Reclaiming the industrial landscape through sustainable transformation

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track (Urbanism)
Landscape metropolis studio
Pollution Lower Lea Valley

Bird's eyes view
The Position of Lower Lea Valley
Past, present, and future…….
**Problem statement**

<table>
<thead>
<tr>
<th>analysis</th>
<th>research question</th>
<th>aim of the project</th>
<th>relevance</th>
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<tbody>
<tr>
<td>Missing link</td>
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**Analysis**

- **Existing open space**
  - Unattractive open space without program
  - Non-continuous open space network

**Research Question**

- Lack of vital and continuous open space

**Aim of the Project**

- **Low spatial quality**

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- Existing open space
- Existing open space
- Existing open space

---
Low spatial quality

Existing waterfront

Existing Lea river

Existing waterfront

- Lack of walk able space along waterfront
- Water problem

\[ \text{Unattractive waterfront} \]

- Flood risk and water shortage
Water problem in Lower Lea Valley

- Flooding
  - Storm in short time
Water problem in Lower Lea Valley

- **Drought**
  - Urban heat island: LLV is one of high land surface temperature area because of high urbanized area
  - Less groundwater

![Land surface temperature map](image)
Low accessibility

Problem statement

Existing road system
Existing public transport system
Existing pedestrian system

Existing DLR station
Existing train station
Existing underground station
Existing Rail/underground/ DLR link
Existing Principal Road Corridors
Existing Pedestrian and Cycle Routes

/ rhombus6

Low accessibility
Low accessibility

- Existing main road
- Existing railway
- Comprehensive infrastructure

- Infrastructure as boundary of LLV
- Lack of bridge to cross infrastructure for neighborhood
  
  **Inefficient pedestrian accessibility**

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Future image from GLA

Future image from GLA

Future image from GLA

- Demolish two third existing buildings
- New housing or program replace industrial equipment

- Lose industrial feature and identity

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<tr>
<td>2012 Olympic games</td>
<td>Regenerate and redevelop</td>
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Past: High position of industrial area

Future: Olympic opportunity

Present: Most deprived area

Reorganize framework for
Connection network
Green space network
Water network
- **Green space network**
  Theme Park + grass + promenade

- **Water network**
  Water course + lake

- **Connection network**
  Bike + pedestrian connection

Vital and continuous open space

Sustainable water management

Improve pedestrian accessibility
## Concept of strategy

- Strengthen industrial feature
- Create walk able physical waterfront and continuous landscape perception
- Improve the pedestrian accessibility
- Solve the flooding and water shortage

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Bring back LLV on London city map

Figure: Population growth since 1989
Source: The London Plan, 2004
What does LLV have?

- **Regional park**: around 90 ha, rich biodiversity, natural resource
- **Olympic park**: around 30 ha, stadium and sport facilities
- **Industrial park**: around 8 ha, industrial heritage, vacant space
The potential of LLV

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Green belt + metropolitan open land

Nature landscape

Culture landscape

Urban landscape

Main green space in east London
Stitch the missing link
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<td>quiet grassland</td>
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<td>quiet open land</td>
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## Principle for spatial experiment

### Improve spatial quality
- Create vital and useful open space
- Reorganize road and open space structure
- Continuous landscape system
- Dynamic spatial experience
- Walkable and attractive waterfront

### Sustainability
- Release flooding and water shortage problem
- Reuse industrial component
- Reduce carbon dioxide emission
- Increase green space to slow down the affect of climate change and improve the infiltration

### Accessibility
- Open pedestrian and bike accessibility from neighborhood
- Easy to close to water and green

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Proposed green structure

- grassland
- woodland
- grove
- native trees
- green passage
- sport field
- park
- ecological field
- garden
- meadow

Existing green space
Proposed pedestrian and bike circulation

Existing pedestrian and bike path

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natural resource

olympic park - earn money

industrial transformation - local feature
Existing condition

Plantation theater

increase continuous open space

Program

mainly is industry
transfer available industrial component
new residential area
new mixed use function
business centre

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Existing condition

Connection

car oriented pattern unsystematic
keep main road system
improve pedestrian and bike system

Urban fabric

messy condition
grid pattern

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Design concept for intervention area

1. Restructure framework of landscape and urban fabric
2. Transfer industrial component
3. Reorganize walking and cycling route
4. New topography

lower and flat land of LLV

dynamic topography and landscape perception

5. Typology of landscape and building

wetland

grassland

artificial lake

garden

landscape typology

mixed use

business

residences

studio

function and building typology

| analysis | concept | strategy | design | relevance |
Gray LLV to green LLV

- analysis
- concept
- strategy
- design
- relevance

built fabric + public space network + street network + land use concept
Green network
● **Open up waterfront**
  - 3m promenade + grass
  - Floodplain and wetland in the lower point

● **Continuous open space structure**
  - Reorganize public and private space by landscape framework
  - Water park + cultural park
  - Provide potential field for new program
  - Bridge cross infrastructure
Water network
Spiral slide Gas holder framework + Swimming pool =

- water container
- gas holder
- artificial lake
- swimming pool
- diving centre
- information centre
- other facility

Water recreation — water container / fresh water — sand filtration — artificial lake / sedimentation
connection network program
Density
Integrate green, blue, red...
Key node
1. Information centre
2. Diving centre
3. Gas holder reservoir
4. Artificial lake
5. Fresh water wetland
6. Water container
7. Recreational swimming pool
8. Sport field
9. Water park
10. Floodplain
11. Wet meadow
12. Residential area
13. Business centre
14. Mixed use waterfront
15. Park lot + ferry
16. Cultural park
17. Gas holder museum
18. Cultural centre / exhibition
19. Fresh water wetland
20. Ecological park
21. Lea River basin
22. Boardwalk / terrace
The present situation of intervention area

New vision of intervention area
Vision bird's view
New phenomenon of green Lower Lea Valley