THE SUSTAINABILITY OF INTEGRATED DESIGN CONCEPT AND PROGRAM ACTIVITY FORMULATIONS OF LAND CONVERSION ISSUES TO THE DEVELOPMENT OF COMMUNITY TOURISM BY IMPLEMENTATION OF TRI HITA KARANA CONCEPT ALONG TIBUBENENG RIVERSIDE
Environment, Social, Culture, & Economic Issues:

1. Land Conversion
2. Local Wisdom
3. Community Tourism
4. Sustainability & Integrated Design Concept
5. Tibubeneng Riverside Corridor

METHODOLOGY:

The first step: Excavating and reviewing information about policies and related sectoral of spatial development at Tibubeneng Village as well as review the current conditions.

The second step: Conducting an analysis of baseline at Tibubeneng Village and development trends due to predictions in the period of next five years.

The third step: Determining the vision and mission of the development of space, as well as to formulate the concept and development strategy at Tibubeneng village.

The fourth step: Making Plans of Environmental Restructuring Riverside design with the establishment of priority areas and the formulation of common rules.
A watershed is one of the flow of surface water to be managed in a comprehensive, integrated environmentally friendly manner with to realize the benefits that sustainable water resources basis for prosperity of the people.

**Basic Reasoning:**
- Basic Issues
- Potency & Prospect of the Region
- Government constitution

**POINT:**
- prevention of violations of land use border of riverside
- the proposed plan of program activities and sustainable neighborhood design

**PURPOSE:**
- utilization and enhancement of natural resource functions
- the drafting of design guidelines for based as a joint referral to the government and society

the river should be maintained and protected
PREFACE
GENERAL DESCRIPTION OF TIBUBENENG VILLAGE

Tibubeneng Village Area: 6,500,000 sqm/650 ha

3 convention domain zone:
1. Padonan zone area
2. Tandeg zone area
3. Berawa zone area

13 Official administrative area: (Called ‘Banjar’)
1. Banjar Dama
2. Banjar Dawas
3. Banjar Tibubeneng
4. Banjar Kulibul Kawan
5. Banjar Kulibul Kangin
6. Banjar Aseman Kangin
7. Banjar Aseman Kawan
8. Banjar Tandeg
9. Banjar Krisnantara
10. Banjar Canggu Permai
11. Banjar Pelambengan
12. Banjar Tegal Gundul
13. Banjar Berawa
6 Farming land zone: (called ‘Subak’)
1. Subak Dawas
2. Subak Daksina
3. Subak Semat
4. Subak Banjarsari
5. Subak Perancak
6. Subak Saih Munduk Padonan

LAND USES:
Land use of settlement: 195,01 ha (29,2%)
Land use of paddys farming: 362 ha (70,8%)
Land use of cemetery: 1,60 ha
Land use of yard: 10 ha
Land use of office: 0,1 ha
Other land uses: 81,29 ha
GENERAL DESCRIPTION OF TIBUBENENG VILLAGE

Total population in 2014 is **9,849** (15/ha on the average)

**Male:** 4,734  
**Female:** 5,106

<table>
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<tr>
<th>No</th>
<th>Job Descriptions</th>
<th>Male</th>
<th>Female</th>
<th>Quantity</th>
<th>Percent</th>
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<tbody>
<tr>
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<td>Government employees</td>
<td>127</td>
<td>131</td>
<td>258</td>
<td>2,4%</td>
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<tr>
<td>2.</td>
<td>Private sector employees</td>
<td>75</td>
<td>42</td>
<td>117</td>
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<td>47</td>
<td>0,4%</td>
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<td>Police</td>
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<td>-</td>
<td>21</td>
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<td>-</td>
<td>11</td>
<td>0,1%</td>
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<tr>
<td>8.</td>
<td>Government corporate employees</td>
<td>10</td>
<td>6</td>
<td>16</td>
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<tr>
<td>9.</td>
<td>Enterpreneur</td>
<td>9</td>
<td>-</td>
<td>9</td>
<td>0,08%</td>
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<tr>
<td>10.</td>
<td>Others (accumulation)</td>
<td>45</td>
<td>29</td>
<td>74</td>
<td>-</td>
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</table>
Forecasts of total population until year of 2019 is **11.122** (1.16% with increasing population of each year)

