The Great Arab Libyan Popular Socialist Jamahiriya
Higher Popular Committee for Utilities

Tripoli City Centre's
Urban and Architectural Charter

Green Plan

Lighting Plan

Street Furniture

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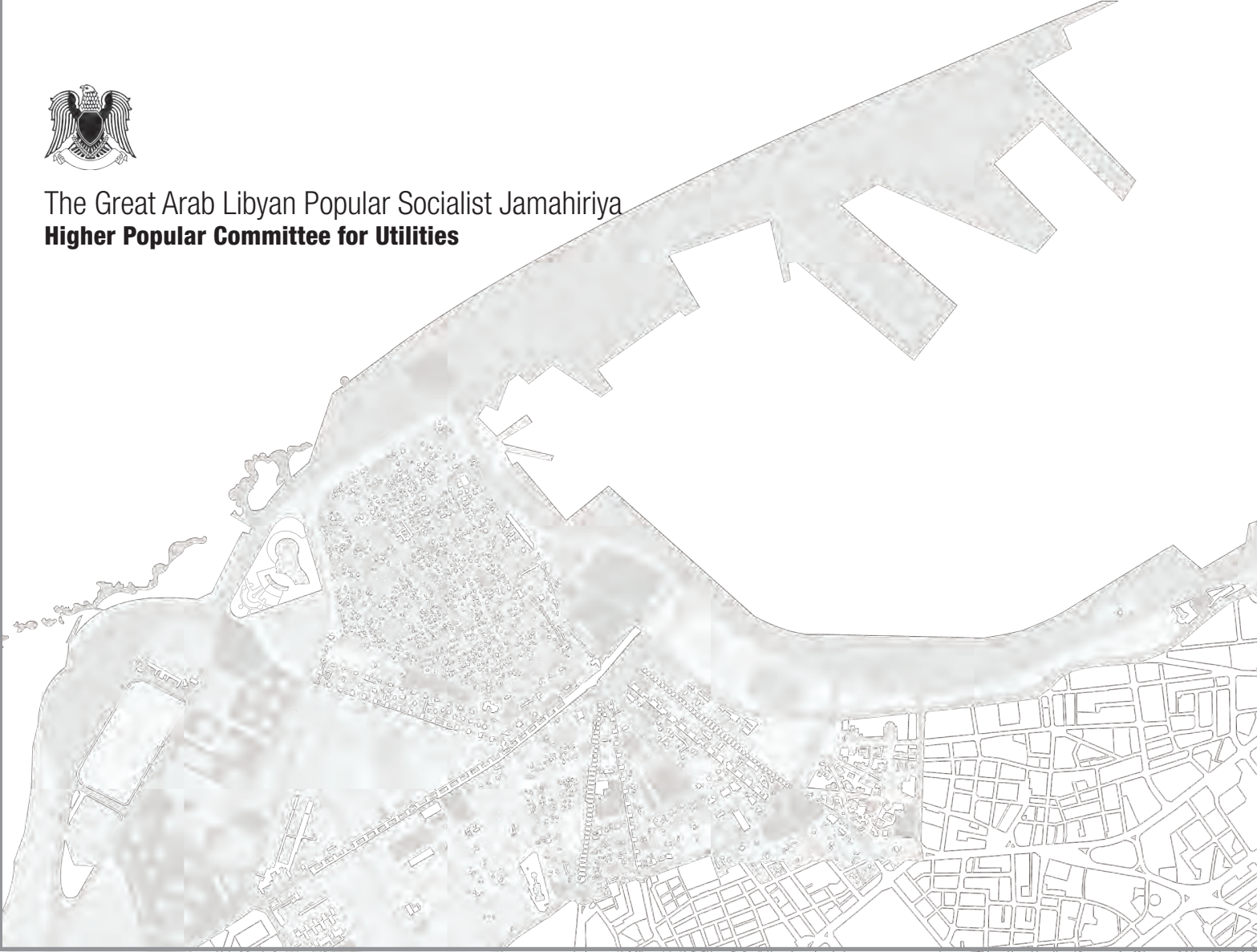INSTITUT
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Green Plan

The Green Plan Area

The project of Tripoli City Centre Green Plan focuses on the area lying between the Mediterranean Sea in the North and the Green Belt project in the South. The area consists of 10 Mahallats (districts): Al Madina Al Kadima (Old City); Al Masira Al Kubra; Ad Dahra; Shuhadaa Ash Shat; 7 April (As Sabee); Al Manshiya; Bab Ben Ghashir; Sharee Az Zawiya; Az Zahf Al Akhdar; Shuhadaa Abu Malyana; Al Mansura.

Contents

Undeveloped Spaces Bearing Greening Potentials…

A privileged location

Located along the Mediterranean Sea, the city of Tripoli has two advantages related to this area of the world for greening and urban composition:

- A climate allowing a wide range of plants; the Mediterranean basin is one of the areas with the highest biodiversity in the world;[1] This is even more true for its southern shore, where almost all the plant species belonging to temperate climates and all those of tropical climates can grow if watered;
- A long history of exchanges and cross cultural influences (Phoenician, Greek, Roman, Arab, Turkish, Italian, African…), that have each contributed to the present shape of the city and to the references of its inhabitants, mayors and planners, concerning architecture, urban design and relationship with nature.

This location not only in the Mediterranean basin but also on its immediate sea border is a supplementary advantage, which helps to develop real waterfronts. The dominant location of a part of the Medina and of a ridge (Cornice) which runs on more than 3 kilometres allows distant views of the sea and even beyond the harbour. While it

is not as spectacular as the location of a city like Algiers, this one also allows views of the city and a contact with water that cities built on a lower coast and cut off from the water by the harbour, such as Casablanca, cannot have.

Undeveloped public spaces: water, roads network, open spaces

Undeveloped spaces are made up of several major groups:

- Water, its banks and neighbouring spaces— here, the Mediterranean sea, the coastline, rivers including their minor and major bed (wadi);
- Roads network (streets, roads and squares), public space's main component, and the other covered spaces with asphalt (open space parking and storage spaces);
- Green spaces, and more generally the "open" spaces in the ecological sense of the word, those on a natural and permeable ground, favourable to biodiversity (agricultural lands, forests, wetlands and other natural spaces).

All undeveloped spaces, whether belonging to the roads network, green spaces, water and its banks, open equipment, form a whole, which should be studied together and subject to an overall project, for many reasons:

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[1] The NGO Conservation International has defined 34 "biodiversity hotspots" around the world, which include the Mediterranean basin (see http://www.biodiversityhotspots. org and http://www.biodiversityhotspots.org/xp/Hotspots/ mediterranean).

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5.1

5.2

- All these spaces visually unobstructed contribute to the urban landscape by giving views on facades, urban fronts or distant horizons;
- Not planted open spaces are (apart water surfaces) the spaces offering the widest greening potentialities, since they can be the place for creating green spaces, or planting a vegetation compatible with other uses, to a lesser cost than on a built space;
- Multifunctional open spaces are to be encouraged (e. g. productive spaces can contribute to landscape and biodiversity);
- Networking all open spaces creates biological corridors and urban landmarks.

A more precise typology of undeveloped spaces can be defined as follows:

Public green spaces managed by the Green Spaces Department

(1) Public gardens (parks or promenades, gardens, planted squares): meant for public access, passing through, walking and-or staying; designed, abundantly planted, equipped with various facilities (benches, children's games, refreshment areas…).

(2) Road green spaces (roundabouts, triangles and slopes) and buffer zones: decoration of spaces left vacant by road design; generally not accessible apart the major ones. Some large roundabouts are designed and used as gardens, and should rather be listed as such, while some inaccessible planted spaces along roads, currently listed as public gardens, should be listed as road green spaces.

(3) Street trees and vegetation: generally planted on sidewalk, enhancing the streets, giving shade, without occupying too much space.

Other green semi public or private spaces

(4) Institutional parks and gardens: hospitals, universities, etc.; not meant to be public gardens, but part of them has a pedestrians' free access.

(5.1) Private gardens: generally not publicly accessible; those of interest here are those visible from the public realm, providing a background to the urban landscape.

(5.2) Private vegetation out of gardens: trees planted in front of houses, vines climbing on facades, on pergolas or over streets.

Large peri-urban green spaces (Green Belt)

(6.1) Forest: mainly Ghabat An Nasr.

(6.2) Former agriculture research centre (Sidi El Masri): with a high landscape value.

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(6.3) Parks: existing (zoo) or planned in the Green Belt project (Souk Al Talat).

Other urban open spaces (undeveloped facilities)

(7) Cemeteries: large grassy areas, some trees, an abundant herbaceous vegetation in spring, not meant for public access apart for the families of the deceased, low attendance.

(8.1) Sports grounds: generally not planted.

(8.2) Other bare grounds: car parks, open-air storage and other spaces without vegetation out of the streets network, around buildings or isolated.

Rural or vacant spaces

(9.1) Plant nurseries: providing the city with both decorative plants and aesthetic sceneries.

(9.2) Agriculture: relicts of cultivation within urban fabric, generally with palm trees, hedges of Indian fig trees (Opuntia), sometimes irrigated crops, sometimes meadows grazed by sheep.

(9.3) Fallow, rural: usually agricultural spaces more or less recently abandoned.

(9.4) Fallow, urban: usually area of demolished buildings, with more surfaced grounds than in rural fallow, some with vegetation left over from former gardens.

Water and banks

(10.1) Coastline: beaches, rocks.

(10.2) Wadi (Al Majnîn): sloping cemented banks throughout the city.

Non green public spaces

(11.1) Streets: various kinds, from narrow pedestrian streets of the old medina to broad avenues and boulevards with a high traffic.

(11.2) Roads and highways: transit traffic, difficult lateral or impossible access.

(11.3) Squares and circuses: whether well designed and planned or mere non-built spaces, used by pedestrians or car parks.

Green and open spaces differ by their manager, their access more or less public, and by their use:

• The management depends on the type of owner: if the owner is public, the managing service may be either that of Green Spaces, that possesses the skills to manage their values, or another service (Water, Road, Sport,

9.1

9.2

Cemeteries, various institutions), that does not take into account their possible ecological and landscape qualities; if the owner is private, he usually manages the site directly.

- Access may be completely public, sometimes with time restrictions for fenced gardens, or restricted to some categories of users (for institutional gardens, that are not primarily meant to be public green spaces), or forbidden to the public (for private gardens, whether of individuals or of clubs).
- Use may—according to the category—be cityscape enhancement, or a recreational use (for public gardens), or sport activity, or burial, or even agricultural production; it should be noted that some spaces have several uses (all public gardens are both for landscape enhancement and for recreation, the An Nasr forest is the main jogging course of Tripoli), and some do have unplanned uses (road green spaces accessed by the public).

Varied stakes according to open spaces types, but improvement potentialities on the whole

The stakes for each major category of open space are presented in chapter 3 and summarised hereunder. They show that there are significant opportunities to improve the quantity and quality of green spaces' offer using reasonable means.

Public gardens
- Large urban parks well designed, well maintained and very busy (very attractive).
- Neighbourhood gardens well designed but often poorly maintained.
- A lack of green spaces in some districts.

Road green spaces (roundabouts, triangles and other islets)
- Road sides and junctions often landscaped.
- Some accessible, used as green spaces; other might be.
- Rebalance the sharing of street space to the benefit of pedestrian areas and green spaces.

Street trees
- Regular alignments, in good condition, that structures the urban landscape.
- A lack of diversity and of local identity.
- Very few continuous rows. Significant potentialities for planting out of already planted roads.

Institutional gardens
- Well maintained spaces, often a good landscape quality.

Management, access and use of green and open spaces

Type	Managed by	Public access	Use
1. Public gardens	Green Spaces Department	Full	Leisure, decoration
2. Road green spaces	Green Spaces Department	Possible	Decoration
3. Street trees	Green Spaces Department	Full	Shade, decoration
4. Institutional parks and gardens	Institutions managing the buildings	More or less restricted	Leisure, decoration
5.1 Private gardens	Private	No	Leisure, decoration
5.2 Private vegetation out of gardens	Private	Variable	Shade, decoration
6.1 Forest	National Parks	Full	Leisure
6.2 Former agricultural research centre	National Parks	Currently more or less restricted, planned as full	Formerly research, planned for leisure
6.3 Green Belt parks	Green Spaces Department	Planned as full	Leisure
7. Cemeteries	Used: Municipality; Closed: Waqf	More or less restricted	Burial place
8.1 Sports grounds	Sports Department	More or less restricted	Sport
8.2 Other bare grounds	Private	Usually no	Car park, storage, etc.
9.1 Plant nurseries	Private	No	Production
9.2 Agriculture	Private	Possible	Production
9.3 Fallow, rural	Private	Usually possible	No use
9.4 Fallow, urban	Private	Usually no	No use
10.1 Coastline	State	Full	Shipping, leisure
10.2 Wadi Al Majnîn	Water department	Full	Water evacuation
11.1 Streets	Roads department	Full	Traffic, walking
11.2 Roads and highways	Roads department	Restricted to motor vehicles	Traffic
11.3 Squares & circuses	Roads department	Full	Parking, walking

Tripoli's Green Belt project and park system.

- A potential for a complete opening to the public, in order to provide green spaces to districts lacking of them.

Private gardens
- Spaces often with a landscape quality, unknown because they usually are not open to the public.
- Spaces to protect.

Private vegetation
- A significant contribution to public space quality, without any cost to the community, to encourage.
- Some interesting special forms, to promote: vines on walls, pergolas, plants in containers on terraces.

Cemeteries
- Meditation and silence places in the middle of urban agitation Places of reverence and quietness amidst the urban hustle and bustle.
- Possible evolution into landscaped cemeteries, with other green space functions, compatible with the character and function of the place.

Sports grounds
- Open spaces, poorly planted.
- A potential of trees planting for some sports grounds.

Plant nurseries
- Spaces of production and of landscape quality altogether.
- Activities that can be moved provided that new locations are found where they can still contribute to the urban landscape.

Agriculture
- Still productive spaces in the city, which provides them management.
- A strong potential for creating green spaces with mature vegetation, provided that the traces and character of an agricultural space are preserved.

Fallows
- Havens of biodiversity.
- A usually unpleasant aspect due to lack of maintenance.
- A strong potential for creating new green spaces with mature vegetation and a high biodiversity, provided that a significant part of spontaneous or formerly cultivated species are preserved.

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Three different urban fabrics

The networks of roads, green spaces, and other open spaces can be grouped in three broad sets of contrasted characteristics and well differentiated location:

- The Old Medina, designed for pedestrians, with very narrow alleys and small squares, which do not exclude vegetation (isolated trees, small gardens, pergolas);
- The "classic" city (Ottoman and Italian, central districts and Garden City), with a clear hierarchy of streets (from large avenues to small alleys), and a beautiful urban design with perspectives, squares, circuses and gardens (Ghazala, Qasr El Shaab, central hospital…);
- The modern city, where the primary network is designed for motor traffic (not only highways and highway interchanges, but also streets with very broad pavements and rounded-angle junctions, adapted to speed and traffic flow, where green spaces occupy the spaces left vacant by road design).

… But Vegetation and Green Spaces Poorly Distributed and Often Inadequate

Indicators of service by green spaces and vegetation

The urban districts' service by green spaces and vegetation is measured by several indicators:

- The most common indicator is the **green space area per inhabitant**, measured by the ratio, within a given area, of the total accessible green spaces area on the population living within the same perimeter; a standard of 10 sq. m per inhabitant was defined in France during the years 1960-1970 as part of new operations (the 'Vilmorin' regulation, 1973), and then widely used as a reference on the scale of municipalities and even urban areas, without always specifying the perimeter of reference.

- The second indicator is the **service by public green spaces**, not given by a figure but by a map, which outlines a radius around each green space indicating the served districts; in most studies, several categories of green spaces are defined according to their area, with a longer radius if the surface area is important (250 m for small neighbourhood gardens and 1000 m for major metropolitan parks); here a simpler method was chosen, with a single radius of 250 m whatever the green space area; indeed it is considered

here that an objective may be to have a local service for all the districts, while major parks (such as An Nasr forest) fulfil both the role of neighbourhood green spaces, for districts located within a radius of 250 m, and the role of metropolitan parks for the whole city through an access by car (therefore, for this metropolitan function, a service radius discriminating the districts cannot be defined).

- The third indicator is the **vegetation index**, which measures point by point the plant cover importance and activity; this ratio is measured by the signal received by a satellite in some wavelengths (infra-red and visible), very strong when chlorophyll activity is intense (maximal when the vegetation is watered); it is set to each pixel in the satellite image.

Like all indicators and all models, these are simplifications of reality, and therefore have limitations:

- **The green spaces surface area per inhabitant** is the most limited indicator, since it does not take into account the distance existing between people and green spaces; a city can have a high surface area of green spaces per capita even with a major part of the population living too far to be concerned; conversely, it can have green spaces out of its edge,

serving a part of the population without being recorded; this standard is a useful indicator provided it is combined with the others.

- **The radius of service by public green spaces** reflects in a discontinuous way (fully served districts or not served at all according to their location inside or outside the radius) a continuously changing reality (districts more or less served according to their distance); however, it can be improved by taking several successive radii; or the objective may be to have on the studied territory both a green space area of at least 10 sq. m per inhabitant and all the districts at less than 250 m of a public green space.

