

# WATERSIDE REGENERATION PROJECT



BULGARIA



*3rd Prize*

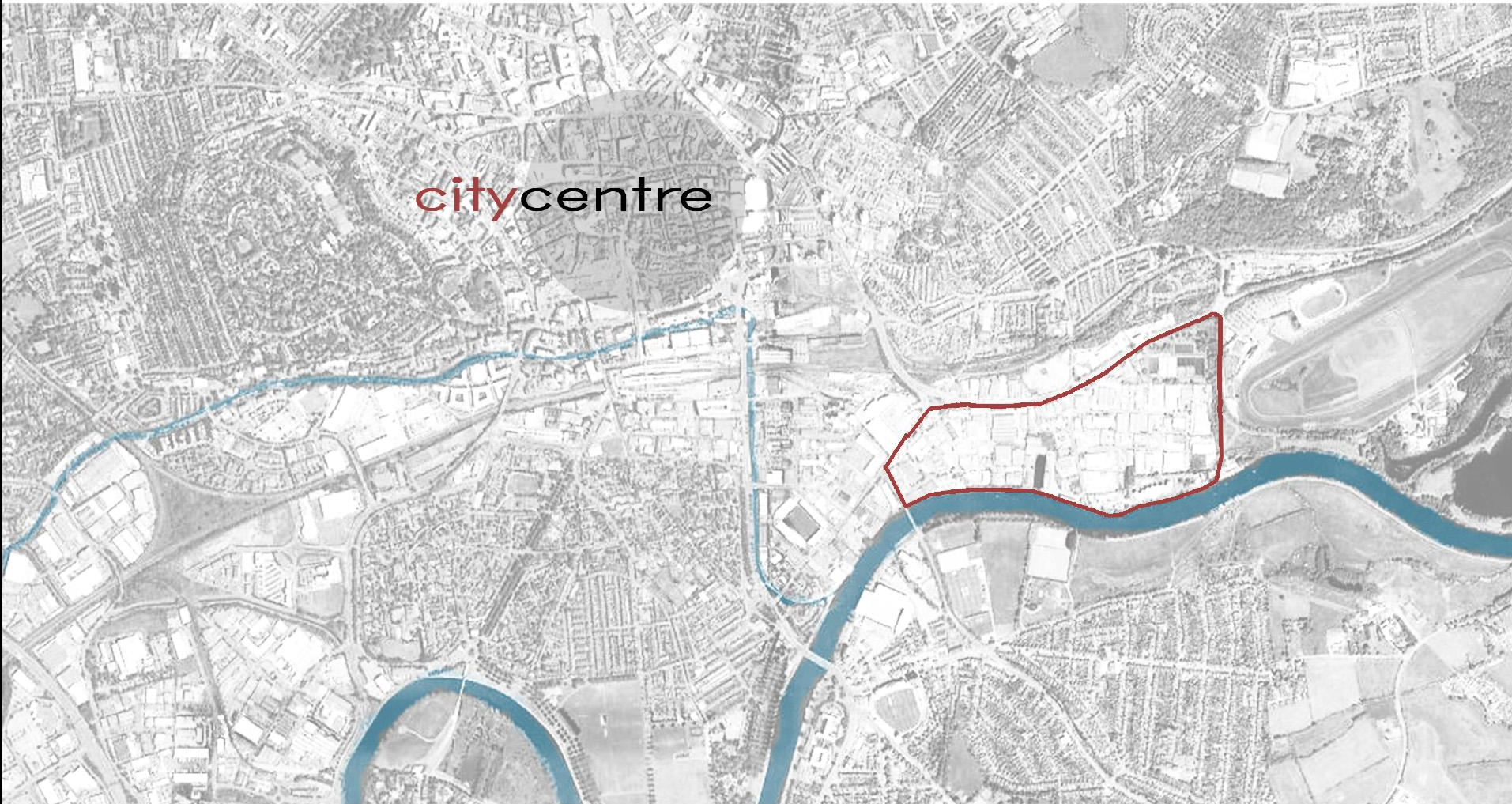
ZORNICA PETROVA

IVAILO ALEXANDROV

GEORGI GROZDANOV

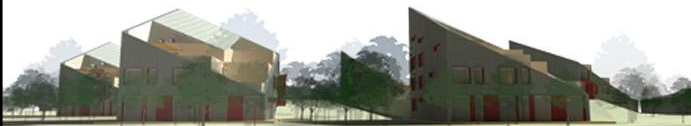
# situation

Nottingham



river Trent

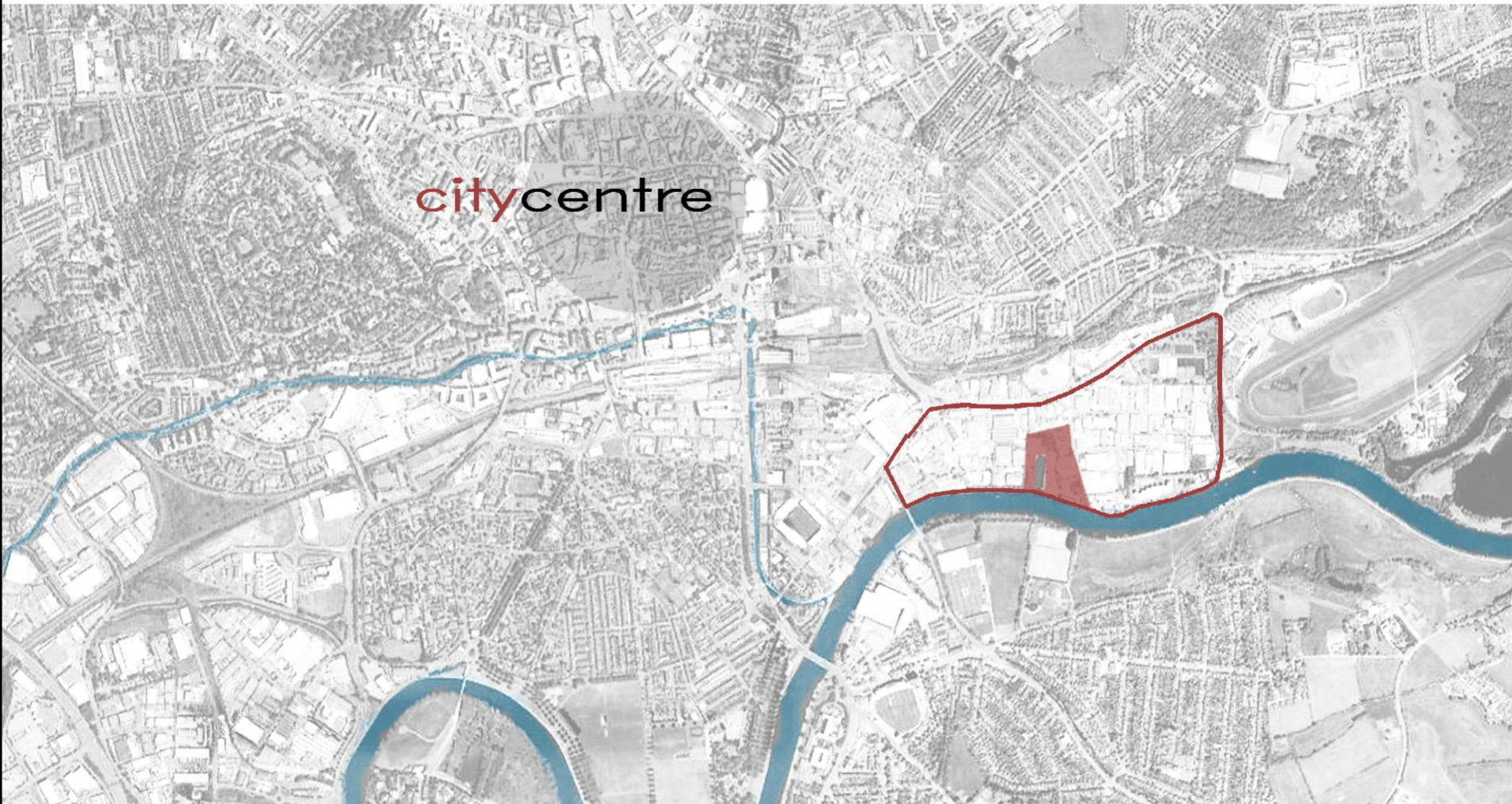
border of the industrial region





# situation

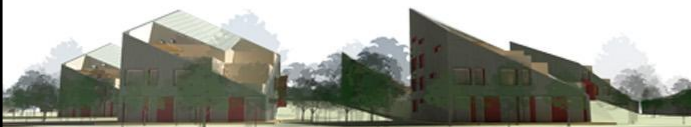
Nottingham



river Trent

border of the industrial region

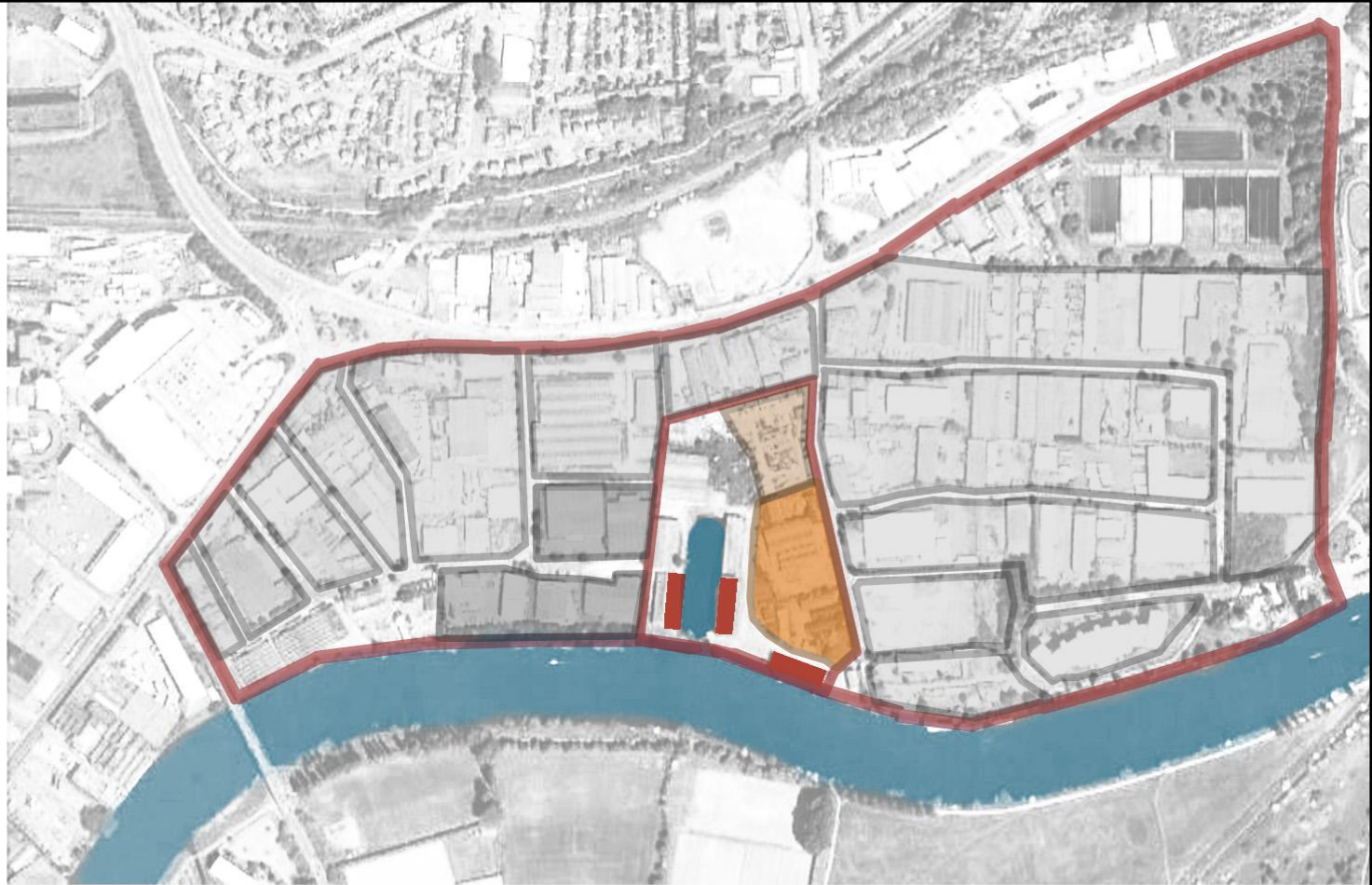
Trent Basin site








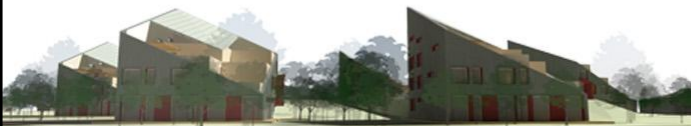
WATERSIDE  
REGENERATION  
PROJECT

# situation

industrial region



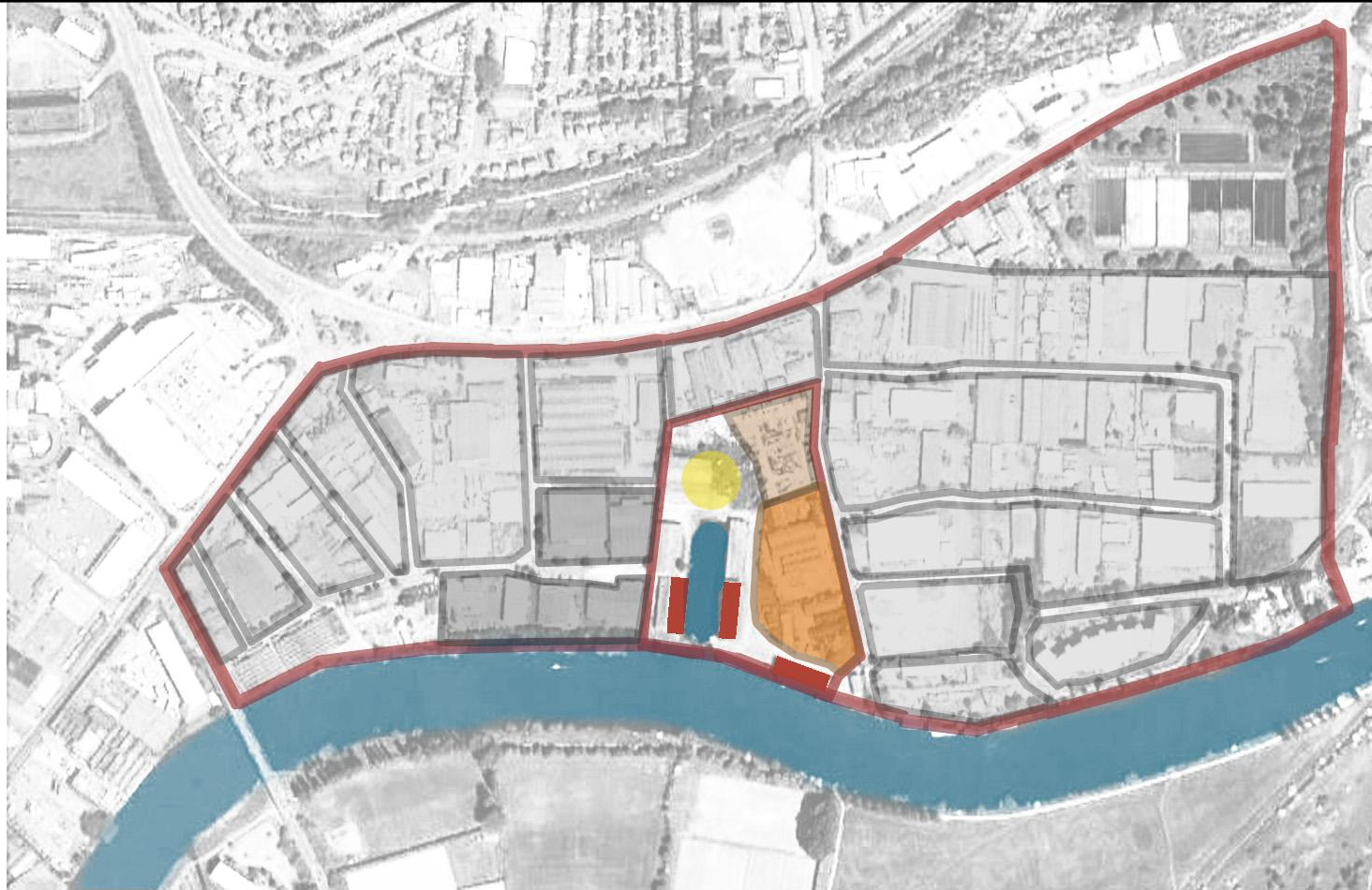