- **Male**: 5.544
- **Female**: 5.578
- **Household forecasts**: 2.781
Issues, Potential & Prospect of Tibubeneng
ISSUES OF TIBUBENENG

Environment Issues:

A. The impact of Land Conversion of farming to land use of settlement.

B. River demarcation on riverside corridor especially in Tukad Yeh Poh & Tukad Semat.

D. The Waste along Tukad Yeh Poh, Tukad Semat & Campuhan river corridor.

E. The range of sacred area between Campuhan Tukad Yeh Poh & Tukad Semat

F. Building regulation on riverside corridor
ISSUES OF TIBUBENENG

Social Culture & Economic Issues:

A. Spread of population
B. Conduciveness security
C. Extraneous culture influences.
D. Heterogeneous population
E. Tourism capitalism
Environment Potency:

A. Paddys landscape Attraction

B. Natural Tukad Yeh Poh, Tukad Semat, Campuhan & Loloan Tukad Yeh Poh, Loloan Tukad Canggu Attraction

C. Berawa Beach Attraction

D. Comparison of Availability Between Green Public Space Area and Settlement Area

E. Availability of Infrastructure Systems

F. Growth of Tourism Accomodations

I. Topografi Sloping Area

K. Strategical Geographical Position of Tourism and Government Zone
Social Culture & Economic Potency:

A. Variety of Lifestyles (traditional lifestyles & modern lifestyles)
B. Existence of Balinese Hindu Religion and Tradition
C. Social and Tolerant Society
D. Existence of Official Security Society
E. Existence of Traditional art and culture communities
F. Existance of Traditional Farmer
G. Existance of Local Youth Communities Organization
H. Existance of Local Official Economic Institution
I. Existance of Participatory Community Organizations in the form of a Community Self-Reliance Agency
Prospect Focus on Environment, Social Culture & Economic Potency related to Local Wisdom: (three main point)

1. Prospect of Agricultural & Urban Farming Tourism Programs
2. Prospect of River Attraction with Community Tourism Base Activity Programs
3. Prospect of River Beautification & Revitalitation Programs
PROSPECT OF TIBUBENENG ACTIVITY PROGRAMS

Prospect of Agricultural & Urban Farming Tourism Programs:
Prospect of River Attraction with Community Tourism Base Activity Programs:

- Fishing activities
- Paddle boating
- Jogging in the park
- Environmental conservation activities
PROSPECT OF TIBUBENENG ACTIVITY PROGRAMS

Prospect of River Beautification & Revitalitation Programs:
Scenario of Tibubeneng Development Programs

To honour the water for harmony life
Peningkatan perekonomian melalui budidaya ikan dalam keramba (atas)
Peningkatan perekonomian melalui budidaya tanaman upakara (atas)
Peningkatan perekonomian melalui budidaya pertanian kreatif lahan basah (atas)
Peningkatan perekonomian melalui budidaya tanaman pangan dan herbal setempat (atas)
A Hope to a harmony Live with Water in Future
To close to nature
CONSTITUTION

Base of Constitution:

1. The law article No. 5, 1990 on the Conservation of Natural Resources, biological and Ecosystems
2. The law article No. 26, 2007 on Spatial Regulations
3. Ministerial decree of Public Works Department No. 63/PRT/1993 on Line Border Riverside, Regional Benefits of River, River of Region and Former of River
4. Local Government Regulation of Bali Province No. 16, 2009 on Spatial Planning Bali Province 2009-2029
5. Government Regulation of Badung Regency of the Detail Spatial Plan North Kuta District Year 2002-2012
6. Tibubeneng Local Village Regulation No. 1/2015 about Orderliness, Cleanliness and fineness
EXISTANCE OF PRIORITY AREA
(3 Priority Area)
FIRST PRIORITY AREA

