

Introduction

The present planning documents mark the completion of the study for Zhuhai's Jiuzhou Heliport transformation design.

The document develops and complete the preliminary proposals presented and approved by the City in November 23rd, 2015.

This document will be the base for a further development of the whole Jiuzhou Airport area and its integration into the idea of a new coastal city for Zhuhai.

- Objectives

The study is based on the City's planning reference documents and on the "One belt Nine bays" concept that will develop, and is already partly building, the new coastal city for Zhuhai.

The analysis of the planning documents and the existing surrounding's situation have grown up the base ideas for the study and the development of the proposed solutions.

One of the main goals of the development is a new urban environment of high comfort which will stimulate creativity and direct exchange between education, leisure and business. It will also create a new area where the inhabitants will discover new landscape values, interact with and enjoy Nature.

This aim would be met through four main objectives: Urban guidelines, interaction with Landscape, Integration and connectivity within the city's overall concept and Sustainable development.

Urban guidelines objective:

- Create a new piece of city that will connect the existing gridline with the sea
- Develop a new piece for the 9 bays' belt
- Propose a program development that will create environment favourable to investment
- Connect north and south seaside pedestrian path

Landscape objective:

- Complete the city's green quality and enable the green side of the sea
- Improve the city's relationship with the sea
- Create a new landscape piece for the city's inhabitants

Integration and connectivity objective:

- Efficient use of city's resources
- Improve the current transportation situation and generate an accessible area for the inhabitants
- Create an ecological communication scheme

Sustainable development objective:

- Use clean water for the new garden
- The green should be cared and planting increased

- Propose an ecological and efficient barrier to protect the site from the sea
- Buildings, utilities and urban systems should be energy efficient
- Alternate sources of energy should continually introduced
- **Concept**

The proposal offers different base ideas for the Jiuzhou Heliport's transformation into a new coastal garden that will include a museum, commercial areas and a luxury hotel resort.

The site has an extraordinary potential and is an important opportunity for the city's development. The surrounding landscape has a great value. It can be integrated into a new coastal garden design with a continuous pedestrian walkway that follows the seaside. The project will become an important spot on the "Lover's Road".

The garden, as a Chinese garden, will be an enclosed space that will be discovered from part to part, from scene to scene. It will be composed of several different parts, several different small gardens, that will create a unique experience for a seaside garden.

And the garden, designed by a western Master, will also have western values. Two different levels will create a prominent upper level that will overlook the different garden's scenes. Both levels will be connected by pedestrian walkways and will be composed by a set of water, vegetation and amenities.

The continuous seaside path will follow the garden's seaside edge, where the garden will be open and porous. The pedestrians will have the opportunity to enter to the garden or follow the path to the north or to the south. The new garden, the Seashore beach and the Hengshan Island's bridge will become an active part of the seaside promenade.

Three vertical artificial stones, located in the middle of the park, will contain a museum and different commercial areas that will become a central spot for the people. And a luxury hotel resort overlooking the new garden and the sea, with its private garden, will occupy the south part of the existing site.

Site analysis

- **City base elements**

Zhuhai is located on the West side of the River Pearl Delta, north of Macao.

This area is bathed by the river and the sea, and the city has a large number of sea inlets and river arms that cross its urban fabric. This coastal and sea side location gives an extraordinary quality to the city.

The site is organized by prominent mountain hills running East-West and large horizontal platforms located between the hills. The topography organizes East-West corridors but difficult north-south connections through the hills.

Jiuzhou airport site is located on the East end of the Jiuzhou axis, in front of the sea, on a large horizontal platform.

Zhuhai's City's planning documents propose to develop the "One Belt Nine Bays" concept and create a new coastal city for its East seaside.

Nine priority areas from the North Jing Xing Bay to South-West Xin Hong Bay, with different activities and interconnected by the Qinglv Road will be transformed into a new tourist path. From leisure to business, from transportation to Cultural spots, the continue path will propose attractions and services to visit the city.