-  proposed residential buildings
-  proposed commercial buildings
-  project area
-  proposed housing in 2nd phase
-  community centers










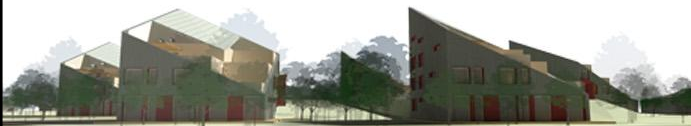
# situation

industrial region



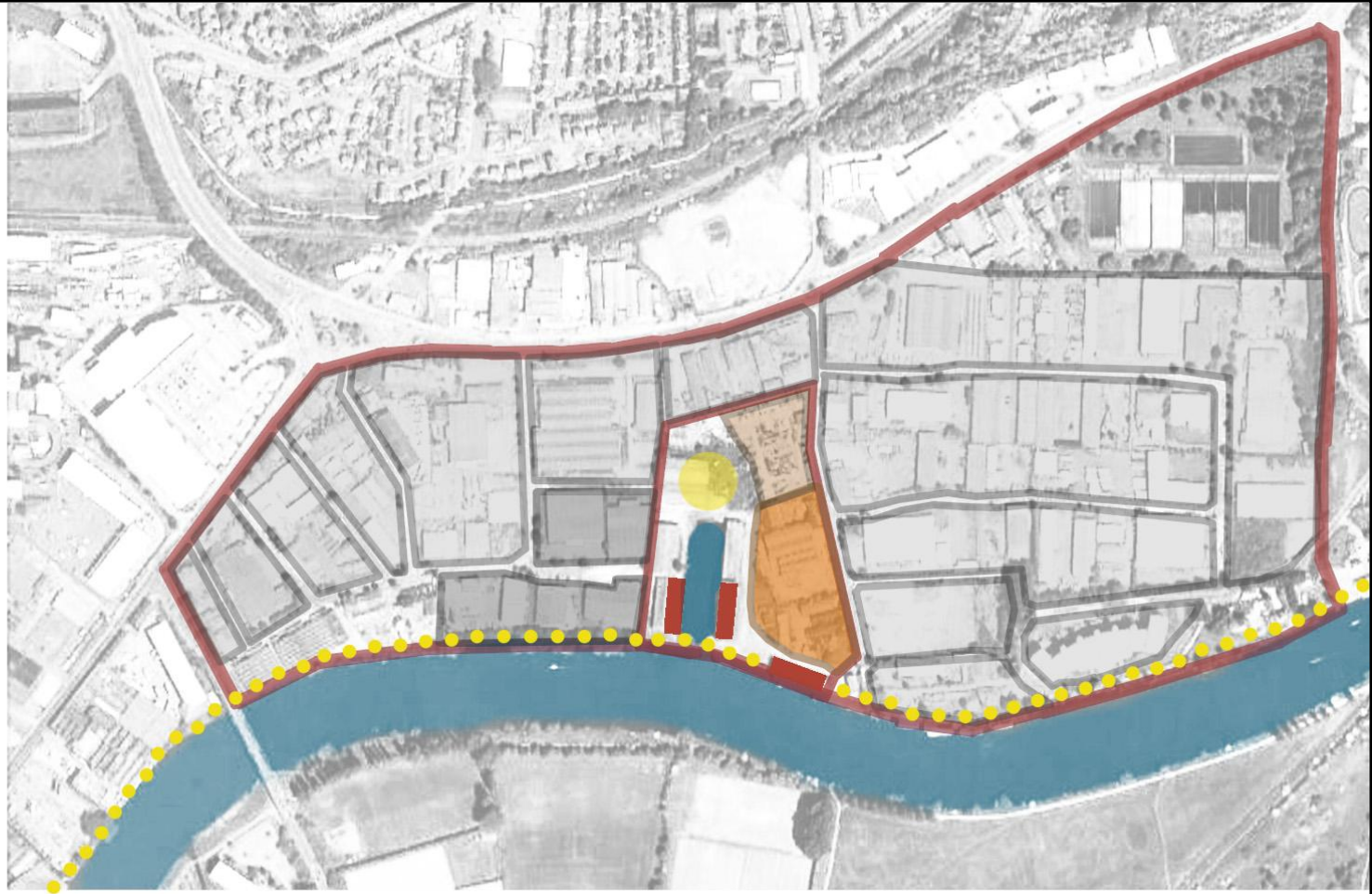
-  proposed residential buildings
-  proposed commercial buildings
-  project area
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-  community centers






 public space



# situation

industrial region



-  proposed residential buildings
-  proposed commercial buildings
-  project area
-  proposed housing in 2nd phase
-  community centers