Location: Br.Tegal Gundul
Name of River : Tukad yeh poh
Length : (318 m’)
Enter Access: Gang Beji & Gang Batu sari

1. Narrow riverside existence of nowdays
2. Riverside topography
3. Riverside corridor without violations
4. Access road to the riverside
EXISTANCE OF PRIORITY AREA

SECOND PRIORITY AREA

Location: Br.Tibubeneng
Name of River: Tukad Semat
Length: (1.117 m’)
Enter Access: Gunung Payung & Beringin Street

1. Green belt and open space on Tukad Semat riverside

2. Access road and bridge existence to riverside

3. The nature of riverside

4. Buildings Violation on riverside
EXISTANCE OF PRIORITY AREA

Location: Br.Aseman Kangin
Name of River : Campuhan Tukad Yeh Poh & Tukad Semat
Length : (600 m’)
Enter Access: Gang Pure Vila & Gang Sandat

1. Access to Campuhan riverside

2. Footpath to access Campuhan riverside

3. Campuhan riverside existence

4. Campuhan main point area existence
Kawasan prioritas 2, Br.Tibubeneng
- Flora dan fauna ekosistem sungai mulai terganggu
- Daya tampung sungai sbg drainase makro makin berkurang karena terjadi pendangkalan dan sedimentasi

Kawasan prioritas 3, Br.Aseman Kangin
- Flora dan fauna ekosistem sungai mulai terganggu
- Daya tampung sungai sbg drainase makro makin berkurang karena terjadi pendangkalan dan sedimentasi

Kawasan prioritas 1, Br.Tegal Gundul telah mulai dihimpit oleh maraknya peruntukan bangunan hunian warga dan akomodasi wisata, namun sebagian area masih berupa RTH (atas)

Berpeluang menjadi paru-paru kawasan
- Kawasan prioritas 1, Br.Tegal Gundul
- Flora dan fauna ekosistem sungai mulai terganggu
- Kualitas sanitasi air sungai mulai terganggu krn himpitan kompleks hunian warga
- Daya tampung sungai sbg drainase makro makin berkurang karena terjadi pendangkalan dan sedimentasi

EXISTANCE OF PRIORITY AREA

PROGRAM PLPBK KECAMATAN KUTA UTARA
KABUPATEN BADUNG - BALI
Approachment of Tri Hita Karana Concept to Design Guidelines
DEFINITION OF TRI HITA KARANA

HISTORY OF TRI HITA KARANA:
Introduced by Balinese Hindu Public Figure Dr. I Wayan Mertha Suteja and popularised by I Gusti Ketut Kaler & I Made Djapa, B.A (1968-1970)

PURPOSE OF TRI HITA KARANA:
A pure concept that sublime passed on by our ancestors in the past, to build a prosperous society in the lives of tangible and intangible. This concept is closely related to the existence of life in Bali

MEANING OF TRI HITA KARANA:
Tri Hita Karana is Snaskrit Language Based From
Tri = Three
Hita = Prosperous
Karana = The causes
Tri Hita Karana = Three main things that led to the welfare and prosperity of human life.
DEFINITION OF TRI HITA KARANA

ELEMENT OF TRI HITA KARANA:

• Relationship with God (called Parhyangan)
• Relationship with Others (called Pawongan)
• Relationship with the Environment (Palemahan)

PURPOSE:

the values of this philosophy is taken from the value which contained in the Vedas and the routines of elders Balinese activity in the past times that are still relevant today for practiced anywhere

BASED IDEA OF ELEMENT IMPLEMENTATION:

• Parhyangan = how to maintain human life close to God (Spiritual values)
• Pawongan = how to maintain human life close to Others (Social interaction)
• Palemahan = how to maintain human life close to Environment (Preserve the nature)
Implementation of Tri Hita karana Concept to Activities Program & Scenario
CONCEPT IMPLEMENTATION OF TRI HITA KARANA TO ACTIVITY PROGRAMS

