MIKVEH ISRAEL:

PRESERVING THE LANDSCAPE OF A CULTURAL HERITAGE SITE

A Final Project Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Architecture – Specializing in Conservation of Buildings and Sites

Final Paper

Bruce David Levin

Submitted to the Faculty of Architecture and Town Planning

The Technion - Israel Institute of Technology

Nisan, 5771 Haifa April, 2011

ACKNOWLEDGEMENTS

MIKVEH ISRAEL:

PRESERVING THE LANDSCAPE OF A CULTURAL HERITAGE SITE

By Bruce David Levin

ID 013566658

Project Advisers

Dr. Nurit Lissovsky

Professor Daniel Czamanski

Department of Architecture and Town Planning

Assistant Adviser: Architect Gil Gordon, PhD.

The author wishes to express sincere appreciation to Dr. Nurit Lissovsky , Professor. Daniel Czamanski of the Technion and Architect Gil Gordon for their assistance in the preparation of this manuscript. In addition, special thanks to the head of the program, Architect Nitza Smuck whose dedication and involvement with the demands and challenges of Architectural Conservation served as an inspiration for all her students. Thanks also to the administrators of the Mikveh Israel School for their cooperation, specifically to Mr. Yair Madar, administrative manager and to Mr. Ronen Tzafrir, general manager of the Mikveh Israel Youth Village, who have the tremendous job of upgrading and rekindling the institution both educationally, socially and economically. Many thanks to Conservation Consultants, Architects Gabriel Curtiss and Adi Kitov and to Architect Naomi Angel, Head Planner of the Tel Aviv Regional Council who showed full cooperation and openness in sharing their data bases with me, and last but not least to Aviva Schwartz, director of the Mikveh Israel Visitor Center operated by the Council for the Preservation of Monuments and Sites. Aviva's warmth and willingness to help young and old learn about the history of the site is only matched by her dedication to Mikveh Israel, its past, its present and its future.

Bruce Levin, April 2011

TABLE OF FIGURES

EXECUTIVE SUMMARY

The relatively new field of architectural and site conservation has evolved greatly in the past quarter of a century. The current internationally accepted philosophy and set of values applied in "best practice" determinations involved in conservation actions are perhaps most eloquently spelled out in the revised ICOMOS Burra Charter of 1999. In the evolution of architectural and site conservation, emphasis has shifted from objects and monuments to buildings and groups of buildings and of late to "places of cultural significance". This approach to conservation is both dogmatic and conservative on some levels and broad minded and flexible on others.

In this paper, I have chosen to attempt to apply the doctrine of conservation to the historic and culturally significant site of the "Mikveh Israel Agriculture School", now in continuous use since its founding in 1870. I have viewed the challenge of preserving the historic fabric of this large 750 acre site which has fortunately escaped the developer's "plow", despite its location in the heart of Israel's Dan Metropolitan Region. In searching for a strategy of conservation, I came to the conclusion during the research that the proper strategy is neither the creation of a conservation museum nor is it creation of a boutique commercial enterprise, (both examples are common in Israel and abroad) but rather a broad and serious conservation of the historic buildings and landscapes while at the same time carefully controlling the siting for a dynamic expansion and development of the agricultural school into a national and world class institution dedicated to agriculture and the earth sciences.

I had apprehension at attempting to deal with such a vast subject both in physical size as well as in Jewish and Israeli historic significance. For this final paper, I nevertheless scoured a large amount of historic sources including first and second hand writings, maps, photographs and discussions with former students. After having gained an understanding and appreciation for the historic narrative surrounding this unique site, I turned to gathering and organizing the elements of significance worthy of preservation into an inventory listing. My concentration has been on landscape and agricultural elements since the conservation listing of buildings provided by the Tel Aviv Regional Council architects was found to be an adequate first attempt for designation of this aspect of the site.

Chapter one breaks the historic narrative of Mikveh Israel into a chronology of periods which explain both the growing pains of the institution as well as the tumultuous external geopolitical events which affected it. In Chapter 2, a selection of physical elements found today on the site is described as a basis for conservation. In Chapter 3, I have attempted to

recreate the pattern of crop coverage for various periods using historic maps, excerpts from historic texts, photos and survey maps. In addition to mapping the changes in crop coverage's, I have attempted to explain the reasons for the changes based upon historical-economic changes occurring thorough the 140 year time line. An inventory of the physical landscape and agrarian elements is shown in this chapter.

Chapter 4 describes briefly the notion of "Cultural Landscape" and practice of preservation and conservation. In Chapter 5, the special legal status of the Mikveh Israel site is explained as well as the legal and practical basis for conservation of sites in Israel. The ramifications of the incorporation of the Mikveh Israel site into the greater Ayalon Regional Park, is discussed. Strategic alternatives for the viable continuity of the Mikveh Israel Agricultural School are explored in addition to the conservation and preservation of its elements and fabric.

In Chapter 6, the implications of conservation scenarios are lain out, and implementation scenarios are suggested. The need for strong organization and intra agency coordination is described as well as a discussion of instruments and avenues for the financial leveraging of both the conservation and institutional expansion which are to provide, in symbiosis, the stimulus and financial inertia needed for such an ambitious conservation project.

In conclusion, I have provided a physical plan of a future Mikveh Israel Agriculture School, integrated into the Ayalon Park lands. This plan is meant to be but one scenario for how a combination of stringent state of the art conservation can work hand in hand without disrupting current inhabitants and users. (Unfortunately it is often the case with current conservation projects that they achieve their goals at the cost of "gentrification". The original users become either displaced or dispossessed- such as is the case along Rothschild Boulevard in Tel Aviv, The Templar Settlement at Sorona, and the more gentrified areas of Old Jaffo) .

My conclusion for Mikveh Israel is that the best conservation plan makes flexible use of various tools described in the Burra Charter, amongst them agricultural landscape succession, restoration and reconstruction of the agrarian landscape fabric, building conservation, adaptation and compatible use, maintenance, and preservation. The conservation process for the Mikveh Site will be long and require a sophisticated and responsive organization able to manage the process successfully over time. My findings are that the uniqueness and significance of the site surely deserves such an effort.

INTRODUCTION

My intent in preparing this final paper has been to use the tools of critical analysis, historic review, document and literary review as well as personal site observation in order to formulate a balanced and broad based strategy for preservation of the landscape of the Mikveh Israel Agricultural School Site. The intention was to gather an adequate amount of historical information and to record significant intact elements on the site in order to put forward suggestions for an all-encompassing preservation plan. I have not attempted to complete an actual conservation survey to the extent needed for implementation of the physical conservation of the site. This vast task is beyond the scope of this final paper, yet such an undertaking will be necessary before the real preservation project can begin.

The Mikveh Israel site is unique in that an essentially rural agrarian landscape from 1870 has been encompassed by a major urban metropolis. The agricultural school and farmlands have remained in continuous use in the same basic land-use pattern during 140 years while all around it, events and changes occurred at a breathtaking historic pace. Therefore it is of great delight that so many fine and original buildings, trees, and open agricultural spaces from the late 19th century onwards have survived the scourges of war and the bulldozer's blade. The Tel-Aviv –Dan Metropolitan Region (Gush Dan), with present population of 3,300,000 has no other such site. Many examples exist of historic churches, mansions, and even royal palaces and hunting grounds whose lands have been subdivided off and have been left standing as historic buildings completely cut off from their contextual landscape. Mikveh Israel has been a fortunate exception.

A quick glance at Charles Netter's 1870 original layout of the site shows the simple yet powerful relationship between building and landscape which can be likened to the skill of the ancient Greek's and other great site planners in architectural history. Netter and his consultants placed the cluster of buildings in an open yet defensive mode, on a high point set between two higher sandstone hillocks to the east and west. A classic north- south and east west axis, Cardo and Decumanus, intersected precisely at the garden court entry to the

building cluster with the synagogue in this case being the point of focus as well as the dominant structure also by virtue of its roof height. Being a farm plan and not a city plan, the axis's were delineated not by Greek columns but rather by a colonnades of trees. (The axis may have been planted originally with Mulberry Trees, Locust Trees, Grevillea or Italian Cypress. The Canary Palm, Washingtonia Fan Palm and Date Palm Alles' seen today were actually planted in 1920 for the school's 5oth anniversary.)

As time went by, piecemeal development and additions to the site intruded into the innocence and simplicity of Netter's pastoral agrarian farm landscape. Perhaps the romantics have to make way for the practitioners in order to make the world function. Luckily however, over the generations most Mikveh managers have directed all additions including residential, educational, and agrarian structures to the south of the Decumanos (East –West axis) . This has allowed the original built cluster to dominate the open fields from the Kurkar sandstone hillocks to the silty -clay alluvial plane of the Ayalon River to the north. Nature aided in that the sandstone southern areas were porous and well drained thus suitable for orchards, vineyards and ornamental gardens whereas the silty-clay alluvial flatlands where more suitable for dry farming, for " Falcha" grasses ' grains and feed.

It is to Netter and his consultant's credit that they so quickly read the lay of the land and created an agrarian landscape whose basic form and majesty have withstood the test of time. Merely conserving the historic buildings of Mikveh Israel without comprehensive guidelines and implementation for preserving the entity as a unified agrarian landscape, will not do justice to the past and will not ensure Mikveh Israel's continuity.

Architectural Preservation for the Mikveh Israel site, is a complex and multi-faceted matter involving various fields, Geography, Agronomy, Micro and Macro Economics, Pedagogy, Sociology, Anthropology, History, Management and Organization , Political Science, Psychology as well as Planning, Architecture and Landscape Architecture, Botany, Mechanical Engineering and Finance.

The historical and physical uniqueness of the site has different yet similar parallels around the world which can serve as case studies and provide both positive and negative experiences of conservation planning and programming. The conservation movement has come a long way from Ruskin and its 19th century beginnings. The approach to conservation in Israel has become more professional and objective in recent years in line with advancement in international standards as supported by UNESCO and ICOMOS. These standards are spelled out in the various charters and conventions , amongst them the 1931 Athens Conference, the Venice Charter of 1964 which laid out the modern conventions for building conservation ; the Florence Charter of 1982 which defined historic garden and architecture composition which comprises historic landscapes, and the Burra Charter, 1981, 1999 (revision) which defined cultural significance, principals for restoration, cultural adaptation, preservation, reconstruction and adaptability. Since then other relevant papers

and documents have been put out by ICOMOS (International Council on Monuments and Sites).

Looking at recent conservation efforts undertaken at Mikveh Israel initiated by very well meaning and dedicated groups and persons and at the level of maintenance in general, it is clear that the present state of decay must be turned around. Various well intentioned yet misdirected "interventions" which were intended to preserve or conserve the site and its landscape have often resulted in more damage than if non-intervention had occurred. This is perhaps understandable considering the decades of financial struggle and total lack of governmental and municipal financial support. Those well-meaning organizations and volunteers lose patience and act with limited resources and without adequate professional and organizational guidance. Still it is time that more professional and acceptable conservation efforts be made. It is not enough to record analyze and prioritize the historic and physical properties of the site. What is also essential is a viable organizational and economic mechanism which can focus on the simultaneous goals of conservation, continuity and blossoming of the educational facility and successful incorporation into the (Ariel Sharon) - Ayalon Regional Park. Only then can Mikveh Israel fulfill its potential as a major national educational, cultural and historic heritage site and as an agro-tourism center. The process will involve the necessary transformation of the site by virtue of a long term preservation implementation plan.

As they say in Hebrew- "amongst so many trees we lose sight of the forest". A good example of this is the present decision to build a seven meter high sculpture of the German Kaiser on his horse meeting Theodore Herzl to be auspiciously placed at the Jerusalem Gate for all to see. If there is one keyword which guides current conservation and preservation good practice it is "authenticity". The authenticity of every preservation intervention should be checked before going forward. In the case of Herzl and the Kaiser, with all due respect, one can hardly create an unauthentic replication of a historic meeting based solely upon a photograph which in itself has been proven be unauthentic! (See figure 52). Furthermore is it not an affront to the public's intelligence that they are deemed to need a "photo-realistic" cast iron image in order that they understand the historic significance of the real and authentic buildings, trees and fields? The planned addition of this huge sculpture along with the gross and inconsiderate placement of the concrete overpass built in the last decade - both located at the historic "Jerusalem Gate" along the Jaffa-Ramle Road – the "foyer" of Mikveh Israel, shows how little we have learned and how far we need to change in order to do justice to our cultural landscapes and cherished historical sites. Such "Disneylandish" approaches should be rejected outright.

A large and wealthy body of information exists for documentation of this site. Fortunately the Mikveh Agricultural School has been both in continuous use as an agricultural school

since 1870, and has been administered by basically the same institution, the Alliance Israelite Universelle since its inception. In its beginnings, the Jewish philanthropist, Baron Edmund De Rothschild gave logistic and financial assistance at times where the lack thereof would have brought the Mikveh experiment to a sudden end. This continuity has probably protected the site from a multitude of outside threats which would have erased the historic physical elements in large part. Much eye witness literature and documentation exits describing Mikveh Israel as a cultural landscape rich in personal and collective narratives of Jewish ethnic struggle, hardship and perseverance. The site of Mikveh Israel can be read as a barometer, wind vane, and thermometer – recording the turbulent history of the Jewish people and later on, the creation of the State of Israel. The pioneering ethos of the first and second Aliya settlers and afterwards , the Zionist pioneers and immigrants who taught, studied and passed thru Mikveh Israel reflects a pathos and camaraderie typical of the idealist- founder generations and rarely found in today's cultural climate. The dedication to the collective responsibility and historic mission sensed by both administrators, faculty and students, is clearly conveyed in all of the historic literature written on Mikveh Israel.

There is a sense that this site and its people clearly took part in making modern Jewish History. In most of the writings, the survival and thriving of Mikveh Israel was interchangeably linked to the emancipation and rebirth of a new Jewish people. Like modern Jewish history, the Mikveh community was constantly going thru cyclical periods of growth and prosperity as well as stagnation and decay and often the very threat of physical survival. From the struggles of founder Carl Netter and his pre-mature death, to the long and successful chairmanship of Eliyhau Krause, the narrative of Mikveh is one of the nobility of human perseverance. One can hardly separate the cultural- historical narrative of the site from the pure physical elements which have survived the tests of time. In the 1960's many of the old structures which had come into decay were demolished in order to make way for "modern" and comfortable student and staff dwellings and classroom facilities in order to help the struggling institution compete with newer agricultural and boarding schools in the country. Even the greatly respected headmaster, Eliyahu Krauze, ended a forty year career with the financial state of the school being almost irreversibly in the red. Not only had the historic buildings suffered decay. Enrollment of the best young people in agricultural studies which characterized the 1930,s 40's and 50's had begun to decline all over the country and it Mikveh in particular. The orchards, vineyards, and Botanical gardens began a long decay which lasted throughout the 1970's and 80's and continues to this day. Field crops such as cotton, sunflower, wheat and Vetch[1] which require little manual labor and less intensive care replaced the large areas of vineyard, orchard and garden crops which characterized the site from the post WWI years. The Botanic Gardens, established as a scientifically arranged

[1] Hairy Vetch (Vicia villosa), also called Fodder Vetch or Winter Vetch, is a plant native to Europe and western Asia. It is a legume, grown as a forage crop.

display of species introductions brought to Palestine and Israel from all parts of the world, became overgrown in top story while the lower story plant cover became either shaded out, or partially destroyed for lack of maintenance or manpower. The same cyclical story of success, prosperity, decline and decay can be seen regarding the basic agricultural units of the Mikveh farmstead; the dairy, stables, blacksmith and mechanical shops, poultry coops, hatcheries, sheep and goat pens, feed silos, and hot houses have struggled to keep up with the latest in farm technology and practice while undergoing lack of proper maintenance and reinvestment for lack of financial resources.

The zenith of Israeli (and western) agriculture in the late 1960's and the replacement of the individual farmer with agro-business, has had a detrimental physical impact on the Mikveh site. In Israel this phenomena has come with the decline of the collective farm and the Kibbutz. Mikveh Israel had been among other things, one of the engines of the Kibbutz and Moshav movement and a source of national achievement and leadership in all fields. Since the 1970's, the enrollment in Mikveh's agricultural programs has been falling behind enrollment in the boarding school and external program for immigrant and disadvantaged youth. The very continuation of the Agricultural School as such is in question.

The present and future use of the site raises fundamental questions regarding the nature and extent of intervention for preservation-conservation. Is the Mikveh Israel cultural- historical site to be preserved as a museum of structures and gardens "frozen" in time, such as historic Williamsburg or Jefferson's Monticello and grounds? This hardly seems the right approach.

What is to be the connection between the financial and curricular problems of the school regarding historic preservation? Although the institution has maintained itself for over 140 years, the institution will need to constantly reinvent itself to provide the relevant educational programs, and physical campus in order to attract the kind of bright and promising youth who have in the past made such a great and important impact on Israeli culture and society. As in the past, this will require all the resources and talents as well as imagination of those managers and educators who make up the institution. In addition the various agencies and organizations which today have influence on the site's future are recently engaged in a new and critical dialogue brought about by both the changing enrollment needs of the school as well as the historic legal approval of Ayalon Park – a vast metropolitan park project which includes the Mikveh Israel site as part of its boundaries. The various actors, the AIU, the Mikveh Israel Agricultural School and the Rashi Foundation, the Ayalon-Park Governmental Company and the Tel Aviv Regional Planning Council, will need to cooperate in creating a program and vision which combines historic conservation with the continuing financial and educational needs of the school and viable maintenance of its vast campus.

Architectural and site conservation concerns itself with prolonging the life and integrity of such elements as architectural style and form, materials such as brick, stone, wood, plaster, plantings, road paving, etc. In a broader sense, architectural conservation makes use of planning policy and statutes in order to develop management programs for protecting, interpreting, and educating regarding the heritage site. In an attempt to safeguard the genuine voice of the past, many questions arise as to what is to be safeguarded; by virtue of a very orthodox "conservation" or a more lenient and flexible approach of "preservation", maintenance, restoration, adaptation and interpretation in suitable combination as ascribed to in the Burra Charter 199 revision. Statutes, conventions and international organizations have since the Athen's Charter in 1931, continued to redefine the acceptable approach, a modern viewpoint if you will of how progressive societies safeguard architecture and sites of the past. The first step in the process is to define the substance of the object to be safeguarded. The scope of this paper is to identify and describe a preservation strategy for

Figure 1 - First Class of Ecole Agricole De Mikveh Israel c. 1870-80 's

the non-building elements of the Mikveh Israel Site. (Architect Gobi Kurtis and others have prepared a preservation inventory list of building structures on site which can be found in Appendix A.) While the huge task of research, documentation and preservation planning awaits application to the Mikveh Israel site, the intent of my work is to show that nothing less than a holistic preservation approach is required for the Mikveh Israel site- an approach which is flexible in allowing physical growth and change to match the needs of the educational institution, the incorporation into the new regional Ayalon Park, while being steadfast and non-compromising regarding what is considered first priority or A-1

preservation elements consisting of both built structures, landscape and agrarian elements of the historic site.

After describing the non-building elements, which include open agricultural fields(being in themselves open space view corridors), planted boulevards, botanic and agronomic landscapes, remnants of historic irrigation and water supply infrastructures, as well as monuments and monumental gardens and groves, all of which together with paths, roads and public open spaces male up the preservation subject of this paper. In the final chapter I will show a hypothetical "Campus Master Plan" as an example of how one can preserve and enhance the historic site while at the same time adopt the site to future anticipated new uses.

Figure 2 - Aerial Perspective View of the Mikveh Israel Site – view to the north east 2010

CHAPTER 1: HISTORICAL BACKROUND OF THE MIKVEH ISRAEL SITE

Ethos, Myths and Historical Reference

The historic context of the liberal French Jewish milieu which in 1860 inspired Charles Netter, a successful European businessman, to leave the comforts of Paris in order to create the Mikveh Israel project in Ottoman Palestine has already been described. Netter's ideology can be summed up in the charter of Alliance Israélite Universelle, of which he was one of the six founders.

"*To gather good-natured people to fight against hate and prejudice.*

To create a society of young idealist and militant Jews that feel solidarity with all those who suffer from their condition as Jews or all those who are victims of prejudice, regardless of their religion.

To ensure that culture replaces the ignorance of fanatics, for the good of all.

If you believe that this would be an honor for your religion, a lesson for the people, a progress for humanity, a triumph for truth and for universal reason to witness all the vibrant forces of Judaism come together, small with respect to number but large with respect to love and good will, come to us, we are thus founding the Alliance Israélite Universelle."[2]

The "Jewish Problem" in Europe was reaching a hiatus with devastating pogroms in Russia, the Ukraine, and the east and rampant anti-Semitism in Western Europe which was to show its ugly head 70 years later with the Nazis. Netter came to Palestine first in 1868. In his plan of the Mikveh Israel site, he gave biblical names to the hills and vales as if they were biblical mountains and valleys. Among names he used for areas within the site, Mount Abraham, Mt. Sarah, Mt. Isaac, Mt. Jacob and Mt. Benjamin; the Valley of Rebecca and the Valley of Rachel; the Plain of Moses and the Plain of Samuel. Cleary, Charles Netter was a visionary and a romantic who believed in a high purpose. His vision, along with his charismatic leadership was powerful enough that even after his untimely death in 1882, the institution he had begun only twelve years previous would survive and grows for the next one hundred and

[2] History". Alliance Israélite Universelle. http://www.aiu.org/ANGLAIS/presentation_ang.htm. Retrieved 2007-06-17.

thirty years. It was only later with the Biluim[3] and with the coming of Labor Zionism that the ethic of the new Jewish Agrarian became ingrained in the Yishuv.

Perhaps the father of Labor Zionism was Zionist thinker, Aaron David Gordon (1856-1922), who was influenced by the völkisch ideas of European romantic nationalism[4], and proposed establishing a society of Jewish peasants. Gordon made a religion of work. Both Gordon and Borochov, and others like them, motivated the establishment of the first Jewish collective settlement at Kibbutz Degania, on the southern shore of the Sea of Galilee, in 1909 (the same year that the city of Tel Aviv was established). Degania, and many other kibbutzim that were soon to follow, attempted to realize these thinkers' vision by creating communal villages, where newly arrived European Jews would be taught agriculture and other manual skills. Mikveh Israel however retained its French cultural identity and it was only in 1918 after World War One almost brought the school to collapse that change came with Eliyahu Krauze (1878-1962), who became headmaster and administrator. Krauze immediately made Hebrew the language of instruction and the institution took on the Hebrew cultural and national identity prevailing in the Yishuv. [5]

Joseph Trumpeldor (1880-1920), is also considered to be one of the early icons of the Labor Zionist movement in Palestine. Trumpledor's vision of the Jewish Pioneer was as follows,

"*What is a pioneer? Is he a worker only? No! The definition includes much more. The pioneers should be workers but that is not all. We shall need people who will be "everything" – everything that the land of Israel needs. A worker has his labor interests, a soldier his esprit de corps, a doctor and an engineer, their special inclinations. A generation of iron-men; iron from which you can forge everything the national machinery needs. You need a wheel? Here I am. A nail, a screw, a block? – here take me. You need a man to till the soil? – I'm ready. A soldier? I am here. Policeman, doctor, lawyer, artist, teacher, water carrier? Here I am. I have no form. I have no psychology. I have no personal feeling, no name. I am a servant of Zion. Ready to do everything, not bound to do anything. I have only one aim – creation*."

This was an age of hardship, of rebellion against tradition, and of new beliefs and ideologies. A new generation of Jewish leaders, thinkers, scientists and agrarians were to grow up in Israel's agricultural schools, Mikveh Israel being the first among them. Mikveh, unlike many political parties and labor movements managed to tone down its ideological bravado and emphasize the practical and doable. The curriculum and philosophy–a tolerant combination

---

[3] See glossary & description of term for "biluim"

[4] See glossary for explanation of the Völkisch Movement

[5] Shlomo Hillels, Mikveh Israel(Omanut Company, Tel Aviv , 1928) p. 67-71

of agriculture, collective work ethic, and social justice morals existed in harmony retaining both traditional Jewish religious values alongside a secular agrarian work ethic and humanistic curriculum. This balance of values found in the coexistence of the religious school, secular school, internal and external student programs as well as the Lycee' French Jewish School, have all been able to coexist in equilibrium to this day.

Finally we can find reason enough to ensure the continuation of Mikveh Israel in the moving words of Shlomo Hillels written in 1928. "*Mikveh Yisrael" – Thousands of blistered hands have labored for over fifty years, to propagate, to decorate and to improve her. And more hands are still readying to continue. Three hundred and fifty persons live at the farm. Of them one hundred and ninety students, fifty to seventy laborers and the rest teachers, administrators, clerks, each and every one of them in his place and his profession, laboring hard. Student and teacher working from early dawn to late evening."*[6].

In our present post –industrial age with its diminishing work ethic, it is most difficult to understand the feeling and emotion expressed here, a Thoreauan - Tolstoyan love; and edification of the common labors of man! Today many people would see such ethos as incredibly naïve and silly, which just goes to say that times and cultures' change dramatically as does the human view of its own condition. In order to remain socially relevant, Mikveh Israel will have to reinvent itself, its ethos and its raison d'être to the aspirations of a new Israeli society and a new generation of youth growing into this twenty first century, our time and culture.

Selection of Historic Periods

In any project of restoration, be it a building or a cultural site, the question of which historic period should be emphasized is of major concern. Spanning 140 years, the Mikveh Israel site has been in continuous use as an agricultural school. It is immediately obvious to the visitor that the central core of historic buildings with the Grand Synagogue as its center, the Jerusalem Gate and Palm Allée creating the axis from the old Jaffa-Ramle-Jerusalem Road, represents the historic core of the site. (Amongst the buildings making up the historic core, the Synagogue, the Winery, the Teacher's House, the Practitioner's House, the Headmaster's House , the Netter "Kolel" school house, the Szold House, the "Flower" house). In fact even the core group of buildings was built over an extended period from 1870 to 1910 and was not all part of Netter's original campus. Physical changes occurred due to external influences of economy and geo-politics, as well as internal influences such as changing of school directors and educational program. Physical changes, additions and removal of physical elements have occurred continuously on the site up until this day. A chronological

[6] Shlomo Hillels, Mikveh Israel (Omanut Company, Tel Aviv , 1928) p. 77

breakdown of historic periods is suggested by which physical elements of the site can be placed.

Period I - 1870 to1877

Founding of the School and the First Aliya-In this period Carl Netter founded the school. In 1871 the first buildings were erected. Itzhak Shemesh was made first director in 1872. In 1876 Zeev Hertzberg was made director.

Period II - 1877 to 1918

In 1877 Samuel Hirsch replaced Hertzberg as director and continued the French educational model. In 1882 Netter brought the "Bilu" pioneer group from Russia to Mikveh Israel who latter would, along with *Hovevei Zion*[7], develop one of the first Jewish agrarian settlements in Rishon Le Tzion. Netter died in the same year. The next group of pioneers to arrive at Mikveh Israel were the "Radomim" who came from Polish Jewish farming communities. According to an agreement between the Rabbi Samuel Mohaliver and Baron Edmond de Rothschild, the new immigrants would first be trained for 2-3 months at Mikveh. Those who showed promise as farmers would be given land parcels to settle and cultivate by *Alliance Israélite Universelle* in areas of Petach Tikvah and Rishon Letzion. .[8] The contact with the immigrants was signed in the month of Heshvan, 1883 and stipulated that if they lived up to the agreement, they would be given housing, wells, and help in purchasing farming tools and supplies to get started. Thus began the reemergence of Jewish farming in Palestine during the first Aliya.

1891 Yoseph Neigo the agronomist was made director. The building program of Netter continued posthumously as he had originally planned. In 1894 there were 98 students. Citrus Orchards were first planted. A plant nursery was established and the first Eucalyptus seedlings in the near east arrived from Tasmania from which saplings were produced. In 1898, a year after the first Zionist Congress in Basel, Dr. Theodore Binyamin Herzl visited Mikveh Israel and met with Kaiser Wilhelm the Second. In 1902 Yoseph Lupo was made director. In 1905 the Hebrew Gymnasium High School was built in Tel Aviv and would later run a joint program with Mikveh Israel in agriculture and field studies. The years leading up to World War One saw rising competition between Western Powers and The Ottoman Empire. The Germans, French and British saw conflicting interests in the

---

[7] Hovevei Zion (Hebrew: חובבי ציון), also known as Hibbat Zion (Hebrew: חיבת ציון, lit. [Those who are] Lovers of Zion), refers to organizations that are considered the forerunners and foundations of the modern Zionist movement.

[8] "מוהליבר שמואל", האנציקלופדיה העברית, כרך כ"ב, עמ' 402. דוד שמש, הרב שמואל מוהליבר - מאה וחמישים שנה להולדתו, משרד החינוך והתרבות, ירושלים תשל"ז. יוסף שלמון, הרב שמואל מוהליבר — רבם של חובבי ציון. מתוך מאה שנות ציונות דתית: אישים ושיטות, הוצאת אוניברסיטת בר-אילן

Middle East controlled by a decaying Ottoman Empire. This competition may have led to the event which created the first airfield in Palestine at Mikveh Israel.

Just ten years after Wilbur and Orville Wright invented and flew the first airplane, the French in 1898 formed a national aviation league, Aéro-Club de France, and after failing to beat the Wright Brothers with the first powered flight (1903) , announced a race from Paris to Cairo crossing three continents. The race took place in 1913 with the first landing of an airplane in Eretz Israel getting stuck in the sand of the Jaffa shore. The planes that followed decided to use the more stable soil of Mikveh Israel influenced by the knowledge that the agricultural institution had French cultural connections. The first airfield in Palestine was thus created hastily at Mikveh Israel where the planes were to come in from Beirut on the Sabbath of Hanukah, 27 of December, 1913. Instead they landed mistakenly again on the Jaffa beach, to the consternation of the throngs of citizens and officialdom (including the French Council Gueyraud and his wife) who had all come to Mikveh Israel to greet the flyers. In order to placate the crowds, the pilot, Vedrines, flew from Jaffa and landed in Mikveh on Sabbath evening where the Turkish and French dignitaries, arrived again from Jaffa to Mikveh Israel. A huge welcoming ceremony was made inside the agricultural school including the governor of Jerusalem- Pasha of Jaffa, and French Council and created much excitement in the Holy Land. On the following day Vedrines took off from Mikveh Israel to Cairo but not before receiving his lunch in a basket "to go" from the daughter of the French Council.[9]

In 1914 Elihau Krauzer became director and would remain until 1954. The struggle to stabilize the number of students and to become economically self-sufficient remained a difficult if not near impossible task, at this time of the First Aliya. WWI led to isolation and stagnation in Palestine as free trade and movement was disrupted to the outside world. During World War One, due to suspicion of the Ottoman's that the Jewish Yishuv would aid the British invasion, the entire faculty and student body was forced by edict to abandon the school and headmaster Krauzer accompanied them to the Negev where they worked on desert forestation until the war ended. 1917 was the year of the Balfour Declaration promising a Jewish homeland.

Period III - 1918 to 1927

The year 1918 marked the end of the Ottoman Empire and the start of the British Mandate in 1922. The re-founding of the school and the Second and Third Aliya created new energies for

---

[9] , (156)4 ,כ"ו ,2001 ,מאי , מחבר גביש,דב : כתב העת "עת-מול" הציפור של צרפת מגיעה לירושלים

הוצאת אוניברסיטת תל אביב – הוצאה לאור יד יצחק בן צבי

Mikveh Israel. . Krauze as director changed the curriculum from French to Hebrew (long after the "war of languages" where Hebrew was made the main language of instruction at the Technicum Haifa in 1914) which reflected the Zionist awakening. In 1926 a base of the Haganah[10] was established at Mikveh at a time of increased Arab –Jewish hostilities.

Period IV - 1927 to 1939

This period was marked by pre-statehood, and the Fourth and Fifth Aliya . In 1938 German Jewish youth and other European refugees were absorbed at Mikveh. The world's great depression and rise of Fascism closed world agricultural markets and Mikvh Israel again began to struggle for economic survival.

Period V - 1939 to 1948

War begins in Europe in 1939. In 1941 a dual secular-religious agricultural school is adopted. Also a school of the histadrut[11] was added. World War Two and Aliyat Ha-Noar brought illegal boat refugees to Palestine.[12] The British White Paper 1922 to 1939, tried to stop all influx of Jewish refugees from Europe.[13] In 1943 many of the "children of Teheran"[14] were absorbed at Mikveh. On November, 1947 the United Nations proclamation declares partition of Palestine into a Jewish and Arab State.

Period VI - 1948 to1956

May 14th , 1948 Israel is declared a state by the United Nations. War of Independence, statehood and the Mikveh Alliance (AIU) -Government Corporation is formed.

Derech HaBitachon [15] was paved from Tel Aviv to Jerusalem passing thru Mikveh. The Davidka[16] is manufactured at Mikveh by mechanics instructor David Leibovitch, and violent

---

[10] Haganah (Hebrew: "The Defense", ההגנה HaHagana) was a Jewish paramilitary organization in what was then the British Mandate of Palestine from 1920 to 1948, which later became the core of the Israel Defense Forces.

[11] General Federation of Labor, Israeli workers' union (Hebrew)

[12] Youth Aliyah (Hebrew: עלית הנוער) (Aliyat Hano'ar) is a Jewish organization that rescued 22,000 Jewish children from the Nazis during the Third Reich. Youth Aliyah arranged for their resettlement in Palestine in kibbutzim and youth villages that became both home and school.

[13] The British White papers became a major obstacle for ships loaded with Jewish refugees fleeing Nazi persecution. Many of the ships were turned back after they reached the shores of the Land of Israel.

[14] The “Tehran Children” is the name used to refer to a group of Polish Jewish children, mainly orphans, who escaped the Nazi German occupation of Poland some of whom arrived to Palestine from Teheran.

[15] Derech HaBitachon was a hastily paved road , built at the outset of the War of Independence in 1948, connecting Tel Aviv to Jerusalem via Mikveh Israel, Holon and Rishon Letzion in order to circumvent the Arab villages of Abu Kabir and Yazur .

attacks near the neighboring Arab village of Yazur claim lives on both sides including 7 Mikveh students.

Period VII - 1956 to1967

Aliya from Arab countries and Iran – the Six Day War Krauze retires as director after 40 years in 1954.

Period VII - 1967 t0 1973

War of Attrition and Yom Kippur War. 1965 Dr. Gideon Katz becomes director.

In 1967 the: Mikveh Israel Law" was passed by Knesset. In 1970 Mikveh Israel had its Centennial celebration.

Period IX - 1973- 2010

This period was marked by the Egypt- Jordanian Peace Treaty- the Palestinian Intifadas; the Aliya of Ethiopian Jews and the historic mass Aliya of Soviet Jews in the early 1990's. This was also a period of "post-ideology" – "post-Zionism" where a less idealistic generation called old values to question.

On April 2oth, 2005 the Israeli Government passed **Regional Plan 3/5** for the creation of an 800 Hectare regional park along the Ayalon Stream including Mikveh Israel, The Menahem Begin Park (Park HaDarom) and the Shephirim and Ayalon drainage basins including the Hirya Land Fill. In 2006 , the **Ariel Sharon Park Corporation Ltd**. became a governmental company whose purpose is to initiate and develop the Ayalon Park.

[16] The Davidka (Hebrew: דוידקה) was a homemade Israeli mortar used in Safed and Jerusalem during the initial stages of the 1948 Israeli War of Independence. Its shells were reported to be extremely loud, but otherwise of little value, besides that of using fear tactics against the Arab forces.

Figure 3 - "Salute de Mikveh-Israel"-Postcard from the late 19th century showing views of Mikveh Israel, the winery, the school entrance Allee, vegetable gardens and students at work.

Preferred Usage of Historic Periods as a Basis for Preservation at Mikveh Israel:

It is one of the dilemmas of conservation as well as of archaeology to decide which physical remnants are to be exposed, emphasized and reconstructed. The Burrah Charter provides a set of "Ethical Principals" by which the conservationist is required to preserve the values and co-existence of diverse cultures respecting the values of all groups involved. [17]

Using the charter as a basis for selection of periods of restoration of the site a number of periods with associated cultures or ideologies can be defined. They are in chronological order;

I.The Muslim- Ottoman earlier buildings on the site, mainly the two well houses and cistern.

[17] The Burrah Charter, ICOMOS Australia, 1999. Charter for Places of Significance and Code of Ethics of Co-Existence.

II. The French period of initial settlement and establishment where physical architecture, horticulture and agriculture reflected French colonial settlements of the time.

III. The Zionist pre-state period

IV. The Independence War and young emergent Jewish state.

V. The post 1965 era – maturation of the state, post idealism and zenith of agriculture.

It is my intention to prioritize the conservation chronologically whereby the older physical elements will have first priority preservation status. The rule of thumb is to preserve the existing physical elements and remnants and in general not to allow reconstruction at the expense of authentic physical elements listed in the site inventory. Where remnants of buildings, tree rows, forestation plantings, do exist from periods I, II, and III, these elements should be given first priority, and reconstruction, restoration and succession planting should be used to reinforce the historic special and physical pattern of the site as a whole.

Remnants of agricultural technologies no longer in use, as well as defense structures which tell the story of past conflict should be given highest priority as well. Adaptive reuse of buildings should be preferred over the "Museum" approach in most cases, but in a manner that allows the public at large educational and physical access to the core building of periods I, II, and III. Adaptive reuse should retain the Spartan nature and authentic character of paving materials, planting materials, building facades and interiors. Boutique reconstruction creating imaginative nostalgic scenes of an idealized past should be avoided at all costs.

Finally, the conservation program should not only preserve and restore but should actively remove asphalt and concrete paving, asbestos and tin roofing materials, and "peel away" layers added to the site from the late 1950's to this day which hide or substantially change the proportions, character and ambiance of the earlier historic periods. This policy shows a certain prejudice against the post 1950's historic period of the site. The reason though is simple. There are many such examples of institutional architecture and landscaping in the country from the 1950's onward. What is unique at Mikveh Israel is the existence of the farm-campus much intact, remaining from the pre-state period.

CHAPTER 2: SELECTION OF PHYSICAL ELEMENTS

Agriculture in Mikveh Israel

The development of ornamental horticulture and gardening came later on in development compared to agriculture advances in Palestine. Intensive plant introductions at Mikveh Israel were made at first by Netter with the aid of his gardener Beudrien who served at Mikveh Israel from 1873-1881. The goal of their efforts was to create a viably economic agriculture in Palestine which could provide a livelihood to Jewish farmers with Europe and particularly France as the major export market. The Baron Rothschild's involvement in French viticulture, winemaking, silk industry, and the perfume industries was certainly a great factor in early agronomic experimentation and economical practical at that. In addition to introducing Robinia Pseudoacia (source of French monofloral honey), Mulberry (for silk worm production), Loquats, Guava, and various Citrus varieties, those early days saw the introduction of varieties of roses, jasmines and other fragrant flowers for the perfume industry. French wine grape rootstock was introduced to Mikveh Israel and to other settlements of the Baron. The Arab gardener Abed El Aziz Atwan also served at Mikveh in 1891. Later on, French agronomist and technical director for Baron Edmond de Rothschild, Justin Dogour was brought from Egypt to help Netter who had no agricultural background. Dogour continued to advise Samuel Hirsch, headmaster from 1879 to 1891.[18] Experimental plant introductions continued through Mikveh's history. [19] In 1885 Lawrence Oliphant described Mikveh Israel as being set amongst groves and Bustan gardens, surrounded by rich agricultural soils. "She has ample boulevards of Eucalyptus and Bamboo, of which are varieties not known in this land, which gives the place a special character which envelopes the school". [20]

In fact many crop and fruit tree introductions were contributed by French and Arab gardeners in those early days. The Jerusalem born Jewish gardener, Joseph Cohen (Kahana) completed his studies at Mikveh Israel in 1912 specializing in orchard tree propagation. Kahana gained experience as a gardener working for wealthy Arab clients in Jaffa and for German Templar clients in Sorona and Jaffa. [21]. He was the first Jewish gardener in modern

---

[18] Rothschild and Early Jewish Colonization Ran Aaronsohn Hebrew Univrsity Magnus Press Jerusalem 2000 p.p. 121-124

[19] מקוה ישראל – אריה חורשי הוצעת ליכטנפלד, 1983 דף 41

[20] Lawrence Oliphant was a British writer, a Christan spiritualist and mystic .By that time, however, his mind was occupied with a large project of colonization in Palestine, and he made in 1879 an extensive journey in that country, going also to Constantinople, in the vain hope of obtaining a lease of the northern half of the Holy Land with a view to settling large numbers of Jews there (this was before the first wave of Jewish settlement of the Zionists in 1882) Philip Henderson, *The Life of Laurence Oliphant* Robert Hale Ltd, London, 1956.