- The knowledge of the **vegetation ratio** usefully complements the knowledge of the service by green spaces, but a satellite image of Tripoli analyzed by the wavelength channels that allow its calculation is not available for this study.

The standard area of green spaces per inhabitant is achieved only with the Green Belt's large parks

In Tripoli, considering the territory within the Green Belt, for a population of 183 000 inhabitants

(± 1 000), the area of public green spaces per inhabitant is between 3 and 17 sq. m, according to the category of green spaces of concern, as shown in table.

a.   **The green spaces with a public status and currently open to public** (excluding the road green spaces which only have a decorative role), within the perimeter (inside the Green Belt), represent 53 hectares, or 3 sq. m per inhabitant, which is very low (Total [A] in the table).

b.   Therefore, considering that the population living inside the Green Belt is also served by **the Green Belt green spaces** (An Nasr forest and zoo), one half of these areas can be added at first approximation (whereas the other half is serving the population living within the Green Belt itself or on its outer edge), the new total ([B] in the table) is 156 hectares, or 14 sq. m per inhabitant, thus reaching the standard.

c.   If we add **green spaces under planting**, we get the following values, which reflect the situation in a near future: staying inside the Green Belt's inner limit (mainly with the gardens under planting or planned in the short term between the coastal road and the express road), 75 hectares, or 4 sq. m per inhabitant inside the Green Belt's inner limit (total [A']), which remain low despite the new

Area of green spaces per inhabitant (current and close future condition)

		Total area (hectares)	Area (sq. m) per inhabitant
CURRENT STATE AND CLOSE FUTURE: CITY CENTRE			
Current green spaces in the city centre	**A = a**	**53**	**2.9**
Green spaces under planting in the city centre	c	17	
Institutional gardens open to the public in the city centre	d	8	
Current **and future** public green spaces in the city centre	A' = a + c	70	3.9
Current and future public and **institutional** green spaces in the city centre	A'' = a + c + d	78	4.3
CURRENT STATE AND CLOSE FUTURE: CITY CENTRE AND GREEN BELT			
Current public green spaces in the green belt (half)	b	103	
Current public green spaces under development in the green belt (half)	c›	16	
Current public green spaces, in the city centre **or in the green belt**	B = a + b	156	14.1
Current **and future** public green spaces in the city centre **or green belt**	C = a + b + c + c'	190	16.8
Current and future public **and institutional** green spaces in the city centre or green belt	D = a + b + c + c' + d	198	17.3
The beach (natural space)	d'	20	
Current and future public and institutional green and **natural spaces** in the city centre or green belt	D' = D + d'	218	18.4

green spaces dimensions; but integrating the Green Belt, which allows to add half of the new large parks to be planted (Souk Al Talat) or to be upgraded (Sidi El Masri), the total ([C] in the table) will rise to 190 hectares or 16.8 sq. m per inhabitant, which allows to exceed the standard of 10 sq. m per inhabitant.

d. We can also add a certain number of **institutional gardens open to the public** (such as the Islamic Museum, the Central Hospital or the Palace of Culture) which serve the people even if it is not their primary purpose (calculation of these garden's areas is done by taking into account one half of the concerned areas, the other half being regarded as occupied by buildings or by non accessible parts). These gardens, relatively large compared to those of the centre, but much smaller than the Green Belt's ones, contribute slightly to the average: With them the total ([D]) is of 198 hectares or 17.3 sq. m per inhabitant.

e. Finally, we can add **the beach**, that is not a green space, but a natural space offering many services similar to parks and garden (access to nature, view, rest, recreational space…). The total ([D']) is of 218 hectares or 18.4 sq. m per inhabitant.

Many districts, especially in the East, are totally devoid of green spaces

If we draw on the territory included within the Green belt a radius of 250 m around the existing green spaces, we can calculate then the share of the city territory that is not served, and analyse its distribution (which districts are not served, which districts are lacking of green spaces). The proportion of the city territory can be given only by surface, by a lack of accurate data on population's distribution, but in first approximation we can estimate that the share of the served population is the same as the area in the range of service access.

This share and the distribution vary depending on the considered set of green spaces, as shown on the maps.

a. If limited to green spaces with a public status and currently open to public (excluding non accessible landscaped road green spaces), the share of served urban territory is 41 %, with only the centre being well served ("classic" city) (map [a]).

b. If we consider also the local service by the Green Belt green spaces (An Nasr forest and Zoo), the increasing of territory share is very small (42 %), as these green spaces are out of the considered territory (map [b]).

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Maps of the current service (and near future) through the public green spaces.

a) Public spaces open to the public today (service: 41 %).

b) = (a) + Green areas of the Green belt (service: 42 %).

c. If we add green spaces under planting (situation in the near future), whether within the inner limit of the Green Belt (gardens under development or scheduled for a short time between the Cornice and the express road) or the new large parks of the Green Belt (Souk Al Talat, Sidi El Masri), the share rises to 46 % with some additional served districts (along the coast, South-East and South-West) (map [c]).

d. The integration of institutional gardens open to the public (Islamic Museum, Central Hospital, Palace of Culture), increases the share (49 %) due to these gardens' location in poorly served districts (map [d]).

e. The integration of the beach does not increase much the share of served districts (up to 50 %), as it I s close to districts already partly served.

Whatever set of green spaces is considered, the share of served urban territory remains low: almost two thirds of the urban area are more than 250 metres of any green space accessible to the public.

The urban vegetation is very unequally distributed
If the vegetation ratio given at each point of the territory by the satellite image is not available, field observation, however, enables us to identify five types of districts depending on the extension of their vegetation (hereunder in descending order):

- Villas' districts, with an abundant private vegetation (gardens, courtyards, spaces in front of houses), often overflowing onto public road;
- Evolving districts (mainly in the East), with still an important relict vegetation (agricultural lands, fallows, isolated trees or hedges, gardens…);
- The "classic" city, with a high share of land occupancy by the buildings, but main streets often planted, a presence of public gardens and some private gardens;
- The dense popular districts, with a high share of land occupancy by the buildings and a very poor vegetation, even in open spaces;
- The Old Medina, with a high share of land occupancy by the buildings, and some gardens and pergolas. Among districts poor in vegetation, the medina is a traditional urban pattern, which does not go traditionally with a wide presence of plants, however, in spite of their density, popular districts could bear more plants.

The last spaces of free nature are ignored and disappear
The insufficiency of cultivated nature is partly balanced by the presence of nature relicts,

c) = (b) + Green spaces under development (service: 46 %).

d) = (c) + Institutional gardens open to the public (service: 49 %).

spontaneous or inherited from the rural past. In these spaces, the agricultural land organisation left plots, hedges and tall trees (palm trees, olive trees) shaping the landscape; lack of maintenance gives scenic and biodiversity qualities related to species spontaneous development.

Unfortunately, such nature is ignored and is rapidly disappearing. In the development sectors, there is no rule to protect these spaces. Uncontrolled construction split agricultural areas; vegetation is no longer maintained; fallows are being transformed into illegal dumps; hundred-year-old trees are cut down; soils that are fragile in this pedological and climatic conditions and rich in biodiversity are cleaned and scoured out with bulldozers.

The problem is not a lack of interest in nature, since, at least in the new districts of villas, gardens are replanted – on grounds on which all natural soil and vegetation has been removed, then garden earth brought on bare soils. The problem is a lack of recognition and identification of agriculture and spontaneous vegetation. The countryside is seen, more or less consciously, by urban dwellers as a backward world; productive species are not considered as having a decorative value and spontaneous species are seen as "weeds" to be eliminated.

This is a regrettable situation, where the most adapted species to soil and climate are weeded and where the area is deprived from mature vegetation, biodiversity, and a landscape that gardens need decades to reach. If the aim is to move from a rural image to urban gardens, this process may be done gradually by planting new plants under the cover of the older and in living soils, and by eliminating the former only once the new have grown.

Green spaces and gardens: a minor contribution to the identity of Tripoli
People go to public gardens, which proves the latter meet a demand; however, their design is often complicated and sometimes common; mineral parts (ground, walls, fences, sculptures) occupy often a disproportionate space, at a high cost of construction and maintenance (even if they are generally sturdy), leaving not enough space to the living element: the vegetation. The latter is not always appropriate, with plants requiring a lot of watering; in particular, lawns, that are very popular with inhabitants loving to sit down there in the cool, should however not be used as mere decorations (as along expressways) where they unnecessarily consume water, while adapted plants (succulents, oleanders, bushes) would be as beautiful.

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Even well-designed facilities, well structuring the urban landscape, such as planting rows along the streets, do not convey an identity of Tripoli: the rows of Canary Palms (Phœnix Dactylifera) or of small-leave Ficus (Ficus Retusa Nitida) formally pruned do exist in many other cities around the Mediterranean Sea. Locally, there are more original shapes, such as palm coppices in front of As Saraya Al Hamra.

It is in the private vegetation that the most original shapes can be found: trees going beyond gardens on the street, vines invading walls, trees becoming monumental or huge with age and sometimes pergolas covering the public realm (as in the Old Medina).

Road network is designed for cars, leaving few room for pedestrians
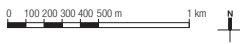In recent decades, the development of public space in Tripoli was commanded by its adaptation to the motorised traffic: expressways cross the city; streets are broadened wherever possible, and secondary streets can be seen where four cars can fit side by side; built-up blocks are demolished to make way for parking lots; crossings are designed in order to avoid cars to slow down (dual-level interchanges between main avenues as if those were motorways; long entry and exit's access roads as in motorways; large roundabouts with access triangles; cut off and rounded corners angles with a large radius of gyration).

Such developments have shown their drawbacks: excessive extension of the roads network, demolitions, loss of continuity of built-up fabric, loss of urban landmarks, creation of numerous road islets without shape and use (but planted and uselessly consuming the resources of the green spaces department), difficult crossing for pedestrians, and even inconveniences to motorised traffic itself (longer distances, congestion of roundabouts and other non stop intersections – roundabouts are more fluid when traffic is low, but admit a lesser volume of traffic than junctions equipped with traffic lights).

The pedestrian position is particularly neglected: even in areas where there is not competition with cars, pedestrians are embarrassed by plantations. The lower branches of street trees are often cut to 1.50 m above the ground, making the passage difficult under them.

Green and Open Spaces Present State

Mediterranean sea

Planetarium
Culture Palace
Horse Race Track

Al Kubra Garden
Sidi Bukar Cemetery

Al Fateh Tower Gardens
Central Garden
Ghazala Garden
Ad Dahra Square
Bab Tajura Cemetery

Sidi Munayder Cemetery
Qasr Ash Shaab

Maydan At Tahrir
El Hani Cemetery

Christian Cemetery

Central Hospital
Gardens

Islamic Museum
Garden

An Nasr Forest
Sidi Al Masri Former
Agricultural Research Centre

Zoo
Al Huriyya Garden

Legend

0 100 200 300 400 500 m   1 km   N

- ■ Public parks and gardens
- ■ Road green spaces
- — Streets with tree lines (continuous)
- ······ Streets with tree lines (discontinuous)
- ■ Institutional parks and gardens
- ■ Garden under planting
- ■ Main private gardens
- ■ Green Belt study area
- ■ Major parcs in Green Belt
- ■ Cemeteries
- ■ Sport grounds
- ■ Agriculture, fallow and vacant open spaces
- ■ Public beach
- ■ Sea front open spaces
- ■ 250 m radius from accessible gardens and beach

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The Plan

As shown in the diagnosis, the green spaces are unevenly distributed in the city. But districts lacking the most of public gardens (especially on the East side) are also those provided with the main resource for the creation of new green spaces, that is the formerly cultivated lands, most of them in fallow. As also explained in the diagnosis, these lands, bearing mature vegetation and a high biodiversity, are the most appropriate places to be transformed into gardens, instead of bare lands as it is too often done.

Most of the pieces of land still cultivated, or that bear abundant vegetation, evidence of a living soil, are therefore proposed as future green spaces, most of them of public access. These parcels are many, but their number is necessary to provide these districts with a network of neighbourhood (districts) gardens, allowing them to reach 27 sq. m per inhabitant, far above the 10 sq. m standard, and 80 % of the territory located less than 250 metres from a public garden.

Cemeteries can be integrated in the green network; they can become green spaces for relaxation, walk and biodiversity, respecting the graves maintenance and the place's calm and reverence. Only commercial and noisy facilities, such as games or cafés, not respecting this character should be avoided. This transformation can even be done in cemeteries still in use, as it is the case in many countries, in various climate and cultural contexts: Northern countries (England, Scandinavia…) but also Mediterranean countries (Spain, South of France, Greece, Egypt…). This transformation into a "landscaped cemetery" mainly requires planting trees, shrubs and flowers, and installing some basic facilities (benches, footpaths…).

The horse race track, located at the North-Eastern end of the Green Belt, overlooks a magnificent perspective of the sea. This place is an ideal location for a major urban park taking advantage of this perspective, completing the Green Belt on this end, while the best location for a horse race track would be along the sea, on a low land dominated by a cornice where the tribune can be placed, following the historical example of Leptis Magna. Such a location is found immediately on the North of the existing horse race track.

A network of green connections

The quality of green spaces is enhanced, for many reasons, by their connectivity:

- **connected green spaces provide ecological corridors** (even more if they are also connected with the outer open space), allowing animal species to circulate and plants to disseminate, thus increasing biodiversity; even the

Network of green connections.

innermost urban parks may have a higher biodiversity if they are connected;

- **the users can walk or ride from one garden to another** on long distance, meeting various landscapes, thus having the feeling of a larger space;
- **linear open spaces provide the urban landscape with landmarks**, in addition to enhancing its beauty, as other open spaces do;
- **continuous and broad open space contributes to local identity**, as it splits developed space into various smaller neighbourhoods, where a sense of place and community can better be achieved.

The best connectivity is achieved when all the open spaces are connected together and with the outer open space in a single network. Two main kinds of open spaces continuity projects can be undertaken, according to the land opportunities:

- **Green ways** – a few metres to a few dozens of metres wide –, mere hiking tracks connecting green spaces in a nice, quiet, usually green environment. These may be quiet streets redesigned for such use;
- **Green corridors**, much wider – several hundred metres –, which really break the continuity of developed space, and are really able to fulfil all the above-described roles.

The main project of connectivity in Tripoli is the Green Belt, with its continuous green line linking major parks (Souk Al Talat, An Nasr forest, Zoo, Sidi El Masri former agricultural research centre). It is complemented along the coastline by a chain of new parks: under implementation along the Eastern part of the Cornice, planned on a strip already cleared along its Western part, planned on a strip reclaimed from current urban development along the beach, West of Old Medina.

This planned network (Green Belt and coastline), which provides the city with a complete peripheral chain of parks, should be complemented by a network of radial connections. Four major connections can be achieved, from the Green Belt to the city centre and the sea :

- Western, from At Tahrir square to the cemetery, along An Nasr Street;
- Southern, from An Nasr forest to Ash Shuhadaa square, along Wadi Street;
- South-Eastern, from Sidi El Masri to Qasr Ash Shaab, along Bab El Medina new development and-or the Central Hospital;
- Eastern, along Fashlum Street.

The urban development, even in the outer parts of the city, is too advanced to allow green corridors all along these four lines; at least, green ways can be achieved. Some parts however have

Tripoli City Centre's
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opportunities to create green corridors, with connected gardens:

- Along Wadi Street: from the cemetery to the maydan Ash Shuhadaa, through Jnan An Nawar garden and a series of gardens that could be created on an undeveloped strip between the street and the facades, currently used for car parks; the access on mayadan Ash Shuhadaa could be through an existing pedestrian street connected to the square under arcades; the only break in the continuity of open space along this line is an old movie theatre, that must be left for its architectural value; the continuity of the path can be ensured through a pedestrian street behind this building.
- Along Bab El Medina, if the project in this sector takes the concept of green space connectivity into account.
- Along Fashlum Street: it is impossible to create a complete green corridor, but some sections can be achieved by keeping connections between existing cultivated plots or fallows.

Punic, Greek and Roman legacy: triumphal arch
(Tripoli, Leptis Magna).

Amphitheatre in front of the sea (Leptis Magna).

Green Plan
Landscape Principles

Historical references giving identity

The identity of a place, as well as the identity of a man, is the result of all its history, of all the influences it has received along this history. In the case of Tripoli, the history has been rich in various influences. Some came peacefully and some by violent conquest. But all left traces that are now elements of the city's identity. Some are typical of Tripoli, some of Libya in general, but as the capital city of Libya, Tripoli should reflect the identity of the whole country. These influences were as follows:

- **The Beduin and Berber legacy** is the oldest, left by the Saharan tribes that have lived in Libya from the Neolithic period till nowadays; the images associated with this legacy are that of desert: dunes, caravans, tents, oases with palm groves, and the desert cities of which the most iconic is Ghadames.

- **The Mediterranean legacy** is also very old and not linked to a particular period or population input, but has impregnated Tripoli all along its history, through exchanges with the rest of the Mediterranean basin; it is expressed in urban forms that are found all around this basin, such as narrow streets, pergolas and typical crops such as vine and olive tree.

- **The Phoenician or Punic influence** arrived first from the cities of nowadays Lebanon but mainly from Carthage in the beginning of the 5th century BC, with the foundation of the three cities of Leptis, Oea and Sabratha, which later took advantage of their location half way between Alexandria and Carthage; albeit deciding, this legacy left few traces, as it was later occulted by Greek and Latin influence.