Implementation of Tri Hita Karana:

1. Parhyangan, the harmony to God
   a) Preservation Campuhan area as an area of activity of religious rituals, customs and traditions of Native Village Tibubeneng Hindu Bali
   b) Glorifying the presence of the water element and paddy (rice / food) as a symbol of life and fertility (Vishnu and Dewi Sri)

2. Pawongan, the harmony to others
   a) Improving the creation of social interaction between the residents who live along the river side of the road corridor through the utilization of the inspection area of the river that functioned as corridor access and public open space with recreational facilities (welfare life)

3. Palemahan, the harmony to Nature
   a) Preservation of agricultural land (paddy wetlands, and upland) as the buffer area of food existence and natural harmony
   b) Preservation of the watershed as a buffer area of biodiversity of the river with its local wildlife
   c) Ecotourism development concept of urban agriculture & farming with the application of local wisdom values
Approach Design & Scenario Concept:

1. Ecology & Sanitary
2. Education
3. Economy
4. Friendly Technology
5. Social Culture
6. Revitalization & Conservation
7. Well-being

**Approach Design & Scenario Concept**

- **1. Ecology & Sanitary**
  - Arang dari batok kelapa untuk membantu lebih menjernihkan air sungai
  - Vegetasi riparian sungai (bambu sungai)
  - Satwa burung liar habitat pepohonan area sungai

- **2. Education**
  - Budidaya ikan sungai dalam keramba
  - Taru pramana atau Apotek hidup
  - Mengedukasi anak-anak untuk belajar mengenal alam
  - Mengedukasi wisman untuk mengenal budaya agraris setempat

- **3. Economy**
  - Mengedukasi remaja untuk turut melestarikan budaya dan kesenian agraris
  - Penyampaian informasi jenis dan fungsi khasiat tumbuhan herbal untuk edukasi masyarakat

- **4. Friendly Technology**
  - Mengedukasi mahasiswa dan pelajar untuk praktek terjun langsung ke lapangan
  - Mengedukasi anak-anak sejak dini untuk berkebun di lahan yang sempit dan terbatas

- **5. Social Culture**

- **6. Revitalization & Conservation**

- **7. Well-being**

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**Program PLPBK Kecamatan Kuta Utara Kabupaten Badung - Bali**
1. **Ekology & Sanitary**

1. Preservation of riparian vegetation river
2. New types of vegetation suitable climatic conditions, soil which related to balinese wisdom
3. Breeding of local wildlife to be released back to nature
4. Freshwater fish farming for economic resilience creative and optimizing the potential of the natural resources of the river
5. Procurement nets garbage in strategic points of the upstream area
6. Purifying water quality / water treatment with natural materials, simple and easy to obtain

2. **Education**

1. Introduction & Inclusion scientific identity information to the lettered latin alphabet of local planted vegetation variant
2. Inclusion of information Description Benefits Operate each vegetation
3. Provision of learning and expression space for the residents around the river environment
4. Invites children of school age to get closer and learn and get to know nature
5. Invite and introduce / promote to tourists to visit, get to know an agrarian culture, and customs of the locals are patterned Hindu Bali
3. Ekonomi

1. Preserving the utilization of agricultural land use wet fields and open green spaces as well as his current whereabouts.

2. Optimizing the utilization of the area along the river to the activities of urban agriculture and urban farming to control thermal conditions (local climate) better than before (lung region)

3. Optimization of the riverbanks into a tourist area folk for food existence and economic resilience creative community of the surrounding environment
4. Friendly Technology
1. Procurement units street lighting inspection with the collaboration of environmentally friendly natural materials (bamboo leaf) and modern materials (photovoltaic or solar cell)
2. Procurement wifi network in areas where residents gather for ease of access to information in the age of globalization
3. Sorting of waste and garbage bank procurement methods
4. Procurement waterwheel windmill at points corresponding to the availability of electrical energy consumption for street lighting and road inspections river environment