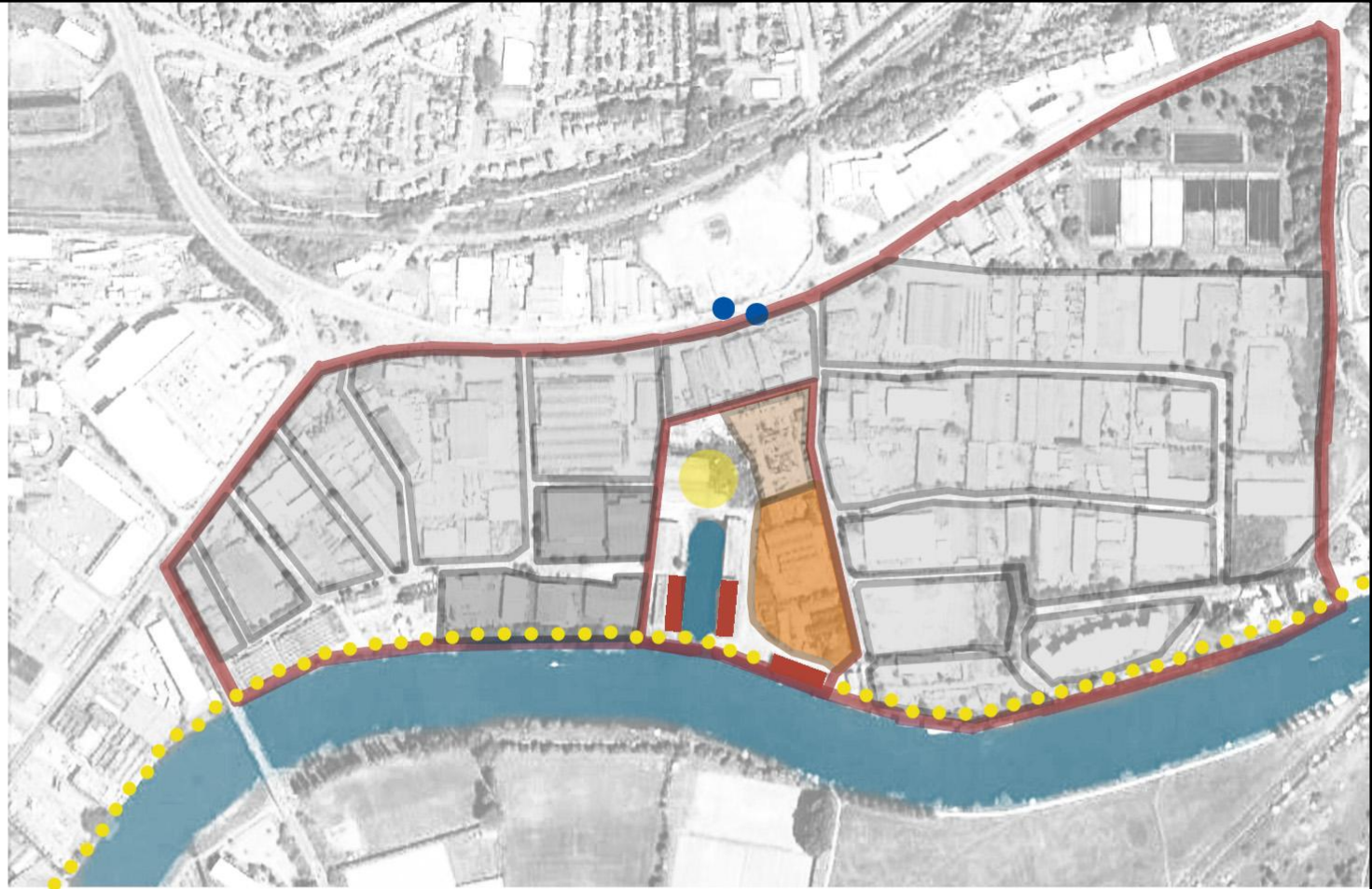
-  public space
-  continuation of the river side public footpath towards the citycentre










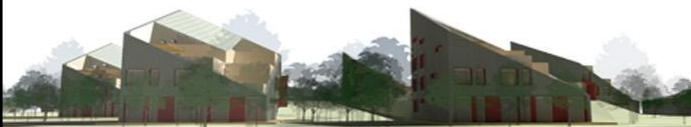
# situation

industrial region



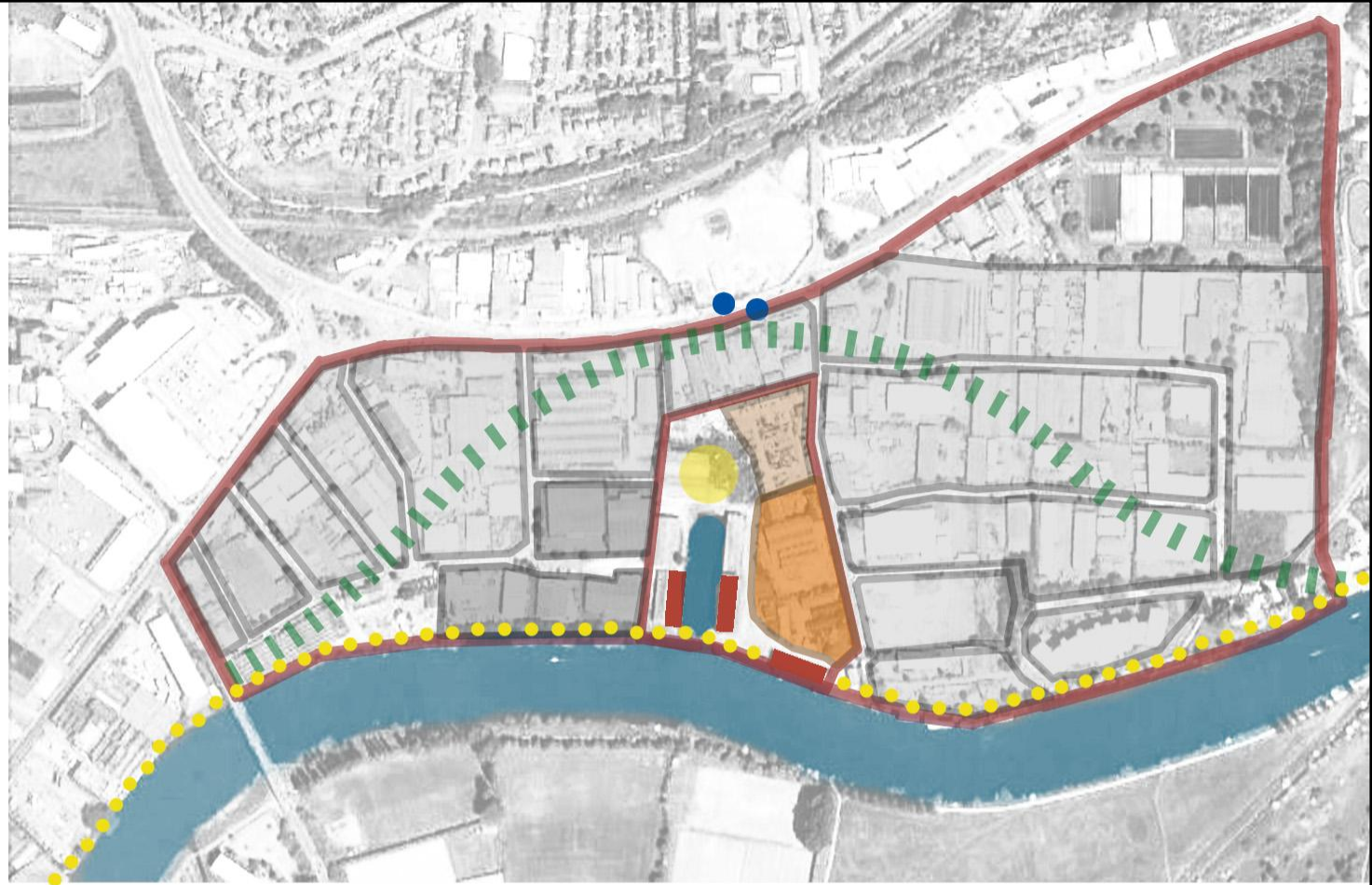
-  proposed residential buildings
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-  community centers

-  public space
-  continuation of the river side public footpath towards the citycentre
-  bus stop



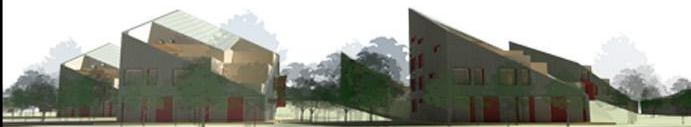
# situation

industrial region



- proposed residential buildings
- proposed commercial buildings
- project area
- proposed housing in 2nd phase
- community centers