[21] גנים ונוף בישראל- יוסף בן-ערב קיבוץ המיוחד 1981- דף30- 34

Palestine to gain an outstanding reputation and was given a grant to study gardening in France and England. Cohen returned and was given the design and implementation of the exquisite gardens and grounds of the British Mandatory High Commissioner on the Mount of Evil Council in Jerusalem. Cohen later was commissioned for the planting and gardens at Mount Herzl, the Israeli "Arlington".

Viticulture and the Mikveh Israel Winery

The winery and cellars was built in the historic central core of buildings, its location just after the grand synagogue, a testimony to the importance given to winemaking by the French founders. The winery likely was completed seven years after opening of the school in 1877. The sandstone block building has had more than one life, beginning as a winery in 1877 and eventually absorbed by and overshadowed by the Baron Edmund De Rothschild's Carmel Mizrahi Wineries in Rishon Letzion and in Zicron Yaacov. (Rothshild turned over the companies to the wine growers cooperative, Societe Cooperative Vigneronne des Grande Caves, in 1908) In the early twenties the cellars were also used as a secret base and "slick" or weapon's catch for the Haganah underground from 1928 under the command of "Musa " Brenner. The entry of the building leads to a set of deep wooden stairs which lead down to rock hewn underground passageway which opens into a huge cellar carved deep into the bedrock maintaining cool temperatures and dampness on even the hottest summer days. Netter brought a crew of experts from Italy in 1877 who carved five cellars out of the sandstone rock to a depth of six meters. Here were stored the Oak aging barrels brought over from France. The wine was produced in the upper levels above the cellars. The cellars were lined with sandstone block masonry for reinforcement. In the 1930's the grape harvest was still brought to the winery on horse drawn wagons. The fermenting was done in giant wood barrels and then transferred to the smaller barrels for aging. In the War of Independence the western section of the winery was exploded which ended production. In 1964 a group of wine growers leased the winery including Alex Tal who was retired admiral of the Israeli Navy. Along with Nathan Hochberg, son of Mikveh's legendary Viticulture Department Chairman, and Emil Shenberger they believed that the fine cellars could become a successful Boutique Winery. Production began again in 1970 reaching 150,000 bottles a year including wines, brandy and liqueurs. The winery was named "Carmia" after Adolf Carmia, founder of Alliance Israelite Universelle . The brandy was named "Carl Netter" and the wine "Mikveh Israel". In 1970 production ceased due to illness of one of the Vintners. [22]

Although the wineries of Rishon LeZion and Zichron Yaacov overshadowed Mikveh Israel's winery, research into Viticulture did not end with Rothschild's agronomists. The legendary

[22] Israel Wines Portal- Article by Israel Parker (02-2005)

Viticulturist and Mikveh teacher, Nathaniel Hochberg was born in Ottoman Palestine and was a student of Mikveh Israel. Nathaniel was not only a great and charismatic teacher, but was the foremost agronomist in Palestine in Viticulture. His many books on grape cultivation comprised the only professional literature on the subject in the Hebrew language. He was the first Israeli agronomist to clone new grape varieties, two of which were named by him. The first, "Dan Ben Hannah" named after his young son, a Mikveh student who fell in the 1948 war, became a popular table grape in South Africa. Another "Shachrit" is used till today in wine production. Hochberg was given the Israel Prize for his contribution to agriculture 1954. [23]

[23] The "Cuisine" Site Haim Cohen and Eli Landau http://www.mevashlim.com/Article/4441001.asp

העונג הבא, רונית ורד טיול יין באזור יואב יהודה 08-03-10

Figure 4 - Bottle of "Carl Netter" Brandy and the giant fermentation barrels.

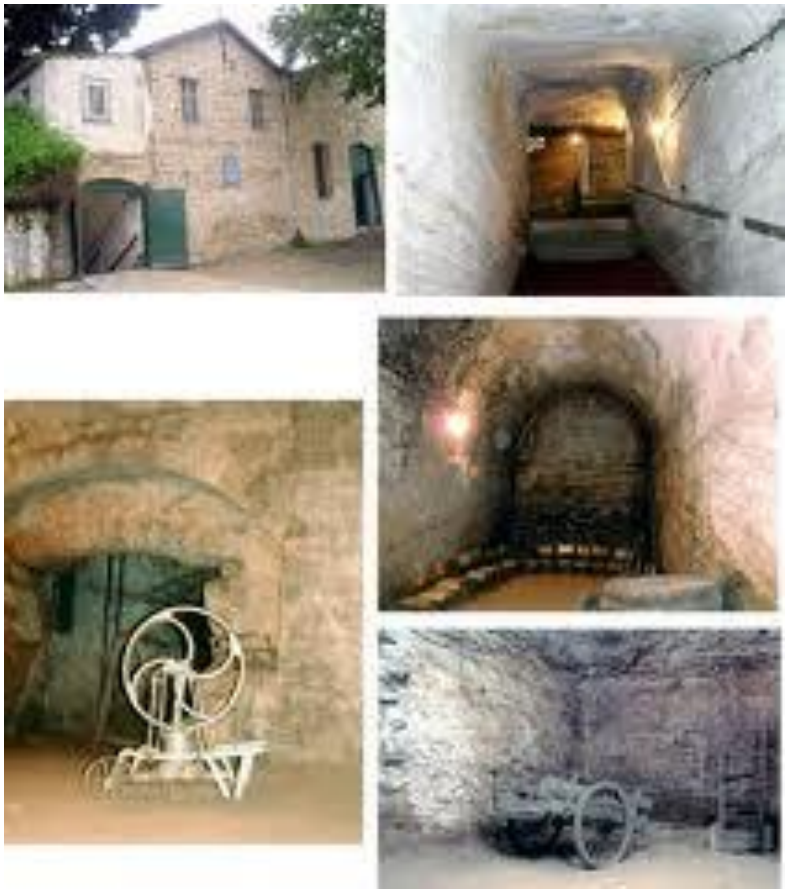


Figure 5 - Sandstone winery above and 6 meter deep rock hewn cellars excavated by Italian experts in 1877 for Charles Netter.

Introduction of Eucalyptus to Ottoman Palestine

Eucalyptus trees brought to Mikveh Israel from Tasmania to dry the swamps and stop the spread of malaria are considered as part of the pioneering ethos of the land. The first seeds were sent in 1883 by P.N. Stafford to his friend Kutin in Jerusalem who gave the seeds to Charles Netter. The seeds were germinated in the Mikveh Israel nursery and from there propagated throughout Ottoman Palestine.

In 1939, fifty-five years after they were first planted the first eucalyptus trees at the Mikveh Israel agricultural school were close to fifty meters in height. The eucalyptus emerged as the

Yishuv's tree of choice during the period after the founding of Mikveh until the late 1920's. During that period, some 78 percent of all JNF trees were eucalyptus.[24]

Several characteristics soon led to their popularity. In six years they can grow twenty meters tall with a one-meter trunk radius. They adapt to all soils, and can survive in a wide range of moisture conditions from arid lands to swampland. Eucalyptus was seen as the most effective biological assistant in overall swamp-reclamation efforts. Their thirsty root system enables eucalyptus trees to flourish in wetlands, and they have been used around the world to dry swamps.

In 1900 eucalyptus trees were first introduced on a large scale by Baron Edmond de Rothschild's development agency, PICA, as a swamp-draining measure in Malaria infested areas of Hadera. No forestry work was more thankless. Soon the eucalyptus spread out far beyond the original towns of Petah Tikva and Zichron Yaakov. The tree was usually planted in the springtime in communities and settlements throughout the Yishuv. So common was the tree that Arabs began to call it *shajarat al-Yahud,* or "the tree of the Jews".

The greatest enthusiasts harbored illusions of the eucalyptus providing the basis for a local lumber industry in Palestine; in fact a crate factory even sprang up briefly in Jaffa that relied solely on eucalyptus wood. It was only logical that the JNF would continue this trend when it assumed the role as chief forester of the Yishuv. During the 1920s, however, the tree fell out of favor. Between 1920 and 1925, 53 percent of all JNF trees planted were eucalyptus. A year later the rate dropped to 32 percent, and by 1930 JNF hardly planted them at all. [25]

Eucalyptus forests in Californian and other regions if the world have been criticized because they compete with native plants and do not support native animals. Fire is also a problem. By the late 1980's some ecologists came to view the world wide spread of Eucalyptus trees as having adversely affecting the soil, water cycle, wildlife, biodiversity, fire cycle, and local vegetation however the JNF's reasons for discontinuation were more prosaic as there were fewer wetlands that needed to be drained.[26]

---

[24]. I. Klinger, Epidemiology and Control of Malaria in Palestine (Chicago: University of Chicago Press, 1930)

[25] Nili Lipshitz and Gideon Biger, "Forestry Policy of the British Government in the Land of Israel," *Geographic Horizons* 40 (1994): 5–16.

[26] Tal, Alon. *Pollution in a Promised Land: An Environmental History of Israel.* Berkeley, Calif: University of California Press, c2002 2002.

Allee's –the Tree Lined Boulevards and Paths

The tree lined axis or allee's were from the very beginning a key European agrarian landscape element which both organized the structure of the landscape and the buildings set upon it. The original Netter plan of 1870 lay out was of north-south and east-west axis using double tree allee's. The map shows what appears as Palms along the entire length of the Jaffa-Jerusalem road, and a smaller tree used for the north-south allee' from the Jerusalem Gate to the built cluster. Various sources show that a variety of trees were used to line the roads and paths of the site from 1870 to 1920. These include some species such as the Mulberry, which were brought by the French agronomists with the hope of beginning a silk industry in Palestine as an economic base. Other species included Grevillea and Eucalyptus, brought early on with the hopes of their potential as a base for the timber industry due to their tall straight trunks and rapid growth habit. A row of Black Locust Trees (Robinia Pseudoacacia) was planted on the axis to the west of the built cluster until later replaced by the Eucalyptus grove. The Black Locust was brought to France from America and was favored as a source for Monofloral Honey (the most highly valued in France at the time) production as well as a useful timber for pickets and firewood. In fact the during the early days of Mikveh in the 19th century , there was an intense search for utilitarian crops which could give a livelihood in a poor land with virtually no economic base. After all, the school's purpose was to train Jews to become farmers who would create viable Jewish settlements based upon an agrarian economy. The Baron Rothschild and his agronomists gave invaluable aid to Charles Netter whom had not the slightest knowledge or background in farming. In addition to well digging, water infrastructure, and soils management, the baron's agronomists were the first to suggest what should be planted and where. Viticulture was an obvious first choice for the Baron and various varieties of grapes were planted in Mikveh's early vineyards with an eye to the lucrative French wine market. Also Roses, Persian Lilac and Jasmine were introduced with the hope of producing perfumes from Palestine again to the lucrative European market. In many ways the Mikveh Israel farm in those days made use of the same knowledge base and technologies used by French Colonial Farms in other parts of Africa and Asia and the Americas, with the major difference being that the goal of this farm was to create a strong enough local economy to allow for immigration and absorption of persecuted Jewish minorities in Europe.[27]

[27] Aaronsohn, Ran , Rothschild and Early Jewish Colonization (2000) Hebrew University Magnes Press, Jerusalem , p. 214-223

Figure 6 - View from north east fields shows major aqua-duct , administration and teacher's house as well as winery and synagogue and Eucalyptus -grove with Jaffa Church spire in background c. 1910-20 Matson Photo Service

Figure 7 - The famous Palm Allee's from the Jerusalem Gate to the built cluster is an alternate planting of Canary Island Palms (Phoenix canariensis) and Mexican Fan Palms (Washingtonia robusta) and Washigtonia Palms, (Washingtonia filifera) planted in 1920.

In the 1920's and onwards, the system of tree lined axis continued and expanded. In 1920, the fiftieth anniversary of the founding of the school, Eliayu Krauze, the administrator, asked his gardeners to "decorate the boulevards from new" for the occasion. The agronomist Baruch Tzizik who later developed the introductory farm for importing and acclimatizing new species from around the world, was a student at the time. Baruch organized the planting with students on the day of the celebration.

The Remburg map of 1928 (Figure 19) shows at least eight other tree lined paths or roads and in addition shows the entire west and east borders of the property all the way to the Ayalon River (Wadi Musrawa) bordered with tree rows. Besides the Canary Island Palm Alle running west to east along the axis of the botanical gardens, most of the tree rows from the mid 1920's onwards use Italian Cypress, Casuarinas, Eucalyptus, and Pines.

The Botanical Gardens

The garden architect Yehiel Segal was to put forth plans for the most significant gardens and open space of Mikveh Israel since Netter and Dogour who designed the historic core of the settlement. Netter's original scheme, (see figure) was carried out almost exactly according to the sketch plan of 1870 but showed no mention of a botanical garden. In the 1928 survey map by H. Remberg Surveyors, the plot for a botanic garden is shown due east of the synagogue square but is limited to the north side of the east west boulevard. (see figure 19) The large painted mural located today in the Headmasters House, "Plan de L'Ecole Agricole De L'Alliance Israelite Universalle" (figure 22) is of unknown date but appears to have been painted after the 1928 survey in the 1930's. In this mural, the plot of the botanical gardens is expanded well to the north and moves up the hilly topography south of the boulevard. Other sources mention scientific and introduction plantings by Professor Otto Warburg in 1930. The 1936 British aerial photograph (see figure 23) clearly shows the existence of the botanic gardens however only the northern (lower) part of the Segal plan was implemented according to plan, along with an extended southern axis connecting to the direction of the Netter Monument and Cemetery. By this time the botanic garden covered 50 dunam (5 hectares) and included more than 1200 species. David Zaidenberg was later in charge of the botanic gardens and the department of ornamental horticulture at Mikveh Israel. He wrote an article in the 1970 Israeli bi-monthly Gan VaNof "100 years for Mikveh Israel and 40 Years for the Botanic Gardens" [28] which sets the date of the botanic gardens at 1930. Perhaps the best and most thorough documentation of the botanic gardens we have today is Zaidenberg's Guide to the Botanical Garden of "Mikveh Israel". [29].

The designer of the Botanical Gardens, Yehiel Segal was a 1904 graduate of the influential Jewish horticulture school, *Israelitische Gartenbauschule* in Ahlem, Germany.[30] He made

---

[28] גן ונוף כרך כ"ה, 1970

[29] Zaidenberg, D A Guide to the Botanical Garden "Mikveh Israel" (1951) Department of Professional Education, Ministry of Education and Culture- Management of Agricultural Education, Tel Aviv

[30] Wolschke-Bulmahn , Joachim - Fischer, Hubertus, Gärten und Parks im Leben der Jüdischen Bevölkerung nach 1933 (ISBN:9783899751444) (2008) Martin Meidenbauer Verlag: München

Aliya[31] in 1919 and eventually became manager of the City of Tel Aviv Gardening Department. According to Ben Arev, the botanical garden was planned after the Arab Riots of 1929. [32] Comparison between the 1929 Yehiel Segal sketch plan and the 1946 aerial of the botanic gardens shows little literal resemblance with the Segal sketch plan of the south hill area however the cental axis and areas north of the axis seem to have been executed exactly to plan. David Zaidenberg (1913-1990) managed the botanic gardens for almost fifty years and in addition promoted tours and excursion by students and teachers from all over Israel including extension courses with the Hebrew Gymnasium High School in Tel Aviv. Ultimately the "tour of the Botanic Gardens at Mikveh Israel along with the Ficus Bengali and the historic buildings would be part of every Israeli child's school curriculum from the 1940's and after Zeidenburg's death in 1990. According to Zeidenberg, [33] the idea for the botanic garden was from Eliahu Krauze first in 1923-24 and later in 1928-29 when 80 dunams were designated to be an arboretum for collections of plants with the design commissioned to one of the most experienced gardeners and garden planners in Israel at the time, Yehiel Segal of Tel Aviv. In 1928-29 the noted German Botanist Professor Otto Warburg helped to layout the plant beds systematically by botanic classification. In 1929 the plots were marked and planting was begun. Since then each year more plants were brought in from all over the world and added systematically by Genus and Species and the entire garden subdivided by Angiosperm and Gymnosperm.

In 1931 the 4 dunam plot of Eretz Israel- Native Flora Palestina was planted with the aid of the Department of Botany of the Hebrew University, Jerusalem which provided many of the seedlings. According to the Segal Plan, the main north-south axis of the garden was delineated by a long pergola culminating in a large 5 meter tall "Sukkath" or Gazebo which allowed for display of more than fifty varieties of climbers and vines. The garden sections were lined with hedges which themselves consisted of a wide varieties of species and introduction which could have practical use for the professional and novice gardener. In following years a succulent plants section was gradually added on the sandstone hillock to the south. Up to a hundred annual flowering specimens were cultivated from year to year in order to teach flower production and for the enjoyment of visitors to the gardens coming to see the blooming mass of colors. Healing and medicinary plants, native forest plants, as well as bulbs and geophytes were displayed throughout the gardens, placed according to botanic classification.

In 1951 Zeidenburg stated that the gardens could be improved if more permanent staff was added to the workforce. He also noted that the gardens were one of the world's youngest

---

[31] Aliya Translated: "ascent" is the immigration of Jews to the Land of Israel (Eretz Yisrael).

[32] גנים ונוף בישראל- יוסף בן-ערב קיבוץ המיוחד 1981- דף30- 31

[33] Guide to the Botanic Gardens of Mikveh Israel Agricultural Scool- D Zidenberg ,1951 p.10

arboretums yet one of the few in the world with no government financial support. Support was by virtue of volunteers, garden societies, and contributions from nature lovers. During the nineteen forties, the world was at war and virtually no introduction materials arrived to the arboretum. Then came the Israel War of Independence and no one was left to care for the gardens. Zaidenberg also lamented the absence of glasshouses for subtropicals and pools for water plants, all he states due to a lack of funds and resources. The arboretum managers held bimonthly exhibits of plants and flowers by season for visiting pupils and with the aid of the Association of Israeli Gardeners and the Ministry of Agriculture, exhibitions of the garden's flora were held in various parts of the country.

In any case, since the Botanic gardens served as an induction center for introduction of new species from around the world, a degree of change and flexibility was inevitable. One of the bigger influences on Yehiel Segal had been the renowned German Botanist Otto Warburg.[34] Warburg who had established himself as an authority on sub-tropical plants, had been approached by Theodore Herzl to help the Zionist movement. In any case, from 1903 Otto Warburg became a key figure on the Zionist Executive. He was instrumental in founding the Bezalel Art Institute in Jerusalem and later the department of Botany of the Hebrew University. Warburg began the botanic gardens there, and was a key initiator of the Jewish National Fund and the early forestation programs. In 1923, he was involved in the search for international scientists to establish the Volcani Agriculture Research Station in Rehovot.

The attempt by Segal to produce both a scientific botanical garden as well as to demonstrate the major influences of garden design as an educational botanic garden as well as a plant introduction station, explains both the complexity and the unusual form of the garden. In an article in Haaretz in 2009, "Locked Garden", writer and poet Arieh Hirshfeld[35] gives a vivid and analytical description of the botanic garden and a lament as to its abandoned and failing condition. According to Hirshfeld this was the first botanic garden in Israel and was created in 1928 as a tool for serious horticultural study. The study of landscape gardening was added to the Mikveh curriculum in the early 1920's and became located in the eastern quadrant of the site on a generous tract of 70 dunam (7 hectares). Hirshfeld describes Segal's work as an eclectic combination of classic 18th century European garden design arranged in perpendicular axis to the east west allée of Canary Palms. The axis divided the garden into north and south sections. (see figure Y. Segal Plan) The southern area was planted with

[34] Helphand, Kenneth 2002: Dreaming Gardens , Landscape Architecture and the Making of Modern Israel Center for American Places, Santa Fe, N.M. pg. 106

[35] אריאל הירשפלד, גן נעול , עיתון הארץ 30/01/09 .

mono-cotyledons and the north with bi-cotyledons. [36] While the southern section is planted informally representing the English "picturesque" or Romantic Movement, the southern section represents the Italian-French garden styles where garden art sublimates nature, and arranges nature in geometric order. In addition the sheer size of the botanic garden , the long open vistas out upon the vast agricultural fields of the plain of the Ayalon, allow for an almost European "le grand jardin à la française".

Perhaps a fitting tribute to Mikveh Israel's French founders, the scale of this garden was and is almost unheard of in the cultural landscape of the Levant. Under the shade of a thickening canopy of upper story trees, many of the thousands of botanically arranged shrub and ground cover species have died and disappeared. As a garden for introducing exotic and new species, many of the trees have matured and thrived. Among the remaining trees, are Quercus suber, (Cork Oak), Cinnamomum camphora , (Camphor tree) , Kigelia Africana (the African Sausage Tree) , Araucaria angustifolia, (the Parana Pine or Brazilian Pine) and many other exotic species. In the past decades, volunteer gardeners have been the only source of maintenance and repair for the gardens, yet this too has stopped and the botanic gardens are today in danger of decay beyond repair.

Regarding the desperate state of the gardens today, immediate action should be taken to maintain and protect the existing trees and shrubs as well as other remnants in the garden until an adequate conservation plan has been prepared.

Characterization of the Site as Landscape

One way to categorize site is according to functions or land uses both relating to physical purpose as well as educational purpose of the physical element of the site.

The following tables show a partial list describing land use and building functions. The process of mapping, cataloging and inventorying of elements needs to be completed before real conservation on a site scale begins. Physical elements need be described according to characteristics such as chronology, authenticity, and state of repair or degree to which the element is endangered, (health status regarding trees and plants). Historic- cultural significance related to uses, events, or particular personages also need be factored. (Example: the famous photo of Theodore Herzl meeting the Kaiser Wilhelm the Second at the front of the " Jerusalem Gate" of Mikveh Israel in 1898)

[36] The number of cotyledons present is one characteristic used by botanists to classify the flowering plants (angiosperms). Species with one cotyledon are called monocotyledonous (or, "monocots") and placed in the class Liliopsida. Plants with two embryonic leaves are termed dicotyledonous ("dicots") and placed in the class Magnoliopsida.

A methodological weighting of conservation values will then allow for assigned a "conservation value" to each physical entity or group of entities.

category			**Open Space**			
Sub Category			**Edges- Walls, Fences, ,**			
Units	Edges- Walls, Fences	Mounds, topography	Riparian and other water bodies	Cemetery and Monuments		
Description		Hillocks, vistas	Cisterna , drainage and irrigation ditches	Netter and other graves and monuments		

Category			**Open Space**			
Sub Category			**Field and Crop**			
Units	Orchard	Forestation	Field crops (Baal and Shlachin)Dry Farming and Irrigated Farming)	Vineyard	Botanic- Ornamental Horticulture Species Introduction	Tree Rows' Windbreaks and Hedge Plantings

Description	Citrus, Olive, Almond. Apple, Pecan, Avocado, Mulberry , Persimmon, Quince, Guava, Loquat.	Pine, Carob, Grevillea, Eucalyptus Cypress, Oak, Carob. Camphor	Cotton, wheat, barley, rye, corn, sunflowers, melon, crops, (Bakia)-vetch (*Vicia ervilia*) (sheep and cattle fodder)	Wine Grapes, Table Grapes	Botanical Gardens Species Introduction Plantations Ornamental Gardening Plots	Species, Age, Condition and usage Grevillea, Eucalyptus, Cypress, Pseudoacacia Mullberry,

Category			**Open Space**			
Sub Category			**Built open space (hardscape)**			
Units	Roads for wagons, vehicles	Footpaths	Courtyards , plazas & monuments	Stairs and retaining walls	Gathering-meeting places	Infrastructure
Description	Location and material over time	Location and material over time	Location and material over time	Location and material over time	Location and material over time	Electricity, water, sewer, irrigation, drainage, communications

Category			**Buildings and Compounds**			
Sub Category			**Defense structures**			
Units	Bunkers	Towers	Turrets			

Description	Although not A Category conservation most of these are from the mid 1930's to late 1940"s and could be researched			

Category			**Buildings and Compounds**			
Sub Category			**Utilitarian Structures**			
Units	Wells , cisterns, and water towers	Tool sheds and storage	Livestock and poultry pens, stables barns, coops and feed silos	Workshops and mechanics	Greenhouses and growing sheds	Infrastructure- pump houses, transformers, generators
Description	These structures are over varying time periods and conservation value. Some have become eyesores- they should be evaluated and those chosen for conservation documented.					

.

Collection of Data and Description of Terms

Data collected for this paper are listed in the following table. Due to the academic scope of this paper, most of the research involved has been done by virtue of books, maps, photos and documents. A conservation plan will need to include methodical survey, investigation and on documentation conducted site.

Description of type of data	**Highly Used**	**Moderate Use**	**Seldom Used**	**Comments**	**Need for Further Collection- Research**
Historic Eye Witnesses – Primary Sources			X	Many of the old timers will not be around a lot longer to get their stories	Interview with eye witnesses. Former students and staff.

Books and Articles by historic eye witnesses – administrators, students	X			This was the primary source for this writing. A large amount of books and documents exist. Writings of Hirsch, Kruze and other keys figures should be searched for.	The agricultural almanacs and accounting records of the Mikveh School should be studied and may reveal much information.
Books and Articles by secondary sources and researchers	X				
Historic Photographs		X		More sources for photographs may be found in Israel and in France	Photo search should review archives at Mikveh, Archive. Paris and the Zionist National
Historic Records, Drawings, Maps, Plans and Surveys		X		More sources for maps and plans may be found in Israel and perhaps in France- in addition accounting and agro- produce records would tell a fuller story	A thorough data base with reference file card on each building and landscape unit is needed for documentation
Aerial Photographs		X		See figures 23-27 Revealing buildings, trees and crops no longer existing	Further searches should turn up additional aerial photos

Description of type of data	Highly Used	Moderately Used	Seldom Used	Comments	Need for Further Collection-Research
Historic Geodetic Surveys			X		X
Current Geodetic Surveys		X			X
Primary Research-Field Surveys		X		Much site work is needed to detail survey and record each structure and landscape unit	A thorough data base with reference file card on each building and landscape unit is needed for documentation
Laws Statutes and Town Plans		X		Any master plan for conservation will require a change in regional town plan	See Curtiss-Kitov Survey for statutory status of existing structures.
Primary Research Interviews of Mikveh Faculty and students			X	As the current and past user of the site, extensive coordination and involvement of administration and staff is a necessity	Any conservation plan must consider the Mikveh Israel Youth Village as principal user and partner in any conservation plan.
Personal observation	X			Many site visits and on the ground photo	Some buildings such as part of the Winery

				reconnaissance	were boarded up and inaccessible.

CHAPTER 3: DESCRIPTION OF FINDINGS

Chronologic Development and Change in Crop and Plantation Activity in Mikveh Israel Based on Interpretation of Aerial Photos, Maps and Written Sources:

In order to approximate the changes in crop coverage over time in Mikveh's fields, a series of maps were drawn using a current digital survey map. Buildings and land uses have been shown according to Aerial Photos, Maps, and cross referenced written materials. The mappings give an approximate representation of the changing land uses over time. Decisions regarding which crops to plant and sustain were based on a number of factors, economic, export and local produce market, labor supply, agro-educational trends and changing availability of water and irrigation as well as developments in the mechanization of agriculture.

Mikveh Israel Crop Coverage 1870 to 1925:

No mapping of crop coverage was found for this period due to lack of reliable sources. Perhaps accounting books and other archives may exist which can shed light on the early planting program. From written sources however one can make a number of assumptions. In the early days of Mikveh Israel as stated before, most agricultural decisions were made by the French agronomist- gardener consultants to Netter, Baron de Rothschild and later to Samuel Hirsch. This was a time of expanding European Colonial Empires and their markets. The Suez Canal opened in 1869 and European Colonization in Africa, the Middle East and Indo-Asia was at a hiatus. Netter and those who followed in his footsteps searched for plant introduction which would eventually prove their ability to adapt and to acclimatize to Eretz Israel's (Palestine's)

unique conditions. Then as always, agriculture was a tough and competitive business. In order to provide a true economic base and to provide a livelihood for future local farmers and for those yet to immigrate, a very experimental attitude emerged. The French gardener Beudrien (served at Miveh 1873-1881) , Arab gardener Abed Aziz Atwan (served in 1891) and agronomist of the Baron, Justin Dogour (1879-81) began active experimental crop and tree introductions. They tried any crop which they imagined could prove economically viable. The agriculture in Palestine at the time was dominated by the Arab Fellahin and consisted of dry farming (Baal) using the scant available rainfall, Bustan Gradens, as well as vegetable field crops and some trench irrigated orchards where water sources or Antilia wells were dug and erected. At the same period the German Templar's had imported their agricultural practices from the state of Wurttemberg ,Germany but their attempt to introduce vineyards and other crops in their Haifa settlement in 1869 had ended in failure due to the poor soil and disease which spread amongst the crops. The Templers later achieved better agricultural results in Sorona and Beit Lechem Hagalilit. Their expertise in agriculture, animal breeding, and dairy, building construction, mechanics and industrial engineering was certainly a welcome source of knowledge and practical know how which both Jew and Arab could learn from.

It can be assumed that due to the abundance of well water at Mikveh Israel, this early period marked a large effort in Viticulture with experimentation among many wine grape varieties whose rootstock was brought from France. In fact Baron Rothschild's major winery in Rishon Le Tzion was designed by the Templar leader, Gottlieb Schumacher (1857-1925). Schumacher also drafted the agricultural parcel plan for the Zicron Yaacov Settlement. [37] Under the auspices of Baron Edmund de Rothschild, *Carmel Wine Co*. was formed in 1895 to export wines of Rishon LeZion and Zikhron Ya'akov, first to Poland, then to Austria, Great Britain and the United States. In 1902 *Carmel Mizrahi* was founded in Palestine to market and distribute wines to the cities of the Ottoman Empire.

Their representatives traveled to France, where they met Baron Edmond de Rothschild, owner of Château Lafite. As a Zionist, Rothschild provided financial and moral assistance to the settlers. His first vineyards were planted near Rishon LeZion, south east of Jaffa. In 1882, French rootstock was imported, and the Baron sent his own wine specialists to advise the pioneers in this enterprise. Construction began on a large wine cellar in Rishon LeZion. Later, a second winery was established in Zikhron Ya'akov, situated on Mount Carmel just south of Haifa. In fact Rothschild at first purchased lands around the settlements to provide large areas of farmland for wheat growing which was the major crop. His strategy was to continue the wheat production while gradually adding additional more profitable crops on an experimental basis. The Baron's administrators emphasizing plantations drew up ideas and conducted trial

[37] Turel, Sara , Chronicles of Utopia – The Templars in the Holy Land 1868-1948 (Eretz Israel Museum, 2006) p.75-76

and error experiments that in the end would pay off. "Whereas wheat was sown by Dugourd in 1883-1884, another agronomist urged colonists to plant vineyards testing Arab varieties in addition to the simple French varieties provided by Mikveh Israel.[38]

Most certainly the fields of Mikveh south of the Jaffa-Jerusalem road held a substantial amount of vineyards up to the 1930's when the local industry waned. Through the early decades of the 20th century the wine business bloomed. Branches of Carmel Wine Co., were opened in Damascus, Cairo, Beirut, Berlin, London, Warsaw and Alexandria, and sales increased, particularly during the First World War, when allied troops passed through Palestine. However, the businesses fell sharply when the war was over. The industry lost its principal markets in Russia due to the October Revolution, in the United States because of Prohibition, and in Egypt and the Middle East because of Arab nationalism. Many of the vineyards were uprooted and replanted with citrus trees.

In addition to viticulture, other agricultural products were explored at Mikveh Israel. The main axis to the Jerusalem gate was planted with the Canary Palm and Date Palm Alles' in 1920 and may have been planted originally with Mulberry Trees in hope of creating a sericulture (silk) industry. (French Jewry had traditionally made a livelihood from the silk trade centered in the Jewish Quarter of Lyon. By the middle of the 17th century over 14,000 looms were in use in Lyon, and the silk industry fed a third of the city's population, a situation which persisted to World War One.)[39] , Locust Trees – Robinia Pseudoacacia, Grevillea and Italian Cypress were also introduced for hedgerows and windbreaks to stabilize soil and sand dunes. In addition to introducing Acacia, and sub-tropical exotics such as Loquats, Guava, Quince and various Citrus varieties, those early days saw the introduction of varieties of Tea Roses, Persian Lilacs, Jasmines and other fragrant flowers for the perfume industry

The Bengali Fig Grove near the entrance to the Netter House was likely planted in 1888. This according to witness of a Mikveh student, and later director, Dr. Gideon Katz based on accounts of student s at Mikveh who had taken care of the tree when they were ten years old. The tree which through aerial roots has create a circular grove of offspring is 15 meters high with a span of 30 meters, and was the first of its species brought to Palestine for introduction and propagation.[40]

---

[38] Aaronsohn ,Ran, Rothschild and Early Jewish Colonization in Palestine, (Hebrew University Magnus Prtess, Jerusalem,2000) p.78

[39] Gérard Chauvy, "La dure condition des forçats du luxe", *Historia*, n°648, December 2000

[40] Galon, Israel , , The Fig of Mikveh Israel , (Gan VaNof Gardening Periodical, ,2008)

Irrigation- Netter chose the site close to the Ayalon Stream with a high water table as well as at least two artesian wells, one having a storage cistern near the Jerusalem gate. The wells are of Arab building technology and must have preceded 1870. The system for drawing water at the time was using vertical water wheels turned by beasts of burden, often donkeys, oxen, or water buffalo ג'מוס (Bubalus bubalis). The local version of the water wheel well was called the Antilia and made use of a horizontal turn wheel geared into a vertical rail of revolving buckets. The Antilia was an improvement over the traditional Arab vertical wheel or Nurriya and had far greater depth and flow.

Figure 8 - Part of the well and cistern by the Jerusalem Gate- Mikveh Israel of Arab origin from before 1870

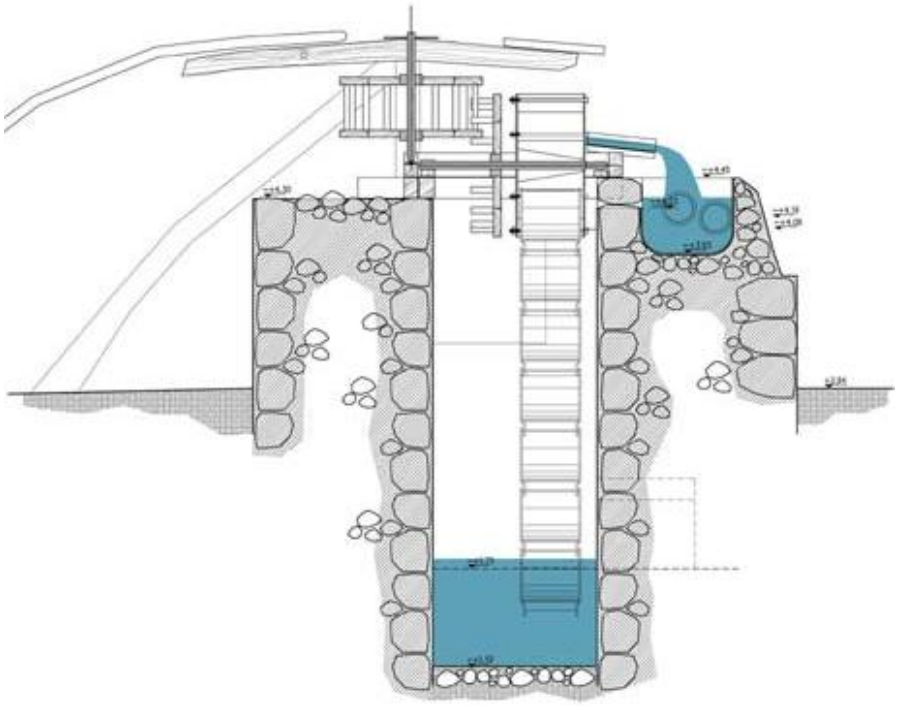


Figure 9 - Typical section of an Antilian well at Gani Redwan south of Akko. This was the deepest water well until the advent of motorized well pumps, having had greater capacity than the traditional Arabic "Nuriyya". The principal of lift is similar to the Archimedes screw

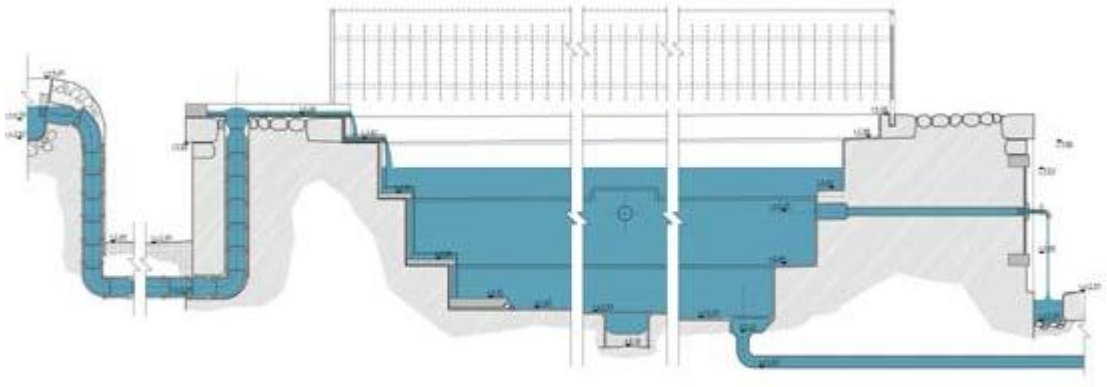


Figure 10 - A typical irrigation pool where the well water is collected and sent out to aqueducts and trenches by gravity or to the left, concept of communicating vessels. (Source: Rejwan excavation, Israel Department of Antiquities)

In order to irrigate subtropical, orchards and to sustain viticulture, all of the orchards and vineyards would have needed to be irrigated at least during the months of April to June where the flowering of fruit trees and grape vines would require additional watering beyond the available rainfall in Palestine. Remnants of small stone aqueducts and gravity pipe system from this period are found at the Mikveh Israel site. (See inventory map) The traditional water wheel output was between five to eight cubic meters per hour and was limited to twelve meters in depth. This limited to a great extent new orchards in the coastal plain where accessible ground water was limited. In 1898 the first kerosene pump motors began to be used in Palestine's orchards. By 1906 about 220 engines ' many produced by the Wagner Brothers of Jaffa and imported Hornsby Motors from England allowed farmers to greatly increase pumping depth and water flows of 20 -40 cubic meters per hour , a key factor enabling expansion of citrus orchards into areas of deep water tables of the coastal plain.[41]

Mikveh Israel Crop Coverage 1925 - 1928

The first survey maps showing agricultural plots and crop types come from the Remberg Survey of 1928 and the Mandatory Department of Public Works survey of 1925. The large water color rendered map in the Mikveh Israel Administration Building is of the same general period with French and Hebrew legend. The three sources show basically the same crop coverage's. What is apparent is the large amount of Citrus Orchard plantings. Vineyard area remains substantial but reduced. There are also Olive and Almond groves as well as a Carob grove; Vegetable crops appear close by the living quarters. The layout of field crops and orchards shows that an efficient irrigation system was in place for most areas south of the Jaffa-Jerusalem road. Under Krauze's strong leadership, the intensity of agricultural work needed to be supported by hard working students as well as paid laborers. The map shows what looks to be a thriving agricultural school and farm. Interestingly some of the orchards carried the names of Rothschild, Goldschmidt, (President of Alliance Israelite Universalle1881-1898) , Lehman and other Mikveh founders.

In this period, the influence of the French founders as well as the Baron Rothschild had been replaced by the local Yishuv farmers. The vineyards and exportation of wines which once had a major role in the economic viability of Palestine farming never fully recovered after World War I. The Citrus Industry had become the hope for Palestine farmer, both Jew and Arab.

---

[41] Karlinsky, N. California, Dreaming- Ideology, Society and Technology in the Citrus Industry of Palestine 1890-1939- p. 99

In 1914 there were 30,000 dunams of citrus orchards in Palestine. Of these 7,500 were Jewish owned, 750 owned by German- Templers, and 21,500 Arab owned. In 1923 a marked change occurred where Jewish planting began to increase until by 1934 there were 145,000 dunams of Jewish orchard and 105,000 dunams of Arab orchard. [42] This can be accounted for by strong profitability up to 1934. Major markets for Palestine Oranges and Grapefruits were in Europe, primarily the British market with France and Germany also being secondary key markets. The citrus industry hit an abrupt downturn in 1935 until 1939 due to the world geopolitical crisis, and the disruption of trade and free market trade with the onset of Fascism and the beginnings of the Second World War.