- **The Greek and Roman legacy**, until the 7th century AD, left brilliant remnants in Leptis Magna and Sabratha; as Oea was the smallest of the three cities, and as it remained the only living city, with new buildings and streets covering the old urban fabric, modern Tripoli has kept few traces, apart the arch of Marcus Aurelius; but Greek-Roman architecture, sculpture and urban design are still well known through Leptis and Sabratha.

- **The Arab legacy**, which forms were fixed mainly during the period of united Islamic empires (Umayyad and Abbasid empires, 7th to 13th century AD) can be considered as the major one, as it shaped religion, society, architecture, arts and crafts: its visual identity is given, among others, by buildings (mosques, caravanserais…), architectural

Beduin and Berber legacy: dunes, oasis, palm groves.

Mediterranean legacy: narrow streets and vine pergolas.

motives (horseshoe arch, Mousharabiyya), geometric patterns, colours of zelliges (enamelled terra cotta tiles, with emerald green, cobalt blue, golden yellow…).

- **The Turkish or Ottoman legacy**, established from 14th to early 20th century AD, introduced spire-minarets and 19th-century houses in the old medina.

- **The Italian legacy** (1911-1943) recalls a painful page of Libyan history, but also left architectural and urban forms of great quality, especially perspectives, gallerias and arcades, that deserve being preserved and are an interesting model of urban design for a Mediterranean city.

- **The African** input is the most recent, with an important immigration from Sub-Saharan Africa, but is now also constitutive of modern Tripoli's identity; the African visual identity is partly linked with colour, a different range from Arab palette: a combination of earth colours (brown, black, reddish brown, brick red, ochre, grey…) with high colours of textile dyes (vermilion red, primary yellow or green, indigo, purple…).

These references should not be used literally and copied directly, but they should be re-interpreted in a contemporary architectural and landscape design. For instance:

- Continuous facades with arcades can be built along some section of the Green Belt;

- A colour chart for street furniture can be established, inspired from characteristic colours of Arabic art (emerald green, cobalt blue, golden yellow) or of African art (brown, black, reddish brown, brick red, ochre, grey, vermilion red, primary yellow or green, indigo, purple…);

- Pergolas can be planted over narrow streets, but also over car parks, where the shade will provide not only user comfort, but also a reduction of the air pollution duo to evaporation of various car components (petrol, oil, rubber) under the heat.

- According to the location, plants species and shapes characteristic of the desert (palm trees, especially in coppices) or of the Mediterranean (cypresses, pines, olive trees) can be used (see below, Characteristic plant shape types).

- Urban patterns can be taken from Leptis Magna and Sabratha (such as the amphitheatre and horse race track overlooking the sea, in a situation similar to Tripoli's cornice).
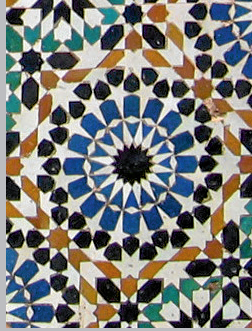
Arab legacy: zelliges,
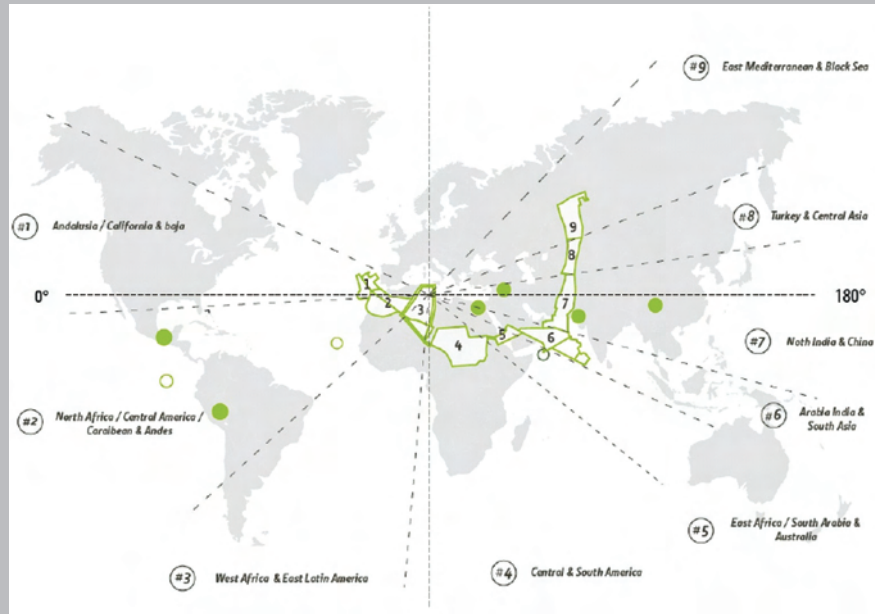geometric patterns, mosques.

Italian legacy: gallerias, arcades.

Turkish or Ottoman legacy: spire minarets.

African legacy: earth colours and bright colours.

Geographical references of Green Belt and sea front.

Geographical references connecting to the world

The landscape architects' team for the Green Belt (Clément-Coloco-JNC) have proposed to plant each sector with species from the part of the world in the same direction: Central and South Americas on the Western part (Souk Al Talat), Sahara and Africa for the Southern part, Australia for the South-eastern part, Asia for the Eastern part.

The proposal here is to extend this principle to the Northern fringe, along the coastline, facing the Mediterranean Sea: the new gardens planned in this sector (East and West of Old Medina) could be planted with Mediterranean species, in connection with Western Mediterranean on the West side (Atlas, Spain, Italy) and with Eastern Mediterranean on the East side (Balkans, Anatolia).

Characteristic plant shape types

The identity of a place is partly given by shapes that are easily memorised and recognised. These identifiable shapes can be those of the site (Rio, Venice, Cape Town…), the general skyline of the city (Manhattan, Hong Kong, Dubai…), a public space giving view on urban facades (often a waterfront, as Algiers' cornice or Paris river Seine banks, but also streets as in Haussman's districts of Paris) or a single monument, whether a building or a sculpture (Giza Pyramids, Paris Eiffel Tower, Peking's Forbidden City, Venice's Palazzo Ducale and Campanile, Istanbul's Saint Sophia, Sydney Opera House, Rio's Corcovado, Geneva's water fountain…).

They can also be monumental trees (such as Tenerife's dragon tree or Freetown cotton tree), or a particular shape of trees or other plants repeated in the place and more abundant than in others (Rome's umbrella pines, cherry blossoms in Japanese cities and Washington…). Even people who are not specialists in botany can identify some tree species or groups of species (umbrella pines, cypresses, palms…) or a

Coppices of red gum trees (Eucalyptus).

Lines of dense small-leaved ficus (F. nitida, F. retusa).
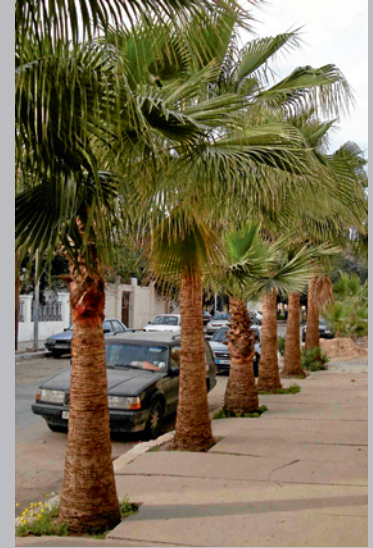

Lines of palm trees (Phœnix, Washingtonia).

particular shape given to trees by planting layout (lines, groups…) or by pruning (formal square-angled rows, free shapes, coppices…) or shapes of other plants, such as pergolas.

Some shapes found in Tripoli, with a landscape interest and not widely used elsewhere could be extended in the city, especially:

*   Coppices of palm trees, recalling oases, can be made with decorative species; they are typical of oases as date palm is able to regenerate from the base of the stem; the Phœnix canariensis, with a similar aspect, does not have this property, but other decorative species do have it, especially Washingtonia (as in front of As Saraya Al Hamra).

*   Pergolas, which can shade many places, including car parks, giving an image of nature without taking space on the ground.

Coppices of palm trees (Washingtonia).
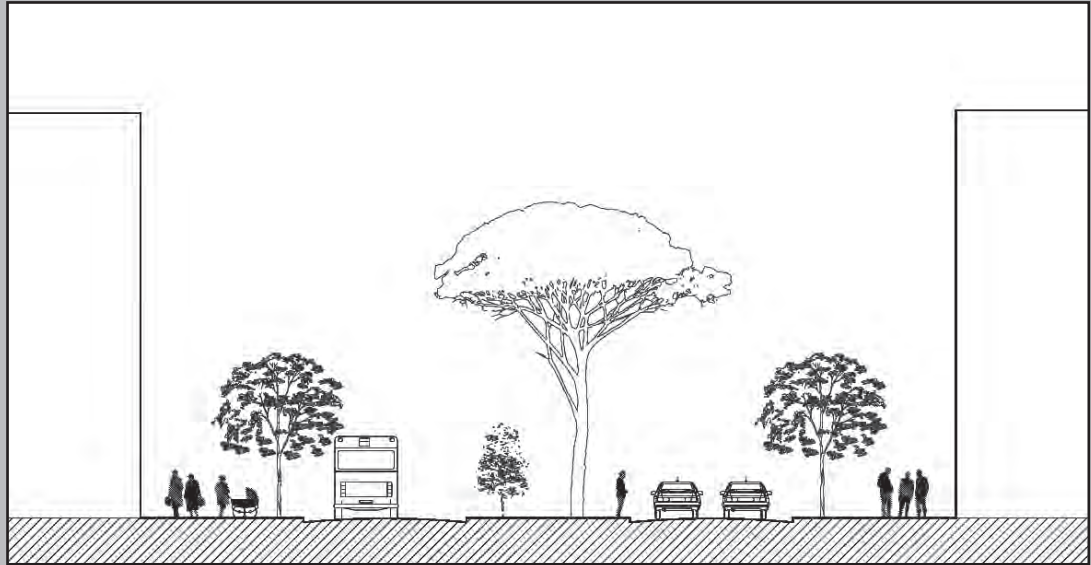
An example of a boulevard
(central planted reservation, dissymmetry):
Possible layout of Al Jalaa road.

Layout of trees according to their location

The plant shapes or layout can also be characteristic of a particular type of location in the city, helping one to know where he is and where he goes.

Especially, the two kinds of major streets can be differentiated by plantations:

- **The avenues, that are the radial ways**, are often straight and offer axial perspectives (see below); they are enhanced and identified by a symmetrical design and side plantation, leaving axial view;

- **The boulevards, that are the circular ways, have** shorter straight alignments and more curves; they sometimes have a central reservation between their lanes; they are enhanced and identified by an asymmetrical design and plantation on the central reservation, as it is the case on some sections of Al Jalaa road, along the former Italian wall.

An example of an avenue (central opening, plantations on both sides, symmetry): Possible layout of Fashlum road (with the addition of Eastern green connexion on one side).

Pergola of vine (*Vitis vinifera*) in the Old Medina.

**Tripoli City Centre's
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Green and Open Spaces Proposed Long-Term Situation

Mediterranean sea

Planetarium
Culture Palace
Horse Race Track
Al Kubra Garden
Sidi Bukr Cemetery
Al Fateh Tower Gardens
Central Garden
Ghazal Garden
Bab Tajura Cemetery
Sidi Mounayder Cemetery
Ad Dahra Square
Qasr Ash Shaab
El Hani Cemetery
Maydan At Tahrir
Central Hospital Gardens
Christian Cemetery
Islamic Museum Garden
Souk al Talat garden
An Nasr Forest
Agricultural Research Center
Sidi Al Masri Former
Al Houriyya Garden
Zoo

Public parks and gardens	Green belt
Institutional parks and gardens	National parks
Cemeteries	Sport grounds
Road green spaces	Streets with tree lines (avenue)
Public place	Streets with tree lines (boulevard)
Public promenades	Protection zone
Public beach	New gardens to locate
Pedestrian walkway	250 m radius from accessible gardens
Green connections	
Sectors of public space projects	

0 100 200 300 400 500 m   1 km

N

Recommendations According to the Typology

Public green spaces managed by the Green Spaces Department

(1) Public gardens
- Maintain with a purpose of public access, landscape quality, biodiversity enhancement and water saving.
- Improve maintenance of neighbourhood gardens.
- Create new gardens in gap districts, mainly on former agricultural and rural fallow lands.

(2) Road green spaces
- Reduce their number and total area, by redesigning street network).
- Maintain with a purpose of landscape quality, biodiversity enhancement andwater saving.

(3) Street trees and vegetation
- A complete network of tree lines along the main streets, with continuous rows all along these streets.
- A higher diversity in species and their combination; for instance, rows of coppices if there is enough space, or alternate planting of high trees (such as palms) and broad trees (such as flame trees).
- A more pedestrian-friendly pruning, with lowest branches at 2 metres or more from

the ground, and a better maintenance of the sidewalk paving, in order to allow pedestrians to walk under the trees.

Other green semi public or private spaces

(4) Institutional parks and gardens
- Keep public access where it currently exists.
- Maintain with a purpose of public access, landscape quality, biodiversity enhancement and water saving.

(5.1) Private gardens
- Protect their status of open and planted spaces through the zoning regulations.
- Encourage users to enhance landscape quality and biodiversity and to save water through the use of drought-resistant plants, shading, etc.

(5.2) Private vegetation out of gardens
- Encourage planting vines on walls and trees in left spaces.
- Plant pergolas in an extensive way on most car parks.

Large peri-urban green spaces (Green Belt)

(6.1) Forest

(6.2) Former agriculture research centre

(6.3) Parks

No specific recommendation, as those spaces are covered by the Green Belt project.

Other urban open spaces (undeveloped facilities)

(7) Cemeteries
Turn into landscaped cemeteries and adapt them to allow access to public in search of quietness: planting trees—those usually found in cemeteries, such as mulberry tree (Morus sp.), carob tree (Ceratonia siliqua), but also evergreen trees, such as cypresses or Ficus—, shrubs and flowers, providing basic facilities (benches, footpaths), installing at every entrance noticeboards recalling the regulations (no noise, no games…).

(8.1) Sports grounds
Plant trees and-or vines around to provide shade and landscape with a low land occupancy; a minimum ratio of landscaped areas or of trees is to be given in the land use regulations.

(8.2) Other bare grounds
Same recommendation as for sports grounds if those spaces are to be left, but many of them are temporary.

Rural or vacant spaces

(9.1) Plant nurseries
- If possible, keep in place and enhance with fence and buildings of a higher quality, in order to make them part of the green spaces network of the city.
- If moved, find new locations where theycan still contribute to the urban landscape.

(9.2) Agriculture

(9.3) Fallow, rural
- Transform into urban green spaces with a preservation of the maximum possible amount of existing trees and shrubs, which can provide mature trees as soon as a new garden is open.
- Preserve structures inherited from the rural past (hedges, vegetation on public space, walls, low buildings, unaligned streets without sidewalks…) which provide a diversity of views, a quality of landscape and a recall of the site's past.

(9.4) Fallow, urban
No specific recommendation, as those spaces are temporary, to be either developed or changed into green spaces.

Water and banks

(10.1) Coastline
- Complete a continuous pedestrian promenade along the sea, overlooking the beach or the harbour.
- Design urban facades on this promenade keeping in mind that they will become an iconic view of tomorrow's Tripoli.

(10.2) Wadi (Al Majnîn)
Use the large width given by the wadiand the neighbouring streets (70 to 100 m from one façade to the opposite) to create a linear green space with large-size trees (in the Green Belt project, a linear section of the wadi will bear a section of the "Green Line" which is the continuous promenade along the Green Belt).

Non green public spaces

(11.1) Streets

(11.2) Roads and highways
Redesign street space to make it more urban and pedestrian-friendly.

(11.3) Squares, circuses, piazzas
- Wherever possible, enhance throughprojects on their whole area and on surrounding facades, designed by urban planners, landscape architects and architects.
- If not, at least increase the amount of trees (a minimum ratio of landscaped areas or of trees is to be given in the land use regulations); an urban square is not necessarily planted, but this constraint should be removed only if there is a design project on the space.

Waterfronts

Waterfronts are of two kinds:

- Seafronts, with a large space, often a beach or an esplanade, and long-distance views;
- Wadi fronts, with shorter space and views.

Waterfronts, especially seafronts, are key places of a city, as they offer distant views on and from the city, enhanced by the reflections in the water:

- The views on the city, with the skyline from distance and the facades from closer views, strongly contribute to its identity, even if maritime cities are almost no longer accessed to by sea;
- The views from the city benefit (for seafronts) from the quality of the seascape and (for all) from the space and from the quality of the setting of public space at the foot of the buildings.

This implies two kinds of projects, on the buildings and on the public space:

- This space between the urban facades and the water deserves a public access, with a continuous pedestrian promenade along the sea, allowing all Tripolitans to benefit from the view, and a high-quality design, by skilled landscape architects and planners, with high-standard materials and plants.
- The urban facades on this promenade also need a high-quality design, by skilled architects, keeping in mind that they will become an iconic view of tomorrow's Tripoli.

Waterfronts of Tripoli comprise several sections, with adapted projects:

- The Cornice, with rows of trees along the upper boulevard (Al Fateh Street) and under which parks are being planted or planned; the presence of the expressway here is problematic, as it cuts the Cornice from the sea;

- The harbour, with green spaces of good quality on the city's side of the expressway (Ghazala, Kubra) and, on sea side, a pedestrian promenade that would need enhancement; here too, the expressway cuts the city from the sea (indeed, pedestrian do cross it at ground level at a high risk, in spite of underground passages, that are not very attractive);
- The West seafront, over the beach, with an ambitious urban, architectural, and landscaping project;
- The Wadi Al Majnîn, with a project in the framework of the Green Belt.

