by advocates as a defensive manoeuvre on behalf of Turkish Cypriots, while detractors consider it an illegal act of foreign aggression against a sovereign, nonaligned nation"

1974 **Turkish Invasion**
15. July: Military junta in Athens engineered a coup against Makarios

20. July: Military intervention (Operation Attila), turkish forces occupied Kyrenia and the northern half of Nicosia.

14. August: Within weeks they controlled 37% of the island

16. August: Turkish forces established the so called "Attila Line", running from Morphou Bay to Famagusta.

1977 **High Level Agreements**
The bi-zonal, bi-communal Federation as framework for any solution

1983 **Turkish Republic of Northern Cyprus (TRNC)**
Self-declared State, recognised only by Turkey

1989 **Outline Proposals for the Establishment of a Federal Republic and the Solution of the Cyprus Problem**

2001 **Leaders of both communities agree to resume face-to-face talks on the Cyprus problem**

2003 **Opening of the first crossing points**
Ledra Palace, Strovilia, Pergamos and Agios Dometios. After 29 years a lot of cypriot refugees visited their former houses and villages.

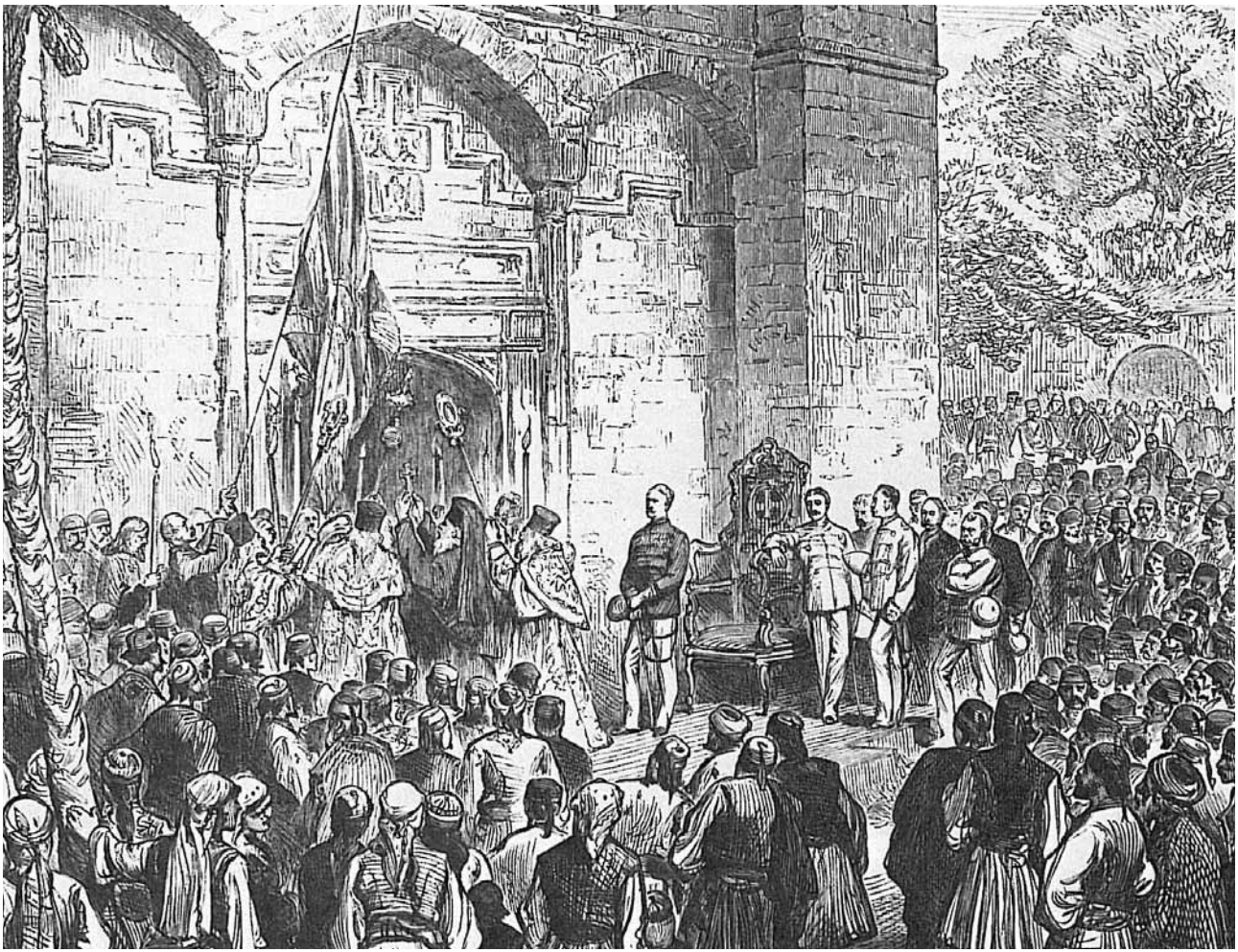
2004 **Chance of Re-Unify, Cyprus as EU-Member**
Referendum: 64% of Turkish Cypriots endorsed Annan's reunification plan and more than 75% of Greek Cypriot voters rejected it

Republic of Cyprus member of the European Union

2018 ***UN: "The leaders have decided to immediately re-engage in their negotiations and have instructed their negotiators to continue meeting in order to achieve further progress on all outstanding issues interdependently. The leaders will also meet as required."***

Fig. 2.02

Egypt to Cyprus. The conversion from an anti-colonial fight to an inter-communal conflict was cosy for Britain, which started to set fences and checkpoints, in order to prevent clashes between the Greek and Turkish factions. External forces, such as Britain, Greece and Turkey, attended a conference in London in 1955, in order to de-escalate the conflict, without the participation of a Cypriot leader. As a result, the violence was worsened.[10] In 1956 the "Maison-Dixon" line was the first division line through the main commercial artery of the city, Ermou street, which was the archetype of the today's green line of Nicosia.[11] In 1958 there was a strict separation and curfews along the line, which was caused by the high levels of violence between both communities around the capital.[12] The Zurich-London Agreements (1959) led to the formation of the Republic of Cyprus, which was guarded by the Guarantor Powers of United Kingdom, Greece and Turkey. Britain retained two military bases.[13] The complexities of the Constitution of 1960 show clearly that its basic philosophy was the separation.[14] The violence renewed between paramilitary personal of both sides because of Makarios's proposal of constitutional amendments in 1963. The Green Line Agreement was signed in Nicosia on the 30th of December 1963, after the events happened during the "Bloody Christmas" in the capital. The line was meant to be temporary, although was stayed permanent and still a partition element.[15] A list of events happened all over the island between the two communities led to the creation of the UNFICYP on 4th of March in 1964. Under the terms of the 1960 Treaty of Alliance, Greece was given the right to maintain an army contingent of 950 officers and men on the island, and Turkey a contingent of 650.[16] In the same year a solution to the Cypriot problem was suggested by Dean Acheson (51st United States Secretary of State), known as the Acheson Plan. The first version anticipated the "Double-Enosis" plan, envisaged the union of Cyprus with Greece while up to three cantons would be established for the Turkish Cypriots, over which they would have full administrative control. Turkey would be able to establish a large sovereign military base in Karpasia in perpetuity. Archbishop Makarios and the Prime minister of Greece rejected the plan, while Turkey accepted it. In the second version of the plan, Turkey would instead have a 50-year lease on a smaller base and which would not be sovereign the and in return the union with Greece. This proposal was rejected by Turkey and Makarios.[17] In 1967 a military took place in Athens. The period followed 1968-1974, both sides started bi-communal meetings and talks in a way that seemed an opportunity for a fare and peaceful solution, although it was fought by EOKA B and completely destroyed by the coup d'état against Makarios in 1974.[18] Few days later (20th of July 1974)



Cypriots welcomed the British rule with joy. *Fig. 2.03*

the first part of the Turkish invasion took place on the island. The Greek Cypriot policy: “Turkey found the pretext to impose its partitioning plans against Cyprus following the coup of July 15, 1974, perpetrated against the elected government of President Makarios by the Athens military junta. On July 20, claiming to act under Article 4 of the Treaty of Guarantee, the Turkish armed forces staged a full scale invasion against Cyprus. Though the invasion was in violation of all rules of international legality, including the UN Charter, Turkey proceeded to occupy the northern part of the island and empty it from its Greek inhabitants.”[19] The Turkish official policy: “Turkey intervened in order to protect its minority from Greek harassment and to prevent union of the island with Greece, after the Greek junta’s coup against Archbishop Makarios, the first president of Cyprus, on 15 July 1974. Turkey had the legal right to use force and, after all, its military intervention helped the restoration of democracy in Greece.”[20] Within weeks the Turkish military controlled and still controls 34,85% of the island. Over 162,000 Greek Cypriots and 48,000 Turkish Cypriots are refugees in their own homeland. Nearly 1,400 persons are still missing. Over 43,000 Turkish troops and nearly 160,000 illegal settlers from Anatolia are currently in

Fig. 2.04

Fig. 2.05

Greek and Turkish prime ministers at the negotiations in Zürich. Fig. 2.06

Fences through the Hermou str. in Nicosia in 1956. *Fig. 2.07*

Fig. 2.08

UNIFIC establishment on the island, 1964 Fig. 2.09

The incident of “Bloody Christmas” in Nicosia, 1963 Fig. 2.10

The presidential palace in Nicosia after the coup d'etat in 1974. *Fig. 2.11*

Turkish military personnel in Cyprus during the invasion. Fig. 2.12

Over 200,000 Greek- and Turkish- Cypriots have been refugees in their own homeland. *Fig. 2.13*

Fig. 2.14

the occupied part of Cyprus.[21] The so called “Attila Line” runs from Morphou Bay to Famagusta, with a total length of 180 kilometres.[22] The High Level Agreements of 1977 and 1979, signed by both communities, support the bi-zonal, bi-communal Federation (BBF), as a framework for any solution.[23] A Turkish Cypriot proclamation of the “Turkish Republic of Northern Cyprus” (TRNC) in 1983, considered legally invalid by the Security Council and no other country than Turkey has recognised it. In 1989, UNFICYP managed to reach an agreement with both communities, so that violenced incidences inside the buffer zone were reduced. Both leaders started in 2001 directed face-to-face talks on the Cypriot problem, which in 2003 led to the first crossing points: Ledra Palace, Strovilia, Pergamos and Agios Dometios.[24] After 29 years, Cypriots had the chance to visit their former houses and villages for the first time, since the Turkish invasion.[25] An island-wide referendum, called Annan Plan was held in Cyprus in 2004. 64% of Turkish Cypriots voted in favor of the plan, while 75% of Greek Cypriots voters rejected it. In the same year the Republic of Cyprus joined the European Union as a de facto divided island. Both Greek Cypriots and Turkish Cypriots, are EU citizens and the whole of Cyprus is considered

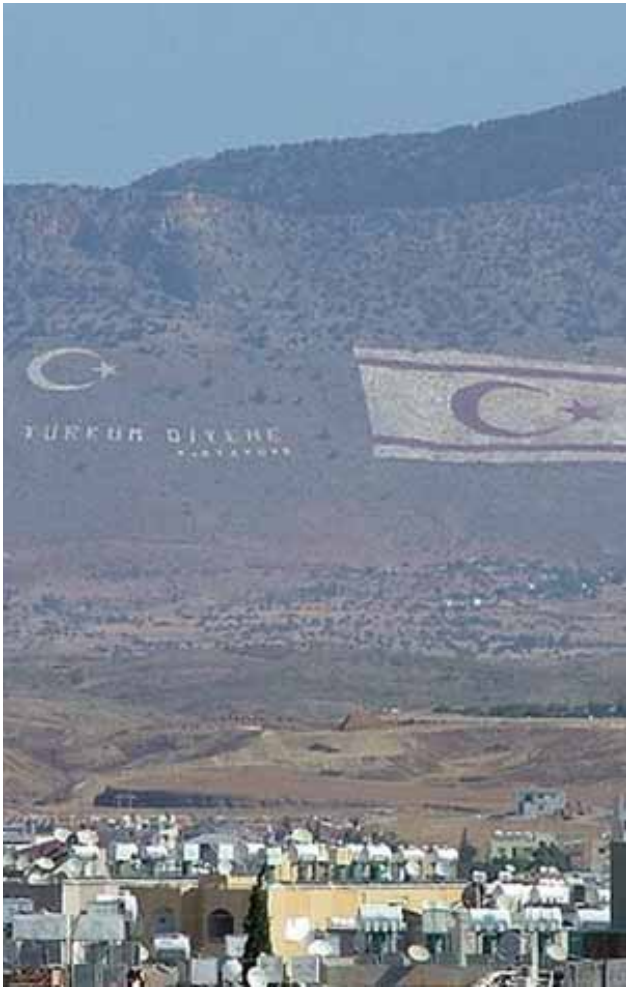


Fig. 2.15

The opening of the first checkpoint in 2003. Fig. 2.16

as EU territory.[26] After 2004 and up to the present, numerous of direct talks and meetings between both sides with the support of the United Nations, took place and continue to happen inside and outside of Cyprus. The current status of the negotiation talks according to the official announcement of UNFICYP, is: “The leaders have decided to immediately re-engage in their negotiations and have instructed their negotiators to continue meeting in order to achieve further progress on all outstanding issues interdependently. The leaders will also meet as required.” [27]

“Yes and no” adverts for the Annan plan Fig. 2.17

Outcome

Due to its strategic location in the eastern mediterranean, Cyprus was over the centuries, a free and a peaceful country only in small periods of time. Its people were influenced by various rulers through ages and suffered from wars, slavery and hunger. The period following the Ottoman empire (1878), known as the British rule, was decisive for the current condition and the situation on the island. It is a fact, that the diverse population of Cyprus was used as a benefit for Britain, which took advantage by the "divide and conquer" policy when needed. Until the middle of 1955 the violence between both communities was minimum.[28] Although, through manipulation, provocation and tricks orchestrated by foreign forces, nationalism on both sides was strengthened and ethnic division was formed. This led to catastrophic results, such as mistrust, antipathy, violence, ignorance and finally the division of the island and losses for each side. Since the Turkish invasion in 1974, the lack of trust, confidence, political, economical and cultural cooperation between Cypriots are the main causes for a non-solution. Political attempts for a solution appear to fail and as the time passes the problem seems to be impossible to solve. A solution can be implemented only by adopting an evolutionary approach (step-by-step), which will cover all aspects of the Cypriots's lives. The desirable solution should originate direct from people for people.

"We are the solution"-banner inside the buffer zone during a demonstration *Fig. 2.18*

Fig. 3.01

3. Cyprus and its people

Numbers

The current population is estimated 1,187,985. According to census 2011 the population was 839,000. Of the 1.18 million people in Cyprus, about 300,000 live in the north, although this number might has climbed to 500,000, half of whom are Turkish settlers or Cypriot-born children of settlers. In 2001, the population was 77% Greek Cypriots, 18% Turkish and 5% other nationalities. The Republic of Cyprus is also home to about 120,000 foreign permanent residents and between 10,000 and 30,000 undocumented illegal immigrants.[1]

The Greeks and the Turks

The Greeks: The Greek culture and language was introduced on the island by the Achaean Greeks in 1200 B.C. Already in 1400 B.C. the Mycenaean Greeks came into view as merchants and immigrants and settled on the island. Regardless of the variety of foreign rulers through the ages, the local population succeed to maintain its Greek character. That was the fundamental reason for "Enosis" (Union of Cyprus with Greece) along with the Greek Cypriots's sense of nationalism during the British rule.

The Turks: The Turkish Cypriot appeared on the island at the beginning of the Ottoman empire in 1571 and mainly consisted of members of the Turkish occupation force, populations from Turkey and a number of Greek Cypriots, known as Linobambaki, who converted their religion from Greek Orthodox to Islam, in order to pay less taxation or out of fear.[2] The Turkish policy of transferring people from Turkey to settle in Cyprus remained unchanged for almost 400 years. After the Turkish invasion in 1974 a large number of people, mainly from Anatolia, were transferred and settled in the northern occupied part of Cyprus.[3]

Languages

The official languages on the island are Greek and Turkish, although the common spoken languages are Greek Cypriot and Turkish Cypriot dialects. The Greek language dominates the south of Cyprus and the Turkish language the north. The Greek Cypriot dialect reflects the influences of the different nations that ruled the country through their periods. It observes mainly the Greek grammar and syntax and its roots are in ancient Greek. The Turkish Cypriot dialect is related to other dialects in Anatolia and distincts the urban dialects of Istanbul, Ankara and Izmir. The Turkish Cypriot community was the only Turkish minority in former Ottoman territories outside Turkey that quickly adopted Ataturk's linguistic

changes. However, a large number of Turkish Cypriots spoke Greek Cypriot until 1964, when the Turkish Cypriot policy changed. English is spoken everywhere in Cyprus and it is considered as symbol of sophistication.[4]

Religion

Since the medieval ages, the religion in Cyprus has been multi-religious. The religion of Greek Cypriots is Greek Orthodox and the Turkish Cypriots's religion is Muslim.[5] Furthermore, there are a small number of Armenian, Maronites, Catholic Christians, Jews and gypsies as well. It is important to note that religion was never a conflict element between the two communities. Indeed, both communities lived peacefully until 1956 when the first inter-communal conflicts have taken place. In a lot of villages and cities there was a Turkish quarter and a Greek quarter without a visible separation. Both quarters were identified by an orthodox church or a mosque, which often were close to each other.[6]

Stereotypes

..to each other:

Despite the religious and linguistic differences, both Greek and Turkish Cypriots are comparable in their

Church and mosque close to each other in Limassol *Fig. 3.02*

The church and the mosque in Limassol, 1900 Fig. 3.03

social and cultural habits. Although, some facts, based on psychological tests extracted among individuals from both communities, have shown that Greek Cypriots have higher self-esteem when in group in comparison to Turkish Cypriots. Turkish Cypriots are more socially oriented while Greek Cypriots are competitive, individualists and more business-oriented. None shows trust to each other. Greek Cypriots tend to think that Turkish Cypriots are slow, passive and suspicious. At the same time Turkish Cypriots believes that Greek Cypriots are smart, fast and tricky.[7]

..for a solution:

Everyone on the island dreams of a solution to the Cypriot Problem, even if the vision of the ideal solution differs from person top person. Most Greek Cypriot believe that all the Cypriot refugees should be able to return to their former houses and villages and that all the Turkish troops and Turkish settlers arrived after the invasion should leave the island. Turkish Cypriots on the other side, support the establishment of their new state, and believe that the presence of the Turkish military force reassures their safety as a minority on the island and its entity to future negotiations. [8]

We and the "others"

The impact of the division of the island has its consequences on people's mental health. Thousands of Cypriots have experienced violence and were forced to leave their former houses.[9] Their personal knowledge and experiences are toxic to the young generation, who prefer the ignorance of the "others" and avoid any direct or physical contact with them.[10] The so called "double minority syndrome" characterizes the complicated relations between majorities and minorities and how each group sees itself. For a long time before the formal division of the island, Greek Cypriots were the members of a political majority but at the same time they have viewed themselves as a regional demographic minority. Turkish Cypriots believed they were not fair represented on a political level, and when in danger they asked for protection from Turkey. In other words each group sees itself as a minority on the island and blames each other; "Who is the victim and who is the minority?".[11]

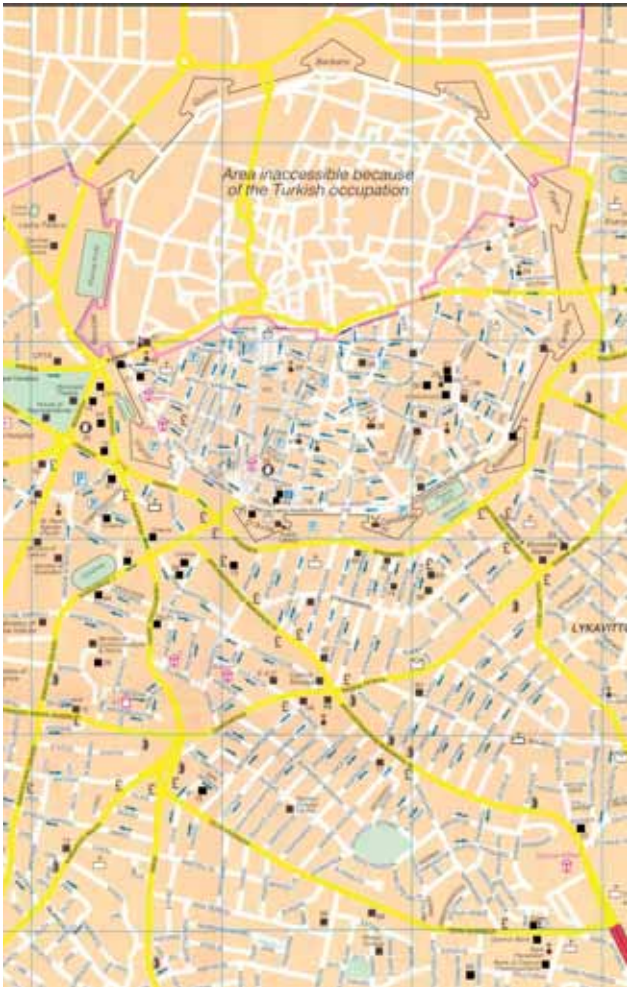


Fig. 3.04

Fig. 3.05

Nicosia touristic maps as appear in leaflets, on sights and on the internet. The total ignorance of the "others".

Outcome

The majority of Cypriots wish to solve the Cyprus problem and everyone on the island hopes for a solution. However, each side gives different explanations about the character of the problem, its causes and its roots. People tend to blame the injustices committed by the other side as a result of the huge post-war-trauma, which generates stereotypes and syndromes for both communities. These lead to the total ignorance of the “others” without any physical contact between them. As already stated, the majority of the population is religious, even though religion was never a problem or a conflict reason between Greek and Turkish Cypriot communitites.

Fig. 4.01

The “Green line” or “Attila” line

The Green line or Attila line was the further development of the Mason-Dixon line originated in 1956, which was the first temporarily partition of the Greek and Turkish Cypriot quarters of the old city of Nicosia. Along the Mason-Dixon line was the main commercial artery of the city (Hermou street), which followed the path of the old Pedieos river through the original Roman settlement. It was set up by the British military, in order to prevent clashes between the Greek and Turkish factions.[1] During its second phase (1958-1963), this line took the name “Green line” because of the green china graph pencil that used by Major General Young in order to draw the double layered partition line between both communities after the incidents of Bloody Christmas, in December 1963.[2] As a temporary ceasefire measure, the Green line was made out of sand bags, oil barrels, concrete, corrugated iron, brick and barbed wire. Despite its temporary character it still remains a physical barrier until today. Up to 1974, the area inside the Green line opened for pedestrians and vehicles that were monitored and controlled by the police and the British military, and was closed whenever violent incidents occured. Since the Turkish invasion the separation line was called Attila line and was spread through the whole island, with 182km length, from Morphou bay in the north west to Famagusta in the east. Inside the Attila line is a buffer zone or a no man’s land, which is controlled by the United Nations peacekeepers.[3] The size of the partition line varies, from 3.3m (within the walls) to 7.5km (Athienou area).[4]

The old Pedieos river through the original Roman settlement. *Fig. 4.02*

Checkpoints

Crossing-points by chronological order: The checkpoints of Ledra Palace, Strovilia, Pergamos and Ayios Domethios were the first crossing points, which opened in 2003, following by Astromeritis checkpoint in 2005, Ledra Street in 2008 and Limnitis checkpoint in 2010.[5] The crossing points of Deryneias and Lefkas are still under construction and are expected to be opened by the end of 2018.[6] As already stated, thousands of Cypriot refugees have already visited their former houses since 2003, when the first checkpoints had opened. That was the main purpose of their visit to the other site. They were allowed to pass through the checkpoint only by showing their passports and by paying for insurance and could only stay there for a limited time. Nowadays, people are allowed to change side only by showing their passport or id without any cost

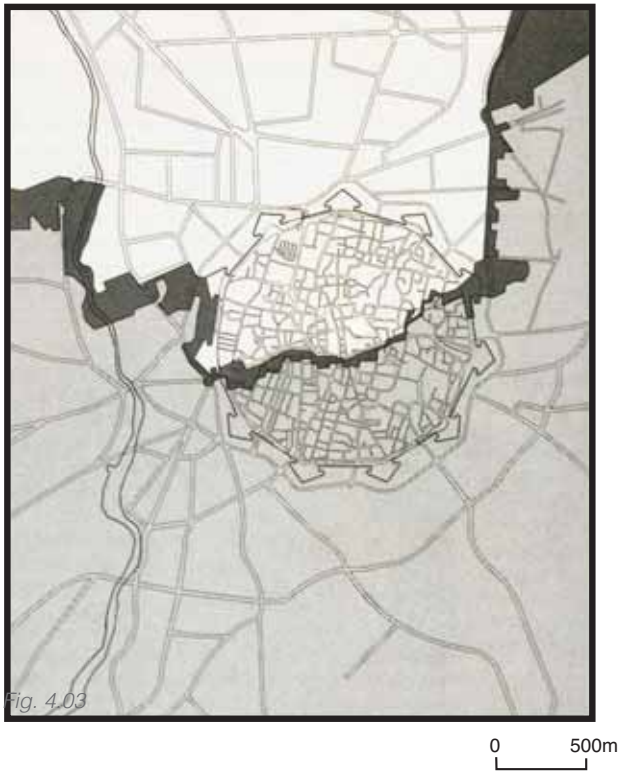


Fig. 4.03

and without time limitation. Many Greek Cypriots (refugees and non-refugees) refuse to show their passports, as they are claiming they do not want to be "tourists in their own country". So they have never crossed the other side. The main purposes for the people who choose to visit the other side, are firstly to return and see their former houses and villages, to revive old friendships or establish new contacts, or simply for shopping. Many of of them have been there just once and never want to go back, as they find it hard to have to knock on the door and ask for permission in order to enter their own houses.[7] Some other reasons Greek Cypriots visit the other side is to shop cheaper or to gamble in a casino, as there aren't any casinos in the controlled area of the Republic of Cyprus yet. Another reason they pass a checkpoint is to visit religious sites or churches. Turkish Cypriots are allowed to pass through a checkpoint, by showing their passports or ids, as they are considered European and Cypriot citizens. It is estimated that 80 000 Turkish Cypriots are living in the occupied area (katechomena). Turkish settlers, which are living in the north, are not allowed to cross, as they are entering a European country and this is only possible by requesting a visa prior to their the visit, like in any other European country. Their main reason for visiting the south is for shopping. Many goods don't exist at all, or if they do, they have a lower quality (such as electrical appliances, cleaning chemicals or agricultural products). A lot of children are crossing sides on a daily basis, as they are attending Greek-Cypriot public or private schools, due to the fact that the Turkish-Cypriot schools are not recognised internationally. In addition, some Turkish Cypriots are working in the south because of the better working conditions or/and the higher salaries.[8]

No "doors" but "windows"

Even though the fact that the buffer zone is a no man's land, there are still certain activities that take place inside this zone, with the approval of UNFICYP. Construction and farming are some of the activities,

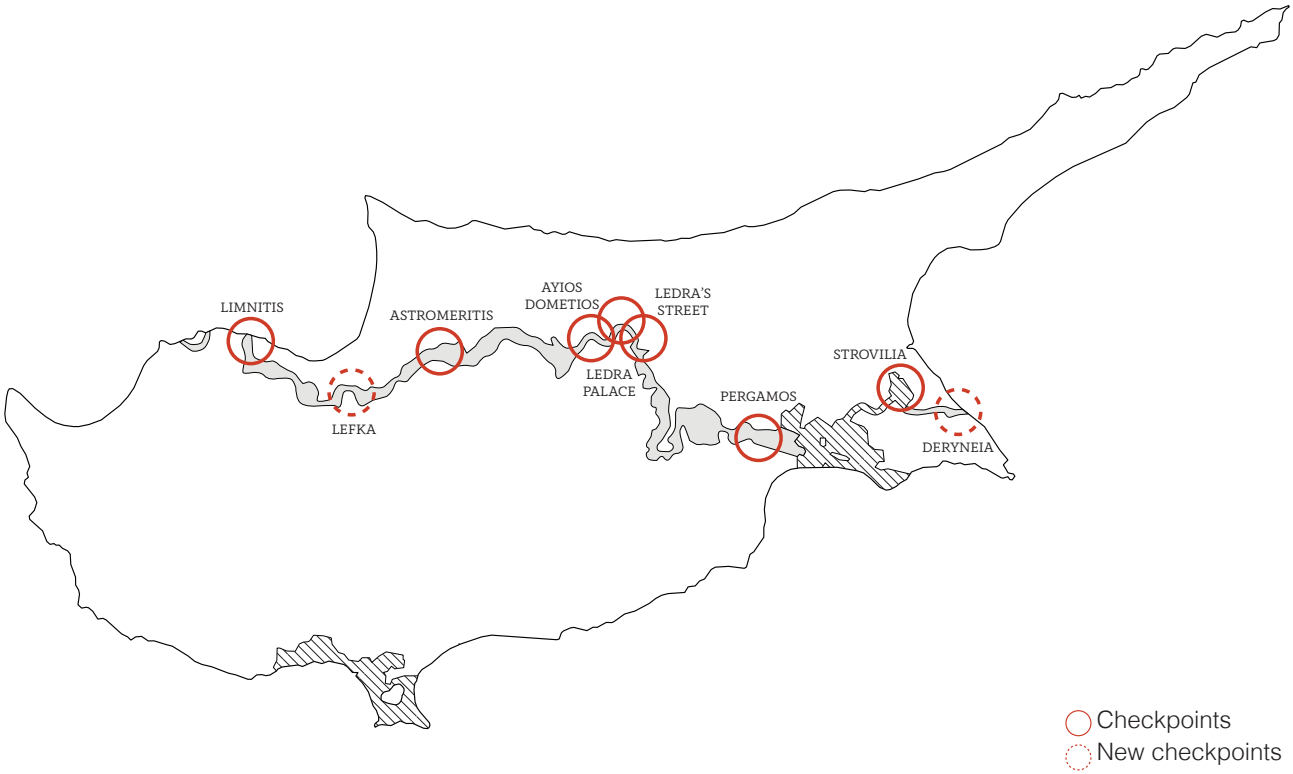

LIMNITIS
ASTROMERITIS
AYIOS
DOMETIOS
LEDRA'S
STREET
LEDRA
PALACE
PERGAMOS
STROVILIA
DERYNEIA
LEFKA
Checkpoints
New checkpoints

Fig. 4.04

Fig. 4.05

that happen inside the buffer zone. These permitions are for a limited time, while authorised people are allowed to renew them every six months or once a year.[9]

Some examples are the following:

Kokkina enclave: This area used to be a former Turkish-Cypriot village surrounded by mountains. It is a coastal enclave which does not connect with the rest of the Attila line and it is de facto an occupied area by the Turkish military forces. Azas, a Greek Cypriot shepherd has permission to go inside the

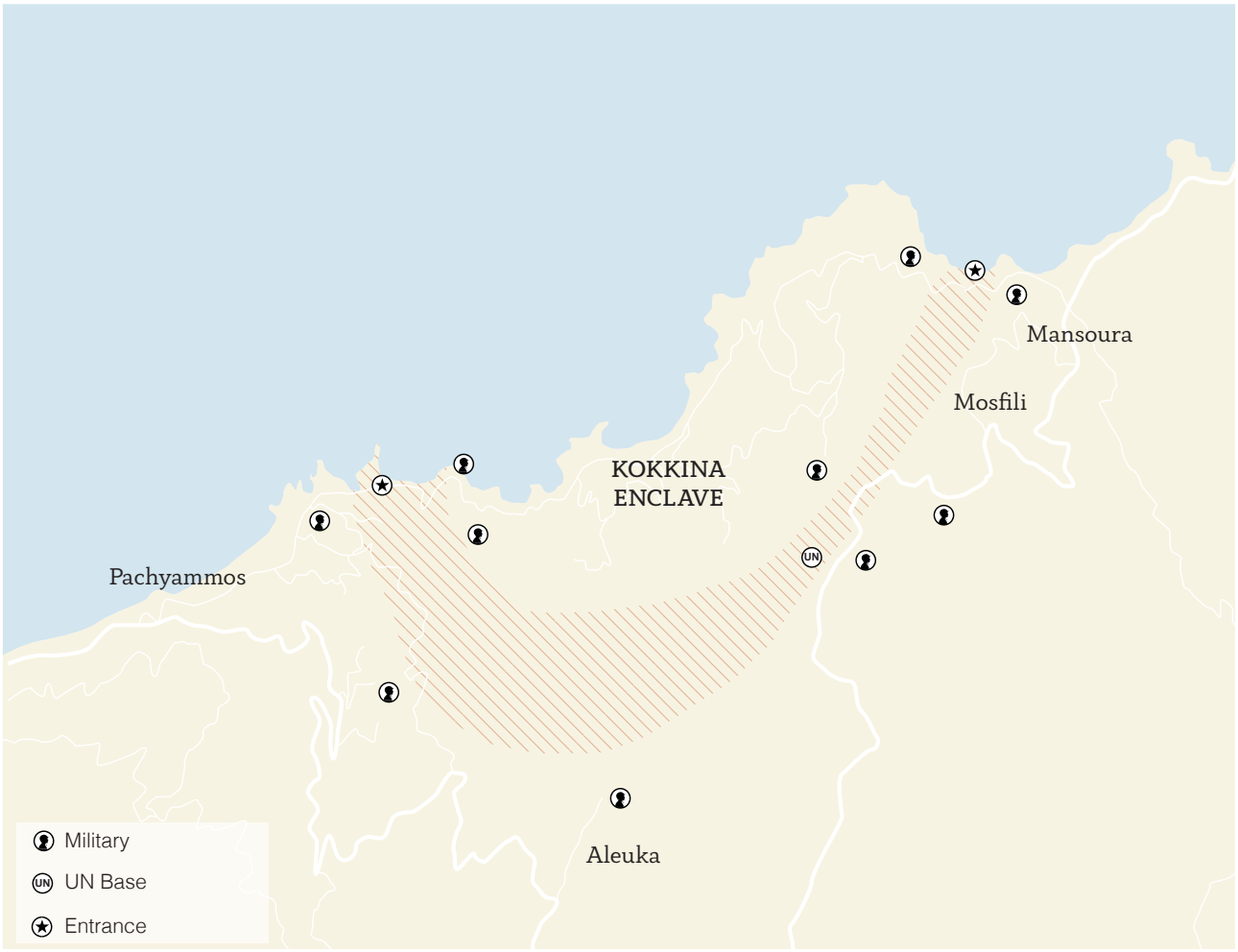


Fig. 4.06

buffer zone on a daily basis and use this area in order to feed his animals. There is no formal entrance or crossing point, because of the rugged landscape. Although once a year Turkish Cypriot groups are allowed to visit Kokkina through Mansoura village for religious reason accompanied by the UN convoy.