5. Social Culture
1. Procurement of open space in the area along the river for social interaction cultural activities of citizens.
2. Restructure the area - which is categorized as a sacred area for the sustainability of the activities of religious / ritual Balinese Hinduism (Campuhan area, Bedugul temple, Sedahan temple, Ulun Suwi temple, etc.)
4. Revitalization & Conservation
1. Beautifikasi area along the river as a corridor inspections pathways are multi-functional.
2. DAS sanitary quality care through the handling of waste streams.
3. Reforestation riparian vegetation berkearifan local river on the slopes of the river is not bertanggul.
4. Inventory and preservation of the sacred area radius (Campuhan) as defined in Government Regulation.

5. Well-Being
1. Procurement physical sports facilities (outdoor fitness, jogging track, trajectory stone massage), as an alternative destinations that are complementary / supplementary public facilities that already exists.
2. Utilization of river inspections pathways for environmentally friendly recreation (fishing, urban farming, etc.).
PROGRAM PLPBK KECAMATAN KUTA UTARA
KABUPATEN BADUNG - BALI

APPRAOCHEMENT OF PRIORITY THEME AREAS

Kawasan prioritas 1, Segmen area sungai Tukad Yeh Poh, Br.Tegal Gundul

REVITALISASI
BEAUTIFIKASI

Kawasan prioritas 2, Segmen area sungai Tukad Semat, Br.Tilubeng

REVITALISASI
BEAUTIFIKASI

Kawasan prioritas 3, Segmen area campuhar sungai Tukad Semat & sungai Tukad Yeh Poh

VEGETASI RIPARIAN
SUNGAI (BAMBU SUNGAI DAN TUMBUHAN LOKAL

VEGETASI RIPARIAN
RAWA (TUMBUHAN BAKAU DAN TUMBUHAN LOKAL

Usulan menggunakan tanggul Bronjong Batu

Usulan menggunakan tanggul Batu Kali & Beton

Usulan menggunakan tanggul Bronjong Batu
APPROACHMENT OF PRIORITY THEME AREAS

Friendly construction

Nature vegetation
Design Implementation of Tri Hita Karana Approachment Concept
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Location Map of Priority Zones at Tibubeneng

First Priority Zone Area, Br. Tegal Gundul

Second Priority Zone Area, Br. Tibubeneng

Third Priority Zone Area, Br. Aseman Kangin

First Priority Zone Area, Br. Tegal Gundul
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Design Master of Second Priority Area at Br. Tibubeneng

Activity Map Illustration

Attraction Map Illustration

1. Entrance/area prioritas satu
2. Idea park and mini amphitheater
3. Shelter
4. Area for outdoor activities
5. Spot for fishing
6. Fishing spot
7. Observation tower
Section Plan of Corridor Access (a)

Section Plan of Corridor Access (b)

Section Plan of Corridor Access (c)

Section of riverside existence

Section of Second Priority Area at Br. Tegal Gundul
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Design Master of First Priority Area at Br. Tegal Gundul

View from Southeast

View from Southwest
Design Illustration of First Priority Area at Br. Tegal Gundul
Design Illustration of First Priority Area at Br. Tegal Gundul

Peta Ilustrasi Detail Perspektif Konsep Spot Area Kawasan Prioritas Satu (alternatif satu)

Area spot 1 (area akses masuk bagian Utara)
Area spot 2 (area shelter/gazebo spot 2)
Area spot 3 (area shelter/gazebo spot 3)
Area spot 4 (area balkon memancing)
Area spot 5 (area akses masuk bagian Selatan)

Ilustrasi Detail Perspektif Konsep Spot Area 4&5 Kawasan Prioritas Satu (alternatif satu)
**DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA**

Design Illustration of First Priority Area at Br. Tegal Gundul

- Usulan ruang tambahan area spot 1 (mini amphitheater, & gardu pandang)
- Usulan ruang tambahan area spot 2 (area self healing)
- Usulan ruang tambahan area spot 3 (area playground & fitness outdoor)
- Usulan ruang tambahan area spot 4 (area rekreasi dan taman burung)