Perspectives

Axial perspectives, given by straight alignments, are another important element of urban design, enhancing views on monuments or other urban landmarks, or on distant horizons.

Tripoli does not possess many major perspectives, but some do exist and should be preserved, enhanced, restored or completed:

- The streets converging on the Green square;
- Several streets directed on the sea, perpendicular to the shoreline;
- Al Jumhuriyya avenue, with the longest straight alignment in Tripoli, ending at a short distance from the sea.

The perspectives must be preserved, by conserving their straight alignment and avoiding objects in their axis (billboards, trees, buildings…) – only monuments with dimensions keeping the openness of the view have their place. They are usually enhanced by a symmetrical design and by continuous sides (facades or tree rows), that focus the view on the axis.

The perspective with the highest stake is Al Jumhuriyya avenue, one of the main axes of Tripoli, with a project of increasing urban density on its sides. This project should preserve and enhance the perspective, by the design of facades and by side plantations (avoiding central plantations). The crowning of this project could be the opening of the perspective on the sea, by redesigning the crossroads and interchanges at its eastern.

Redesigning street space to make it more urban and pedestrian-friendly

In a sustainable development vision, with the mass transit that are planned, the trend to car dominance should be reversed. The road network can be redesigned so as to become more urban:

- **Street width:** Reducing the number of lanes on many streets, in order to broaden the sidewalk, and to plant rows of trees where there are not.

- **Junctions of urban roads, currently with dual-level motorway-type interchanges:** Replacing interchanges by ground level urban crossroads; reuse of the motorway bridges for pedestrian promenades.

- **Junction of urban road with a motorway or an expressway:** Keeping a dual-level interchange but if it is a cloverleaf interchange, replace it with a rhomb interchange or a dual-level roundabout (as it exists for the interchange of Al Fateh Street – the Cornice boulevard – with the coastal expressway).

- **Roundabouts:** Suppression of access triangles, redesigning the access streets with both sides parallel to the central axis; central circle at the crossing ox street axes; redesigning

the surrounding façades to create an urban circus, not a mere crossroad.

- **Perspectives:** Restoring, extending and-or enhancing perspectives, with aligned facades and rows of trees on both sides and monuments in the axes

- **Street corners:** Crossroads with small-radius curves, that make vehicles turn slowly and provide pedestrians with short road crossings.

- **Regulation of traffic:** with traffic lights, that admit a higher vehicle capacity than roundabouts and allow pedestrians to cross safely.

- Mass transit: Introducing tramway lines in main avenues, with a high standard urban, architectural, landscape, furniture and light design.

These changes would allow the recovering of a very large area, which can in many places be allocated to pedestrians (including widening sidewalks) or accessible green spaces.

PARKS AND GARDENS

Key figures

Number of parks and gardens : 52
Total area : 68 ha

From large parks on the city scale (the Zoo)…

… to small district squares, used by the neighbourhood (Shawki).

Localisation of major gardens.

Description

Tripoli has some urban parks in its city centre (Qasr Ash Shaab, Kubra, Ghazala…) or in the green belt (Zoo), small gardens and district squares. These open spaces are generally well designed, shaded by numerous trees, provided with benches and sometimes with children's games, made of strong materials (pavements, low walls, benches made of stone or concrete, metal furniture…). Some parks enclose small businesses (cafés, trinket merchants). However, apart from major parks, showcases of the city, public gardens' maintenance is often inadequate: this appears in pavements, fences and furniture in poor state and in the quasi absence of shrubs and flowers.

Uses

Free and open access to the public, for the most part (even if they are fenced) without any time schedule restriction apart from the few most cared large parks (zoo).

Plant species

Trees
Schinus molle (Brazilian pepper tree)
Ficus nitida, F. retusa, F.microcarpa, F.Hawaii, F. benjamina, F. religiosa (Ficus)
Eucalyptus (Gum tree)
Cupressus (Cypress)
Phœnix canariensis (Canary Palm tree)
Pinus halepensis (Aleppo Pine tree)
Delonix regia, Poinciana regia (Royal Poincenia or Flame tree)
Bombax (Baobab)
Chorisia (Silk Cotton tree)
Washingtonia robusta, W. filifera

Others
Acacia longifolia
Policyana
Cæsalpinia gilliesii (Yellow flame tree)
Interbolium
Jacaranda acutifolia, J. mimosifolia (Blue Jacaranda)
Albizzia julibrissin (Acacia of Constantinople)
Acacia nidosa
Practonia
Melia azedarach
Bauhinia

Status, management, future

Owned by the city, parks and gardens are managed by the municipal green spaces department.
Existing gardens are not destined to major changes. However some have recently be replaced by real estate transactions (Borj Al Fateh), which should be avoideed, even if it is planned to replace them with an at least equivalent surface. Indeed, it takes several decades to get mature trees, quality environment and a significant biodiversity. A bare ground cannot replace a garden.

Keep in mind

• Large urban parks well designed, well maintained and very attractive.
• District gardens well designed but often poorly maintained.
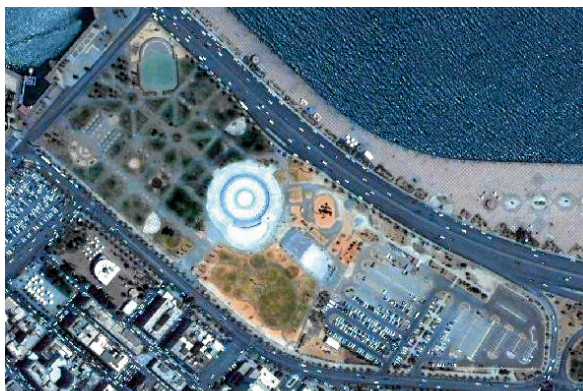• A lack of green spaces in some districts.

← 1 0 0 0 m →
Zoo.

← 5 0 0 m →
Ghazala (Gazelle) Garden.

← 6 0 0 m →
Kubra Garden.

Numerous school visits to the zoo are among the parks functions.

Cafés, trinkets, knick-knacks and other businesses liven up public gardens (above, Zoo; below, Jnan An Nawar).
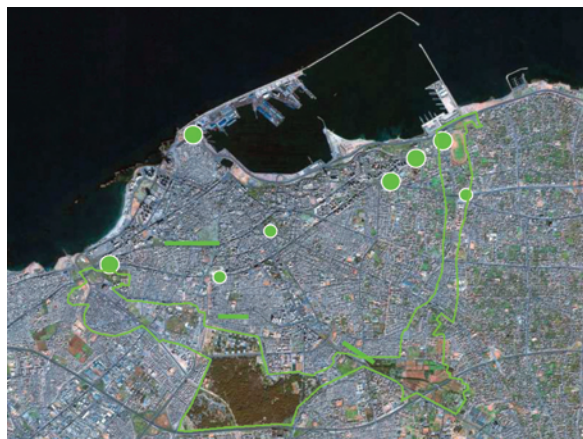
ROAD GREEN SPACES

Key figures

Number of elements: around 50
Total area: 17 ha

Roundabouts often include fountains or other decorative elements ..

Large islets are fenced, landscaped and used as gardens.

Localisation of major road green spaces.

Description

This category includes green spaces laid out on the parts of the street space that are not devoted either to the street nor to the sidewalk. It consists of central islands of roundabouts and other important crossroads (*jazirat*), triangular islets (*muthalathat*) separating the lanes at crossroad approach, and slopes (*munhadarat*) of expressway embankments or clearings. Roundabouts often include fountains or other decorative elements. The largest are fenced, landscaped and used as gardens.

Uses

The uses identify two contrasted categories : islets accessible to the public, which are actually gardens surrounded by streets, and islets and triangles purely decorative and unfit to public access.

Plant species

Large trees
Schinus molle (Brazilian pepper tree)
Ficus nitida, F. retusa, F. microcarpa, F. Hawaii, F. benjamina (Ficus)
Eucalyptus (Gum tree)
Cupressus (Cypress)
Phœnix canariensis (Canary palm tree)
Delonix regia, Poinciana regia (Grand Flame tree or Royal poinciania)
Washingtonia robusta, W. filifera

Small trees and shrubs
Cæsalpinia gilliesii (Yellow Flame tree)
Jacaranda acutifolia, J. mimosifolia (Blue Jacaranda)
Albizzia julibrissin (Constantinople Acacia)
Practonia
Melia azedarach

Status, management, future

Islets and street triangles belong to the public realm. Their management is ensured by the Municipality Green Spaces Department. Changes are possible towards genuine public gardens : on the one hand, some large road green spaces not completely isolated from the street or roads carriageways can be made accessible (slope of An Nasr Street, interchange loops accessible from under viaducts ways); on the other hand, if the dominant position and speed of motor vehicles are curbed, ground may be gained for gardens at the expense of carriageways (tighter bends, elimination of some access ways…).
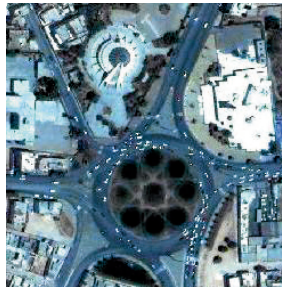
Keep in mind

- Road sides and junctions often landscaped.
- Some road green spaces are accessible, and used as public gardens; others could become accessible.
- Rebalance the sharing of street space to the benefit of pedestrian areas and green spaces.

← ——————— 500 m ——————— →
Cornice Al Jumhuriyya and expressway interchanges.

← ——————— 800 m ——————— →
An Nasr Street.

←100m→
Al Qods Roundabout.

←100m→
North of Old Medina.

← ——————— 800 m ——————— →
Sidi El Masri gateway sector.

A well-designed urban landscape but an irregular maintenance.

Some roadsides could be converted into public gardens
(above: An Nasr Street; below: Al Jumhuriyya Street interchange in front of Iranian Embassy).

STREET TREES

Key figures

Length of streets bordered with trees:
50 to 60 km

Regular, dense and well maintained
alignments (along Jnan An Nawar garden).

Palm trees for the perspectives (along Kubra Garden).

Location of main streets bordered with trees.

Description

Most of Tripoli main streets are shaded by regular, dense, and well maintained tree lines. The majority of these alignments comprises of ficus (F. nitida, F. retusa, F. microcarpa), locally of palm trees (Phœnix canariensis), where a perspective effect is sought.
The adopted species and shapes are typically Mediterranean, but not specific to Tripoli. Ficus alignments are found in Beirut or Casablanca, promenades bordered with palm trees recall the sea fronts in Nice, Cannes or Larnaca.
In addition to lined trees, street and road trees include those in squares (outside the green spaces specially planted in squares); in this case, the diversity of species is much larger.

Uses

Enhancement and shade of the streets.

Plant species

Main
Schinus molle (Brazilian pepper tree)
Ficus nitida, F. retusa, F. microcarpa, F. Hawaii, F. penjamina (Ficus)
Eucalyptus (Gum tree)
Cupressus (Cypress)
Phœnix canariensis (Canary Palm tree)

Others
Pines
Delonix regia, Poinciana regia (Flame tree or Royal Poinciana)
Albizzia julibrissin (Constantinople Acacia)
Practonia
Melia azedarach
Bauhinia
Washingtonia robusta, W. filifera

Status, management, future

Trees on roads belong to the public realm. Their management is ensured by the municipality green spaces department, i.e. with horticular know-how and not as a simple street furniture. Since only main roads are currently planted with trees, many others might be planted as well, with species adapted to the size of each road, and with a greater diversity of trees than those currently used.

Keep in mind

- Regular alignments and in good condition, shaping the urban landscape.
- Lack of diversity and local identity.
- Important potentials to plant outside the currently planted roads.

— 500 m —
Palms (West of Ghazala Circus) and Ficus (East).

— 500 m —
Cornice.

— 500 m —
Streets around Qasr Ash Shaab Garden.

Ficus are the mostly used.

Palm trees are characteristic of the urban landscape with their regular shapes.

After Ficus and Palms, the most used species is the Brazilian Pepper tree (*Schinus molle*).

Ficus are often pruned in regular shapes.

INSTITUTIONAL GARDENS

Key figures

Institutional gardens
Number of plots listed: 10
Total plot area: 120 ha
Total garden area: around 60 ha
Institutional non planted grounds
Number of plots listed: 5
Total plot area: 10 ha
Total open space area: around 5 ha

The hospital gardens.

Localisation of main institutional gardens.

Description

In this category are included all the green spaces of public facilities (hospitals, universities, governmental buildings…) or commercial facilities (hotels, shopping malls). Publicly or privately owned, their main characteristic is that they are open to public for another purpose than garden visit. For most of them, the public access is not limited in practice to the use of the facility, and these gardens can be used as resting and promenade places. However, their use by the public may differ greatly. At most, their accessibility is complete and they are considered as real public gardens (listed, therefore, outside the present category), such as the Qasr Ash Shaab Garden, situated around the Library; at least, entrance is controlled or restricted by a clearly private aspect such as outdoor areas of major hotels.

Uses

Access meant for people attending the facility, but usually not controlled.

Plant species

Trees
Araucaria bidwillii (Bunya pine)
Bombax (Baobab)
Chorisia (Silk-cotton tree)
Cupressus (Cypress)
Delonix regia, Poinciana regia (Grand Flame tree or Royal Poinciana)
Eucalyptus (Gum tree)
Ficus nitida, F. retusa, F.microcarpa, F.Hawaii, F. benjamina (Ficus)
Phœnix canariensis (Canary palm tree)

Others
Schinus molle (Brazilian pepper tree)
Washingtonia robusta, W. filifera

Shrubs
Acacia longifolia
Acacia nidosa
Albizzia julibrissin (Acacia of Constantinople)
Bauhinia
Cæsalpinia gilliesii (Yellow Flame tree)
Interbolium
Jacaranda acutifolia, J. mimosifolia (Blue jacaranda)
Melia azedarach
Policyana
Practonia

Status, management, future

Each institutional garden is usually managed by the public or private manager of the building it surrounds. Some of these gardens, because of their size and quality landscaping, could be formally recognised as public green spaces for districts lacking of gardens. Their use as green spaces must of course respect the constraints related to the central facility (e. g. quietness around the hospital).

Keep in mind

• Spaces well maintained with often a quality landscaping.
• A potential for complete opening to the public in order to provide green spaces to districts lacking of them.

— 500 m —

The Hospital's gardens (accessible, above); the official guests residence (non-accessible, below).

Institutional gardens are often of a high value by their design, their diversity and the age of their trees.

The Arts and Crafts School yard, a magnificent Andalus-style garden.

PRIVATE GARDENS

Key figures

Unlike public gardens and road green spaces, the area of private gardens is not calculated.

A well planted and well maintained condominium garden (Zawiyat al Dahmani).

Private gardens have many uses, including production of decorative plants.

Localisation of some private gardens.

Description

This category includes individual or collective housing gardens, and more generally all gardens non open to public. When these gardens are in the middle of a block, invisible and non open onto the road, they do not contribute much to the green fabric of the city (apart from their contribution to biodiversity and fixing various pollutants); but when they can be seen from the public road, or more or less accessible, they have to be taken into account.

Uses

Access normally reserved for residents and their visitors, yet often free in collective housing.

Plant species

Trees
Araucaria bidwillii (Bunya pine)
Cupressus (Cypress)
Delonix regia, Poinciana regia (Flame tree or Royal poinciana)
Ficus nitida, F. retusa, F. microcarpa, F. Hawaii, F. benjamina (Ficus)
Phœnix canariensis (Canary Palm tree)
Washingtonia robusta, W. filifera

Small trees and shrubs
Acacia longifolia
Acacia nidosa
Albizzia julibrissin (Constantinople Acacia)
Bauhinia
Cæsalpinia gilliesii (Yellow Flame tree)
Interbolium
Jacaranda acutifolia, J. mimosifolia (Blue jacaranda)
Melia azedarach
Policyana
Practonia

Vines (sensu lato)
Actinidia (Kiwi)
Ampelopsis brevipedunculata (Peppervine)
Bignonia (= Campsis) grandiflora (= chinensis), B. (= C.) radicans (Crossvine)
Bougainvillea
Hedera helix, h. canariensis (Ivy)
Ipomœa purpurea (Morning glory)
Jasminum grandiflorum, J. azoricum (Jasmine)
Lonicera japonica, L. caprifolium (Honeysuckle)
Passiflora (Passion flower)
Polygonum (= Fallopia) *aubertii*
Vitis vinfera (Vine, sensu stricto)
Wisteria sinensis

Status, management, future

Private gardens are managed by their owner, free of charge for the community. They must be protected by urban regulations in order to prevent their destruction by real-estate projects. Whereas densification can be useful to curb urban spral, it should not be done at the expense of quality green spaces. Consequently, an inventory of these gardens and of their interest is to be carried out.

500 m

From above, private garden appear as dark green spots.

Keep in mind

- Spaces often with a landscape quality, unknown because usually they are not open to the public.
- Spaces to be protected.

With their vegetation higher than the walls, sometimes overlapping on the streets, private gardens participate to the quality of public space.