Irrigation: Israel Citriculture imported technology from both Europe and the United States, particularly from California who led the industry at the time. The spread of Israel's electric grid in the late 1920's allowed for the introduction of electric centrifugal pumps used in excavated wells and later in drilled wells which gradually transformed the ground water retrieval system. The "California irrigation system" was introduced in 1936. Until this time most orchards were irrigated by manually dug trenches which would be flooded periodically. The "California" system used underground irrigation tubes which were brought to the surface and discharged into deep furrows. Introduction of tractors, harvesters and mechanical furrowing machinery in the late twenties and early thirties made this form of irrigation more profitable. Irrigation sprinklers had been tested in the 1920's but deemed inappropriate because of the mold caused to the leaves and the very high water pressures required.

[42] Karlinsky, Nahum , California Dreaming- Ideology, Society, and Technology in the Citrus Industry of Palestine 1890-1939 (State University of New York Press , 2005) p. 79-83

Figure 11 - The "California Irrigation System" introduced in Palestine 1936 "Yakhin Groves" using furrowed basins with water delivered by underground tubes.

Botanical and Ornamental Plantations:

It was also at this time that Eliyahu Krause maintained an active program in tree planting and the experimental introduction nursery which in the late twenties developed into a full-fledged arboretum and botanic garden which continued to be developed in the 1930's and onwards. It was in 1920 for the fiftieth anniversary of the founding of Mikveh Israel that Krause had his students and gardeners planted the Palm Alees' which are so strongly identified with the Mikveh Israel site today.

Figure 12 - Postcard of irrigated Citrus Orchards from California, 1930's- a model for Palestinian Citrus farmers.

Mikveh Israel Crop Coverage 1938

As was previously described the 1930's were a difficult economic time the world over. Both Viticulture and Citrus culture international markets had dropped tremendously. World free trade hurt by the depression was also damaged by the onset of Fascism and the subsequent geopolitical turmoil leading to the Second World War.

In addition to external geopolitical factors the 1930's had marked the beginning in Palestine of the Arab Awakening marked by the 1936 -39 Arab Rebellion which was first against the British but which would gradually turn into civil war until the decisive Israel War of Independence in 1948. Mikveh had already survived the attacks of 1921. In the late twenties Krauze[43] encouraged the Hagannah[44] to set up a branch headquarters at Mikveh Israel which consisted mainly of student, teacher and laborer volunteers. Mikveh Israel was located on the strategic supply route from Jaffa Harbor to Jerusalem. Word of the Hagannah contingent at Mikveh Israel quickly spread to the Arab militias who both feared and respected Mikveh's defenses. In the later 1930's the economic situation at Mikveh Israel was difficult. Krauze ran the budget with an iron fist, being personally aware of every expense. Financing which would have gone to agriculture was diverted to arms and defense.[45] The composite map of 1936 shows a continued mix of vineyards, Citrus groves, vegetable gardening, olive and almond groves as well as a noted expansion of the botanic gardens which included the hillock to the south of the central axis. Perhaps the need for a diversified growing plan was a result of economic hard times and a need for self-sufficiency as much as the result of the agricultural education program. Further research is needed to review the record books of Mikveh where annual produce, heads of livestock, poultry, milk production and honey production, would show a clearer picture of the cycles of agricultural production relative to market conditions over time.

Mikveh Israel Crop Coverage 1946

Traumatic geopolitical events affected the Jewish Yishuv at this time. World War II had ended in a terrible genocide of Europe's Jewry. Under Arab Nationalist pressure, the British White Paper Policy meant that masses of desperate refugees needed to be smuggled into Palestine. Mikveh Israel took in large numbers of holocaust orphans as did most other Jewish institutions at the time. Both Arab and Jewish underground groups where making life intolerable for the British and the Jewish and Arab populations were moving toward civil war which in 1948 would become a full-scale War of Independence. This was the time when

---

[43] Eliyahu Krause was an agrarian, pioneer and director of Mikveh Israel fron 1915- 1954

[44] "The Defense", ההגנה HaHagana) was a Jewish paramilitary organization in what was then the British Mandate of Palestine from 1920 to 1948, which later became the core of the Israel Defense Forces.

[45] Ben Yosef, Itzhak, Mikveh Israel 100, (Ministry of Eduaction and Culture Press' Tel Aviv 1970) p. 64-65

concrete machine gun nests and guard towers were added on all sides of the site and remain today as a vestige of that period. Pioneering and settlement had been a hallmark of education at Mikveh Israel. Graduating students would form collectives or "Seed groups" and would create "startup" agricultural settlements thru ought the country. Amongst their achievements are Kibbutz Yiftah, the Jezreel Kibbutz Group, Kibbutz Hakuk and other agricultural settlements. !942 had been a crisis year in Mikveh Israel. The orchards crop brought no returns due to lack of export markets. The connection with Alliance Israelite Universelle was ended due to the Nazi invasion and thus outside funding had ceased. [46] Students from abroad ceased to arrive, class size dwindled and most of the students lacked financial means. In 1943, Salaries of teachers were reduced 25% and laborers were laid off. Krauze sought a new source of students in new students arriving on the "Aliyat Hanoar Program"[47] but did not succeed due to competition from other agricultural schools. Given little choice he acceded to allowing a "Histadrut" labor union managed curriculum tied to the Labor Movement and the Kibbutz Movement. [48] The costs for the program were covered for by the Farmer's Center. The new Histadrut classes brought to Mikveh the agrarian labor philosophy preached by Ben Gurion and other leaders of the time and aimed for pioneering and settlement. The histadrut program eventually reached 242 pupils but was limited due to lack of dormitory facilities. It was also at this time that Israel Prize recipients Professor Itzhak Val and Dr. Yaacov Meknes ran the agricultural field station and made major scientific research on endemic and hybrid strains of wheat.

The composite map for 1946 is very revealing. The Mikveh Israel land is divided into many small parcels showing lots of activity in vegetable gardening. Citrus groves are greatly reduced and vineyards are almost totally gone. The war economy had destroyed agricultural export markets, and the farm plots were run as "Victory Gardens" allowing for self-sufficiency in a war economy. Significant plots especially in the north-west area of the farm had gone fallow either due to a lack of labor, lack of economic incentive or perhaps due to hostile Arab neighbors from Kfar Yazur, Abu Kabir or Kfar Salame to the north.

Mikveh Israel Crop Coverage 1968

This period, twenty years after the founding of the state of Israel, had been marked by a struggling economy, Fedayeen incursions and counter raids, and two major wars with her

---

[46] Ben Yosef , Itzhak, Mikveh Israel 100 Years, (Ministry of Education and Culture, Tel Aviv, 1970) p. 76-78

[47] Aliyat Hano'ar - (Hebrew) A Department of the Jewish Agency. It was founded in 1933 in Germany and adopted in 1934 by Henrietta Szold, thereafter becoming a project of the Hadassah organization. It continued after World War II in Israel, to save Jewish children and especially orphans from difficulties and danger abroad, to educate them and bring them to safety.

[48] HaHistadrut HaKlalit shel HaOvdim B'Eretz Yisrael (Hebrew: ההסתדרות הכללית של העובדים בארץ ישראל, lit. "General Federation of Laborers in the Land of Israel"), known as the Histadrut, is Israel's organization of trade unions. Established in December 1920 during the British Mandate for Palestine

Arab neighbors. Israel's victory in the Six Day War brought new optimism and economic vigor to the nascent state. The legendary Eliyah Krauze retired in 1954. The new administration decided to reduce the amount of salaried labor and to make use of the increased numbers of students in order to operate the farm at profit. In 1952 Krause had requested the government to add another 1000 dunams to the mikveh lands in order to expand the crops in proportion to the growing numbers of students. The land tract of abandoned by Kfar Yazur to the north and east of the Jaffa- Ramle road was given to Mikveh by the Government Land's Custodian. [49] The vineyards of Mikveh which fell do disuse and decay in the 1940's were replaced by new vineyards in the new area reaching 150 dunams of vineyard under the supervision of agronomist Nathaniel Hochberg.

In 1943 the number of students at Mikveh was 600 and the institution was 60,000 Israeli Lira in debt. The subtropical fruits brought good profits to the farm in the early fifties (Kiwi , Mango, Loquat, Persimmon, Guava, Papaya) . Asher Malchin replaced Krauze and began an intensive expansion program which included additional classrooms, laboratories, a swimming pool, worker housing, road paving, amphitheater and more. The new administrator soon brought the institute to total financial duress. Malchin called on the Israel Government and Alliance Israelite Universelle for financial support. Being denied his request, Malchin resigned. This led to agreement between the Israel Government and Alliance Israelite Universelle in 1956 whereby the government agreed to take upon itself the debt in addition to special loans. Mikveh Israel had finally become solvent. The building expansion program begun by Malchin was continued thru the fifties and sixties by following administrations as student enrollment increased and the fifth year Agricultural Technician Degree program was added. The 1968 map shows the many new buildings added by Asher Malchin and following administrators. Most of this new building is to the south of the original built core and along the old Gaza Road, now Yosef Serlin Street. The map shows the Orange and Citrus groves are aging and dying, as well as the tree rows and groves in the former Yazur fields north of the Jaffa-Jerusalem Road. Young orchards have been planted in the south-east quadrant to replace the aging ones. Another key change is the appearance of irrigated plots in areas to the north of the Jaffa-Jerusalem Road. The major National Water Carrier Project of 1964 ended the former total reliance on well and ground table water, bringing water directly from the Sea of Galilee for mainly agricultural use. [50] The irrigation system of Mikveh was thus

---

[49] [49] Ben Yosef , Itzhak, Mikveh Israel 100 Years, (Ministry of Education and Culture, Tel Aviv, 1970) p. 84-85

[50] The National Water Carrier of Israel (Hebrew: המוביל הארצי, HaMovil HaArtzi) is the largest water project in Israel. Its main task is to transfer water from the Sea of Galilee in the north of the country to the highly populated center and arid south and to enable efficient use of water and regulation of the water supply in the country. Up to 72,000 cubic meters (19,000,000 U.S. gal; 16,000,000 imp gal) of water can flow through the carrier each hour, totaling 1.7 million cubic meters in a day.

expanded to cover the entire site; however the northern alluvial clayey soils proved to be too heavy for more intensive crops. New available water pressures also allowed introduction of mechanically-moved sprinklers, lateral move sprinklers in the early 1970"s and micro or drip irrigation in 1973 allowed for vastly more flexible and efficient forms of crop irrigation. No longer did irrigation depend on ground surface flow of water.

Mikveh Israel Crop Coverage 1996

The 1996 crop map was showed a reversion back to dry farming especially in the areas north of the Jaffa-Jerusalem Road. The surveyor shows field crop types including Cotton, Sunflowers, Wheat, and Vetch (Heb. Arabic- " Bakia") (latin, Vicia villosa), a native forage plant and soil nitrogenizer which can fix as much as 200 lb/ acre of atmospheric nitrogen . Notably Citrus Orchard and Vineyard continues to decrease from previous years as does the small plot vegetable gardening. It seems that although student enrollment increased in these years, and the building program was expanded, the general drop in popularity of agriculture as a profession resulted in a gap between student interests and expectations and the need to have an intensive learning- working agricultural program. The planting patterns show a trend to lower maintenance and reduction of labor intensive agricultural activities.

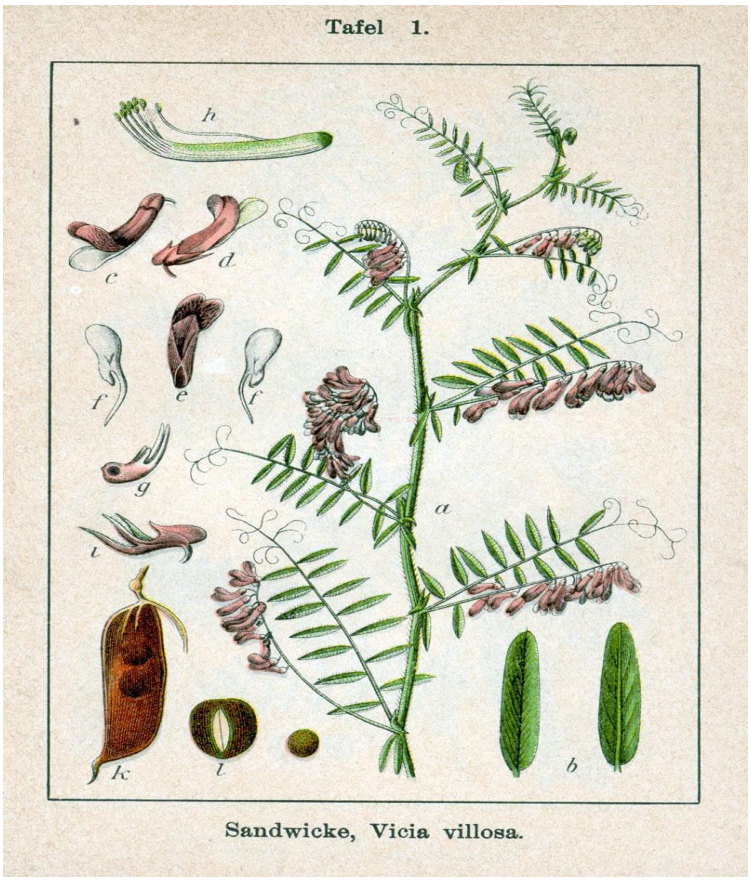


Figure 13 - Vicia villosa – native forage plant and soil nitrogenizer

Mikveh Israel Crop Coverage 2005

The composite map bringing the survey close to the date of writing is based on an aerial photograph as well as site visits conducted in 2010. The map shows a further reduction in citrus groves and other large parcels left fallow. Much of the remaining cropland is used for dry-farming. The implication is that the agricultural activity has dropped to the level of low intensity- low activity perhaps due to a combination of factors, low market value, and lack of manpower and perhaps drop off in number of genuine agricultural students. The sorry state of field crop and orchard is repetitive of the general state of the Botanic Gardens as well as the state of the older agricultural, administrative and student residential buildings. By 2011 changes can be seen. A massive planting program was seen underway in the south-east quadrant of the site of Haas and other Avocado varieties. Avocado export to Europe is now

one of Israel's most profitable agricultural exports. [51] [52]An entire new automated fertilization-drip irrigation system was put in to support those orchards.

Interpretive Maps and Site Plans Showing Chronology of Change of Land Use at the Mikveh Israel Site (pocket folds)

[51] Israel dominated the EU market with 64% in 1987. Over the past few years production levels were 30-40 000 ton for export. The industry has a strong technological basis and the crop estimate for 1999 is 75 000 ton with an export volume of 50 000 tons. Water is a limiting factor in production.

[52] Israel's avocado controls Europe: The pear-shaped green fruit's sales have totaled reach one-third of all the fruit sold in the continent, according to a recent Wall Street Journal article dedicated to Agrexco. According to the paper, 2009 saw a 12% rise Agrexco's sales turnover and the company leads Israel's agricultural exports this year. Last year, the company exported agricultural produce under the Carmel brand for about € 492 million (about $663 million)

1. Mikveh Israel Crop Coverage 1928

2. Mikveh Israel Crop Coverage 1938

3. Mikveh Israel Crop Coverage 1946

4. Mikveh Israel Crop Coverage 1968

5. Mikveh Israel Crop Coverage 1996

6. Mikveh Israel Crop Coverage 2005

7 . Key Map to Tel Aviv Regional Council Survey of Structures and Elements 2010

Table of Found Existing Site Landscape Elements (non-building) Requiring Preservation and Specialized Maintenance

***Present Statutory Use Refers to Tel Aviv Regional Council Detailed Plan 'תגפ 520א'**

Ornamental Gardens, Botanical Gardens and Special Landscape Elements					
Comments	**Conservation Rating**	**Planted before 1965**	**Present Statutory Land Use ***	**Site and Description**	**No. by map**
Garden includes open swales, surrounded by mature Cypress,Italian stone and Allepo Pines, Date Palms, Kigelia, Casuarina, Ashes, Alders, Bombax, and a great specimen trees, Phytolacca dioica "Omb'u" Tree due south of the Teachers House (58) as well as undated sandstone retaining walls	**A-1**	**√**	Public Open Space	**Carl Netter Cave and Garden (Cave used by Netter as living shelter until first buildings erected)**	**144**
Symbol of Mikveh-Planted in 1910- the first of this species brought to Palestine-Aerial root	**A-1**	1888 **√**	Public Open Space	**Bengali Fig Tree Grove**	**145**
Garden includes Some original tree and plant specimens from 1880's' Washigtonia Palms, Large beautiful Italian Cypresses,	**A-1 forecourt** **A-3 Court**	1880-1890	Public Open Space/ Institutional Building	**Synagogue forecourt Gardens**	**62A**

Pittosporum and Citrus hedgerows. Tropical shrubs added later. Re4mant original Sandstone Block walls and wrought iron railings. Synagogue forecourt remake in 1970's using non-conservation unsuitable materials/			Space		
Botanic Garden includes forested hill south of axis- Most specimen trees have survived and need maintenance- most shrub and ground cover aside from hedges have died off.	**A-1**	1931-1951 **√**	Landscape Preservation	**Botanic Gardens**	**148**
Yosef Nego Memorial Grove Older Allepo Pine Grove with more recent tree plantings- Brachychiton, Olives, deciduous spp.	**A-2**		Agricultural Use	**"Bustan Garden" nearby the southeast water tower**	**150**

Allee's, Hedgerows and Boulevard Plantings

Comments	**Conservation Rating**	**Planted before 1965**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
Washingtonia Robusta and Phoenix Canariensis planted in juxtaposition. The Washingtonia are	**A-1**	**1**920 **√**	Agricultural Use	**Palm Allée from Synagogue to North (Jerusalem)Gate**	**146**

at the end of life cycle and require maintenance and succession program					
Mature Canary Island Palms	**A-1**	1920-1930 **√**	Preserved Landscape – Public Open Space	**. Palm Allée east west axis botanic gardens**	**147** **148A**
Double row of old Phoenix Dactylifera-Date Palms	**A-1**	**√** 1920-1930	Agricultural Use	**Palm Allée to east of Botanic Gardens**	**149**
This Allee likely replanted in place of Robinia or Morus Alba circa 1890-1900	**A-1**	**√**	Agricultural Use	**Eucalyptus Grove- Allée due west of the historic core**	**154**
Large Italian Cypress	**A-1**	1920-1930 **√**	Agricultural Use	**Italian Cypress Allée east west North Perimeter of Botanic Gardens**	**155**
Probably dating to before 1900 since Netter died in 1883.	**A-1**	1883-1900 **√**	Agricultural Use	**Italian Cypress Allée and Eucalyptus Grove by the Carl Netter Grave**	**ж156**
Agricultural Plots, Plantations, Orchards					
Washingtonia are at the end of life	**Conservation Rating**	**Planted before 1965**	**Present Statutory Land Use**	**Site and Description**	**No. by map**

The staff and teachers residences along the south (Derech Gaza-Jaffo) were built circa 1946-1956. The Southern grove consists of Eucalyptus, Pine, and Lawsonia Cypress. Grevillia trees align the central crossroad of the neighborhood. The private gardens contain fine tree specimens, vestiges of former Pecan Groves. The northern road is lined with Italian Cypress. A huge Coralodendrum Tree and Ficus Sycamorus stand just south of building 38.	**A-2**	**1942-1956** **√**	Residential area B (mid rise)	**Mixed grove and tree plantings beside single family residential**	**161**
Important to maintain most of this area as a visual open space corridor	**A-1**	**√**	Agricultural Use	**All the fields under till or in fallow including Mikveh lands South of the Jaffa-Ramla Road residential area along Y. Serlin Road**	**162**
Important to maintain most of this area as a visual open	**A-1**	**√**	0utside of plan	**All the fields under till or in fallow**	**163**

space corridor			boundaries	**including Mikveh lands north of the Jaffa-Ramla Road to the Railroad Corridor**	
Planted in 1882 from seed brought from Tasmania, this grove of Eucalyptus Camadulensis- Red River Gum, was the source for the legendary trees raised by the JFK to drain the swamps of Hadera and the Hule. Valley .	**A-1**	√ 1882	Public Open Space	**Pioneer's Grove Eucalyptus Grove**	**164**
Comments	**Conservation Rating**	**Built before 1965**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
These two buildings located at the northeast border of the Botanic Garden served as gardener's shed and the larger as "Agronomist's – workshop and display " according to the 1951 map by David Zaidenberg's. The in descript buildings should be seen as part of the historic botanical garden.	**A-1**	√ 1942-1951	Landscape Preservation	Gardener's Shed and Orchard House**.**	**168**

Water Supply and Irrigation					
Comments	**Conservation Rating**	**Built before 1965**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
Building is dilapidated and in danger of collapse	**A-1**	Boarded up	Institutional Use	**Open Pool**	**54**
Building is dilapidated and in danger of collapse	**A-1**	Abandoned	Institutional Use	**"Antilia" Na-urah Water (Water Raising Wheel) Well**	**א55**
	A-1	Circa 1770-1870 Arab Structure	Public Open Space	**Old Water Well Double Arched**	**67**
	A-1	In disuse	Agriculture Use designation	**Old Water Tower**	**68**
	A-1	Circa 1770-1870 Arab Structure	Agriculture Use designation	**Water Well Cistern- "Jerusalem Gate"**	**71**
	A-1	In disuse	Agriculture Use designation	**Water Well "Jerusalem Gate"**	**73**
	A-1	Village services	Public Open Space	**Water Tower**	**135**
√	**A-1**	Village services	Public Open Space	**Old Water Tower (Present Campus Security)**	**139**
Remannts of the water carrying system of sandstone block with terra cotta pipe located south to north along	**A-1**	Circa 1890-1900	Public Open Space / Public Institutional/ Employee	**Old Aqueduct Remnants**	**157**

Sdereot Havatikim and west to east from the Winick Building (86)			Residential		
	A-2	Boarded up	Institutional Use	**Open Pool**	**54**

Memorial Gardens and Sculptures

Comments	Conservation Rating	Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
	A-1	**√**	memorial	Agricultural Use	**Carl Netter Grave**	**156**
	A-1		memorial		**Ben Gurion Sculpture**	**158**
	A-1		memorial		**Elijah Krauser Sculpture**	**159**
Beautiful monument bronze and stone to 13 Mikveh students from the "Geva" Group who died in the 1948 War of Independence.	**A-1**	1953	memorial	Landscape Preservation	**Monument to Mikveh's Fallen Soldiers in the Botanic Gardens**	**170**

Large stone pylon marking north central axis of the botanic garden tablet		1948-??	memorial	Landscape Preservation	**Monument to Eliahu Shamir- Student who was killed on the Jerusalem Road by Kfar Yazur 1947-8**	**171**
Date after 1982- Location in Cactus garden west of Tractor Driving School Black Stone Tablet, Lawn and Cactus Garden			memorial		**Monument to Gadi Levi and four fallen soldiers- 1982 Lebanon - Israel War**	**172**
Date after 1990- Location in area of west parterre- Botanic Gardens. Plaque set into nature stone boulder			memorial	Landscape Preservation	**Monument to David Zaidenberg- Manager of the Botanic Gardens until 1990.**	**173**

Date 2002- Location in garden behind and to the east of College Lycee Franco-Israelien Building			memorial		**Monument to Inbal Peretz erected 2002 by the Mikveh Israel employee's association**	**174**

CHAPTER 4: CULTURAL LANDSCAPE IN THEORY AND PRACTICE

Cultural Landscape in the Context of Conservation and Preservation

Preserving and caring for cherished objects of art and culture goes back far in time in human history. Under the patronage of the churches, monarchies, and the aristocracies; the art of fixing, mending and caring for objects in the past grew into the discipline and science of restoration. The fields of science and art became increasingly intertwined during the nineteenth century as scientists such as Michael Faraday began to study the damaging effects of the environment to works of art and Louis Pasteur carried out scientific analysis on paint. The first organized attempt to conserve cultural patrimony was the Society for the Protection of Ancient Buildings in Britain, influenced by the writings of John Ruskin, and founded by William Morris and Philip Webb in 1877. During the same period a movement

with similar aims had also developed in France under the direction of Eugène Viollet-le-Duc a French architect and theorist, famous for his "restorations" of medieval buildings. The focus of conservation development then accelerated in Britain and America, and it was in Britain that the first international conservation organizations developed. The International Institute for Conservation of Historic and Artistic Works (IIC) was incorporated under British law in 1950 to improve the knowledge, methods, and working standards needed to protect and preserve precious materials of all kinds.

The rapid growth of conservation professional organizations, publications, journals, newsletters, both internationally and in localities, has spearheaded the development of the conservation profession, both practically and theoretically. Art historians and theorists such as Italian, Cesare Brandi (1906-1988) have also played a significant role in developing conservation-restoration theory. In recent years ethical concerns have been at the forefront of developments in conservation.

The Concept of Cultural Landscapes:

The European and Western concept of 'cultural landscapes' originated from the tradition of landscape painting. From the 1500s onwards, many European artists painted landscapes in favor of people, diminishing the people in their paintings to figures subsumed within broader, regionally specific landscapes.

The word "landscape" itself combines 'land' with a verb of Germanic origin, "scapjan/ schaffen" to mean, literally, 'shaped lands'. Lands were then regarded to have been shaped by natural forces, and the unique details of such landshaffen (shaped lands) became themselves the subject of 'landscape' paintings.

German geographer Otto Schluter is credited with having first formally used “cultural landscape” as an academic term in the early twentieth century. In 1908, Schluter argued that by defining geography as a Landschaftskunde (landscape science) this would give geography a logical subject matter shared by no other discipline. He defined two forms of landscape: the Urlandschaft (natural landscape) or landscape that existed before major human induced changes and the Kulturlandschaft ('cultural landscape') a landscape created by human culture. The major task of geography was to trace the changes in these two landscapes.

Carl O. Sauer, a German- American human geographer, was probably the most influential in promoting and developing the idea of cultural landscapes and remains famous for his 1925 paper "The Morphology of Landscape". Sauer was determined to stress the agency of culture as a force in shaping the visible features of the Earth’s surface in delimited areas. Within his definition, the physical environment retains a central significance, as the medium with and

through which human cultures act. His classic definition of a 'cultural landscape' reads as follows:

“The cultural landscape is fashioned from a natural landscape by a cultural group. Culture is the agent, the natural are the medium, the cultural landscape is the result" Since Schulter's first formal use of the term, and Sauer's effective promotion of the idea, the concept of 'cultural landscapes has been variously used, applied, debated, developed and refined within academia.

The idea of creating an international movement for protecting heritage emerged after World War I culminating in the achievements of CIAM and the 1931 Athen's Charter. It was only well after the Second World War that cultural landscape came on to the agenda of major international concern. After WWII, CIAM and the League of Nations was replaced by UNESCO and ICIMOS with the important Venice Charter in 1954.

The Stockholm Convention concerning the Protection of World Cultural and Natural Heritage was adopted by the General Conference of UNESCO on 16 November 1972. Convention concerning the Protection of the World Cultural and Natural Heritage developed from the merging of two separate movements: the first focusing on the preservation of cultural sites, and the other dealing with the conservation of nature

In 1992, the UNESCO World Heritage Committee elected to convene a meeting of the 'specialists' to advise and assist redraft the Committee's Operational Guidelines to include 'cultural landscapes' as an option for heritage listing properties that were neither purely natural nor purely cultural in form (ie 'mixed' heritage).

The revised version of the Burra Charter of 1999 provides guidelines for preservation of "Places of Cultural Significance". The charter defines aesthetic value, historic value, scientific value, and assessment of cultural significance. The Burrah Charter defines a scope for conservation policy, interpretation and management. It relates to conservation, maintenance, adaptation, reconstruction, preservation and degree of intervention. [53]

The World Heritage Committee's adoption and use of the concept of 'cultural landscapes' has seen multiple specialists around the world, and many nations identifying 'cultural landscapes', assessing 'cultural landscapes', heritage listing 'cultural landscapes', managing 'cultural landscapes', and effectively making 'cultural landscapes' known and visible to the world, with very practical ramifications and challenges.

---

[53] The Burra Charter, The Australian ICOMOS Charter for Places of Cultural Significance, 1999 Burkwood, Vic, Ausrtalia

A 2006 academic review of the combined efforts of the World Heritage Committee, multiple specialists around the world, and nations to apply the concept of 'cultural landscapes', observed and concluded that:

"Although the concept of landscape has been unhooked for some time from its original art associations, there is still a dominant view of landscapes as an inscribed surface, akin to a map or a text, from which cultural meaning and social forms can simply be read."

Within academia, any system of interaction between human activity and natural habitat is regarded as a cultural landscape. In a sense this understanding is broader than the definition applied within UNESCO, including, as it does, almost the whole of the world's occupied surface, plus almost all the uses, ecologies, interactions, practices, beliefs, concepts, and traditions of people living within cultural landscapes.

Cultural Landscapes have been defined by the World Heritage Committee as distinct geographical areas or properties uniquely "representing the combined work of nature and of man" This concept has been adapted and developed within international heritage arenas (UNESCO) as part of an international effort to reconcile "one of the most pervasive dualisms in Western thought - that of nature and culture".

The World Heritage Committee has identified and adopted three categories of cultural landscape, ranging from (i) those landscapes most deliberately 'shaped' by people, through (ii) full range of 'combined' works, to (iii) those least evidently 'shaped' by people (yet highly valued). The three categories extracted from the Committee's Operational Guidelines, are as follows

(i) "a landscape designed and created intentionally by man";

(ii) an "organically evolved landscape" which may be a "relict (or fossil) landscape" or a "continuing landscape";

(iii) an "associative cultural landscape" which may be valued because of the "religious, artistic or cultural associations of the natural element"

Cultural Landscape Conservation in Practice:

The practice of conserving cultural landscapes has undergone major reassessment in the past few decades just as the fields of physical and human geography have given way to Ecology , Sustainability and an entire series of sub-fields combining physical science with humanities.

A site such as Mikveh Israel can be studied and described using a vast variety of academic and scientific disciplines. In terms of the physical site we may use the tools of hydrology, geomorphology, geodesy, pedology , landscape ecology, archaeology and archeo-botany in order to describe and to analyze origins and changes of the site. Regarding the human-cultural aspects of the site, we may use academic tools such as cultural geography, history, anthropology, in order to describe the physical results of a hundred and forty years of human interaction on this piece of land. In addition, aspects of Mikveh Israel certainly were determined by economics, and geopolitics. It is easy to become overwhelmed when seeking a methodology or guideline for conservation or preservation of a cultural landscape as rich in historic-cultural narrative as is Mikveh Israel.

In fact the common non-partial observer visiting Mikveh Israel, would perhaps not find the physical site awe inspiring or of tremendous architectural or landscape significance. It is only when combined with knowledge of the role the site played in human and historic events do the physical elements take on a higher level of significance. The influence of the many people who were educated and experienced the ethos of the site, and who went on to spread the ideals and cultural spirit in Israel and abroad elevate this cultural landscape to a "culture exporting" landscape. The essence of Mikveh's narrative is its role as a practical training center and laboratory for movement of Jewish Return "back to the land". The Jewish culture, cut off for centuries from its agrarian roots as well as from its ancestral land, decided to reinvent itself and to once again become an agrarian culture. An almost mystical and surely idealistic view of the soul redeeming value of the "agrarian life" lies behind the narrative of Mikveh Israel and the modern "Zionist Labor Movement" as well. Unlike religious Zionism which also was impetus for Jews throughout the ages to return to Zion, the founders of Mikveh sought a pragmatic and physical solution which would not only repair the historic cultural wounds resulting from persecution, anti-Semitism and disenfranchisement. Redemption thru working the soil would create the new Jewish man and woman, would allow for economic and cultural independence and a way for a victimized people to take their often tragic historical fate their back into their own hands. The successes and failures of Mikveh Israel read like the successes and failures of the Zionist movement and of the modern Palestine and Israel.

In addition one must consider that the Mikveh Israel Site has been continuously used as an agricultural high school (grades 7-12) and youth village. The institution has seen dramatic ups and downs since its founding. Each historic period brings new challenges. Today, modern Israeli's and Jewish immigrants make up the 1,200 students with 225 living "on campus". The days when the best of Israeli society seek the agrarian education have ended. The Mikveh Israel School is today struggling with decreasing enrollment as a result of competition from schools deemed more modern and having more relevant curriculum for today's youth. The strategy of the school is to retain the agricultural identity while becoming a leading school in

earth and life sciences, computers and bio- technology. The school seeks to upgrade and modernize its building infrastructure to that end. Questions arise as to the viability of maintaining and preserving the vast 750 acres of which are predominately agricultural fields and orchards historically part of the school curriculum and maintained by students and staff. Conservation of this cultural landscape must apply both sustainability and adaptability if the health of the academic institution is to be improved. As in the past, Mikveh Israel will need to find the mechanism for conservation, change, renewal and economic stability and growth if it is to once again become the dynamic cultural site which can contribute to modern Israeli society rather than to become a museum or silent foundation as is the fate of other historic cultural sites "laid out to pasture". To maintain Mikveh Israel as both a farm as well as a center of learning of science and culture remains a unique conservation challenge.

CHAPTER 5: A STRATEGY FOR THE CONSERVATION OF MIKVE ISRAEL

Historic preservation in Israel can be divided into two chronological categories. All structures and sites existing before the year 1700 CE come under the protection of the Israel Antiquities Authority by virtue of the national Law of Antiquities of 1978. All buildings and sites created after 1700 come under the legal discretion of the local or regional planning commissions. As complimentary addition to the IKEMOS Venice Charter of 1964, an Israeli Charter was written at the time of the founding in 1984 of the Society for Preservation of Israel Heritage Sites. One of the problems with both the SPIHS and the charter was the narrow cultural definition they defined which was non-inclusive of Israel's minority cultures. Even the title of the charter" Charter for The Preservation of Sites of Settlement" denies the existence of other cultural heritages in the same land from 1700 onwards. The SPIHS "identifies, restores and protects heritage buildings and locales associated with the country's rebirth, Zionism, settlement and security." [54] (Today the SPIHS has broadened its scope, changed its name and is reaching out to the Arab Israeli public with a branch office in Shfaram).

In 1991 an addition to the National Planning and Building Law[55] dealing with historic preservation became known as the "fourth addition" (התוספת רביעית.). The addition calls upon each municipality to establish a committee for historic preservation and to provide a registry of buildings to be preserved. The provision has been enforced only in part and is subject to the quirks of local politics and to the forces of the property markets. The law defines "historic site" as a building or group of buildings or portion thereof, including its

[54] שימור מבנים ואתרי התיישבות –היבטים ערכיים ומשפתיים, החברה להגנת הטבע- 1964 דפ , 64

[55] חוק התכנון והבנייה, התשכ"ה – 1965 The Planning and Building Law 1965- Knesset Israel

adjacent surroundings that in the opinion of the local authority are deemed of historical, national, architectural, or archaeological importance."[56] Since 1991 further amendments to the law have been proposed in the Knesset (Amendment 31 to the 1991 law) yet none of these have been made into law. [57] Fortunately other public and non-governmental organizations have taken initiative to prevent destruction of historic cultural buildings and sites. The destruction of the Hebrew Gymnasium in Tel Aviv in the in the 1970's in order to build the Shalom Towers office building, caused major public outrage and can be seen as a turning point in public awareness of historic preservation. Architectural preservation reached its culmination in Israel with UNESCO's recognition of Tel Aviv's White City (Hebrew: העיר הלבנה, *Ha-Ir HaLevana*) refers to a collection of over 4,000 Bauhaus or International style buildings built in Tel Aviv from the 1930s by German Jewish architects who immigrated to the British Mandate of Palestine after the rise of the Nazis. Tel Aviv has the largest number of buildings in this style of any city in the world. Preservation, documentation, and exhibitions have brought attention to Tel Aviv's collection of 1930s architecture. In 2003, the United Nations Educational, Scientific and Cultural Organization (UNESCO) proclaimed Tel Aviv's *White City* a World Cultural Heritage site, as "an outstanding example of new town planning and architecture in the early 20th century."[58]

Unfortunately preservation of rural and agrarian sites as well as other cultural historic sites outside of Tel Aviv's pricey real estate market have not achieved similar conservation successes.

The Case of the Mikveh Israel Site

The Mikveh Israel Law:

Unique among historic sites in Israel, Mikveh Israel is protected by a special law of Knesset. In 1956 the government of Israel signed an agreement with Alliance Israelite Universelle (AIU), [59] for the joint management of the agricultural school. In 1976 the Knesset passed the "Mikveh Israel Agricultural School Law", which stated that the agricultural school shall continue to perform in accordance with its goals, and that no change of status to the land use may occur without approval of the Ministers of Education , Agriculture and the Interior. The law was initiated to replace the license issued to the school from the Ottoman Empire and in order to address pressures by private and public developers to buy parts of the land for real-estate development. . The Mikveh Israel Law left management of the physical site to

---

[56] Amendment 31 to the 1991 Planning and Building Law www.knesset.gov. il. private law. data

[57] The 18th Knesset- Proposed Amendment for Conservation and Restoration- Eitan Havel

[58] UNESCO World Heritage Center, Tel Aviv- White City Date of Inscription 2003

[59] In Hebrew "כל ישראל חברים"

the AIU and Ministry of Education. The site being outside the city limits of Tel Aviv-Jaffo and of Holon; came under the special planning jurisdiction of the Tel Aviv Regional Planning Council. The council is responsible for overseeing all building permits issued on the site. Up until the mid-1970's, before historic preservation became a serious topic in Israeli society, built expansion of the school was initiated by the AIU and generally approved by the regional council. Fortunately the AIU and school management placed most all new building in the rear, or southern periphery of the site, thus sparing the historic core and open spaces from mutilation. Still, no overall historic preservation plan was made which dealt with the entire site or institution. In the late 1980's and onwards, the Society for Preservation of Israel Heritage Sites, (SPIHS), became actively engaged in the protection and restoration of the central core of buildings in the school's center. The SPIHS under the leadership of founder Yossi Feldman worked with the Mikveh Israel School to produce restoration plans and to appropriate funding. The SPIHS worked with the architect Saadia Mandel, and other conservation professionals and their efforts saved the most significant buildings from being lost. Since that time, historic preservation, conservation technique, craft, and practice in the world at large, as well as in Israel have gone thru many changes and are today much more involved and complex than in those early days. Some mistakes had been made however the alternative of neglect would have been far worse.

The Ayalon Park Plan

On April 20th, 2005, the Israeli government announced passage of the Regional Statutory Plan 4416, to create the Ayalon Park and establish a governmental body, "The Ariel Sharon Park Corporation, Ltd." whose role is to establish and manage the implementation of the 8oo hectare metropolitan park. Of the 800 hectares, 330 constitute the Mikveh Israel Site. This rather abrupt historic change of status and introduction of new partners to Mikveh Israel arrived with the expected amount of confusion and apprehension amongst the AIU school management and the SPIHS . In May 2005, Mikveh Israel Agricultural School issued an appeal to the High Court's asking for a injunction removing the Mikveh lands from the Ayalon Park. The appeal was refused. Today the Ayalon-Park governmental corporation is working closely with the agricultural school, the AIU, and the SPIHS in order to create a plan serving the interests of all parties. No specific physical plan for the Mikveh Site has been made public to date. Whether or not the Ayalon Park will be catalyst for the planning, organization and funding is necessary in order to bring about the optimal preservation plan for the site remains to be seen. The balance between the needs of an autonomous educational institution as well as the demands of a vast public urban park while preserving this cultural historical site remains both the question and the challenge.

Today, in conjunction with the Rashi Foundation, another phase of restoration of core buildings is in the planning stages and will benefit from the knowledge gained in the art of preservation since the 1980's. In addition, the Regional Planning Council has initiated an

inventory of the entire site as preparation for a future preservation plan. Architect Gabriel Curtis, known for his preservation work such as the restoration of Zichron Yaakov's main street, is in charge of this survey along with architect Adi Kitov. The Curtiss survey has concentrated upon categorizing physical elements as to their preservation value as a tool for future planning decisions on the Mikveh Israel Site. At the time of writing this paper, the question of preservation strategy for the site looms large. One sign for optimism is the decision of October 11, 2010 by the Tel Aviv Regional Conservation Committee to conserve 145 buildings, agricultural structures and landscape elements as well as water infrastructure based on the Curtiss-Kitov inventory and prioritized conservation listing. The passage of the list for conservation is the first step in implementation of a comprehensive preservation plan for Mikveh Israel.

Strategic Scenarios for Preservation of the Mikveh Israel Site

Within the complexity of governmental and NGO institutions intensively involved in the site, one of the major challenges is the coordination, cooperation, and leadership regarding any major conservation effort. Israel, both state and pre-state have had a difficult time in creating unity amongst such diverse socio-political and economic interests even when the ultimate goals are symbiotic in nature. Once basis for coordination and leadership is established, the questions of the nature of site conservation can be addressed.