This opportunity will enhance the city's relationship with the sea and develop several economic spots.

Jiuzhou airport platform is located on the Qinglv Road, but the platform edge is currently not accessible for the pedestrians, as for security reasons, the heliport's platform separates the public space from the edge's dike.

It is adjacent to the Seashore beach on its north side, connected by a bridge to the new Hengshan Island and very close to the Jiuzhou Harbour and the Ferry terminal. Other active spots are very close: the Mermaid statue, the new Zhuhai Opera and the Central Urban Area. The Jiuzhou axis, that is the main East-West city's connection and ends on the Ferry Terminal, is just 420 m west from the Qinglv Road part that passes along the Heliport's site. Very close by walk.

Moving the heliport to another site will bring the opportunity to re-activate the heliport's platform edges and open the communication from the Qinglv Road to the sea and from the north to the south seaside pathway.

The Jiuzhou Heliport can then be transformed into an active spot on the Lover's Road.

The surrounding landscape and natural conditions are another opportunity for the site development.

Zhuhai's city is characterized by a mixture of hills and flat areas. This topography gives a very strong identity that put forward the green quality of the city. The hills are mainly occupied by forests, parks and green areas that according to the site height give a prominence to the Nature. The hills are visible from far areas of the city, and the sea become also visible from the top of the hills. It creates a very comfortable image of the city that is somehow invaded by the nature that is present everywhere in the streets but is also seen from many points. The inner city's hills become mountains as in the traditional Chinese gardens.

The horizontality of the platform and its ~700 meters length are also an ideal view point to admire the landscape : the city and its hills to the West, the mountain arriving to the sea and the beach to the north, the sea, the islands and the Hong Kong bridge to the East and South. Maintaining the site horizontality above the sea for the new development will be an asset.

The site's size itself, as a large open and horizontal area (265 x 692 m), available in the middle of the city with its situation on the sea side transforms the place into an extraordinary and exceptional opportunity for the city.

Comparing it to other exceptional sites as the Opera in Beijing, or the Beijing's Yuanmingyuan and the "Humble administrator's garden" in Suzhou, we have discovered that it is a big available area for a building, but that it can become small for a Chinese garden. It has more the scale of a Man of letter's garden than an Imperial one.

All these characters are valuable points to start the study and find the right balance and scale between activities and nature on this extraordinary site.

The main goal being to focus on economic activities that could develop the site on the general strategy of the "Lovers Road", but keeping the opportunity to develop a new idea of the coastal city.

- **Current situation**

- Topography:

The site is located on a flat area near the sea and circled by the Shijing mountain, the Shihua mountain, and the Hengshan island hill.

基地位于滨海的平坦地块并被石景山,石花山及横山岛度假中心环绕.

- The water:

Different kinds of waters are available on the site: the salted sea water, the polluted water from the existing canal and the clean and proper for people water from the water plant. The water to be used for the proposed garden should be taken and cleaned from the canal with a specific and new water plant to be located in the master plan.

- The green areas:

Beside the forest on the hills (and the hill located on the study area), the surrounding areas are very green. The urban grid streets have a green character that should be maintained on the project's edges. The Qinglv street character should remain the same as today.

- Urban grid:

Mainly the Qinglv Road that passes by the site, and the Jiuzhou Axis that becomes parallel to the Qinglv Road, are the main axis. Both are large avenues that have a strong traffic load. Secondary roads connect both main roads and dilute the traffic on the area.

- Transportation :

Buses lines follow the Qinglv Road and continue to the north and south. One stop is set in front of the platform. The metro line that follows the Jiuzhou Axis stays 420 m from the site. This distance to the site is feasible for the pedestrians that would connect the metro from the site. But an

improvement of the current public transportation should be organised in order to guarantee the connectivity to the site. One direction is the north-south line that will become the "Lovers Road", and another could be the connectivity to the metro line.

- Existing use programs :

The seaside edge is mainly occupied by the shore beach and the dikes separating the city from the sea. The west side of the Qinglv road is dedicated to leisure and public programs unless two apartment blocs located beside the existing platform's hill.