Former International airport of Nicosia:

The former international airport of Nicosia has not been used since 1974 and was declared a United Nations protected area. However, the area includes multiple functions, such as the headquarters of

Fig. 4.07

UNFICYP, the Blue Perret Camp, recreational facilities for UN personnel and also some of the negotiation sites between both communities.

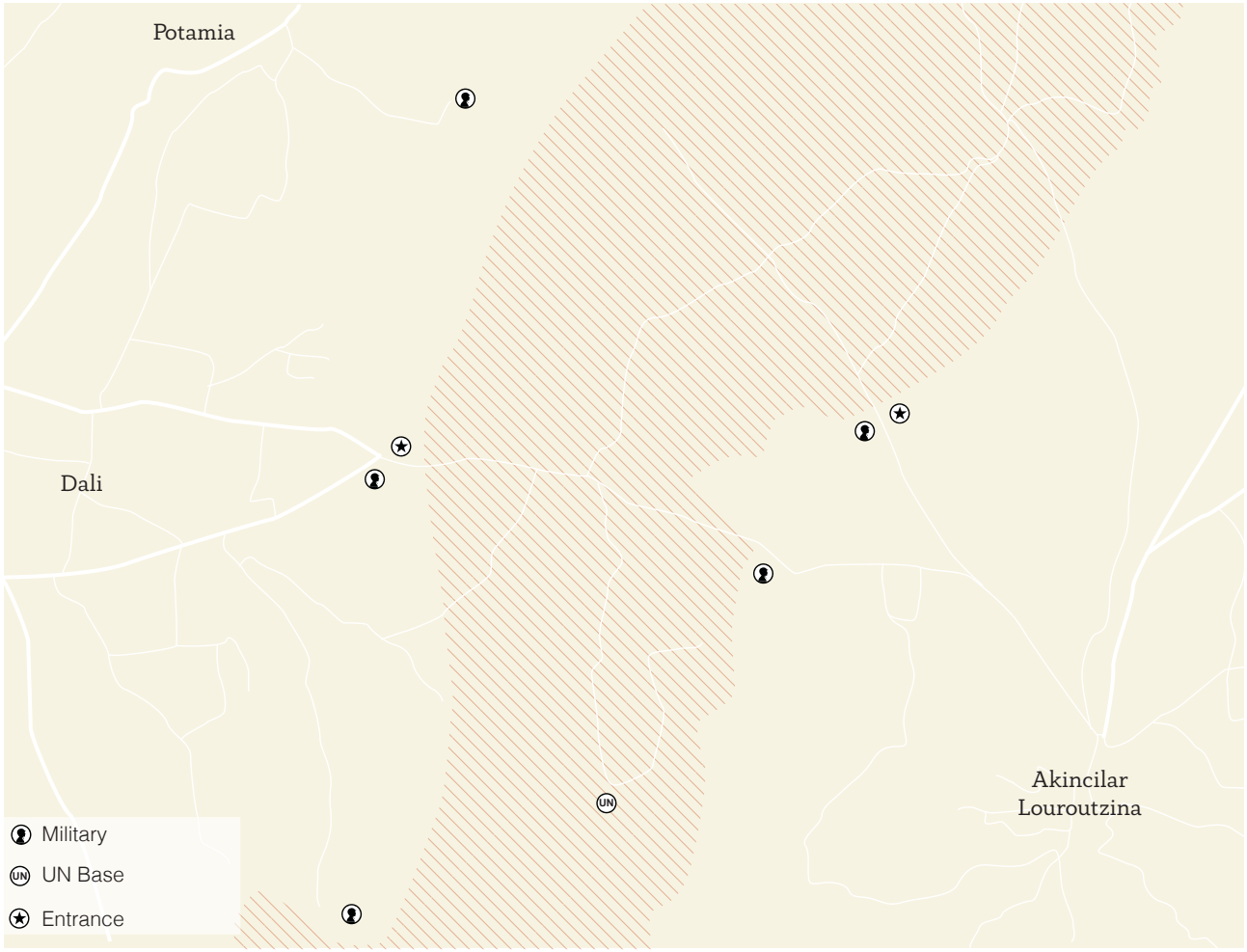


Fig. 4.08

Louroutzina village:

This area remains isolated and is only 22km far from Nicosia. The buffer zone in Louroutzina area can be crossed by farmers with the permission of the UN, which patrols the whole area by jeeps and helicopters.

Bi-communal projects

" (..) the contact (between both communities) is the primary element, on which the understanding and the future's way can based on (..)"

Takis Hadjidemetriou, Co-Chairman of the Cultural Heritage Technical Committee[10]

Despite the diferrences between the two communitites, there are certain groups of people from both sides, who try to maintain contact between them through bi-communal actions. Multiple bi-communal projects and events have taken place in Cyprus since 1974, such as TV shows, music festivals, building projects and online forums. Some of them are listed below:

Sewerage System of Nicosia:
The first bi-communal project was the preparation of a common sewerage system in 1978, which was supported by the United Nations Economic Commission for Europe (UNECE).[11] Through this initiative, Nicosia can be seen as a divided city above the ground, although it is connected below. This underground connection improves the living conditions of all the inhabitants of Nicosia and costs less for them, as it prevents the duplication of water infrastructures.[12]

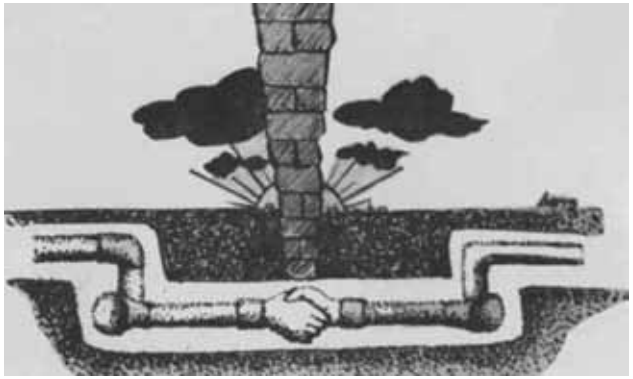


Fig. 4.09

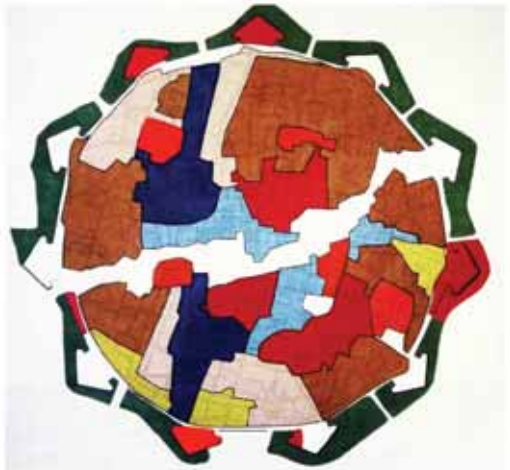


Fig. 4.10

Walled city's master plan:
In 1979 the two mayors of Nicosia, Demetriades and Akinci attempted to create a common master plan for the divided walled city. This masterplan included pedestrianisation and restoration projects, rehabilitation of neighbourhoods, public spaces and green areas.[13] The present mayors of Nicosia have managed to implement the pedestrianisation project for the walled city, in 2015, and have tried to develop a new revitalisation concept for the buffer zone. They have also proposed the opening of new checkpoints within the walls of the old city.[14]

Technical Committee on Cultural Heritage:
In 2008, the Technical Committee on Cultural Heritage was established in order to recognise, to promote and to protect the cultural heritage of the island. A lot of archaeologists, architects, art historians and town planners from both communities have worked

Technical Comittee on cultural heritage. *Fig. 4.11*

Bi-communal events at the House of Cooperation inside the buffer zone. *Fig. 4.12*

and are still working together to support, study and physically protect and restore mainly churches and mosques everywhere in Cyprus. The European Commission has provided European funds for the implementation of these projects.[15]

Home of Cooperation:

The Home of Cooperation is a community Centre located in the buffer zone next to the Ledra Palace crossing point. Its aim is to bring people from both communities together by providing spaces and opportunities to them, such as workshops, language courses, walking and cycling tours. Greek Cypriots and Turkish Cypriots are allowed to visit the building inside the buffer zone without showing their passports. The Centre is funded and supported by the European Economic Area Grants and Norway Grants.[16]

Outcome

Many Cypriots from both communities choose to cross over to the other side for various reasons. However, there is a number of people, who refuse to show their passport in order to visit the North. The locals's request for opening more checkpoints is beeing considered and more entries are planned to take place in the future. These crossing points are located in the buffer zone and are controlled by the UN forces. They are considered as a no man's land, however, multiple places can be used for certain reason if permitted. Many bi-communal projects are taking place in groups, which are examples of building trust and contact between them. Such initiatives have a win-win character, which is the main reason for their success.

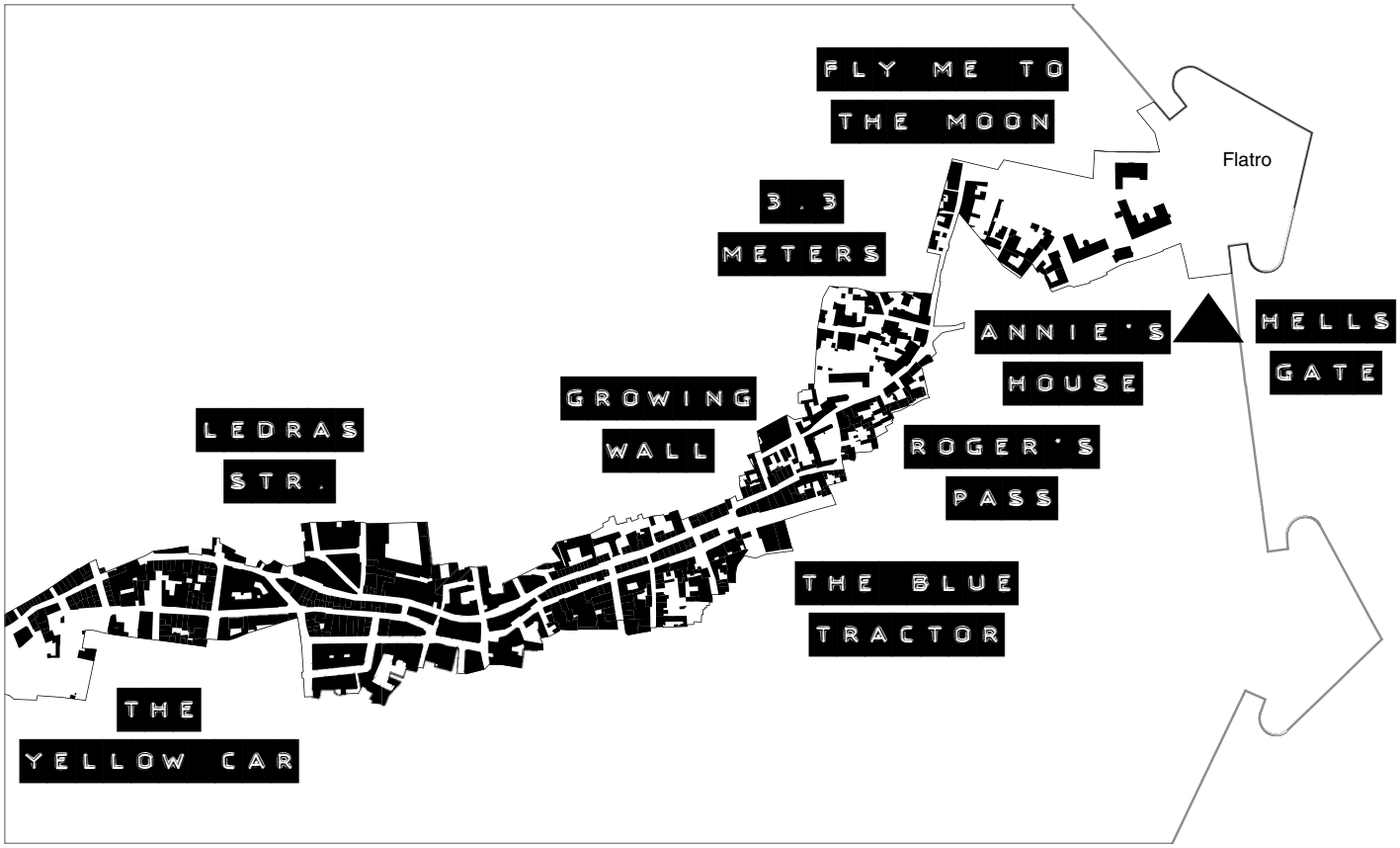
Fig. 5.01

5. The “first” contact

The first trip to the “other side” - Impressions

In the context of the design studio *Recording Nicosia - fragments of a divided city* in 2017 at the university, our group visited Nicosia, the last divided capital of Europe. This excursion gave me the chance to visit the northern part of Cyprus for the first time. We had stayed in Kerynia, which gave us the opportunity to visit many places in the North, such as Famagusta, Agios Ilarionas mountains, Keryneia and the northern part of Nicosia. It was pretty impressive to me the fact that every place we visited, reminded me of the southern part of the island. Many places we had been, felt like home to me. I also feel also very lucky because the UN forces in Cyprus, in contact with the Austrian embassy in Nicosia, allowed us the entrance in the buffer zone for two hours. The UN soldiers told us real stories about the Green line through a tour inside the buffer zone in Nicosia, within the walls of the historic city. They explained us stories at each stop we had, such us the *Jeep’s Gate, Annie’s house, Fly me to the moon, Rogers pass, The blue tractor, The growing wall* and *The yellow car*. Starting from the eastern bastion, Flatro, a large empty plot with a closed gate known as the *Jeep’s gate* is to be found.

Fig. 5.02



Our “tour” inside the green line in the historic city of Nicosia. *Fig. 5.03*

Fig. 5.04

Fig. 5.05

Fig. 5.06

Between trees and bushes the neoclassical facades of Agios Kassianos urban schools are visible. The schools have been abandoned since 1964, as one of the main conflict areas between both communities. The bullet signs and the slogans on the walls prove the tragedy of this period. This is how our trip inside the buffer zone started. Passing through the ruins, we were beeing told a lot of stories, and had been informed on how the UN army attempts to maintain the whole area. It was obvious to all of us, that the time inside this area had been frozen since 1964. Ruins and bullets on the remaining walls, many dead ends, concrete blocks, barrels, flags and barbed wires were setting up this surreal scene in the heart of Nicosia. Having the opportunity to visit the Green line, was an unforgettable experience and that was without a doubt the highlight of our trip. Arriving back in Vienna and looking at the photos I had captured, I could not recognise where I had took them. *Was it in the south, was it in the north?* The nature of the island is an indicator that Cyprus is one unified island, and beyond borders, barriers, checkpoints and armies it is still one. Its nature is a proof of its unity.

Fig. 5.07

Fig. 5.08

Fig. 5.09

Fig. 5.10

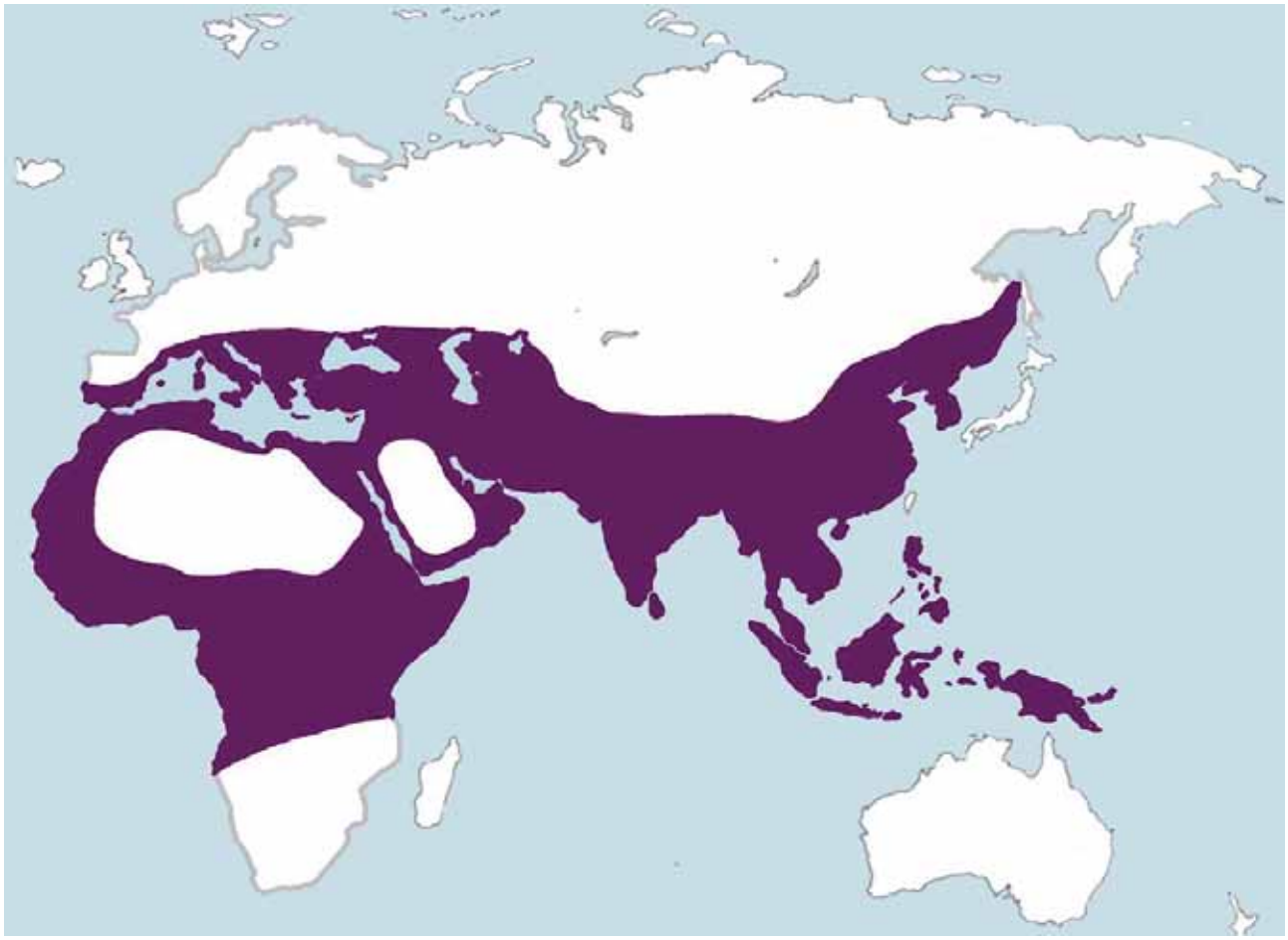
Fig. 5.11

Fig. 5.12

Fig. 5.13

Fig. 5.14

Fig. 5.15



Map of Thalassaemia distribution. Fig. 5.16

Our nature’s nature

The case of Thalassaemia:

As the nature of Cyprus is identical on both sides, so is our nature as human beings. The case of Thalassaemia disease in Cyprus is only an example that our health as humans does not have any borders neither. Such genetic diseases do not “choose” religions, sides or languages. Thalassaemia disease is a serious health problem, especially in Cyprus. It is a genetic disease, which belongs to the family of the known Haemoglobin disorders, that affects the human blood.[1] Thalassaemia causes severe anemia, facial and other deformities, impairment of normal physical activity, early death and patients require frequent blood transfusion. It is a fact that the name of Thalassaemia (Thalassa + Anemia) is referred to countries with high-risk populations, such as the Mediterranean area (Cyprus, Italy, Greece, Turkey, Tunisia etc.), the Middle East, Transcaucasus, Central Asia, the Indian subcontinent and the Far East.[2] In Greek, it is well known as “Μεσογειακή αναιμία” (Mediterranean Anemia) and people in Cyprus are really aware of this disease. In the late 1970s the first pilot programs started in many countries included Cyprus, such as carrier screenings, counseling, and prenatal diagnosis in order to prevent β-Thalassaemia. Many people from the areas of the world where Thalassaemia is common, including Cyprus, carry the gene for it on one chromosome, called the stigma. If both parents carry the stigma, their children have a one in four (25%) chance to have Thalassaemia major. Therefore, the Orthodox church in Cyprus requires a specific certificate as a proof that the screening of Thalassaemia has been accomplished before marriage, for people who wish to marry in a church.[3] Primarital screening for Thalassaemia is also required by law in the North, as well.[4] The Thalassaemia International Federation (TIF) was founded by patients in 1986 and is registered in Cyprus as a Non-Profit, Non-Governmental Organisation. Its offices are based in Nicosia and its mission is the development and implementation of national disease-specific programmes for Thalassaemia in every country.[5] Cyprus is considered as the leading country regarding Thalassaemia disease and it is currently collaborating with a lot of countries concerning treatments, methods, education and prevention.

Fig. 6.01

6. Rare Diseases in Cyprus

Current situation

Similar to Thalassaemia, there are up to 8.000 rare diseases worldwide and are affecting one person per 2000 inhabitants. Some of them are: Myasthenia Gravis, Huntington's Disease, Scleroderma, Cystic Fibrosis, Retinitis Pigmentosa, Friedrich's Ataxia, etc.[1] Such diseases are chronic, painful and 80% of them are genetic. It is estimated that 6-8% of Europe's population (nearly 15 million people) suffer from a rare disease and approximately 100 000 patients are suffering in Cyprus. Despite the small statistical number of patients, rare diseases are of great importance for the public health system. Because of the large number of variety and rarity of those diseases, it is pretty difficult to obtain expertise. As a consequence to this, a lot of patients are not diagnosed on time or sometimes never, which cause pain and agony to the patients and their family. The small number of patients affected, does not allow the development of drugs intended to treat rare diseases, because industries do not recover the capital invested for research. The so called *orphan drugs*, are intended to treat diseases so rare that sponsors are reluctant to develop them under usual marketing conditions. Currently in Cyprus, like other european country, many diagnostic scientific/ medical Centres for rare diseases are beeing operated and many patients are visiting public or private hospitals for their treatments. Patients that can not be treated in Cyprus, often visit Centres abroad. The patient's rehabilitation or their recovery-therapies, such as physical-, occupational- and speech-therapy, diet and mental health support are quite important. However, the possibilities of a multifaceted approach and treatment are limited because of the fragmentation and the lack of infrastructures and personnel. Cyprus, as a small country, has its advantages regarding the records of rare diseases, which is a relevant part for the further development and the effective approach to such disorders. On the other hand, concerning research, Cyprus is taking part in European research programs for rare diseases, such as *Orphanet* and *E-rare*. It is also known that Cyprus spends only 0,5% of its Gross National Product (GNP) for rare diseases, while the average expenses for European countries should be 2%.[2]

Cyprus Alliance for Rare Diseases (C.A.R.D)

The Non-Governmental Organisation Cyprus Alliance for Rare Diseases was founded in 2010 in order to support patients in Cyprus, which are suffering from rare diseases. The Alliance advises patients and provides information about treatments and health services within and outside Cyprus. At the same time, the organisation supports the strategic plan for rare diseases on national level (Europlan), which secures the patient's rights for accessible and quality care.[3] Through events, congresses and workshops, the Alliance encourages patients and provides information to doctors and authorities, to the government and to the Cypriot community.

"Folia" Centre

Despite the coordinated actions of the C.A.R.D and authorities, there is a lack of information, and support-

The advantages and disadvantages of Cyprus for rare diseases:

Advantages:

- Political Support: *Political will for the development of a strategic plan for rare diseases*
- Size and population: *The small size of Cyprus and its population can improve the coordination for the prevention of rare diseases, which can cost lower and make it easier to keep records.*
- Geographical position: *The position of Cyprus favors cooperation with neighboring countries.*
- Participation in common EU actions: *Exchange of experiences through European networks.*
- *Patient's organisations: They are active a*nd well organised.
- Aware population: *Because of Thalassaemia, people are more aware to rare diseases.*
- Culture: *It provides contact and cooperation.*

Disadvantages:

- Population and number of incidents: *Because of the small number of patients the diagnosis is difficult and so is the creation of specialised centres for rare diseases.*
- General health system: *The lack of a strategic plan causes multiple difficulties.*
- Briefing to population and health professions: *It is limited for rare diseases.*
- Handling of incidents: *There is a weakness because of the limited number of specialised doctors and medical groups.*
- Lack of effective coordination and records
- Unsatisfying cooperation: *on european and internation level.*
- Percentage of GNP: *only 0,5% of GNP is spend for rare diseases. It should have been 2%.*
- Cooperation between research teams: *not satisfying.*

The advantages and disadvantages of Cyprus as listed in the national strategic plan for rare diseases, 2012.[4]

Fig. 6.02

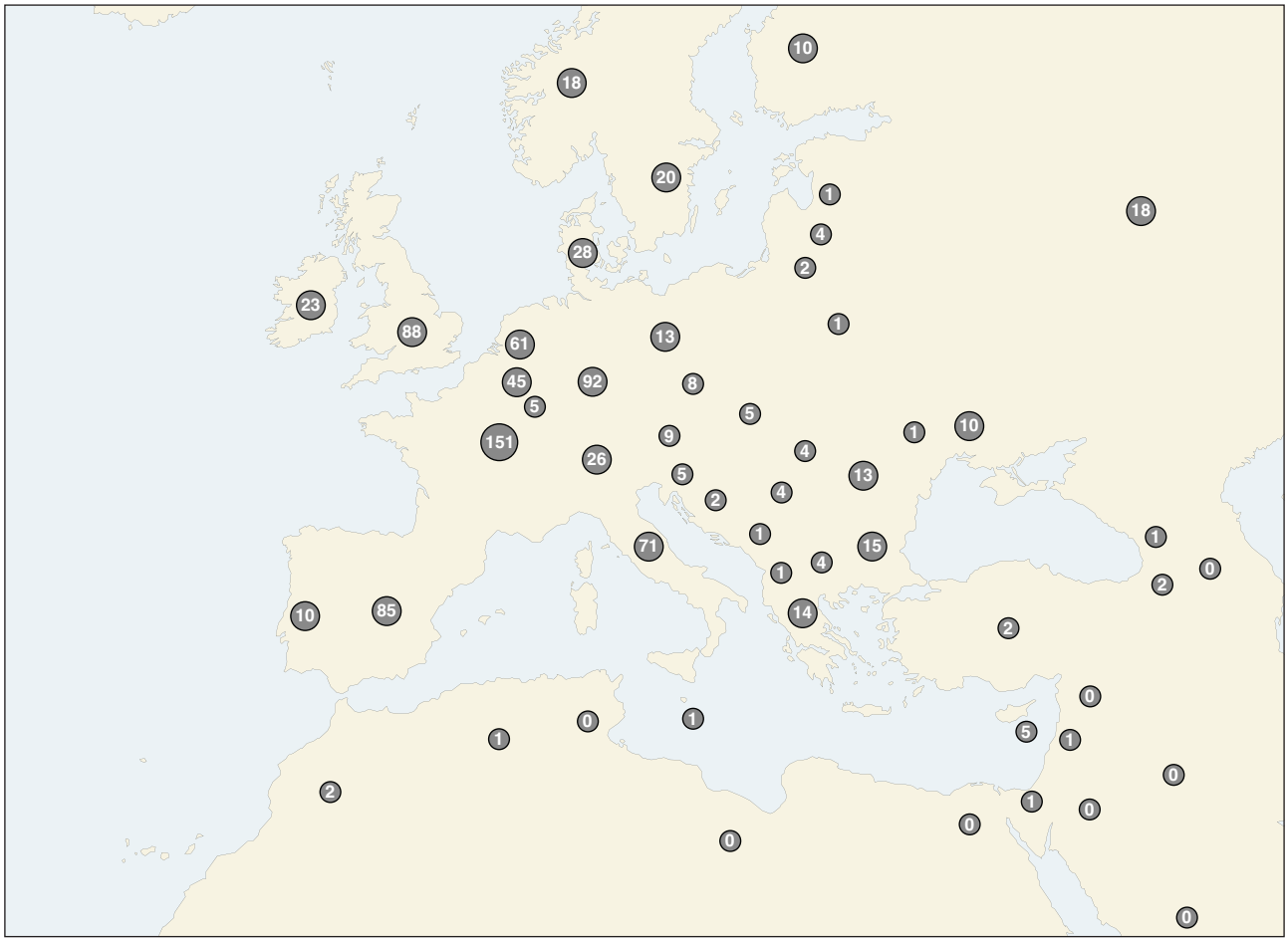
services for rare disease patients and their families. As a result, the C.A.R.D. has listed the needs and demands of the patients and in 2017 founded the Centre “Folia” (nest), which offers services such as information, support and education for the patients suffering from rare diseases. The foundation of the Centre gave the chance to more people and patients to come together, to communicate and visit the Centre. Until 2017, the Alliance had 11 associations and 44 individual patients as members. Since the establishment of the Centre, the members were increased to 15 associations and more than 160 individual patients. Through multiple events and meetings, the Centre supports and informs not only the patients, but their families as well. Specifically, the Centre provides secretarial support to rare disease patients and up-to-date information on health and social welfare policies. It communicates with the authorities, and monitors the patient’s outcome and demands. The Centre is equipped with an automated telephone Centre, a room with computers and a meeting area. Many associations that lack office infrastructure, as well as individual patients are allowed to use an office, which is appropriate equipped.[5]

Centres in Europe/Middle East

There are countries with official Centres of reference for rare diseases, countries with official Centres outside a national policy and countries with none, for rare diseases at all. Cyprus has one official Centre. However, some Centres have been established by reputation, such as the Thalassaemia Centre and the Institute of Neurology and Genetics for rare neurological genetic diseases.[9]

Outcome

The lack of building infrastructures and personnel for rare diseases is a matter of the public health system not only for Cyprus, but also for every country.



Members in Europe and in the Middle East area as they appeared by EURORDIS, the alliance of patient organisations of rare diseases in Europe and beyond. It is representing 804 organisations in 69 countries.[7]

Fig. 6.03

Centres in Europe & in the Middle East.[8]

Fig. 6.04

Despite the small number of rare disease patients, their demands are high and should be considered by authorities, in order to invest and to improve their quality of life. The location of Cyprus, its climate and its size, are ideal for the development of a specialised Centre referred to rare diseases, which will not only provide services locally but it could make Cyprus an international medical destination, with multiple positive results.

Current situation

Bi-communal projects
inside the buffer zone

Fade-out effect of the borders:
Peace by peace

Cyprus without borders

Fig. 7.01

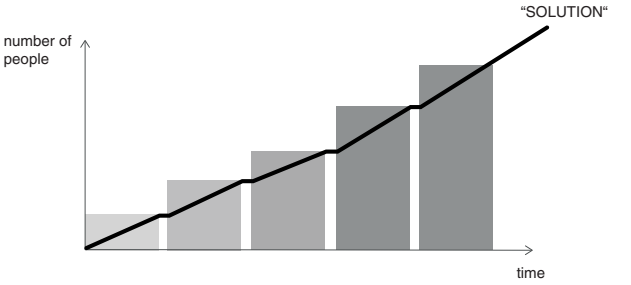
7. An (im)possible solution

“Peace by peace”

A solution to the Cyprus problem can be seen as impossible, due to the fact that after 44 years the political tries by both communities failed. Without any physical contact, people continue to ignore and avoid each other, which is toxic, especially for the younger generations. However, there is hope through initiatives and bi-communal events that have taken place especially in the last decade. The solution should be represented and should be found by people for the people. The function between the number of people in relation to time, can be seen as a solution that will bring more and more people together as the time passes. Additional to this logic, the borders will fade out and will completely disappeare and people will build bridges instead of raising walls. Step by step, piece by piece or even better “peace by peace”.

A Healthcare Centre for Rare Diseases

The creation of a rare disease Centre in Cyprus reflects not only the needs of the patients locally,



The solution plan as a matter of time and the number of people

Fig. 7.02

but also in the wider area of the Middle East. This Centre willl be located inside the buffer zone and will be as a part of the bigger concept for the solution. Its purpose is to bring not only rare disease patients together, but also their families, scientists and whomever is related to. It will provide office, support, educational and research infrastructure in Cyprus and it will improve the quality of life of its members. Furthermore, it will support both communities to have contact by solving problems, which are important to both of them, as a matter of the public health system. It is a win-win situation from another point of view as well. The announcement of its creation to the public, as part of a solution-project, will aware people about

the case of rare diseases and at the same time will give a different dynamic to the solution; *"How can people have a common ground in order to solve problems, that are relevant to everyone, without any flags, religions, languages and ideologies"*. As already stated, the project will take place partially, and each phase will focus on different target groups from both communities.

The four phases:

The project is part of a bigger plan, which consists of different phases. Each phase will increase the number of people involved, in order to bring them all together. This project will also be formed in different phases similar to the main concept.

The "building" phase:

The first phase of the project is the building phase. Builders, engineers and people related to the construction sector from both sides will work together. In order to enter the building site during this phase, these people will have to show a personal *entry allowance card* or id.