At this point in time, more extensive surveys and inventories need to be methodically conducted over the entire site which includes the large agricultural tracts to the north of Jaffa- Ramle Road, and north of the railway tracks and Highway One up to the banks of the Ayalon River (Wadi Musrara). Until now inventory surveys of the site have concentrated on the historic core of buildings from the 19th century. Many but not all of the buildings have been documented for architectural preservation in a manner consistent with current best practice in Israel. More work remains to be done. The completion of this inventory must include not only buildings of later periods, but utilitarian and agricultural structures as well. This should include walls, fences, roads, wells and reservoir, defense related structures, infrastructure relating to irrigation, water sources, trees, plant materials, garden and road constructions, as well as traces of elements which have been damaged or destroyed.

The next strategic question is what elements of the site should be preserved , and to what degree of conservation? Here one must consider the fact the site and its buildings are in use to this day, mostly as a functioning agricultural high school which includes a boarding school. With the built in conflicts of retaining the site as a high school and as part of a planned huge metropolitan park with full public access, there is consensus that all the historic core buildings should be considered first degree conservation. Aside from the conservation of

those 19th century buildings, there is a consensus on first degree preservation of the Botanical Gardens, the various Palm and Cypress allée's and the giant Bengali Fig Trees. In addition a number of monuments, the cemetery and Netter family graves, the Netter Cave, the Monument for Fallen Students, and the Davidka are all landmarks deserving first degree preservation.

Major questions arise regarding the entire inventory of buildings spanning the 1900's up to today. In addition, recent restorations in the historic core have not been up to standard. Retrofit of uses of buildings in the core has caused damage, either covering over or irreversibly altering both original exterior and interior architecture. Restorers have not always used original building materials and technologies, creating often more damage than non-interference would have caused. Additionally, the exterior landscape- gardens and paths have not been faithfully restored. In the desire to upgrade and maintain, these exterior spaces between the core historic buildings have been remade using modern paving and plant materials with no regard to garden preservation. An example is the treatment of the French Garden at the entrance to the Central Synagogue building. Another example of the effects of the lack of clarity in preservation goals is the Botanic Garden. There is broad consensus that the garden must be preserved but until today, all attempts have been discouraging if not damaging. The garden has been of major import as a center for plant introduction and experimentation as well as scientific botanical study in its early days. At the same time, a lack of funding, manpower, and changing staff and student needs has resulted in a steady and downward spiral in the condition, upkeep and maintenance of the gardens. An attempt as of late to "rehabilitate" the gardens resulted in planting a vast green lawn in the broad central axes of the gardens as well as replacing the original wood –concrete trellis-arbor with a modern steel one. While certainly sprucing up the tired and decaying appearance of the botanic gardens, the latest treatment not only did not contribute to saving the aging and dying plant species, nor did it establish a system of plant display in line with the original scientific- botanic organization based on genus- species categorization. In fact there never was a lawn in the original gardens and as handsome as it may look it has no place in true preservation if that is the goal of the restorers.

Many of the educational buildings added in the second half of the 20th century are mainly located adjacent and to the south of the historic core buildings. In addition two residential rows of faculty family housing where added along Mikveh Israel Road, (the southern edge of the site bordering the city of Holon). Many of these buildings lack the charm and specialness of the historic core buildings and are seen as second, third degree or even expendable in regards to preservation. Yet these are the buildings holding the classrooms, laboratories, and dormitories where generations of Israel's agricultural and agronomist innovators where educated and trained. The Mikveh-Israel Agricultural School, from its inception in 1870, has been a continuous uphill struggle to maintain its educational viability and social relevance

and just as importantly its economic viability and economic relevance to its students seeking a secure economic future. In all historic periods, leaders of the institution have moved from euphoria to deep despair. Student enrollment and economic viability have been like a historic roller coaster echoing the state of the Jewish people and their struggle for a homeland. In 2010 the situation is no different. The numbers of farmers required in the modern high- tech world of agricultural is geometrically far less than in the past century. Few of today's idealist young people seek agriculture as the field of future promise. In the 1930's to 1950's , Yitzhak Rabin, Moshe Dayan, Yigal Allon, Haim Bar Lev (at Mikveh Israel) , Raful and others were all educated at agricultural schools, and represent the first "Sabra" generation of military and political leadership. Once the main source of the Jewish Yishuv's leadership and political elite, the level and quality of students in today's agricultural schools has fallen off drastically.

The Mikveh Israel Agricultural School (as well as all the nation's agricultural schools) will need to reinvent itself if it is to regain its position as a relevant and sought after educational institution. It is hard to see historic conservation succeeding on the site while its main tenant and occupants are struggling for educational relevance and economic vigor. In its latest attempts to improve its image, the school has enlisted architects and planners in order to propose new and up to date dormitories, laboratories, lecture halls. The decisions made as to which buildings to replace, where to site new buildings, and how to retrofit and use existing buildings are all inextricably woven into the conservation strategy which has yet top clearly be defined. Such examples underscore both the difficulties and the need for a clear and comprehensive future vision for the conservation of the site in both a holistic and dynamic sustainable equilibrium. Some of the possible strategies will be reviewed in the final chapter of this paper.

CHAPTER 6: IMPLICATIONS AND IMPLEMENTATION

General Elements of the Conservation Project

In any effort for the conservation of a site containing historic buildings and landscapes, the following are needed:

I. Survey and Conservation Actions

1. Any Conservation attempt will need to begin by determining physical boundaries; which elements of the site have historic integrity and other areas which do not have exceptional importance, In addition recent changes which have erased historic

characteristics, (for example roads paved in asphalt where tree line gravel paths existed should be considered to be reversed). Out of these determinations, a detailed preservation policy should be derived. Preservation policy should not be deterministic favoring a particular period of the site but should be built upon the actual surviving relics at the site which are deemed worthy of preservation. The result of such a policy will be a preservation of a mosaic of authentic buildings and landscape elements spanning different periods.

2. In addition to conservation listings of all buildings, structures, open space and landscape elements deemed for conservation by the historic preservation data base and feasibility study, clear boundaries must be established which demarcate areas for conservation, restoration as well as areas where expansion of facilities, new structures and infrastructure upgrading can occur in a manner not intrusive to the conservation areas.

3. The ongoing functioning of the existing institutions, facilities on the site will need to be re-adjusted to the task of stewardship of the heritage site, and the expected large increase in public visitation and participation both as a result of the preservation effort as well as the expansion of the Ayalon Regional Park. The visitor management of the site can either be the responsibility of a separate authority, eg. Parks authority, or can be incorporated into the functions of the ongoing local institution, in this case Alliance Israelite Universelle.

II. Organizational and Administrative Operations for Implementation of Preservation

1. Establishment of a strong and knowledgeable conservation authority to implement the conservation program which will continue to exist thru ought the project and afterwards as steward of the conservation

2. A full understanding of the costs, financing and cash flow available for the implementation. A major decision needs ne made on the nature of the financial mechanism. In some cases heritage sites may pursue corporate involvement. In other cases Public-Private Partnership may be feasible. In some cases a Revolving Fund may be created and managed for long run implementation and conservation maintenance. In addition adaptive reuse of parts of the site may be considered for appropriate finance generating uses. In the case of Cultural Historic Sites of national importance, it is common that government provide all or major sources of funding similar to the funding of National Parks and natural heritage.

3. Full understanding of the legal, statutory, and land ownership issues involved in the conservation effort. This may include the lengthy process of statutory or town plan changes, registration and re-parcelization and removal of squatters and unauthorized buildings.

4. The conservation authority will need to establish working relationships with other organizations and authorities which have limited or partial jurisdiction in or near the site. This can include municipalities, regional government agencies, power and communications companies, transportation and rail authorities.

5. A realistic time frame needs to be adapted for conservation of large historic sites. Often in adaptive reuse projects, the cash flow mechanism creates extreme time pressures whereby the implementation must be rushed in order to lease out the conserved buildings in order to bridge the gap between development financial outlays, loan interest financing and income revenues. (e.g. "the Old Jaffa Train Station Project" which was immediately leased out as a commercial shopping center). The mechanism used for example on Rothschild Street and in Tel Aviv in general makes use of transferable development rights and building height variances in order to finance considerable amounts of historic buildings. On the surface, it seems that most of these mechanisms are not feasible for the Mikveh site which is outside of municipal jurisdiction and cannot by virtue of its status be deemed "prime value real estate" other than in its prescribed Educational-Agricultural land use. Aside from the Mikveh Law allowing only uses which are in conjunction with the operation of the agricultural school, extreme commercialization of the preserved historic site, (such as was the case of the Jaffa Station Project) would be entirely inappropriate for this unique cultural historic heritage site and the continuity of the Alliance Israelite Universelle Youth Village. It seems that the strategy for Mikveh will require a lengthier process which will develop a combination of existing and new mechanisms as a strategy for conversation.

A. Establishment of a Conservation Authority based upon the American Conservation Land Trust model.

At present, it seems there is an overlap of institutions and authorities all seeing themselves responsible for stewardship and implementation of conservation and development of the Mikveh site. This overlap of interested parties cannot continue to be the mechanism for a concerted and responsible conservation project. A single conservation authority with representation of all interested parties in the form of a steering committee should be given full authority for implementation of the project. The major voice in the authority should be

that of Alliance Israelite Universelle who after all, founded the site and supported Mikveh Israel for a hundred and forty years to where it is today. Outside professional resources regarding conservation restoration, financing strategy and recreation-tourism management will be required beyond the capabilities of the youth village which is very busy maintaining the educational facility of 3000 students , maintaining viable management of the vast agricultural campus well as staff and labor. In researching this paper, I have found that planners of the Arial Sharon – Ayalon Park, are now involved in far reaching decision making processes which will affect the future of Mikveh Israel as part of the huge regional park . (Mikveh Israel comprises 300 of the 841 Hectare park). There should be complete coordination and visibility between the park planners, the AIU, and the preservation coordinating agency.

B. Implications of incorporation of Mikveh Israel as part of the Ariel Sharon- Ayalon Regional Park

Present master planning of the Ayalon Park shows intent to retain the agricultural use of most all Mikve Israel land up to the Israel Railroad Easement. The plans show intent to create a number of public access points for hikers, bicyclers and two visitor parking trail heads. The trails are shown around the periphery as well as long the central axis of the Mikveh Israel site and lead across the Jaffa-Jerusalem Road using the existing agricultural overpass as well as coming to a proposed train station at the juncture of the Ayalon Highway with the western border of Azur. The Latz plan also shows some massive graded fill on Mikveh lands just north of the Jaffa –Ramle Road, assumingly as part of the flood retention concept. Aside from the fill areas there is little physical change caused to the Mikveh lands by the park plan. The massive fill should be called into question as being both unnecessary from an engineering aspect but also damaging and unduly altering the topographic form of the historic landscape. The other question regarding the Ayalon Park Scheme is the conflict resulting in opening the grounds of what is essentially a junior High and High School to the public at large. On the one hand, public use of the Mikveh site is a welcome and democratic gesture which will allow a maximum amount of visitors to learn about, experience and enjoy their heritage. On the other hand, Israeli schools (and schools in many other countries as well) for obvious reasons, have stringent security with perimeter fencing and guards. Only authorized persons with passes are allowed in school grounds during class hours. Mikveh Israel is also a boarding school and it a large number of its students live in the grounds day and night. The same can be said for the live- in faculty, employees and families. Perhaps the closest comparison would be to an urban Kibbutz such as Ramat Rachel in Jerusalem or Glil Yam in Herzelia. In both cases public access is allowed thru a control point. In periods where there is theft, vandalism or harassment from outsiders, the controllers tighten up the checkpoint to keep out potential trouble makers. Any future public access thru and around the Mikveh site should then, retain full security responsibility to the Mikveh Israel Youth Village. The School will

need to be compensated for the increase in operating expenses, salaries, maintenance, etc. In any case a second tier security system should make use of up to date technology since adding fencing within the site will have an extremely destructive effect to the preservation goal. Pupils and public park visitors should know which zones are "non-public" and which are "mixed public-and students".

C. Future Opportunities

Until this time the Mikveh Israel School has focused on the social and educational aspects of agrarian values be they of a labor Zionist or of Jewish religious nature. In today's world agriculture does not provide a broad enough profit margin to sustain large and expense operation and maintenance costs of institutions such as Mikveh Israel. Education and tuition fees of course are a major source of financing but they are not adequate in the particular case of Mikveh Israel .Just as the Kibbutzim needed to diversify for survival by developing tourism, high tech and other industry as well as non-agrarian commercial activities, so it seems must be the path of the Mikveh Israel Agricultural School. Of course this cannot be done at the price of damaging the physical character of the historic site .Any new "profit centers" must comply to the "Mikveh Law" and must be physically compatible with the continuity of the Youth Village educational program as well as with the ongoing cultivation of all Mikveh Lands. An iron clad set of physical guidelines and regulations and facilities plan will need to be put in place to allow for building expansion and appropriate restoration and conservation in a highly thoughtful and sustainable manner.

Lastly, Mikveh Israel was founded upon a set of ideals and vision of a better future. The problems of the human condition leading to the founding and continuity of Mikveh as an institution of learning as well as social preparation of young citizens for leadership roles in society should remain the rasion d'être of the school. The lowered economic and social status of the farmer and laborer in Israeli and modern society in general does not mean however that the importance of agricultural to man's destiny has diminished. In fact the opposite is true. The crisis of coming generations will be overpopulation, diminishing resources beginning with water and fertile land, and environmental- ecological imbalances created by pollution, greenhouse gases and over industrialization. Perhaps a new agenda for Mikveh Israel can be similar to that of the Limagrain Cooperative's ethos described as follows:[60]

[60] GROUPE LIMAGRAIN CHAPPES 63720 France Phone: +33473634000 Fax: +33473634044

Stakes for Society	Stakes for Research
Feeding mankind	Everywhere in the world, farmers should be able to have access to production resources, and in particular productive seeds. Food security, and therefore the future of agriculture and the agri-food sector are dependent on the lasting prosperity of farmers.
Meeting the growing evolution of needs	In 2050, in order to satisfy the needs of the planet's nine billion inhabitants, all farmers will need to be mobilized to increase agricultural production by 70%, providing consumers with safe, healthy products.
Achieving environmental performance standards	The scarcity of arable land and natural resources, and the need to reduce greenhouse gas emissions, mean that we have no other choice but to find innovative solutions
Enriching biodiversity and making progress accessible	Access to progress and the sharing of knowledge are essential to any evolution. The use of life science technologies requires an acute sense of responsibility and pedagogy.

GOALS AND COMMITMENTS TO THE FUTURE OF AGRICULTURE

Commitment No 1

- To contribute to the future of farmers
- The stakes for society:
  - Feeding mankind sustainably
- Contributions:
  - To meet the needs of farmers and vegetable producers
  - To participate in the vitality of our regions
  - To respect the diversity of different forms of agriculture
  - To militate for a balanced regulation of international agricultural exchanges

Commitment No 2

- To innovate to produce more and better sustainably
- The stakes for society:
  - Meet the growing evolution of mankind's needs
- Contributions:
  - To create high-performance seeds, better adapted to different climates and soils
  - To share knowledge in order to improve production
  - To organize traced chains to guarantee the authenticity of agricultural products
  - To integrate the criteria of nutrition and health into product development

Commitment No 3

- To reconcile economic development and preservation of the environment
- The stakes for society:
  - Achieve optimal environmental performance
- Contributions:
  - To create varieties that are both economical and more productive
  - To preserve water resources
  - To fight against greenhouse gases
  - To conceive renewable raw materials from plants

Commitment No 4

- To control and share progress in plant improvement
- The stakes for society:
  - Enrich biodiversity and make progress accessible
- Contributions:
  - To utilize biotechnology with a responsible vision
  - To share genetic resources so that agriculture can progress
  - To protect plant breeding without confiscating genetic variability
  - To disseminate knowledge in the field of plant improvement

D. Potential "Profit Centers" Compatible with Mikveh Israel's Designated Land Uses

Following is a list of "profit center" scenarios which may in combination result in an economically sustainable conservation program. This is a scenario list of economic start ups whose very nature is compatible with the conservation program but which demands development of a business management organization with modern and sophisticated skills and tools. Sponsorship should be actively sought from the very Israeli agriculture related industries who owe in part their existence to Mikveh Israel, amongst them; *Tnuva, Strauss, Hazera Gadera, Hazera, Supersol, Agrexco, Yachin, Vita, Osem, HaPardess, Carmel and other Vintners, Supersol, Mega, Coop* and other wholesale food chains, and others. This cooperation between Israel's high tech agricultural and foodstuffs industries and the Mikveh campus should also generate joint research projects as well as provide internship programs to promising students. *(To the Israel food industries who have gained so much from Israeli Agriculture and Mikveh Israel's pioneering contribution, it is "payback time").*

Such a program will also add further educational opportunities to the school curriculum including agro and eco-tourism, facilities operations, agricultural-industrial management and commercial business management. At first the list may seem far-fetched or unachievable, yet the prime location of the Mikveh Israel Farm in the heart of the metropolis gives it strategic value in catering to the large population center in its immediate surroundings.

List of "profit center" scenarios :

- Establishment of a **Israeli National Historic Museum of Agriculture** and Mikveh Israel Visitor Center with active guided tour program.

- Establishment of a specialized **Mikveh Israel Israel Seed Bank and Bio-diversity Research Center** in cooperation with the Israel Plant Gene Bank of the Volcani Research Center(ARO) , perhaps in conjunction with the Hebrew University, Rehovot and the and the European Cooperative Programme for Plant Genetic Resources (ECPGR) and the United Nations (FAO) Food and Agriculture Organization, and the Global Crop Diversity Trust .

- **Open University for the Study of Sustainable Urban Living**- Urban Ecology- Green Building and Organic Agriculture, Agro Tourism, and Horticultural Sciences achieving Bachelor of Science accreditation. May be an "extended learning" branch of an affiliated college or university.

- Establishment of **Mikveh Center of Organic Agricultural Produce** (according to Agrexco, this is one of Israel's top export markets to Europe although a difficult field for achieving profitability). This is also a quickly growing food produce niche within Israel itself.

- Establishment of the **Mikveh Israel Urban Garden Center** with products, plants nursery and classes in urban gardening ' hydroponics', aeroponics, roof wall and balcony gardening and indoor gardening as well as garden tools and furnishings sale. The center would special in both food produce and ornamental gardening which allow the **Urban Gardener** to "grow their own".

- **Mikveh Israel 'Farmers Market"** where local fresh farm products, milks, cheese, vegetables and fruits will be sold on a seasonal basis. Products will be augmented by fresh agricultural products from around the country while the majority would be produced on site. This would encourage a more diverse and intensive agricultural program on site contributing to a greater crop diversity which had existed at Mikveh prior to the 1960's.

- **Mikveh Equestrian Ranch**- Where the art of equestrian husbandry, show riding, show jumping, and guided horse trips thru the Mikveh Lands and the Ayalon Parklands on approved horse trails. In addition equestrian physiotherapy clinic for autism and other impairments.

- **Mikveh Israel Rodeo and Country Faire**. - A totally country experience in the heart of the city. May be an annual or biannual event with Rodeo- horse and bull riding, country food stands, selling homemade jams' pies. Booths, shooting galleries, apple dunkin and a stage with Israeli folk and country music, Hora and Debka troupes and the like and of course the bonfire circle and the "trip to the Goren".

- **Arboretum and Botanical Garden Restoration and Expansion** including fulfillment of David Zaidenburg's dream to include pond habitats, however using recycled grey water to demonstrate biologic water reclamation and water plant habitat. Erection of Arboretum Glass Houses with subtropicals, flowers, Orchids and perhaps Aviary and Butterfly habitat, Herbarium for studying history of medicinal herbs in local Jewish and Arab folklore.

- **Annual Mikveh Students Garden Show** including commercial booths representing the gardening and horticulture "green" industry. In addition the show should include a competition for small garden designs similar to the European garden shows. A new glass Arboretum House as David Zaidenberg had dreamed could be the perfect venue for these events.

- **A Mikveh Israel Corporate Retreat , Seminar and Coaching Center**- modeled after the Asilomar Retreat , Monterey California) - An ideal retreat for corporate office teams – a quick way to leave the tension of the city and chill out in a rural village- The facility could be an ideal economic solution for adaptive reuse of endangered historic buildings on the site) Facilities: Catering (on and off site) , Picnic Area, Parking, Mini-Business Office, Media/Conferencing/Internet Available Events: Meeting Rooms, Corporate & Social Parties, Retreat Center. Operation of the center could be incorporated into the high school and college business management program.

- **Holistic Health Center**, located adjacent to the retreat may run programs for weight loss, yoga, meditation and other forms of mental and physical health care. The center may make use of future hiking, running and biking trails which will be linked up with the Ayalon Park System.

- **Mikveh Israel Guest House** Similar to the Mishkenot Sha'ananim, Yemin Moshe of the Jerusalem Foundation, , one of the historic buildings with adequate restoration of its historic charm can be converted to an authentic living quarter or guest house and can function with other new facilities attracting special guests, visitors connected with AIU, educators, lecturer's and "Friends of Mikveh Mikveh Israel" . Operation of the facility could be made part of the program for agro and eco-tourism management.

- **Revival of the Mikveh "Carmia" Winery as well as winery tours and tasting rooms.** The winery was successfully revived in the late 1960's but needs an arrangement with the AIU which will allow entrepreneurial motivation and sustainability. The winery could be student operated but the possibility of bringing in an outside vintner and combined lease agreement as a public-private enterprise should be explored.

E. Financial Strategies

In order to achieve a major conservation effort a financial mechanism which is entirely lacking today will be required. Sustainable outcomes of conservation cannot rely upon philanthropy. We have to engage in the world of finance and borrowing, investing and managing funds. The universe of the "profit world" must be integrated with the universe of "sustainable conservation". Government and private subsidies as well as fundraised dollars need to be managed and leveraged in clever ways. Although initial contributions will come from government tax incentives, donations, non- profit organizations, the new conservationists are finding ways to attract private business to invest in the form of land trusts, REITS (Real Estate Investment Trusts) and tax incentives given to local and foreign

investors. "Financing a workable land trust takes the trust beyond the reactive emergency driven approach to conservation into the realm of strategic and proactive action." [61]

In the USA there are more than 1500 registered conservation land trusts. They operated according to accreditation standards and guidelines of the LTA (Land Trust Alliance) and it "Land Trust Standards and Practices". The land trusts use methods of finance such as revolving loan funds, surcharge programs, protection funds and PRI's (Program related Investment program- no interest loans made to land trusts). Another related trend in American conservation finance and management is the "Conservation Easement" which allows a land trust to acquire easements of land at relatively low cost, giving them control for preventing subdivision and development of private rural lands. [62]

Since the 1981 passage of the Uniform Conservation Easement Act (UCEA) American Conservation Land trusts have been growing and hundreds of thousands of historic urban and rural lands have been saved from the developer's plow. No such legal arrangement exists in Israel in fact more than 70% of all land in Israel is Government owned and not privately owned (The Israel Land's Authority and Jewish National Fund are the prime agencies of land ownership). In a feasibility study prepared for the Israel Society for the Protection of Nature's OLI Institute, the author's finding was that Israel is in need of land trust activity and that the use of the conservation easement tool is valid and useable according to Israeli Law. [63]

In the case of Mikveh Israel, Alliance Israelite Universelle is actual lease holder to the Mikveh Lands by virtue of Ottoman, British and Israeli Law. Therefore it seems that the AIU could act as a land trust with perhaps minor legal adjustments. In this way the trust could have full tax advantages, access to revolving loan funds, and other financial instruments. As stated previously most all conservation effort and planning in Israel is left to the level of municipal government. For example a city corporation of Tel Aviv named Ezra Ubiitzaron recently managed the conservation and restoration of the historic Jaffa Rail Station and Templar House and Factory on government owned land turned over to the city. The city corporation used a BOT (Build- Operate -Transfer) financing mechanism whereby the private developer provides financing and is allowed to lease the property and enjoy the rental profit returns in this case for a period of fifteen years.. In addition Ezra Ubitzaron runs an active program of historic building conservation in Tel Aviv, managing and getting loan approvals, as well as

---

[61] Clark, Story A Field Guide to Conservation Finance , (Island Press , Washington D.C. 2007)

[62] Levitt, James, From Walden to Wall Street- Frontiers of Conservation Finance , (Lincoln Institute of Land Policy, - Island Press, Wash. DC, 2005)

[63] Gothelf, Tomer Implementation of a Land Trust Model In Israel – Purchase of Land or Land Rights in order to Preserve Open Spaces, , (Open Landscape Institute of Israel, June 2008)

transferable development rights, and additional building rights incentives which create the incentive for conservation in the private market.

Mikveh Israel being outside of any municipal jurisdiction is regulated by the government through the Tel Aviv Regional Planning Council. It is not clear what apparatus if any the council has for financing conservation although the council does have a Conservation Committee which overseas planning design and building rights issues relating to conservation sites within its jurisdiction.

Another Israeli "conservation" phenomenon as of late is the passage of the Prime Minister's "Heritage Plan" "תכנית מורשת של ראש הממשלה". The plan announced by the office of the Prime Minister and approved by the government on 21-02-2010 provides for financing of 150 projects with an appropriation of 399 million N.I.S.. The projects will seek donations and matching funds from private donors and outside sources of an additional 200 million N.I.S. The project hopes to generate 4,500 new jobs and generate an additional 650 million N.I.S. a year in projected internal and external tourism related to the sites. Most of the sites are to be in the Negev and the Galilee. A new office within the office of the prime minister will be created with a director who will be in charge of the plans implementation along with a government steering committee who will oversee the activates of the office.

Unfortunately the list of candidate sites has not been publicized.[64] Sadly, the words "historic and conservation" are not mentioned once in the announcement and it seems the inclination has more to do with Religious and Battle Sites than with historical cultural landscapes such as Mikveh Israel. The aforementioned example perhaps shows why it is advised that Mikveh Israel retain its independence and not overly rely upon government funding which often may not have the institution's best's interests in mind, may be infected by motives of partisan politics and may result in substandard planning and programming in terms of professional conservation practice.

Source - Publications and Announcements- The Office of the Prime Minister of Israel – 9 of May, 2010

F: Schematic Layout of Preservation- Expansion Principles- Synthesis of Conclusions for the Mikveh Site

As a synthesis of this final project paper, the schematic diagram shows one possibility for future expansion and preservation which will appear as a three dimensional model view in the attached graphic foldout. The preservation-expansion plan contains the following key elements:

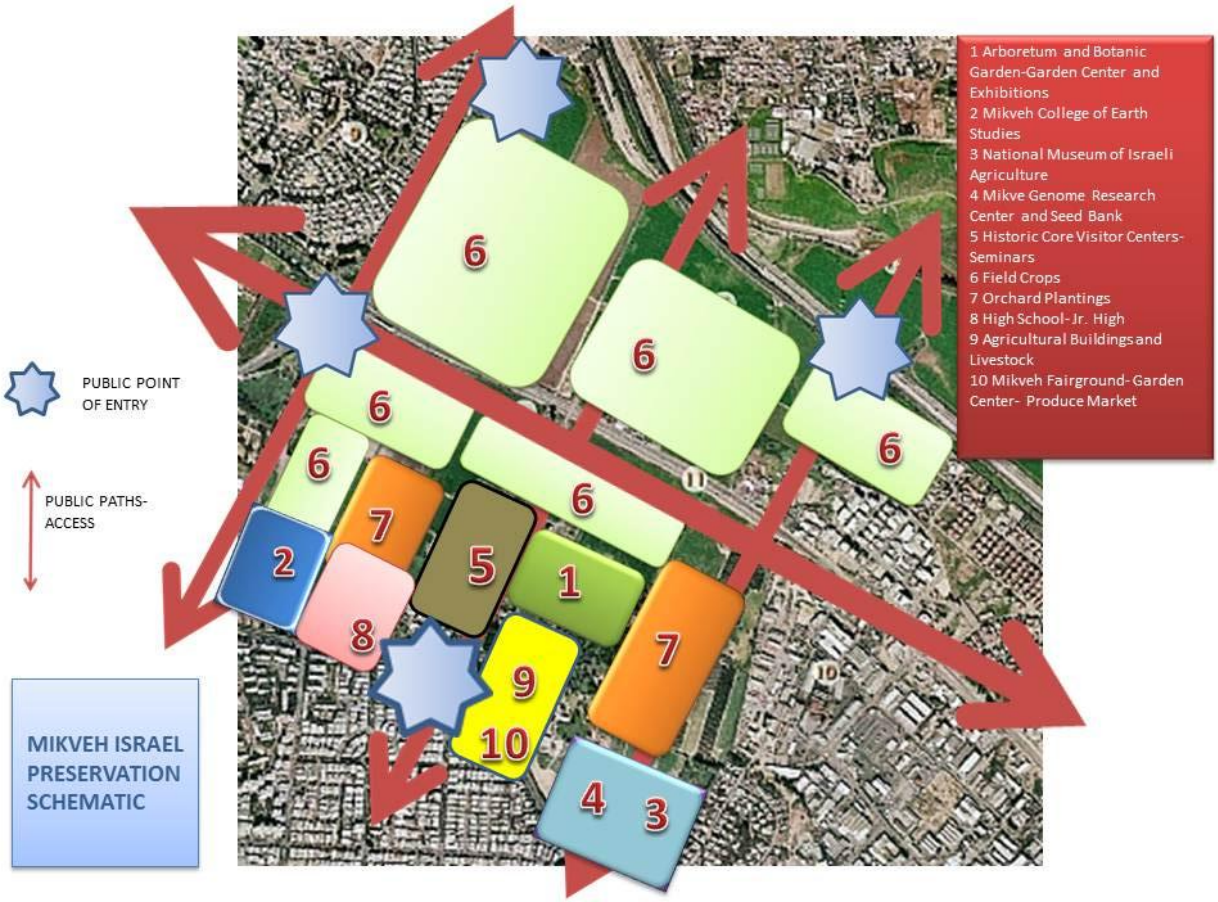


Figure 14 - Mikvhe Israel Preservation Schematic

I. Total preservation of all A-1 and A-2 Buildings, Landscapes and Agricultural elements as documented in the tables found in chapter 3 and appendix A. The methods to be used are maintenance, reconstruction, replanting, restoration, demolition or peeling off of

inappropriate additions in order to expose authentic and historic elements and adaptation as prioritized and defined by the Burra Charter for places of cultural significance.

II. Redefining of the need for onsite residency workers and staff. Areas demarked for these uses should be used for expansion of the academic-agricultural program.

III. A clear and absolute open space corridor to the north, west and south of the historic core of buildings. The landscape corridor shall be of field crops and in designated areas, orchard plantings with no new builing.

IV. New points of entry and access-pedestrian equestrian movement corridors in lieu of the integration into the Ayalon Park Complex

V. **Reinforcement of hedgerow, Allee' , and Boulevard plantings based on succession planting** of existing remnant being true to the authentic tree species in place. This will redefine the special structure of the landscape both North and South of the Jaffa-Ramle Road. Various cluster plantations, Pine, Grevillea, and mixed Conifer and Carob Groves also to be strengthened with succession planting and maintenance.

VI. Jaffa Ramle Road Interface to be given facelift: Removal of non-authentic elements, demolition of bridge overpass, removal of obtrusive bus stops, fencing and in its place, sinking the present highway below ground in order to rejoin Mikveh Lands east and West with full visual, equestrian and farm machine access to Mikveh lands on both side of the road. This will achieve the opening of blocked view corridors from Tel Aviv and the Ayalon Park towards the historic built core.

VI. **Along with conservation-preservation efforts in restoration of the older agricultural structures, the newer agricultural structures are to be rebuilt according to stringent design guidelines** especially regarding roof treatment. Tin, Asbestos and plastic roofing shall be replaced by appropriate roofing forms which shall be in architectural harmony with the tile roofing of the historic core.

VII. The Botanic Gardens shall be expanded according to the vision of David Zaidenberg. This shall include arboretum glass houses for exhibition and display, water features appropriate for displaying wetland and riparian plants. The upper story tree s shall undergo an intensive maintenance and renewal-succession program. The lower story shrubs and ground covers shall be redesigned in order to create a more sustainable if less scientific garden.

VIII. All Major new building shall be to the southwest and south east of the historic built core. This shall include a University Extension in the southwest quadrant with separate

access from Kugel Boulevard. Height limits in this zone can be up to five stories without destroying the dominant presence of the historic core so long as new building hugs the interchange.

IX. The South east corner is another neglected site cut off visually from the historic core by virtue of topography. In this corner of the site is proposed **a National Seed Bank** and **Agricultural-Ecological Research Center**. In addition an **Agricultural Fairground** and **Marketplace** along with **Garden Center** can provide an active interface between the produce of Mikveh Israel and the urban consumer. Height limits in this area can be up to five stories without visually impacting the historic core.

X. **Expansion of the Junior and Senior High Schools.** It is time to reduce the number of single family residences on the Mikveh site. In order for the Mikveh School to be competitive, it will require new and modern facilities. A-2 and A-3 priority residential buildings outside the historic core should be adapted or demolished in order to make space for high school expansion. Dormitories for external pupils should make use of readapted employee residences. Employees can find suitable housing "off campus".

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs;

The proposed plan is shown in the following illustrations. The plan incorporates the aforementioned program as well as a land bridge connecting the Ayalon Park lands with the Mikveh Israel lands above the Israel Railway corridor and Highway 1. This idea appears in the Ayalon Park Master Plan. In fact the long term strategic goal of the Dan Regional Plan is the interconnectivity of major urban greenswards, the Yarkon Stream Corridor , the Ayalon Stream Corridor, with Mikveh Israel being a bridge to a new green corridor reaching to the sea at Jaffa in the west. The spatial-visual qualities of the proposed plan in this paper can be seen in the three dimensional perspectives with essential conservation elements described in the legend.

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs

(Pocket Folds)

Plan Perspective View

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs

Close up View to the Historic Core from the North

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs

Close Up Perspectives of Major Elements of the Plan

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs

Aerial View to the North

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs

Aerial View to the East

Proposed Schematic Plan for the Conservation and Expansion of the Mikveh Israel Agriculture School and Environs

CONCLUSION:

In this paper I have tried to formulate a balanced and broad based strategy for preservation of the landscape of the Mikveh Israel Agricultural School Site. I have gathered and organized a large amount of historical information from varied sources. I have recorded significant intact historic landscape and agricultural elements on the site as well as the spatial and visual corridors associated historically with the site. Suggestions have been made for preserving them thru a four pronged policy of conservation:

- A thorough undertaking of a conservation survey encompassing buildings, agricultural infrastructure and landscape elements.
- Determination of essential structures, landscapes and view corridors to be preserved and restored.
- Creation of compatible institutional developments which can serve as financial catalyzer for the preservation and sustainability of the future site.
- Transfer of the preservation policy to a strong and capable organization having the administrative tools necessary to implement the required actions over time.

In the process I have tried to tell the story of over one hundred and forty years of development of the site. Humans, their events and their activities have come to shape the Mikveh Israel Landscape. This is a landscape shaped by the vision of a people and a culture rather than by nature. This interaction, so obvious and taken for granted, has been described in the famous quote given by the eminent Geographer, Carl O. Sauer;

"The cultural landscape is fashioned from a natural landscape by a cultural group. Culture is the agent, the natural are the medium, the cultural landscape is the result ".

Much of the human story of Mikveh Israel was left out, many contributions by students and staff including a large number of Israel Prize recipients, civilian and military leaders, pioneers, educators, scientists, agronomists, and farmers. . These stories can be found partially in the books and references listed in the bibliography of this paper. Some of the actors are still alive and should be interviewed and their memories documented.

A visit to Mikveh Israel today reveals both reasons for optimism and pessimism. A new and energized administration, a large enrollment of over 3,000 students in three programs, the general education program, the religious program and the French Program with a large number being boarding students. Today's campus scene of Russian and Ethiopian immigrant youth along with native Israeli youth receiving a wholesome education and a warm home at

Mikveh Israel after 140 years of continuity is heartening. Recently it was decided do begin a Mechina Tzvayit- a pre-army education program which instills values and knowledge to leaders of Israeli youth in the collective pioneering spirit!

Although the school continues to maintain all elements of its agricultural program, many of the field facilities show signs of wear and decay. The packing house, Apiculture center,(Beekeepers House), the tractor and mechanical garage, the dairy, chicken coups and Goat pens are all in various states of decay and neglect. Much of the equipment is obsolete. The trees of Mikveh including the Fan Palms and Canary Palms of the central axis are aged and near the end of their life cycle, and no plan of tree succession seems to be in place. Other tree rows of shorter lived Italian Cypress and Grevillea have recently been replaced by new varieties such as Hibiscus Tiliata, whose broad canopied asymmetric form may well be out of "Conservation Character" from the neat verticality of the original tree rows which originally demarcated the axis. . The botanic garden survives but only barely having faced lack of funding and neglect for over thirty five years now. (This author made a number of visits with Landscape Architect Joseph Segal in 1975, and Joseph was very frustrated by the lack of funding and maintenance at the time. Today most all the understory plants, woody shrubs and herbaceous plants have died however a large number of the trees and name tags from over different periods remain.

The field crops of Mikveh Israel have gone over to low intensity, low maintenance use and the scenery of agricultural vitality seen in many agricultural settlements throughout the country is not today projected from Mikveh's fields.

Finally, many of the historic buildings have been restored in the late 1970s ands 1980's without use of original building technologies. Much of their original "Craftsmen" feeling has gone. In addition roads have been paved and paths and squares of concrete pavers have replaced the soft gravel paths and gardens which had once surrounded the historic core buildings, once again detracting from the authenticity of the site. Key building such as the Practitioner's House, the Flower House, the warehouses and the winery are in a state of neglect and even in danger of collapse.

Driving along the main Jaffa-Jerusalem Road, today highway 44, Mikveh Israel's Jerusalem gate is still part of the scenery yet this- the front door to the historic site has been blemished. In the last few decades, a large concrete overpass was built over the highway just east of the Jerusalem Gate. Recently a huge steel bus stop of "Heavy Metal" design and exaggerated proportions was placed at the western side of the road in total oblivion to the historic landscape behind it. Soon the "Kaizer and Herzl" statue, a seven meter Disneylandish object will be added to the clutter. One of the first tasks of an overall conservation plan should be to deal with the public view corridors of the site. In fact the original Netter Plan called for the Jaffa-Jerusalem Road to be lined with high conical trees. Perhaps this is the very treatment

called for in order to enhance the public interface with the site along this corridor. The northern view corridor along the Jaffa-Ramle Road is the historic vista of association from which passersby have come to know Mikveh Israel over the years. This corridor needs to be enhanced not be additions but by removal of impediments (bridges, mega-scale bus stops, power lines, highway expansions, junkyards, warehouses) added on so callously over the years.

All the aging and now deceased tree rows of Mikveh Israel should be replanted and a tree succession program introduced based on historic species.

This along with replanting of some of the sites historic crop types, vineyards, citrus and almond orchards, and perhaps roses and Mulberry, would add both historic correctness but also enrich the visual- agricultural landscape as well. A comprehensive conservation plan with economic means to sustain it can achieve much in a relatively short time.

The situation today of dilapidated buildings in decay while dire is not beyond the point of "conservation" return. All of the existing structures from before 1948 should be given immediate "first aid" and listed for conservation, either A or B. Using the economic and organizational tools previously spelled out, the conservation master plan should place new structures in limited zones near the south border with Holon in a way as not to be visible from the historic core. The fields and plantings from the historic built core out to the Israel Railway and Ayalon Stream should remain as dedicated open space. Within this framework, by adaptive reuse of restored historic buildings, selective infill of new facilities on the south edge of the site, and development of a sustainable program of crop plantings, orchards and replanting and perhaps strengthening of NS and EW tree rows, the cultural historic landscape can be preserved and flourish. The connection with Ayalon Park- bike paths, hiking and horse riding trails, along the tree lined agricultural paths of Mikveh Israel will be a further enhancement both to the success of the park and to the future economic viability of Mikveh Israel as it takes on the added role of regional historic site visitor center. Pherhaps a fitting ending to this paper would be to quote Shlomo Hillels (1873-1953), Jewish educator, Yiddish and Hebrew writer and journalist who became a teacher at Mikveh Israel in 1925 after immigrating to Palestine from Bessarabia and remained until 1934 on the staff.[65] In 1928 he who wrote in his book Mikveh Israel in 1928,

---

[65] Goldshlager, Joseph- Galron עורך אחראי לקסיקון הספרות העברית החדשה: יוסף גלרון-גולדשלגר - Modern Hebrew Literature - a Bio-Bibliographical Lexicon Ohio State University,, http://library.osu.edu/projects/hebrew-lexicon/

"מקווה ישראל- אלפי ידיים מיבלות עמלו במשך של יותר מיובל שנים להפרותה.