The urban West side of the Qinglv Road is used for different kinds of program uses: mainly dwellings, the water plant (that occupies a large area), the driving licence school; and an important number of commercial shopping centres and hotels in the first row of buildings facing the sea and the beach.

- Building's heights :

Apart from a few blocks located in the sea side edge, the first row of buildings tops out around 100 meters, and smaller blocks occupies the interior of the urban grid.

- Program studies

Zhouhai's City planning documents propose to develop the area partly for commercial use and partly for cultural use.

The site is extremely interesting for its size, horizontality and relationship to the sea and the natural landscape. It has a prominent location inside the city.

As the rest of the seaside edge, it should mainly remain as a natural area, dedicated to the public leisure. Garden's close to the sea are unusual, not only in China but also in the rest of the world. And this garden could be organized on two levels in order to increase its size and create a specific organization.

Keeping the main part of the heliport platform area for a new coastal garden can transform the place in an extraordinary spot for the city and attract the tourism.

The concept of the garden can be mixed with different buildings that will meet the City planning use and will also be part of the garden's experience. They will need to have a specific and prominent presence into the garden.

The current south part of the platform is occupied by the two apartment blocks and the hill. This south part, which is separated from the north part by the entrance point to the apartment block, could become a private luxury hotel program.

The north part of the platform (and its main area), can fit a public garden with some commercial and cultural buildings.

A large path that will follow the dike and the sea edge could become a public path that will connect to the north and to the south with the existing parts of the seaside pedestrian way.

Finally, some services and maintenance areas (and the water plant for the garden as well) will be located in the garden as well.

The proportions for each part of this program could be as follows:

- Current platform area : ~ 152'800 m²
- Proposed reorganized area : ~ 223'000 m² (gardens partially in 2 levels)
- Gardens: ~ 75%
- Buildings: ~ 25%

And the following detailed proportions:

- Upper public garden: ~ 28%
- Lower public garden: ~ 27%
- Hotel garden: ~ 15%
- Public parking: ~ 5%
- Garden's services buildings: ~ 2%
- Museum: ~ 3%
- Commercial areas (retail) : ~ 9%
- Hotel: ~ 11%

The garden's essence

Studying the Chinese traditional gardens has been a starting point of our work. But the idea is not to reproduce a traditional garden.

Some concepts and basic organization will remain, and the Chinese essence and inspiration will be part of the proposed garden: the orientation, the use of the far scenes (the existing hills) as brought parts of the garden, the organization of the garden in small parts, different scenes, that will be combined together to create a long and varied path through the Nature; the use of the water, the combination with the artificial mountains; the curved and broken paths in the garden...

The four prints that are presented in the project's documentation translate the essence of the Chinese ambiance that we would like to keep for the new garden.

And our proposal, as western designers, will also bring and translate part of our western culture: the geometrical organization of the space; the overview of the site, the choice of the green essences, the use of the sculpture....

Many ideas that we learnt. Many ideas that we tried to forget. But these ideas will merge together and come along as stones in our way to design the garden. And all together, the Chinese and the Western, as the Ying and the Yang, will produce a different and new organization in Zhuhai.

Concept ideas and evolution

Several schemes have been studied during the design process. They are presented on the documentation.

But some deep concepts have set the base for all them. And they remain visible as they have organized the space and the relationship to the surroundings.

From there, we have tried different options in order to find the right balance, the right volume, the right position for each part of the program.

The Final Master Plan is the conclusion of our study. Each part of the program has taken the right place and the right identity to bring all together a strong design and a strong image to the site.

Master Plan

- The Master Plan's elements

Six elements will compose the Master Plan: three landscape elements and three building groups.

