11.307 Beijing Urban Design Studio
Summer 2008

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The flexible module
CONNECTION BETWEEN SOIL-POLLUTED DEGREE & FUNCTION

浓度 | DENSITY

铅 | LEAD
锌 | ZINC
铜 | COPPER
镍 | NICKEL
镍 | NICKEL

时间 | DURATION

e工业 | E-INDUSTRY
工业 | INDUSTRY
商业 | COMMERCIAL
教育培训 | EDUCATION
居住 | HOUSING
THE INTERACTIVATION BETWEEN FUNCTION

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POWER STATION

E- INDUSTRY
THE INTERACTIVATION BETWEEN FUNCTION

POWER STATION
E- INDUSTRY
M-HOUSING
THE INTERACTIVATION BETWEEN FUNCTION
THE INTERACTIVATION BETWEEN FUNCTION

POWER STATION
E- INDUSTRY
M-HOUSING
COMMERCIAL
CIVIC
INDUSTRY
THE INTERACTIVATION BETWEEN FUNCTION

POWER STATION
E- INDUSTRY
M-HOUSING
COMMERCIAL
CIVIC
INDUSTRY
GREEN BUFFER
THE INTERACTIVATION BETWEEN FUNCTION

POWER STATION
E- INDUSTRY
M-HOUSING
COMMERCIAL
CIVIC
INDUSTRY
GREEN BUFFER
THE INTERACTIVATION BETWEEN FUNCTION

POWER STATION
E- INDUSTRY
M-HOUSING
COMMERCIAL
CIVIC
INDUSTRY
GREEN BUFFER
Development process

PHASE 0, PHASE 1, PHASE 2, PHASE 3, PHASE 4, PHASE 5

HOUSING, INDUSTRY, COMMERCIAL, EDUCATION

- ENERGY STATION
- E-INDUSTRY
- RENTING HOUSING
- HOUSING
- COMMERCIAL
- CIVIC
- INDUSTRY
- GREEN
PROPORTION CHANGES IN PHASES CAUSED BY DIFFERENT MAJOR FUNCTIONS

Land use proportions

- Housing Focus Development
  - Phase 0: 17%, Phase 1: 11%, Phase 2: 14%, Phase 3: 10%, Phase 4: 5%, Phase 5: 2%

- Industry Focus Development
  - Phase 0: 10%, Phase 1: 16%, Phase 2: 14%, Phase 3: 12%, Phase 4: 10%, Phase 5: 8%

- Commercial Focus Development
  - Phase 0: 13%, Phase 1: 12%, Phase 2: 10%, Phase 3: 10%, Phase 4: 8%, Phase 5: 6%

- Education Focus Development
  - Phase 0: 34%, Phase 1: 20%, Phase 2: 12%, Phase 3: 10%, Phase 4: 12%, Phase 5: 12%

- Other
  - Long narrow strip
  - keith case - zhang ruoxi - ma xiaoying - kristina katic - marissa grace desmond
SELECTION OF BASES FOR [ PHASE 0 ]

1. ENERGY STATION | 能量基地
   EFFICIENT & TOTALLY COVERAGING NET
   能量站形成的网络可以有效覆盖整个区域

2. HUGE WORKSHOP IN GOOD CONDITION | 质量好规模大现有厂房

3. EXISTING HOUSING AREA | 现存的可居住区域

4. CLOSENESS TO RAILWAY | 铁路交通的可达性
Phase 0 land use

LAND USE | 用地
PHASE 0 | 阶段 0

- ENERGY STATION | 能源基地
- ENVIRONMENTAL INDUSTRY | 生态工厂
- HIGH DENSITY HOUSING | 高密度住宅
- HOUSING | 住宅
- COMMERCIAL | 商业
- CIVIC | 文化
- INDUSTRY | 工业
- GREEN SPACE | 绿地
- MOUNTAIN | 山地
- LAKE | 湖
Phase 3 land use
Phase 4 land use
LAND USE | 用地
PHASE 5 | 阶段 5

- ENERGY STATION | 能源基地
- ENVIRONMENTAL INDUSTRY | 生态工厂
- HIGH DENSITY HOUSING | 高密度住宅
- HOUSING | 住宅
- COMMERCIAL | 商业
- CIVIC | 文化
- INDUSTRY | 工业
- GREEN SPACE | 绿地
- MOUNTAIN | 山地
- LAKE | 湖

long narrow strip
long narrow strip
long narrow strip
Phase 2 remediation

long narrow strip
Projected development centers

- Commercial
- Industrial
- Civic
- Open space
- Housing
- Energy
- Parking
- Water

long narrow strip
Programmatic transitioning

- Phase 1: Industrial
- Phase 2: Migrants, Industrial
- Phase 3: Migrants, Greenies, Commercial
- Phase 4: Villagers, Commercial, Migrants

Establish critical circulation and extents of build out

long narrow strip
Programmatic transitioning

Adapt migrant housing to middle and upper class residences, expand residential higher, convert industrial spaces to academic, commercial or garden apartments and lofts.

Establish critical circulation and extents of build out.

long narrow strip
Programmatic transitioning

Building Height

Density

Phase 1: Industrial

Phase 2: Industrial

Phase 3: Commercial, Migrants, Greenies

Phase 4: Villagers, Commercial, Migrants

Adapt migrant housing to middle and upper class residences, expand residential higher, convert industrial spaces to academic, commercial or garden apartments and lofts.

Establish critical circulation and extents of build out.
Programmatic transitioning

Housing is now a mix of middle class dwellings ranging from row houses to apartment blocks within city blocks containing institutional, civic, commercial and light industrial.

Adapt migrant housing to middle and upper class residences, expand residential higher, convert industrial spaces to academic, commercial or garden apartments and lofts.

Establish critical circulation and extents of build out.

long narrow strip
Large existing buildings with adaptable interior space are reserved to first house soil remediation and related industries
As soil remediation moves out of the major spaces, other industrial uses as well as migrant housing will move in provisionally as the rest of the site is developed into industrial and light commercial enterprises.
As the remediation activities move elsewhere on the Shougang site, the remaining industrial volume can be broken up into smaller commercial and residential spaces while larger spaces will become civic and entertainment venues.

As migrants move to other parts of the site, their housing becomes middle class apartments.
Prototypical development north of the Little Hot Lake

long narrow strip

keith case - zhang ruoxi - ma xiaoying - kristina katic - marissa grace desmond
pre-treated water from a settling tank that has allowed solids to fall out of suspension

biofilter of bark and humic material - first filtration

aerobic tanks - a series of both closed dark and open top tanks with photosynthetic algae to fix oxygen to the water

aquaculture tanks - filter feeders eat the algae and plankton that have fed on the smaller particles and detritus feeding fish eat larger particles

filtered water can now be used for irrigating the soil remediation facilities

long narrow strip
long narrow strip

keith case - zhang ruoxi - ma xiaoying - kristina katic - marissa grace desmond
Living machine section

long narrow strip

keith case - zhang ruoxi - ma xiaoying - kristina katic - marissa grace desmond
Living machine view