לקשטה ולשכללו ועוד ידיים נטויות אליה בעבודה."

"Mikve Israel – thousands of calloused hands labored for over a half a century (today we can say nearly a century and a half) *for her fruitfulness. More hands are ready to continue* to *decorate and to refine her*" [66]

Figure 15 - Mikveh Israel Staff 1892

[66] Hillels, Shlomo Mikveh Israel – Accounts of the First Attempt of Jewish Agriculture in Eretz Israel ,(1928) Omanut, Tel Aviv

BIBLIOGRAPHY

Aaronsohn, Ron, Rothschild and Early Jewish Colonization, (2000) Hebrew University Magnes Press, Jerusalem

Agnoletti,M. The Conservation of Cultural Landscapes , Faculty of Agriculture, University of Florence, Italy (2006) CAB International, Oxsfordshire, Oxford UK

Beresford, Tristram (1966) Agriculture in Israel- Lecture to the House of Commons. London-Anglo-Israel Association

Bialik, H.N. , "The City of Slaughter" in Complete Poetic Works of Hayyim Nahman Bialik, Israel Efros, ed. (New York, 1948): 129-43 (Vol. I)

Dieterich, D and Van der Straaten,J. Cultural Landscapes and Land Use - The Nature Conservation-Society Interface, (2004) Kluwer Academic Publishers, Dordrecht, NL

Dr. Phipps,L, Dr. Osborne, E, Dr.Dyer, D, Dr.Ball, A Handbook on Agricultural Education in Public Schools. (2008) Thomson-Delmar Learning, Clifton Park, N.Y.

Gilbar, Gad (editor) (1990) Ottoman Palestine 1800-1914: Studies in Economic Social History. Leiden: E. J. Brill

Hazen, N. William (1937) Agriculture in Palestine and the Development of Jewish Colonization . United States Department of Agriculture, Bureau of Agricultural Economics.

Helphand, Kenneth (2002) Dreaming Gardens – Landscape Architecture and the Making of Modern Israel, Center for American Places Inc, Santa Fe, New Mexico

Hillels, Shlomo (1931) Mikveh – Israel, Premier Agricole en Palestine Omanuth, Tel Aviv

Karlinsky, Nahum (2005) California Dreaming; Ideology, Society, and Technology of the Citrus Industry of Palestine 1890-1939. SUNY Press, NY

Keller, T. and Keller, G. How to Evaluate and Nominate Designed Historic Landscapes , National Register Bulletin 18 ,(1985) U.S. Department of the Interior, National Parks Service

I. Klinger, Epidemiology and Control of Malaria in Palestine (Chicago: University of Chicago Press, 1930)

Melnick, R, McClelland, L., Keller, T. and Keller, G. Guidelines for Evaluating and Documenting Rural Historic Landcsapes , National Register Bulletin 30 ,(1989, rev. 1999) U.S. Department of the Interior, National Parks Service

Sauer, C.O.(1925)"The Morphology of Landscape". University of California Publications in Geography

Sauer, C.O.(1952) "Agricultural Origins and Dispersal".

The Bowman Memorial Lecture Series, the American Geographical Society, N.Y.

Tal,Alon. Pollution in a Promised Land: An Environmental History of Israel. Berkeley, Calif: University of California Press, 2002.

Tolkowsky, Samuel (1918) The Jewish Colonization of Palestine. The Zionist Review, English Zionist Federation, London

Turel, Sarah (curator) (2006) Chronicles of a Utopia – The Templers in the hilly land 1868-1948. Erertz Israel Museum press

Zohary D. and Hopf, M, Domestication of Plants in the Old World- The origin and Spread of Cultivated Plants in West Asia, Europe and the Nile Valley. (2000) Oxford University Press, UK

Zola, E. "J'Accuse". L'Aurore (January 13, 1898). Translation by Chameleon Translations. Retrieved February 12, 2008.

. .

אהרונסון, רן (1990) הבארון והמושבות . הוצעת יד יצחק בן צבי - ירושלים

אסיף, ש' (ספטמבר 1996) פארק האיילון- עקרונות התכנון וחלופות הפריסה . מינהל מקרקעי ישראל

אסיף, ש' (ספטמבר 1996) פארק האיילון- הרקע לתכנון . מינהל מקרקעי ישראל

אשכול, ד' (עורך) (2003) מדריך למוזיאונים - מחרשה ושלח תל אביב: תירוש-שבח

בן-יוסף , יצחק, מקוה-ישראל תר"ל-תש"ל (1870-1970) משרד החינוך והתרבו (1970) ת"א

בן ערב , יוסף, גנים ונוף בישראל הוצאת הקיבוץ המיוחד (1981) תשמ"א

ברייל, יחיאל (1883) יסוד המעלה יד יצחק בן-צבי- ירושלים

בר-עם שחל, ל' בר-אור, א' (1999) הנחיות לסקר ותיעוד אתרים לשימור. מרכז מחקר למורשת הארכיטקטורה - הטכניון חיפה.

גוגנהאים, ד' פלסנר, א' קפלן, מ' (מאי 2000) תכנית מתאר מחוזית חלקית- תמ"מ 3/ 5 משרד הפנים, מנהל התכנון, משרד לאיכות הסביבה

הללס, שלמה, מקוה ישראל- תולדות הנסיון הראישון לחקלאות בארץ ישראל , ספרית ארץ-ישראל של הקרן הקיימת לישראל- הוצאת "אמונות" תל אביב תרפ"ח (1928)

זיידנברג , דוד (1951) מדריך לגן-הבוטני – בביה"ס החקלאי מקוה-ישראל הוצא ע"י המחלקה לחנוך מקצועי של משרד התרבות – פיקוח על החינוך החקלאי- ת"א

נובנשטרן, ח' (עורך) (1998) שימור גנים ואתרי נוף היסטוריים בישראל. פרסום המועצה לשימור מבנים ואתרי התיישבות

פלדמן, י' נובנשטרן, ח' טורנר, מ' שבייד ,י. (1995) שימור מבנים ואתרי התיישבות – היבטים ערכיים ומשפטיים. מרכז מחקר למורשת הארכיטקטורה- הטכניון חיפה.

רוזנר, ש' (1970) מקווה-ישראל : בית הספר החקלאי העברי הראשון בארץ-ישראל, מיסודה של חברת "כל ישראל חברים", נוסד בשנת תר"ל, 1870-1970 /[כתב וערך: שלמה רוזנר] מו"ל: [תל-אביב] : משרד החינוך והתרבות / שירות הפרסומים, בשיתוף עם הוועדה לחגיגות מאה שנה למקווה ישראל, תש"ל 1970

רז , א' עין דור, א' (2000) מדריך לשטחים פתוחים עירוניים . פרסום אדם טבע ודין

רם, חנה (1996) היישוב היהודי ביפו מקהילה ספרדית למרכז ציוני 1839-1939 הוצאת כרמל, ירושלים הוצאת כרמל, ירושלים ד. 53,56,60,67-68,71-72,198,314,329

שוורץ ,א' (2006) מקווה ישראל- מחזון למציאות . פרסום המועצה לשימור מבנים ואתרי התיישבות.

שטרן א. ורבינוביץ', נ. - 2006 נופי התרבות החקלאית בישראל הגדרות ופרישה מרחבית , ניקדת ח"ן לקידום ערכי נוף וסביבה באזורים חקלאיים בישראל דו"ח מסכם- סביבה ותכנון בע"מ, תל אביב

GLOSSARY AND DESCRIPTION OF TERMS

Adaptive Use: The reuse of a building or structure, usually for a purpose different from the original. The term implies that certain structural or design changes have been made to the building in order for it to function in its new use. Examples might include a factory building now used for loft apartments, or a house now used as a funeral parlor .

Agricultural field station- Agricultural research dates back to the end of the 19th century with the establishment (1870) of the Mikveh Israel School. The Agricultural Station, set up in Tel Aviv (1921), eventually developed into the Agricultural Research Organization (ARO), today Israel's major institution of agricultural research and development.

Agronomist – One who practices the science of Agronomy, technology of using plants for food, fuel, feed, fiber, and reclamation. Agronomy encompasses work in the areas of plant genetics, plant physiology, meteorology, and soil science. Agronomy is the application of a combination of sciences like biology, chemistry, ecology, earth science, and genetics. Agronomists today are involved with many issues including producing food, creating healthier food, managing environmental impact of agriculture, and creating energy from plants. Agronomists often specialize in areas such as crop rotation, irrigation and drainage, plant breeding, plant physiology, soil classification, soil fertility; weed control, insect and pest control.

allée -In landscaping, an avenue or allée is traditionally a straight route with a line of trees or large shrubs running along each, which is used, as its French source venir ("to come") indicates, to emphasize the "coming to," or arrival at a landscape or architectural feature. In most cases, the trees planted in an avenue will be all of the same species or cultivar, so as to give uniform appearance along the full length of the avenue. The French term allée is confined normally to avenues planted in parks, estates and landscape gardens.

Alliance Israélite Universelle (AIU) The Alliance Israélite Universelle (Hebrew: כל ישראל חברים) is a Paris-based international Jewish organization founded in 1860 by the French statesman Adolphe Crémieux to safeguard the human rights of Jews around the world. The organization promotes the ideals of Jewish self-defense and self-sufficiency through education and professional development.

Aliyah (Hebrew: עלייה Translit.: Aliyah Translated: "ascent") is the immigration of Jews to the Land of Israel (Eretz Yisrael). It is a basic tenet of Zionist ideology.

Archaeology, Industrial: Archaeology or preservation involving landscapes, structures, and equipment of significance in the history of technology, engineering, and industry .

Architectural Design Old-New Relationship: Refers to the contrast between an older building or structure and its newer neighboring buildings or structures, or new additions to older buildings .

Architectural Details: The small details like moldings, carved woodwork, etc. that add character to a building .

Architectural Review Boards: These groups, usually locally appointed or elected, are charged with judging whether an owner's proposed changes to his or her property are acceptable under written or implied guidelines (see Design Criteria) for what is "appropriate" in the particular community or historic district .

Archival Resources: Refers to collections of corporate or organizational records or manuscript or photograph collections. The term once implied paper records but increasingly can refer to electronically-produced records including CDs, audio or video tapes, or computer tapes or disks .

Artisans: Persons whose vocation consists of manufacture by hand of pottery, textiles, woodwork, or the like .

artesian well, well from which water flows under natural pressure without pumping. It is dug or drilled wherever a gently dipping, permeable rock layer (such as sandstone) receives water along its outcrop at a level higher than the level of the surface of the ground at the well site. At the outcrop the water moves down into the aquifer (water-bearing layer) but is prevented from leaving it, by impermeable rock layers (such as shale) above and below it. Pressure from the water's weight (hydrostatic pressure) forces water to the surface of a well drilled down into the aquifer; the pressure for the steady up flow is maintained by the continuing penetration of water into the aquifer at the intake area.

Baron Edmond de Rothschild : A leading proponent of the Zionist movement, aiding the AIU and Netter in financing the Mikveh Israel Agricultural School as well as financing the first site at Rishon LeZion. In his goal for the establishment of a Jewish homeland, he promoted industrialization and economic development. In 1924, he established the Palestine Jewish Colonization Association (PICA), which acquired more than 125,000 acres (22,36 km²) of land and set up business ventures.

Barrier-Free Design: Refers to arrangements for accommodating persons with visual, hearing, or physical impairment to mobility .

BILU- The Bilu'im (Hebrew: ביל"ו) were early Jewish pioneers of the BILU movement who arrived in Palestine in 1882; Name is an acronym based on a verse from the Book of Isaiah

(2:5) "בית יעקב לכו ונלכה" Beit Ya'akov Lekhu Venelkha ("House of Jacob, let us go [up]"). Bilu's goal was agricultural settlement of the Land of Israel

Buildings Construction: Can refer to the actual construction of a building or to a discussion of the materials of which it is constructed (sub-categories include masonry, steel-frame, wood .(

Buildings History: Used only when a detailed and extensive history of a building is given .

Cast Iron: Refers to the use of cast iron (distinguished from other types of iron) as a building material, often in building facades but also as a structural material. See also Wrought Iron, Ironwork and Metalwork .

*Charles Netter (*1826- October 2, 1882, Hebrew: קרל נטר), was a Zionist leader, and a founding member of the Alliance Israélite Universelle. In 1870, Netter founded Mikveh Israel, the first modern Jewish agricultural settlement in the Land of Israel.

Citriculture - the cultivation of citrus fruits, as lemons, oranges, etc. — citriculturist, n

Circa: Used only when the exact date is not known.

Citizen Participation: Refers to volunteer or grass roots movements by people not professionally involved with preservation .

Color in Architecture: Used when color is an important feature of the architectural effect; it could refer to tile, plaster, color of window frames, etc. The term overlaps with paint not the application of paint, but the selection of color to achieve architectural design goals. The San Francisco Victorian "painted ladies" are an example of an appropriate use of this term .

Conservation Technology: Equipment and methods used in conservation of artifacts, works of art, and/or natural resources. Typically distinguish between conservation and preservation along these lines: conservation does not apply to buildings but to other cultural objects and natural resources. .

Cultural Landscape Preservation: Preservation of cultural landscapes, or areas "where the interaction between man and nature created a unique whole" or "places in nature that have acquired significant associations with human activities and human events . . . these landscapes seem to retain their natural forms and features, [but] they are transformed in the minds of those who associate historic events with them. "These landscapes are no longer strictly a product of nature, valued for their inherent characteristics, but also become a product of the human mind" (US/ICOMOS Newsletter 11 [1992]; Carol J. Galbreath, qtd. in All about Old Buildings 155).

Cultural Resource Management: Administration or protection of a cultural resource, or "a building, structure, district, site, or object that is significant in . . . history, architecture, archaeology, or culture" (Bill Murtagh, Keeping Time 214 .(

Cultural Resource Surveys: Inventories of sites, buildings, structures, or objects deemed to have local, regional, national, or international cultural significance. The purpose of such surveys is to have a record of what is significant in order to protect such resources from development or encroachment or to document the current appearance or condition for the record. Often such surveys lead to the nomination of properties to historic registers. These were formerly referred to as Historic Sites Surveys .

Culture and Heritage: The term is used with a hyphen and brief description to designate a group with national borders, such as African American, German Mexican, Italian Canadian. Exceptions to the nationality descriptor include Hispanic, Latino, etc.; Gay, Lesbian, etc.; and Women .

Demolition by Neglect: Allowing a building to fall into such a state of disrepair that it becomes necessary or desirable to demolish it. Property owners have been accused of permitting demolition by neglect on purpose, in order to save rehabilitation costs .

Design Criteria: Standards of appropriateness or compatibility of building design within a community or historic district. Often in the form of a handbook, design criteria (also called design guidelines) usually contain drawings accompanying "do's and don'ts" for the property owner. In some situations an Architectural Review Board or similar group has authority to administer the design criteria .

Destruction: Refers to deliberate demolition of a building or site. To be applied only when article covers 1) the subject of destruction or 2) a situation in which a building or site has already been destroyed .

Irrigated versus Dry Farming Baal- Shalchin

Before greenhouse farming, agriculture practice could be divided into two categories; Dry farming In Hebrew Baal - חקלאות גידולי בעל; and irrigated trench farming , in Hebrew Shalchin . גידולי שלחין .

Baal farming is based on direct rainfall and growing of winter grain crops or certain orchard plantations such as olives. The name comes from the Canaanite God of the Sun – Baal. Shalchin (literally to send) uses trenches or channels to send out the water to the crops from the source spring or creek. The channels and trenches have been replaced today by irrigation pipe.

Easement: Legal protection (recorded in a property deed) for distinguishing features of the interior or exterior of a property or in the space surrounding a property because such features are deemed important to be preserved. For example, a new property owner may be prevented from making changes or additions to a building, structure, or landscape by an easement in the property deed itself. These are sometimes specified as preservation easements or conservation easements .

Economic Aspects: In recent preservation publications, this term usually refers to concerns about shoppers' exodus to suburban malls and how to turn this around. It may also involve issues of "Conservation and Restoration," but strictly speaking does not have to .

Environmental Protection: Used for broad environmental initiatives or legislation, such as clean air and water programs. It can be distinguished from landscape protection in that its motivation is primarily scientific or ecological rather than primarily aesthetic or cultural. It need not apply to a specific visible area, or to a rural area. Environmental protection may apply to nations as a whole, to localities, or to urban areas. It is a broader term than Natural Resources Conservation, though in an article, both terms may apply .

Foundations: Refers to building foundations.

French Garden - The French formal garden, also called jardin à la française, is a style of garden based on symmetry and the principle of imposing order over nature. It reached its apogee in the 17th century with the creation of the Gardens of Versailles, designed for Louis XIV by the landscape architect André Le Nôtre. The style was widely copied by other courts of Europe.

Fund Raising: Refers to active Fund Raising efforts by a group, not other means of raising money, such as having bonds approved .

Grants: Usually refers to grant programs, rarely to an individual project being awarded a grant. Individual projects are usually only included when there is an extensive description of a building or site .

Heritage Areas: Used only when the article uses this terminology. As opposed to a park, historic district, or scenic byway, a heritage area possesses the following broadly-defined components: A "sense of place"; regional scope; natural or cultural resources that unify the region; varied land uses; (usually) private ownership; local, regional, state and/or national significance. This term is used only when the article covers 1) the subject of heritage areas or 2) officially designated heritage areas .

Hovevei Zion (Hebrew: חובבי ציון), also known as Hibbat Zion (Hebrew: חיבת ציון, lit. [Those who are] Lovers of Zion), refers to organizations that are now considered the forerunners and foundation-builders of modern Zionism. Many of these first groups were established in Eastern European countries in the early 1880s with the aim to promote Jewish immigration to the Land of Israel, then a part of Ottoman Empire, and advance Jewish settlement there, particularly agricultural. Most of them stayed away from politics.

In 1882, a group of Hovevei Zion enthusiasts founded Rishon LeZion, the first Zionist settlement in the Land of Israel.

Historic Districts: Used only when referring to a neighborhood or region designated by national, state, or local officials as a historic district .

Historic Landmarks: Used only when referring to a site designated by national, state, or local officials as a historic landmark. Primarily used to refer to National Historic Landmarks .

Historic Preservation Biography: Refers to biographies of preservation professionals .

Historic Preservation Corporate Involvement: Used to describe occasions when corporations fund preservation of their own or other structures or facilities. If the action takes place in conjunction with government or civic groups, Public-Private Partnership is used as well .

Historic Preservation Feasibility Studies: Refers to studies which examine all facets of a proposed preservation effort to determine if the structure or site's significance is worth the efforts required to save it, as well as whether artisans, materials, funds, community support are sufficient for the project .

Historic Preservation Philosophy and Ethics: Refers to the underlying philosophy that provides the basis for any preservation plan; "why should it be done this way "?

Historic Preservation Planning: Refers to broad, master plans for preservation, not specific plans being made for preservation of any one building .

Historic Preservation Study and Teaching: The catch-all term used to refer to any kind of preservation education programs, whether professional, for the general public, or for school kids, including heritage education .

Historic Registers: Refers to any local, state, national, or international list of significant sites, districts, buildings, or objects. Used when such a list is the focus of the article. Example: the U.S. National Register of Historic Places; the World Heritage List. Articles that simply state that a building (site, etc.) has been listed are not included unless the article provides substantial information about the building. Moreover, "HISTORIC REGISTERS" would not

likely apply to such an article unless the focus of the article is on, for example, a long struggle to have the building listed in said register .

Historic Registers Criteria: Refers to the standards a site, district, building, or object must meet in order to be listed in a historic register .

Historic Sites: This term is reserved for use for historic sites related to famous or important events or persons (i.e. Independence Hall, Philadelphia; Monticello, etc .(.

Historic Structure Reports: An HSR is an analysis of a building's structural condition, involving written and photographic or photogrammetric evidence. The purpose of an HSR is usually to provide a record of a building's condition before beginning restoration or renovation of the building. Used only when article uses this terminology .

Impact Studies: Studies done to determine the impact that a new plan would have on an area, such as a study to determine the effect building a new Target store would have on a historic downtown shopping district .

Infill: The use of vacant land and property within a built-up area for further construction or development, especially as part of a neighborhood preservation or limited growth program .

Council for Restoration and Preservation of Historic Sites in Israel- ICPMS: The Council for Restoration and Preservation of Historic Sites in Israel identifies, restores and protects heritage buildings and locales associated with the country's rebirth, Zionism, settlement and security.

Labor Zionism (Labour Zionism, Hebrew: ציונות סוציאליסטית, tsionut sotsialistit) can be described as the major stream of the left wing of the Zionist movement. Labor Zionists believed that a Jewish state could only be created through the efforts of the Jewish working class settling in Palestine and constructing a state through the creation of a progressive Jewish society with rural kibbutzim and moshavim and an urban Jewish proletariat.

Land Management: Generally refers to the decisions local governments make about land use, e.g. zoning and subdivision ordinances. Sometimes used to refer to the decisions a property owner makes about his or her individual property .

Landmarks Commissions: Used to describe state or local organizations with authority to determine eligibility of buildings and structures to be added to their respective landmark registers .

Landscape Protection: Refers to the whole range of techniques used to protect land from inappropriate development, including education, land use plans, zoning laws, and easements. It can be distinguished from Open Space Conservation, in that Landscape Protection is a narrower term, referring to the protection of open space that has been designed anything from a garden to a farm. It can be distinguished from Natural Resources Conservation in that it describes the aesthetic or cultural sense of a landscape rather than the potential economic value of the forests, water, topography, minerals, etc. contained in the landscape. Rural Preservation efforts may include Landscape Protection. Landscape Protection is usually used by landscape architects and historic preservationists; Open Space Conservation by planners and public officials .

Mixed Use: As distinguished from a single use plan (as set out often in zoning regulations and laws), mixed use refers to a variety of authorized uses for buildings and structures in a particular area. This could appear as, for example, a property's being utilized in more than one way, such as a street level market and upstairs apartments .

Museum's Collections: Distinguished from Museums Interpretive Programs in that it is limited to description of a particular collection or set of collections without special reference to the particular interpretive method at work in the presentation of the collections .

Museums Interpretive Programs: Attempts to provide a context for or explain the significance of artifacts, works of art, historic places, cultural sites, or historic events at museums, historic sites, and so forth. The term is not used to denote language translation at such sites .

Open Space Conservation: Refers to the whole range of techniques used to protect land from inappropriate development, including education, land use plans, zoning laws, easements. It can be distinguished from Landscape Protection in that Landscape Protection is a narrower term, referring to the protection of open space that has been designed anything from a garden to a farm. Landscape Protection is usually used by landscape architects and historic preservationists; Open Space Conservation by planners and public officials .

Parks Interpretive Programs: Attempts to explain, provide a context for, or the significance of artifacts, structures, historic places, cultural sites, or historic events at parks. The term is not used to denote language translation at such sites .

Preservation Techniques: Methods of maintaining the historical integrity of a building with limited alterations or additions; methods of stabilizing and preventing further decay. The term should be distinguished from Restoration Techniques, which denotes rebuilding in order to achieve authenticity and Conservation Technology on the basis of the difference

between preservation and conservation, which can be summed up thus: the former can refer to buildings, while the latter refers to other cultural objects and natural resources .

Public-Private Partnership: Joint ventures between community members and government or business or between corporations and government .

Restoration Techniques: Methods used in rebuilding buildings and structures with historically accurate materials to achieve historical authenticity in keeping with a particular time period or event. The term should be distinguished from Preservation Techniques on the basis of the difference in meaning between restoration and preservation, which is a matter of degree. While both seek to achieve historical accuracy, preservation does not imply rebuilding. Restoration Techniques should also be distinguished from Conservation Technology, a distinction having to do with the range of reference present in each term. .

Revival: Used to describe later revivals of historical styles. If the building was designed after the original style period, "Revival" is added to the style name. For instance, if the article says "1945 Colonial house," ARCHITECTURE, COLONIAL REVIVAL is used .

Revolving Funds: Defined by Lynn Moriarity in the Landmark Yellow Pages as a "pool of capital created and reserved for a specific activity, such as historic preservation, with the restriction that the monies are returned to the fund to be reused for similar activities ".

Seismic Retrofit: Refers to the shoring-up of buildings to enable them better to withstand earthquakes .

Street Furniture: Refers to objects such as street lights, benches, and so forth that are part of a streetscape .

Sympathetic Additions: Additions to structures which follow or complement the architectural style or scale of the original building .

Templars: Not to be confused with the Templar Order of Knights of the Crusades, the modern German Templars served as a model for the Jewish pioneers . The German Templars, who had broken off with the Lutheran Church came to Ottoman Palestine from Wurtemberg in 1861. They considered themselves as the people of God, the Jews having failed in their mission for not having recognized Jesus as the Messiah. Their objective was to reconstruct the Temple of Jerusalem. With this prospect, they organized the departure of several families for Palestine. A first group of 72 people settles in Haifa at the foot of the Carmel mount in 1868, that is to say fourteen years before the first Jewish Aliya immigration wave. The Templar Colonies in Jaffa and Sorona had extensive commercial ties to Mikveh Israel.

Transfer of Development Rights: Explained by Frank B. Gilbert: "Landmarks are often located in the center of cities where zoning resolutions would permit much larger buildings should they be replaced. . . . In New York City the owner of a landmark may now transfer unused development rights from his lot to an adjacent site where a new building is to be constructed. This transaction, allowing the new building to be larger, enables the landmark owner to realize some of the present-day value of his land without destroying the historic building"

Utopias and Communal Societies: Refers to tightly-knit communities that are bound in nature and structure by religious or social beliefs .

Völkisch Movement had its origins in Romantic nationalism, as it was expressed by early Romantics such as Johann Gottlieb Fichte in his Addresses to the German Nation published during the Napoleonic Wars, from 1808 onwards, especially the eighth address, “What is a Volk, in the higher sense of the term, and what is love of the fatherland?," where he answered his question of what could warrant the noble individual's striving "and his belief in the eternity and the immortality of his work," by replying that it could only be that "particular spiritual nature of the human environment out of which he himself, with all of his thought and action... has arisen, namely the people from which he is descended and among which he has been formed and grown into that which he is". The movement combined sentimental patriotic interest in German folklore, local history and a "back-to-the-land" anti-urban populism with many parallels in the The dream was for a self-sufficient life lived with a mystical relation to the land; it was a reaction to the cultural alienation of the Industrial revolution and the "progressive" liberalism of the later 19th century and its urbane materialist banality. Similar feelings were expressed in the US during the 1930s by the populist writers grouped as the Southern Agrarians.

In addition the völkisch movement, as it evolved, sometimes combined the arcane and esoteric aspects of folkloric occultism alongside "racial adoration" and, in some circles, a type of anti-Semitism linked to exclusionary ethnic nationalism. The ideas of völkisch movements also included anti-communist, anti-immigration, anti-capitalist and anti-Parliamentarian principles. The völkisch ideas of "national community" (Volksgemeinschaft) came more and more to exclude Jews.

Viticulture (from the Latin word for vine) is the science, production and study of grapes which deals with the series of events that occur in the vineyard. When the grapes are used for winemaking, it is also known as viniculture. It is one branch of the science of horticulture.

*World Zionist Organization (*Hebrew: *ההסתדרות הציונית העולמית), or WZO,* was founded as the Zionist Organization (Hebrew: ההסתדרות הציונית), or ZO, in 1897 at the First Zionist Congress, held from August 29 to August 31 in Basel, Switzerland. It changed its name to World Zionist Organization in January 1960.

Yishuv (Hebrew: ישוב, literally "settlement") or Ha-Yishuv (the Yishuv, Hebrew: הישוב), is the term used in Hebrew referring to the body of Jewish residents in the Holy Land before the establishment of the State of Israel. The residents and new settlers were referred to collectively as "the Yishuv" or "Ha-Yishuv." The term came into use in the 1880s, when there were about 25,000 Jews living in Eretz Yisrael, and continued to be used until 1948, by which time there were about 700,000 Jews there, and is used in Hebrew even nowadays to denote the Pre-State Jewish residents in the Holy Land.

APPENDIX A: DATA FIGURES

Listed Inventory for Conservation of Mikveh Israel Site – based upon Draft prepared by Architect Gabriel Curtiss for the Central Regional Council Planning Authority- Ministry of the Interior 2010. Translation from Hebrew and minor additions by author marked , **#**.

The statutory jurisdiction over the Mikveh Israel site is unusual in Israel due to the Mikveh Israel Law. Since the area is non-incorporated, all planning matters including permits and plans is handled by the Tel Aviv Regional Planning Council. The statutory plan Glilit 520/A (תגפ/520/א) was prepared by architect Dan Eitan and submitted in the late 1960's. The plan was ratified in 1972. The plan encompasses 1684.444 dunams (168.44 Ha.) The plan designates land uses including

Employee-worker residential single story, residential 2 story, boarding school dormitories 2 story, light industrial, workshops, farm buildings and agricultural structures all of which are for the use of the institution only!

In addition agricultural plots, private open space, sports areas, paths and pedestrian ways, unpaved roads and streets are designated. The plan designates only five structures and a site for preservation;

a. Jerusalem gate and entry building on the Jaffa- Jerusalem Road.
b. Szold House
c. Netter House
d. Central Synagogue
e. Netter Cave
f. Netter Gravesite

A large number of structures are designated "for demolition".

The plan calls out three phases of implementation:

First Phase: Paving of internal roads – 5 years

Removal of buildings earmarked for demolition- 10 years

New Boarding School Buildings – 12 years

Phase Two: Remodeling of structures sited for preservation for employee- living quarters.

Development of Sport Facilities

Phase Three: Completion of construction of Boarding School Facilities

Completion of site and landscape work.

In fact, the plan has been implemented and at the time of writing pressures exists for additional institutional building inside the site. A new plan submission, תגפ/520/א3 Glilit 520/A3 was submitted and publicized on 16/12/2010 for placement of a sculpture and "reuse" and inhabitation of historic buildings . [67]

1560 ילקוט הפרסומים 6173, ט' בטבת התשע"א, 16.12.2010
המחיר 32.40 שקלים חדשים ISSN 0334-3030 סודר במח' רשומות, משרד המשפטים, והודפס במדפיס הממשלתי

מרחב תכנון מקומי מחוזי – מחוז תל אביב

הודעה בדבר אישור תכנית מיתאר מקומית ברמה מפורטת מס' תגפ/ 520/ א/ 3 שם התכנית: תוספת שימושים במתחם שער ירושלים, מקווה

נמסרת בזה הודעה, בהתאם לסעיף 117 לחוק התכנון הבניה, התשכ"ה–1965, בדבר אישור תכנית מיתאר מקומית רמה מפורטת מס' תגפ/ 520/ א/ 3, כפיפות לתכנית תגפ/520/א, נגפ/520.

איחוד וחלוקה: בלא איחוד וחלוקה.

1495

[67] Israel Lands Authority Statutory Plan Archive www.mmi.gov.il 2011

עיצוב ופיתוח לבניין, למגרש ולשטחים הציבוריים. ו. קביעת תנאים למתן היתרי בניה.

הודעה על הפקדת התכנית פורסמה בעיתונים בתאריך 10/07/2009 ובילקוט הפרסומים 5973, התשס"ט, עמ' 4685, בתאריך 06/07/2009.

התכנית האמורה נמצאת במשרדי הוועדה המחוזית לתכנון ולבניה מחוז תל אביב, דרך בגין 125, תל-אביב-יפו 67012, טל' 03-7632588, וכן במשרדי הוועדה המקומית לתכנון ולבניה תל אביב, שד בן גוריון 68, תל-אביב-יפו, טל' 03-5217162, וכל מעוניין רשאי לעיין בה בימים ובשעות שהמשרדים האמורים פתוחים לקהל.

68

Figure 16 - The sculpture " Hertzl meets Kaiser Wilhelm" by artist Yossi Mizrachi was initiated by Mr. Yossi Feldman, chairman of the Isareli Council for the Preservation of Monuments and Sites, headquartered in the "Teachers Hosuse" at Mikveh Israel. This seven[69]

[68] Source – Publication of Announcements- 16-12-2010, Ministry of Law, Government of Israel Printing Offices, ISSN 0334-3030

[69] Source from Maariv article, 24-04-2010 Eli Berdenstein

Conservation Listing - Mikveh Israel Site Showing Statutory Status According to Town Plan Glilit 520/A (תגפ/520/א)

"A Draft Version - 2010"- Translated from the work of Architects Gobi Curtiss and Adi Kitov – Tel Aviv Regional Council 2010.

The Historic Built Core - Establishment Period								
Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
Structural problems – part of building designated for demo! by Town Plan Glilit 520/A	**A-1**			**√**	Warehouse and building additions	Institutional Use	**Winery and related structures**	**55**
Designated for demo! by Town Plan Glilit 520/A	**A-1**			**√**	Office, storage, and second level residences	Institutional Use	**Warehouses ground level** **Workers**	**56**

							Quarters second level	
Structural problems	**A-1**			**√**	Fitness room and storage	Institutional Use	**Apprentices Quarters**	**57**
	A-1			**√**	School Administration Offices	Institutional Use	**Administration Building**	**58**
Non conformance with designated land use. Designated for demo! by Town Plan Glilit /520A	**A-1**			**√**	Offices of the Council for Restoration and Preservation of Historic Sites in Israel CRPHS	Private common property	**"Teacher's " House**	**59**
Designated for Conservation by Town Plan Glilit /520A	**A-1**			**√**	Religious School	Institutional Use	**"Henrietta Szold" House**	**60**
Designated for Conservation by Mikveh Israel Scool./ Designated for demo! by Town Plan Glilit 520/A	**A-1**			**√**	Religious School	Institutional Use	**Bet Haprachim Flower House**	**61**

Designated for Conservation by Town Plan Glilit 520/A	**A-1**			**√**	Central Synagogue	Institutional Use	**Synagogue**	**62**
Designated for Conservation by Town	**A-1**			**√**	Religious School	Institutional Use	**Netter House**	**63**
Non conformance with designated land- Addition 1972 by permit	**A-1**			**√**	Blacksmith-metal shop Present use- Museum	Common Private Property	**Blacksmith, Metal Shop - Museum**	**64**
Structure "not permitted" by Town Plan Glilit /520A	**A-1**			**√**	In disuse	Agriculture Use designation	**Guardhouse – "Jerusalem Gate "**	**72**
Structure "not permitted" by Town Plan Glilit /520A	**A-1**			**√**	In disuse	Agriculture Use designation	**Gatehouse "Jerusalem Gate"**	**74**
Structure "not permitted" –marked for "demolition " by Town Plan Glilit /520A	**A-1**			**√**	Visitor Center	Institutional Use	**Visitor Center Run by CRPHS**	**90**

Water Infrastructure (Various Periods)								
Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
marked for "demolition" by Town Plan Glilit /520A	**A-1**			**√**	Boarded up	Institutional Use	**Open Pool**	**54**
	A-1			**√**	Abandoned	Institutional Use	**"Antilia" Na-urah Water (Water Raising Wheel) Well**	**55א**
	A-1			**√**	In disuse	Common Private Property	**Old Water Well Double Arched**	**67**
Structure "not permitted" by Town Plan Glilit /520A	**A-1**			**√**	In disuse	Agriculture Use designation	**Old Water Tower**	**68**
Structure "not permitted" by Town Plan Glilit /520A	**A-1**			**√**	In disuse	Agriculture Use designation	**Water Well Cistern- "Jerusalem Gate"**	**71**
Structure "not permitted" by Town Plan Glilit /520A	**A-1**			**√**	In disuse	Agriculture Use designation	**Water Well "Jerusalem Gate"**	**73**

Built in 1973	**A-1**				Village services	Common Private Property	**Water Tower**	**135**
	A-1		**√**		Village services		**Old Water Tower (Present Campus Security Offices)**	**139**
	A-1			**√**	Ruins		**Old Aqueduct Remnants**	**157**
Grouping of Educational Buildings- Early Second Period								
Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
Building addition 1968- no permit	**A-2**			**√**	Residential	Residential area B (mid rise)	**"Halperin" Dormitories with "live in chaperon-leader"**	**36**
Non conforming use	**A-2**			**√**	Nuresery School	Residential area B (mid rise)	**"Atid" School and leader's quarters**	**37**
Addition and closure of patio- non permit	**A-2**			**√**	General School	Institutional Use	**Library**	**43**

	A-2			**√**	General School	Institutional Use	**Arts and hobbies classrooms**	**44**
	A-2			**√**	General School	Institutional Use	**Physics Classrooms- Amitzur Krause Bldg**	**45**
Structure "not permitted" –marked for "demolition " by Town Plan Glilit /520A	**A-2**			**√**	Religious School and Clubs	Residential area B (mid rise)	**Bet "Hamachzorim "Alumni Bldg** **Historic Religious School**	**53**
Structure "not permitted" –marked for "demolition " by Town Plan Glilit /520A	**A-2**			**√**	Storage	Institutional Use	**Warehouse for Water Systems and Security Technician Staff**	**א54**
	A-2			**√**	Boarding School Dorms	Residential area B (mid rise)	**"Pollack" Dormitories with "live in chaperon-leader"**	**91**

Grouping of Early Period Worker's Living Quarters

Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					

	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**75**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**77**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**80**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**81**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**82**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**83**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**84**
	A-2			**√**	residence	Residential area A (low rise)	**Single Story Residence**	**85**
Non-Conforming Use	**A-2**				residence	Institutional Use	**Single Story Residence**	**87**

Agricultural Structures- Early Period

Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building	**With building**					

		permit	**permit**					
Structure "not permitted" –marked for "demolition " by Town Plan Glilit /520A	**A-2**			**√**	Agricultural Settlement	Light Industrial	**Stables**	**93**
Cowshed Building Application 2005	**A-2**				Agricultural Settlement	Farm Structures	**Sheep and Goat Pens- Calf breeding- feeding Pens**	**118**
Cowshed Building Application 2005	**A-2**		**√**		Agricultural Settlement	Farm Structures	**Dairy Department Sheds and Offices**	**122**
Structure "not permitted" by Town Plan Glilit /520A	**A-2**		**√**	**√**	Village Services	Agricultur al Use	**"Rothschild" Well-House**	**131**
	A-2			**√**	Agricultural Settlement	Farm Structures	**Beekeeping Department**	**132**
Structurall y unsafe- Great building- unique brickwork	**A-2**			Circa 1880-1910	Village Services	Farm Structures	**"Goldshmit" Well-House**	**133**
	A-2				Agricultural Settlement	Private Open Space	**Equipment Shed- (in disuse)(**	**136**

	A-2				Agricultural Settlement	Private Open Space	**Warehouse**	**137**
Structure "not permitted" by Town Plan Glilit /520A	**A-2**			**√**	Agricultural Settlement	Agricultural Use	**Packing House**	**138**

Ornamental Gardens , Botanical Gardens and Special Landscape Elements								
Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
	A-1			**√**	Public Open Space		**Carl Netter Cave**	**144**
	A-1			**√**	Public Garden		**Bengali Fig Tree Grove**	**145**
Botanic Garden includes forested hill south of axis	**A-1**			**√**	Gardens	Agricultural Use	**Botanic Gardens**	**148**
	A-1				Memorial Garden in memory of Shraga Cohen	Agricultural Use	**"Bustan Garden" nearby the southeast water tower**	**150**

Hedgerows and Allées								
Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Withot building permit	With building permit					
	A-1			√	שביל כניסה צפוני ת	Agricultural Use	**Palm Allée from Synagogue to North (Jerusalem)Gate**	**146**
	A-1			√	תיחום חלקות	Agricultural Use	**. Italian Cypress Allée east west by botanic gardens**	**147**
	A-1			√	תיחום חלקות	Agricultural Use	**Palm Allée to east**	**149**
	A-1			√	תיחום חלקות	Agricultural Use	**Eucalyptus Grove- Allée**	**154**
	A-1			√	תיחום חלקות	Agricultural Use	**Italian Cypress Allée east west by southern fields**	**155**
	A-1			√	כניסה לקבר נטר	Agricultural Use	**Italian Cypress Allée to Carl Netter Grave**	**156א**

Agricultural Plots, Plantations, Orchards

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
	A-2						Pine Groves beside single family residential	161
כולל החלקות מצפון לכביש 44	A-2			√			All the fields under till or in fallow including Mikveh lamds north of the Jaffa-Ramla Road to the Railroad Corridor	162