- The planted seaside pedestrian path: it will be constructed above the dike. Sit 5 m above the sea; with additional sea barriers and a secondary linear pit parallel to the sea. It will separate and protect the gardens from the sea and the storms. A platform bridge will cover partially the existing canal from the existing Qinglv Road Bridge to edge of the salted water allowing connecting the path to the north and south existing seaside promenades.
- The North Public Garden: it will be composed with two levels of public garden connected visually and physically together. An upper garden at the street level (level 0), enclosed from the Qinglv Road but open to the seaside path and to the sea landscape; and a lower underground garden (level -6 m) composed of several scene cells connected together. The upper garden will overlook the lower one. Both will be physically connected by two ramps and four vertical cores.
- The South Hotel's garden: The existing platform hill and the south part of the site will be used as private garden for the Hotel. Separating it from the public garden will enable to provide a separate entrance a clear distribution from the public areas. The hotel's garden will be enclosed and will slope up to the Hotel's main entrance at the first level (+6 m).
- The Garden's services: different public services like the ticketing or tourist information, a public exterior café, the maintenance areas or the water plant for the garden will be used to create the "wall" enclosure for the garden and separate it from the Qinglv Road in order to keep it safe and secret from outside.
- The Museum and Commercial areas will sit in the middle of the garden. Like artificial mountains, they will create a vertical element for the garden. Planted roofs will also provide a falling down nature that will identify them with the garden's identity. Hidden behind a forest, unseen from the entrance, a rift path will separate three pieces into three different programs: one piece will be the Museum, and the two others will have commercial areas (retail, restaurants....). The rift path will channel the public until a glass covered plaza separating the entrances to each stone building.
- The Hotel: An elongated thin prismatic volume, situated perpendicularly to the sea, sit above an amenities and services platform. It overlooks the

garden to the north, with all its room's levels looking to the garden and to the north landscape.

The garden's will be provided with low height lighting that will bring a general identity to the planted areas and the main circulation paths will have a significant downlight system, mounted on posts or suspended.

A specific architectural lighting system will also be provided for the buildings in order to enhance their presence at night and integrate them into the city's night skylight.

The project's development will be the opportunity to develop each specific system.

- **Site organization**

- Topography:

The site topography is mainly preserved. The garden's two levels are organized on the street and underground levels so the Qinglv Roads perception will somehow be similar. The platform dike edge is also preserved and improved.

- The water:

A water path with lake parts will be provided on the lower garden level. Purified water from the canal will be used, and a water cleaning plant will be built for this purpose on the maintenance and services buildings.

- The green areas:

Planting will be organised on both garden's levels. Some parts will be done on ground, and others will be planted above the bridge and covered areas sit on the lower level. The proportion of planted areas compared to circulation areas will be kept around 75 % - 25%.

- Urban grid:

The proposed master plan liberates the platform edge providing a continue path along the seaside. A north and south public and private garden areas are clearly defined, and both are separated from the public grid on the Qinglv Road. On the seaside, the Public garden will be porous but a system to partially close it (fences and/or bridges) will be provided.

- Transportation :

A 248 exterior non covered public parking will be constructed along the Qinglv Road for the garden's visitors. It would also be used by the neighbourhood. A specific 10 to 20 buses parking will also be organised next to the public garden's entrance. The luxury hotel will also have a covered enclosed specific parking garage for its clients.

The city's transportation department mentioned that a tramway project was under study on the area. It might be an opportunity that this tramway,

connecting the ferry terminal to the Central Urban area, could pass by the Qinglv Road and stop at the Public Garden's entrance.

- Use programs :

The Commercial and Cultural programs are consistent with the City Planning documents.

- Building's heights :

Only the new buildings, located on concentrated areas of the site will be higher than the existing heliport platform, but the proposed buildings are lower than the existing apartment and hotels towers located on the Qinglv Road.

- **The Upper Garden**

A public north-west entrance will be the main door to enter to the garden. A maintenance/delivery specific entrance will be located close to the hotel's services and parking entrance.

The public will mainly arrive from the Qinglv Road, passing the entrance door and be dispersed on the upper garden through the different circulation paths and bridges that circles around the holes of the lower garden level. The upper circulation system is wide enough to channel the main public traffic flows, to give it the opportunity to discover from point to point the lower gardens, and directing the people to the points where they will descend to the lower garden level.