PRIVATE VEGETATION

Key figures

Unlike public gardens and trees alignment, private vegetation is not recorded and listed; moreover, it is difficult to do it for the vegetation planted outside the gardens, because its forms and kinds are so much varied. A mapping of the vegetation index could be elaborated from satellite images, giving an idea of plant density in each district.

A tree in a courtyard is enough to enliven the scene.

The pergola, a typical Mediterranean form and an inexpensive shade.

Sectors with a higher amount of private vegetation.

Description

Private vegetation is very present outside gardens, in spaces that are not fully allocated to it (in the same way that public vegetation includes alignment trees outside parks and gardens). This private vegetation has various shapes : narrow strips in front of villas laid slightly off the streets, with tree branches extending above the sidewalk or the pavement; trees and shrubs planted and maintained by local residents on the public space in front of their house, vines climbing on facades or separating walls; vines on pergolas overhanging the public space (even entirely covering some streets of the Old Medina).

Functions

Enhancement, shade.

Plant species

Almost all species of private gardens may be found on the edge of public realm and participate in the quality of the latter; vines are specially adapted, due to the small space they take.

Trees
Araucaria bidwillii (Bunya pine)
Cupressus (Cypress)
Delonix regia, Poinciana regia (Flame tree or Royal poinciana)
Ficus nitida, F. retusa, F. microcarpa, F. benjamina, F. religiosa (Ficus)
Phœnix canariensis (Canary Palm tree)
Washingtonia robusta, W. filifera

Shrubs
Acacia longifolia
Acacia nidosa
Albizzia julibrissin (Constantinople Acacia)
Bauhinia
Cæsalpinia gilliesii (Yellow Flame tree)
Interbolium
Jacaranda acutifolia, J. mimosifolia (Blue jacaranda)
Melia azedarach
Policyana
Practonia

Vines (sensu lato)
Actinidia (Kiwi)
Ampelopsis brevipedunculata (Peppervine)
Bignonia (= *Campsis*) grandiflora (= *chinensis*), B. (= C.) radicans (Crossvine)
Bougainvillea
Hedera helix, h. canariensis (Ivy)
Ipomœa purpurea (Morning glory)
Jasminum grandiflorum, J. azoricum (Jasmine)
Lonicera japonica, L. caprifolium (Honeysuckle)
Passiflora (Passion flower)
Polygonum (= Fallopia) *aubertii*
Vitis vinfera (Vine, sensu stricto)
Wisteria sinensis

The villas districts are those where the greatest amount of private vegetation overlapping on the public realm can be found.

Status, management, future

Private vegetation overstepping on public space, or even just visible from it, presents the great advantage to participate in the quality of the urban landscape, of the environment and the nature in the city, without any cost to the community. It should be encouraged in its diversity and abundance and limiting restrictions to the indispensable (pruning to protect aerial wires, removal of dead or unstable branches, but allowing the overrun on public spaces). This type of vegetation ca even be developed, including vines, climbing or in pergolas. Pergolas can be created on many public spaces, including car parks. Climbers and green roofs (so far scarce) can also be encouraged.

Keep in mind

- A significant contribution to the quality of public
- space, at no cost to the community; to be encouraged.
- New forms to promote: pergolas over car parks, green roofs.

An isolated palm tree in Al Jumaah.

A tree overlapping on the street in Garden city.

Vines on walls have a high scenic value, especially if they bring colour, such as Bougainvillea.

CEMETERIES

Key figures

Number of main cemeteries : 4
Total area: 27 ha

The 3 major cemeteries of Tripoli: Sidi Munayder (above); Sidi Bukr (centre); El Hani (below).

Description

Cemeteries are regarded as open spaces due to their non developed and non surfaced character, as well as to their vegetation, even their primary purpose is not to be green spaces: abundant grass and flowers in spring and some trees.

Use

Cemeteries are not supposed to be visited for other reasons than funerals, visit and maintenance of graves. They are closed and guarded, hence limiting other functions. But theoretically, nothing prevents entering them and staying, if the calm and the reverence of the place are respected.

Plant species

Trees
Morus sp. (Mulberry tree)
Ceratonia siliqua (Carob tree)

Herbaceous layer
Wild meadows

Status, management, future

Cemeteries are run by the Waqf, and if they are closed down, their function cannot change before a long period (40 years). Transforming them into a green spaces for relaxation, walk and biodiversity, without games nor shops, is compatible with the graves maintenance and the respect of the place's character. This transformation can even be done in cemeteries still in use, as it is the case in many countries, in various climate and cultural contexts: Northern countries (England, Scandinavia…) but also Mediterranean countries (Spain, South of France, Greece, Egypt…). This transformation into a "landscaped cemetery" mainly requires planting trees, shrubs and flowers, and installing some basic facilities (benches, footpaths…).
The Christian cemetery: right, Commonwealth military cemetery; centre, former Italian military cemetery, now civil ossuary; left: disused part of Italian cemetery, that could become a public garden

Keep in mind

- Places of reverence and quietness amidst the urban hustle and bustle.
- Possible evolution into landscaped cemeteries, with other green space functions, compatible with the character and function of the place.

In spring, lush blooming meadows enhance the cemeteries.

The Christian Cemetery, an ensemble of a high architectural and landscape quality, with remarkable old trees, restored on a smaller area, the rest having a high potential of transformation into a public garden.

TREE NURSERIES

Key figures

Number of tree nurseries listed: 2
Total area: 1 ha

Intensive production for sale …

… offering at the same time the atmosphere of gardens (Bab Tajura).

Localisation of identified nurseries.

Description

Tree nurseries for decoration can be considered as an authentic form of green spaces, particularly interesting insofar as they fulfill two functions: spaces for the production of plants for marketing and spaces for biodiversity and landscape quality by themselves.

Uses

Space for production and display of products. Open to clients, but is free with no obligation of buying, as in every commercial space.

Plant species

Trees
Araucaria bidwillii (Bunya pine)
Cupressus (Cypress)
Delonix regia, Poinciana regia (Flame tree or Royal poinciana)
Ficus nitida, F. retusa, F.microcarpa, F.Hawaii, F. benjamina (Ficus)
Phœnix canariensis (Canary Palm tree)
Washingtonia robusta, W. filifera

Small trees and shrubs
Acacia longifolia
Acacia nidosa
Albizzia julibrissin (Constantinople Acacia)
Bauhinia
Cæsalpinia gilliesii (Yellow Flame tree)
Interbolium
Jacaranda acutifolia, J. mimosifolia (Blue jacaranda)
Melia azedarach
Policyana
Practonia
Yucca

Status, management, future

Apart from municipal tree nurseries providing the public green spaces, tree nurseries are considered as commercial enterprises for private sale. Since most of perennial plants are grown in containers, a tree nursery can be more easily moved than other types of green spaces if an urban plan deems another function of the soil to be a priority. In this case, attention must be given to find an easy-to-access place, visible to the public road if possible, where the tree nursery can assume its role as a green space in addition to that of a production space.

Keep in mind

- Space of production and landscape quality at the same time.
- Activities that can be moved, provided that new places are
- found where they can still contribute to the urban landscape.

←——————— 100 m ———————→

A tree, flowers and decorative shrubs nursery near Bab Tajura

Spaces for production and display of products.

Quality and diversity of plants atmosphere: trees, green plants, flowers.

AGRICULTURE

Key figures

Agricultural spaces zoned as future green spaces:
Number of parcels listed: 4
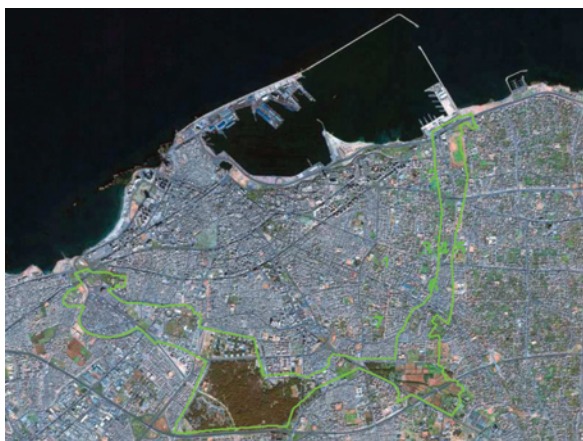Total area: 4 ha

Constructible agricultural spaces:
Number of parcels listed: 9
Total area: 10 ha

Olive grove surrounded by the city.

Urban agriculture is sometimes irrigated.

Localisation of some agricultural plots (enlarged on left).

Description

Some agricultural areas remain, surrounded by the urban fabric. It is most often precarious occupations : annual crops (cereals, market gardening or vegetables), sheep grazing (locally goats or cattle). Perennial crops (Date Palm Tree, Olive Tree, Prickly Pear Cactus or Indian Fig Tree) or semi-perennial (Castor Bean Tree) are plantations remnants that were installed in a then rural or suburban environment. Even when investments are made (irrigation ramps, animal shelters…), these are easily removable facilities, compatible with a precarious occupation.

Uses

Production spaces, mostly open areas and therefore accessible to the neighbourhood, for which they meet some green spaces functions such as: landscape, biodiversity, quietness, promenade…

Plant species

Trees
Phœnix dactylifera (Date Palm Tree)
Olea europæa (Olive Tree)
Ceratonia siliqua (Carob tree)

Shrubs
Opuntia ficus-indica (Indian Fig Tree or Prickly Pear Cactus)
Ricinus communis (Ricin Tree or Castor Bean Tree)

Herbaceous crops
Cereals
Market gardening or vegetables

Status, management, future

Regulations have zoned some of these areas as green spaces, which allows them to survive in the middle of the city. This protection and the presence of trees descending from old plantations are assets to make future green spaces in the districts that are often lacking of. Those which are not protected by zoning and possess an interesting vegetation should be protected. The transformation of such lands in urban green spaces should preserve this vegetation, which can provide mature trees as soon as a new garden is open. Beyond vegetation, some structures inherited from the rural past (hedges, low buildings, unaligned streets without sidewalks…) deserve to be preserved for the quality of their atmosphere. This preservation requires a fresh look at rural areas hitherto regarded as less noble than urban green spaces.

Keep in mind

- Still productive spaces within the city, which ensure their management.
- A high potential for creating new green spaces with an adult vegetation, provided the traces and character of an agricultural space be preserved.

500 m

500 m

500 m

Agricultural plots in Fashlum area.

Livestock is also present, providing maintenance of open spaces.

Cultivated trees (mainly olive and palm trees) can decorate future public gardens created on these areas.

Opuntia (Indian Fig Tree or Prickly Pear Cactus) often makes hedges.

Some forms of rural land use (olive or palm trees planted on public spaces, hedges, low buildings, unaligned streets) remain in town.

FALLOW

Key figures

Fallows zoned as future green spaces
Number of parcels listed: 5
Total area: 2 ha

Constructible fallows
Number of parcels listed: 13
Total area: 13 ha

Fallows are dominated by date palms, castor bean trees, grass and other remnants of former cultivation.

Description

Fallows surrounded by the urban fabric are generally former agricultural spaces, where the presence of once grown species is observed. The lack of maintenance can give them landscape and biodiversity qualities pertaining to the development of spontaneous species. However, this lack of maintenance is also, more often than not, expressed by many degenerating elements: ruined constructions or fences, rubble dumps, sometimes illegal garbage dumps. The distinction is not always clear with agricultural spaces, mainly for grazed fallows.

Uses

Slightly used by people, except for grazing or occasional walks. The absence of maintenance leads to illegal use (especially garbage dumping).

Plant species

Formerly planted trees (see Agriculture sheet).

Status, management, future

Fallows are characterized by their absence of management. The presence of trees dating back to the rural past, and the wild species which appeared over time, gives them a strong potential to become the future green spaces in districts which often lack such spaces. Developing these sites into urban green spaces should preserve trees, thus offering adult trees once a new garden is open, and part of the wild vegetation, which contributes to the biodiversity and authenticity of these places. Development projects should then be preceded by an accurate inventory of existing plant species and forms.

Keep in mind

- Havens of biodiversity.
- A usually unpleasant aspect due to the absence of maintenance.
- A strong potential to create new green spaces with an adult vegetation and a significant biodiversity, provided that a large part of spontaneous or formerly cultivated species be preserved.

500 m

Fallow plots around Bab Tajuraa.

Fallows often suffer illegal dumping.

A large fallow close to the see, besides the Planetarium, that could be integrated in a green spaces network.

Green and Open Spaces Location (Existing & Proposed)

Mediterranean sea

Planetarium
Culture Palace

Al Kubra Garden
Sidi Bukr Cemetery

Al Fateh Tower Gardens

Central Garden

Sidi Mounayder Cemetery

Ghazal Garden

Bab Tajuraa Cemetery

Qasr Al Shaab
Dahra Square

Maydan Al Tahrir

Christian Cemetery

El Hani Cemetery

Central Hospital
Gardens

Islamic Museum
Garden

Souk Al Talat garden

An Nasr Forest

Zoo

Sidi Al Masri Farmer
Agricultural Research Center

Al Houriyya Garden

Legend:

Existing public parks
and gardens

Proposed public parks
and gardens

Institutional parks
and gardens

Cemeteries

Agriculture, fallow
and vacant open spaces

Green belt

National parks

Public beach

0 100 200 300 400 500 m   1 km   N

List of Existing and Proposed Open Spaces in Tripoli

Code: refers to map of green and open spaces
location (existing and proposed situation).

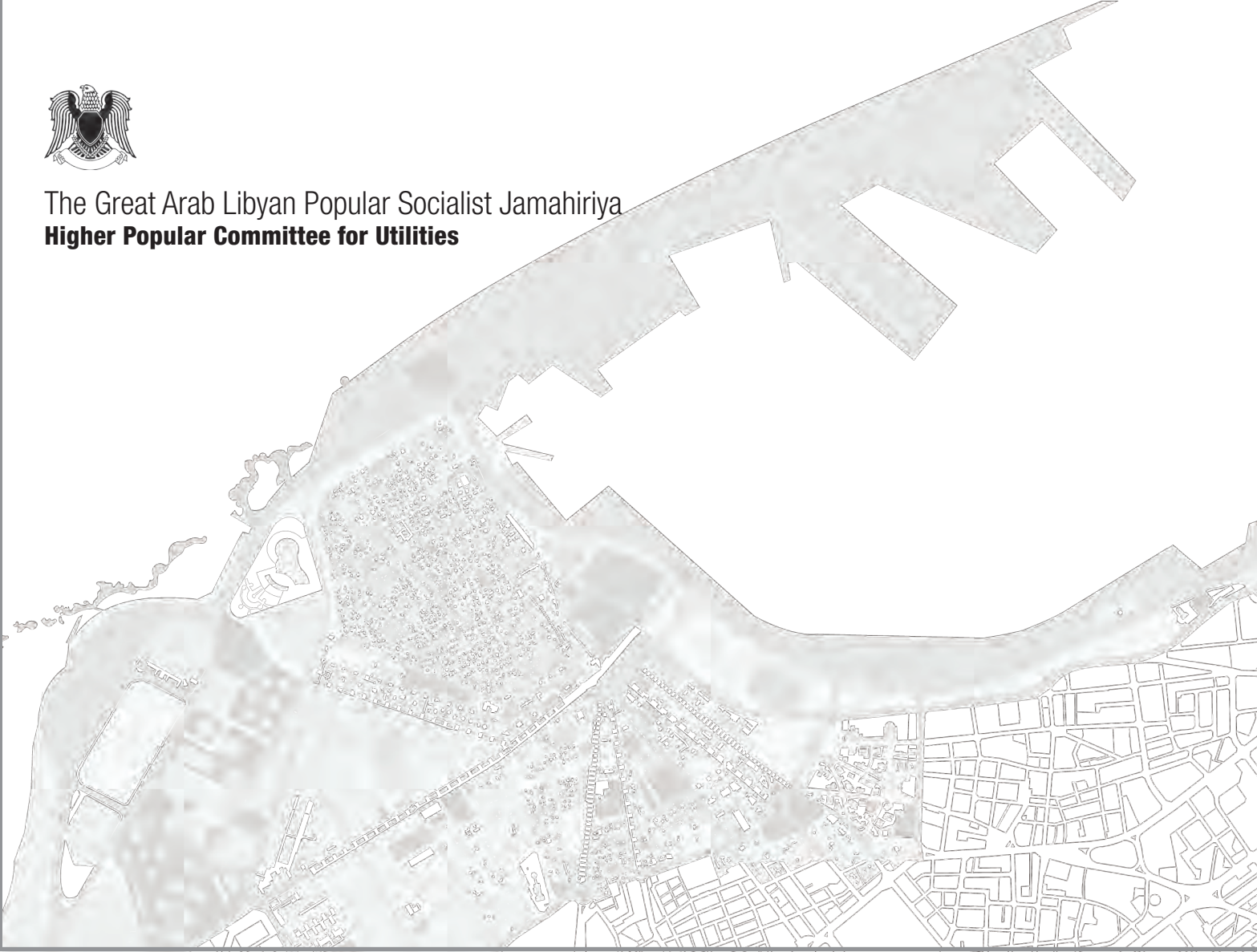| Code	Name or location	Area (ha)	Current use	Proposed use
123	Proposed garden	0.2216	Developed	Public garden
201	Proposed linear garden (North Al Jalaa Road)	0.2824	Developed	Public garden
202	Proposed linear garden (North)	0.1962	Developed	Public garden
203	Proposed linear garden (Centre)	0.2062	Developed	Public garden
204	Proposed linear garden (South)	0.3586	Developed	Public garden
401	Proposed garden South-West of Al Qods Circus	0.5517	Developed	Public garden
1101	People's Castle (Qasr Ash Shaab) Garden	5.1191	Public garden	Public garden
1102	Al Fatih Tower Garden (A)	5.9881	Public garden	Public garden
1103	Al Fatih Tower Garden (B)	2.9793	Public garden	Developed
1104	Mizran Garden in front of the mosque	0.2088	Public garden	Public garden
1105	Mizran Garden in front of Social Security Building	0.0798	Public garden	Public garden
1106	Shawki Street Garden	0.2939	Public garden	Public garden
1107	Jumhuriyya Street (central part) Garden	0.9322	Public garden	Public garden
1108	Sidi Bukr Garden	0.6024	Public garden	Public garden
1110	Um Hamad Al Magarief Garden	0.0462	Public garden	Public garden
1111	Garden in front of Iranian Embassy	0.2190	Public garden	Public garden
1112	Suleiman Khatr Garden in front of Dutch embassy	0.0732	Public garden	Public garden
1113	Bin Ashur Garden (Ghara)	0.5301	Public garden	Public garden
1114	Philadelphia Murad Agha Garden	0.1492	Public garden	Public garden
1115	Central Garden (Omar Mukhtar Street)	0.5437	Public garden	Public garden
1116	Jnan An Nawar Garden (Wadi Street)	0.5765	Public garden	Public garden
1117	Jraba Street Garden (Drebika)	0.7504	Public garden	Public garden
1118	Ghazala Garden (Jnan Al Gareq)	0.4116	Public garden	Public garden
1119	Ghazala Garden (Green CafÚ)	0.5703	Public garden	Public garden
1120	Ghazala Garden (main part)	1.6469	Public garden	Public garden
1121	City Hall Garden (fountain)	0.1902	Public garden	Public garden
1122	Saadun Swaihli Garden	0.4837	Public garden	Public garden
1123	Kubra Garden	7.6767	Public garden	Public garden
1124	Lion Garden	0.2989	Public garden	Public garden
1126	Garden in front of Amrua Mosque	0.1201	Public garden	Public garden
1128	Al Sarim Street Garden besides Palestine Square	0.1699	Public garden	Public garden
1132	Qadeseya Circus	0.0885	Road space	Road space
1135	Cornice Garden (Ghazala, Ministry of Education)	1.6713	Public garden	Public garden
1136	Garden besides Mahari Hotel (Cornice), East	0.3528	Pedestrian walkway	Pedestrian walkway
1137	Garden besides Mahari Hotel (Cornice), West	0.1619	Pedestrian walkway	Pedestrian walkway
1139	Garden behind Ali Warith School	0.3718	Facilities garden	Facilities garden
1143	Square, South-West of Old Medina	0.8396	Public place	Public place
1151	New Cornice Garden under Culture Palace	17.4337	Public garden	Public garden
1161	Garden between Al Fatah and An Nufliyin Streets	0.7735	Public garden	Public garden
1219	Leader's father's Tomb Garden	0.4470	Public garden	Public garden
1220	Leader's father's Tomb Garden (Southern extension)	0.3916	Public garden	Public garden