Grouping of Defense Structures

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					

הבניה אסורה על פי תכנית תג"פ 520	**A-2**			**√**	לא בשימוש	Agricultural Use	**Defense post on old water tower**	**68א**
הבניה אסורה	**A-2**			**√**	לא בשימוש	Agricultural Use	**Defense post above packing house**	**138א**
	A-2				לא בשימוש	שפ"פ	**Defense post above supply shed**	**137א**
	A-2			**√**	עמדת הגנה	Agricultural Use	**Defense post near botanic gardens**	**151**
	A-2			**√**	עמדת הגנה	Agricultural Use	**Defense post near well by synagogue**	**152**
	A-2			**√**	עמדת הגנה	Agricultural Use	**Defense post near Palm Allee at North entrance**	**153**
	A-2			**√**	לא בשימוש	Agricultural Use	**Defense post near Eucalyptus Alee**	**154א**

Monuments and Memorial Sites								
Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
	A-1			**√**	memorial	Agricultural Use	**Carl Netter Grave**	**156**
	A-1				memorial		**Ben Gurion Sculpture**	**158**
	A-1				memorial		**Elijah Krauser Sculpture**	**159**
Beautiful monument bronze and stone to 13 Mikve students from the "Geva" Group who died in the 1948 War of Independence.	**A-1**			1953	memorial	Landscape Preservation	**Monument to Mikveh's Fallen Soldiers in the Botanic Gardens**	**170**
Large stone pylon marking north central axis of the botanic garden tablet				1948-??	memorial	Landscape Preservation	**Monument to Eliahu Shamir-Student who was killed on the Jerusalem Road by Kfar**	**171**

							Yazur 1947-8	
Date after 1982- Location in Cactus garden west of Tractor Driving School Black Stone Tablet, Lawn and Cactus Garden					memorial		**Monument to Gadi Levi and four fallen soldiers- 1982 Lebanon - Israel War**	**172**
Date after 1990- Location in area of west parterre- Botanic Gardens. Plaque set into nature stone boulder					memorial	Landscape Preservation	**Monument to David Zaidenberg- Manager of the Botanic Gardens until 1990.**	**173**
Date 2002- Location in garden behind					memorial		**Monument to Inbal Peretz**	**174**

and to the east of College Lycee Franco-Israelien Building							**erected 2002 by the Mikveh Israel employee's association**	

Faculty and Staff Housing

Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
Built in 1986	**B**				Residential	Residential area A (low rise)	**Single family residential**	**1**
Built in 1986 Remodeled 1978	**B**				Residential	Residential area A (low rise)	**Single family residential**	**2**
Built in 1986	**B**				Residential	Residential area A (low rise)	**Single family residential**	**3**
Built in 1986	**B**				Residential	Residential area A (low rise)	**Single family residential**	**4**
Built in 1986	**B**				Residential	Residential area A (low rise)	**Single family residential**	**5**
	B			**√**	Residential	Residential area A (low rise)	**Single family**	**6**

							residential	
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**7**
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**8**
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**9**
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**10**
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**11**
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**12**
	B			**√**	Residential	Residential area A (low rise)	**Single family residential**	**13**
	B			**√**	Residential	Residential area A (low rise)	**Single family reside**	**14**

							ntial	
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**15**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**16**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**17**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**18**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**19**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**20**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**21**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside**	**22**

							ntial	
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**23**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**24**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**25**
Addition 1973 with permit	**B**			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**26**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**27**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**28**
	B			**√**	Resid ential	Residential area A (low rise)	**Single family reside ntial**	**29**

Later Period Employee's and Worker's Housing

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
	B				Residential	Residential area B (mid-rise)	**Two story Residential**	**30**
	B				Residential	Residential area B (mid – rise)	**Two Story Residential**	**31**
Built 1970	**B**		**√**		Residential	Residential area B (mid-rise)	**Two Story Residential**	**32**
	B		**√**		Residential	Residential area B (mid—rise)	**Two Story Residential**	**33**
	B		**√**		Residential	Residential area B (mid-rise)	**Two Story Residential**	**34**
Built 1973	**B**		**√**		Residential	Residential area A (low rise)	**Two Story Residential**	**78**
Built 1973	**B**		**√**		Residential	Residential area A (low rise)	**Two Story Residential**	**79**
Built 1973	**B**		**√**		**בי"ס כללי**	Institutional Use	**Winick building**	**86**
Non - conformance to Statut	**B**				Residential	Institutional Use	**Headmaster's House**	**88**

ory Plan								
Built 1975	**B**		**√**		Residential	Residential area B (mid	**"BEIT " House and Leader's Residence**	**98**
Built 1978	**B**		**√**		Residential	Residential area B (mid rise)	**Two Story Residential**	**99**
Built 1978	**B**		**√**		Residential	Residential area B (mid rise)	**Two Story Residential**	**100**

Grouping of Later Educational Buildings Phase 3

Comments	**Conservation Rating**	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
Fire stairs added 2006	**B**				Residential	Residential area B (mid rise)	**"Regev" boarding Hall and 2 leaders residences**	**35**
Fire stairs added 2006	**B**				Residential	Residential area B (mid rise)	**"Malchin" boarding hall and leader's residence**	**38**
Built in1971- Non Conformance to designated land use	**B**		**√**		Class-rooms	Residential area B (mid rise)	**"Holon" boarding hall and leader's residence**	**39**

Land Use by Town Plan Glili 520-A Residential and 520A1	**B**				Residential	Institutional Use	**"Na-amanim" boarding hall and leader's residence**	**40**
	B		**√**	**√**	General School	Institutional Use	**General School Building.Northern Building is of historic import-Southern portion is later addition**	**42**
	B				Residential	Residential area B (mid rise)	**"Taayna (Fig) " boarding hall and leader's residence**	**49**
Remodled 2002 with permit	**B**		**√**		Residential	Residential area B (mid rise)	**"Rimon (Pomegranate) " boarding hall and leader's residence**	**50**
	B				Residential	Residential area B (mid rise)	**"Gefen (Grape Vine) " boarding hall and leader's residence**	**51**
Built in 1973 with permit – fire stair added 2002	**B**				Residential	Residential area B (mid rise)	**"Lehman" boarding hall and leader's residence**	**52**

The Latter Agricultural buildings								
	Conservation Rating	**Built after 1965**		**Built before 1965**	**Present Usage**	**Present Statutory Land Use**	**Site and Description**	**No. by map**
		Without building permit	**With building permit**					
Sited for demo- No structures permitted by town plan Glili	**B**			**√**	Warehouse and offices	Private open space	**Field Crops**	**65**
No structures permitted by town plan Glili	**B**			**√**	Not in use	agricultural	**Field Crops Shelter**	**69**
No structures permitted by town plan Glili	**B**			**√**	Not in use	agricultural	**Field Crops Shelter**	**70**
	B			**√**		Residential area A (low rise)	**Electric Circuitry Shed**	**76**
	B			**√**	Farmstead	Light Industrial	**Mechanized and mechanical Equipment Yard**	**92**

Built in 1968	**B**		**√**		Farmstead	Light Industrial	**Agro-mechanic Classrooms**	**94**
	B			**√**	Farmstead	Light Industrial	**Service Garage**	**95**
Non-conforming land use	**B**			**√**	Village services	Residential area B (mid-rise)	**Ornamental Landscape Warehouse**	**97**
	B				Farmstead	Service and maintenance area	**Warehousing and sculpture yard**	**112**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Barn-feed shed**	**115**
	B				Farmstead	Service and maintenance area	**Calves Pen**	**116**
	B				Farmstead	Service and maintenance area	**Milking Parlor and Pens**	**117**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Dairy Sheds**	**119**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Cowshed**	**120**

Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Milking Parlor - cowshed**	**121**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Cowshed**	**123**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Silo**	**124**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Barn and Hay Shelter**	**125**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Fodder Storehouse**	**126**
Permit for cow shed 2005	**B**		**√**		Farmstead	Service and maintenance area	**Fodder Storehouse**	**127**
Built in 1975-closed with structural problems	**B**		**√**		Village services	Service and maintenance area	**Swimming Pool**	**134**

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
Permit 125/3 RS	**C**		**√**		general school	Institutional Use	**General school and upper grades**	**41**
Given business permit with no building permit- for demo!	**C**				Food services	Institutional Use	**Dining hall**	**46**
Built in 1973	**C**		**√**		general school	Institutional Use	**Gymnasium**	**47**
Built in 1974	**C**		**√**		Village services	Residential area B (mid-rise)	**Residential Air Raid Shelter**	**48**
No structures permitted by town plan Glili 520	**C**				Not in use-old shed	agricultural	**Shed and Guardhouse in Dis-use**	**66**
Remodeled 1998 with permit	**C**			**√**	Dining hall	Institutional Use	**Dining hall and kitchen**	**89**
Built 1970	**C**				Farmstead	אזור תעשיה זעירה	**Carpentry Workshop**	**96**
	C				Village services	Residential area B (mid-rise)	**Guardhouse "Krause"**	**101**

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
Non conforming use	**C**				Parking shed	Private open space	**Parking Shed**	**102**
Non conforming use Built in 1972	**C**		**√**		Work-shops- art camp	Private open space	**Summer camp Prefab-Structure**	**103**
Non permitted structure	**C**			**√**	Village services	agricultural	**Pump house for treatment ponds**	**104**
	C				Farmstead	Service and maintenance area	**New Greenhouse**	**105**
	C				Farmstead	Service and maintenance area	**Electric Control Room and Greenhouse**	**106**
	C				Farmstead	Service and maintenance area	**Small Greenhouse**	**107**
Built 1973	**C**		**√**		Farmstead	Service and maintenance area	**Main Greenhouse**	**108**
	C				Farmstead	Service and maintenance area	**Feeding (fattening) Coup**	**109**

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
1978 Built	**C**		**√**		Farmstead	Service and maintenance area	**Chicken Coup**	**110**
	C				Farmstead	Service and maintenance area	**Chicken Coup**	**111**
	C					Service and maintenance area	**Train carriage storehouse**	**113**
	C				Farmstead	Service and maintenance area	**Coup warehouse**	**114**
Non conforming use Built in 1972- No structure allowed by Glilit 520-A	**C**				Storage	Landscape Conservation	**Botanic Garden Warehouse - prefab**	**128**
No structures permitted by town plan Glili 520 A.	**C**				Classroom	Landscape Conservation	**Botanic garden classrooms**	**129**
No structures permitted by town plan Glili 520A.	**C**				Farmstead	Landscape Conservation	**Botanic Garden Storehouse**	**130**

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
No structures permitted by town plan Glili 520A.	**C**		**√**		antenna	agricultural	**Cellcom Antenna (Cellular Phone Transmitting Relay Station)** **(Swim Pool)**	**140**
No structures permitted by town plan Glili 520. Present antenna for demolition to be rebuilt with permit	**C**				antenna	agricultural	**Antenna – Pelephone-Orange (Cellular Phone Transmitting Relay Station)** **(Kugel Intersection)**	**141**
	C		**√**		antenna	Service area	**Cellcom Antenna** **(Cellular Phone Transmitting Relay Station)**	**142**

Comments	Conservation Rating	Built after 1965		Built before 1965	Present Usage	Present Statutory Land Use	Site and Description	No. by map
		Without building permit	With building permit					
No structures permitted by town plan Glili 520 for Demo.	**C**				antenna	agricultural	**"Orange" Antenna – (Cellular Phone Transmitting Relay Station)**	**143**
	C				school		**Temporary classroom structure**	**160**

APPENDIX B: MAPS AND DOCUMENTS

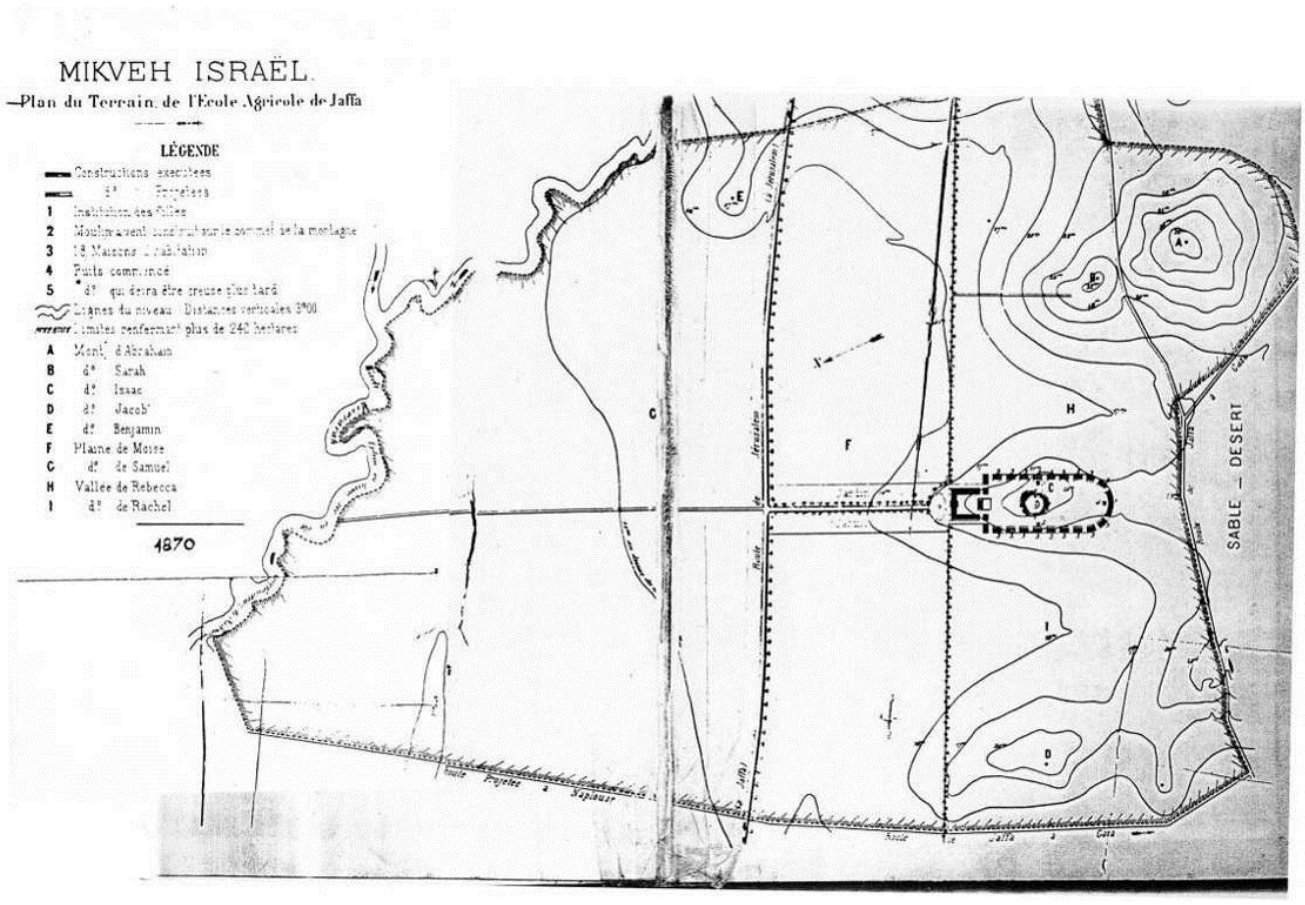


Figure 17 - Original Netter Plan for Mikveh Israel 1870

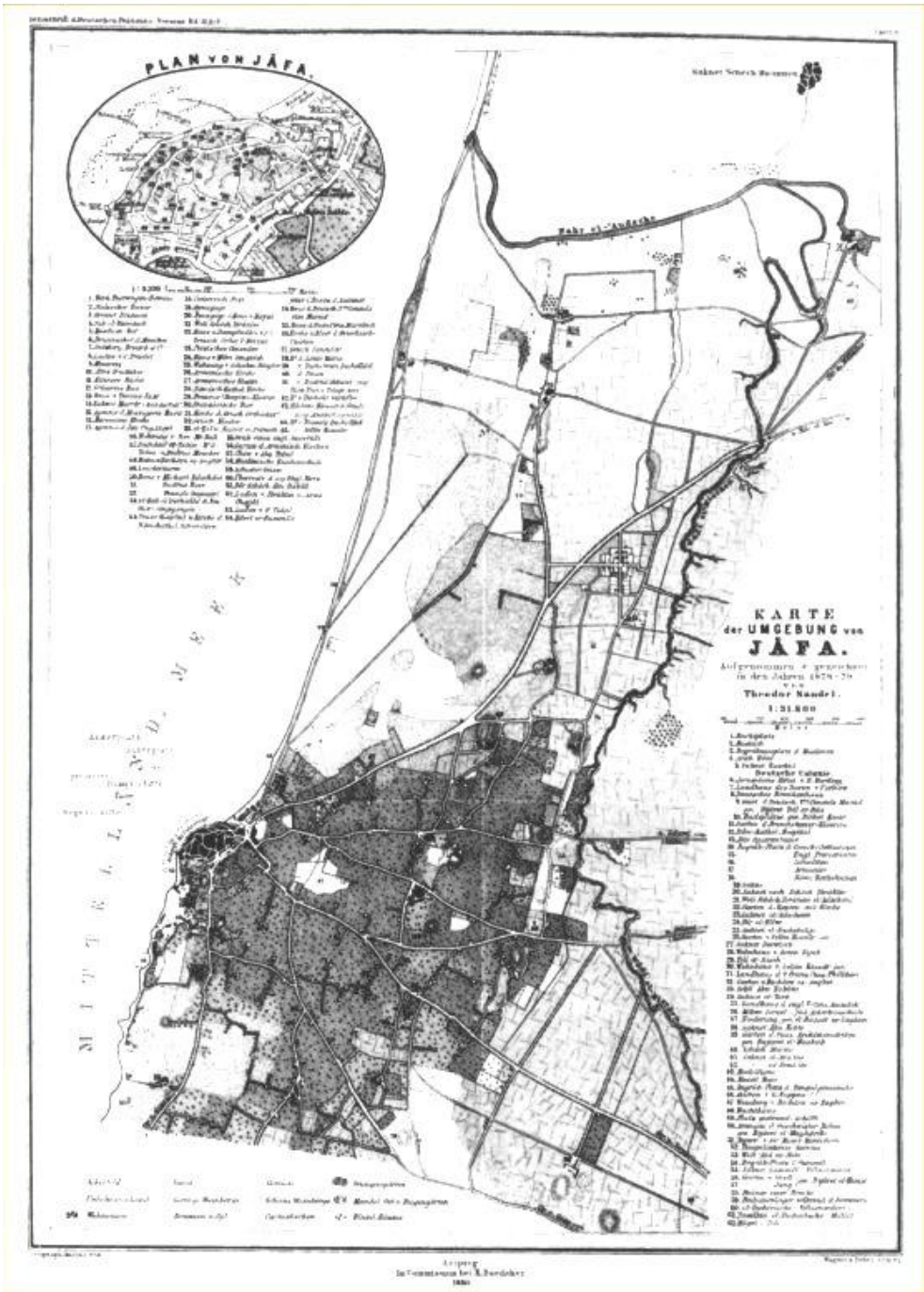


Figure 18 - Karte der Umgebung von Jafa 1878-79 Thodor Nandel- Mikveh Israel lower right

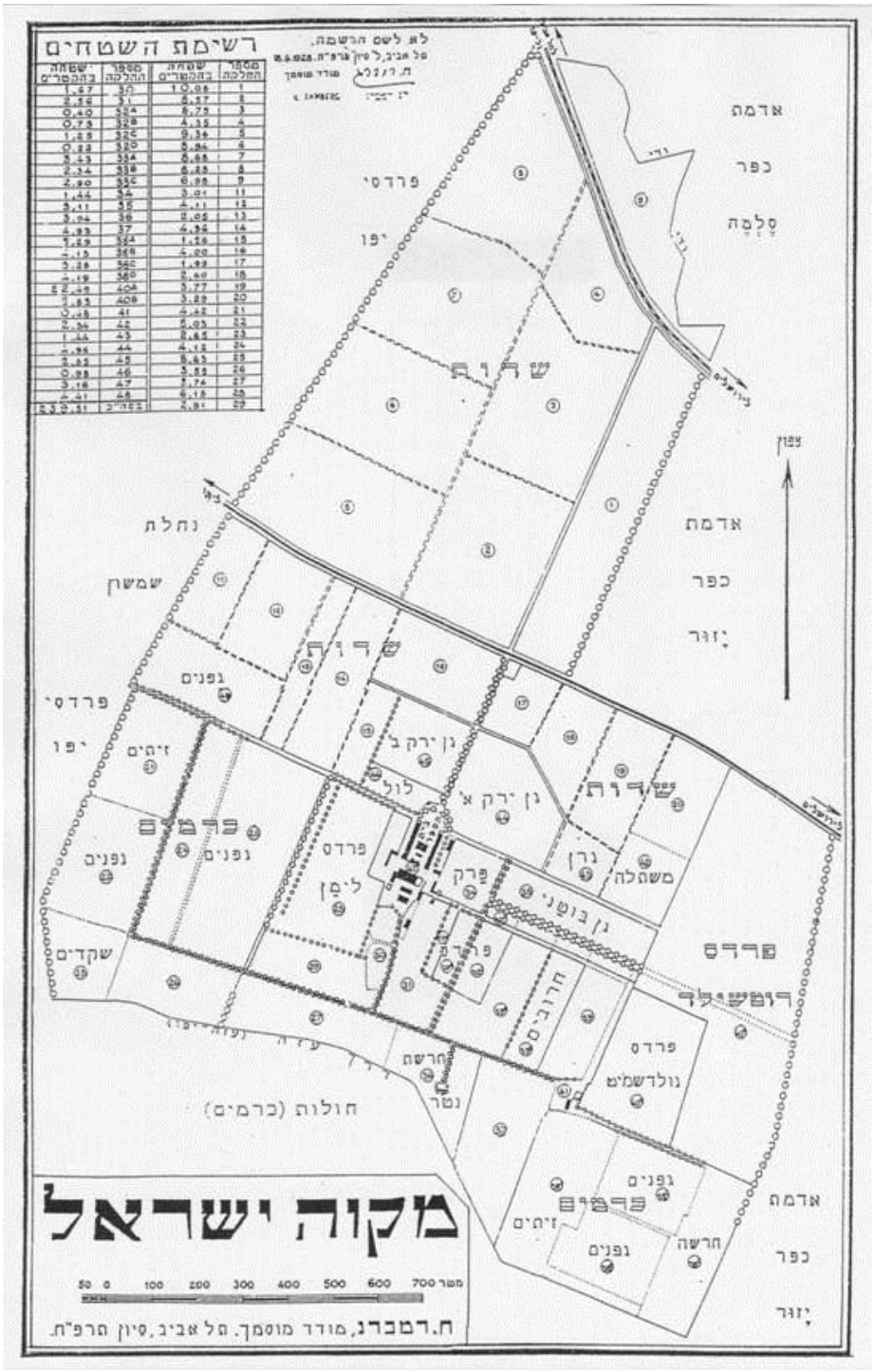


Figure 19 - Remburg map of Mikveh Israel c. 1927 תרפ"ח source; Mikveh Israel- Shlomo Hillels

Дозволено цензурою Одесса, 26 Апрѣля 1903 г.

Лит. Торговаго Дома Т. М. Левицкомъ, Одесса.

Figure 20 - Russian Map – Jaffa- Sarona with Ottoman Railway c. 1903

Figure 21 - Map Mikve Israel 1925 (From Archive of Survey of Israel – SOI)

Figure 22 - Map of Mikveh Israel showing agricultural uses located in the Administration Building c. 1930

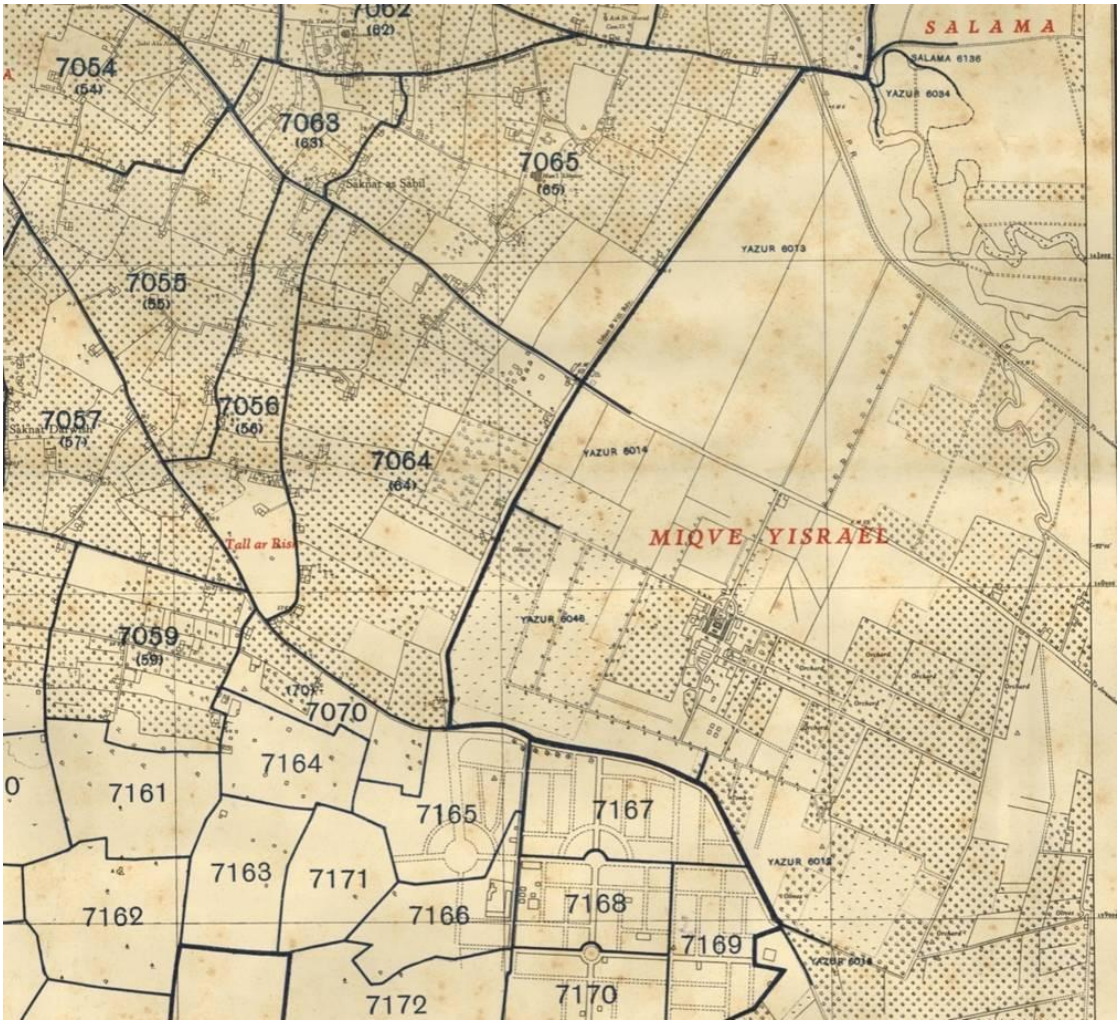


Figure 23 - British Photogrammetric Map of Mikveh Israel – 1938 Mandatory Dept. Of Public Works, Palestine

Figure 24 - 1948 Map of "Derech Habitachon" Hagana-palmach defenses with Hatikvah - Mikveh Israel observation posts as a link in the defense and logistics system of the Israel Independence War and as part of the supply corridor top break the siege of Jerusalem

Figure 25 - Aerial Map of Mikveh Israel 1966 - Survey of Israel – SOI Cat. 7154

Figure 26 - Aerial Photo of Mikveh Israel 2005 Survey of Israel – SOI

Figure 27 - Aerial photo perspective to north east c. 1990's (before overpass at Jerusalem Gate)

APPENDIX C: HISTORIC PHOTOS

Figure 28 - Jerusalem Gate c. 1890

Figure 29 - Grevillea Trees at entrance to Synagogue (note small palms which will later dominate) c.1890

Figure 30 - Synagogue- c. 1960

Figure 31 - Mikveh Buildings – Flower house – two levels and Synagogue c. 1920 Matson Photo service

Figure 32 - Mikveh Buildings – Netter House and Synagogue c. 1920 Matson Photo Service

Figure 33 - Mikveh Buildings – Flower house – two levels and Synagogue c. 1920 Matson Photo service

Figure 34 - Mikveh First Students c. 1890- Rear of Synagogue

Figure 35 - Mikveh Israel – View from north-east fields to south west Clear view of Winery, Administration Building and Teacher's House as well as Eucalyptus Grove c. 1920 Matson Photo service

Figure 36 - promotion of the Grand Pries de Aero Club – Paris to Cairo

Figure 37 - French Aviator Jules Vedrines used Mikveh as landing field (Photo above shows landings at Talpiot) Above- promotion of the Grand Pries de Aero Club – Paris to Cairo Jules Védrines succeeded in conquering the 11,500-foot Taurus peaks, and went on to become the first pilot to land in Palestine, when he touched down in *Jaffa on December 27, 1913*

תַּלְמִידֵי בֵּית־הַסֵּפֶר (תרפ"ז)

Figure 38 - Class of 1927 Mikveh Israel

Figure 39 - Working the Vineyards – late 1920's

Figure 40 - Figure 40 - Selecting Oranges– late 1920's

Figure 41 - Plowing with tractor – late 1920's

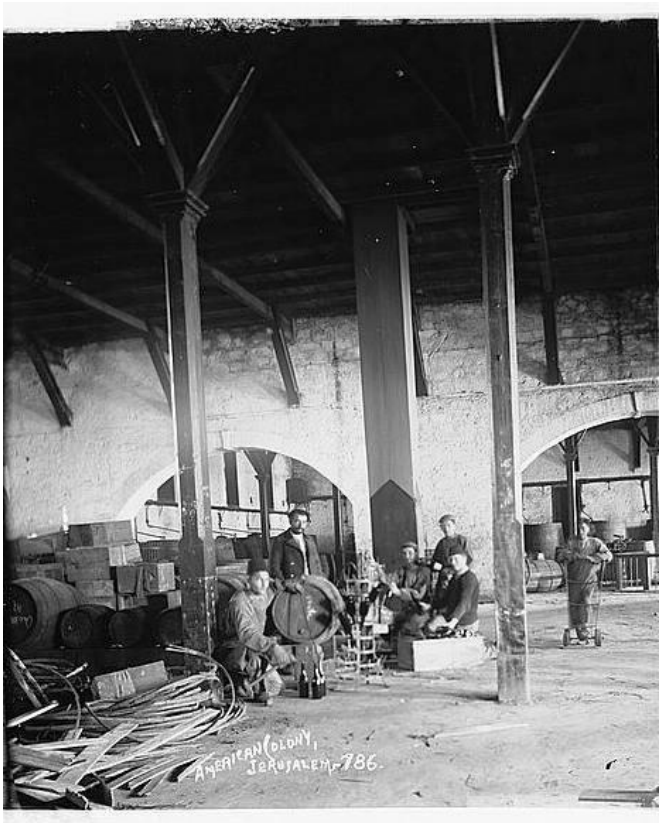


Figure 42 - Barrel Makers- Mikveh Winery – c. 1920 Matson Photo Service

Figure 43 - Classroom – Netter House or Szold House c 1910

Figure 44 - Dormitory – Netter House or Szold House c 1910

Figure 45 - "Camel Train" transporting orange crates to Jaffa harbor c-1910

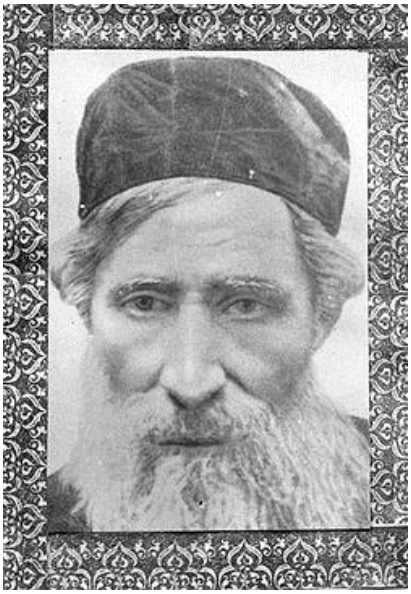


Figure 46 - Rabbi Shmuel Moholiver- 1824-1898 – Founder and Leader of Hibat Tzion in Poland

Figure 47 - Charles Netter – Founder of Mikveh Israel (1826- 1882)

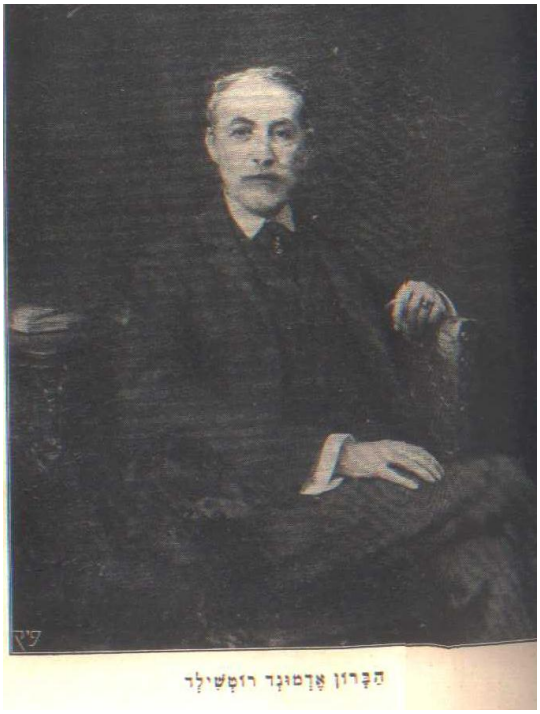


Figure 48 - Baron Edmond de Rothschild (1845-1934)

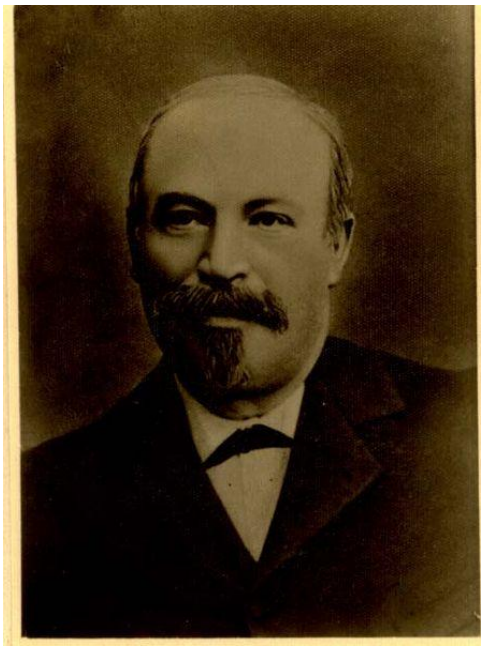


Figure 49 - Samuel Hirsh –Second (1879-91) Headmaster of Mikveh Israel

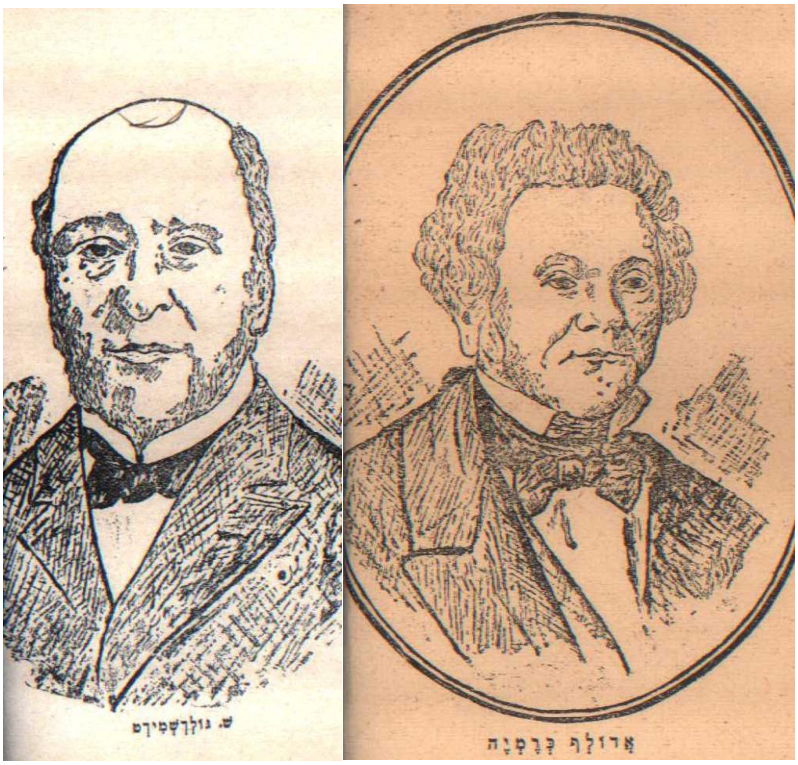


Figure 50 - Founder of Alliance Israelite Universelle Adolphe Cremieux and second president, Shmuel Goldshmidt

Figure 51 - "work battalion" of pioneers - Aliyah BILU in kuffiyeh c. 1882 spent their first year as laborers in Palestine at Mikveh Israel Twelve of them

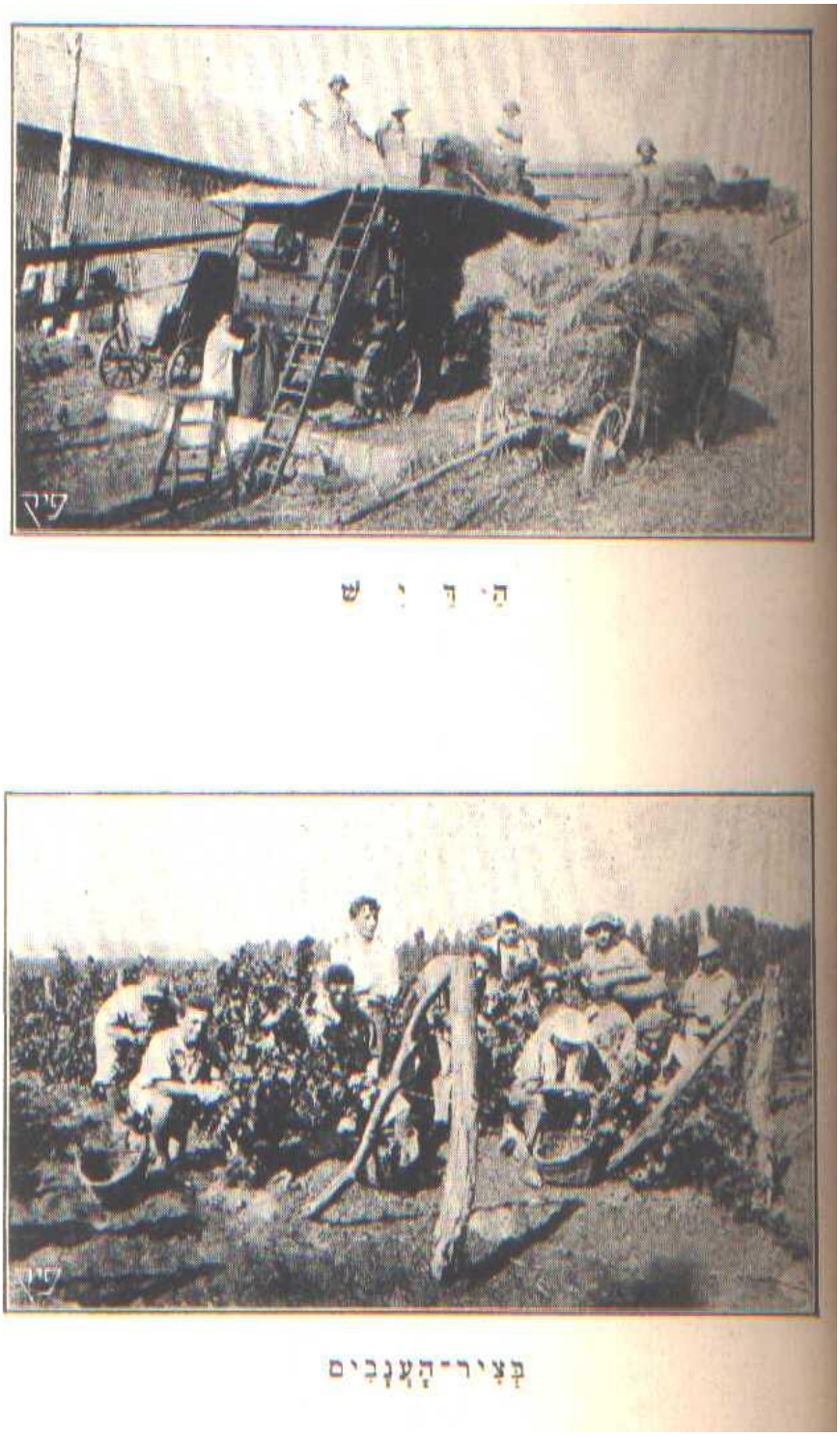
Figure 52 - Herzl and Kaiser Wilhelm II, 1898 (photographer unknown. This photograph was taken on October 28, 1898 outside of the agricultural school at Mikve Israel when Kaiser Wilhelm II of Germany, astride a white stallion, with helmet of gold stopped for a mo

Figure 53 - Posed photo of Herzl on roof Original photograph, 1898 (photographer unknown)

חורשת האקליפטוסים

Figure 54 - The Eucalyptus grove planted c. 1886

Figure 55 - The packing shed- Crat ing oranges c. 1927



הַ·דָּ י ש

קְצִיר־הָעֲנָבִים

Figure 56 - The wheat harvest and the grape picking- c. 1927

Figure 57 - The milking shed c.1927

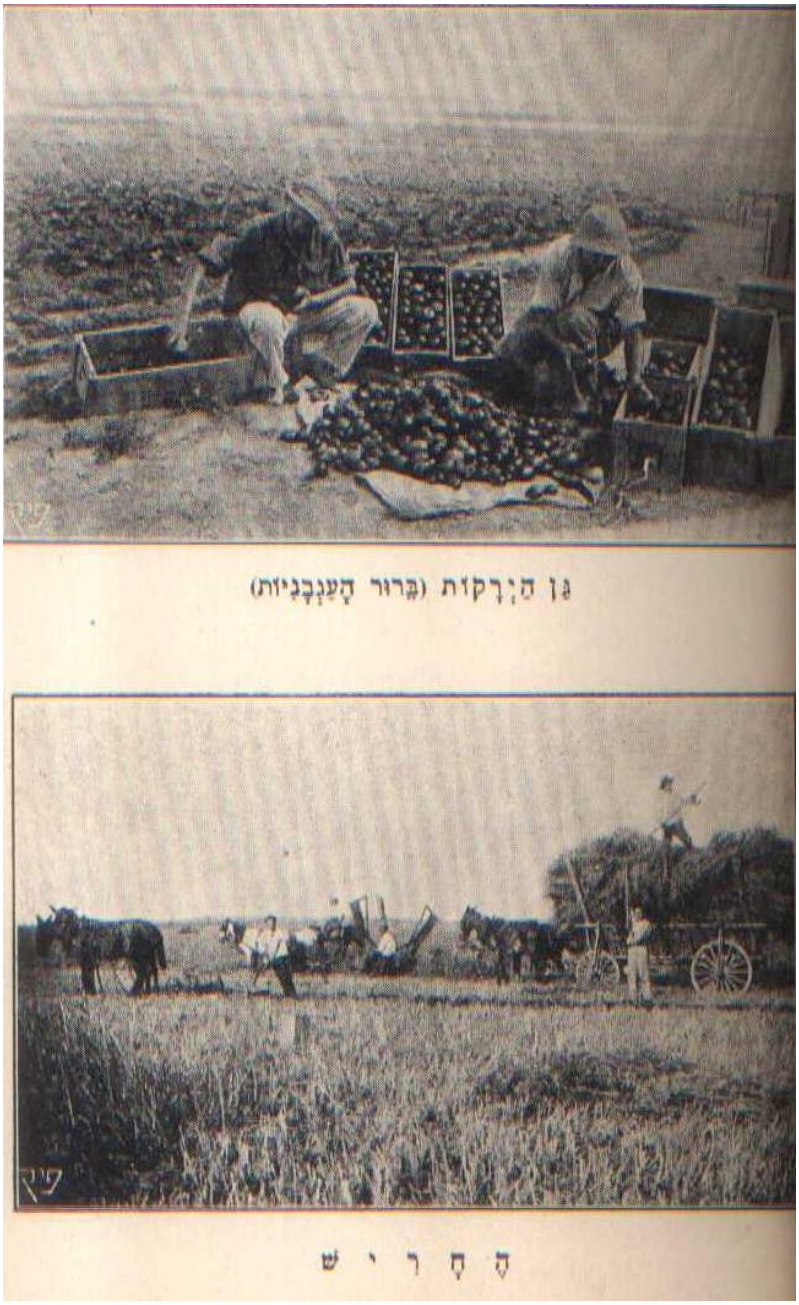


Figure 58 - Selecting tomatoes in the Vegetable Garden (above) - The wheat harvest (below) c.1927

חדר האכל

Figure 59 - The dinning hall- c. 1927

לול העופות

Figure 60 - The chicken coop c.1927

Figure 61 - Legendary Headmaster – Eliyahu Krauze who served at Mikveh Israel from 1914 to 1954.