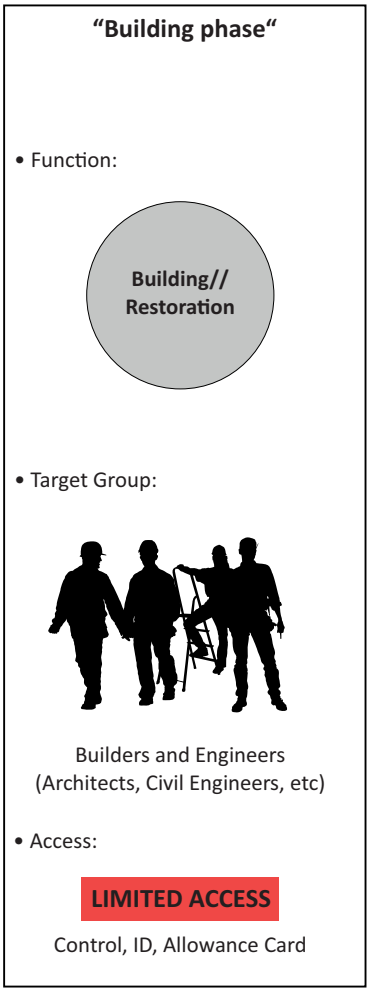


Fig. 7.03

The "supporting" phase:
During the second phase, patients and their families, young couples, organisations and members related to rare diseases, authorities, doctors and active supporters from both communities will come together. The supporting phase will house basic office infrastructures, patients's rooms, lobby, conference room, pharmacy, kid's place, pc room, cafe, lecture room (for events and meetings related to rare diseases) and restrooms. A new checkpoint by both sides will allow people to enter the area by showing their passports or ids. A special *entry allowance card* will be given to people working in the Centre.

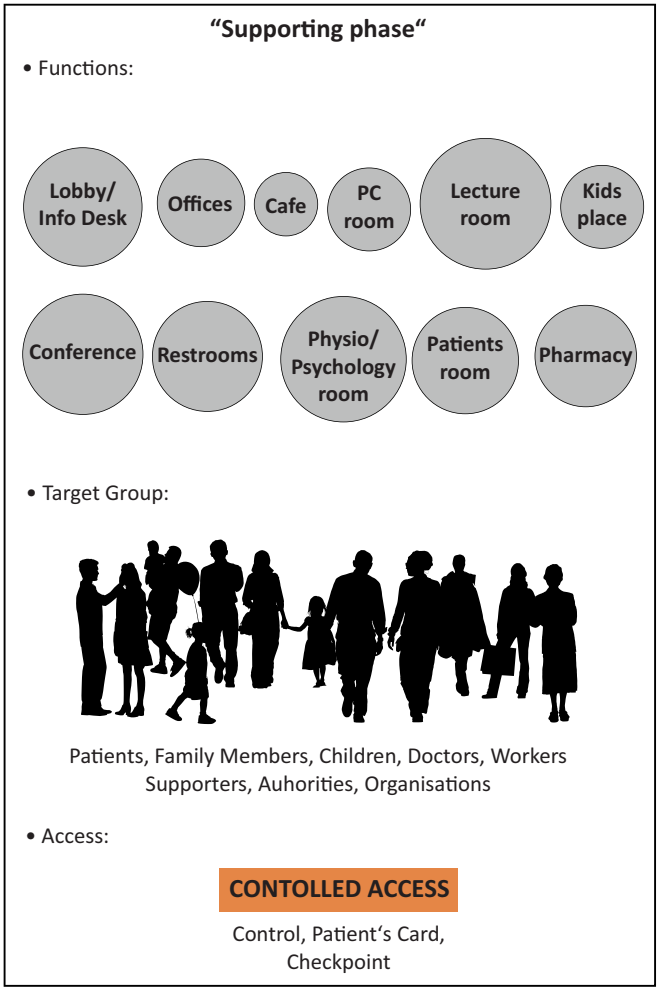


Fig. 7.04

The "researching" phase:

The third phase will bring specialised scientists, doctors, patients, students, volunteers and authorities not only from both sides but also on international level, together. The third phase consists of patients's rooms, laboratories, conference room, offices and restrooms. Though a checkpoint people will entry the Centre without showing their passport or id. The control will take place only by their exit.

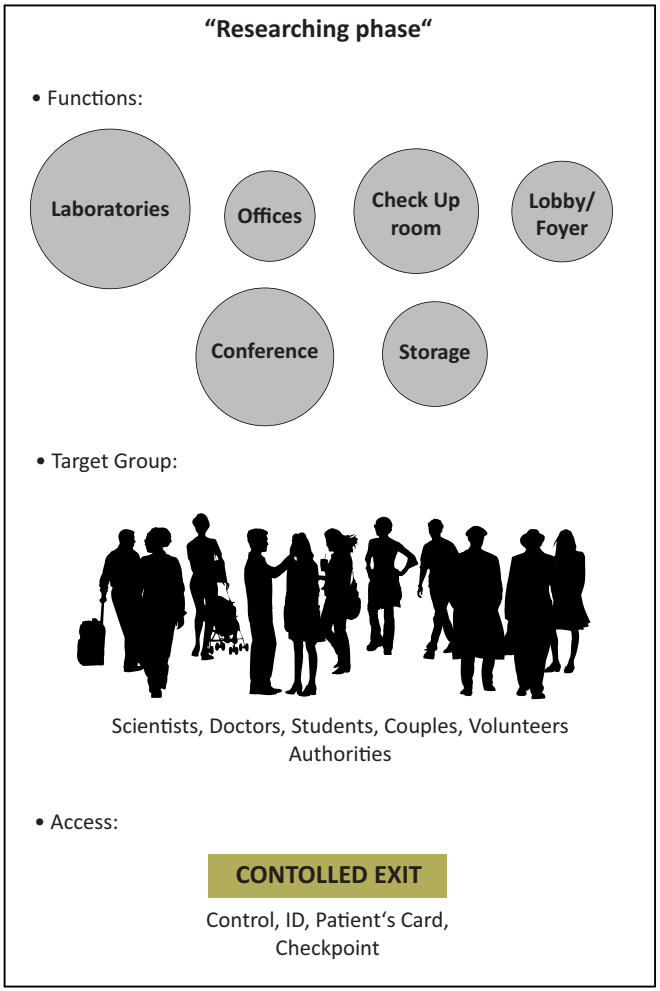


Fig. 7.05

The "spreading" phase:
In the fourth phase a rehabilitation Centre as a part of the healthcare Centre, will serve not only local rare disease patients, but also patients from abroad. Next to the patients/guests the Centre will target doctors and personnel from both sides. During this phase the Centre will house a lobby, guest-rooms, check-up rooms, physiotherapy rooms, offices, ambulance station, kitchen, restaurant, cafe and restrooms. The control will take place only by their exit.

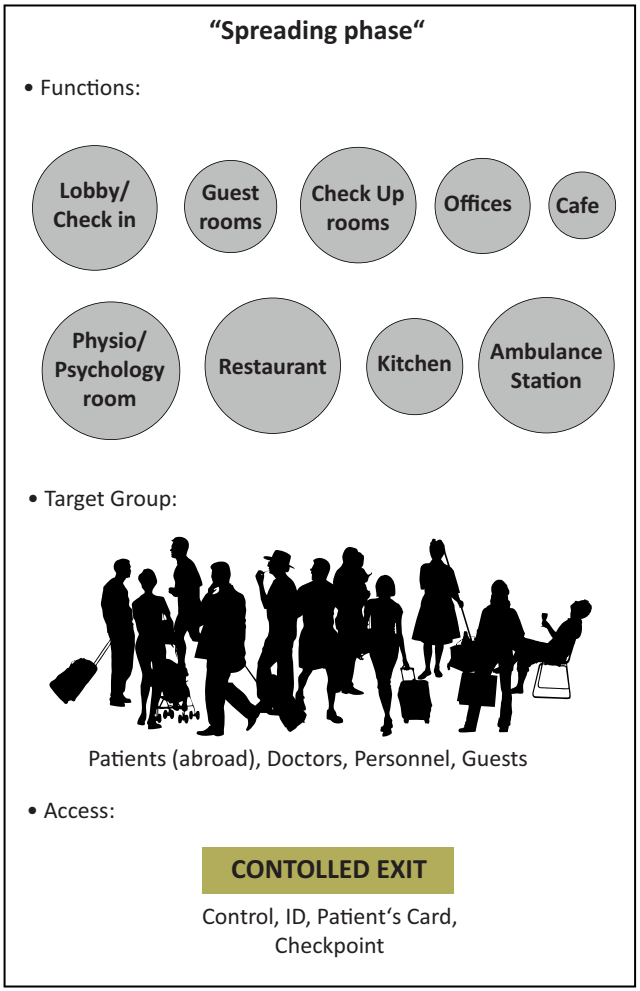
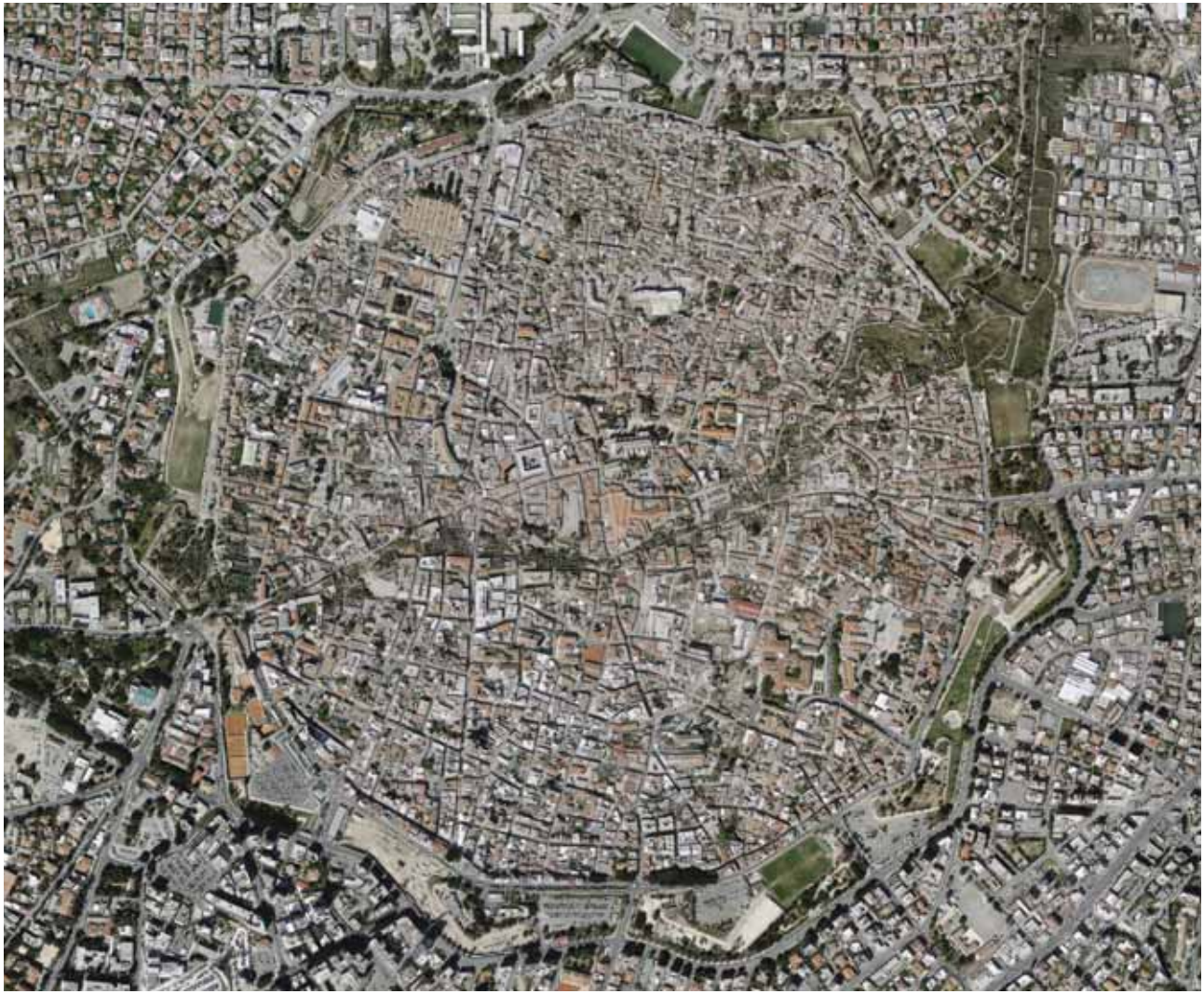


Fig. 7.06



Sattelite view of the historic city of Nicosia, 2014. The buffer zone is visible as well. *Fig. 8.01*

8. The healthcare Centre/Phases 1-3

The location

The location of a Healthcare Centre for rare diseases is important. Rare disease patients and their families should not feel isolated from the society, but instead be part of the it and receive support and attention. Due to this fact, the selected building site is located in Nicosia, close to the city Centre within the Venetian walls of the historic city. Because of its size and its capacity-needs, the selected area should be large with high potential for intervention. As already stated, the project should take place inside the buffer zone, a neutral common ground, in order to be fairly and easily accessible for both sides.

Λευκωσία - Lefkoşa - Nicosia, the last divided capital city of Europe

Located in the middle of Cyprus, Nicosia is for more than 44 years the last divided capital city of Europe. Greater Nicosia is maybe the only city in Cyprus that is continuously habited since the bronze age, 2500 BC. Around 672 BC the Kingdom of Ledra, ruled by the King Onasagoras, was established in Nicosia. During the Roman rule and until the 4th century AD, this Kingdom was nothing more than a small village. In the 6th century AD, people moved in the centre of the island because of the Arab raids. Probably, Nicosia had become the capital of the island between 9th and 10th century. During the Byzantine period it has become the seat of the Byzantine governor of Cyprus and has acquired a castle along Pedieos river. In 1191 the Templars bought the island from Richard the Lionheart and their seat of power was the castle of Nicosia. A year later locals revolted and completely destroyed the castle. The Templars sold Cyprus to Lusignans and the first walls of their capital, Nicosia, appeared. The Venetians ruled the island from 1489-1571. During the last years of their rule and when the threat from the Ottomans was visible, Venetians decided to fortify their administrative centre according to contemporary defence methods. Eleven bastions formed the new star shaped walls, which had only three gates, Keryneia gate in the north, Paphos gate in the west and the largest to the east, Famagusta gate. In order to be more compact and safe, Pedieos river has been moved outside the walls to the west. During the Ottoman empire the city was deserted, although Nicosia was the seat of Pasha, the Greek Archbishop, the Dragoman and the Cadi. The urban development of the city started under the British rule in 1878, with completed roads and connection within and beyond the walls. Many villages around Nicosia began to expand and by 1958 they formed Nicosia's suburbia. During this time the old city of Nicosia became a lower income

area and was given over to shops. Since 1960, Nicosia has officially become capital of the Republic of Cyprus. The capital remains divided by the Green line since 1974.[1]

Building Site:

The urban school of Ayios Kassianos (Αστική σχολή Αγίου Καισιανού) is located in the eastern part of the old city, next to the Flatro bastion and consists three schools and a small church of the 12th century (Ayios

Fig. 8.02

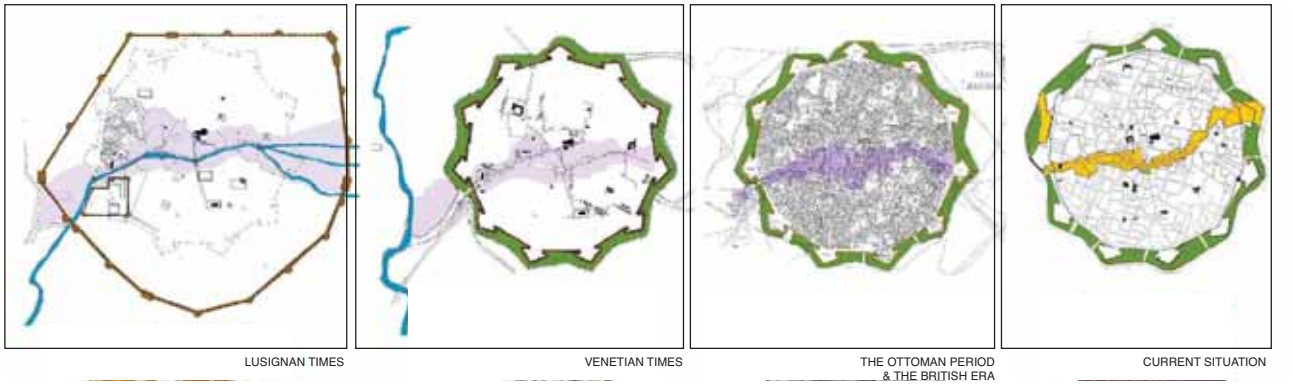
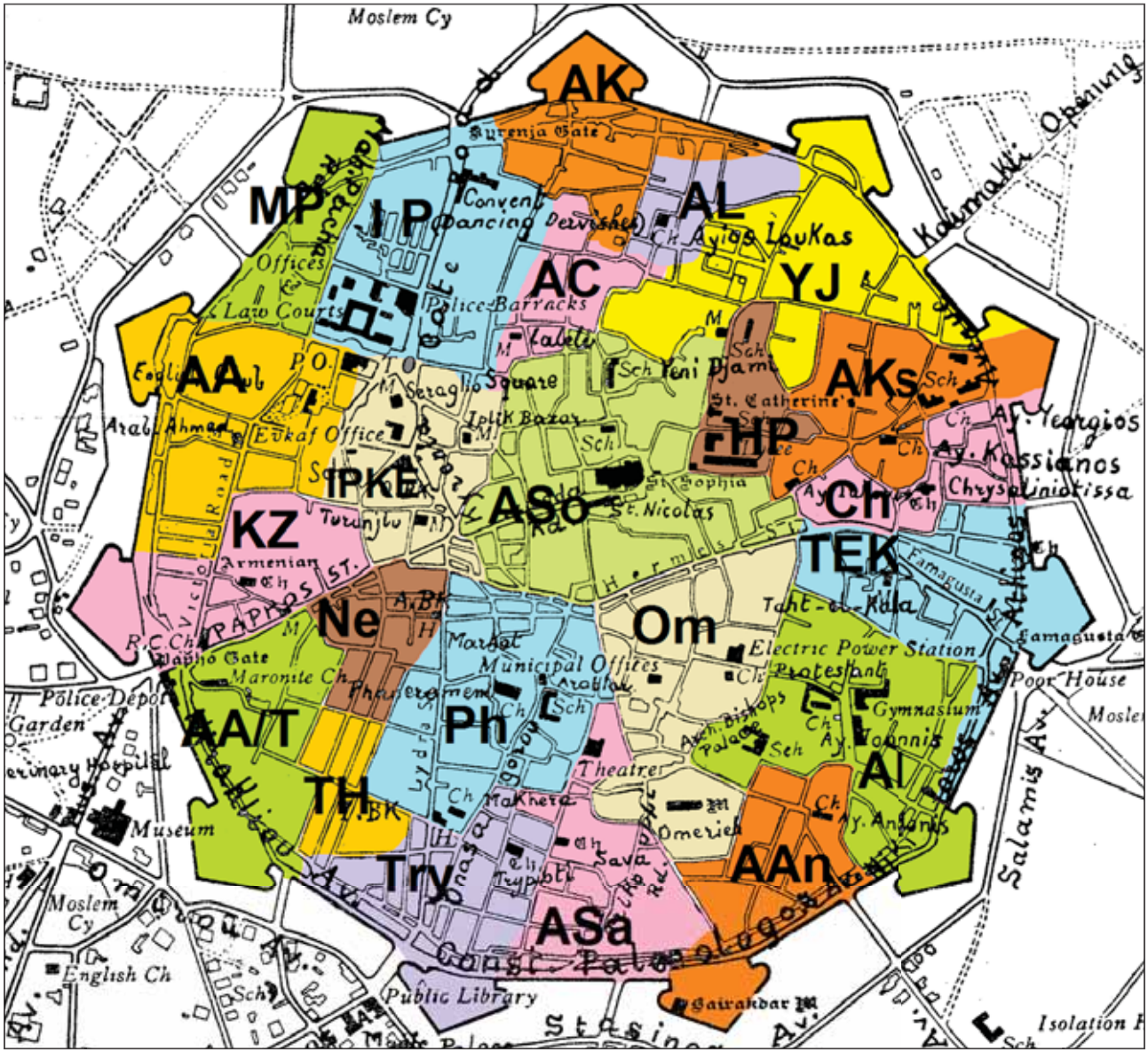


Fig. 8.03



Historical city districts *Fig. 8.04*

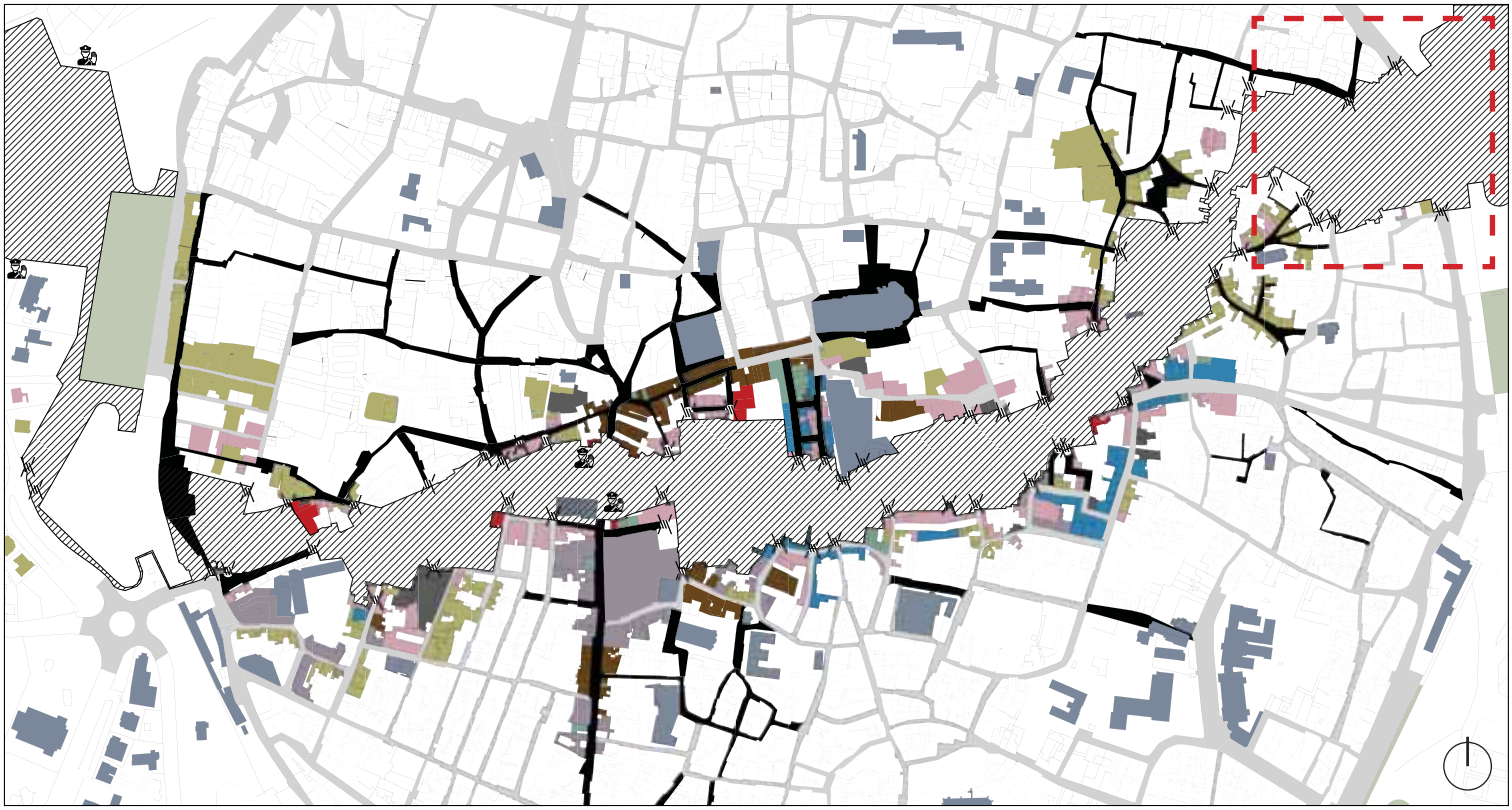


Fig. 8.05

Georgios). It is inside the buffer zone between Greek and Turkish Cypriot districts, Chrysaliniotissa area in the south and Yeni Jami in the north. It is a large area filled by nature, as the area is abandoned and is currently monitored by the UN. The first school, was opened in 1923 as a female school, and two years later the male school was built. During the second world war, both schools remained temporarily closed. In 1942 both schools opened again and were in function as separated male and female schools until 1959. Since the “Bloody Christmas”-incidents, that have taken place in Nicosia in 1963-64 and caused

Fig. 8.06

the formation of the Green line, the schools have been abandoned and are still closed until today.[2] During 1964 - 1974 the neighbourhood of Ayios Kassianos was a “conflict” area, with a lot o violent incidents and kills between both communities. The scars of this violence are engraved by bullets and slogans on the exterior walls of the schools. The site is easily accessible by the main road (Athinas str. or Sehit Mustafa Ali Riza str.) from the east and towards the city centre through multiple narrow streets, which are closed by barricades and fences. In the northern part of the area, there is one school which is oriented to the north, while the other two schools are oriented to the south-east.

Fig. 8.07

Fig. 8.08

Fig. 8.09

Fig. 8.10

Fig. 8.11

Fig. 8.12

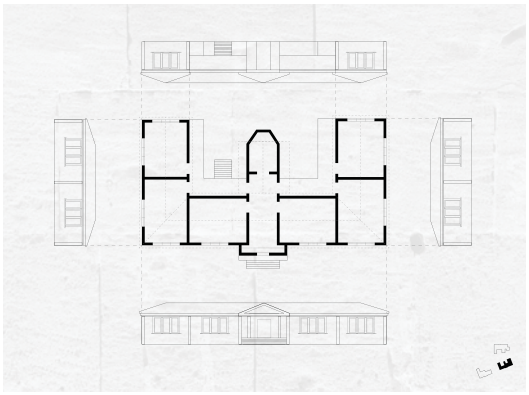
The schools

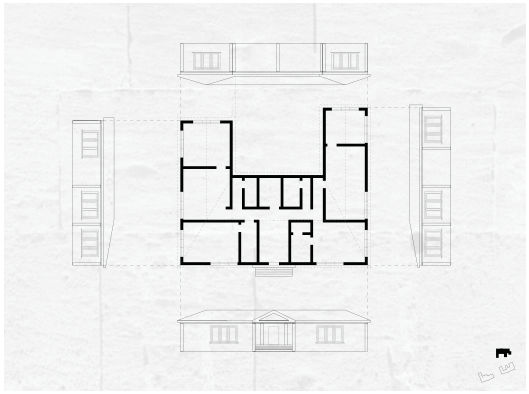
The schools before:
The buildings of the schools are built in neoclassical style as part of the Greek revival. The views are symmetrical and their dominant element is the main entrance with Hellenic columns, neoclassical pediments, acroterions and triglyphs. The columns, pediments, window frames and the view base are made of local stone known as “pouropetra”, while the exterior walls are coated. The neoclassical details are perfectly built. The arrangement of the spaces are in E-shape and are connected by a central corridor. This is a shape that has been used for many Greek schools during this period. Due to capacity-needs, the buildings have been changed by post-dated extensions.[3]

Ortho-photo of Chrysaliniotissa area in 1963

Fig. 8.13

Fig. 8.14





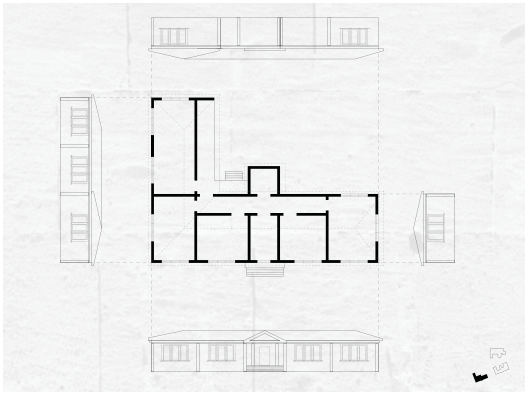


Fig. 8.15

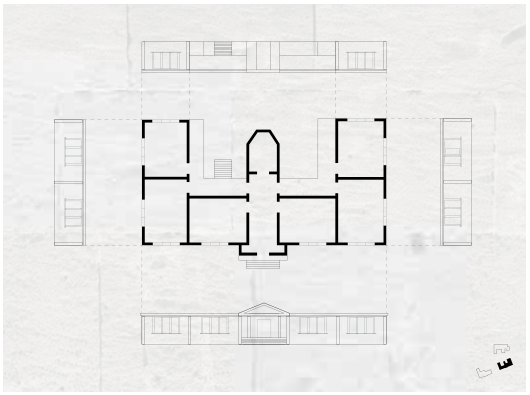
The schools today:

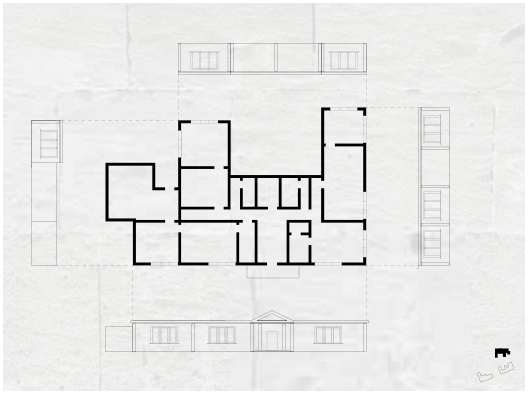
Nowadays, the schools are still standing as ruins, in bad condition. Their roofs are completely destroyed and their interior is covered by trees and bushes, as no man's hand has ever touched them for 44 years. Because of the height of the trees and due to the fact that the area is inaccessible, the schools are not visible from the main street. The "polemic" atmosphere is well represented by the condition of the exterior walls, by bullet-signs and slogans.

Ortho-photo of Chrysaliniotissa area in 2014

Fig. 8.16

Fig. 8.17





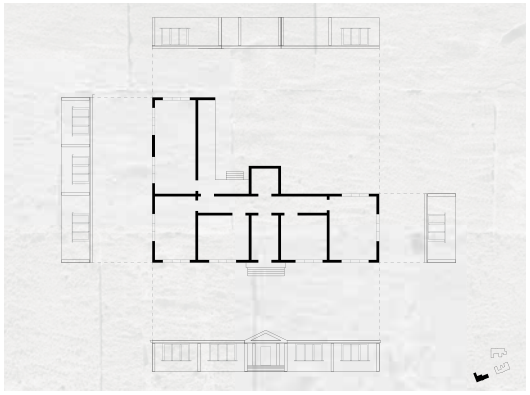


Fig. 8.18

The schools of tomorrow/Synthesis:

The nature:

As already mentioned, the nature of the island is a catalyst for this project, not only on a conceptual approach but also physically. Nature tries to cover the “injured” space and attempts to fill the “gap” between both communities. Wild trees and bushes, dominate the whole area of the green line and are multiplying year by year. Thus, each tree on the site is important and their position will affect the design process of the project. The aim is to maintain and protect as many trees as possible.

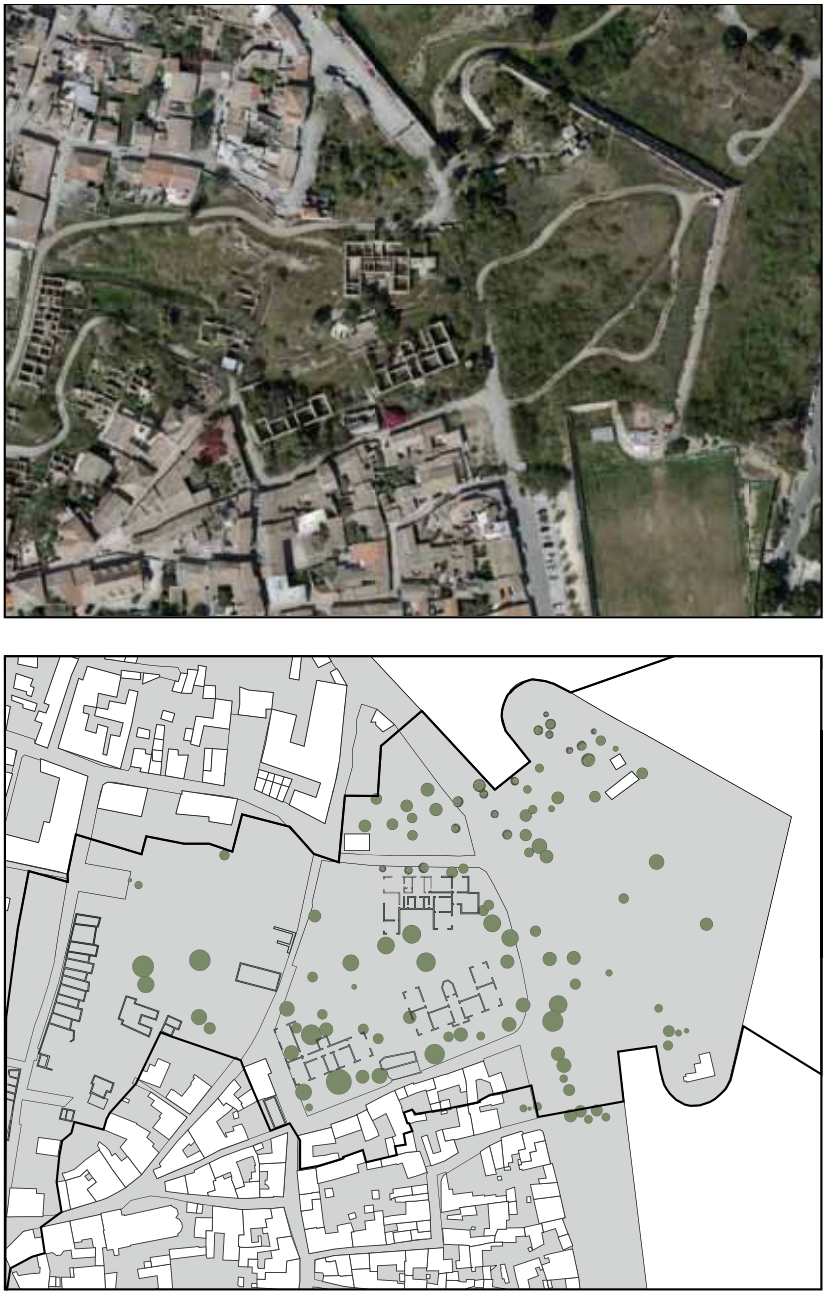


Fig. 8.19

The borders:

The program of the project will be enclosed by the existed main facades of each school and will be developed partially, according to each phase. The borders will fade out by each phase, until they completely disappeared.