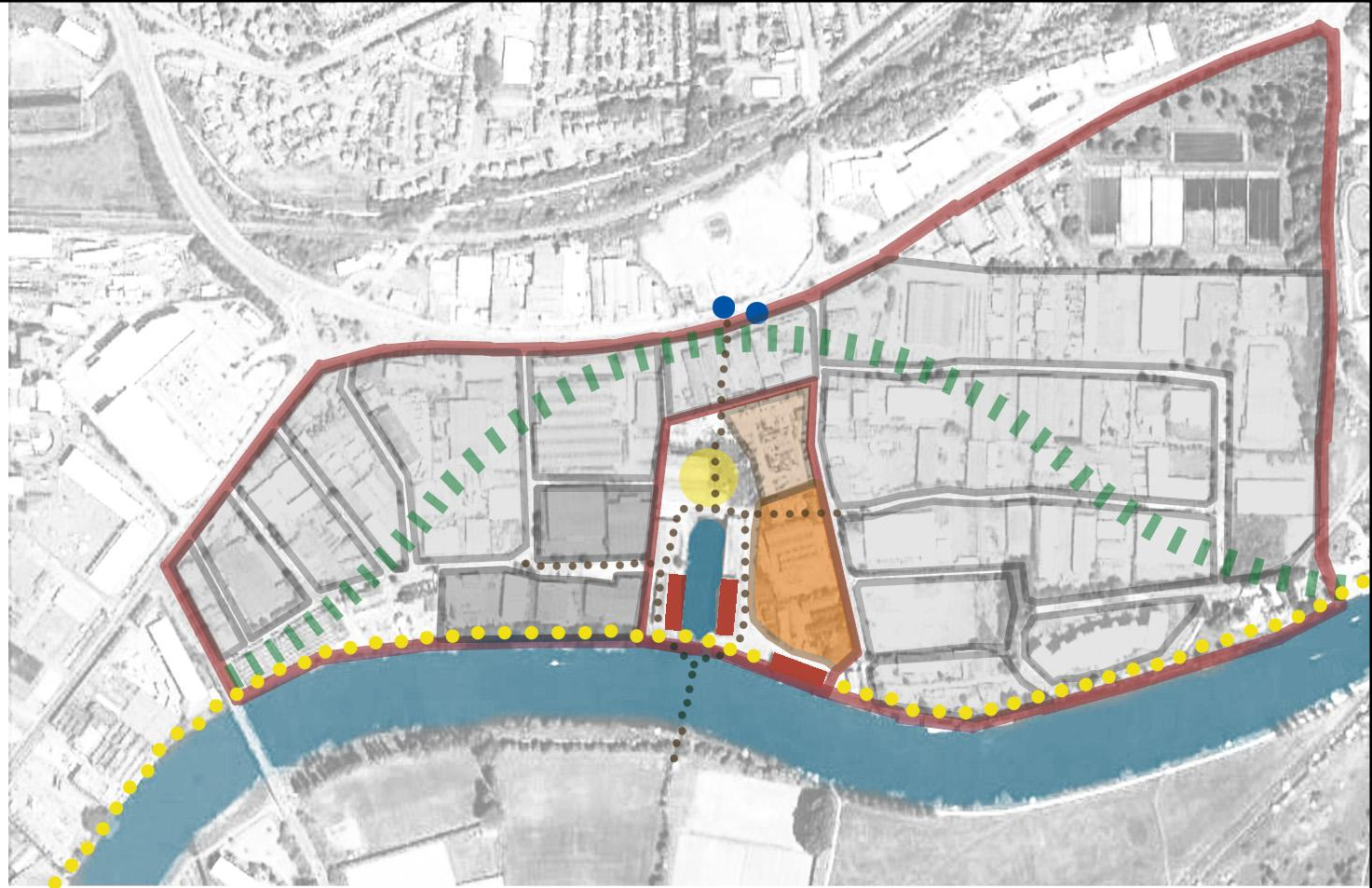
- public space
- continuation of the river side public footpath towards the citycentre
- bus stop
- green corridor proposal










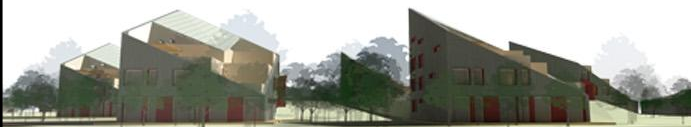
# situation

industrial region



-  proposed residential buildings
-  proposed commercial buildings
-  project area
-  proposed housing in 2nd phase
-  community centers

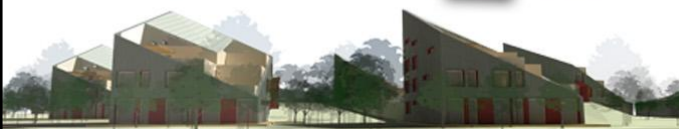
-  public space
-  continuation of the river side public footpath towards the citycentre
-  bus stop
-  green corridor proposal
-  new pedestrian paths





# situation

bird's eye view







# situation

Trend Basin site

pedestrian path connecting the site with the public transport

residential structure for 3 families

symbolic structure which creates stunning setting for civic gatherings, celebrations and ephemeral events

situated between the two residential complexes the victorian house is suitable for a kindergarden

artificial hill covering the car parking and creating an open green space in order to provides people with places where they can gather, recreate and play

new community center providing activities both during school and afterschool, allowing neighbours to engage in the process of building a stronger community

multistorey vegetable farm

restaurant, cafe, art gallery

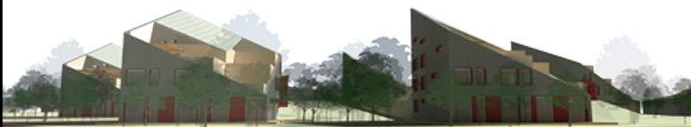
pedestrian bridge connecting the site to the park and the sport facilities





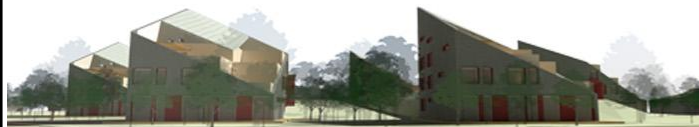
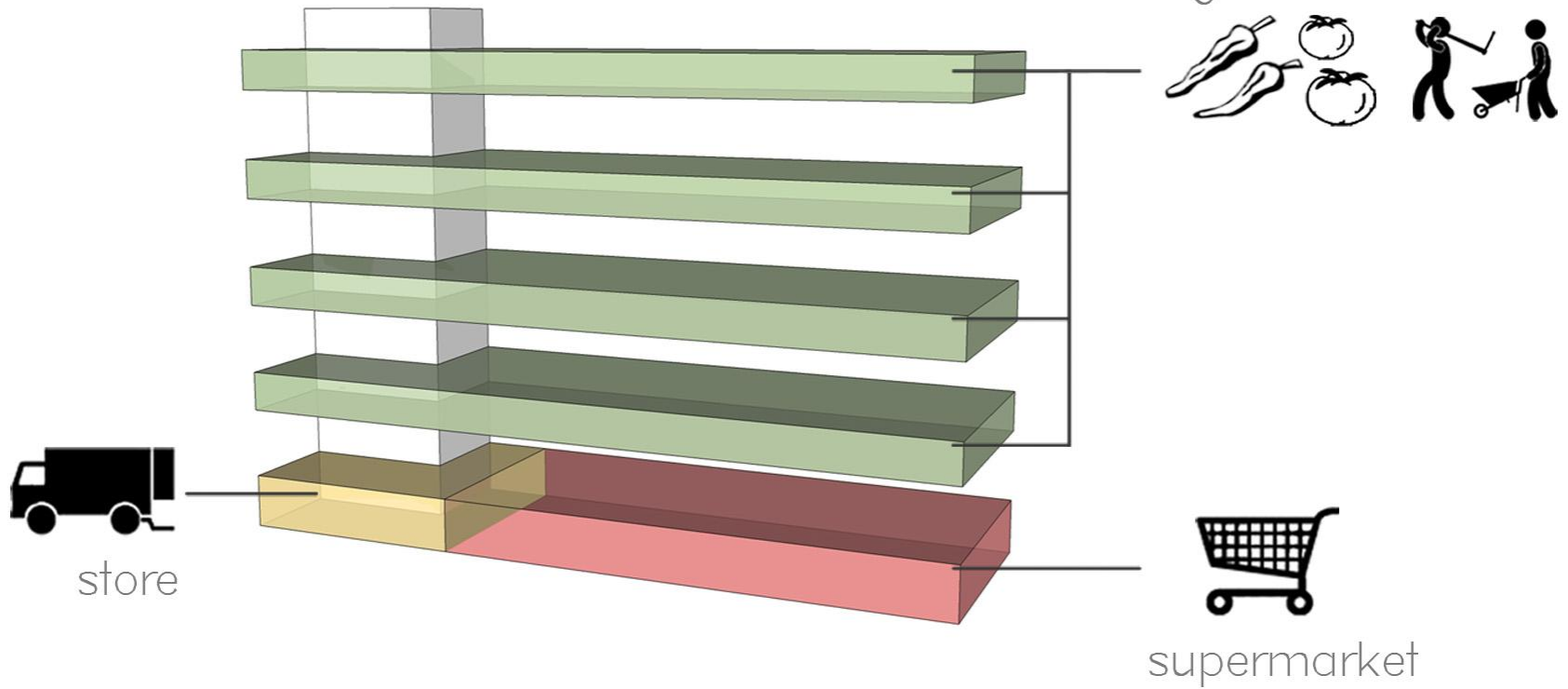
# warehouses