Figure 62 - Hedgerow of tall trees- Perhaps Grevillea- note drainage-irrigation furrows c. 1910

Figure 63 - Mikveh Israel students training for "Haganah" c. Mid to late 1930's

Figure 64 - Orchard Crew – c. 1930's

Figure 65 - Packing House Preparing Orange Crates for "Pardess" Jaffo Oranges c. 1928

Figure 66 - Visit of David Ben Gurion 1970 for Mikvah's One hundereth Anniversary

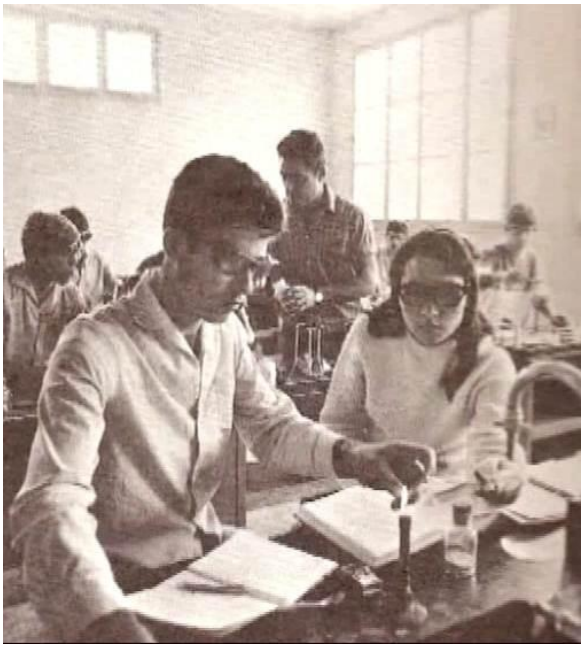


Figure 67 - Science Laboratory 1970's

Figure 68 - Orchard work – 1970's

Figure 69 - Female agriculture students on the fig branch- 1970's

Figure 70 - Students in work clothes - 1970's

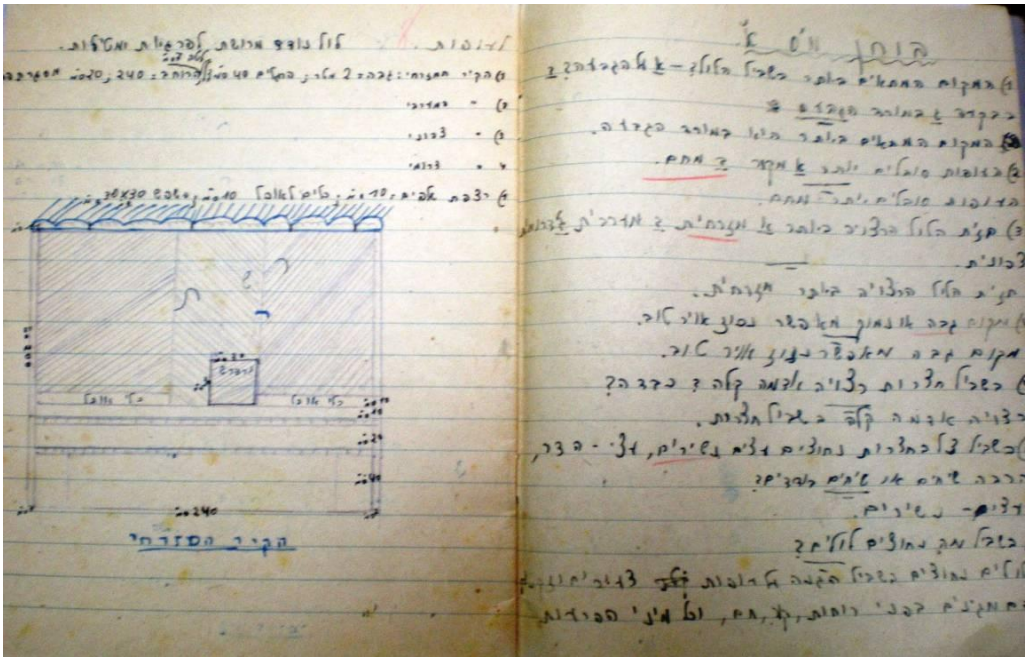


Figure 71 - Pages from the notebook of student son of Viticulturist Nathaniel Hochberg c. 1950

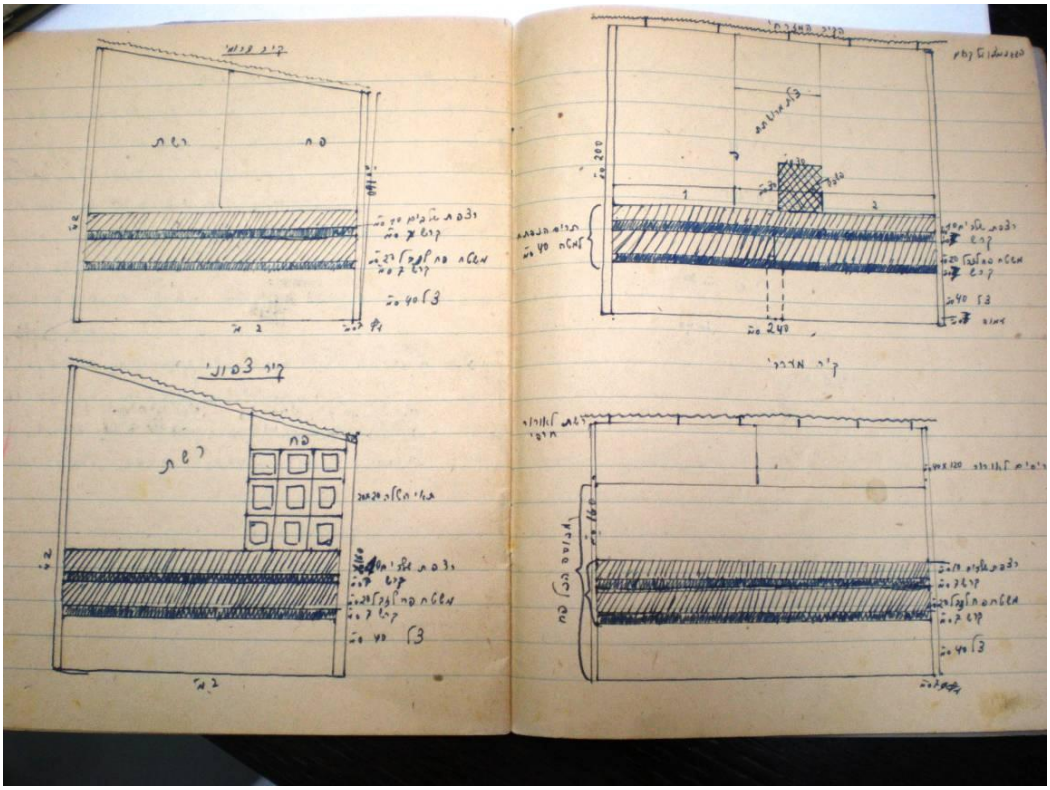


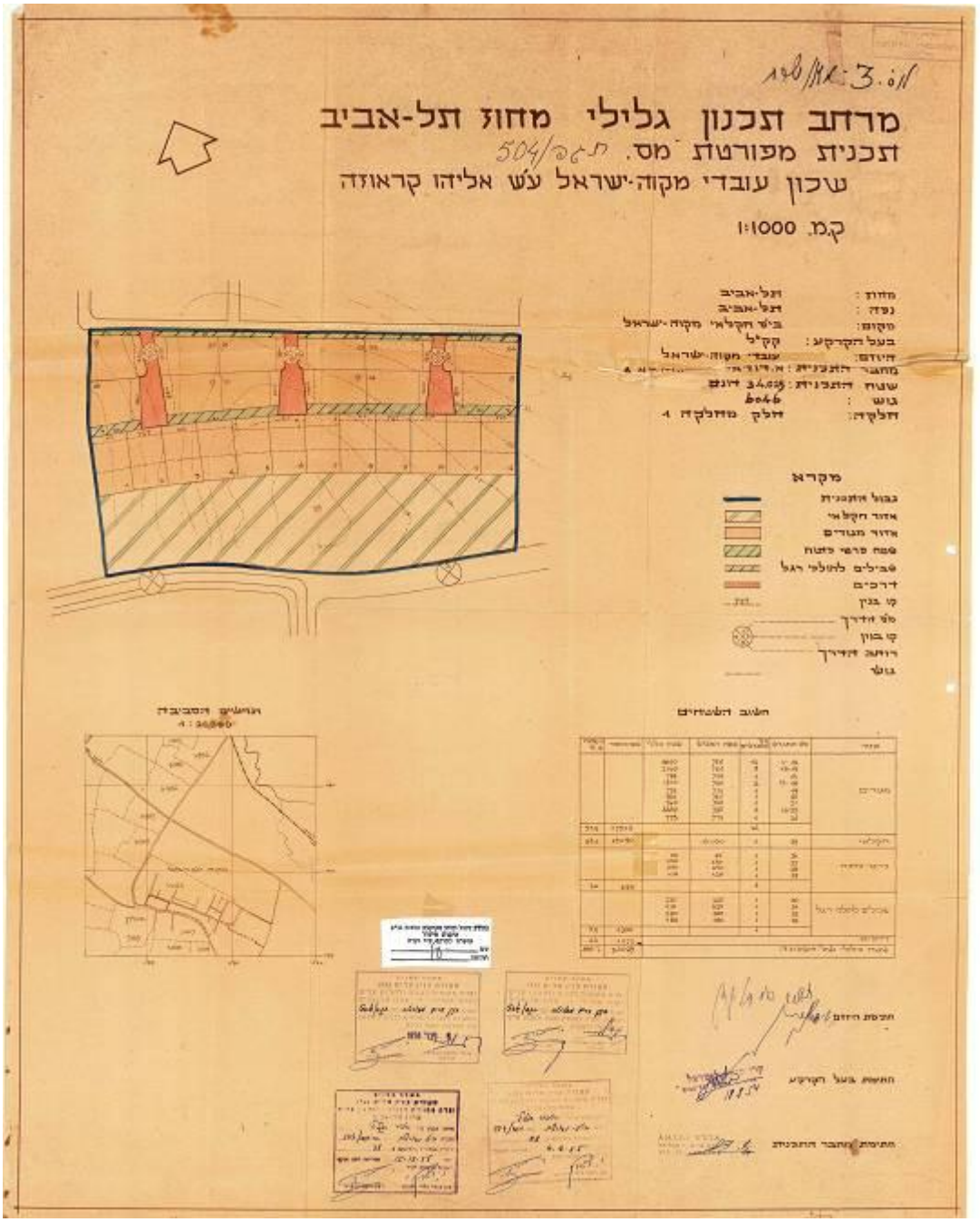
Figure 72 - Students meeting in the Botanical Gardens by the Parterre- c. 1951

Figure 73 - Students passing thru the Jerusaelm Gate c. 1970

Figure 74 - Jerusalem Gate in the 1960's

APPENDIX D: STATUTORY DOCUMENTS

Figure 75 - Ottoman Firman giving Carl Netter Lease rights on Mikveh's lands.



תגפ/504 פרסום תוקף ברשומות 14/6/1956 י.פ. 481 סוג ועדה: מחוזית מקום התוכנית: שיכון עובדי מקוה ישראל ע"ש אליהו קראוזה - Figure 76

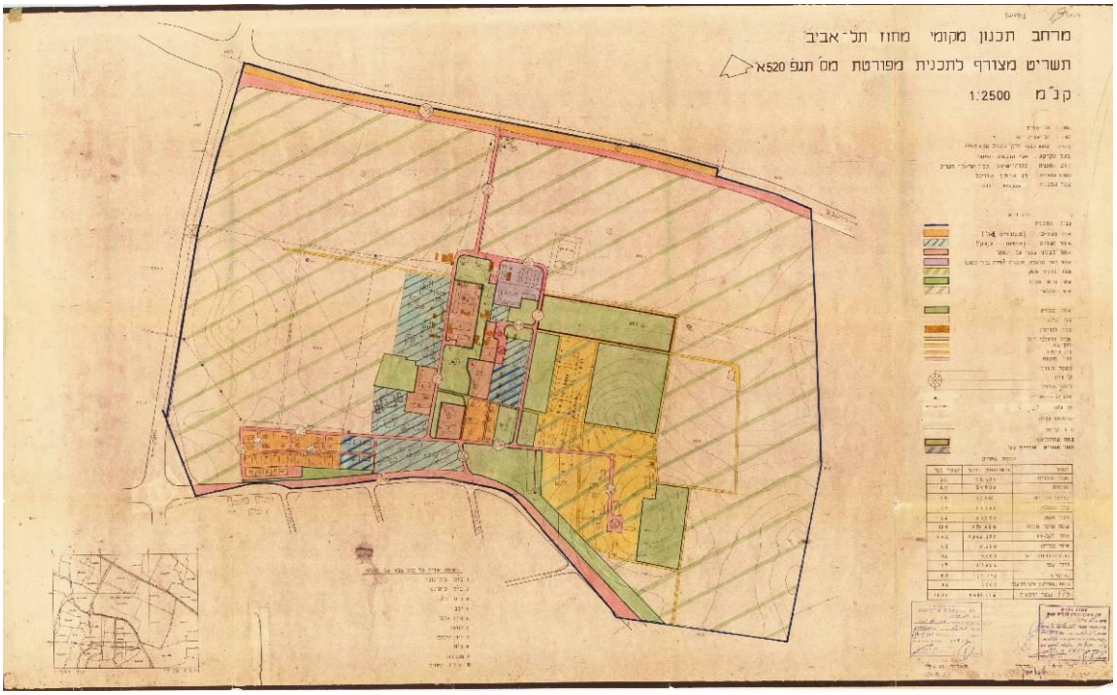


Figure 77 - תכנית מפורטת תגפ / 520א Town Plan Glilit 520A - 33.817 שטח התוכנית: אדריכל דן איתן 1973 דונם

חוק בית הספר החקלאי מקוה ישראל, תשל"ו—1976[1]

המשך פעולת בית הספר

1. בית הספר החקלאי מקוה ישראל, מייסודה של חברת "כל ישראל חברים" ביום י"ד באדר א' תר"ל, שהוא המוסד החינוכי החקלאי הראשון בארץ־ישראל, יוסיף לפעול כבית ספר חקלאי לקידום מטרותיו.

מטרות בית הספר

2. מטרותיו של בית הספר הן לחנך נוער בישראל לחיי חקלאות ולהתיישבות, ולהקנות לו השכלה כללית, וכן תרבות יהודית וחינוך עברי בהתאם למורשת ישראל, כמקובל במוסדות החינוך במדינה.

שינויים בתזכיר ובתקנות

3. שינויים בתזכיר ההתאגדות ובתקנות ההתאגדות של החברה "מקוה ישראל — כל ישראל חברים" המנהלת את בית הספר, טעונים אישור הממשלה וועדה משותפת של ועדת החינוך והתרבות וועדת הפנים ואיכות הסביבה של הכנסת.

איסור שינוי יעוד

4. (א) המקרקעין המפורטים בתוספת מיועדים לשימוש בית הספר ואין לשנות את יעודם זה אלא לפי חמת שר ובאישור שרי החינוך והתרבות, החקלאות והפנים, וועדה משותפת של ועדת החינוך והתרבות וועדת הפנים ואיכות הסביבה של הכנסת.

(ב) הוועמדו לשימוש בית הספר מקרקעין בנוסף על המפורטים בתוספת, רשאים השרים והוועדה המשותפת כאמור בסעיף קטן (א) לקבוע שדינם יהיה כדין המקרקעין שבתוספת.

(ג) לא יהיה תוקף לכל עסקה במקרקעין האמורים הטעונה רישום, לא יינתן צו אכיפה בשל התחייבות לעשות בהם עסקה כזאת ולא תירשם הערה ביחס להתחייבות כזאת, אלא אם שר הפנים ושר החינוך והתרבות אישרו את העסקה או ההתחייבות.

---

1. ס"ח 816, תשל"ו (1.7.1976), עמ' 222.

יצחק רבין
ראש הממשלה

יוסף בורג
שר הפנים

אהרון ידלין
שר החינוך והתרבות

אפרים קציר
נשיא המדינה

1.10.76

Figure 78 - Mikveh Israel Law- Passed in the Knesset 1976 signed by Prime Minister Itzhak Rabin. In 1976 the law passed by Prime Minister Rabin, graduate of Kadoorie Agricultural School, and Minister of Education Aharon Yadlin.The law states that the lands of Mik

Figure 79 - תגפ/520א/1 - שינוי ייעודי קרקע ממגורים (פנימיה) למוסדות ציבור, שטח ב'- שינוי ייעודי קרקע ממגורים ב' (פנימיה) ומאזור ספורט למוסדות ציבור שטח ג'- שינוי ייעודי קרקע משפ"פ לאזור למבני משק 1999.

מרחב תכנון מקומי מחוזי – מחוז תל אביב

הודעה בדבר אישור תכנית מיתאר מקומית ברמה מפורטת מס' תגפ/ 520/ א/ 3
שם התכנית: תוספת שימושים במתחם שער ירושלים, מקווה

נמסרת בזה הודעה, בהתאם לסעיף 117 לחוק התכנון הבניה, התשכ"ה–1965, בדבר אישור תכנית מיתאר מקומית רמה מפורטת מס' תגפ/ 520/ א/ 3, כפיפות לתכנית תגפ/520/א, נגפ/520.

איחוד וחלוקה: בלא איחוד וחלוקה.

1495

עיצוב ופיתוח לבניין, למגרש ולשטחים הציבוריים. ו. קביעת תנאים למתן היתרי בניה.

הודעה על הפקדת התכנית פורסמה בעיתונים בתאריך 10/07/2009 ובילקוט הפרסומים 5973, התשס"ט, עמ' 4685, בתאריך 06/07/2009.

התכנית האמורה נמצאת במשרדי הוועדה המחוזית לתכנון ולבניה מחוז תל אביב, דרך בגין 125, תל־אביב–יפו 67012, טל' 03–7632588, וכן במשרדי הוועדה המקומית לתכנון ולבניה תל אביב, שד בן גוריון 68, תל־אביב–יפו, טל' 03–5217162, וכל מעוניין רשאי לעיין בה בימים ובשעות שהמשרדים האמורים פתוחים לקהל.

APPENDIX E: MIKVEH ISRAEL BOTANIC GARDENS- MAPS, PHOTOS AND PLANT LISTS

Note : Source for historic photos, plant lists and maps of the botanic gardens comes from the 1951 publication, "A Popular Guide and Hand List of Plants grown in the Botanical Garden of the Agricultural School Mikveh Israel" published by the Department of Proffessional Education- Ministry of Education and Culture, Supervision of Agricultural Education by David Zaidenburg, garden curator.

The book is dedicated "My mentor, Mr. Eliahu Krauze in celebration of the the 50th anniversary of blessed harvests in the fields of agrarian knowledge" (Krauze was director of Mikveh from 1914 to 1954).

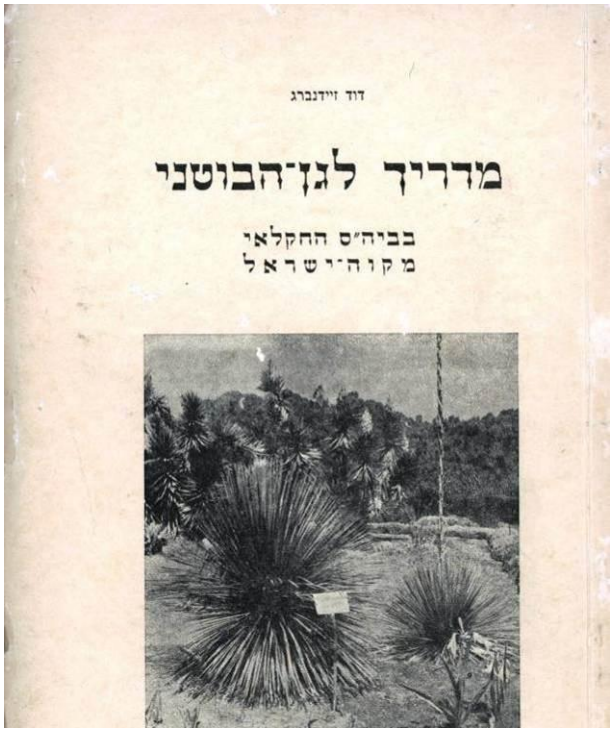


Figure 80 - Botanical garden Guide

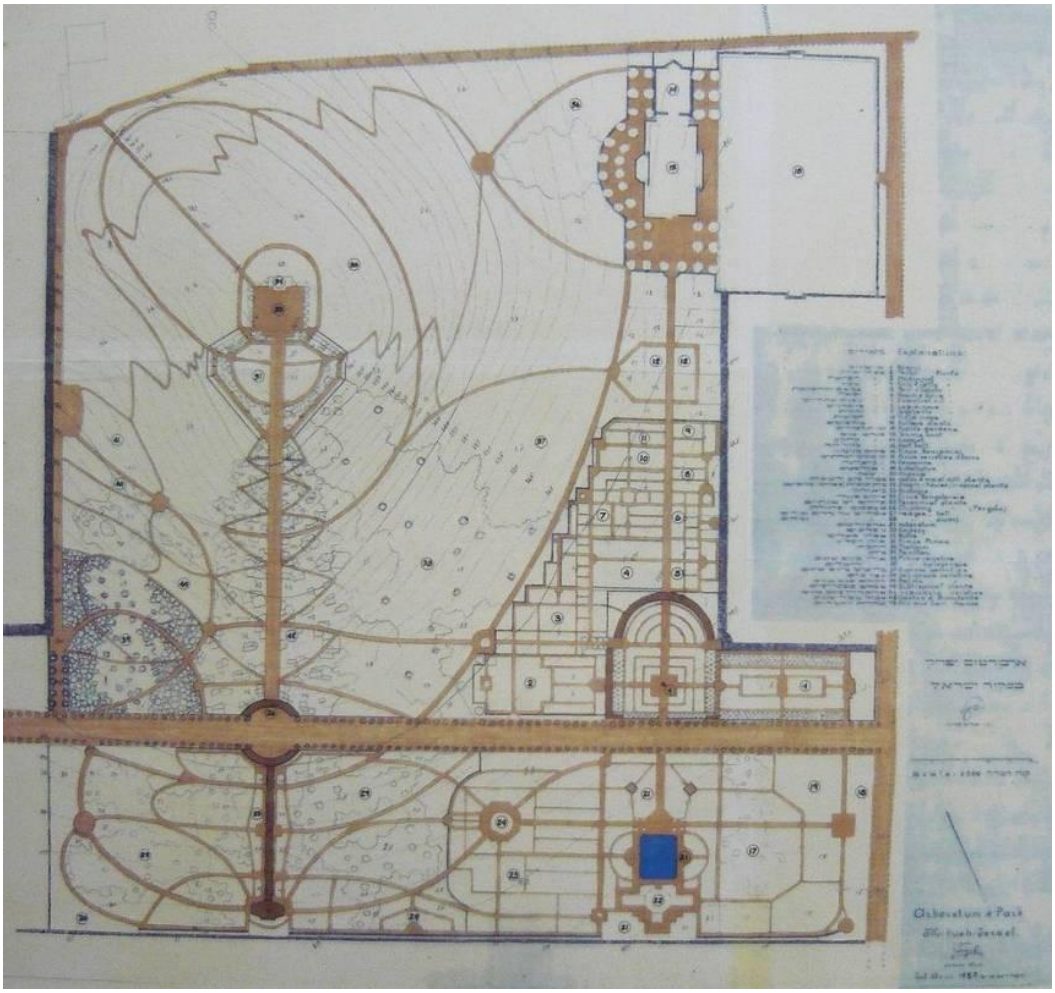


Figure 81 - Original Yehiel Segal Plan for the Mikveh Israel Botanic Gardens 1929

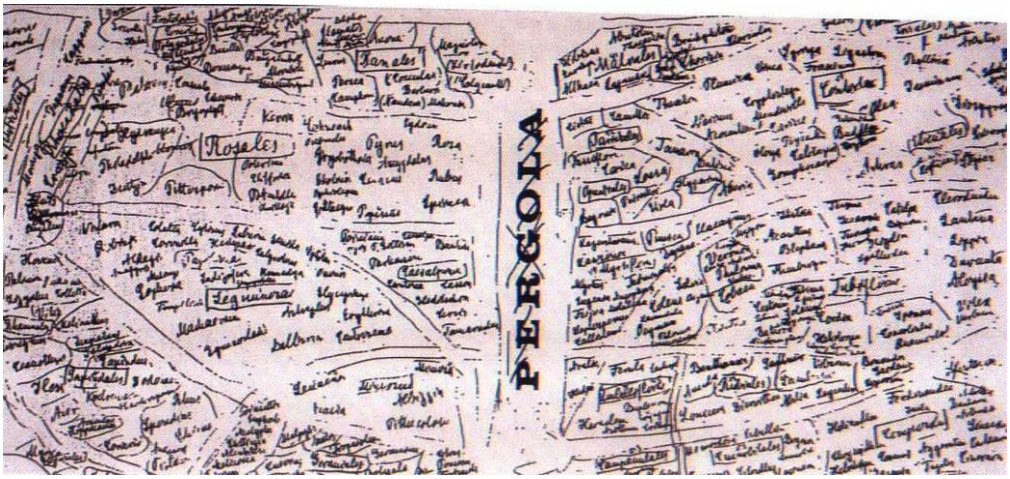


Figure 82 - Plan by Yehiel Segal Based onBotanical concepts of Otto Warburg 1929

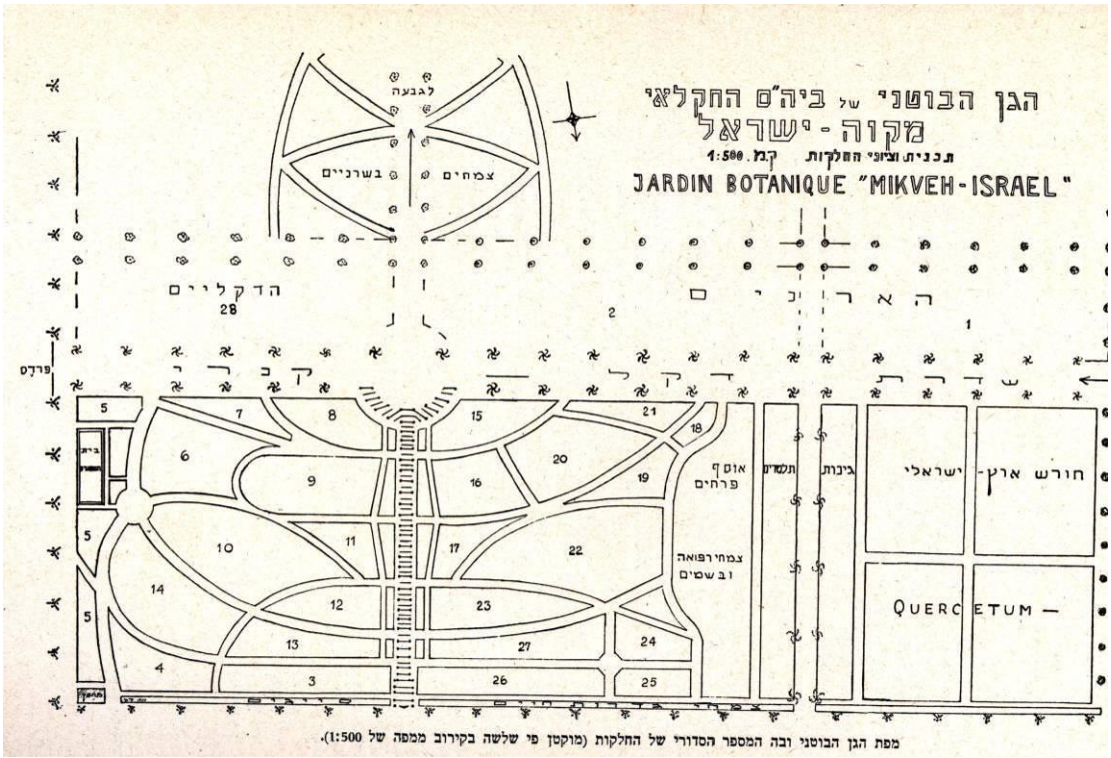


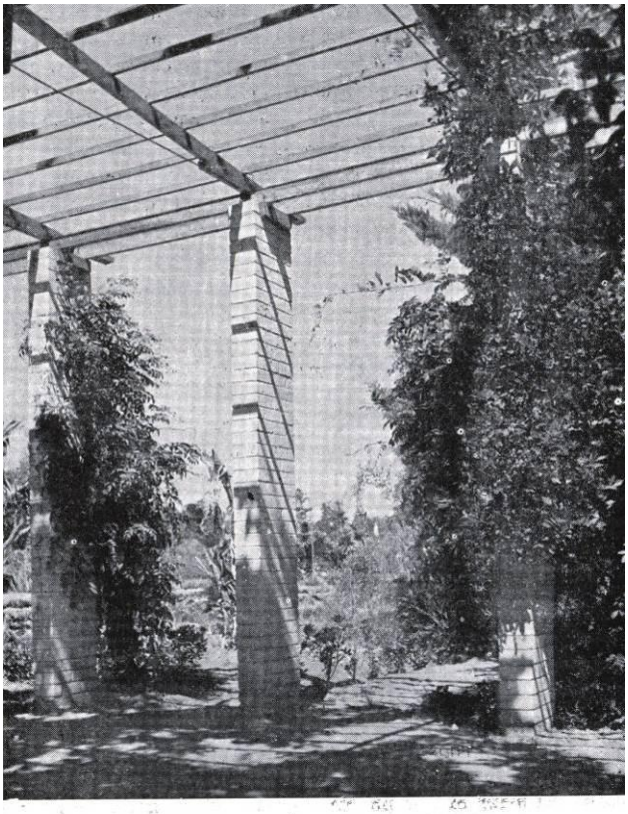
Figure 83 - Zaidenberg's Map of the plots of the gardens 1951

ת מ ו נ ה 4. אחד משבילי הגן הבוטני ; חלקת המימוסים מימין והפיגמיים משמאל.

Figure 84 - Path in the botanic garden, area of Mimosoideae and Ficeae . 1951

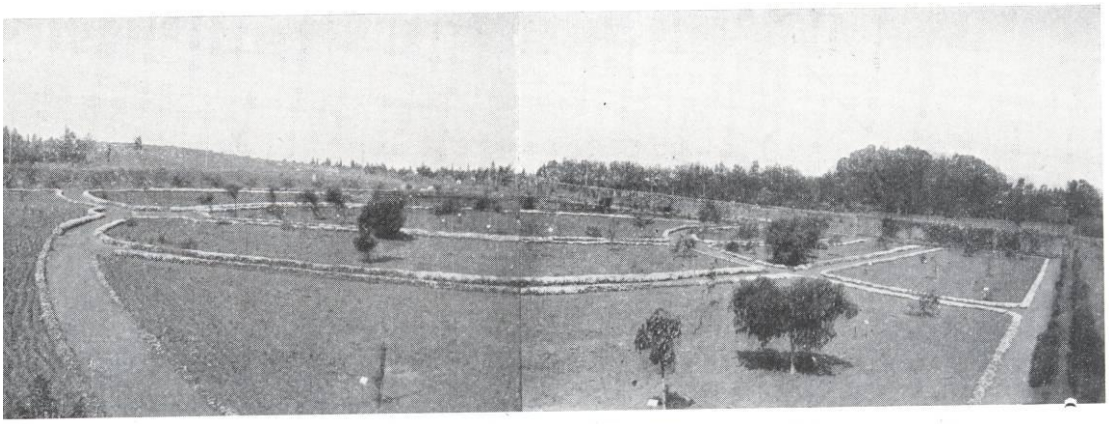
ת מ ו נ ה 8. מימין חלקת ההדסיים Myrtaceae מס׳ 17, משמאל חלקת Tubiflorae מס׳ 22.
העץ הרחב Eugenia Jambolana . העץ הזקוף Melaleuca Leucadendron

Figure 85 - Myrtaceae plots to right- Tubiflore to left, with trees Eugenia and Melaleuca c. 1951



ת מ ו נ ה 1. קטע מהפרגולה ואוסף המטפסים.
מימין — ויסטריה סינית, משמאל — ביגנונית תונברג.

Figure 86 - Large Wisteria and Begonia Vibes growing on main Pergola Colonnade c/ 1951



ת מ ו נ ה 42. החלק המזרחי של הגן הבוטני צולם באפריל 1931. שולי השבילים שתולים צמתי אהל ורוד, הנראים בפריחתם.

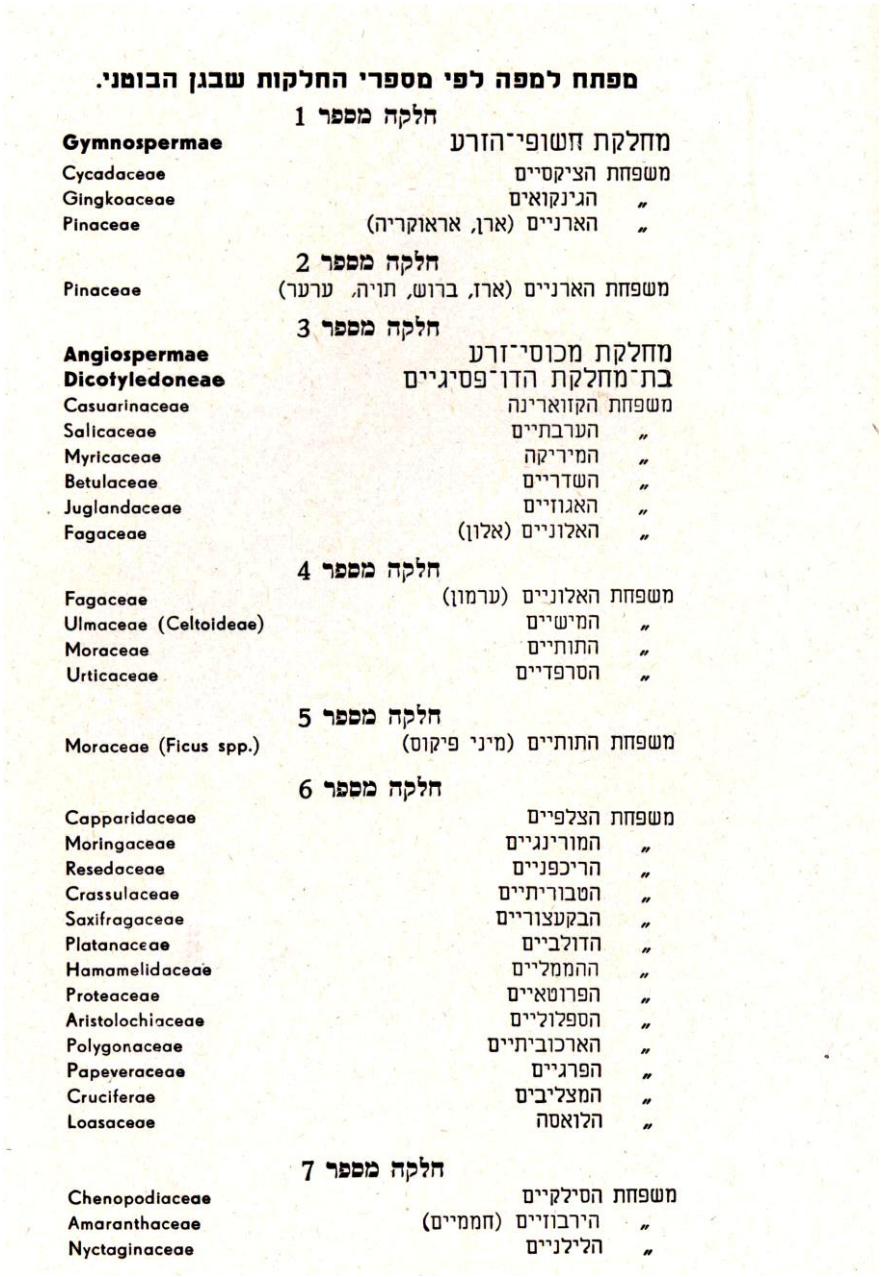
Figure 87 - The Eastern section of the Botanic Gardens April 1931- Pink Mesembryanthemum lines the paths.

