CONTENT

- problem
- objectives
- Rivierenbuurt
- Rokin, OLVG west, Javastraat
- applicability
- conclusion
CAUSES

two major developments

climate change

predicted temperature rise Midden Nederland

- annual average
- trend
- uncertainty trend
CAUSES

two major developments

climate change
predicted temperature rise Midden Nederland

urban growth
predicted population growth Amsterdam

- annual average
- trend
- uncertainty trend
OBJECTIVES
multi-lateral solutions

storm water resilient,
sustainable & livable city
RIVIERENBUURT context

- enclosed by water
- parking
- unique open spaces
RIVIERENBUURT

Concept
RETENTION ROAD

primary road
STORM WATER ROAD
secondary road
GREEN ROAD
residential road
RETENTION AREA

parks & squares
RIVIERENBUURT
phase 2
RIVIERENBUURT
phase 3
**RIVIERENBUURT**

**evaluation**

- **Rain shower**
  - 60 mm in 2 hours
  - 60 L/m²

- **Roof of 70 m²**
  - 4.200 L

- **Blue-green roof buffers 80%**
  - 840 L

- **V-shaped street profile**
  - 69.240 L

- **Rainwater tank 3.000 L**

- **Green courtyard 200 L/m²**

- **Rain shower 60 mm in 2 hours**
  - 225 L

- **Rain barrel 225 L**

- **Rainwater tank 3.000 L**

- **Green courtyard 200 L/m²**

- **10x blue-green roof runoff 8.400 L**

- **Street surface of green road 60.000 L**

- **Water square 450 L/m² 1.080.000 L**

- **Connection to surface water (Amstel river)**

**Total:**

- **840 L**
- **69.240 L**
- **4.200 L**
- **3.000 L**
- **225 L**
- **3.000 L**
- **200 L/m²**

**Total Volume:**

- **1.080.000 L**
ROKIN
context

height differences

subsurface

traffic strip
ROKIN
new elements

cafe
summer setting
winter setting

souvenir shop

elements for facilities strip

possible lay-out of Rokin square
clothing store
OLVG WEST
context

huge flat roof

height differences

view from hospital
OLVG WEST
design proposal
OLVG WEST

design proposal

rainwater tanks: 30.000 L

surplus roof 2

50%
JAVASTRAAT context

car parking

shopfronts

inner courtyard
Impact:
- high
- medium
- low

Sustainable benefit
- energy
- urban agriculture
- biodiversity
- water quality
- waste reduction
- health & mood
- social cohesion
- traffic safety
- organized public space

Socio-economic benefit
- exchange of knowledge
- recreational facilities
- social cohesion
- education
- employment
- business
- tourism

Type of benefit:
- sustainable benefit
- socio-economic benefit

Type of design component:
- very much water related
- somewhat water related
- not water related

Legend:
- high
- medium
- low
**CONCLUSION**

qualitative evaluation

---

**Design components**

- storm water resilience
- energy
- urban agriculture
- biodiversity
- water quality
- waste reduction
- health & mood
- traffic safety
- social cohesion
- organised public space
- recreational facilities

**(Additional) benefits**

- very much water related
- somewhat water related
- not water related

Legend

- sustainable benefit
- socio-economic benefit

Type of benefit:
- Energy
- Urban agriculture
- Biodiversity
- Water quality
- Waste reduction
- Health & mood
- Traffic safety
- Social cohesion
- Organised public space
- Recreational facilities

Type of design component:
- Storm water resilience
- Energy
- Urban agriculture
- Biodiversity
- Water quality
- Waste reduction
- Health & mood
- Traffic safety
- Social cohesion
- Organised public space
- Recreational facilities

Impact:
- High
- Medium
- Low
CONCLUSION
qualitative evaluation

Design
components

(Additional)
benefits

Legend
Type of benefit:
+ sustainable benefit
+ socio-economic benefit

Type of design component:
- very much water related
- somewhat water related
- not water related

Impact:
- high
- medium
- low
CONCLUSION
qualitative evaluation

Design components

(Additional) benefits

Legend
Type of benefit:
- sustainable benefit
- socio-economic benefit

Type of design component:
- very much water related
- somewhat water related
- not water related

Impact:
- high
- medium
- low