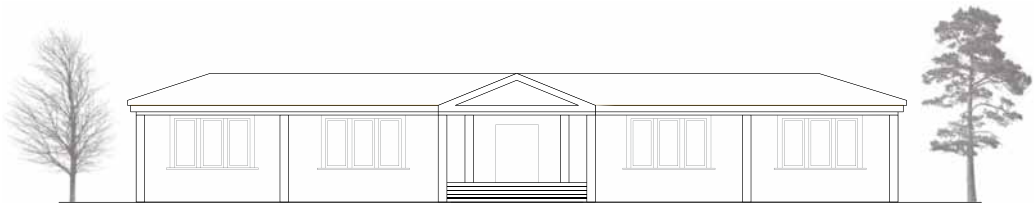
The borders will fade out by each phase until they completetly disappeared

Fig. 8.20

The facades:

The exterior walls, that are located in the northern and the southern side of each school, are important for the further development of the project. Due to the size needed for such a Centre and due to the bad condition of the walls, the existing main facades (entrances) of each school will be restored. The tragic history and the conflict's violence of the previous time are well represented on these facades. Their presence is invaluable and their condition is still reminding people the causes of the violence and the war. In order to respect their history and to keep the emphasis on their story, the new structure should be as "humble" and "invisible" as it can be. The rest of them, such as the western and the eastern exterior walls, as well as the interior walls, will be demolished and the recovered material, mainly local stone, will be reused for landscaping works etc. Thus, a structural system is required for the support of the remaining "free-standing" facades. Reinforced concrete piers will provide additional strength against wind loads, and earthquakes.

Fig. 8.22



1923-64

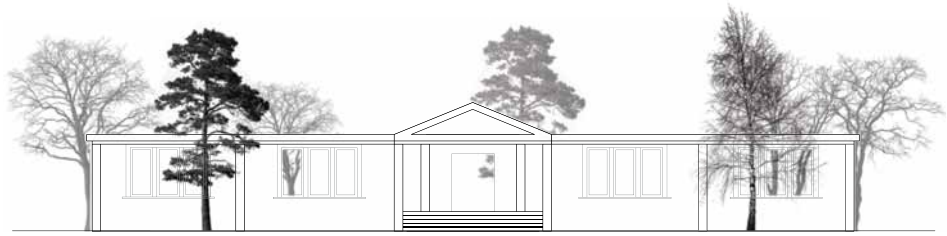
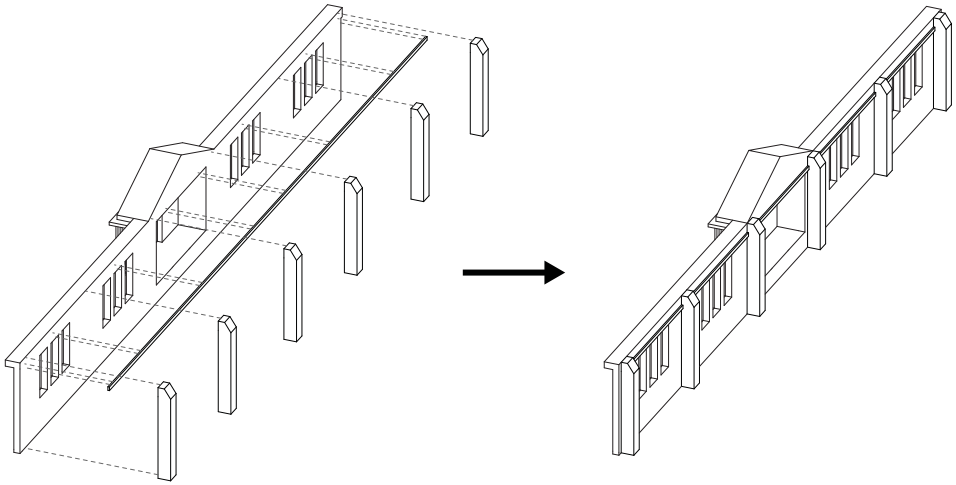


Fig. 8.21

2018

Fig. 8.23



Column supporters for the main facades

Fig. 8.24

The church:

Between the southern schools, is located a small Greek Orthodox church, which is today in a bad condition. Its massive stone walls are still standing, while the roof is partially destroyed. Due to the fact that religion was never a problem between both communities and because of the deep religious society in Cyprus, the renovation of the existing church and the construction of a mosque in the building site will bring additional advantages to the Centre. It will support the psychology of the patients on spiritual level and express the multi-cultural character of the Centre. The mosque will be opposite to the existing church in the northern edge of the site.

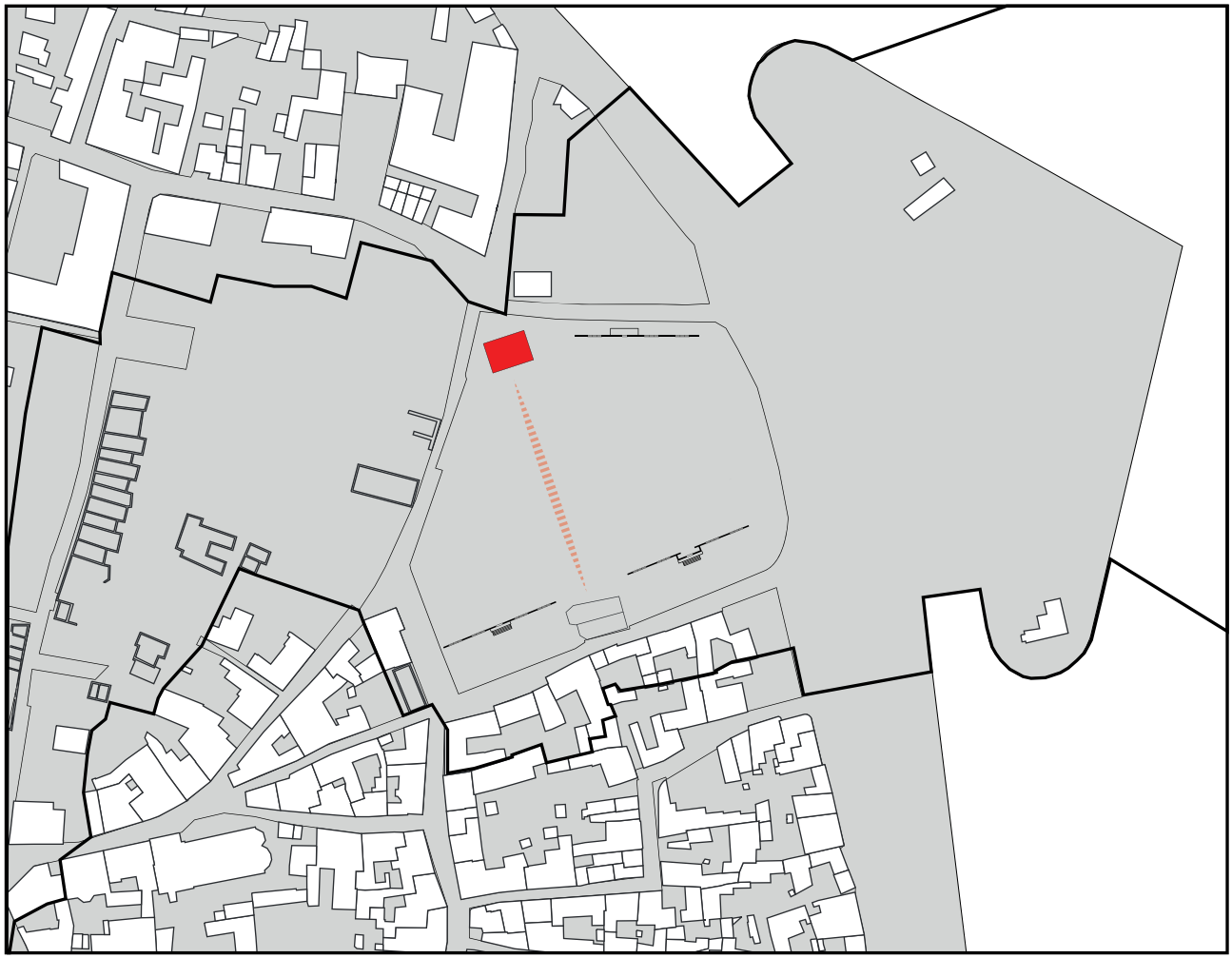


Fig. 8.25

The circulation:

The circulation axes on the site provide access to the Centre through multiple entrances or exits, which are located to each side of the building site. The two sides, east and west, are connected by a main walkway. Perpendicular to the main walkway, side walkways lead to the main facades. These spaces should be wide and permanent covered, in order to protect people during summer and winter. These covered areas should be developed in a way, in order to be perceived as the main entrances to the Centre, but on the other hand should be “gentle” to the existing facades. Moreover, the Centre can be accessible through multiple additional side entrances and exits all around the site. The position of the existing trees affect the formation of the walkways, as it is important to preserve and protect as many trees as possible.

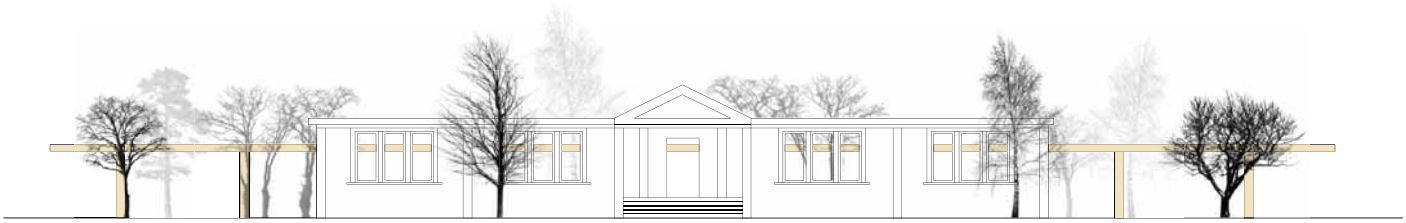
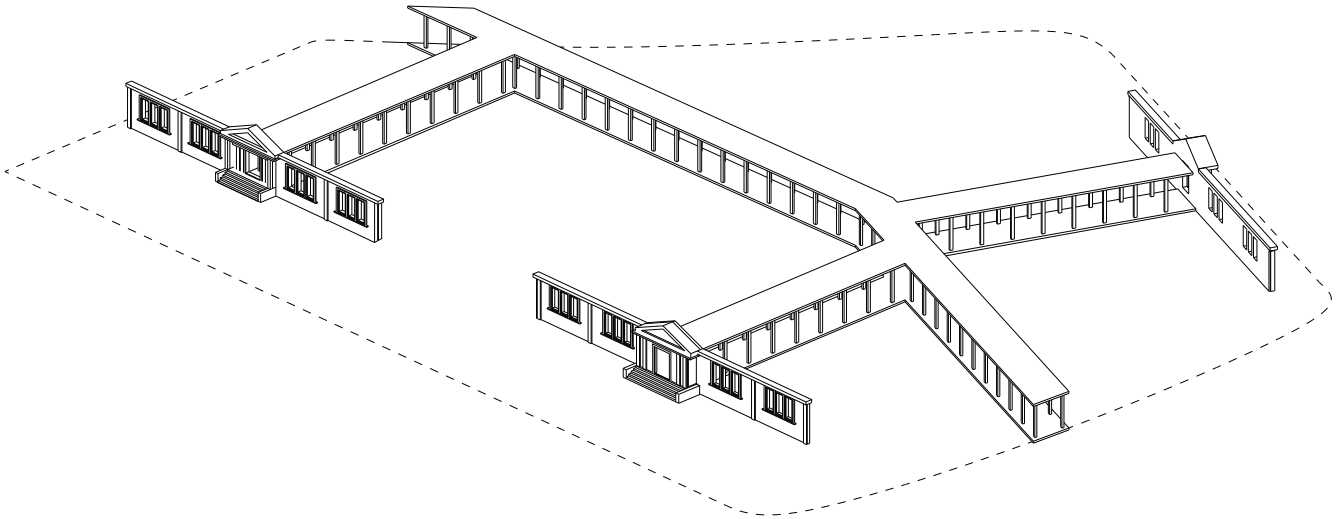


Fig. 8.26

Fig. 8.27



The primary walkway as permanently covered area

Fig. 8.28

The Genius Loci:

“Ο βιος εν Ελλάδι είναι υπαίθριος (..) το κλίμα μας δίνει όλες τις δυνατότητες να ζούμε άνετα στην ύπαιθρο, να κατοικήσουμε δηλαδή κάτω απο τον ανοιχτό ουρανό (..)”
“Life in Greece is outdoors (..) the climate give us the opportunity to live comfortable outdoors, to live under the open sky (..)”

Aris Konstantinidis, 1972 [4]

Fig. 8.29

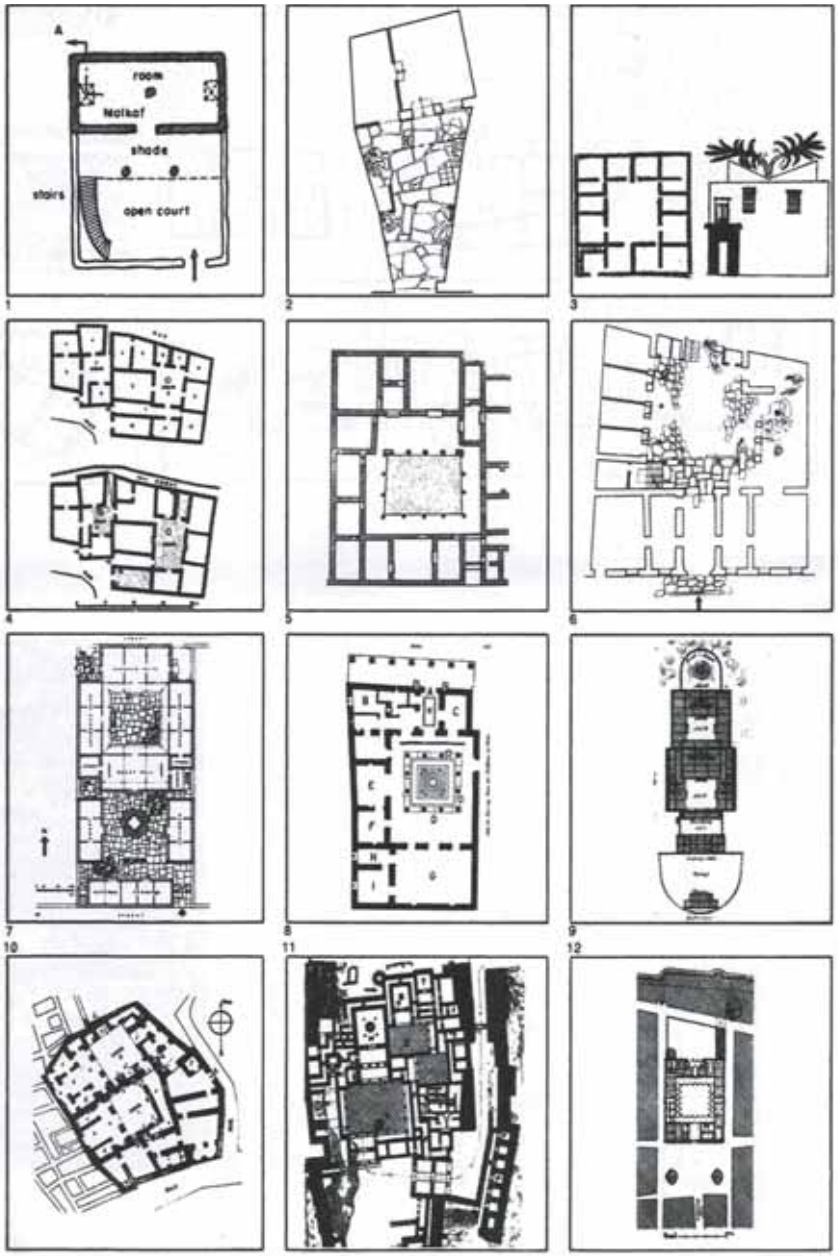
Fig. 8.30

Fig. 8.31

Fig. 8.32

The “transitional” spaces:

People from all over the world used to build their houses wisely according to their social needs, to their budget possibilities and most importantly, according to the local climate conditions and resources. In the In the mediterranean countries like Cyprus, where the climate is mild and “friendly”, vernacular, often anonymous, architecture organises the “inside” and the “outside” as a homogeneous space. In a way that the “inside” becomes the “outside” and vice versa. This is possible through “transitional”, often semi-outdoor spaces which stand between the “inside” and the “outside”, such as stoas, pilotis, pergolas, courtyards and covered areas. This approach reflects the outgoing Mediterranean mentality of the people as well.[5]



Aris Konstantidis, historical examples of transitional spaces in mediterranean countries

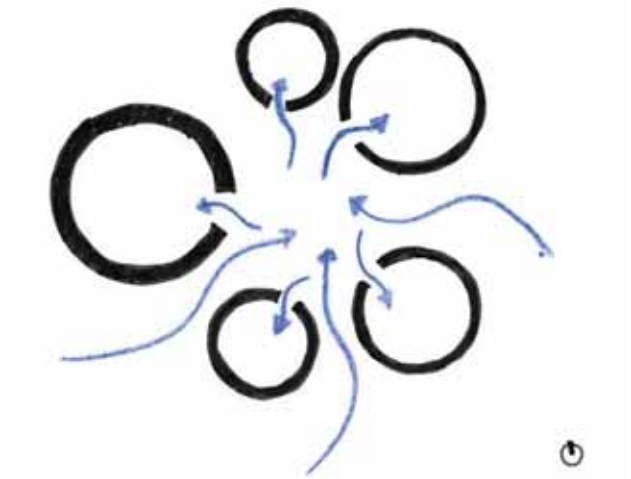
Fig. 8.33

People in Cyprus seem to build their houses similar to other Mediterranean countries and when at home, spend most of their time in those transitional semi-outdoor spaces, which offer shaded areas during summer and protection from the rain during winter. Following are some remarkable examples of each phase of history in Cyprus:

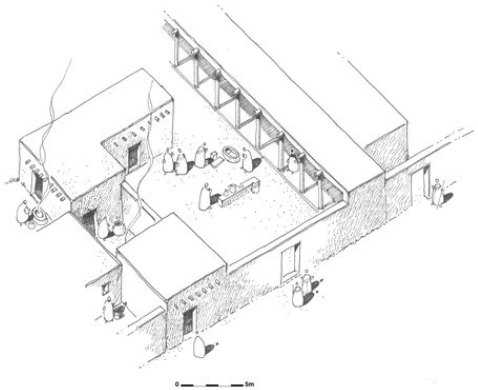
Neolithic age: Choirokoitia settlement

The settlement of Choirokitia is organised in small groups of circular buildings. Each building of is placed around an outdoor space (courtyard) and it is accessible by an entrance oriented in the yard. This allowed a better natural ventilation.[6]

Fig. 8.34



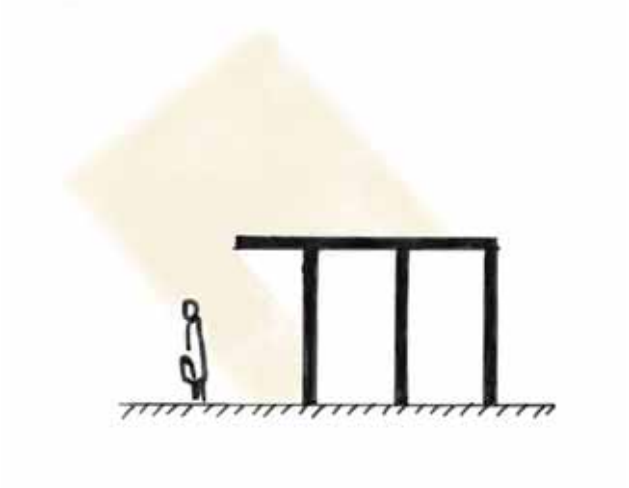
Choirokoitia settlement reconstruction *Fig. 8.35*



Kition settlement reconstruction *Fig. 8.36*

Chalcolithic age: Kition settlement

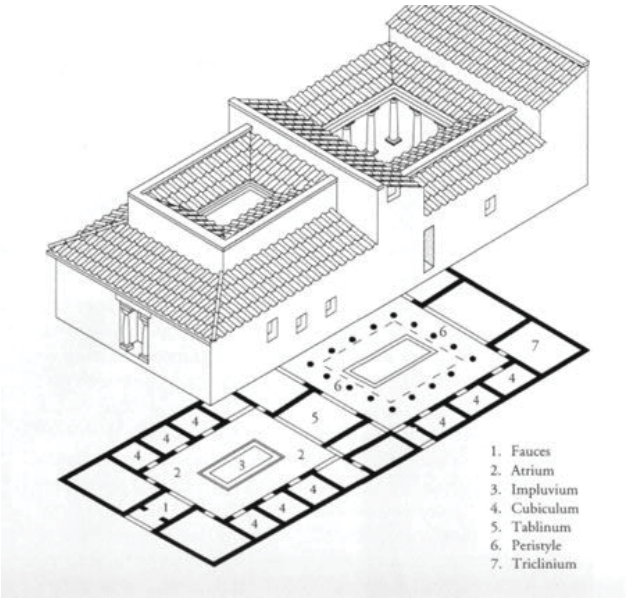
The significant characteristic of this period is the rectangular floor plan and the development of a semi-outdoor, covered space, which supported the natural ventilation and generated shaded areas.[7]



Kition settlement principle *Fig. 8.37*

Hellenistic period: House in Pompeii

Similar examples which were built during the hellinstic hellenistic period, is the settlements in Pompeii. There is a significant separation between public and private open-air spaces inside the building.[8]



House in Pompeii reconstruction *Fig. 8.38*

Byzantine era: Portico and interior yard

A new building type appears mainly in the new capital of Cyprus, Nicosia. Houses are built on the borders of the building site. This new type formed narrow streets between the houses, which created shading areas on the street and for the buildings. The “portico” (entrance) was introduced for the first time on the island. The portico is a central space, which connects the exterior space with the internal yard. It allows natural ventilation and enough light into the house.[9]

Byzantine era: Interior yard *Fig. 8.39*

Byzantine era: Portico *Fig. 8.40*

Ottoman empire: House of Hadjigeorgakis Kornesios

During the Ottoman empire, the houses were separated in smaller buildings, made of cheap materials, such as wood and adobe. Bigger openings on the southern facade had been introduced as well, which offer better internal ventilation.[10]

Ottoman empire: House of Hadjigeorgakis *Fig. 8.42*

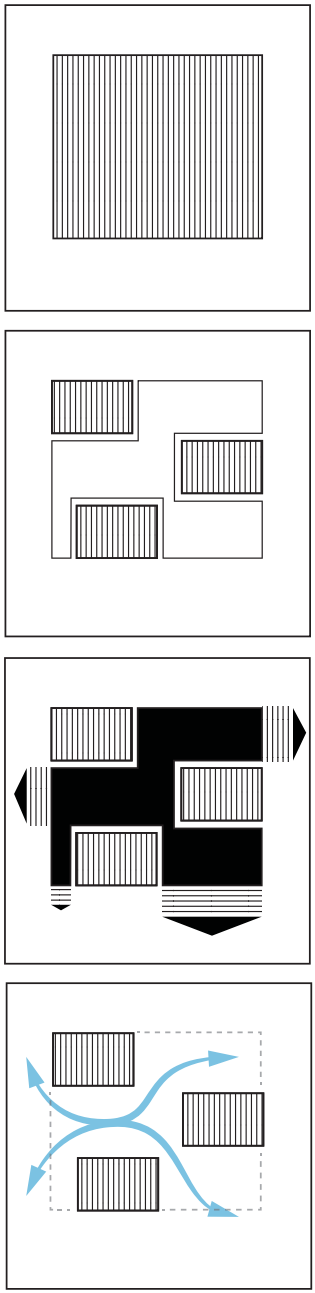
British rule: Pieridis museum in Larnaca

During this period, covered balconies in the south and new materials, such as reinforced concrete and steel, had been used.[11]

British rule: Pieridis museum *Fig. 8.43*

The typology:

Life in Cyprus happens mainly in the outdoors. However, the existing schools have been developed in a neoclassical style, which does not reflect the Mediterranean building tradition and mentality. Their neoclassical floor plans led to the strict separation of the “inside” and the “outside”, offering no oudoor covered spaces. The development of multiple “transitional” spaces is important to Cypriots, as they find the outdoor covered areas more attractive. The space between the existing school facades and the main walkway, are seen as a courtyard, which will be defined by small groups of buildings and internal connecting axes. The development of small groups of buildings, it will allow to the project multiple advantages; such as better natural light and ventilation, common outdoor spaces/yards between the buildings, and pleasant and friendly atmosphere for the users.



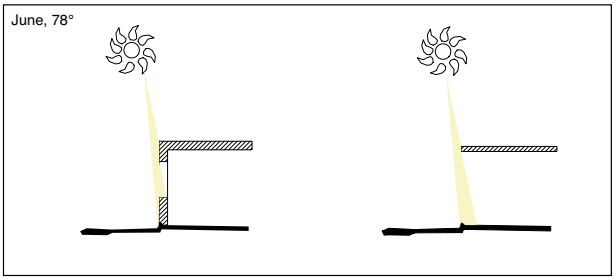
The main typology of the existing neoclassical schools

The new typology

Pavillions will define the outter space

Natural ventilation and daylight

Fig. 8.44



Solar position in Nicosia[13]

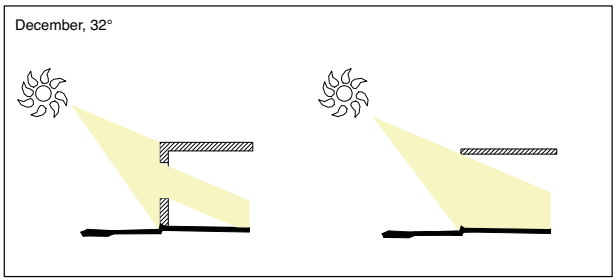
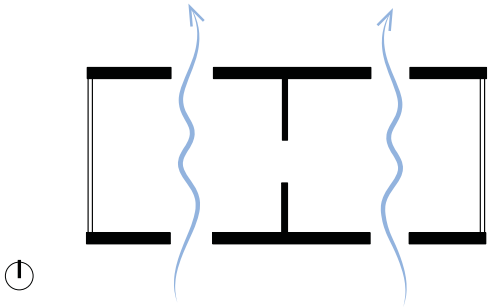


Fig. 8.45

The daylight and the natural ventilation:

Since antiquity, people have been trying to idealise their living conditions by dealing with the physical attributes of the environment, such as the sun and the wind. The main source of lighting was the natural daylight. Because of the orientation of the buildings and through semi-outdoor spaces, the sunlight was well regulated during summer and winter. Light was ensured by the openings of the building as well, such as doors and windows. The suitable orientation for the openings is on the south side, because of the solar position and its angles. During winter, the sun moves closer to the horizon and the sunlight shines almost vertical on the facade (32° degrees in December). During summer the sun is higher and nearly parallel to the facade (78° degrees in June).[12] The exploitation of natural ventilation has been important as well. In Cyprus, the wind direction is often coming from the north-west. The south-west winds are cooler, thus southern openings offer more refreshing interior ventilation. Natural ventilation is more effective, when the wind changes its direction inside the building. The size of the openings in relation to their orientation, regulate this change of direction, as well as plants and bushes in front of the openings.[14]



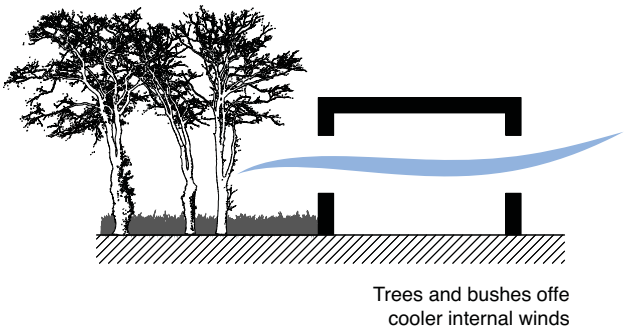
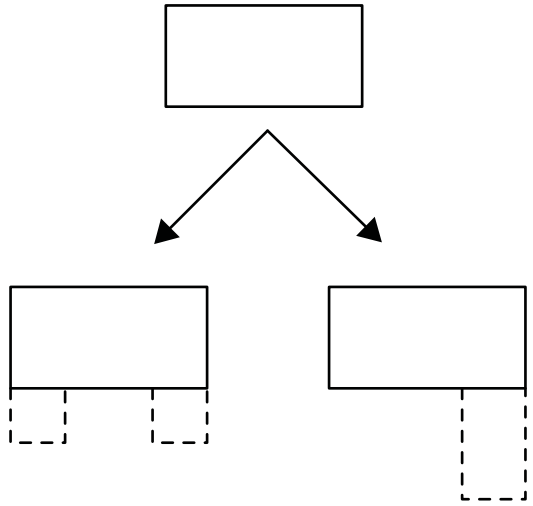


Fig. 8.46

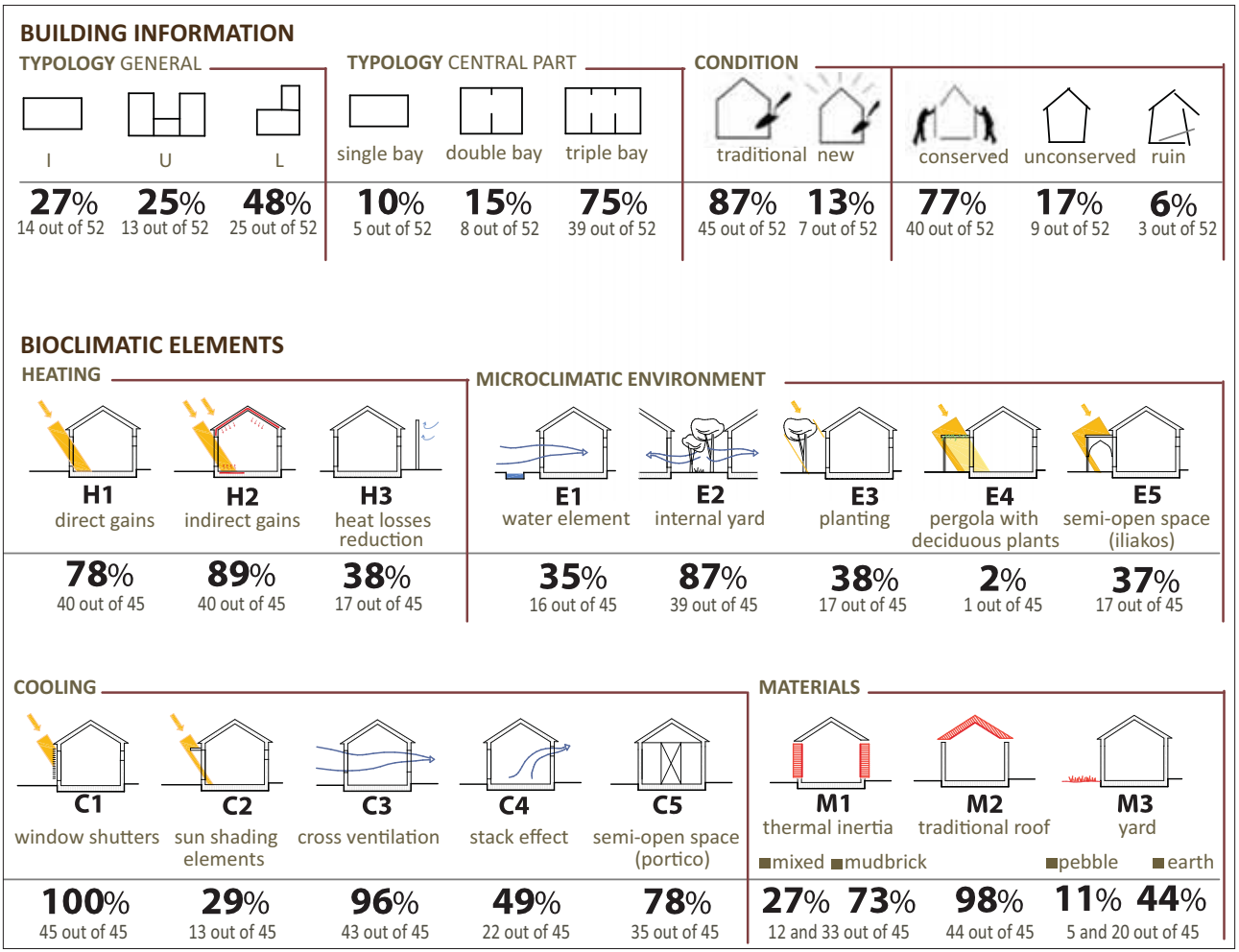
The “pavillions”:

The research project “Biovernacular”, which is funded by the Republic of Cyprus and the European Regional Development Fund in 2012, focuses on the neighbourhood of Chysaliniotissa and its results expose important facts about the bioclimatic characteristics of the vernacular dwellings of the area. The simplicity of the architecture corresponds to the local climatic conditions, which through innovative and “smart” solutions supports the environmental-friendly approach of each dwelling. The compact and simple form of the “I” shape typology reveals the origins of the main typologies of the buildings in the Chrysaliniotissa area (its evolution to “U” and “L” shape).[15] The “heating” and “cooling” strategies are counted on the southern orientation of the buildings and their openings. Its rectangular shape is defined by parallel walls. Southern oriented, external walls should be compact, due to thermal mass needs. Openings on those walls support the internal ventilation (cross ventilation). Walls in the east and west should offer natural light to the interior and should form the entrance for each pavillion.