ת מ ו נ ה 6. אוסף הפרחים ליד גינות התלמידים. — למעלה שדרת הדקל הקנרי.

Figure 88 - Photo of students flower garden- in background the Canary Palm All'e c. mid 1930's

ת מ ו נ ה 9. במבואות הגן. משמאל החורש הארצישראלי (Quercetum) עם סייג של הדס

Figure 89 - The west entry path to the gardens and to the left the native Eretz-Israel Forest Plot (Oaks) with Myrtle Hedgerows



מפתח למפה לפי מספרי החלקות שבגן הבוטני.

חלקה מספר 1

Gymnospermae	מחלקת חשופי־הזרע
Cycadaceae	משפחת הציקסיים
Gingkoaceae	„ הגינקואים
Pinaceae	„ הארניים (ארן, אראוקריה)

חלקה מספר 2

Pinaceae	משפחת הארניים (ארז, ברוש, תויה, ערער)

חלקה מספר 3

Angiospermae	מחלקת מכוסי־זרע
Dicotyledoneae	בת־מחלקת הדו־פסיגיים
Casuarinaceae	משפחת הקזוארינה
Salicaceae	„ הערבתיים
Myricaceae	„ המיריקה
Betulaceae	„ השדריים
Juglandaceae	„ האגוזיים
Fagaceae	„ האלוניים (אלון)

חלקה מספר 4

Fagaceae	משפחת האלוניים (ערמון)
Ulmaceae (Celtoideae)	„ המישיים
Moraceae	„ התותיים
Urticaceae	„ הסרפדיים

חלקה מספר 5

Moraceae (Ficus spp.)	משפחת התותיים (מיני פיקוס)

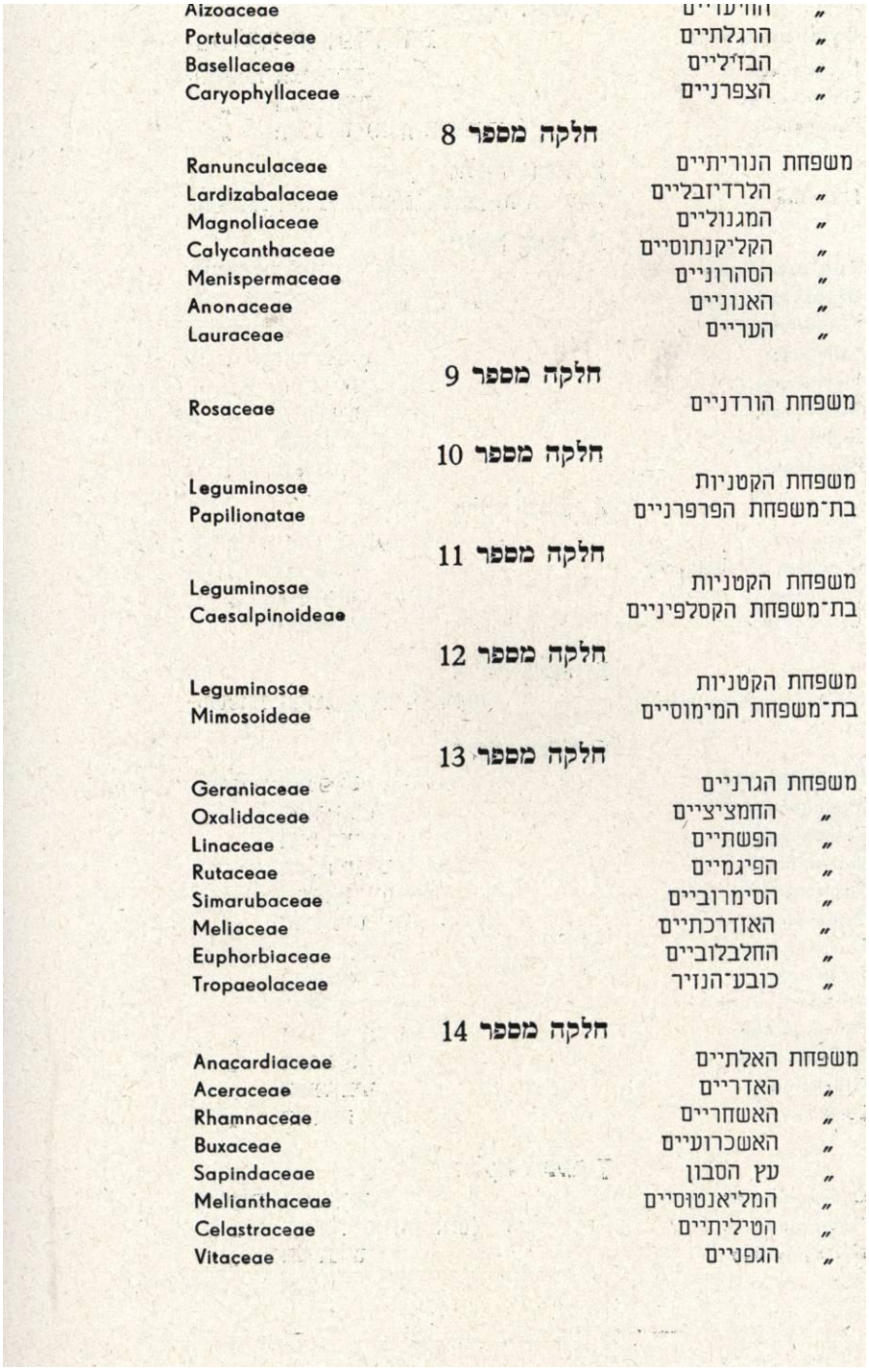
חלקה מספר 6

Capparidaceae	משפחת הצלפיים
Moringaceae	„ המורינגיים
Resedaceae	„ הריכפניים
Crassulaceae	„ הטבוריתיים
Saxifragaceae	„ הבקעצוריים
Platanaceae	„ הדולביים
Hamamelidaceae	„ ההממליים
Proteaceae	„ הפרוטאיים
Aristolochiaceae	„ הספלוליים
Polygonaceae	„ הארכוביתיים
Papeveraceae	„ הפרגיים
Cruciferae	„ המצליבים
Loasaceae	„ הלואסה

חלקה מספר 7

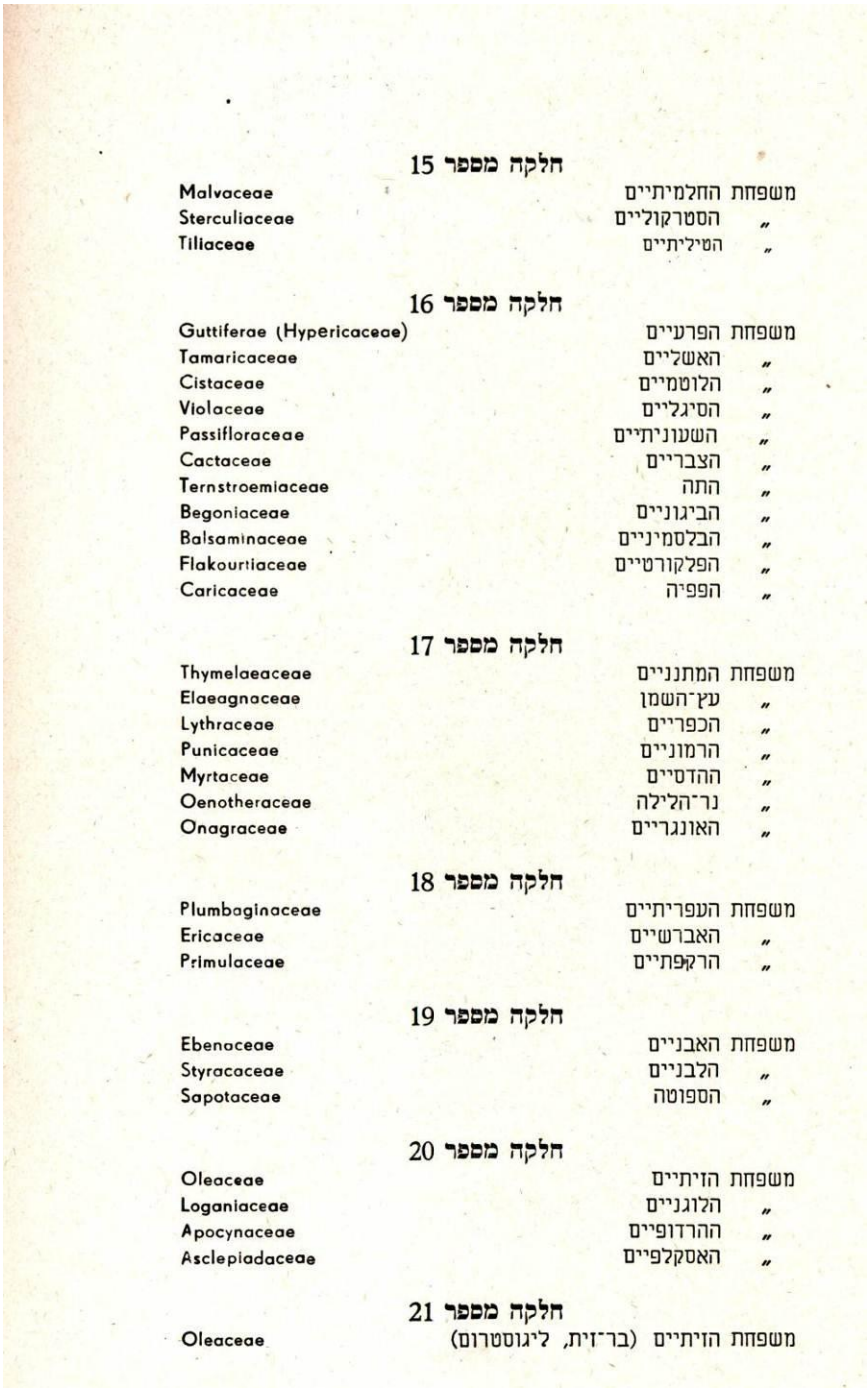
Chenopodiaceae	משפחת הסילקיים
Amaranthaceae	„ הירבוזיים (חממיים)
Nyctaginaceae	„ הלילניים

Figure 90 - Plants by plot and botanic classification



Aizoaceae		„ החיעדיים
Portulacaceae		„ הרגלתיים
Basellaceae		„ הבזליים
Caryophyllaceae		„ הצפרניים
	חלקה מספר 8	
Ranunculaceae		משפחת הנוריתיים
Lardizabalaceae		„ הלרדיזבליים
Magnoliaceae		„ המגנוליים
Calycanthaceae		„ הקליקנתוסיים
Menispermaceae		„ הסהרוניים
Anonaceae		„ האנוניים
Lauraceae		„ העריים
	חלקה מספר 9	
Rosaceae		משפחת הורדניים
	חלקה מספר 10	
Leguminosae		משפחת הקטניות
Papilionatae		בת־משפחת הפרפרניים
	חלקה מספר 11	
Leguminosae		משפחת הקטניות
Caesalpinoideae		בת־משפחת הקסלפיניים
	חלקה מספר 12	
Leguminosae		משפחת הקטניות
Mimosoideae		בת־משפחת המימוסיים
	חלקה מספר 13	
Geraniaceae		משפחת הגרניים
Oxalidaceae		„ החמציציים
Linaceae		„ הפשתיים
Rutaceae		„ הפיגמיים
Simarubaceae		„ הסימרוביים
Meliaceae		„ האזדרכתיים
Euphorbiaceae		„ החלבלוביים
Tropaeolaceae		„ כובע־הנזיר
	חלקה מספר 14	
Anacardiaceae		משפחת האלתיים
Aceraceae		„ האדריים
Rhamnaceae		„ האשחריים
Buxaceae		„ האשכרועיים
Sapindaceae		„ עץ הסבון
Melianthaceae		„ המליאנטוסיים
Celastraceae		„ הטיליתיים
Vitaceae		„ הגפניים

Figure 91 - Plants by plot and botanic classification



חלקה מספר 15

Malvaceae	משפחת החלמיתיים
Sterculiaceae	„ הסטרקוליים
Tiliaceae	„ הטיליתיים

חלקה מספר 16

Guttiferae (Hypericaceae)	משפחת הפרעיים
Tamaricaceae	„ האשליים
Cistaceae	„ הלוטמיים
Violaceae	„ הסיגליים
Passifloraceae	„ השעוניתיים
Cactaceae	„ הצבריים
Ternstroemiaceae	„ התה
Begoniaceae	„ הביגוניים
Balsaminaceae	„ הבלסמיניים
Flakourtiaceae	„ הפלקורטיים
Caricaceae	„ הפפיה

חלקה מספר 17

Thymelaeaceae	משפחת המתנניים
Elaeagnaceae	„ עץ־השמן
Lythraceae	„ הכפריים
Punicaceae	„ הרמוניים
Myrtaceae	„ ההדסיים
Oenotheraceae	„ נר־הלילה
Onagraceae	„ האונגריים

חלקה מספר 18

Plumbaginaceae	משפחת העפריתיים
Ericaceae	„ האברשיים
Primulaceae	„ הרקפתיים

חלקה מספר 19

Ebenaceae	משפחת האבניים
Styracaceae	„ הלבניים
Sapotaceae	„ הספוטה

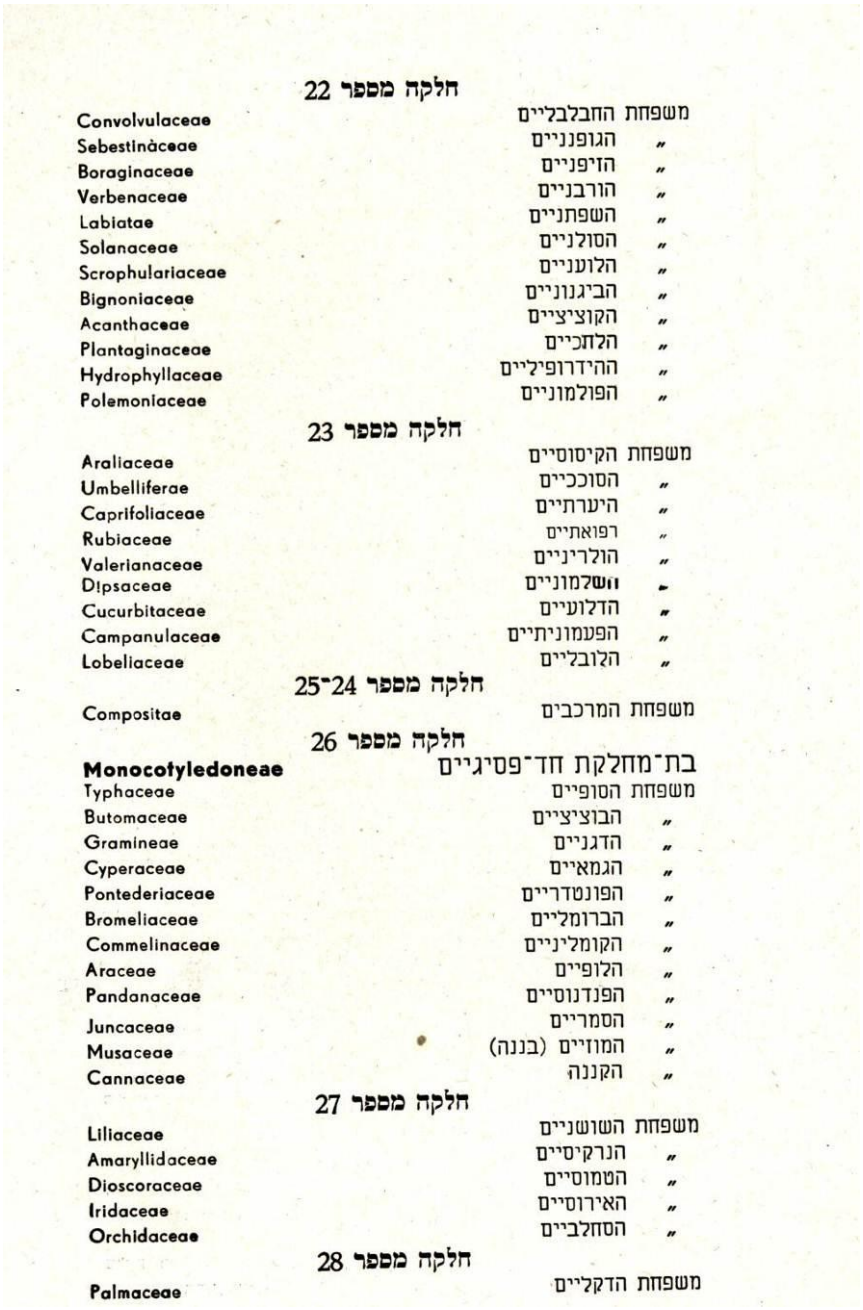
חלקה מספר 20

Oleaceae	משפחת הזיתיים
Loganiaceae	„ הלוגניים
Apocynaceae	„ ההרדופיים
Asclepiadaceae	„ האסקלפיים

חלקה מספר 21

Oleaceae	משפחת הזיתיים (בר־זית, ליגוסטרום)

Figure 92 - Plants by plot and botanic classification



חלקה מספר 22

Convolvulaceae	משפחת החבלבליים
Sebestinàceae	„ הגופנניים
Boraginaceae	„ הזיפניים
Verbenaceae	„ הורבניים
Labiatae	„ השפתניים
Solanaceae	„ הסולניים
Scrophulariaceae	„ הלועניים
Bignoniaceae	„ הביגנוניים
Acanthaceae	„ הקוציציים
Plantaginaceae	„ הלחכיים
Hydrophyllaceae	„ ההידרופיליים
Polemoniaceae	„ הפולמוניים

חלקה מספר 23

Araliaceae	משפחת הקיסוסיים
Umbelliferae	„ הסוככיים
Caprifoliaceae	„ היערתיים
Rubiaceae	„ רפואתיים
Valerianaceae	„ הולריניים
Dipsaceae	„ השלמוניים
Cucurbitaceae	„ הדלועיים
Campanulaceae	„ הפעמוניתיים
Lobeliaceae	„ הלובליים

חלקה מספר 24־25

Compositae	משפחת המרכבים

חלקה מספר 26

Monocotyledoneae	בת־מחלקת חד־פסיגיים
Typhaceae	משפחת הסופיים
Butomaceae	„ הבוציציים
Gramineae	„ הדגניים
Cyperaceae	„ הגמאיים
Pontederiaceae	„ הפונטדריים
Bromeliaceae	„ הברומליים
Commelinaceae	„ הקומליניים
Araceae	„ הלופיים
Pandanaceae	„ הפנדנוסיים
Juncaceae	„ הסמריים
Musaceae	„ המוזיים (בננה)
Cannaceae	„ הקננה

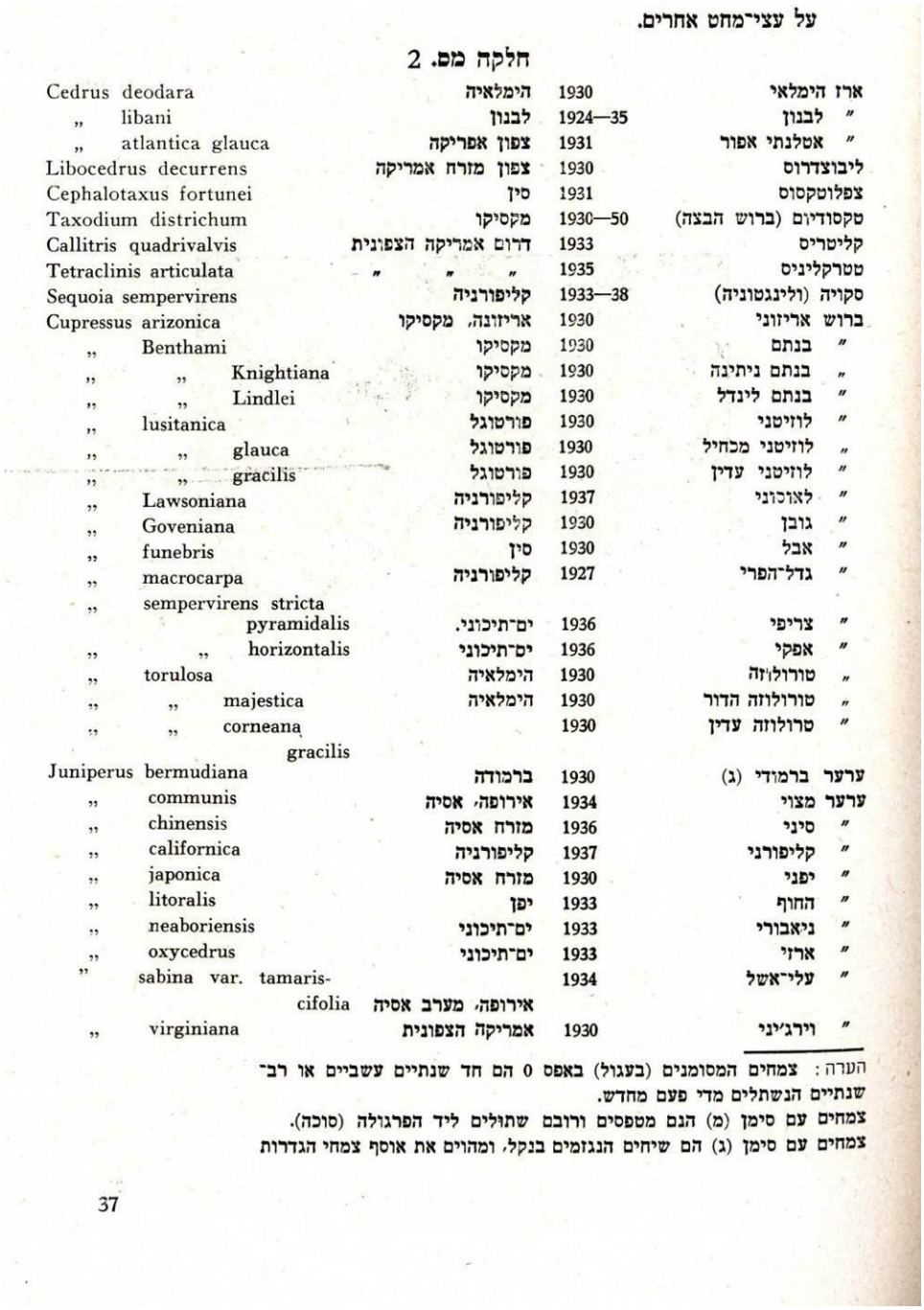
חלקה מספר 27

Liliaceae	משפחת השושניים
Amaryllidaceae	„ הנרקיסיים
Dioscoraceae	„ הטמוסיים
Iridaceae	„ האירוסיים
Orchidaceae	„ הסחלביים

חלקה מספר 28

Palmaceae	משפחת הדקליים

Figure 93 - Plants by plot and botanic classification



על עציי־מחט אחרים.

חלקה מס. 2

Cedrus deodara	הימלאיה	1930	ארז הימלאי
„ libani	לבנון	1924—35	״ לבנון
„ atlantica glauca	צפון אפריקה	1931	״ אטלנטי אפור
Libocedrus decurrens	צפון מזרח אמריקה	1930	ליבוצדרוס
Cephalotaxus fortunei	סין	1931	צפלוטקסוס
Taxodium districhum	מקסיקו	1930—50	טקסודיום (ברוש הבצה)
Callitris quadrivalvis	דרום אמריקה הצפונית	1933	קליטריס
Tetraclinis articulata	״ ״ ״	1935	טטרקליניס
Sequoia sempervirens	קליפורניה	1933—38	סקויה (ולינגטוניה)
Cupressus arizonica	אריזונה, מקסיקו	1930	ברוש אריזוני
„ Benthami	מקסיקו	1930	״ בנתם
„ „ Knightiana	מקסיקו	1930	״ בנתם ניתינה
„ „ Lindlei	מקסיקו	1930	״ בנתם לינדל
„ lusitanica	פורטוגל	1930	״ לוזיטני
„ „ glauca	פורטוגל	1930	״ לוזיטני מכחיל
„ „ gracilis	פורטוגל	1930	״ לוזיטני עדין
„ Lawsoniana	קליפורניה	1937	״ לאוסוני
„ Goveniana	קליפורניה	1930	״ גובן
„ funebris	סין	1930	״ אבל
„ macrocarpa	קליפורניה	1927	״ גדל־הפרי
„ sempervirens stricta			
pyramidalis	ים־תיכוני.	1936	״ צריפי
„ „ horizontalis	ים־תיכוני	1936	״ אפקי
„ torulosa	הימלאיה	1930	״ טורולוזה
„ „ majestica	הימלאיה	1930	״ טורולוזה הדור
„ „ corneana		1930	״ טרולוזה עדין
gracilis			
Juniperus bermudiana	ברמודה	1930	ערער ברמודי (ג)
„ communis	אירופה, אסיה	1934	ערער מצוי
„ chinensis	מזרח אסיה	1936	״ סיני
„ californica	קליפורניה	1937	״ קליפורני
„ japonica	מזרח אסיה	1930	״ יפני
„ litoralis	יפן	1933	״ החוף
„ neaboriensis	ים־תיכוני	1933	״ ניאבורי
„ oxycedrus	ים־תיכוני	1933	״ ארזי
” sabina var. tamaris-		1934	״ עלי־אשל
cifolia	אירופה, מערב אסיה		
„ virginiana	אמריקה הצפונית	1930	״ וירג׳יני

הערה: צמחים המסומנים (בעגול) באפס 0 הם חד שנתיים עשביים או רב־שנתיים הנשתלים מדי פעם מחדש.
צמחים עם סימן (מ) הנם מטפסים ורובם שתולים ליד הפרגולה (סוכה).
צמחים עם סימן (ג) הם שיחים הנגזמים בנקל, ומהוים את אוסף צמחי הגדרות

37

Figure 94 - Partial list of tree species

„ humilis	דרום אירופה	1930	„ עניו
„ „ macrocarpa	דרום אירופה	1930	„ גדל־הפרי
„ longifolia	דרום אירופה	1930	„ ארוך עלים
Cocos australis (Butia)	פרגואי, ברזיל	1931	קוקוס מזרחי
„ campestris „	ברזיל	1932	„ השדה
„ eriospatha „	ברזיל	1935	„ לביד
” flexuosa (Arecastrum)	ברזיל	1936	„ מתפתל
” romanzoffiana (”)	ברזיל	1930	„ רומנזופינה
Corypha elata (brahea)	בנגל, בורמה	1936	קוריפה זקופה
Erythea armata (Brahea)	קליפורניה	1935	אריתיה מזוינת
Jubaea spectabilis	צ׳ילי	1930	יוביה הדורה
Latania borbonica	סין	1936	לטניה בורבונית
Livistona australis	אוסטרליה	1939	ליביסטונה אוסטרלית
Phoenix canariensis	איים קנריים	1934	תמר קנרי
„ dactylifera	ערב, אפריקה	1937	התמר (מצוי)
„ farinifera	הודו, צילון	1930	תמר (דקל) קמחי
„ hybrida	(גנני)	1930	„ (דקל) כלאים
„ leonensis	אפריקה, סירה־ליונה		„ מליונה
” Roebelinii	אפריקה, סירה־ליונה		„ נטוי
„ roebelinii	דרום הודו־סין	1946	„ רובלין
„ senegalensis	אפריקה הטרופית		„ סנגלי
„ sylvestris	הודו	1930	„ היער
„ tenuis	איים קנריים	1930	„ עדין
Pritchardia filifera	אמריקה הסובטרופית	1932	ושינגטוניה חוטית
Oreodoxa regia	פלורידה		אוריודוקסה מלכית
Raphis flabeliformis	סין	1933	רפיס המניפה
Sabal adansonii	דרום אמריקה הצפונית	1931	סבל אדנסון
„ Ghiesberghti	פלורידה	1931	„ גיזברט
„ havanensis	דרום־מזרח אמריקה הצ׳		„ הבאני
„ Palmetto	פלורידה	1930	„ פלמטו
„ princeps	ברמודה	1930	„ אביר
„ umbraculifera	ברמודה	1930	„ סוככני
Washingtonia robusta	קליפורניה, מכסיקו		ושינגטוניה חסונה
„ sonorae	קליפורניה, מכסיקו	1931	ושינגטוניה סונורה
„ filifera	אמריקה הסובטרופית	1931	שינגטוניה חוטית

Figure 95 - Partial list of tree species

APPENDIX F: ARIEL SHARON- AYALON PARK PLANS

Figure 96 - Ayalon- Park Ariel Sharon and the strategic open space corridors concept of the city of Tel Aviv – In blue strategic open space corridor from Regional Town Plan 5.

Figure 97 - The Latz Ariel Sharon Park master plan- including Mikveh Israel 2010

Figure 98 - The Latz Ariel Sharon Park master grading plan- note changes described in Mikveh Lands

Figure 99 - Latz Master Plan 2010 – Demarcation of agricultural landscapes within the Ayalon Park

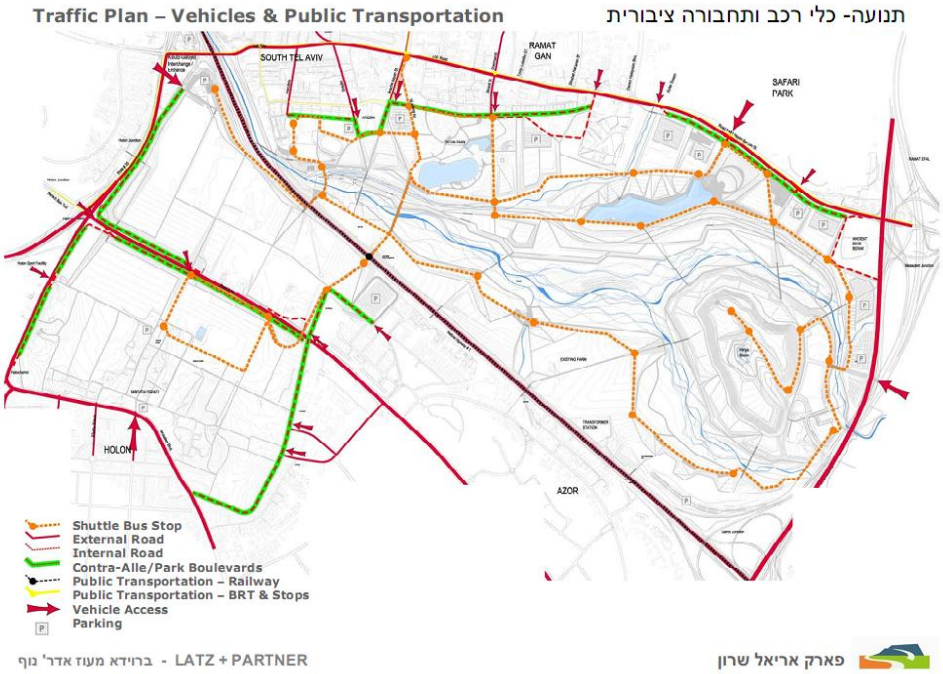


Figure 100 - Latz Master Plan 2010 – Demarcation of public vehicular and pedestrian circulation access and parking Ayalon Park

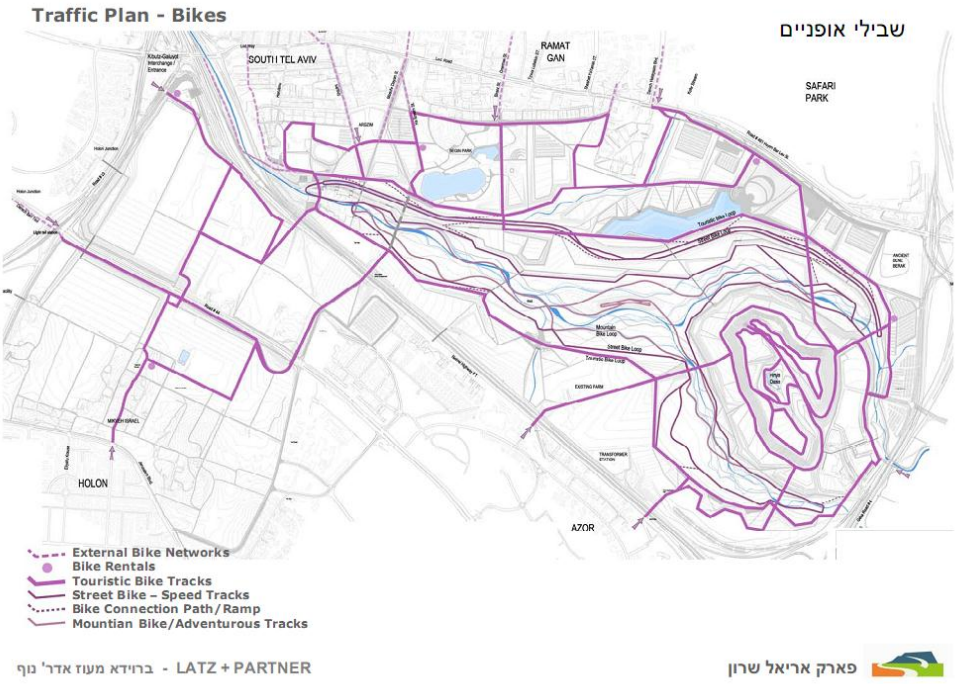


Figure 101 - Latz Master Plan 2010 – Demarcation of public bicycle circulation and access - Ayalon Park

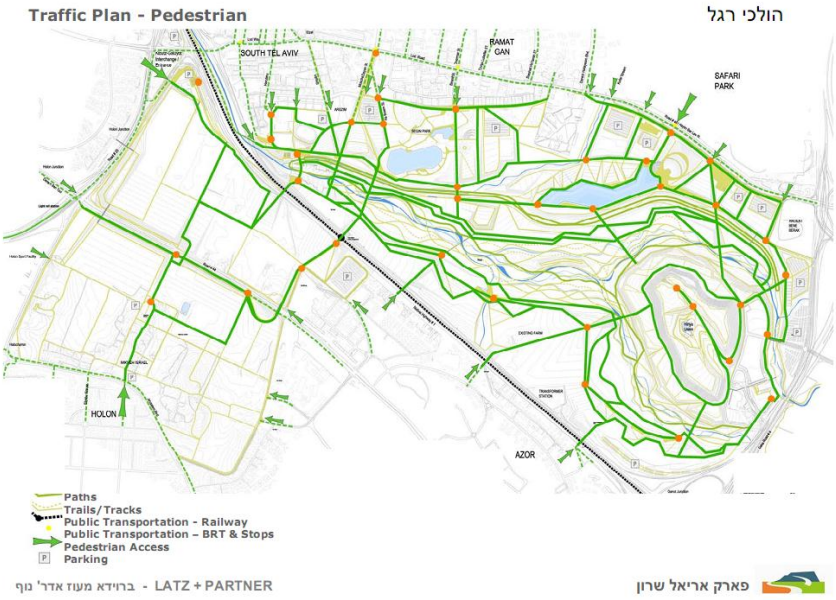


Figure 102 - Latz Master Plan 2010 – Demarcation of public and mass transit and parking facilities- Ayalon Park

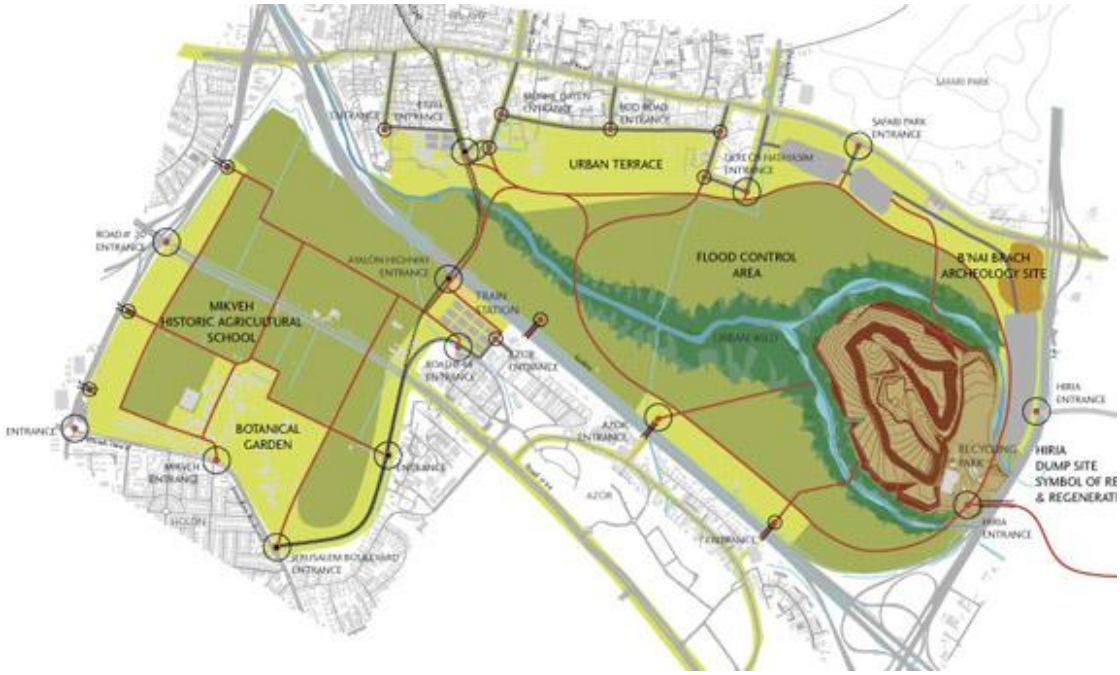


Figure 103 - Starr Plan for Ayalon Park 2008 (public circulation plan for Mikveh Israel shown below)

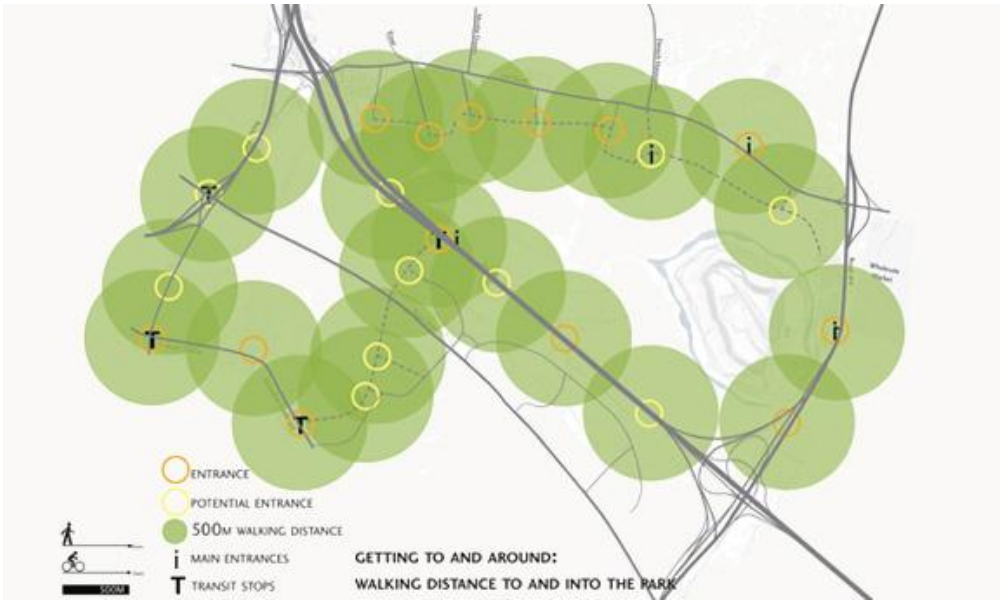


Figure 104 - Map and "Vision" of Friends of Ayalon Park website 2010

Figure 105 - "Building Israel's Green Future: The Israeli Government is committed to Ayalon Park. In 2005, it dedicated one of the last remaining tracts of open urban land for use in Ayalon Park and later allocated a seed grant to create a national treasure for the enjoyment of future generations. This donation then encouraged initial grants from organizations, including the Beracha Foundation, allowing the park to start becoming a reality. In 2005, The Friends of the Ayalon Park was established as an independent, non-profit organization to ensure public involvement in planning, building and financing the park. "To date, Ayalon Park is Israel's most ambitious environmental project. Its completion is entirely dependent upon cooperation and a communal effort. Much work remains to guarantee the integrity and success of Ayalon Park. Ayalon Park will offer personal and environmental revitalization. Once completed, it will be one of the world's largest urban parks containing trees, hiking trails, streams and an unparalleled lookout point.It's signature attractions will include a recycling plant, environmental education centers and a former garbage dump undergoing a process of renewal into a living and healthy part of nature. Ayalon Park is Israel's green future. Symbolized by the healing garbage dump, the park will prove that an environmental hazard can be turned into a national treasure – one that will radiate to the world Israel's new green face."