present condition



# warehouse

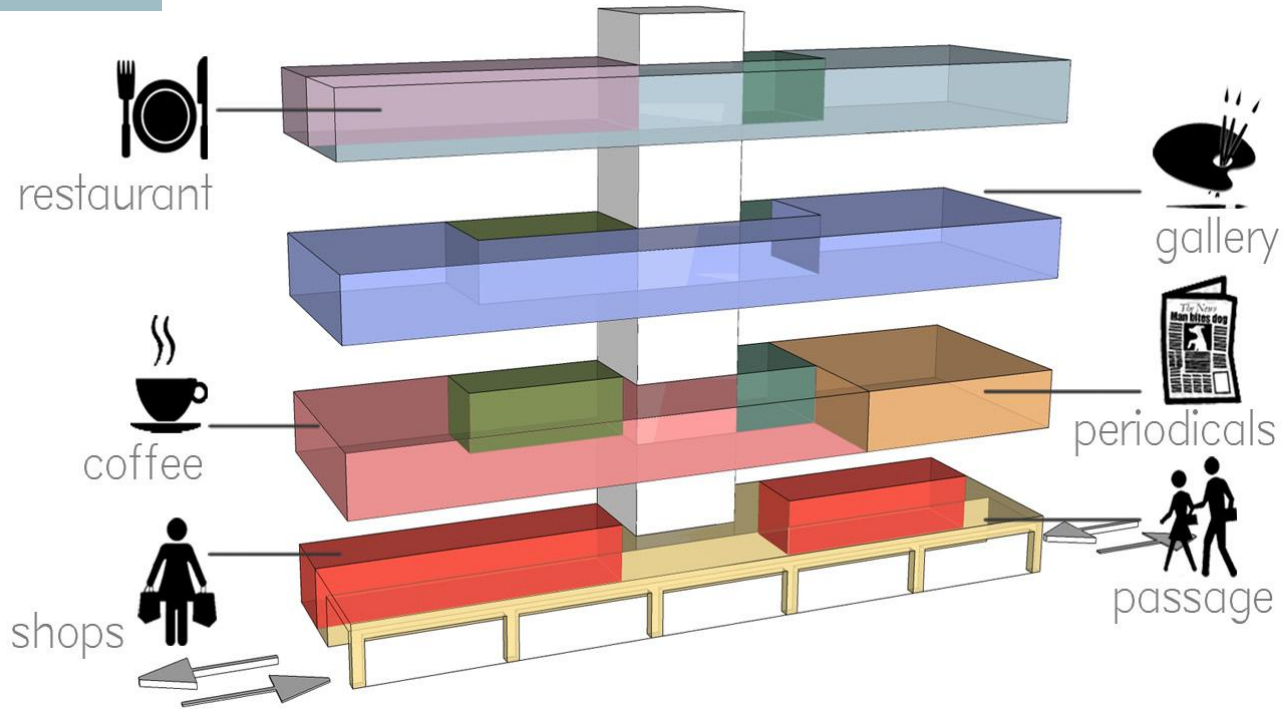
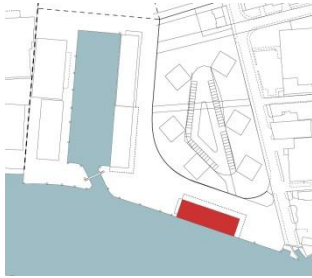
1





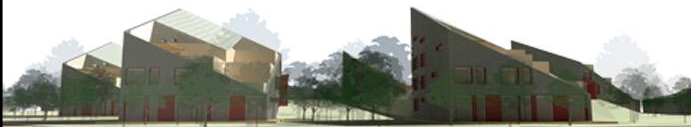
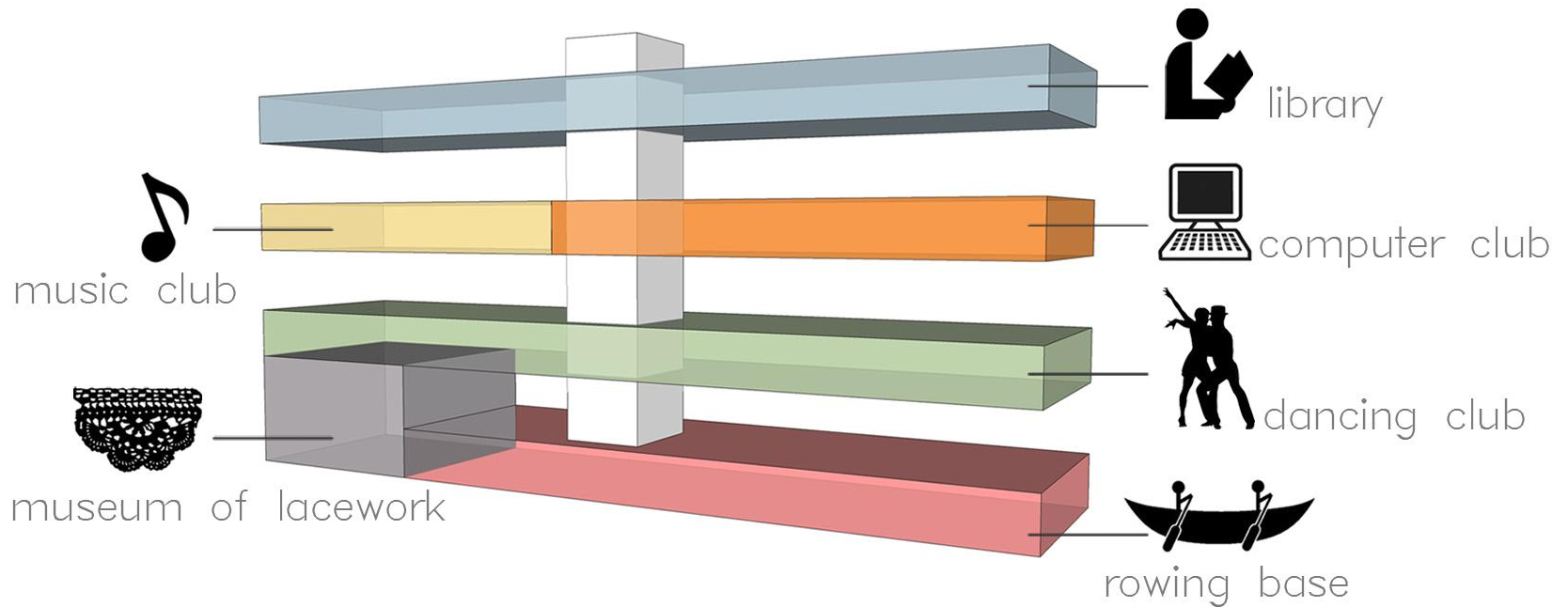
# warehouse

## 2



# warehouse

## 3





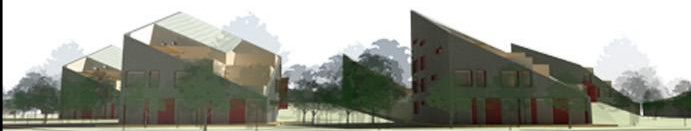




# reused materials

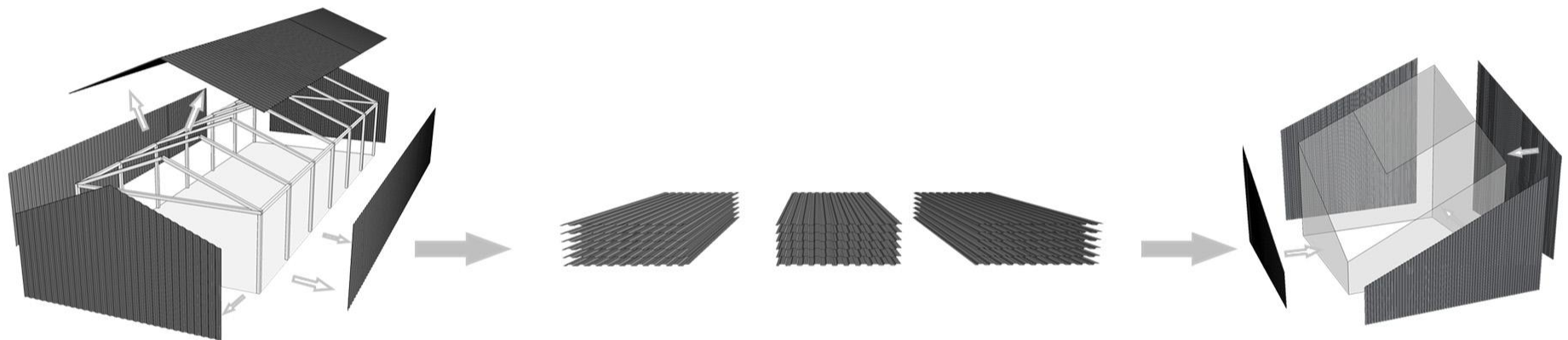
## existing warehouses

Trent Lane, Nottingham, England, United Kingdom  
Address is approximate





# reused materials scheme



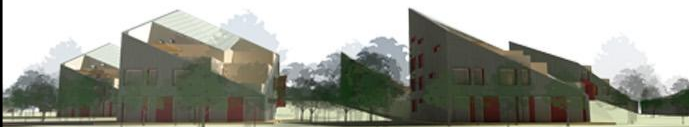
'undressing' the old existing  
on site warehouse buildings

## REUSED

tin — 9365 m<sup>2</sup>  
bricks — 460 m<sup>3</sup>  
concrete pannels — 1440m<sup>2</sup>