A forest will separate the Qinglv Road from the main part of the garden. The commercial and museum buildings will be hidden from the entrance and planted circulations will channel the public to the mountain's buildings.

The public will also be able to enter to the garden through the seaside path. This pedestrian promenade will be porous on different points and the public will be directed to the mountain's buildings.

The green of the lower garden's will project until the top level and the circulation paths will be covered by the trees arms and leaves providing enough sun shading and different paths to walk.

- **The Lower Garden**

On the lower garden, 6 different gardens, separated but punctually communicated, will form a necklace of different ambiances, essences and promenades. Each one will have a different character and will focus on different natural elements.

Each socket will function separately but similarly. A covered pedestrian circulation will circle each garden, creating a long path from which admire the interior of the garden.

Some tiny connections will allow the public to pass from one garden to the other, and also open perspectives and views to the adjacent gardens.

Interior thinner, undulating and broken circulation paths will give the opportunity to enter to each garden's heart and discover the different scenes and the garden's difference from inside.

The water will be an important element for the composition of the lower level. It will flow from the north gardens and cross all the gardens until a point where a whirlwind will suck the water down.

The 6 gardens necklace will also circle the Mountain's building underground level, where restaurants and education activities will interact with the lower garden.

Building's preliminary organization

- The Hotel

The hotel organization is efficient and simple.

The prismatic volume with its 14 floors of 200 mono-oriented rooms overlooking the garden to the north will sit above a large horizontal platform where all the amenities and services will be located. An alternate level could provide 28 rooms per level, with a total of 300 rooms.

A vertical core, with public and service elevators and stairs will connect all the levels together.

On the first level, the hotel's platform roof, a public level will organize the entrance and reception areas.

On the platform services level, a large restaurant will have a direct view to the garden. The rest of the services for the clients and the back office will be set inside the platform.

As mentioned during the last presentation with the major, alternate options with a part of the hotel on the water have been explored and will be discussed during the February presentation.

- The Museum and Commercial areas

The Museum and the Commercial areas will occupy the three Mountain Buildings sit in the middle of the garden: the Museum in the South-East building and the Commercial areas in the other ones.

The building's organization will almost be similar with a few differences.

The three buildings will have a very similar volume, with irregular plans and curved walls clad with an exterior skin.

A common underground delivery area at the level -6m, with a connection corridor will distribute the delivery to each one.

The roofs will all be planted and the green will fall down from the top of their facades. But the West building will have one level less than the other two (just first, second and underground levels), with a rooftop higher than the others that could accommodate technical equipment and/or solar panelling.

On the Upper garden level, three rifts between each building will channel the public to a centre space. This space's aim is to work like a plaza, where all the building's public entrances will be located. Two storey high glass facades will open each mountain building to the exterior, and this plaza area will be covered by a glass roof to protect the public from the heavy rains and the sun.

The Museum's building will fit different cultural areas: two levels of exhibition with the top one having glass skylights providing natural light; they will be combined with the typical services for entrance and lobby (bookshop, education, administration offices) and be connected by a central stair.

A specific restaurant, education areas with a 200 seats auditorium as well as the art delivery and the museum's storage will occupy the underground level. On the third level, the top one, a library will complete the cultural offer.

The other two Mountain buildings are dedicated to Commercial areas, mainly retail. They will be organised as open spaces, with central atriums providing the natural light to the centre of the buildings, and shopping/retail corners areas. On the East commercial building, different restaurants and kitchens set like corners with a central eating area open to the exterior lower garden will occupy the underground level. The second level, apart from retail areas, will also have a high standard restaurant with its specific kitchen, and exterior view to the gardens. The third level is an undetermined area that could accommodate retail areas like the first and second levels or open spaces offices for business related to culture. The rooftop will be used as a café with exterior terrace and overlooking the garden and the sea.

The West commercial building will be only used for retail areas as corner shops in open space levels, with underground storage and technical areas.