Code	Name or location	Area (ha)	Current use	Proposed use
1309	At Tahrir Square Garden	1.6384	Road space	Public place
1310	At Tahrir Square Garden	2.8721	Road space	Public place
1311	Kishlaf Garden	4.4439	Public garden	Public garden
1401	Mujahidin Garden	0.7482	Public garden	Public garden
1404	Garden in front of Islamic Museum	1.3126	Public garden	Public garden
1405	Garden on Al Jalaa Road	0.3582	Road space	Public place
1406	Al Huriyya Garden (Freedom Garden)	3.2866	Public garden	Public garden
1407		0.1638	Public garden	Public garden
1408	Bin Ghashir Garden	1.0994	Public garden	Public garden
1411	Abu Hrida Garden	0.7884	Public garden	Public garden
1412	Triangle in front of Abu Hrida Garden	0.1268	Public garden	Public garden
1516	Ad Dahra Souk Garden	0.8143	Public garden	Public garden
1522	Ghazala Triangle	0.0717	Public garden	Public garden
1714	New garden between Jumhuriyya and Nasr West ends	0.7688	Public garden	Developed
1802	Garden South of Al Qods Circus	0.3949	Public garden	Public garden
2107	Zaweya Dahmani roundabout and triangles	0.0473	Road space	Reserved area
2107	Zaweya Dahmani main roundabout (on Jumhuriyya st.)	0.2187	Road space	Road space
2107	Zaweya Dahmani roundabout and triangles	0.0488	Road space	Road space
2108	Olympic Committee roundabout	0.1002	Road space	Public place
2113	Garden North Central Bank of Libya (Western part)	0.2561	Road space	Public garden
2114	East extension of Culture Palace Garden	0.1745	Road space	Public garden
2115	Garden in front of People's Castle (Northern part)	0.1517	Public garden	Public garden
2117	Jumhuriyya, Al Fatah and Ash Shatt Piazza (South)	0.1403	Road space	Public place
2118	Jumhuriyya, Al Fatah and Ash Shatt Piazza (Centre)	0.3959	Road space	Public place
2119	Jumhuriyya, Al Fatah and Ash Shatt Piazza (North)	0.1442	Road space	Public place
2121	Ghazwat al Khandaq Square	0.3015	Road space	Public place
2123	Garden North Central Bank of Libya (Central part)	0.2889	Road space	Public garden
2125	Garden in front of People's Castle (Southern part)	0.3567	Public garden	Public garden
2127	Zaweya Dahmani second roundabout	0.1819	Road space	Road space
2131	Algeria Circus	0.0558	Road space	Road space
2133	Garden North Central Bank of Libya (Eastern part)	0.0760	Road space	Public garden
2156		0.0347	Road space	Road space
2201	Bab Tajura roundabout	0.3120	Road space	Road space
2402	Al Qods Circus	0.6434	Road space	Road space
2403	University Road Central Garden (South)	0.3718	Road space	Road space
2404	University Road Central Garden (Centre)	0.7254	Road space	Public garden
2405	University Road Central Garden (North)	0.7726	Road space	Developed
2408	Roundabout Al Jalaa and Souk Al Talat roads	0.4523	Road space	Road space
2412	Roundabout Al Jalaa and Al Hadhba roads	0.0465	Road space	Road space
2525	Garden between Old Medina and As Saraya Al Hamra	0.1075	Road space	Public garden
2529	Cornice Jumhurya interchange	0.4994	Road space	Public garden
2535	Old Medina slope	0.6481	Road space	Road space
2539	Al Jarat fountain	0.0427	Road space	Road space
2541	An Nasr Street South slope (Eastern part)	0.2714	Road space	Road space
2542	An Nasr Street North slope	0.1127	Road space	Road space
2544	Green Book Garden (West)	0.1374	Road space	Public garden
2545	Green Book Garden (West)	0.1487	Road space	Public garden
2551	An Nasr Street South slope (Central part)	0.8126	Road space	Road space
2561	An Nasr Street South slope (Western part)	0.1011	Road space	Road space

Code	Name or location	Area (ha)	Current use	Proposed use
4101	Culture Palace Garden	1.2615	Facilities garden	Facilities garden
4104	Central Hospital Garden	3.4388	Facilities garden	Facilities garden
4105	Islamic Museum Garden	3.1567	Facilities garden	Facilities garden
4107	Al Qods Circus City Revolutionary Committee Garden	0.8844	Facilities garden	Facilities garden
4119	Shula Garden	0.5389	Facilities garden	Facilities garden
4201	Planetarium Garden	1.4477	Facilities garden	Facilities garden
5101	Proposed Garden on disused compounds	2.8459	Private garden	Public garden
5102	Proposed garden	0.3976	Private garden	Public garden
5103	Proposed garden	0.5940	Private garden	Public garden
5104	Proposed garden	0.8739	Private garden	Public garden
5105	Proposed garden	0.4090	Private garden	Public garden
5106	Proposed garden	1.4876	Private garden	Public garden
5107	Proposed garden	0.6166	Private garden	Public garden
5108	Proposed garden	0.6139	Private garden	Public garden
5109	Proposed garden	0.4102	Private garden	Public garden
5110	Proposed garden	0.3851	Private garden	Public garden
5111	Proposed garden	0.3066	Private garden	Public garden
5112	Proposed garden	0.8785	Private garden	Public garden
5114	Proposed garden	0.6728	Private garden	Public garden
5115	Proposed garden	0.1945	Private garden	Public garden
5116	Proposed garden	0.2889	Private garden	Public garden
6101	An Nasr Forest (Ghabat An Nasr)	159.6843	Green belt forest	Green belt forest
6201	Sidi El Masri former Agricultural Research Centre (East)	31.8812	Green belt agriculture	Green belt park
6202	Sidi El Masri former Agricultural Research Centre (West)	54.7512	Green belt agriculture	Green belt park
6203	Sidi El Masri Olive Plantation	9.1246	Green belt agriculture	Green belt park
6301	Zoo	45.3573	Green belt park (Zoo)	Green belt park (Zoo)
6302	Souk Al Talat new park	32.6210	Green belt park	Green belt park
7001	El Hani Cemetery	3.6903	Cemetery	Cemetery
7002	Sidi Bukar Cemetery (East)	1.8850	Cemetery	Cemetery
7003	Sidi Bukar Cemetery (West)	0.6387	Cemetery	Cemetery
7004	Sidi Munayder Cemetery	12.3168	Cemetery	Cemetery
7005	Christian Cemetery	8.4426	Cemetery	Cemetery
7101	Sidi Abu El Musha Cemetery	0.8196	Cemetery	Cemetery
7102	Rabbab Cemetery (Bab Tajura Cemetery)	1.4768	Cemetery	Cemetery
8104		0.5985	Sports ground	Sports ground
8105		0.8914	Sports ground	Sports ground
8107		0.9031	Sports ground	Sports ground
8161		0.4187	Sports ground	Sports ground
8201	Bin Ashur and Jalaa Streets interchange	0.9912	Bare ground	Public garden
8203	Proposed garden, An Nasr st., Sidi Munayder	0.2622	Bare ground	Public garden
8204	Proposed garden	0.3887	Bare ground	Public garden
9201	Proposed garden, West of Planetarium	0.9788	Agriculture	Public garden
9202	Proposed garden	0.2525	Agriculture	Public garden
9301	Proposed garden, South-West of Bab Tajura	0.9316	Fallow, rural	Public garden
9302	Proposed garden	0.1275	Fallow, rural	Public garden
9303	Proposed garden	0.6946	Fallow, rural	Public garden
9304	Proposed garden	0.4679	Fallow, rural	Public garden
9306		0.1382	Fallow, rural	Sports ground

Code	Name or location	Area (ha)	Current use	Proposed use
9309	Proposed garden	0.9194	Fallow, rural	Public garden
9310	Proposed garden	0.1911	Fallow, rural	Public garden
9402	Proposed garden under Cornice	6.4974	Fallow, urban	Public garden
9410		0.1530	Fallow, urban	Parking lot
9410	Proposed garden	0.4159	Fallow, urban	Public garden
9412	Proposed garden	0.3022	Fallow, urban	Public garden
9417		0.5888	Fallow, urban	Sports ground
9417	Proposed garden in backstage of English Cemetery	0.6087	Fallow, urban	Public garden
9601	Proposed garden	1.1659	Agriculture	Public garden
9603		0.1864	Agriculture	Developed
9604	Proposed garden	0.2549	Agriculture	Public garden
9605	Proposed garden	0.7255	Agriculture	Public garden
9606	Proposed garden	0.8162	Agriculture	Public garden
9607	Proposed garden	2.2947	Agriculture	Public garden
9608		1.5879	Agriculture	Facilities
9608	Proposed garden	3.1873	Agriculture	Public garden
9609	Proposed garden	0.9249	Agriculture	Public garden
9701	Proposed garden	1.1473	Fallow, rural	Public garden
9703		0.1618	Fallow, rural	Parking lot
9703	Proposed garden	0.3013	Fallow, rural	Public garden
9704	Proposed garden	1.1261	Fallow, rural	Public garden
9706	Proposed garden	0.6145	Fallow, rural	Public garden
9708		0.2730	Fallow, rural	Developed
9709	Proposed garden	0.7308	Fallow, rural	Public garden
9715	Proposed garden behind Al Qods Mosque	1.0762	Fallow, rural	Public garden
9801	Proposed garden	0.2084	Fallow, urban	Public garden
9802	Proposed garden	0.2406	Fallow, urban	Public garden
9803	Proposed garden	0.1122	Fallow, urban	Public garden
9804	Proposed garden	0.0268	Fallow, urban	Public garden
9805	Proposed garden	0.3897	Fallow, urban	Public garden
9806	Proposed garden, Al Jalaa and Al Hadabah Roads	0.5169	Fallow, urban	Public garden
9807	Proposed garden	0.9891	Fallow, urban	Public garden
9808	Proposed garden on disused oil tanks	4.1326	Fallow, urban	Public garden
9809	Proposed garden on disused oil tanks	4.2658	Fallow, urban	Public garden

The Great Arab Libyan Popular Socialist Jamahiriya
Higher Popular Committee for Utilities

**Tripoli City Centre's
Urban and Architectural Charter**

Lighting Plan

LIGHT CIBLES

Contents

Lighted Sites Typology

SPACES

		COMMERCIAL SECTIONS
Main road 1		
Main road 2		
Secondary road		
Tertiary road		
Open air souks		
Covered souks		
Kerbs		
Streets with trees		
Arcades		

PEDESTRIAN PATHS

- Main
- Secondary

Structures

Public facilities & Special buildings

Mineral spaces

Other open spaces

Parkings

Sea front

Vegetal spaces

Tramways
Line 1
Line 2
Line 3
Line 4
Line 5

Bicycle paths

Beach

Project area

LINE 1

LINE 5

LINE 2

LINE 3

Lighting Adapted to Each Type of Site

The Tripoli City Centre Lighting Plan was carried out as part of the City's Architectural and Urban Charter, by the light specialist Louis Clair.

When we put in place a lighting street system, it does not only ensure a nighttime visibility, pedestrians and vehicles safety. Especially in down-town, lighting plays a key role in creating special ambiences while highlighting vegetation, buildings streets and water settings.

The Lighting Plan is represented in this charter originates from a perusal reading of different sites to give each of them a special ambience.

Lighting Ambiences Examples

Functional
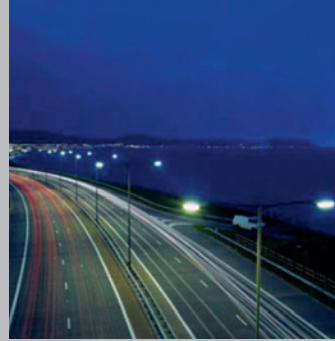
Discreet

Particular Ambiences for Different Sites

Lighting does not serve in the same manner as on an expressway, the Old City narrow streets or monuments such As Saraya Al Hamra. Each of these sites deserves to be treated with a special ambience adapted to it.

The Lighting Plan identifies five different ambiences: functional, magnificent, convivial, romantic and discreet.