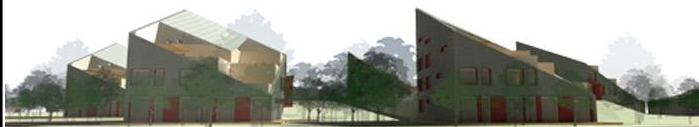
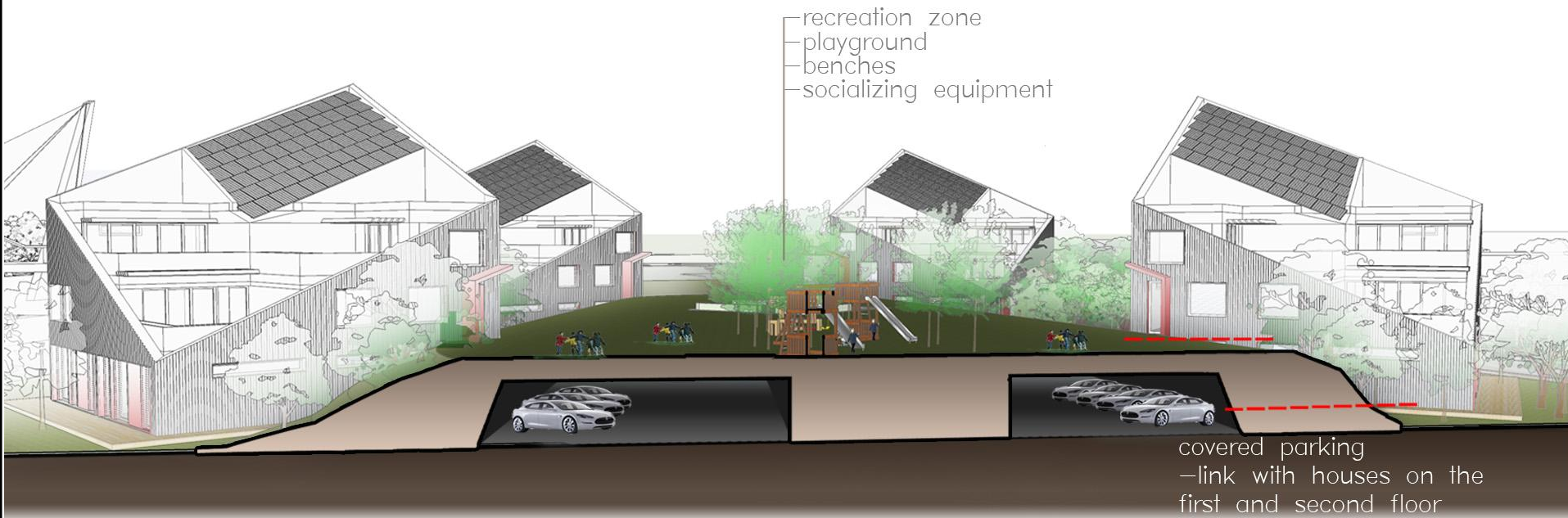
'dress' the new house

tin — 4250 m<sup>2</sup>  
6houses x 640m<sup>2</sup>  
reconstructed warehouse 810m<sup>2</sup>  
bricks — 100 m<sup>3</sup>  
concrete pannels — 1440m<sup>2</sup>



# the hill

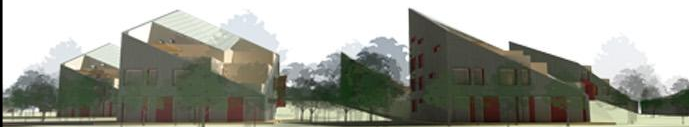
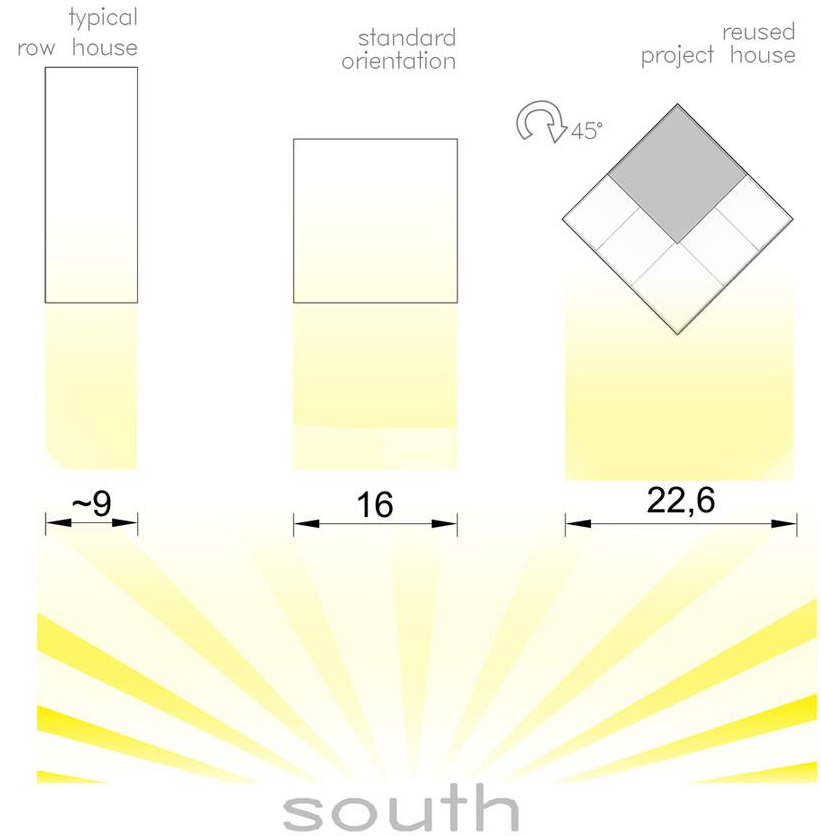
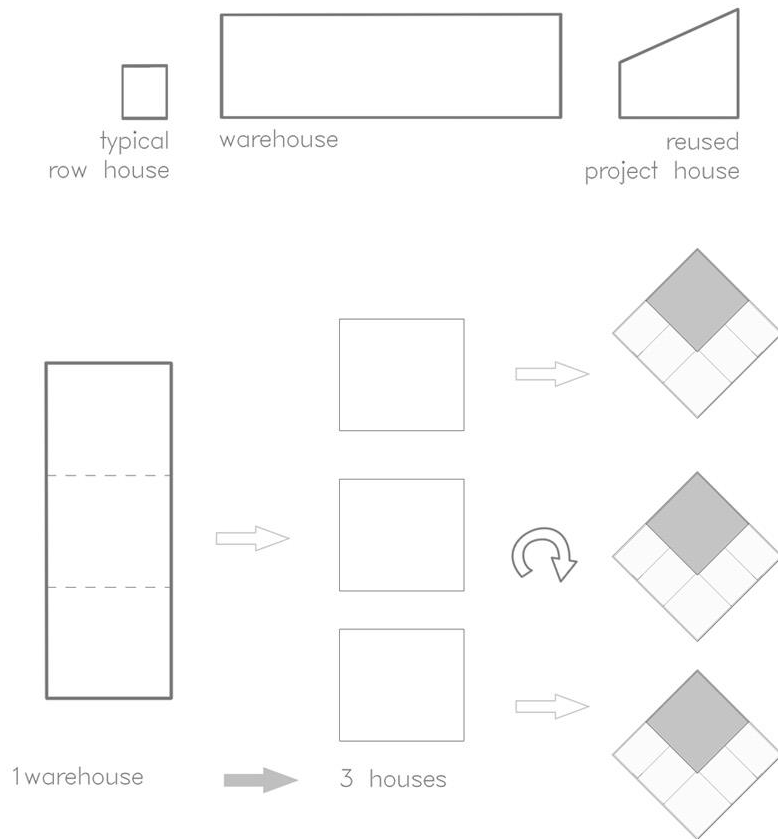
scheme





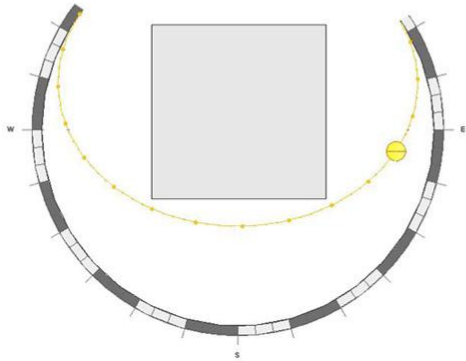
# scale factor/ sunlight

concept



# moisture prevention

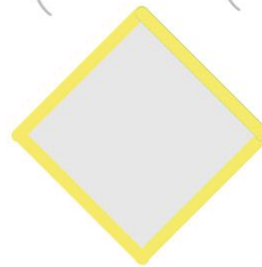
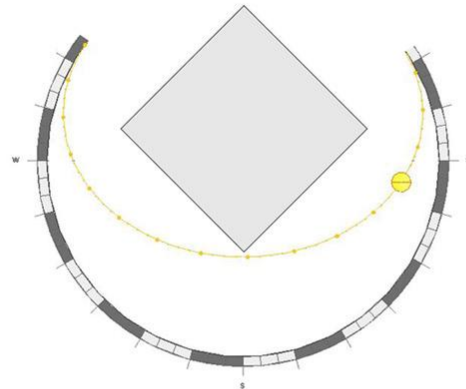
concept