The “I”-shape and its evolution to “U”- and “L”-shape

Fig. 8.47



Results from the research project "Biovernacular" for the Chrysaliniotissa area

Fig. 8.48

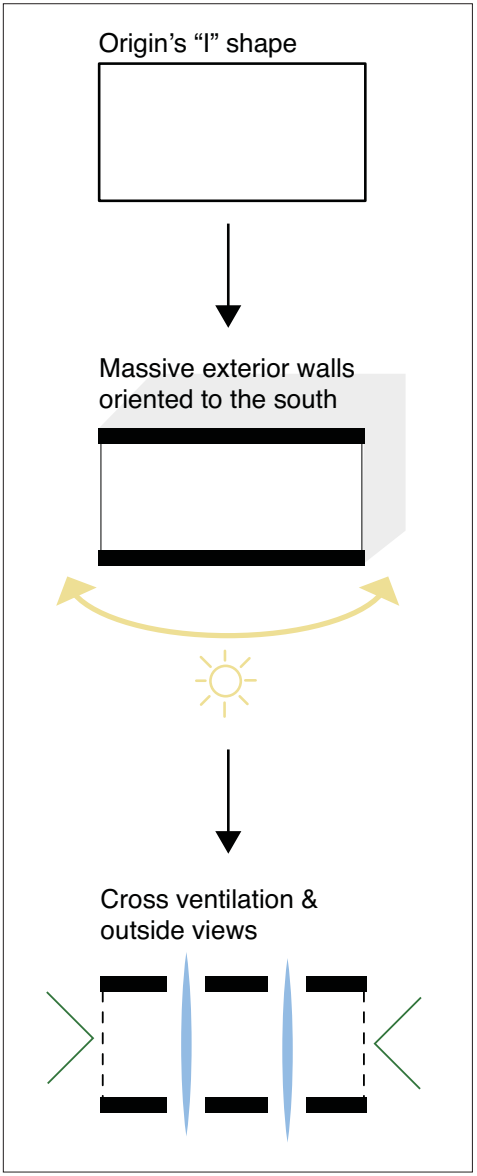


Fig. 8.49

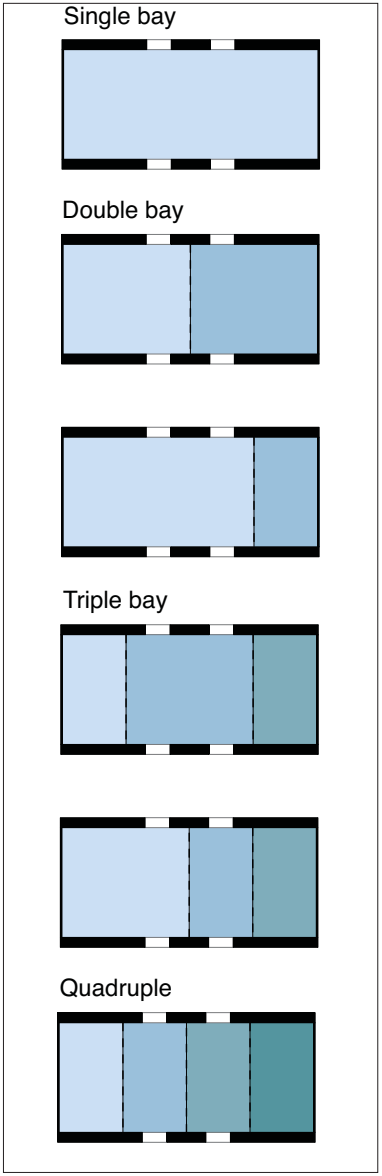


Fig. 8.50

The spatial plan:

According to the research mentioned above, the central part of the building volume can be differentiated to single, double or triple bay. Thus, individual buildings can "contain" multiple uses/ functions. Depending on the size needed and based on the relation between the uses, each pavillion houses different possible combinations.

FUNCTION	SIZE (m^2)
PHASE 2	
LECTURE HALL	180
OFFICES	120
CAFE	90
PSYCHOLOGY ROOM	60
KID'S PLACE	60
LOBBY/INFO DESK	40
PHARMACY	30
CONFERENCE ROOM	30
PATIENT'S ROOM	20
PC ROOM	20
PHASE 3	
LABORATORIES	80
OFFICES	40
CHECK-UP ROOM	20
LOBBY/FOYER	40
CONFERENCE ROOM	30
LIBRARY	20
STORAGE	20
OPEN-AIR ATRIUM	200

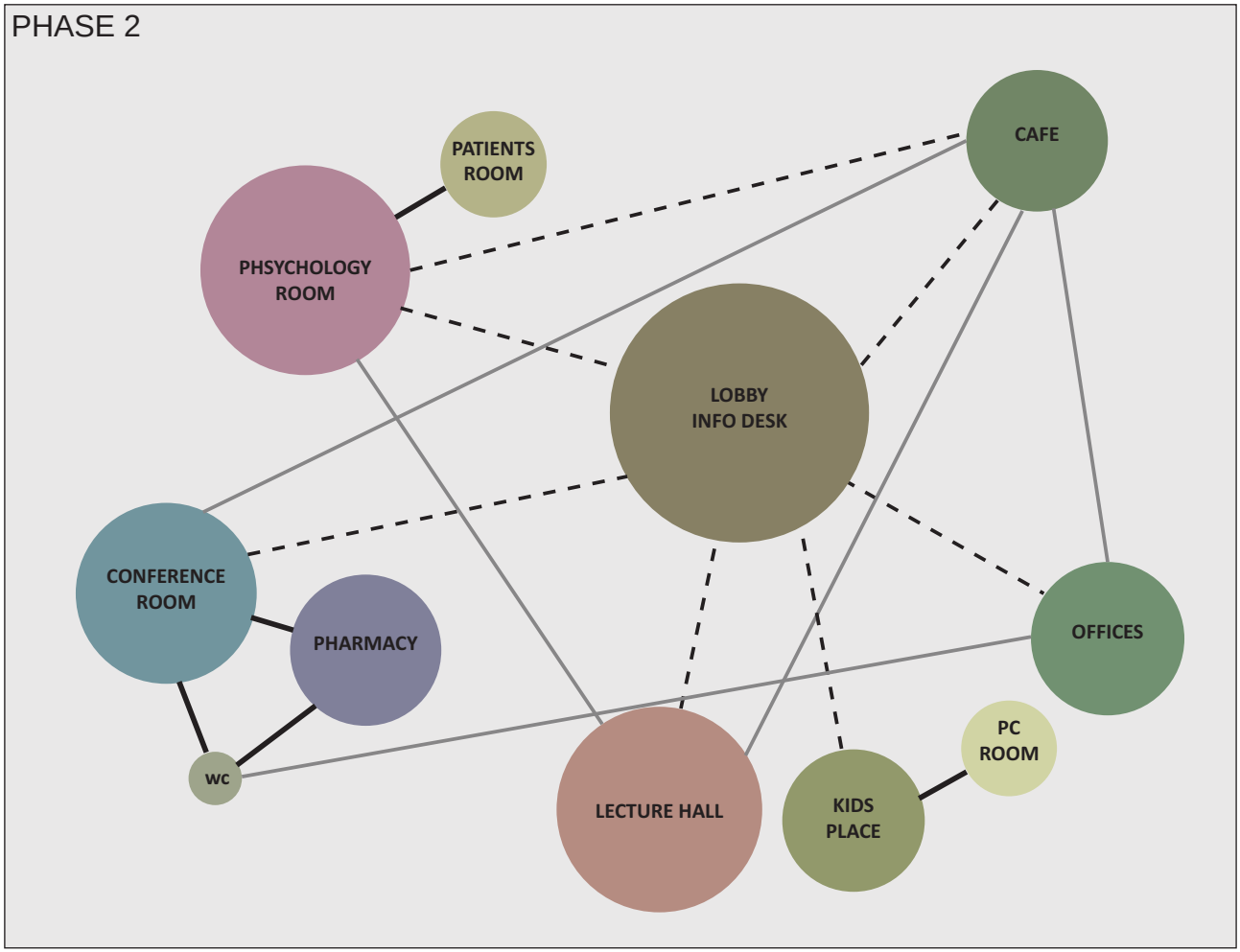

PHASE 2
PATIENTS ROOM
CAFE
PHSYCHOLOGY ROOM
LOBBY INFO DESK
CONFERENCE ROOM
PHARMACY
OFFICES
PC ROOM
wc
LECTURE HALL
KIDS PLACE
Combined in a pavillion
Permanent covered walkway
Temporarily covered walkway

Fig. 8.51

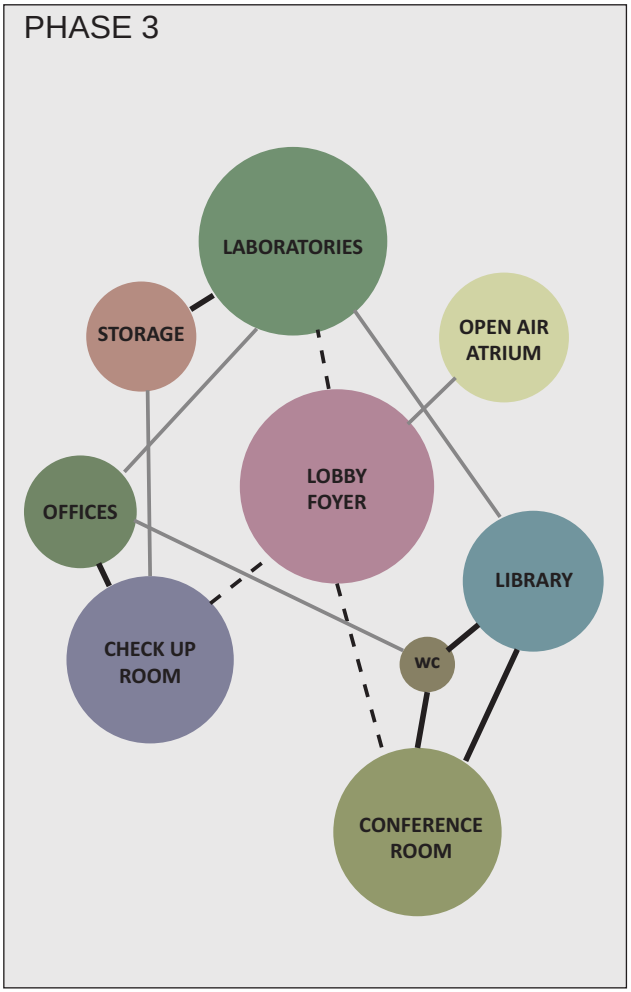

PHASE 3
LABORATORIES
STORAGE
OPEN AIR ATRIUM
LOBBY FOYER
OFFICES
LIBRARY
CHECK UP ROOM
wc
CONFERENCE ROOM

Fig. 8.52

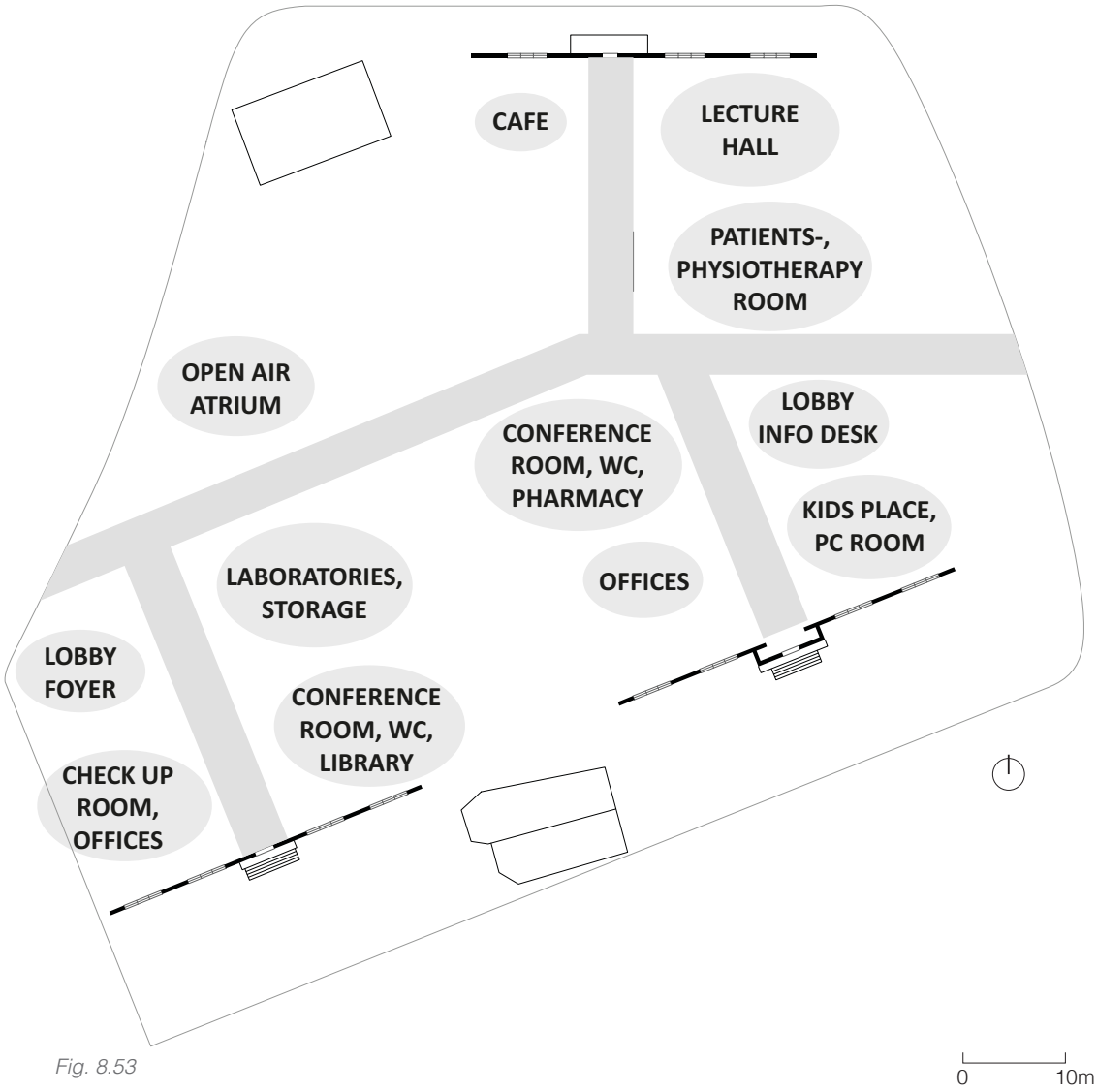

CAFE
LECTURE HALL
PATIENTS-, PHYSIOTHERAPY ROOM
OPEN AIR ATRIUM
LOBBY INFO DESK
CONFERENCE ROOM, WC, PHARMACY
KIDS PLACE, PC ROOM
LABORATORIES, STORAGE
OFFICES
LOBBY FOYER
CONFERENCE ROOM, WC, LIBRARY
CHECK UP ROOM, OFFICES
0
10m

Fig. 8.53

The In-between:

As already stated, each group of the pavillions forms *"transitional"* spaces ("negotiation" spaces) in order to give people the chance to come closer. Each pavillion should be placed around a courtyard and according to the southern orientation, the position of the existing trees and the covered walkways, in a way that it will support the living qualities (light and ventilation) to the maximum. The position of each pavillion defines the "negotiation" space, the space in-between. Through structural elements (wall extensions, outdoor furniture), this space should offer comfortable conditions and a familiar atmosphere, such as shaded areas and multiple possibilities for the people to meet. The research study reveals information about the strategies regarding the microclimatic environment as well, which are important for the development of the "negotiation" spaces. The existence of water elements, such as wells and shallow pools, as well as the watering of plants, will lead to cooler temperatures during summer. Almost each dwelling (87%) has an internal central courtyard. During winter, the surface materials (stone, earth) and the surrounding walls increase the urban heat effect and the interior temperature is higher, in comparison to the external environment. During summer, the courtyard is being shaded by plants and vegetation or by the surrounding buildings, in a way that the interior temperature is

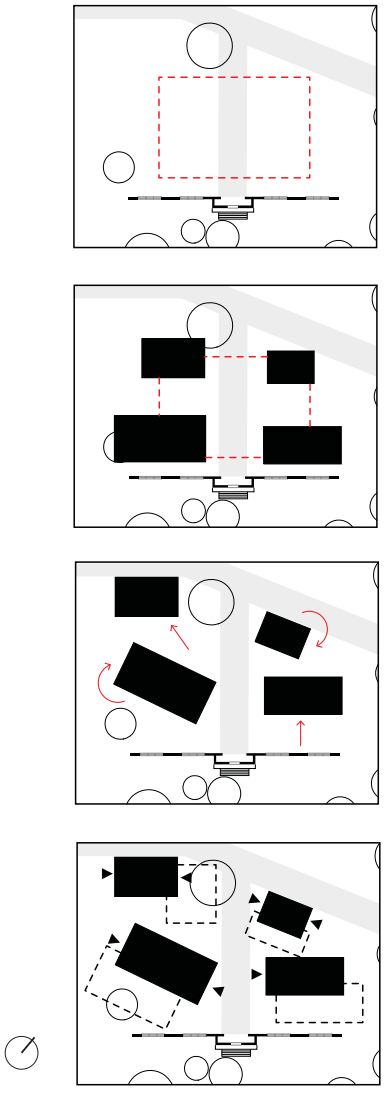
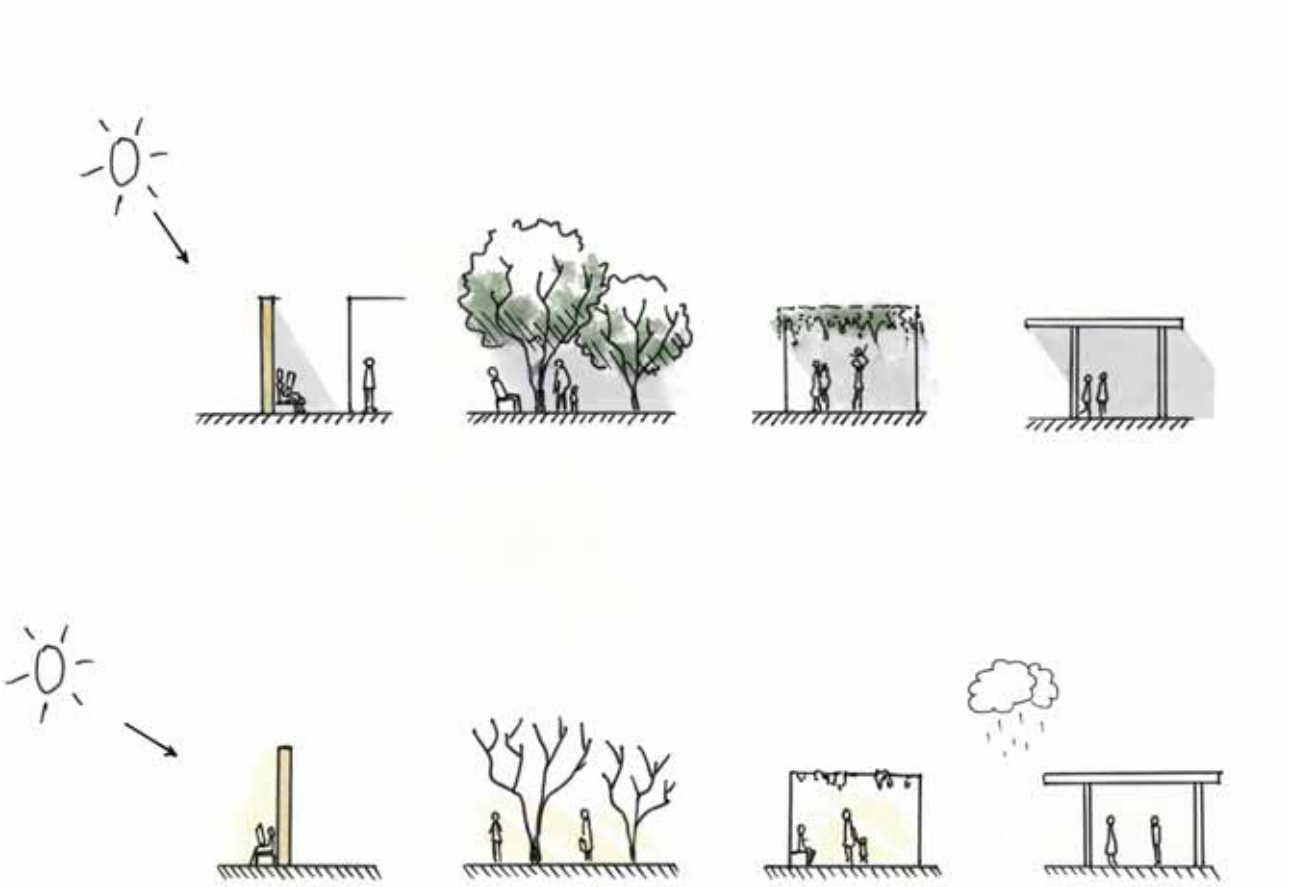


Fig. 7.54



Different types of the negotiation space (in-between) during summer and winter

Fig. 8.55

Fig. 8.56

Fig. 8.57

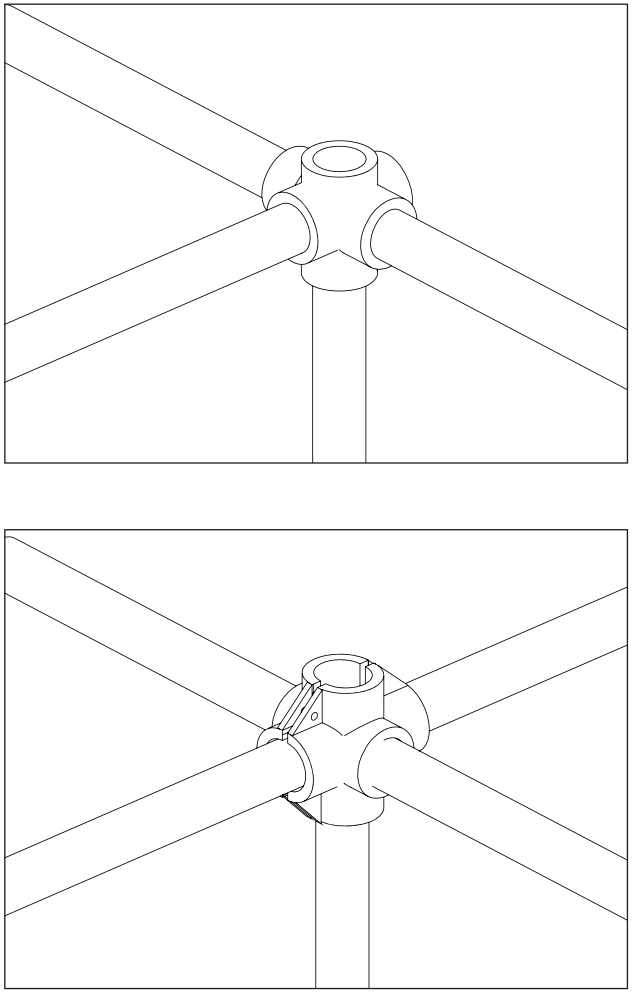
Fig. 8.58

Fig. 8.59

lower than the external environment. Despite the fact that pergolas in combination with climbing plants are widely common and popular in rural settlements in Cyprus, only a few cases have been recorded in Chrysaliniotissa area. This is because of its urban character, the small size of the courtyards or probably were removed throughout the years.[16] However, due to traditional, ecological and aesthetical reasons, the integration of vegetation and plants for shading, will be part of this project. Shading through plants has a better contribution to the improvement of thermal-comfort contributes than any other artificial shading system. It is a natural shading system that makes the outdoor space more liveable during summer and winter. Horizontal shading, such as pergolas with deciduous climbing plants, must have southern orientation, while trees and bushes are preferable in the south-east or the south-west side.[17]

Fig. 8.60

Fig. 8.61



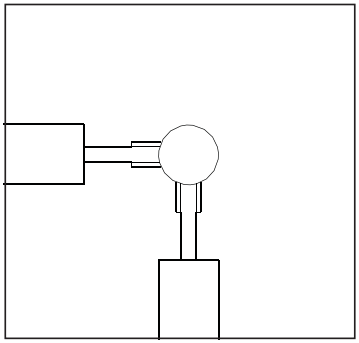
Typical traditional steel joints *Fig. 8.62*

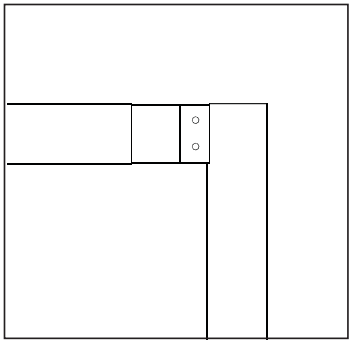
Nicosia: Example of light structures with climbing plants for shading in urban public spaces. *Fig. 8.63*

According to the ministry of agriculture in Cyprus, suitable deciduous climbing plants for exterior use in Cyprus are mainly; the Vitis vinafera (Grapevines), Campsids (Trumpet creeper), Ampelopsis (Peppervine) and Clematis vitalba (Traveller's joy).[18]

Clematis Vitalba (Traveller's joy) *Fig. 8.64*

Campsids (trumpet creeper) *Fig. 8.65*





A self-supported light structural system has been developed based on the traditional method and materials.

Fig. 8.66

The local traditional building materials:
The local traditional building materials are adobe in form of mud bricks and local stone for the exterior walls, marble or concrete for the floor and wood, loam, reeds and straw for the roof.

The floor: In traditional dwellings, the floor is nowadays mainly covered by marble tiles or a layer of concrete. Historical examples have shown that loam was used as floor cover and its maintenance happened once a year.[19]

The exterior walls: Adobe, in form of sun dried bricks, was used for the building of the walls. Adobe was made by adobe-makers or “plittararies”. A mixture of loam and straw was poured into rectangular boxes (40x30x6cm) in order to dry there for few days. When the bricks were ready for use, they were transferred to the building site. Clay, lime and plaster were used as brick jointers. The width of the walls was between 40 to 50 cm thick.[20]

The roof: The roof was supported by wooden beams, which were placed parallel to the narrow side of the building. Reeds were placed horizontal and on top of the beams. A layer of plants or seaweeds (5cm) was covering the reeds, in order to protect them from humidity and to avoid thermal losses. A thin layer of clay and loam was on top, protecting the roof structure. The roof was approximately 20 to 25cm thick. The roof offers protection from sun and rain, and its flat surface was used as a sleeping area or

Fig. 8.67

as a surface for sun-dried fruits during summer. Due to erosion, the roof was maintained once a year, by a layer of mud or loan. At the perimeter of the roof, a thick parapet of mud was built, in order to protect the exterior walls from rain. Through openings and mud tubes, the raining water collected on the the roof was driven to the courtyard.[21]

Fig. 8.68

Fig. 8.69

Rammed earth wall surface *Fig. 8.70*

Earth, as building material:

Earth was one of the most prevalent traditional building material in Cyprus. Earth, as a building material, is referred in scientific terms as loam, which is a mixture of clay, slit and sand. The technique of handmade unbaked bricks (mud bricks or adobe) was common on the island. It was provided by nature, was locally available and owned excellent insulation properties and heat storage capacity, which reduced the energy consumption of buildings.[22] Despite its multiple advantages, earth is not used any more as a building material. The lack of scientific knowledge about the material and its specialised technicians, as well as the fact that people tend to perceived it as an old-fashioned, antiquated material, mainly used by poor people, are some of the reasons that earth is not popular in the building sector in Cyprus. However, earth will be re-introduced in the project, as a contemporary building material, which will provide ecological, economical and aesthetic benefits. Nowadays, earthen walls are stable, durable, weather-resistant, earthquake-proof and fire-resistant. Contemporary building techniques, such as mechanised rammed earth technology is used in many industrialised countries, where high standards of thermal insulation are not required (U-value for exterior walls in Cyprus = 0,85 W/m^2K)[23]. In comparison to the other techniques, rammed earth walls have shown lower shrinkage ratio, higher strength and longer life (when compact and monolithic). With rammed earth technique, moist earth is poured into a formwork, in layers of 15cm thick and then compacted by ramming. Common formwork systems, used in concrete technology, can also be used for rammed earth.[24]

Fig. 8.71

Built references:

Concerning the rammed earth technique, the work of Martin Rauch has been inspiring. His innovative ideas and his architectural experience highlight remarkable applications of rammed earth technique. Haus Rauch (2007) is an example of a house that has been built, without any harmful substances to the building site. A total of 85% of the building materials have been excavated directly from the building site. The 45-cm-thick rammed earth walls are built of excavated material, which was sieved at the nearby workplace and transported back to the site.[25] The strips of clay bricks, between the typical clay layers, stabilise visually the building structure by creating interesting light and shadow effects at the same time.[26] The interior atmosphere created by the rammed earth walls and floors, is notable in his projects, such as the House in Flims (2011) and the Cinema Sil Plaz (2010). The compatibility of loam with other building materials, such as reinforced concrete, wood and steel are revealed in the Sportsanlage in Sihlhölzli (2002), the Ricola herb Centre (2014) and in House in Cardinal-Schwarzenberg (2005). Multiple other projects, such as the Johnson-Jones Residence in Arizona (1999), by Eddie Jones, the Visitors building in Victoria (1997), by Burgess Architects and the Residence des Montes in New Mexico (2004), by One Earth Design have been inspiring as well, due to their structure, appearance, typology and details.

Fig. 8.72

Haus in Flims Fig. 8.73

Haus in Flims, interior Fig. 8.74

Cinema Sil Plaz

Fig. 8.75

Sportsanlage in Sihlhölzli *Fig. 8.76*

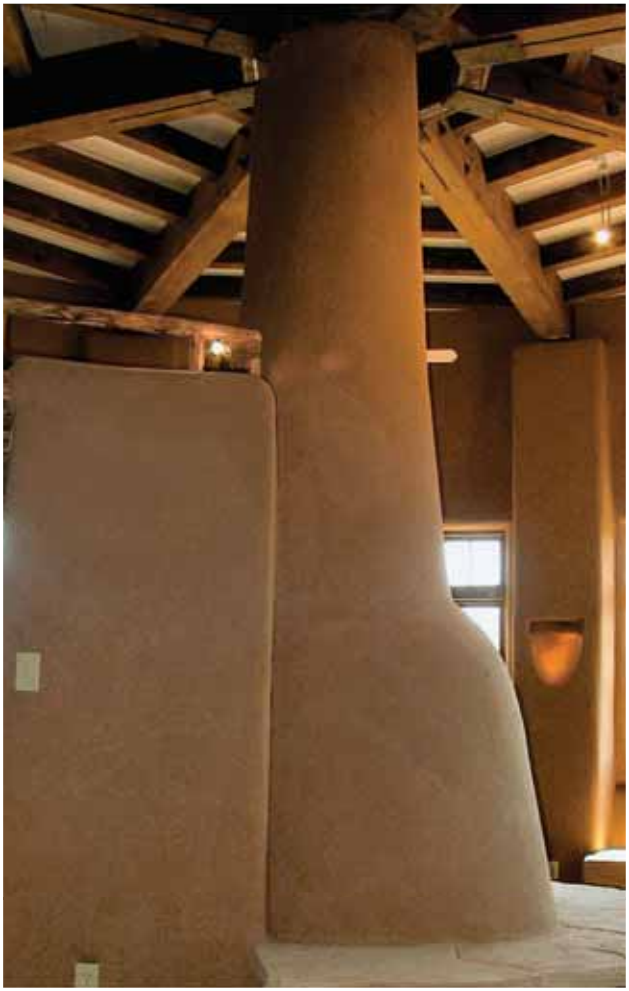
Ricola Herb Centre

Fig. 8.77

Sportsanlage in Sihlhölzli Fig. 8.78

Johnson-Jones residence Fig. 8.79

Visitors building in Victoria Fig. 8.80



Residence des Montes in New Mexico Fig. 8.81

Johnson-Jones residence *Fig. 8.82*

Gravel	Sand	Silt&Clay	Silt	Clay
2,4%	19,1%	78,5%	49,5%	29,0%

Fig. 8.83

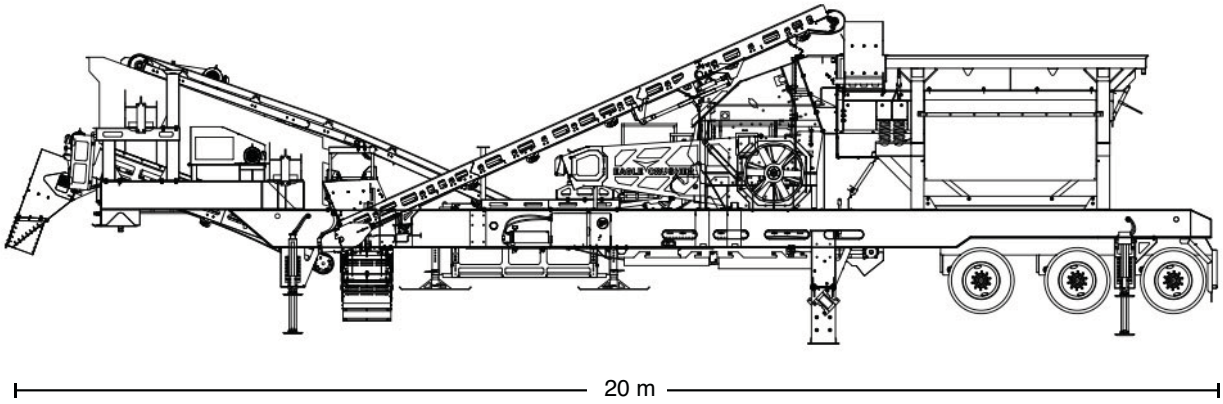
Local soil:

A sample of soil should be tested, in order to discover, if local soil is suitable as a building material. A test sample within Nicosia's walls has revealed that local soil consist of 2,4% of gravel, 19,1% of sand, 49,5% of silt and 29,0% of clay. The test was based on BS 1377: Part 2: 1990 with the following classification: Gobbles >60mm, Gravel 2,0-60mm, Sand 0,06-2,0mm, Silt 0,002-0,06mm, Clay <0,002mm. The Attemberg limits of the soil are indicators of the behaviour of the soil at different water consistences. The Plastic Limit (PL) is the water content between the plastic and semi solid states. The Liquid Limit (LL) is the water content at the boundary between the liquid and plastic states. The Plastic Index (PI) is the difference between the two limits. These limits for the local soil are as following: PL =20,5, LL =35,8 and PI =15,3.[27] According to the SIA's (Schweizerischer Ingenieur- und Architekten- Verein) "Regeln zum Bauen mit Lehm", each building technique requires a specific range of these limits. As appeared in the diagram (Fig.8.88), local soil is not suitable for building, due to the low content of gravel and sand. The recommended grain composition for the rammed earth technique is: 20-35% of silt and clay and 50-75% of sand and gravel (Fig. 8.85).[28] As a result, sand and gravel should be transported to the site, so the recommended grain content can be achieved. However, one of the advantages of building with loam on site in comparison with other materials, is that it is eco-friendly as it saves energy through its preparation, handling and transportation. In order to avoid extra transportation expences and extra environmental burden, the missing sand and gravel content can be produced on the site by using the recovered stones of the demolished school's facades. This could be possible by small sized

Classification based on
BS 1377: Part 2: 1990

Gobbles..... >60mm
Gravel.....2,0-60mm
Sand..... 0,06-2,0mm
Silt.....0,002-0,06mm
Clay..... <0,002mm.