Magnificient
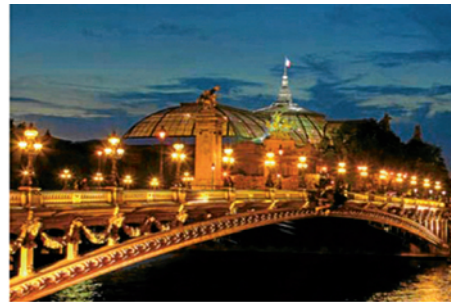
Convivial

Romantic

The Ambiences' Distribution on Different Sites

The Lighting Plan proposes, for each type of site, the ambience that suits. As shown on the map, the purely functional lighting is reserved to parkings and technical facilities. A magnificent ambience is suggested for the seafront and main roads. Secondary roads are equipped with a convivial ambience, and service roads with a discreet ambience. Finally, public gardens are worked out with a romantic ambience

Ambience Map

AMBIENCES | COMMERCIAL SECTIONS

Functional
Magnificent
Convivial
Discreet
Romantic
Special Lighting Concept

Beach
Project area

Main Roads

12 m

4.5 m

open space   open space

6   14   6

SECTION

12   12

24

PLAN

Main Roads

> 12 levels

| 4.5 | 9 | 3.5 | 7 | 3.5 |

SECTION

| 13.5 |
| 27 |

PLAN

Secondary Roads

6 m

0.8 m

> 12 levels   2   7   3   3-4 levels

SECTION

18

9

PLAN

Old City's Streets

2 levels   3.5   2 levels

SECTION

PLAN

FITTINGS	LANTERN	WALL BRACKET
HEIGHT	RANDOM	
INTERDISTANCE	RANDOM	

Old City's Streets

2 levels   3   2 levels

SECTION

PLAN

Old City's Streets

2 levels   2   2 levels

SECTION

PLAN
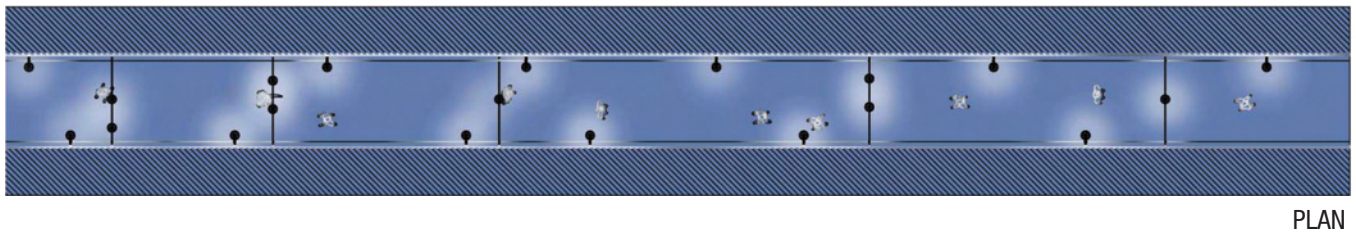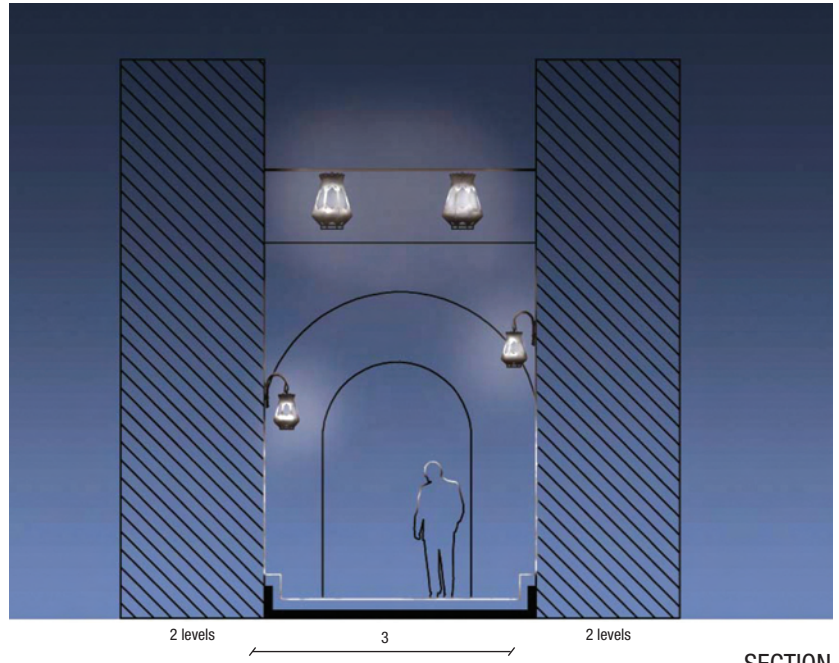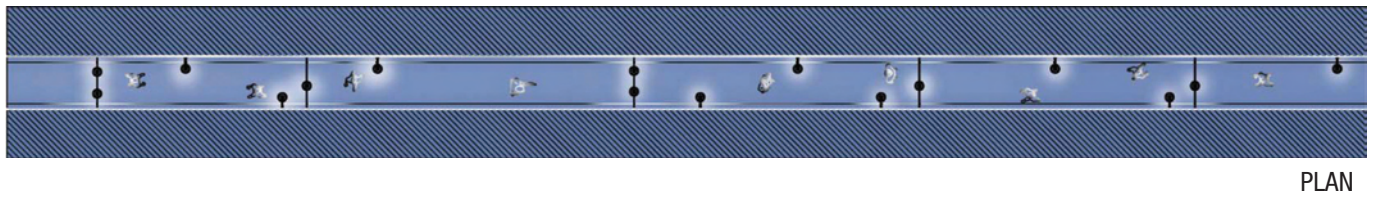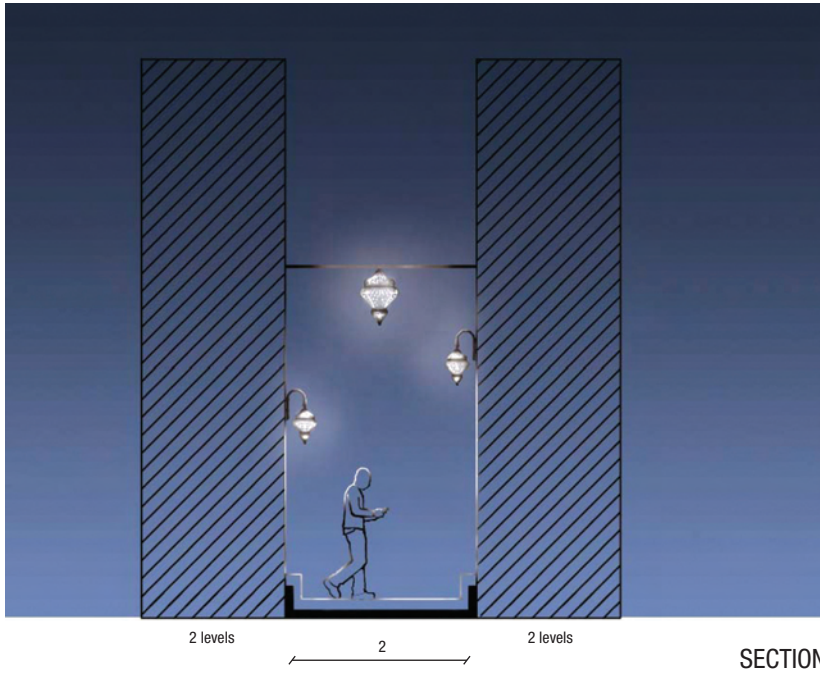
Tramway Lines on main roads

12 m

4.5 m

4.3 8 1.5 8 1.5 8 5.3

SECTION

12 24

PLAN
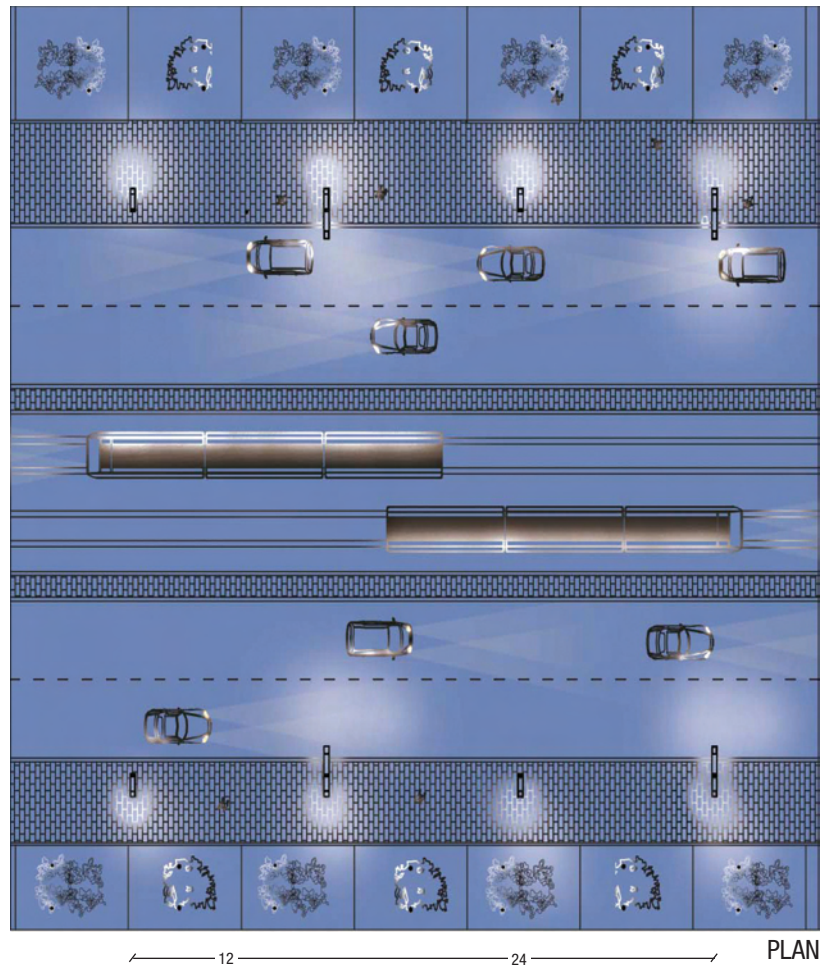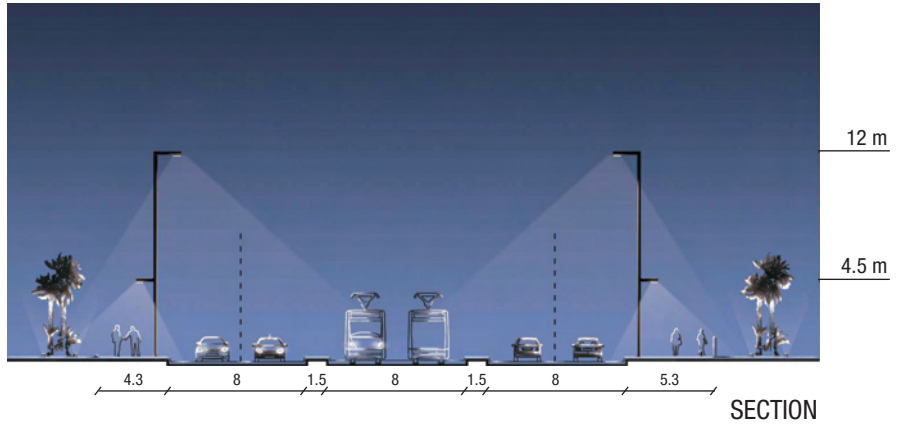
Secondary Streets' Bicycle Paths

9 m

4.5 m

7   2.5

10

SECTION

13.5   27

PLAN

Bicycle Paths

13.5   13.5   PLAN

7   2.5

11.5   SECTION
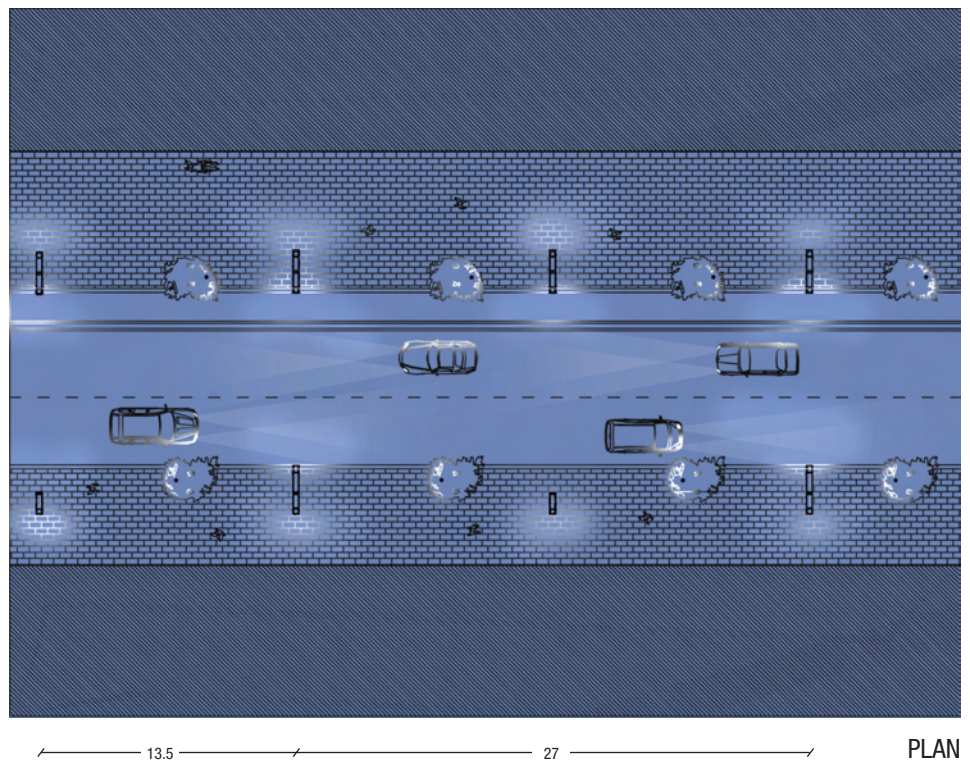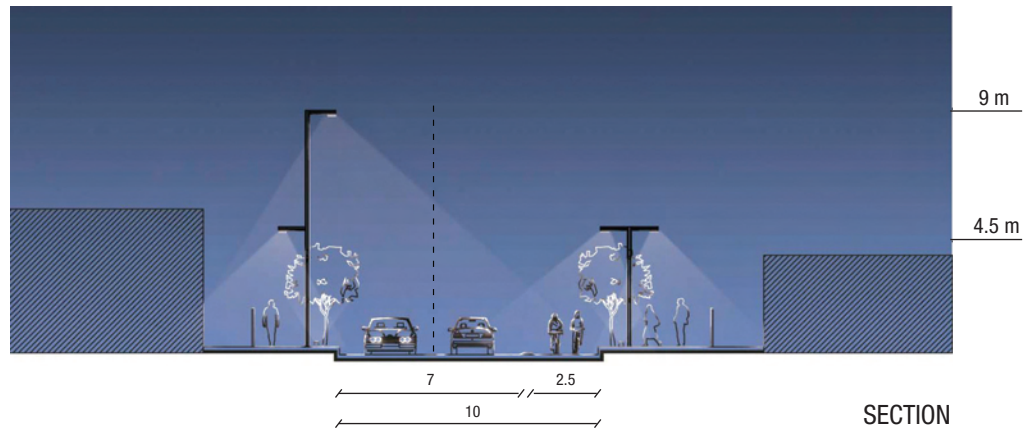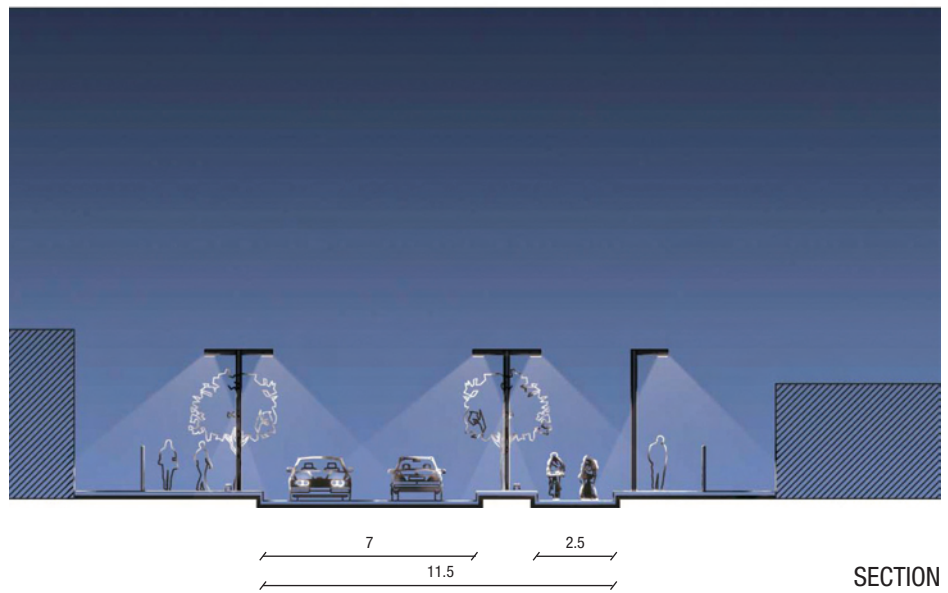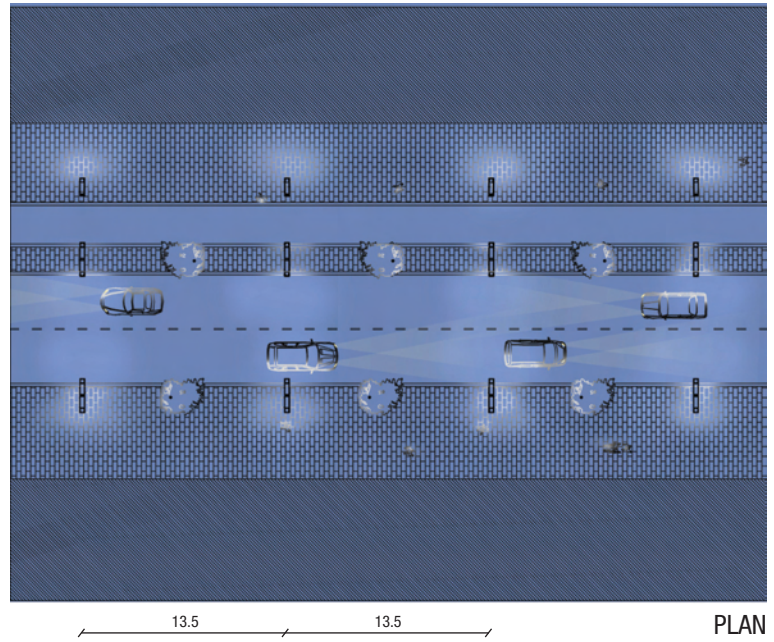
Sidewalk Lighting Recommendations

Minimum 50 cm

BRACKETS SIZING HAVE TO TAKE INTO ACCOUNT TREES' CHARACTERISTICS.

LIGHTING FIXTURES MUST EMERGE FROM THE FOLIAGE.

12 m

9 m

4.5 m

3.5 m

1 m

TREES LIGHTING CONCEPT

THE TREE MINI BOLLARDS WILL BE POSITIONED ON A DIRECTION CONTRARY TO VEHICULAR TRANSIT TO PREVENT GLARE.