max.3 hours of sunlight  
per day on the nord facade

➔ not optimal ventilation

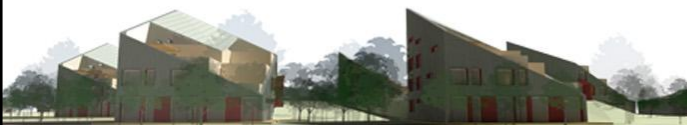
➔ accumulates moisture



max.10 hours of sunlight  
per day on the nord facade

➔ better ventilation

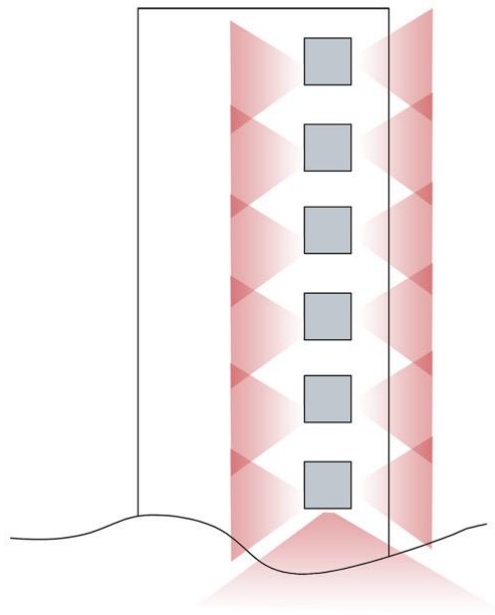
➔ prevents accumulating moisture



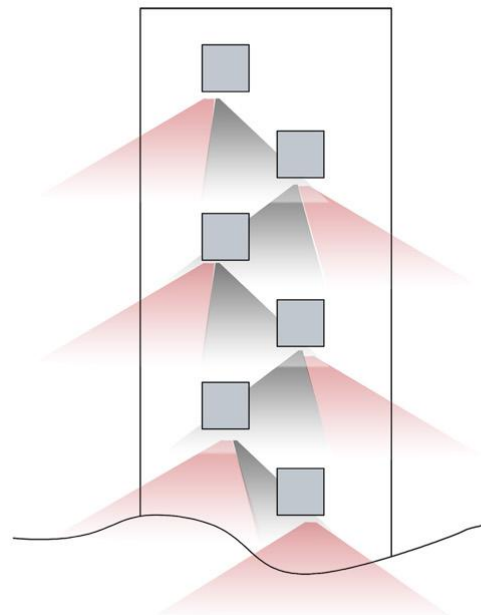


# views scheme

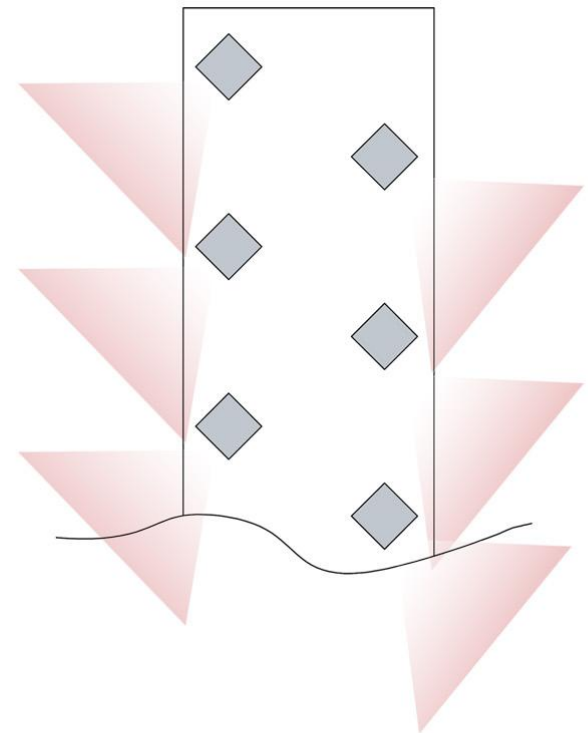
row placed



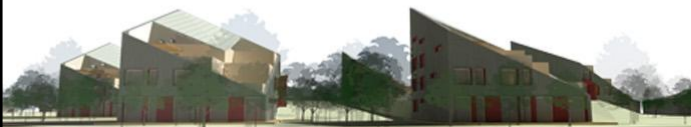
staggered placed



staggered,  
rotated 45° placed



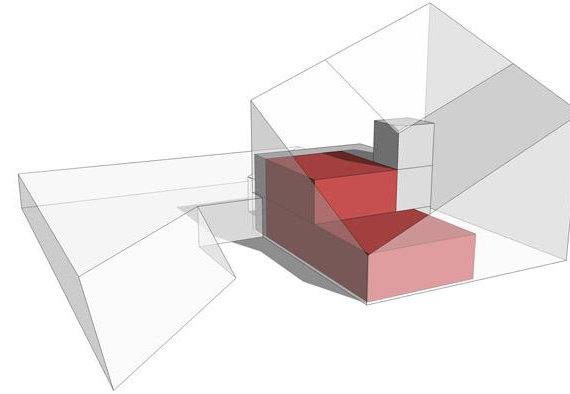
sight views







# apartment type **A** 130 m<sup>2</sup>



**1**  
FLOOR



FAMILY



YEARS LATER



OLD COUPLE

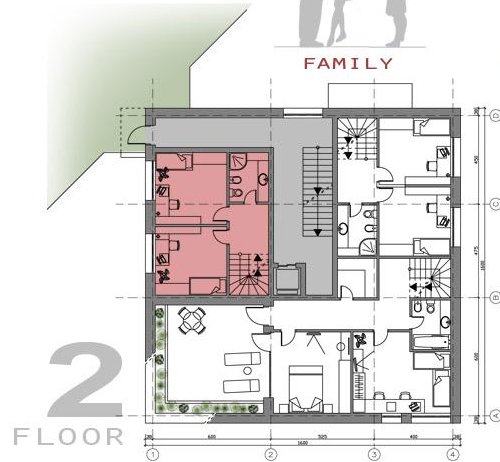
NEW GUYS

OR

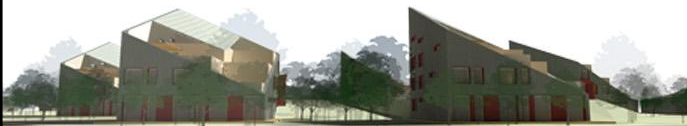
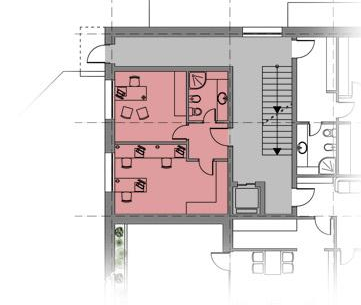
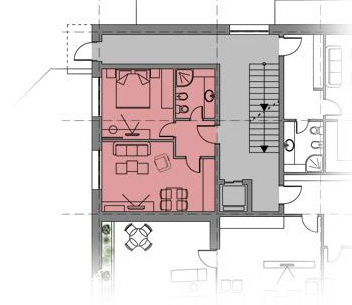


OLD COUPLE

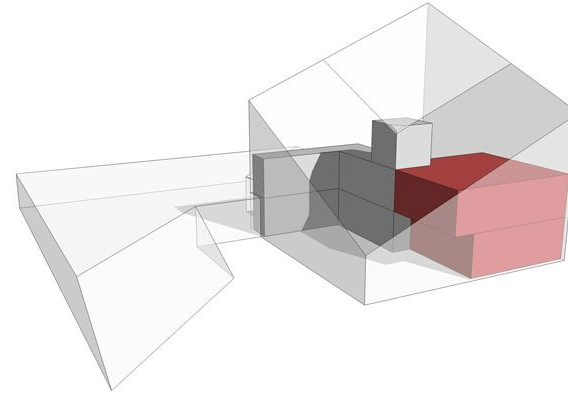
OFFICE



**2**  
FLOOR



# apartment type B 190 m<sup>2</sup>



FAMILY



YEARS LATER



OLD COUPLE

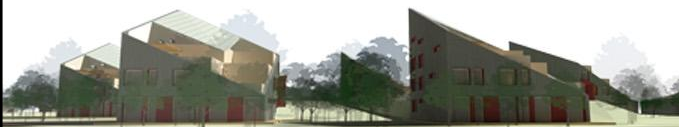
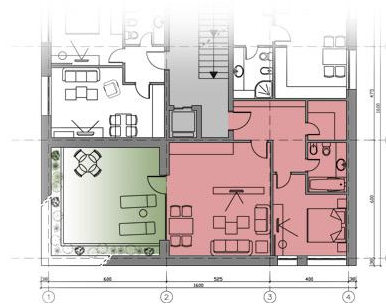
NEW GUYS

OR



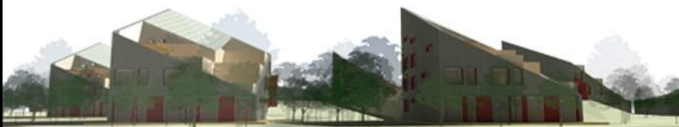
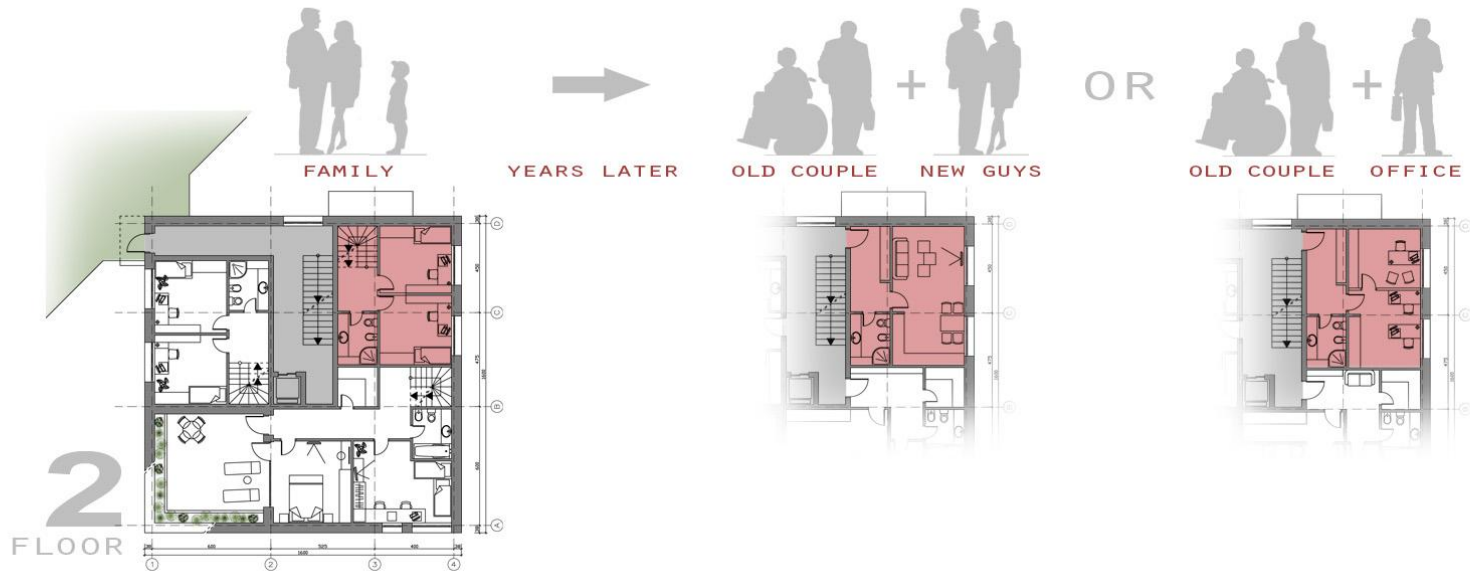
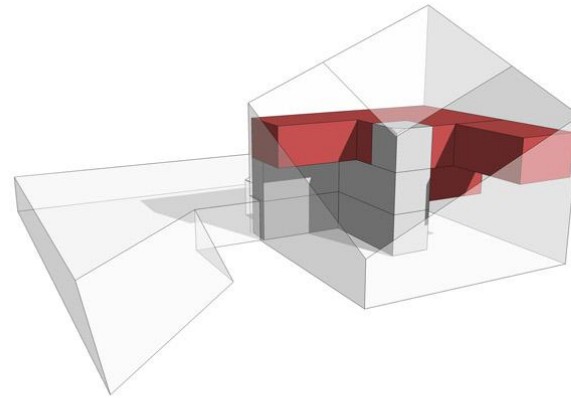
OLD COUPLE