Fig. 8.87

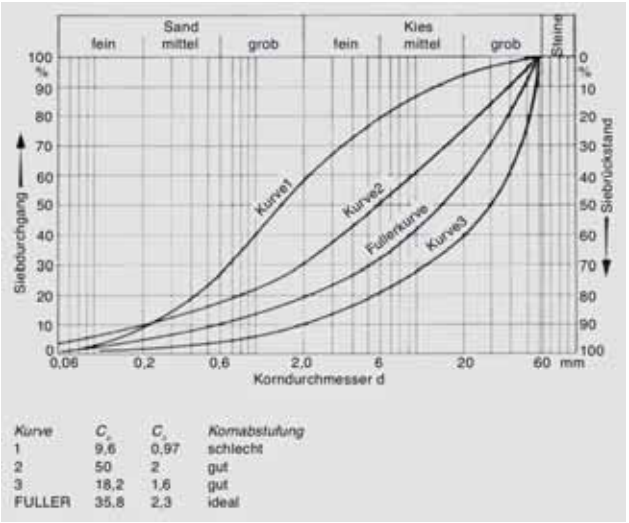


Mobile crusher example *Fig. 8.84*

portable stone crushers, such as Eagle crusher, stealth 500.[29] Thus, the local available material can be reused for building and at the same time, without extra transportation and environmental pollution. By adding the missing grain sizes to the soil, according to the "Fuller-diagram" (Fig. 8.86), the desirable grain content can be reached and therefore local soil will be used. Building codes, call for a characteristic

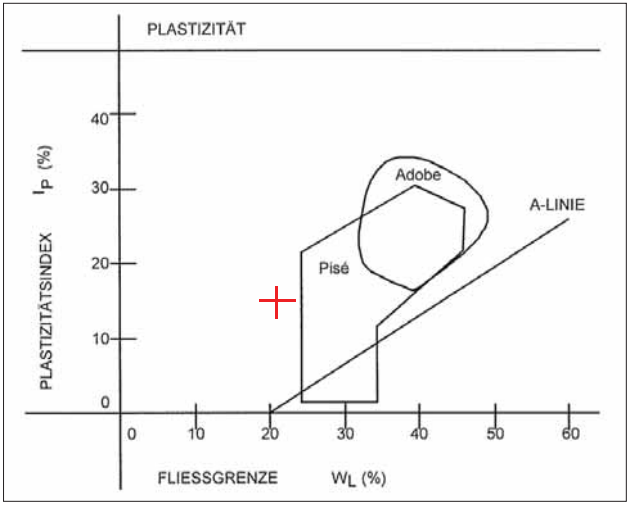
Nr.	Kornfraktion	Minimum [%]	Maximum [%]
1	Ton + Schluff	20–25	30–35
2	Sand + Kies	50–55	70–75

Recommended grain composition for rammed earth technique *Fig. 8.85*



Füller diagram *Fig. 8.86*

compressive strength of rammed earth walls, not less than 2 N/mm^2. The content of clay regulates the compressive strength of the soil, as well as additives, such as cement.[30] However, by adding cement, the benefits of clay, as a building material, are lost and the technique is no longer an “authentic” earthen building technique, but a poor, low quality concrete. The amount of local soil needed for the walls and columns (=350m^3), can be found by the excavation of the open-air atrium.



Plasticity diagramm *Fig. 8.88*

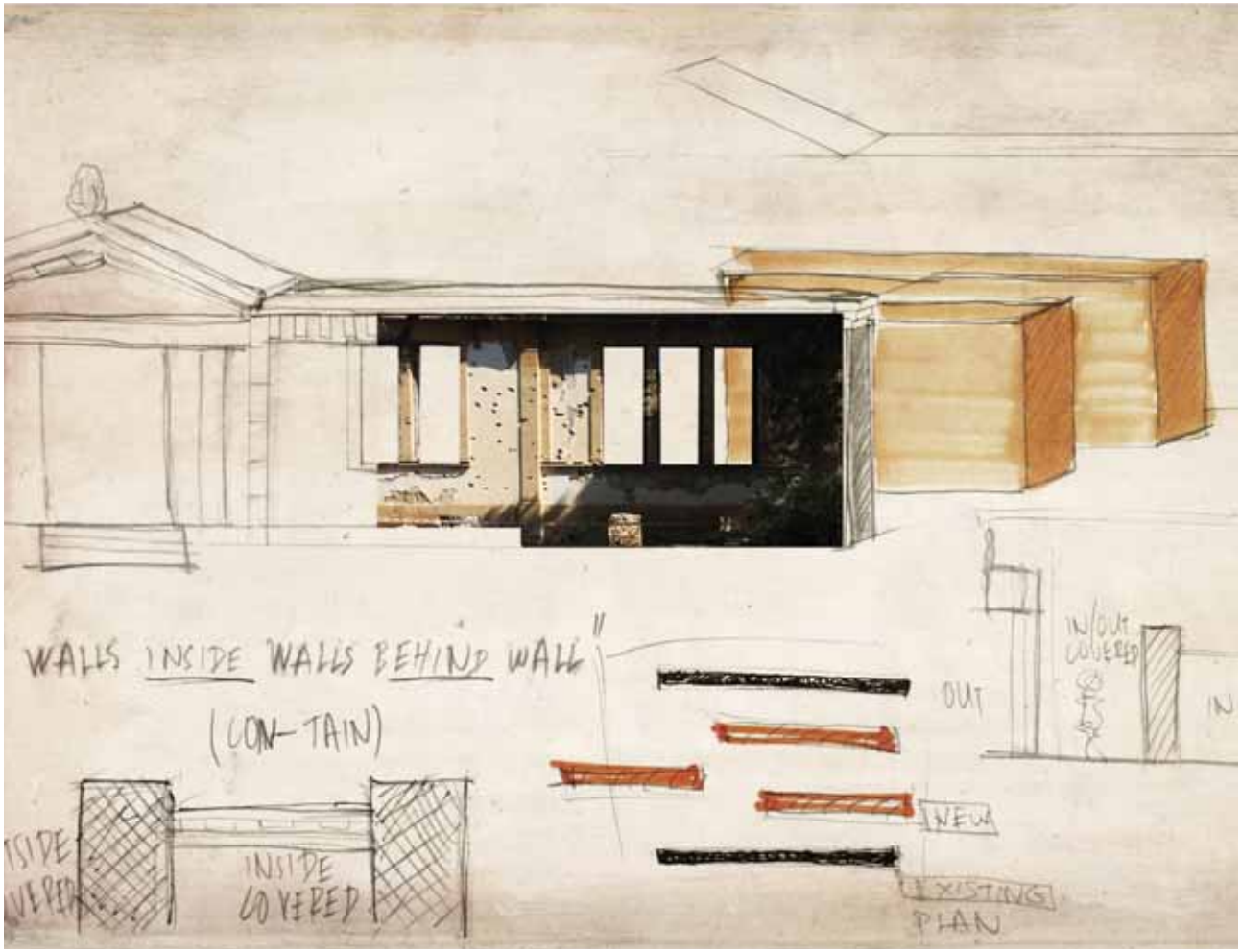
Thermal insulation:

The thermal insulation capacities of rammed earth walls cannot provide the levels of thermal insulation required in cold climates. For example, the U-value for a 30cm-thick rammed earth wall is about 1,3W/m^{2}K without extra insulation system.[31] A 45cm thick wall is required, in order to achieve a U-value of 0,85W/m^{2}K, which is the minimum U-value for exterior walls in Cyprus. However, the width of the wall should be between 49 to 61,5cm, in order to achieve the maximum possible wall height (=3,5m).[32]

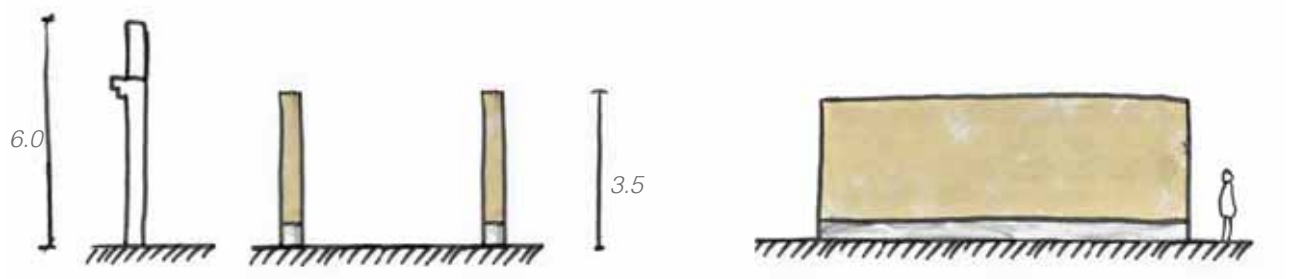
Test samples:

In order to turn the theoretical knowledge into practical and see how it actually works, I decided to build various rammed earth test cubes (10x10x10mm), three in particular, with different material dosages. have been developed with different attributes. This experiment took place in August and the soil was excavated from a field in Paphos in a depth of 30-40cm. It is important to mention, that the content of moisture for rammed earth is ideal right after the excavation. Then, I pass the soil through a sieve to remove the bigger stones and roots. Each type of soil can be determined through many tests, such as the “Jar test”. After sieving the soil, I moved on with the development of the formwork. The first sample I created was unsuccessful, as when I tried to ramm the soil, the formwork collapsed. The second attempt failed once again. While working on the collapsed formwork, I accidentally left the collected soil under the sun (38°C). However, I kept working with the sun dried soil, created the sample and removing the formwork three days later, I realised that the sample was not compacted. This experiment failed, due to lack of moisture. The third test sample was created at night (lower temperature) with an additional small amount of cement (2-3%). This was the only successfully implemented sample. As it is visible in the Fig. 8.89, the cube is not homogeneous, as small pieces of cement come into sight on the surface. The success of this sample was not because of the additional amount of cement, but because of the right content of moisture.

Test sample cube *Fig. 8.89*



"Walls inside Walls behind Wall" *Fig. 8.90*

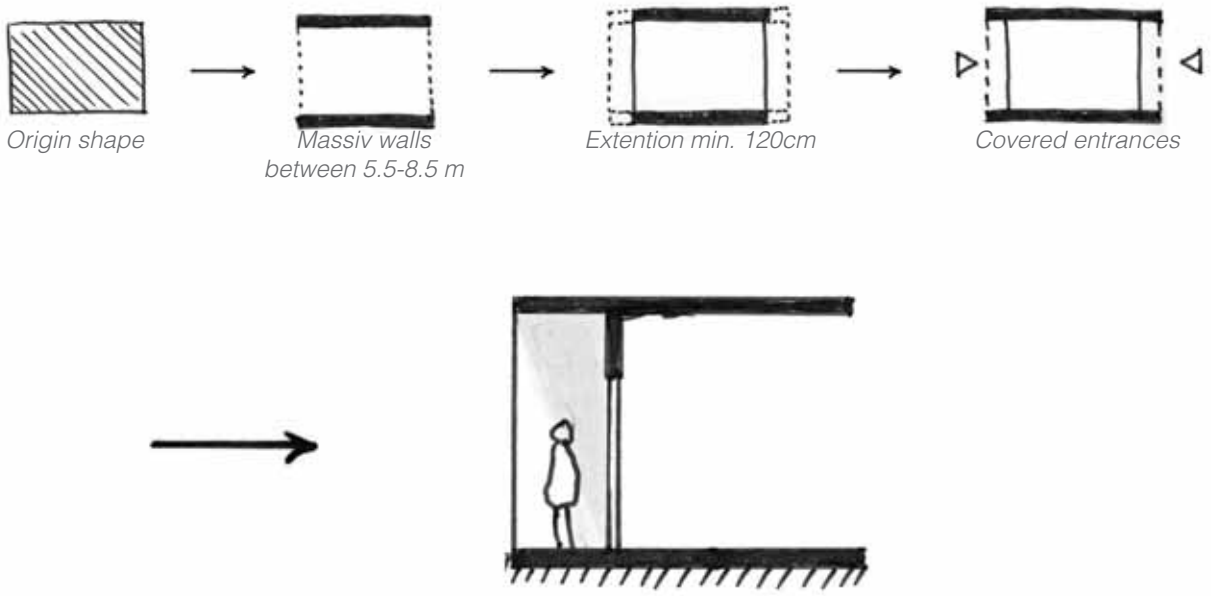


Wall height

Fig. 8.91

The pavillion-prototype:

As stated above, each pavillion varies, depending on the size needed, their orientation and the relation between them. Furthermore, the use of sustainable building materials, such as loam and wood, requires specific handling and method, according to the characteristic strengths and the physical limitations of each material. Despite these complexities, a pavillion-prototype is developed in order to reveal the main architectural principles, which each single pavillion follows. The interior space is defined by two parallel compact walls oriented in the north and the south, and by glass facades in the eastern/western side. The compact walls will be extended to the east and the west for miimum 120cm. Thus, an outdoor covered space is created, which highlights the entrance to the building and provides protection from the sun and rain. The distance between the walls is between 5.5 to 8.5 meters. The length is counted on the size needed for each function. The walls are compact and monolithic and appear as independent self-supported elements. Rammed earth walls require a plinth, made of water-resistant materials, such as concrete or stone.[33] This plinth should be about 50cm high, in order to protect the wall from raining splashes.[34] Reinforced concrete will be used for the floor, which should be maximum 2cm above the ground in order to be accessible for people with disabilities. As already stated, for a 60cm-thick wall the maximum height is 3.5m. The light roof could be supported by the walls, although with multiple disadvantages. The wooden beams should be inserted into the wall (24cm), which could lead to thermal bridges and this demands a more precise work, when working with rammed earth technique. An alternative solution to this, is a self-supported roof by rammed earth piers (minimum 24cm), which will not only support the roof, but are also laterally supports, allow no thermal loses, and act as space-divisions for the interior (Fig. 8.93).[35]



The entrance situation

Fig. 8.92

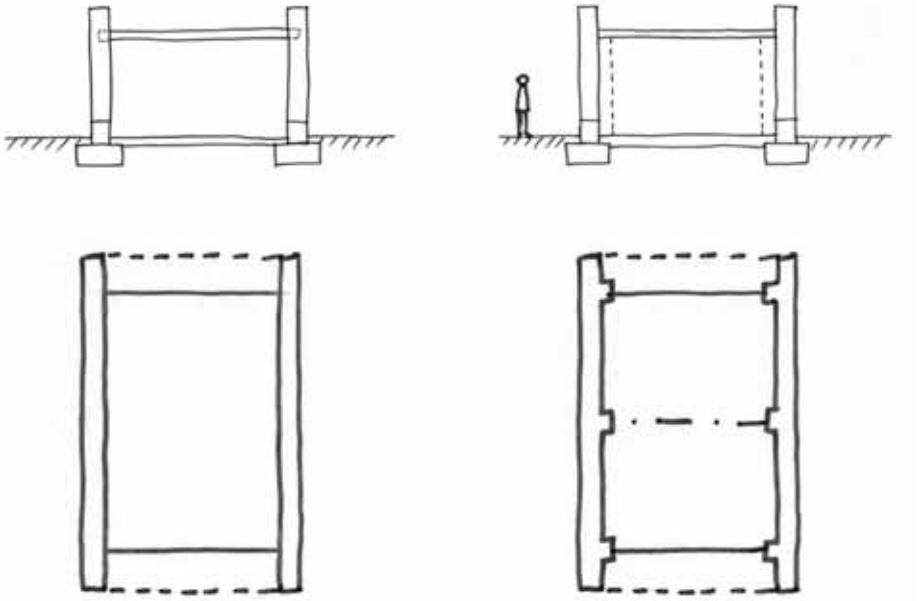
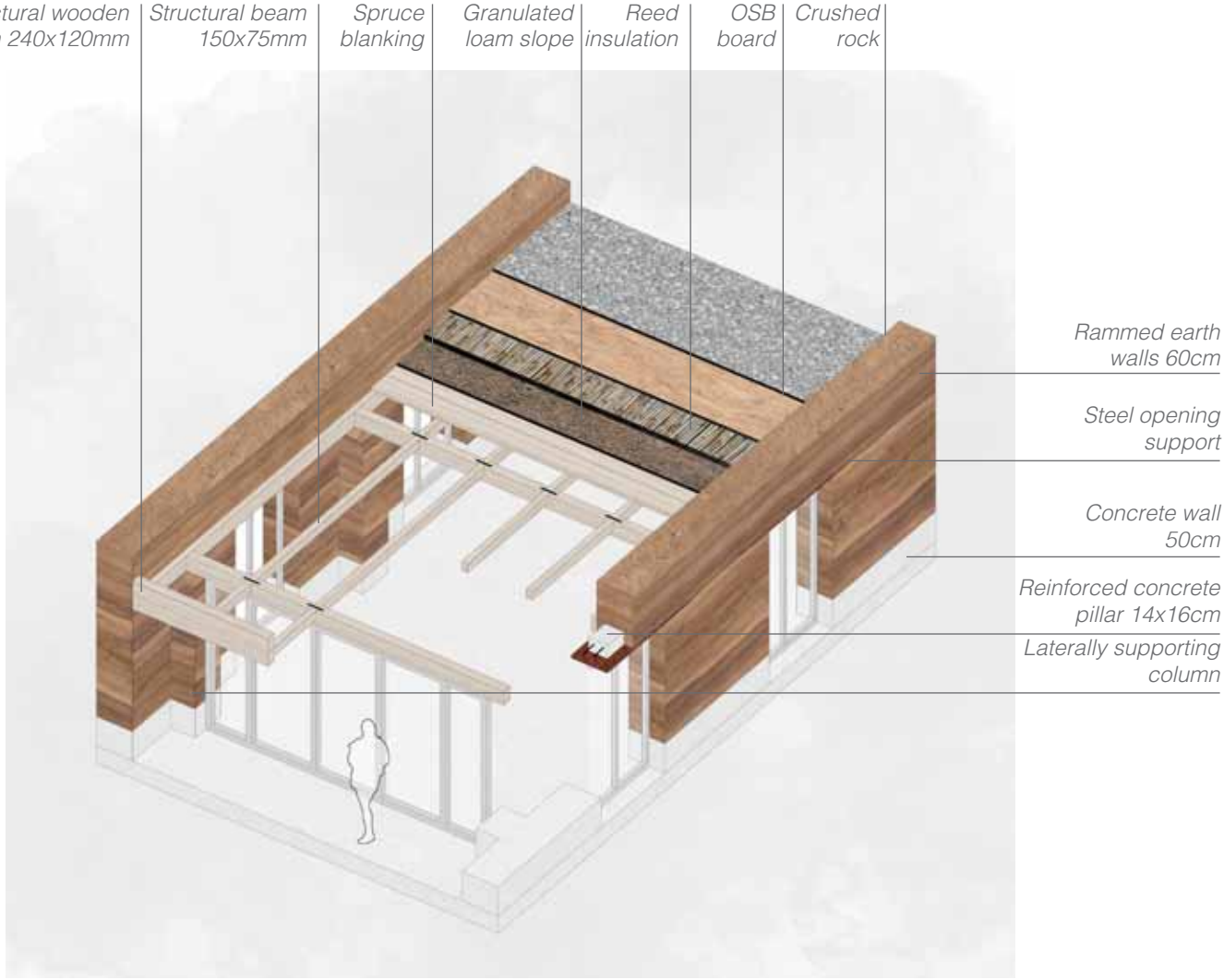


Fig. 8.93

+ simple frameworks
+uniform structural system
-no laterally support
-high precision in planing and impelmentation
-thermal losses between the roof joints

+columns as laterally supports
+space divisions
+no thermal losses
+indepented structural system of the roof
-precised frameworks
-higher material quantity



The pavillion prototype

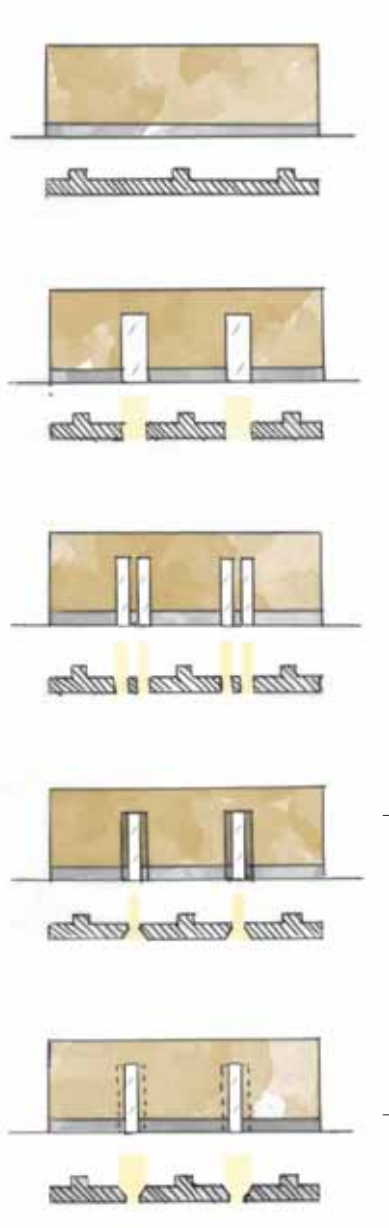
Fig. 8.94

Variation:

In order to add variation, a methodical system has been developed, which will fit to each pavillion according to their internal uses and functions. This system concerns the openings (windows and doors). There are three categories of entrances for the eastern and western side of the pavilions and three groups of openings, with multiple varieties for the southern and northern facades. The window-system will support the user's orientation inside the center as well, making each pavillio unique.

East/west opening types

Fig. 8.95



For smaller pavillions without high demand of daylight in the interior, highlighting the main entrances to the Centre: Lobby/ Info desk/ Reception

For uses with high demand of daylight, such as: Offices, Check-up room, Kid's place, Cafe, Library

For uses with high demand of privacy and daylight, such as: Psychology room, Pharmacy and Conference room, Laboratories

For uses without high demand of daylight, such as Storage, PC room or for uses with bigger capacity needs, such as the Lecture hall

List of facade openings

Fig. 8.96

Orientation:

The orientation of the users is an important topic for the centre and its functions, as each pavilion seems similar to each other. A better orientation can be obtained by landmarks (such as the church or the mosque), or by using a visual language, like colors. Additional to the developed window-system of the pavillions, the orientation will be even more effective by the colorful walkways (colorized trass-concrete for each side-walkway), as well as the matching colored outdoor furniture.

The colors of the earth, the nature, the sea and the sky

Fig. 8.97

Outdoor furniture:

The outdoor furniture along with the vines, are the primary elements for the formation of the exterior space, the space “in-between”. The furniture mimics the formal form of the pavillions and uses similar materials, such as trass-concrete and wood. Each area between the main facades and the primary walkway, represents each part of the centre, which can be defined by different colors, as already stated. Moreover, the outdoor furniture has another task, such as the orientation, which will be succeeded by those different colors.

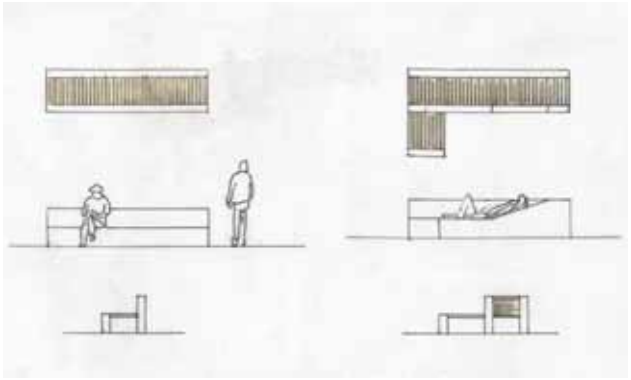


Fig. 8.98

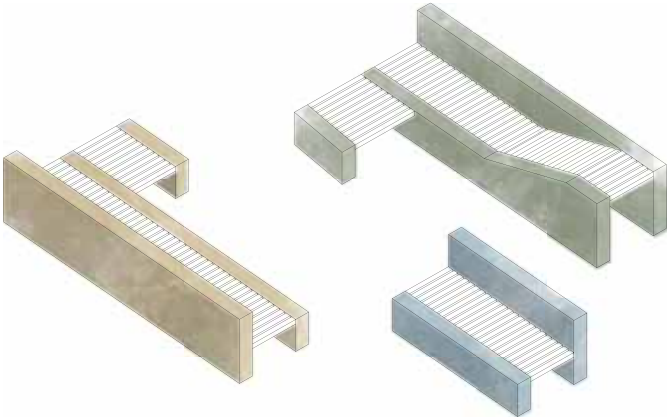
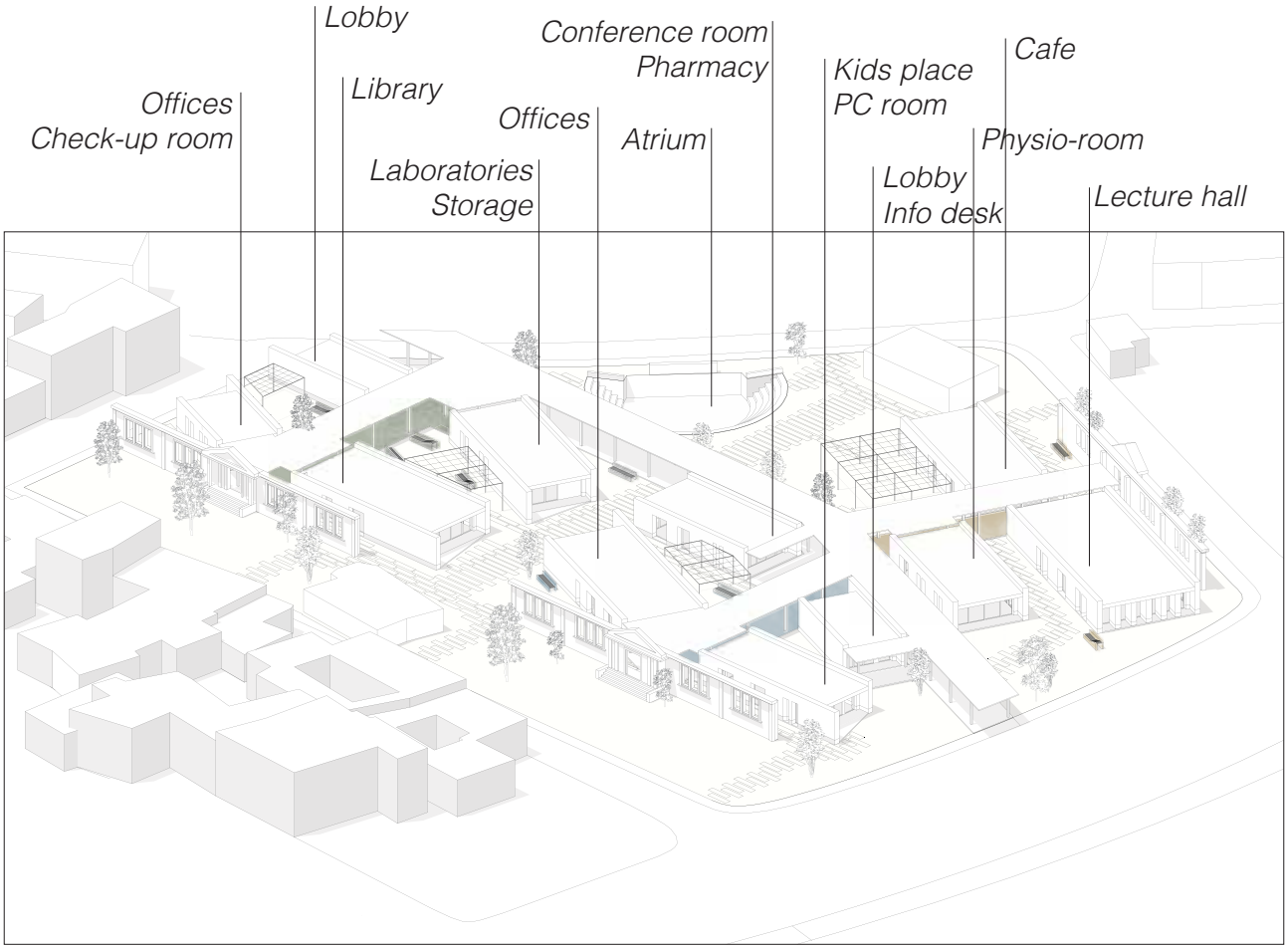


Fig. 8.99



The healthcare Centre, axonometry, functions of the individual units *Fig. 8.100*

The existing situation Fig. 8.101

During the first phase, the access to the Centre and its entrances by checkpoints

Fig. 8.102

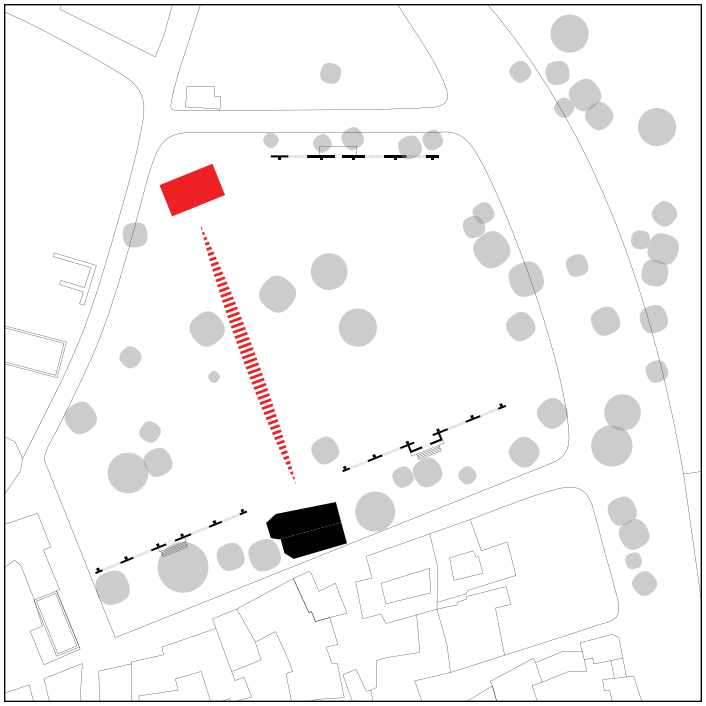
During second phase, the borders will fade out with additional entrances by checkpoints

Fig. 8.103

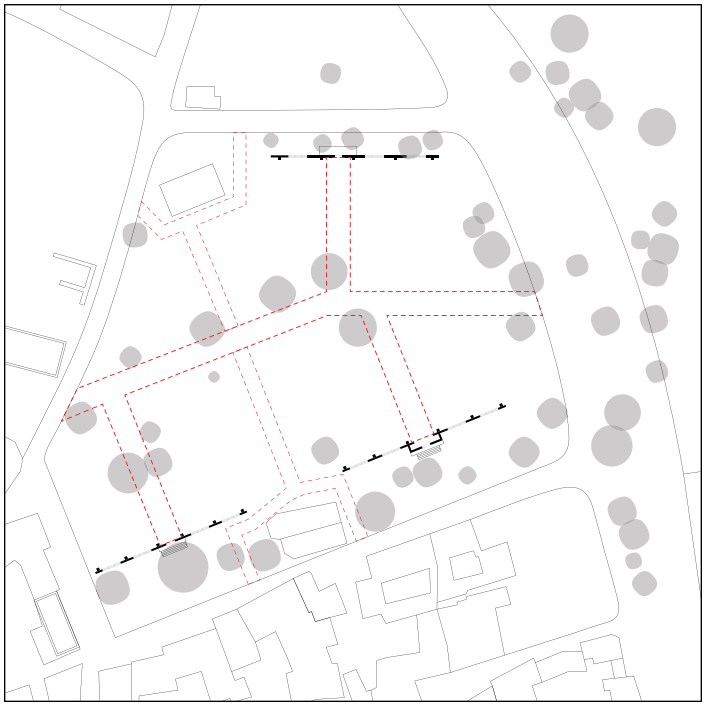
The main facades will be maintained, while the rest of the walls will be demolished. Their material (stone) will be used for the new structure

Fig. 8.104

The building site after the demolition *Fig. 8.105*



The new mosque, opposite to the existing church *Fig. 8.106*



The primary covered walkway along the existing trees and the seconary path between the church and the mosque

Fig. 8.107

The area between the main facades and the walkways will be used for the uses of the Centre

Fig. 8.108

Placing each use according to their size, use, entrances and sequence

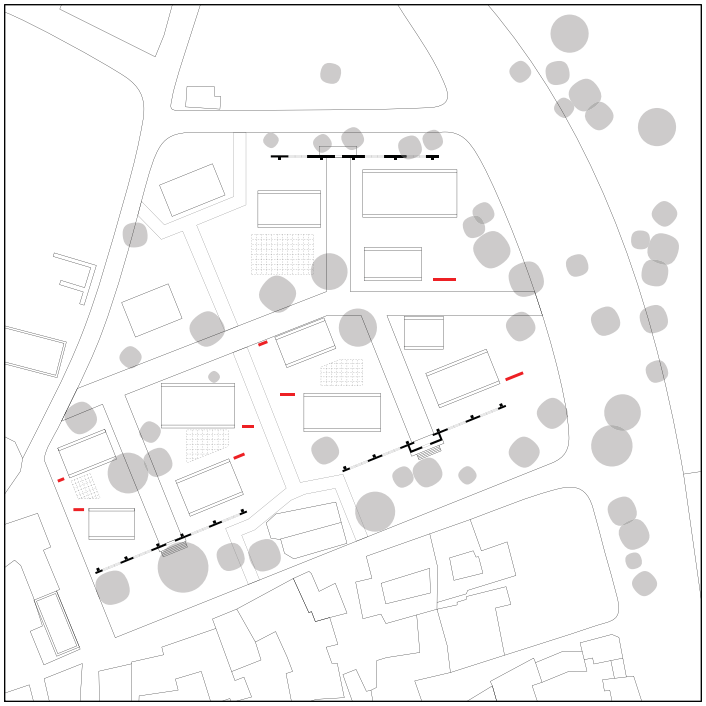
Fig. 8.109

Necessary movements in order to protect as much of the existing trees as possible