Location of the First Priority Area Spots

Location of the Second Priority Area Spot (second alternative design)
Usulan ruang tambahan area spot 1 (mini amphitheater, & gardu pandang)

Usulan ruang tambahan area spot 2 (area self healing)

Usulan ruang tambahan area spot 3 (area playground & fitness outdoor)

Usulan ruang tambahan area spot 4 (area rekreasi dan taman burung)

Location of the First Priority Area Spots

Lintasan batu pijat dengan permukaan dari material batu koral/batu kenikil

Location of the Second Priority Area Spot (second alternative design)
Design Concept & Design Illustration at Priority Area

Design Illustration of First Priority Area at Br. Tegal Gundul

Location of the First Priority Area Spot

- Usulan ruang tambahan area spot 1 (mini amphitheater, & gardu pandang)
- Usulan ruang tambahan area spot 2 (area self healing)
- Usulan ruang tambahan area spot 3 (area playground & fitness outdoor)
- Usulan ruang tambahan area spot 4 (area rekreasi dan taman burung)
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Usulan ruang tambahan area spot 2 (area self healing)

Usulan ruang tambahan area spot 3 (area playground & fitness outdoor)

Usulan ruang tambahan area spot 4 (area rekreasi dan taman burung)

Location of the First Priority Area Spot

Location of the Second Priority Area Spot (second alternative design)
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Design Master of Second Priority Area at Br. Tibubeneng

Activity Map Illustration

Attraction Map Illustration

1. 2-wheeler parking
2. Gathering
3. Performing art
4. Jogging/walking
5. Playing
6. Urban farming
7. Picnic
8. Seeing
9. Wi-Fi spot
10. Fishery

1 = Akses pencapaian/entrance area prioritas dua
2 = Spot area observasi/pengamatan
3 = Area lahan pertanian sawah basah dengan aktifitas wisata agraris atau rekreasi urban agriculture
4 = Koridor jalur inspeksi sungai
5 = Spot area memancing menyebab sepanjang koridor jalur inspeksi
6 = Area budidaya ikan sungai dalam keramba
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Section Plan of Second Priority Area at Br. Tibubeneng

Location of the Second Priority Area Spot

Section Plan of Corridor Access
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Design Illustration of Second Priority Area at, Br. Tibubeneng
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Design Illustration of Second Priority Area at, Br. Tibubeneng

Design Illustration
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Design Master of Third Priority Area at Br. Aseman Kangin

Activity Map Illustration

Attraction Map Illustration
DESIGN CONCEPT & DESIGN ILLUSTRATION AT PRIORITY AREA

Section Plan of Third Priority Area at Br. Aseman Kangin

Section plan of riverside existence

Section plan of corridor access
Design Illustration of Third Priority Area at, Br. Aseman Kangin

Location of the Spot of Third Priority Area

Design Illustration
The Formulation and Regulation to Controliing Riverside Land Use Area In the Implementation of Tri Hita Karana Approachment Concept
**Analysis Policy of Riverside Area**

1. Proposed Establishment of First Priority Riverside at, Br. Tegal Gundul

2. Proposed Establishment of Second Priority One Riverside at, Br. Tibubeneng & Br. Aseman Kangin

**Analysis Policy of Building Regulations**

1. Proposed Determination Orientation of Building Concept facade Along the River

2. Proposed Establishment of Slot Area Aperture Concept Along the River
ANALISIS KEBIJAKAN TATA BANGUNAN

1. Usulan Penetapan Konsep Jenis & Peruntukan Bangunan Kawasan Prioritas Satu

2. Usulan Penetapan Konsep Pembagian Zona Area Linier Kawasan Prioritas Satu

- Cluster of settlement
- Riverside area
- Layer of first line building area
- Layer of second line building area
- Riverside area

Building type on first layer
Building type on second layer
Free access for sun lighting
Thank You For Attention