Seafront

The lamp posts should be positioned on the outer side of the promenade to ensure the proper enjoyment of the views.
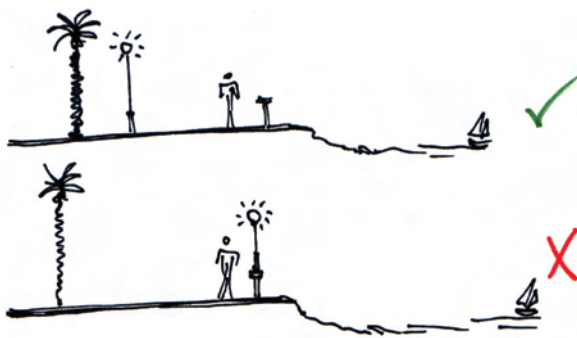
Reference image : Promenade des Anglais, Nice.

The lamp posts that accompany the promenade will create the visual image of a pearl necklace.

Reference image : Promenade des Anglais, Nice.

Vegetal Spaces
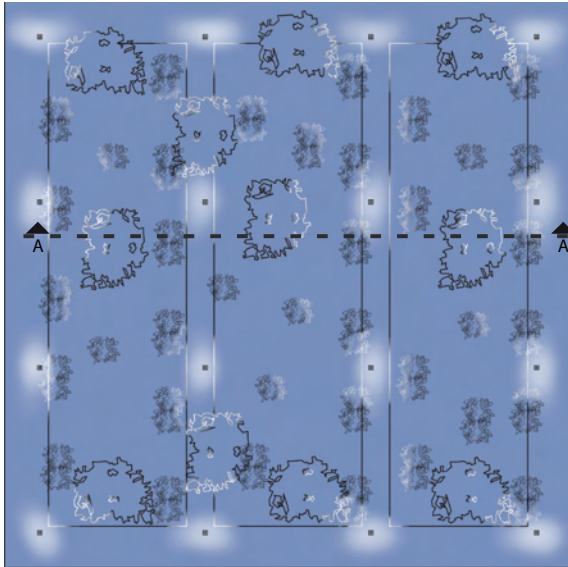
PLAN A
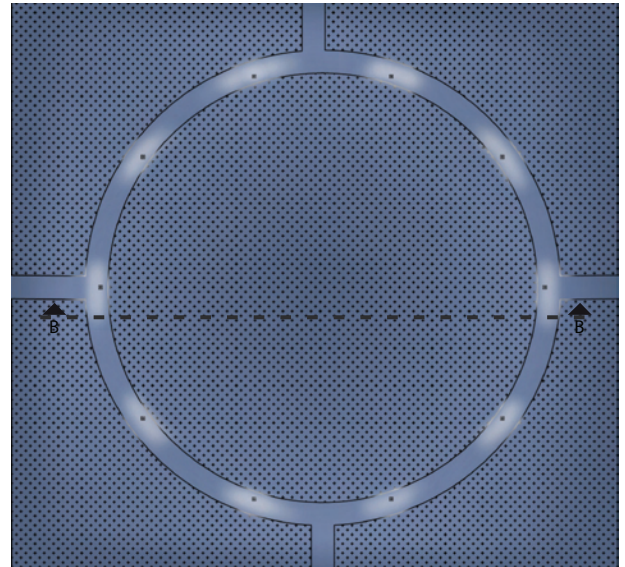
PLAN B

SECTION A-A
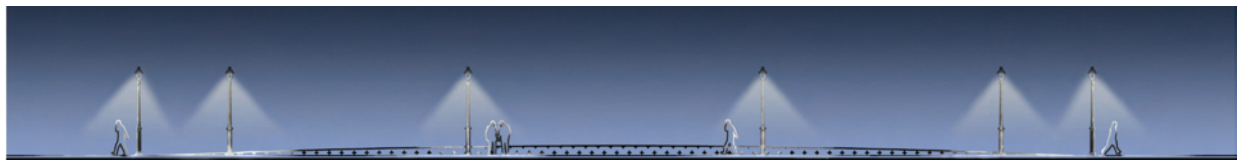
SECTION B-B

Special Buildings

Buildings and monuments examples of illuminations
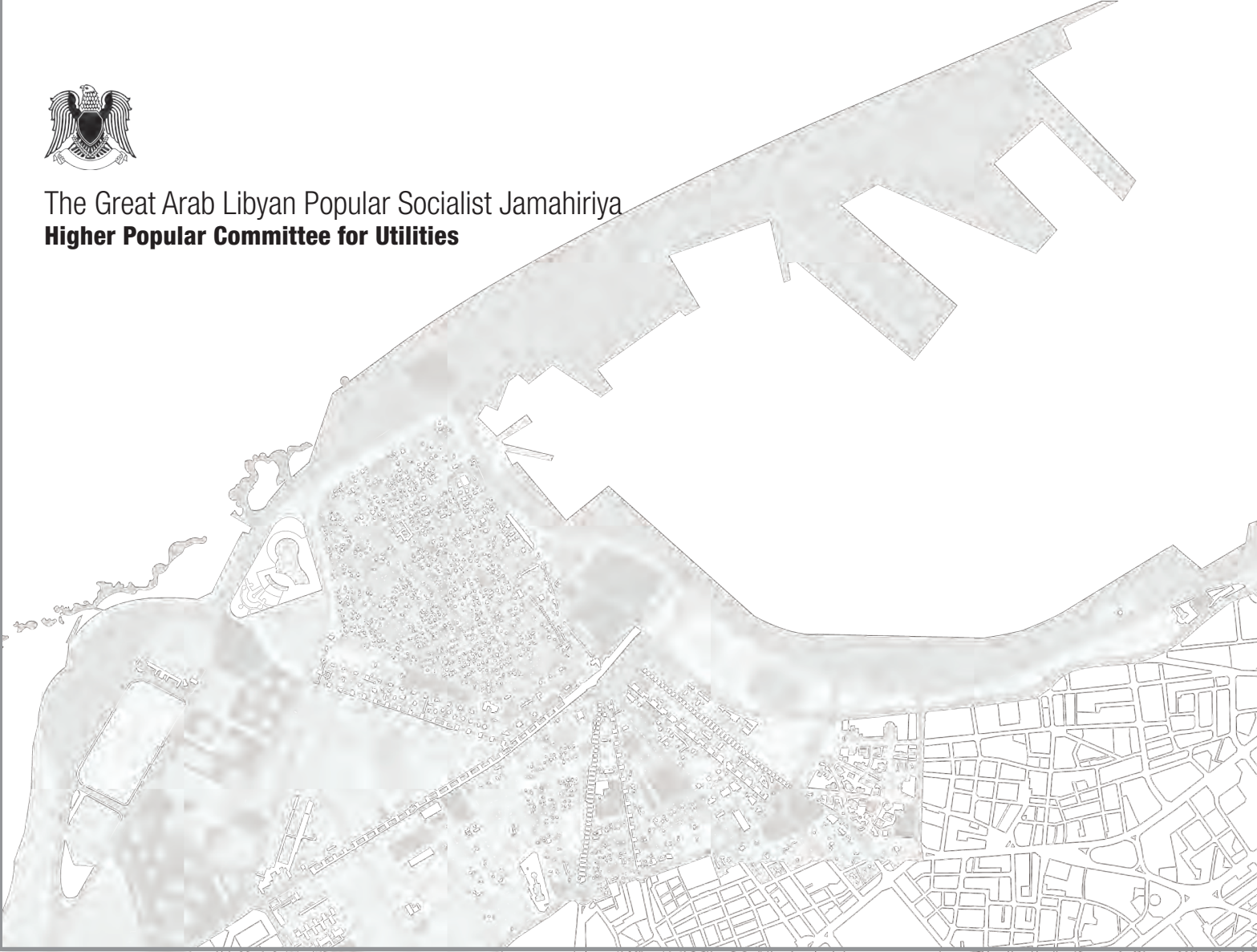
Tripoli City Centre's
Urban and Architectural Charter

Street Furniture

aurel(s)studio
design urbain

Contents

An Urban Furniture Range for the City of Tripoli

As a component of the Architectural and Urban Charter of Tripoli City Centre, a new range of urban furniture has been proposed by the international designer Marc Aurel.

The designer based his proposals on his perception of the city, with its places in the making, architectural remains, narrow and winding roads, wide avenues, contemporary buildings, its sweeping seafront, palm and orange trees lining boulevards, strong light, sand from the nearby desert covering sidewalks, its public space as a space of live, meetings and interchange…

This perception leaded him to the idea of **"familiar objects"**.

Familiar, so as **not to disrupt** the subtle balance in the city and its various districts with **objects that would be too loud**.

Seating resembling sofas, planters inspired by vases, lighting recalling interior lamps or gems, garden benches like sets of jewels…

Simple forms in vocabulary borrowed from the interior employing **contemporary or reworked materials**: Ductal concrete, ceramic, wood, cast glass, metal…

Sophisticated surface finishes carried out by specific handling of the material: grinding, casting, stamping, etc.

Working on the material through **pattern interplays** allows putting these objects in **direct lineage** with the ornamental vocabulary of traditional architecture. The desire isn't to be fixed in the past, but to interpret the "décor" issue in a contemporary way.

The goal was above all to conceive contemporary objects able to converse with the diversity of the city, from the Medina to the Business district and including the Italian period architecture.

Seats
Armchair

Seat
Textured white ceramic

Arm-rest
Galvanized steel painted
in grey black 3mm with a
laser cut pattern

Base
Galvanized steel painted in
grey black 3mm

Hole for water

Seats
Stool

Seat
Laminated wood

Base
Galvanized steel painted in
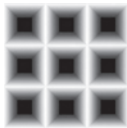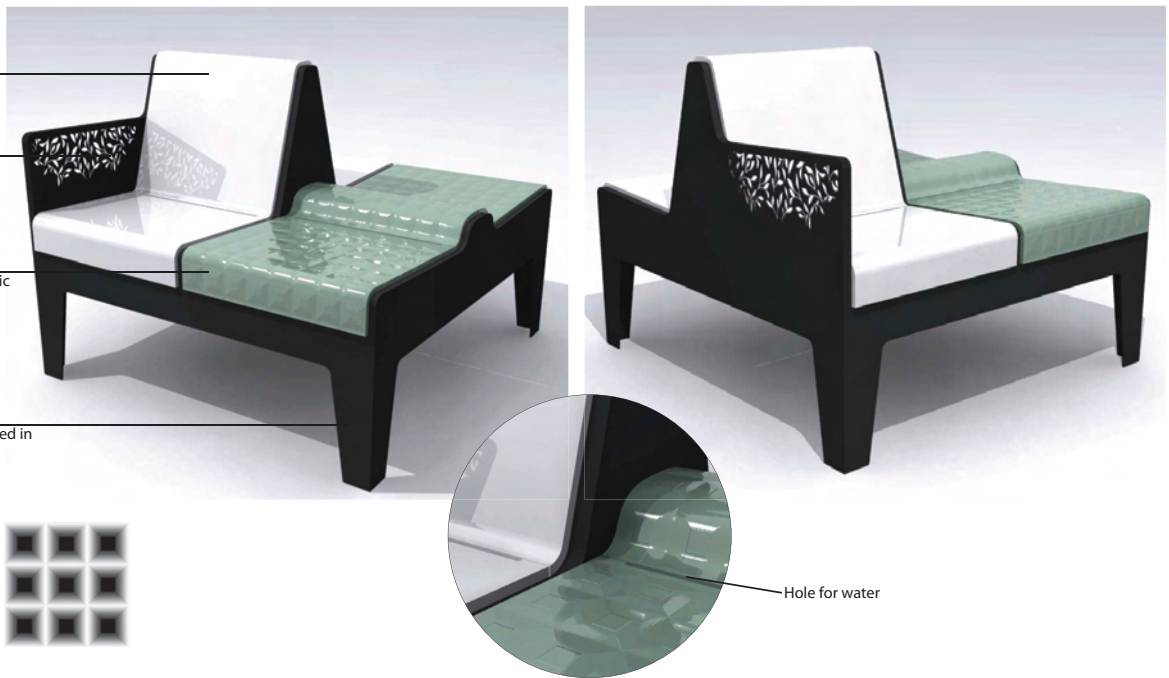grey black 3mm

Hole for water

Seats
Square seat

Seat
White ceramic

Arm-rest
Galvanized steel
painted in grey black
3mm with a laser cut
pattern

Seat 2
Textured Green ceramic

Base
Galvanized steel painted in
grey black 3mm

Hole for water

Seats
Long seat

Seat
Laser cut metal sheet painted in white

Arm-rest
Galvanized steel painted in grey black

Seat 3
Laminated Wood

Base
Galvanized steel painted in grey black 3mm
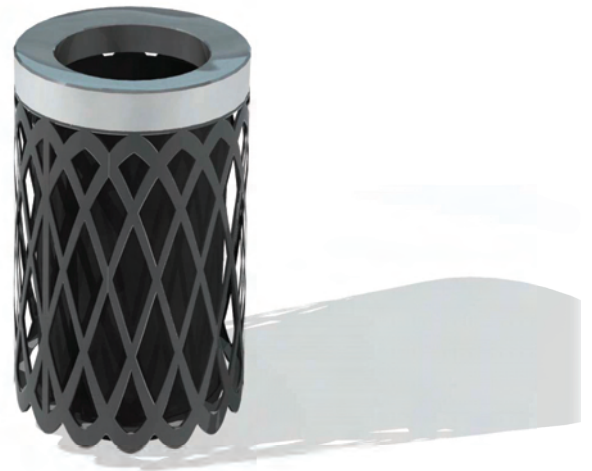
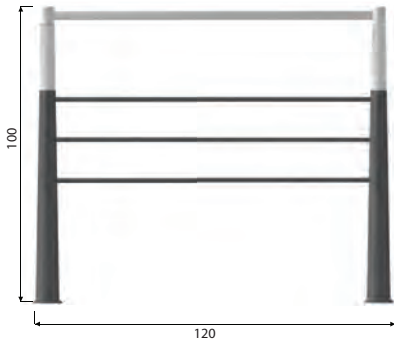# Coffee Chair
Prototype

Waste Bin
General View

Side   Front

Planter
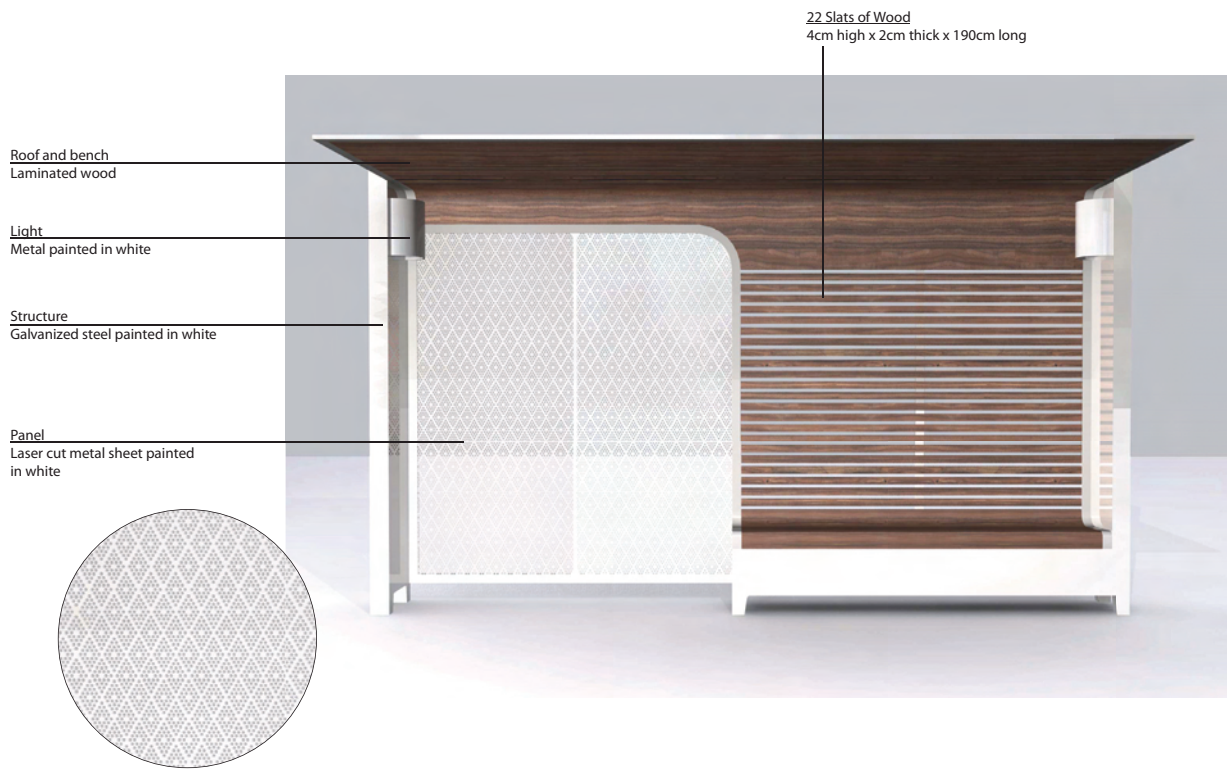## General view

Marker & Barrier

100

120

Bus Stop
Basic shelter

Bus Stop
Materials

22 Slats of Wood
4cm high x 2cm thick x 190cm long

Roof and bench
Laminated wood

Light
Metal painted in white

Structure
Galvanized steel painted in white

Panel
Laser cut metal sheet painted
in white

Lights
Tiffany > 7m

Lights
Célestin > 4.5m

Lights
Miranda

Overall View