Fig. 8.110

The “negotiation-space” is defined by the placement of each the pavillions. These areas will be equipped with vines and outdoor furniture

Fig. 8.111



The wall extension, when possible, will add variation to each pavillion and it will support the privacy

Fig. 8.112

The main entrance to each pavillion will be part of the main walkway, as a covered area

Fig. 8.113

Multiple side entrances to the Centre will be created *Fig. 8.114*

Each pavillion will follow the pavillion-prototype principles *Fig. 8.115*

The form of windows according to each use, as well as the type of entrances to each pavillion will add variation, while the orientation is supported by the colorful walkways and the outdoor furniture

Fig. 8.116

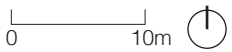
The healthcare Centre, south-east view

Fig. 9.02

9. Floorplans, Views, Sections, Details

Top view, scale 1:1000

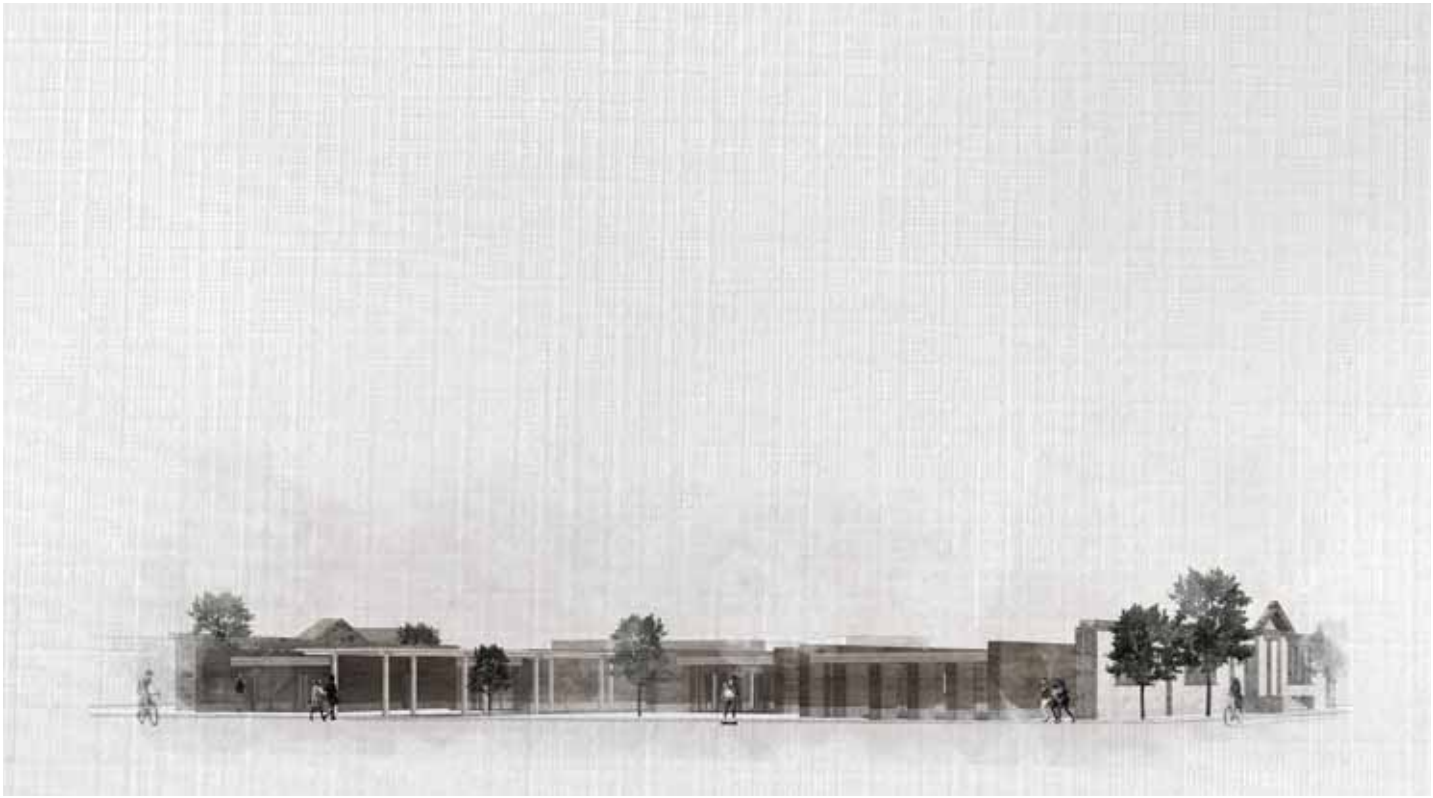
Groundfloor



The healthcare Centre, inner covered areas

Fig. 9.01

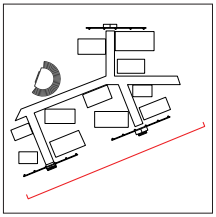
The healthcare Centre, the “in-between” Fig. 9.04

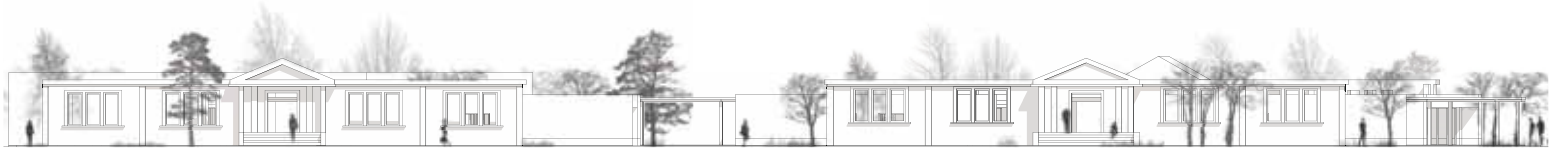


The healthcare Centre, north-east view

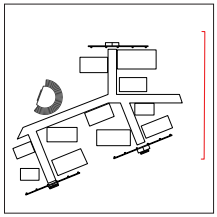
Fig. 9.05

Views

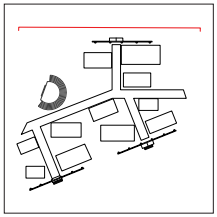




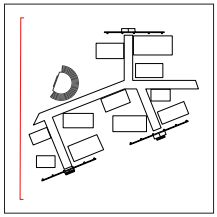
0 10m

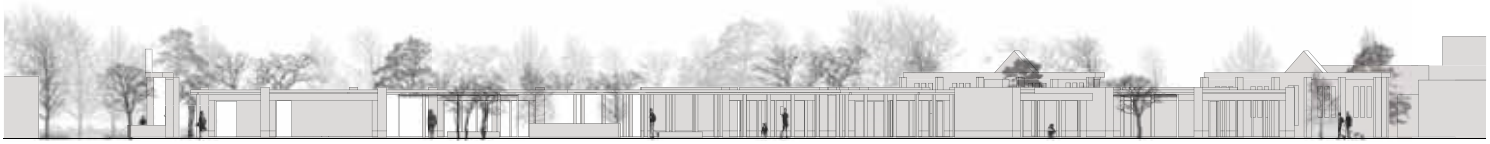


0 10m

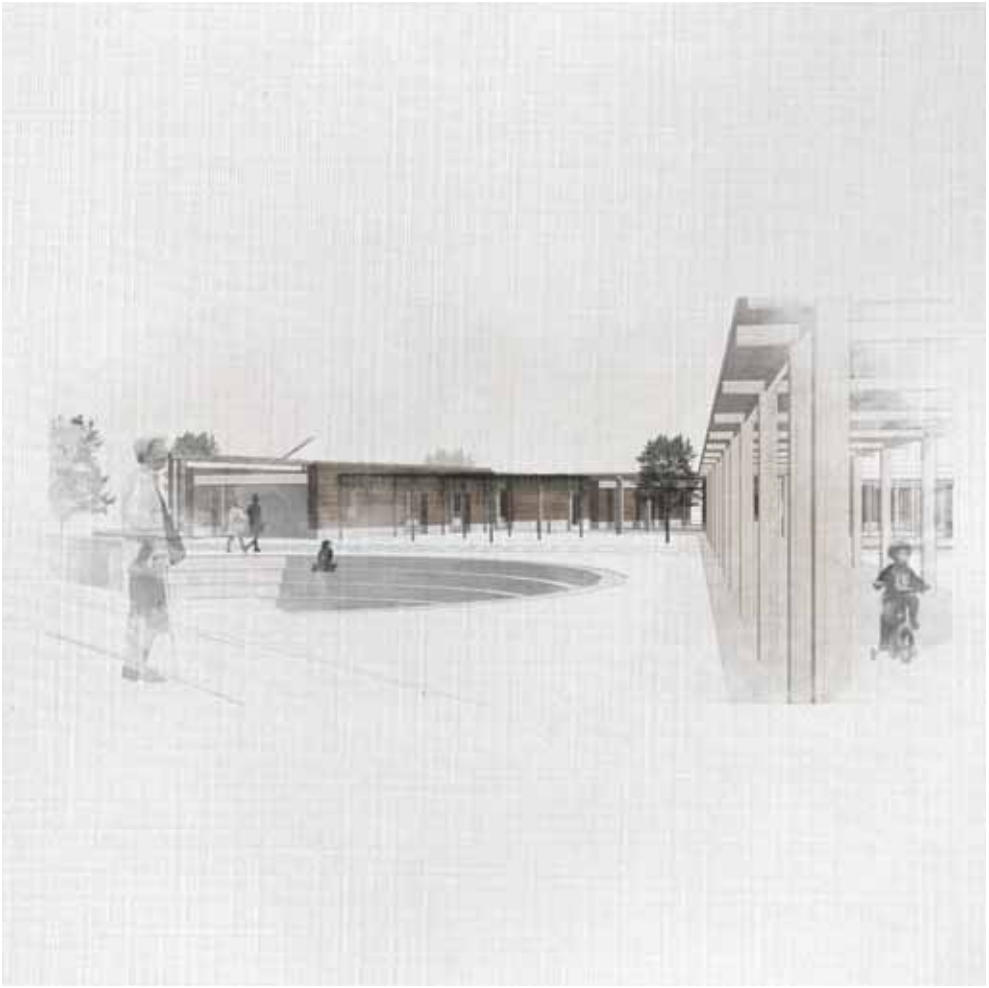


0 10m





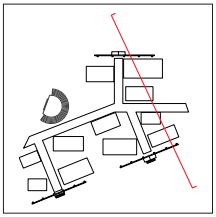
0 10m

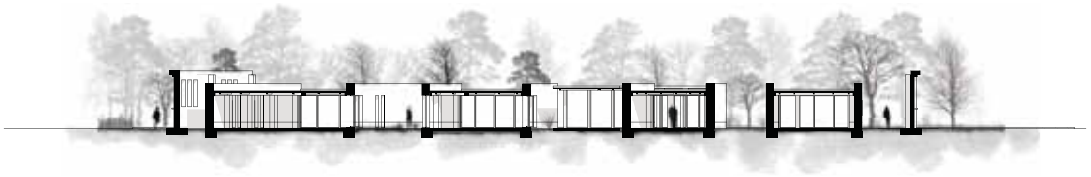


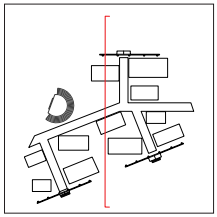
The healthcare Centre, atrium

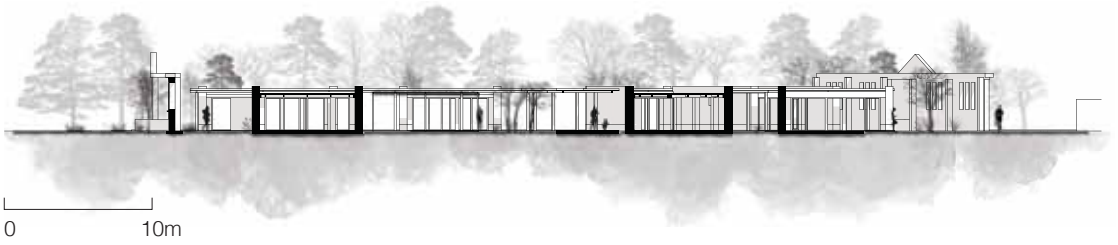
Fig. 9.06

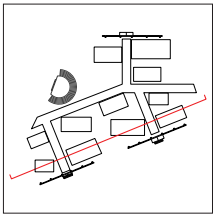
Sections

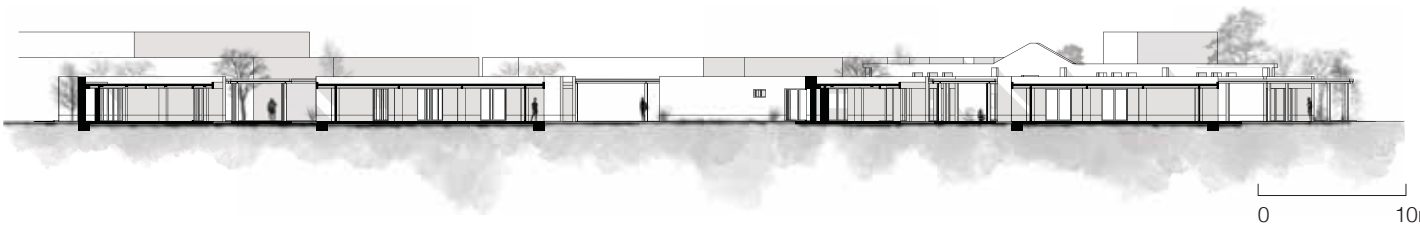


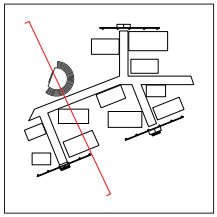

0
10m

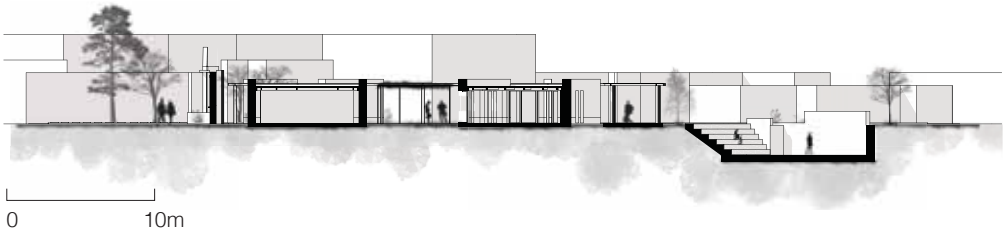


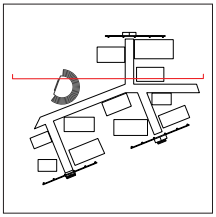

0
10m

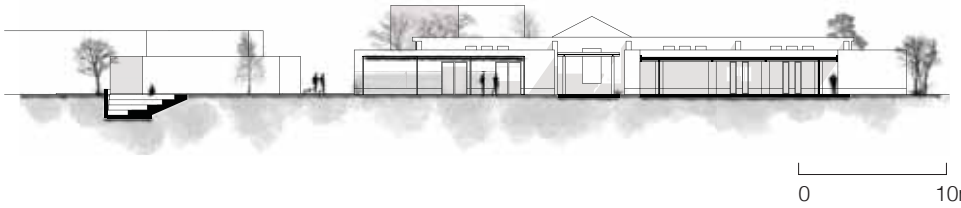



0
10m



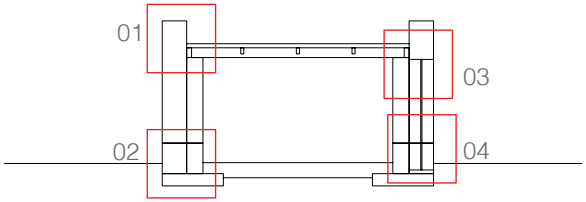

0
10m

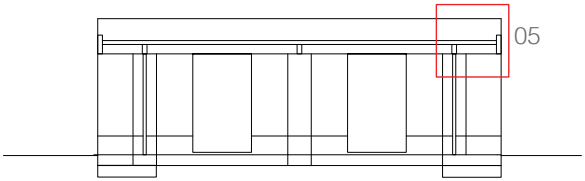



0
10m

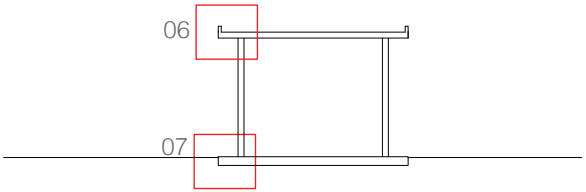
The healthcare Centre, side entrance

Fig. 9.07



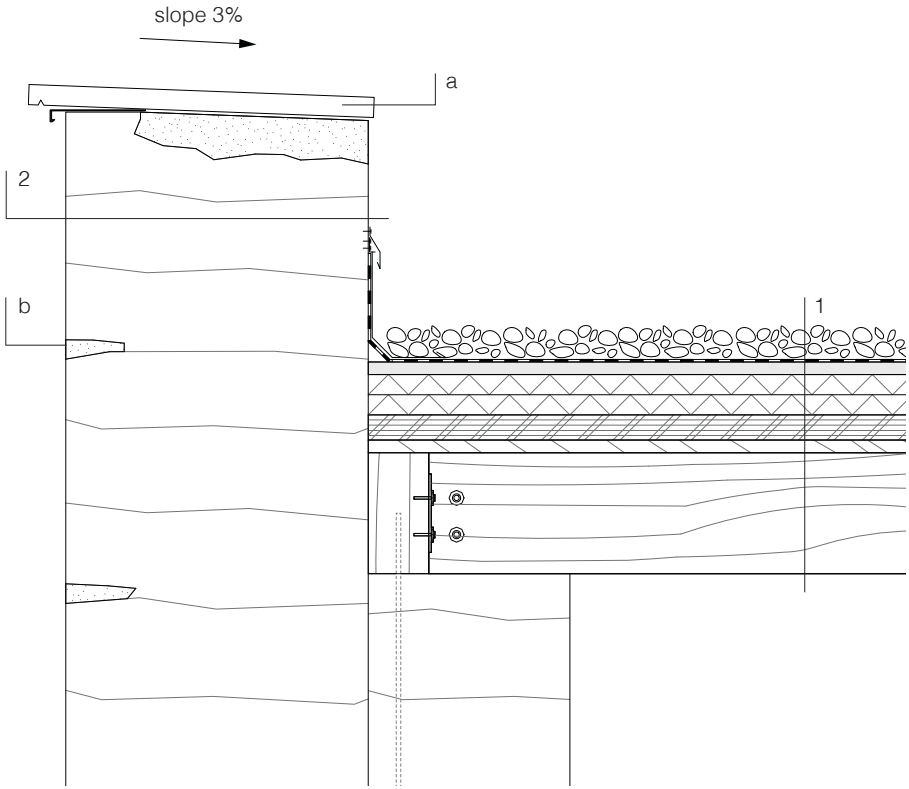


The pavillion details



The walkway details

Details

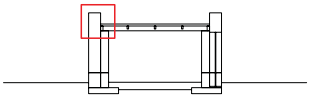


1.
Crushed rock filling 60mm
OSB board with bituminous waterproofing 20mm
Reed insulation 2x40mm
Granulated cork-loam-trass-lime slope 0-50mm
Spruce blanking 250mm
Structural wooden beam 240x120mm

2.
Rammed earth facade 600mm

a.
Low-fired mud tile cover 40mm

b.
Trass-lime check



Detail 01, scale 1:15

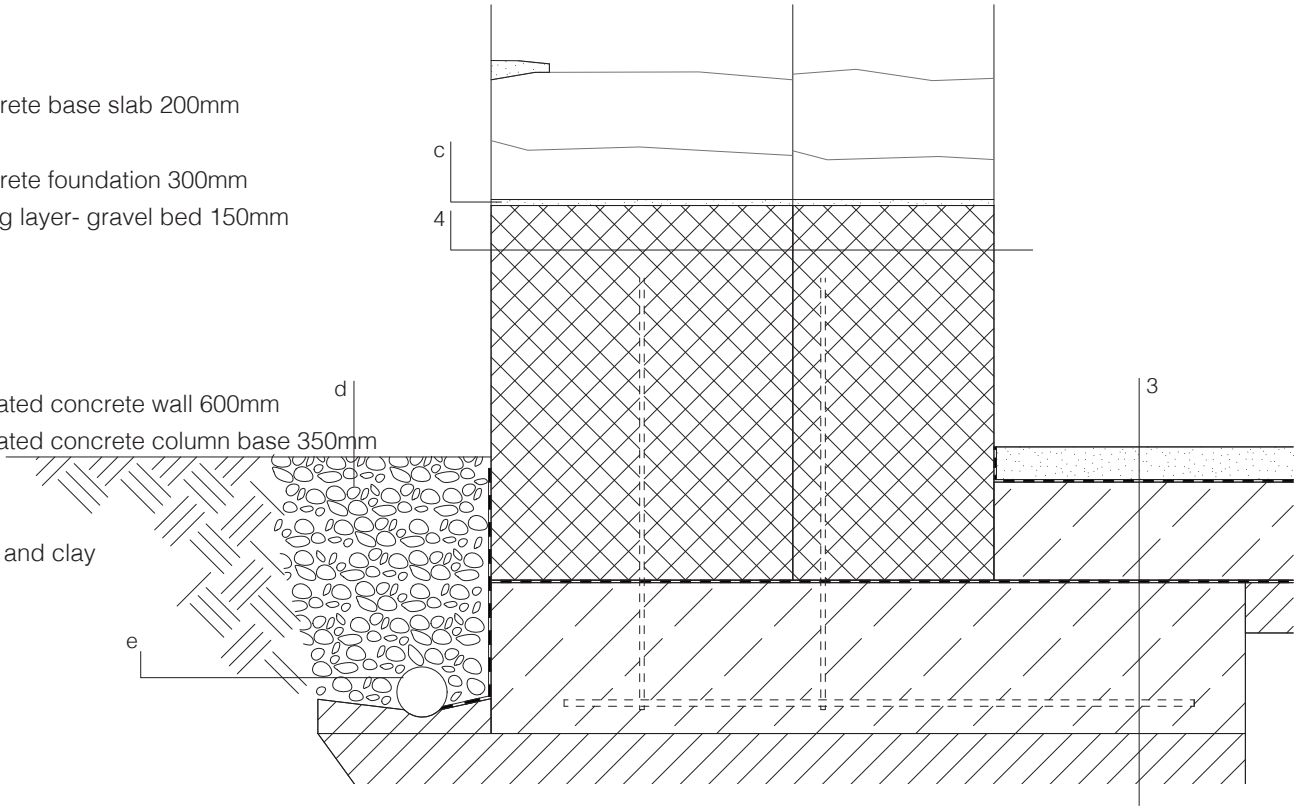
3.
Screed 750mm
Separating layer
Reinforced concrete base slab 200mm
PE foil
Reinforced concrete foundation 300mm
Capilary breaking layer- gravel bed 150mm
Filter web layer
Soil

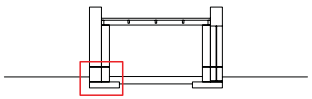
4.
Reinforced insulated concrete wall 600mm
Reinforced insulated concrete column base 350mm

c.
Bitumen coating and clay
mortar 12mm

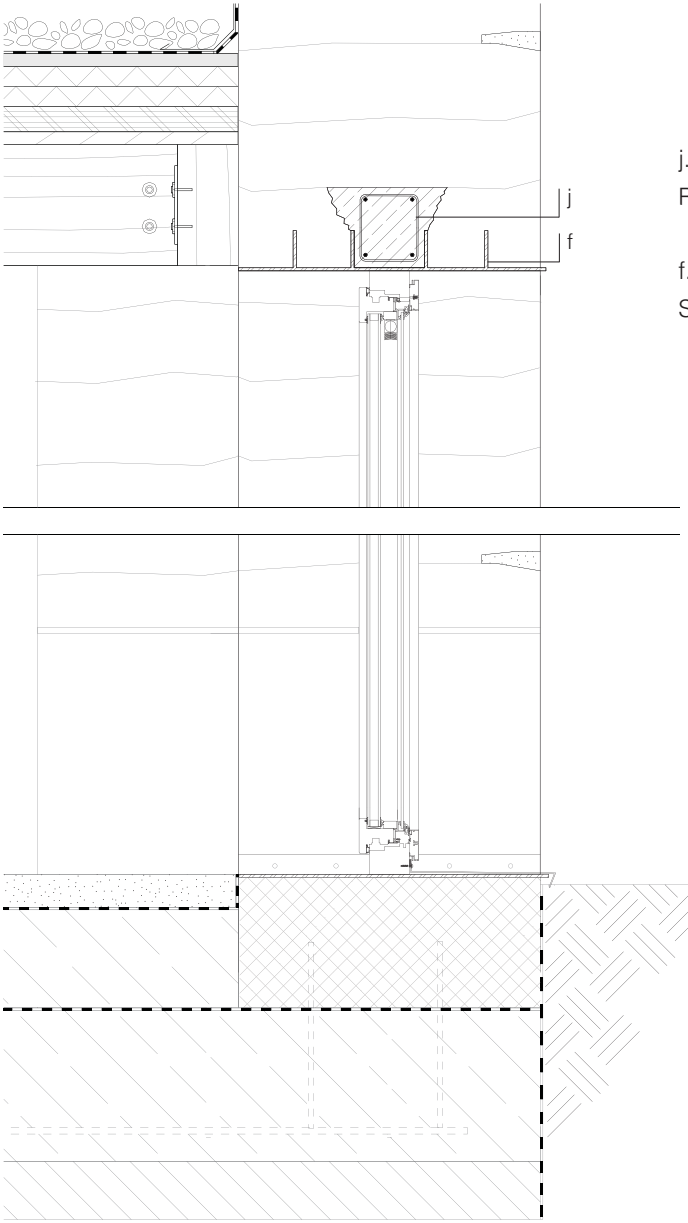
d.
Gravel lawn

e.
Subsoil drain



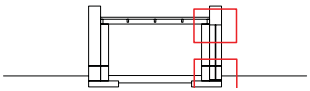


Detail 02, scale 1:15



j.
Reinforced concrete pillar 140x160mm

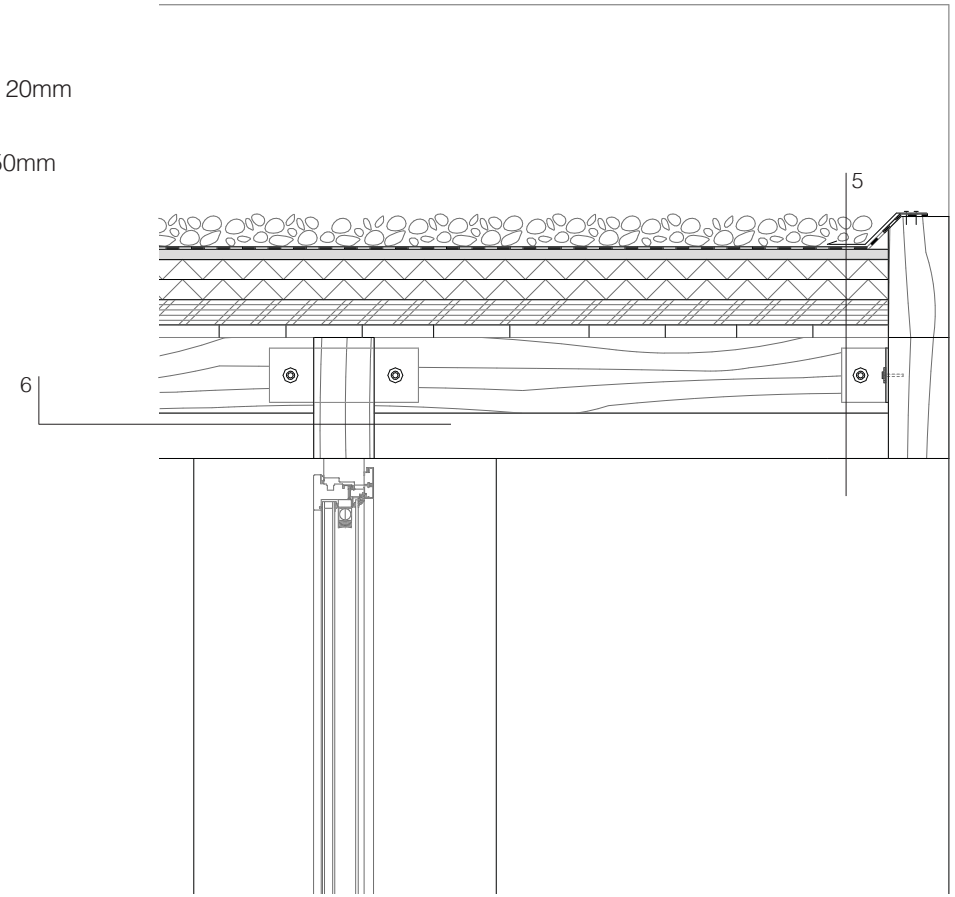
f.
Steel profile 4mm

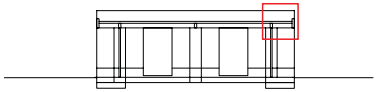


Detail 03-04, scale 1:15

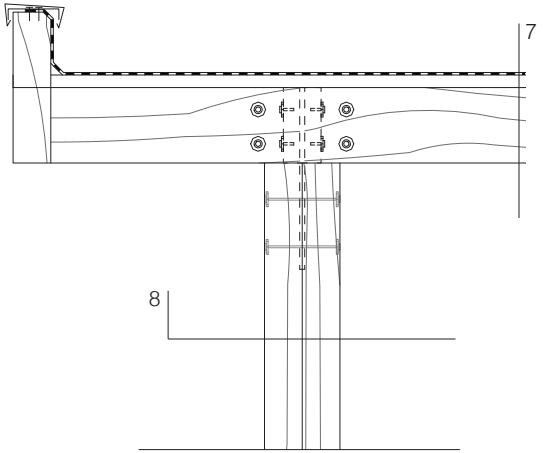
5.
Crushed rock filling 60mm
OSB board with bituminous waterproofing 20mm
Reed insulation 2x40mm
Granulated cork-loam-trass-lime slope 0-50mm
Spruce blanking 250mm
Structural wooden beam 150x75mm

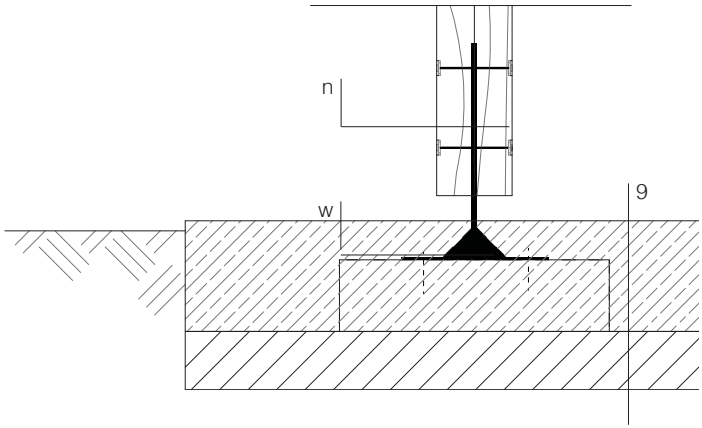
6.
Structural wooden beam 240x120mm





Detail 05, scale 1:15





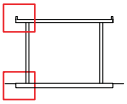
7.
PE foil
Spruce blanking 250mm
Structural wooden beam 150x75mm

8.
Timber column 150x75mm
Timber column 150x75mm

9.
Reinforced concrete slab 150mm
Reinforced concrete foundation 300mm
Capilary breaking layer- gravel bed 150mm
Soil

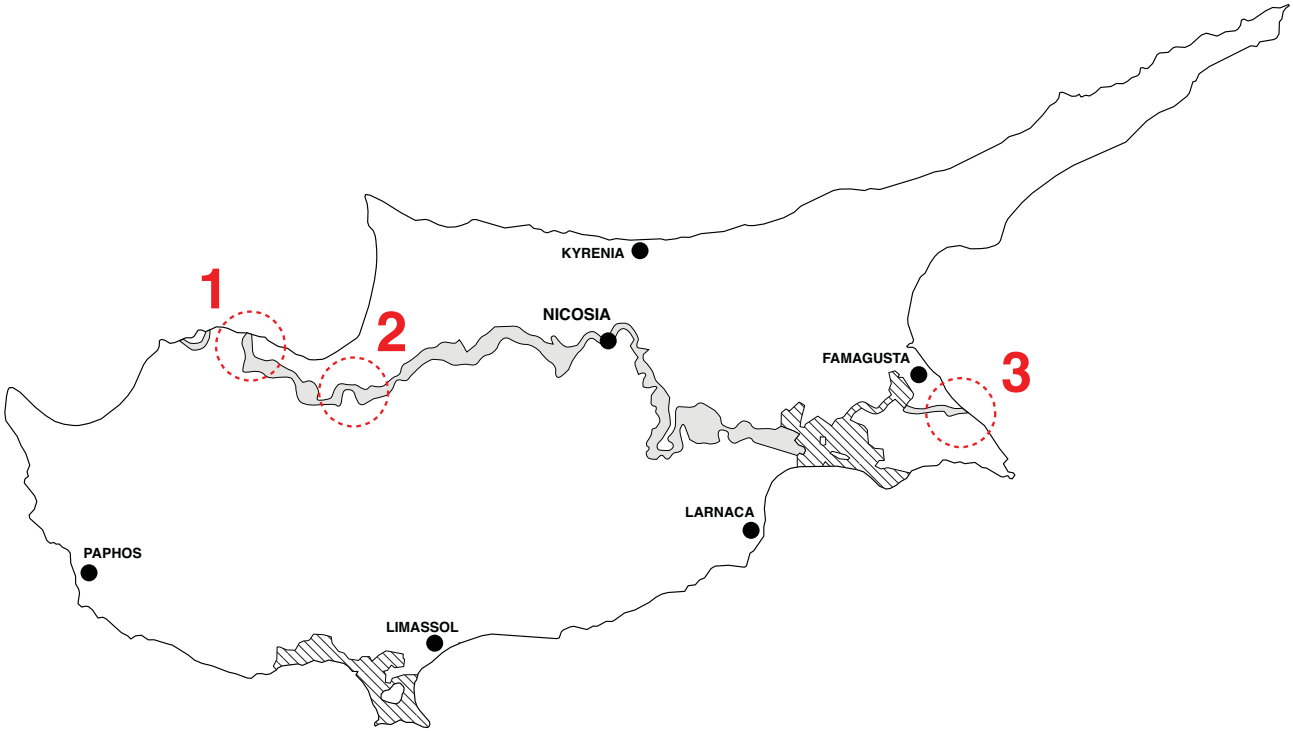
n.
Steel joint

w.
Steel base joint



Details 06-07, scale 1:15

The healthcare Centre and its nature *Fig. 9.08*



Map of the possible locations for the rehabiliation centre

Fig. 10.01

10. The rehabilitation Centre/Phase 4

Within the fourth phase (spreading phase) and as a part of the healthcare Centre located in Nicosia, a rehabilitation Centre should be developed as well. This Centre will provide services and treatments to rare disease patients from abroad, while it will employ people from both sides. Concerning the term of medical tourism, there are multiple factors affecting this industry, such as the image and overall environment of the host country, the healthcare and tourism industry of the country and the quality of the medical facility and services.[1] As one of the top tourist destinations of the Middle East, Cyprus could invest in other forms of tourism, such as medical tourism, with multiple economical and social benefits. A rehabilitation Centre will support the medical facilities and services in Cyprus on international level, it will extend the tourist period in the area, it will create more employees in the healthcare sector and and it will support the cooperation with other medical Centres in the world.[2] Most importantly, it will bring people from both sides closer, by working together for a better future.