OFFICE



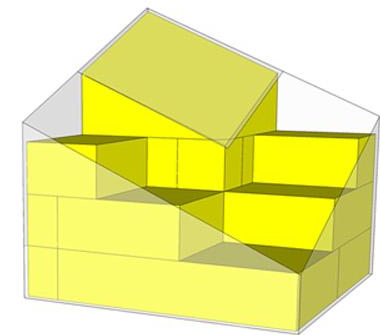
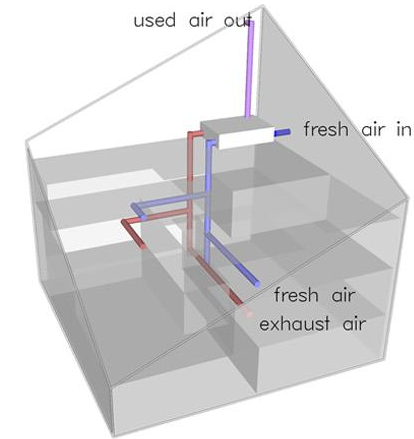
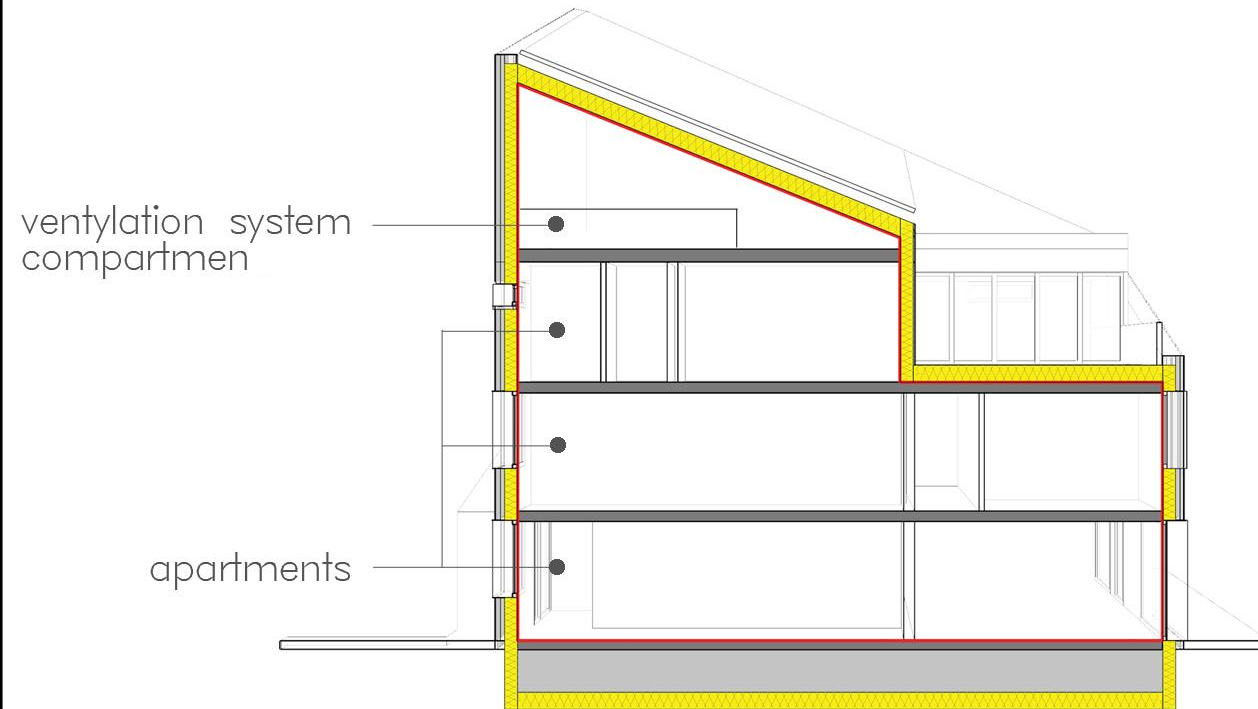


# apartment type C 215 m<sup>2</sup>

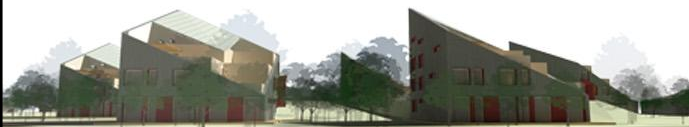


# thermal insulation/airtightness/ ventilation system

energy efficiency

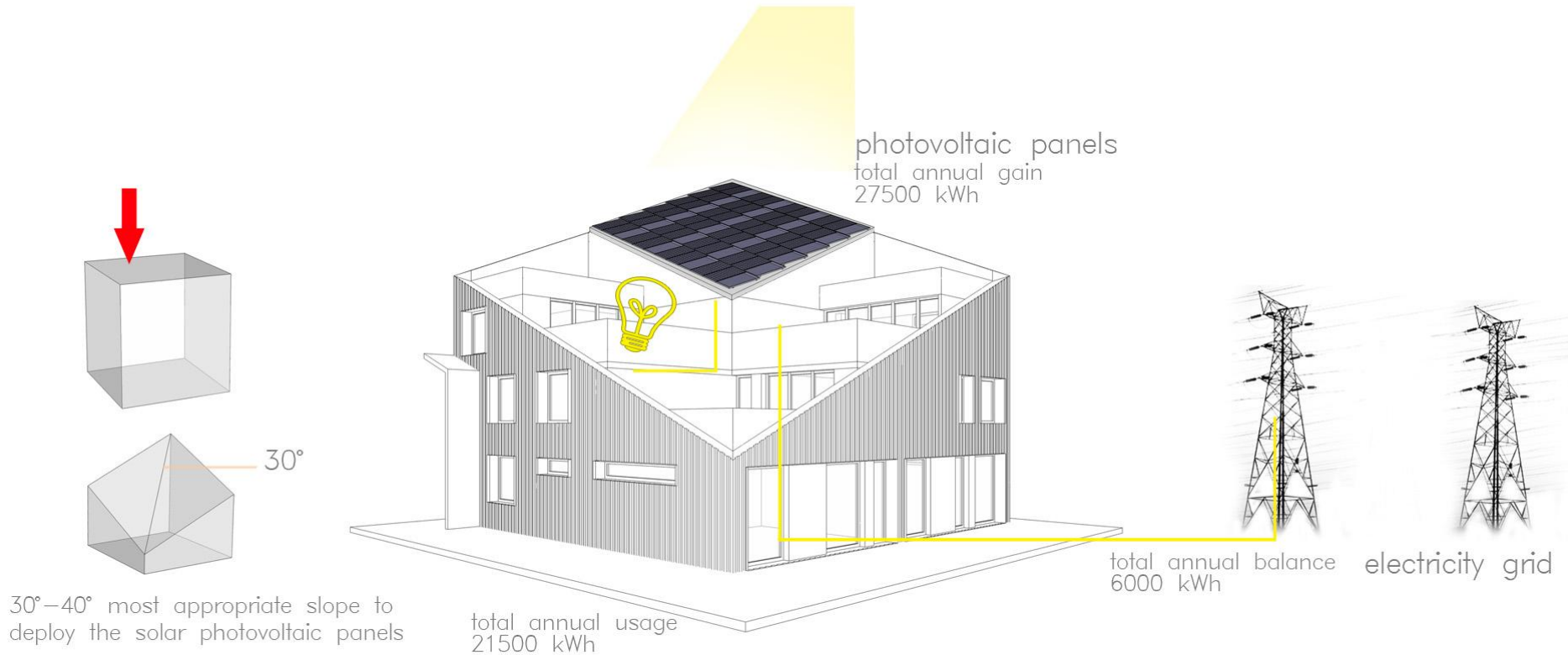


heated volume





# photovoltaic panels scheme



## Calculations:

### Heat Losses:

1. Transmission Heat Losses per m<sup>2</sup> and year:
2. Ventilation Heat Losses per m<sup>2</sup> and year:
3. Total Heat Losses per m<sup>2</sup> and year:

### Heat Gains:

4. Internal Heat Gains per m<sup>2</sup> and year:
5. Available Solar Heat Gains per m<sup>2</sup> and year:
6. Total Heat Gains (Free Heat) per m<sup>2</sup> and year:

Annual Heat Demand (kWh/m<sup>2</sup>):

Specific Annual Heat Demand (kWh/m<sup>2</sup>):

Specific Annual Heat Demand < 15 kWh/(m<sup>2</sup>a) achieved:

43.12 kWh/m<sup>2</sup>a  
6.88 kWh/m<sup>2</sup>a  
43.12 kWh/m<sup>2</sup>a

13.34 kWh/m<sup>2</sup>a  
16.29 kWh/m<sup>2</sup>a  
26.19 kWh/m<sup>2</sup>a

3822.62 kWh/m<sup>2</sup>

14.93 kWh/m<sup>2</sup>

YES