The location:

As a part of the solution's main concept, the location of the Centre should be within the buffer zone and

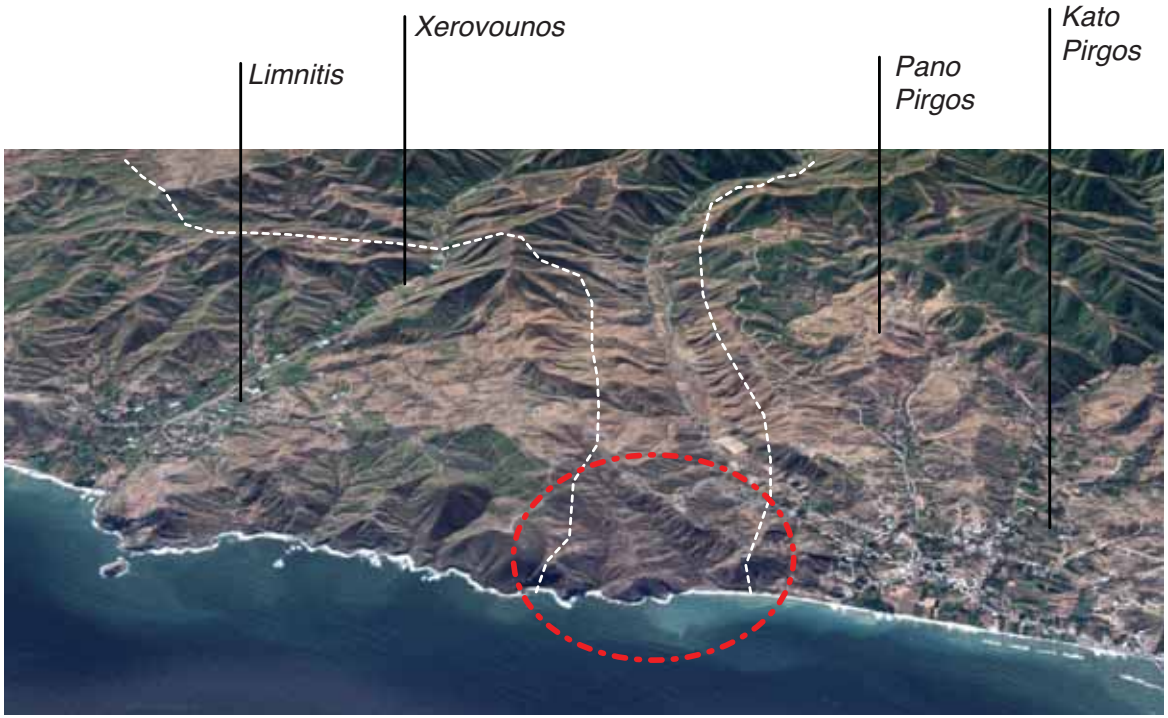


Fig. 10.02

because of its function, close to the sea or forest, where the environment is ideal and pleasant for rehab. Possible locations are proposed in the following map.

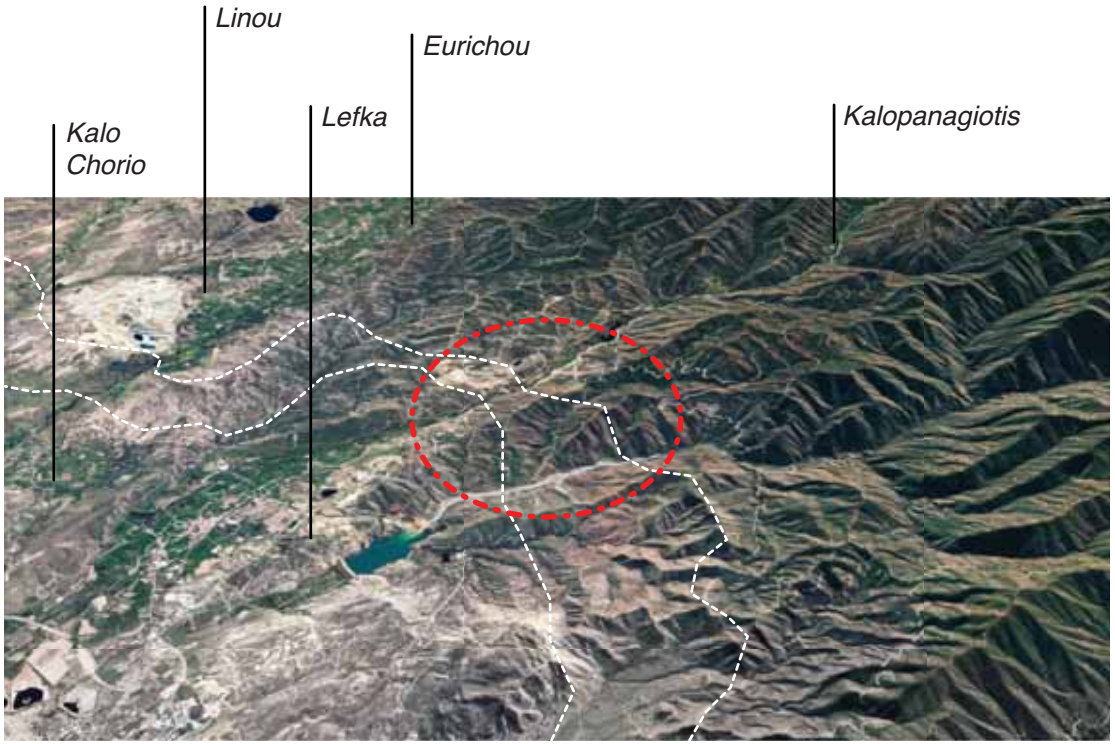


Fig. 10.03

3

Fig. 10.04

Fig. 11.01

"Many small people who in many small places do many small things that can alter the face of the world."

African proverb

Conclusion:

The aim of this project is an alternative proposal to the Cypriot problem, by supporting and respecting the local people and their needs. As a bi-communal project, people from both sides will come together for a better future, by helping each other. Perhaps architecture will help in a way, although without people's will and support, nothing can happen.

References:

Introduction

1. Peter Zumthor Interview at Mextropoli 2007, last modified April 30 2018, https://www.youtube.com/watch?v=UG1DzotEwX4

1. Cyprus and its facts

1. Delipetrou, P., Vogiatzakis, I., Pungetti, G., Manion, A., Eds. 2008, Mediterranean Island Landscapes: Natural and Cultural Approaches, Springer Netherlands, p. 170
2. Academic (2017), Geography of Cyprus, last modified May 04 2018, http://enacademic.com/dic.nsf/enwiki/3032
3. Republic of Cyprus, Department of Meteorology, last modified May 10 2018, http://www.moa.gov.cy/moa/MS/MS.nsf/DMLcyclimate_en/DMLcyclimate_en
4. Kyris, G. (2012), The European Union and the Cyprus problem: a story of limited impetus, Eastern journal of European studies, Vol. 3, No. 1, p. 88 - 89.
5. Madeleine L. (2012), Us and them: Young people's constructions of nation identity in Cyprus, Sage Journal, Vol. 19, No. 4, P. 474
6. Stefanou, S., Foreign military bases in Cyprus, last modified June 03 2018, http://militarybases.twoday.net/stories/763647/
7. United Nations Peacekeeping, UNFICYP Mandate, last modified June 03 2018, https://unficyp.unmissions.org/unficyp-mandate
8. Madeleine L. (2012), Us and them: Young people's constructions of nation identity in Cyprus, Sage Journal, Vol. 19, No. 4, p.475

2. Cyprus and its history

1. William, M., Cyprus, A historical overview, Press and information office, Republic of Cyprus, P. 38-40
2. Καραχασάνης, Γ., Ψυρρής, Π., 2010, Ιστορια της Κυπρου, Αγγλοκρατία 1878 / 1960, Οδύσσεια εκδόσεις, Λευκωσία, P. 13
3. Καραχασάνης, Γ., Ψυρρής, Π., 2010, Ιστορια της Κυπρου, Αγγλοκρατία 1878 / 1960, Οδύσσεια εκδόσεις, Λευκωσία, P. 12
4. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 11
5. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 28
6. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 50
7. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 128
8. Διαλέξεις Λαϊκου Πανεπιστημίου, 1993, Κυπριακή ζωή και κοινωνία, Λίγο πριν την ανεξαρτησία και μέχρι το 1984, Δήμος Λευκωσίας, P. 10
9. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 7
10. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 127
11. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 132

12. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 133

13. Faustmann, H., Peristianis, N., 2009, Britain in Cyprus, Colonialism and Post-Colonialism 1878-2006, Bibliopolis, P. 427

14. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 115

15. Λάμπρου, Γ., 2008, Τα χρόνια μετά την ανεξαρτησία, Πάργα, P. 111

16. United Nations, UNFICYP, Establishment of UNFICYP, last modified May 20 2018, https://unficyp.unmissions.org/establishment-unficyp

17. Λάμπρου, Γ., 2008, Τα χρόνια μετά την ανεξαρτησία, Πάργα, P. 159

18. Λάμπρου, Γ., 2008, Τα χρόνια μετά την ανεξαρτησία, Πάργα, P. 207

19. Republic of Cyprus, The Cyprus problem, last modified May 23 2018, http://www.mfa.gov.cy/mfa/HighCom/london.nsf/hcrcl07_en/hcrcl07_en

20. Fouskas, V., 2005, Uncomfortable Questions, Cyprus, October 1973 August 1974, Contemporary European History, Vol. 14, No. 1, Peer Reviewed Journal, P. 47

21. Hadjilyra, A., Facts about the the 1974 Turkish invasion in Cyprus, last modified June 03 2018, https://www.scribd.com/document/29472257/Facts-about-the-1974-Turkish-invasion-in-Cyprus

22. United Nations, UNFICYP, About the buffer zone, last modified June 04 2018, https://unficyp.unmissions.org/about-buffer-zone

23. Faustmann, H., 2013, Can the Cyprus Problem be Solved?, The Cyprus Review, Vol. 25, No. 2, Peer Reviewed Journal, P. 117

24. United Nations, UNFICYP, Timeline, last modified June 07 2018, https://unficyp.unmissions.org/timeline

25. Dikomitis, L., 2005, Three Readings of a Border, Greek Cypriots Crossing the Green Line in Cyprus, Anthropology today, Vol 21, No. 5, P. 7

26. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 139

27. United Nations, UNFICYP, News, last modified June 12 2018, https://unficyp.unmissions.org/news

28. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 128

3. Cyprus and its people

1. Cyprus population 2018, last modified, June 20 2018, http://worldpopulationreview.com/countries/cyprus-population/

2. Varnava, A., The state of Cypriot minorities, Cultural diversity, Internal-exclusion and the Cyprus “Problem”, The Cyprus Review, Vol. 22, No. 2, P. 206

3. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 4

4. Languages in Cyprus, last modified June 21 2018, http://www.studycountry.com/guide/CY-language.htm

5. Varnava, A., The state of Cypriot minorities, Cultural diversity, Internal-exclusion and the Cyprus “Problem”, The Cyprus Review, Vol. 22, No. 2, P. 205

6. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 5

7. Soulioti, S., 2006, Fettered Indepedence, Cyprus 1878 - 1964, University of Minessota, P. 6

8. Madeleine L. (2012), Us and them: Young people’s constructions of nation identity in Cyprus, Sage Journal, Vol. 19, No. 4, P. 474

9. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 140

10. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 5

11. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 208

4. Cyprus and its borders

1. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P.151

2. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 124

3. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press, P. 133

4. Hadjilyra, A., Facts about the the 1974 Turkish invasion in Cyprus, last modified June 03 2018, https://www.scribd.com/document/29472257/Facts-about-the-1974-Turkish-invasion-in-Cyprus

5. United Nations, UNFICYP, Timeline, last modified June 30 2018, https://unficyp.unmissions.org/timeline

6. Kades, A., 2018, Deryneia checkpoint almost ready, last modified June 30 2018, https://cyprus-mail.com/2018/05/04/dherynia-checkpoint-almost-ready/

7. Dikomitis, L., 2005, Three Readings of a Border, Greek Cypriots Crossing the Green Line in Cyprus, Anthropology today, Vol 21, No. 5, P. 8

8. Παλλικαρίδης, Α., 2010, Μας προτιμούν οι Τουρκοκύπριοι, last modified July 04 2018, http://www.sigmalive.com/archive/simerini/news/local/314150

9. United Nations, UNFICYP, Buffer zone permits, last modified July 10 2018, https://unficyp.unmissions.org/buffer-zone-permits-0

10. Takis hadjidemetriou and Ali Tuncay at biz/emeis about the Techical Committee on Cultural Heritage, last modified July 12 2018, https://www.youtube.com/watch?v=l3HvG_f57gE

11. Nicosia Masterplan, last modified July 14 2018, https://www.unece.org/fileadmin/DAM/thepep/en/workplan/urban/documents/petridouNycosiamasterplan.pdf

12. Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania Press P. 121

13. Nicosia Masterplan, last modified July 14 2018, https://www.unece.org/fileadmin/DAM/thepep/en/workplan/urban/documents/petridouNycosiamasterplan.pdf

14. Sadri, H., 2015, Nicosia's old town as a bi-communal free zone, last modified July 14 2018, http://cyprus-mail.com/2015/07/12/nicosias-old-town-as-a-bi-communal-free-zone/

15. The Technical Committee on Cultural Heritage in Cyprus, last modified July 14 2018, http://www.cy.undp.org/content/cyprus/en/home/library/partnershipforthefuture/the-technical-committee-on-cultural-heritage--2015-.html

16. Home for Cooperation, About us, last modified, July 14 2018, http://www.home4cooperation.info/what-is-the-h4c

5. The "first" contact

1. About Thalassemia, Thalassemia International Federation, last modified August 02 2018, http://thalassaemia.org.cy/about/thalassaemia/

2. Map data by region, last modified August 02 2018, http://perspectivesinmedicine.cshlp.org/content/3/2/a011775/F3.large.jpg

3. Cao, A., Wai Kan, Y., 2012, The prevetion of Thalassemia, last modified August 04 2018, http://perspectivesinmedicine.cshlp.org/content/3/2/a011775.full

4. Bozgurt, G., 2007, Results from the north cyprus thalassemia prevention program, last modified August 04 2018, https://www.ncbi.nlm.nih.gov/pubmed/17486509

5. About Thalassemia, Thalassemia International Federation, last modified August 05 2018, http://thalassaemia.org.cy/about/thalassaemia/

6. Rare Diseases in Cyprus

1. The Folia Centre, Cyprus Alliance for rare diseases, last modified, August 20 2018, http://raredisorderscyprus.com/the-folia-centre/

2. Ministry of Health Cyprus, 2012, Strategic Plan Rare Diseases, Goverment Printing Office, Nicosia, P. 37

3. Ministry of Health Cyprus, 2012, Strategic Plan Rare Diseases, Goverment Printing Office, Nicosia, P. 41

4. Τι κάνουμε, Cyprus Alliance for rare diseases, last modified August 20 2018, http://raredisorderscyprus.com/σχετικά-με-εμάς/τι-κάνουμε/

5. Κουμάστα, Μ., 2017, Η Φωλία των σπάνιων συνανθρώπων μας, last modified August 20 2018, https://dialogos.com.cy/i-folia-ton-spanion-sinanthropon-mas/

6. Members and Associations, last modified August 20 2018, https://www.google.com/maps/d/viewer?hl=fr&mid=1BEou7CSmUi-03IRY8vGD4BzRrOJmqJ2k&ll=34.39366809727391%2C28.005523681640625&z=5

7. Who we are, Eurordis, last modified August 27 2018, https://www.eurordis.org/who-we-are

8. Centres of Reference for rare diseases in Europe: State-of-the-art in 2006 and recommendations of the Rare Diseases Task Force, last modified August 27 2018, http://ec.europa.eu/health/ph_threats/non_com/docs/contribution_policy.pdf

9. Centres of Reference for rare diseases in Europe: State-of-the-art in 2006 and recommendations of the Rare Diseases Task Force, last modified August 27 2018, http://ec.europa.eu/health/ph_threats/non_com/docs/contribution_policy.pdf

8. The healthcare Centre/Phases 1-3

1. History of Nicosia, Nicosia Municipality, last modified September 02 2018, http://www.nicosia.org.cy/en-GB/municipality/history/nicosia/

2. Το δημοτικό σχολείο του Αγίου Κασσιανού, last modified September 02 2018, http://dim-ag-kassianos-lef.schools.ac.cy

3. Γεωργίου, Κ., 2018, Η αρχιτεκτονική των Κυπρίων επι Αγγλοκρατίας, Εκδόσεις Εν Τύποις, Λευκωσία, P. 125

4. Κωνσταντινίδης, Α., Για την αρχιτεκτονική, Δημοσιεύματα σε εφημερίδες, σε περιοδικά και σε βιβλία, 1940- 1982, Πανεπιστημιακές εκδόσεις Κρήτης, P. 232

5. Κωνσταντινίδης, Α., Για την αρχιτεκτονική, Δημοσιεύματα σε εφημερίδες, σε περιοδικά και σε βιβλία, 1940- 1982, Πανεπιστημιακές εκδόσεις Κρήτης, P. 239

6. Συλλογικός Τόμος, 2007, Κύπρος απο την αρχαιότητα εως σήμερα, Αθήνα, P. 9

7. Συλλογικός Τόμος, 2007, Κύπρος απο την αρχαιότητα εως σήμερα, Αθήνα, P. 10-11

8. Τσιπούρας, Ν., 1921, Αρχιτεκτονικές βάσεις προς δημιουργίαν νέου ελληνικού ρυθμού, Αθήνα, P. 36-38

9. Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 13

10. Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 14

11. Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 14

12. Ανδρεαδάκη, Ε., 2017, Βιοκιματικός σχεδιασμός, Κλιματική αλλαγή-περιβάλλον-βιοσιμότητα, University Studio Press, P. 48

13. Nicosia, Cyprus, last modified September 04 2018, https://www.gaisma.com/en/location/nicosia.html

14. Ανδρεαδάκη, Ε., 2017, Βιοκιματικός σχεδιασμός, Κλιματική αλλαγή-περιβάλλον-βιοσιμότητα, University Studio Press, P. 60-63

15. Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 26-27

16. Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 30

17. Αραβαντινός, Δ., 2011, Οδηγός ενεργειακού σχεδιασμού, Εκδόσεις Κτίριο, Θεσσαλονίκη, P. 41

18. Πάυλου, Α., Αγρόκυπρος, Κυπριακή Δημοκρατία, last modified September 07 2018, http://www.moa.gov.cy/moa/agrokypros.nsf/All/BEBCAA11DE025649C2257BE40035738B/$file/Anarrihomena%20kallopistika.pdf

19. Παπαχαραλάμπους, Γ., 2015, Η κυπριακή οικία, Κέντρο επιστημονικών ερευνών Κύπρου, Λευκωσία, P. 20

20. Παπαχαραλάμπους, Γ., 2015, Η κυπριακή οικία, Κέντρο επιστημονικών ερευνών Κύπρου, Λευκωσία, P. 8

21. Παπαχαραλάμπους, Γ., 2015, Η κυπριακή οικία, Κέντρο επιστημονικών ερευνών Κύπρου, Λευκωσία, P. 11-12

22. Minke, G., 2006, Building with earth, Design and and technology of a sustainable architecture, Birkhäuser, P. 12-13

23. Ο περι ρύθμισης της ενεργειακής απόδοσης των κτιρίων νόμος, 2009, last modified September 04 2018, http://www.mcit.gov.cy/mcit/energyse.nsf/All/0B7C2600AC782FC5C22580F100289404/$file/KDP446_2009%20peri%20Rythmisis%20Energeiakis%20 Apodosis%20Ktirion(Apaitiseis%20Elaxistis%20Energeiakis%20Apodosis%20Ktiriou)%20Diatagma.pdf

24. Minke, G., 2006, Building with earth, Design and and technology of a sustainable architecture, Birkhäuser, P. 50-51

25. Sustainable by design 2050, last modified September 10 2018, http://www.sbd2050.org/project/haus-rauch-39/

26. Bolthauser Architekten, 2008, Rammed earth house, last modified September 12 2018, https://www.architonic.com/en/project/boltshauser-architekten-rammed-earth-house-rauch-family-home/5100620

27. Demetriou, T., Pattichis, A., Constantinides, A., Papadouris, G., 2003, Restoration and maintenance of traditional settlements, Cyprus Civil Engineers and Architects Association, Cyprus, P. 132-133

28. Schröder, H., 2013, Lehmbau - Mit Lehm ökologisch planen und bauen, Springer Vieweg, P. 138

29. Stealth 500, last modified September 07 2018, https://eaglecrusher.com/products/stealth-500

30. Schweizerischer Ingenieur- und Architekten-Verein, 1994, Regeln zum Bauen mit Lehm, P. 25

31. Minke, G., 2006, Building with earth, Design and and technology of a sustainable architecture, Birkhäuser, P. 110

32. Minke, G., 2006, Building with earth, Design and and technology of a sustainable architecture, Birkhäuser, P. 259

33. Schröder, H., 2013, Lehmbau - Mit Lehm ökologisch planen und bauen, Springer Vieweg, P. 249

34. Rauch, M., 2015, Gebaute Erde Gestalten & Konstruieren mit Stampflehm, Detail Verlag, P. 83

35. Schröder, H., 2013, Lehmbau - Mit Lehm ökologisch planen und bauen, Springer Vieweg, P. 259

10. The rehabilitation centre/Phase 4

1. Fetscherin, M., Stephano, R., 2015, Tourism management, Medical tourism index: Scale development and validation, Elsevier, P. 541

2. Φραγκιαδάκης, Γ., Ο ιατρικός τουρισμός στην Ευρώπη και στην Ελλάδα: Διαμορφώνοντας στρατηγική, last modified September 12 2018, https://fragkiadakisgeorge.weebly.com/uploads/2/4/2/3/24235314/3._g_fragkiadakis_iatrikos_tourismos-.pdf

List of Figures:

Figures with no source indicated are own drawings or photographs of the author.

Fig. 2.15 Gojkovic, M., 2017, http://www.cyprusbeat.com/cyprus-marks-43-years-since-turkish-invasion/

Fig. 2.16 Politis news, 2018, http://politis.com.cy/article/23-apriliou-2003-15-chronia-apo-tin-dianixi-ton-odofragmaton-foto

Fig. 2.17 no and yes, https://cyprus-mail.com/2016/04/26/tassos-papadopoulos-russia-and-the-annan-plan/no-and-yes/

Fig. 2.18 Karadjias, P., 2017, A protestor holds a banner during a demonstration for the peace at the Ledras main crossing point inside the U.N buffer zone, https://www.thenationalherald.com/163296/cyprus-unity-talks-deadlocked-anastasiades-wants-turkish-army/

3. Cyprus and its people

Fig. 3.01 Joyce, M., Lydra coffee shop, Nicosia, Cyprus, https://500px.com/photo/48862298/untitled-by-mark-joyce?ctx_page=1&from=search&ctx_q=coffee+shop+cyprus&ctx_type=photos&ctx_sort=pulse

Fig. 3.02 Mosque and Church - Limassol old town, Cyprus, https://www.flickr.com/photos/16748457@N08/6756655817

Fig. 3.03 Κολώτας, Τ., Λεμεσός, πόλη ισόπεδη και νέα με τις κεραμιδένιες στέγες και τους κήπους της, http://www.lemesosblog.com/stiles/apo-to-parelthon/7638-2017-09-27-05-03-40

Fig. 3.04 Tourist map of central Nicosia, Cyprus. Shows points of interest. Also shows line of Turkish occupation, http://www.mappery.com/map-of/Nicosia-Tourist-Map

Fig 3.05 City map of the north side of the city of Nicosia, Cyprus. In Turkish, English, and German, http://www.mappery.com/map-of/North-Nicosia-City-Map

4. Cyprus and its borders

Fig. 4.02 Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania press, p. 151

Fig. 4.03 Calame, J., Charlsworth, E., Eds. 2012, Divided Cities Belfast, Beirut, Jerusalem, Mostar and Nicosia, University of Pennsylvania press, p. 124

Fig. 4.09 Sewerage board of Nicosia, https://www.unece.org/fileadmin/DAM/env/eia/documents/WG2.3_Nov13/Saner_11Nov2013.pdf

Fig. 4.10 Sadri, H., 2015, http://cyprus-mail.com/2015/07/12/nicosias-old-town-as-a-bi-communal-free-zone/

Fig. 4.11 Ali Tuncay and Takis Hadjidemetriou, 2015, http://www.thecypriotpuzzle.org/12001-2/

Fig. 4.12 http://www.thecypriotpuzzle.org/success-story-of-a-landmark-for-peace-h4cooperation/

5. The first contact

Fig. 5.16 Amid, A., Saliba, A., Taher, A., Klaassen, R., 2015, Thalassaemia in children: from quality of care to quality of life Archives of Disease in Childhood, BMJ Journals, https://adc.bmj.com/content/archdischild/100/11/1051/F1.large.jpg?width=800&height=600&carousel=1

6. Rare diseases in Cyprus

Fig. 6.01 https://raredisorderscyprus.com

Fig. 6.02 http://raredisorderscyprus.com/the-folia-centre/

8. The healthcare Centre/Phases 1-3

Fig. 8.01 Satellite map of Nicosia, Technical University of Vienna, Department of Spatial and Sustainable Design

Fig. 8.02 Η Λευκωσία αλλαζει, 2015, http://www.sigmalive.com/simerini/news/293405/i-lefkosia-allazei

Fig. 8.03 Tymviou, M., Historic evolution of Nicosia, http://www.biovernacular.ac.cy/images/media/file/POSTER%20_20140505_final_REVISED.pdf

Fig. 8.04 Districts of Nicosia, Technical University of Vienna, Department of Spatial and Sustainable Design

Fig 8.06 Schwarzplan Nicosia, Technical University of Vienna, Department of Spatial and Sustainable Design

Fig. 8.13 Orthophoto Nicosia 1963, Technical University of Vienna, Department of Spatial and Sustainable Design

Fig. 8.16 Orthophoto Nicosia 2014 of Nicosia, Technical University of Vienna, Department of Spatial and Sustainable Design

Fig. 8.29 Coffee shop “The Square”, https://500px.com/photo/212153587/coffee-shop-the-square-by-andreas-ierides?ctx_page=3&from=search&ctx_q=people+cyprus&ctx_type=photos&ctx_sort=pulse

Fig. 8.30 https://500px.com/photo/80594683/ricamo-by-eraldo-mostini?ctx_page=18&from=search&ctx_q=people+cyprus&ctx_type=photos&ctx_sort=pulse

Fig. 8.31 https://www.flickr.com/photos/marukomu/8319517154/sizes/k/

Fig. 8.32 Safe line, https://500px.com/photo/8077279/safe-line-by-aga-konopacka?ctx_page=2&from=search&ctx_q=people+nicosia&ctx_type=photos&ctx_sort=pulse

Fig. 8.33 Κωνσταντινίδης, Α., Για την αρχιτεκτονική, Δημοσιεύματα σε εφημερίδες, σε περιοδικά και σε βιβλία, 1940- 1982, Πανεπιστημιακές εκδόσεις Κρήτης, P. 259

Fig. 8.34 Χοιροκοιτία νεολιθικός οικισμός, https://el.chooseyourcyprus.com/larnaca-top-15.html

Fig. 8.36 Αποκατάσταση της κυπρο-αρχαϊκής Ι φάσης του ιερού Κιτίου, http://kyprioscharacter.eie.gr/el/episthmonikes-symboles/details/arkhaiologia/e-topographia-tou-kitiou-tes-epokhes-tou-siderou

Fig. 8.38 Plan and Reconstruction Drawing: House of Silver Wedding, Pompeii, 1st c. AD, https://www.pinterest.at/pin/554787247823754325/

Fig. 8.39 Interior yard, Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 30

Fig. 8.40 Portio, Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 30

Fig. 8.41 House of Hadjigeorgakis Kornesios, http://www.nicosia.org.cy/getattachment/discover/museums/hadjigeorgakis-kornesios/IMG_6296.JPG.aspx/

Fig. 8.42 Εθνολογικό Μουσείο, http://wikimapia.org/1869876/el/Εθνολογικό-Μουσείο-Οικία-Χατζηγεωργάκη-Κορνέσιου

Fig. 8.43 Μουσείο Πιερίδη, 2016, http://www.cityoflarnaka.com/διάλεξη-στο-μουσείο-πιερίδη-για-τη-λάρ/

Fig. 8.48 Summary of the study, Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 31

Fig. 8.59 http://www.thevivalavita.com/wp-content/uploads/2017/10/Viklari-the-Last-Castle-Paphos-Cyprus-2.jpg

Fig. 8.63 Shading in urban public space, Φιλόκυπρου, Μ., Μιχαήλ, Α., 2014, Η βιοκλιματική διάσταση της παραδοσιακής αρχιτεκτονικης της Κύπρου, Λευκωσία, P. 27

Fig. 8.64 Clematis Vitalba, https://www.pinterest.at/pin/362117626272913813/

Fig. 8.65 Campsids, https://www.pinterest.at/pin/188095721921009750/

Fig. 8.70 Rammed earth wall surface, http://www.kusuminaoki.com/img/img_sample/001.jpg

Fig. 8.71 Haus Rauch, http://www.fourthdoor.co.uk/unstructured/unstructured_07/images/3/haus_rauch.jpg

Fig. 8.72 Haus Rauch, Bühler, B., Rauch, M., http://www.lehmtonerde.at/uploads/pictures-w850/RB_Rauch_10_2857.jpg

Fig. 8.73 House in Flims, Feiner, R., Rauch, M., http://www.lehmtonerde.at/en/projects/project.php?pID=80

Fig. 8.74 House in Flims, Feiner, R., Rauch, M., http://www.lehmtonerde.at/en/projects/project.php?pID=80

Fig. 8.75 Cinema Sil Plaz, Egger, L., http://www.lehmtonerde.at/en/projects/project.php?pID=35

Fig. 8.76 Sihlhölzli, Bühler, B., http://www.lehmtonerde.at/en/projects/project.php?pID=45

Fig. 8.77 Ricola Kräuterzentrum in Laufen, Bühler-Raso., M., 2015, https://inspiration.detail.de/ricola-kraeuterzentrum-in-laufen-111970.html

Fig. 8.78 Sihlhölzli, Teare, K., 2016, Martin Rauch, http://seriouslyarchitecture.com/tag/martin-rauch/

Fig. 8.79 Johnson-Jones Residence, http://jonesstudioinc.com/project/johnson-jones-residence/

Fig. 8.80 Twelve Apostles Visitor Amenities Building, http://www.gbarch.com.au/projects/2001/twelve-apostles-visitor-amenities-building/

Fig. 8.81 Gernot, M., 2006, Building with earth, Springer Journals, P. 164

Fig. 8.82 Johnson-Jones Residence, http://jonesstudioinc.com/project/johnson-jones-residence/

Fig. 8.84 Eagle mobile crusher, https://eaglecrusher.com/products/stealth-500#panel3

Fig. 8.85 Schröder, H., 2013, Lehmbau - Mit Lehm ökologisch planen und bauen, Springer Vieweg, P. 138

Fig. 8.86 Schröder, H., 2013, Lehmbau - Mit Lehm ökologisch planen und bauen, P. 64

Fig. 8.88 Plastizitätsdiagramm, Schweizerischer Ingenieur- und Architekten- Verein, 1994, Regeln zum Bauen mit Lehm, P. 24

A big thank you,

to my family Chris, Stavroulla and Filios,
for their endless support and encouregment

to Electra,
for her continuous love and patience
throughout these years

to Mrs. Rieger-Jandl,
for her guidance and inspiration

This work is dedicated to all the people I encountered while working on this project, especially those who are not able to read it anymore.