



## Integration is the magic word

How can fortifications become a long-term, integrated solution for urban and environmental challenges?

Karen Gysen – 9 nov 2018

# Declaration of Venice

How can fortifications become a long-term, integrated solution for urban and environmental challenges?



How can fortifications become a long-term, integrated solution for urban and environmental challenges?

## Antwerp

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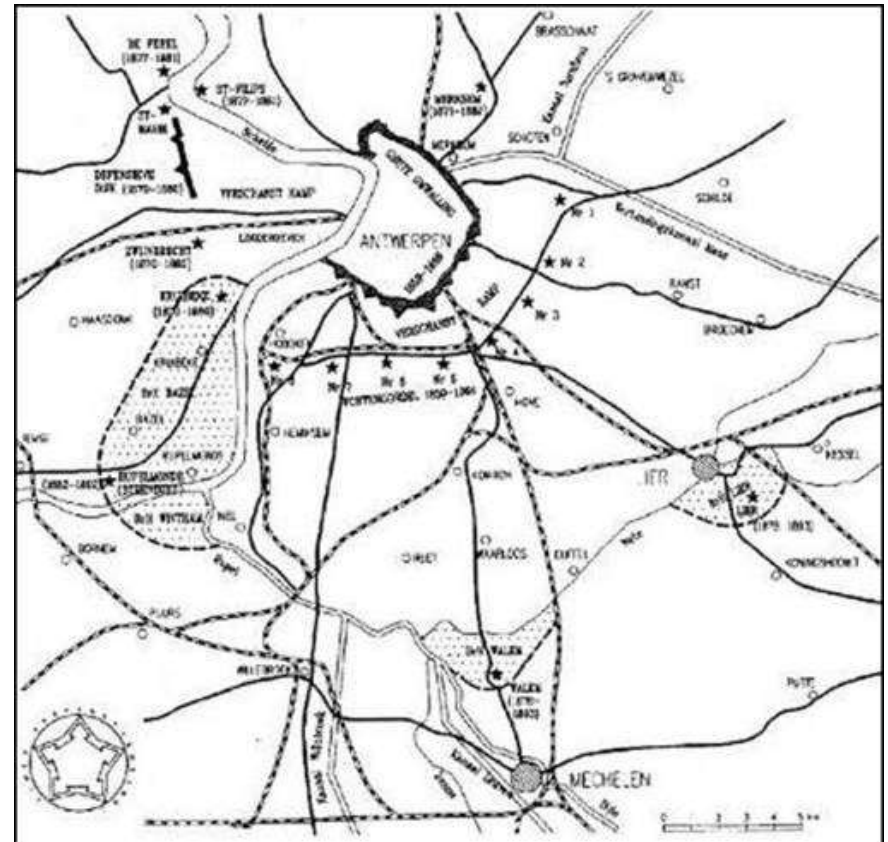
## den Bosch

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# Fortified Antwerp

- City walls
- Inner fortification belt 1860
- Outer fortification belt 1885-1906
- River fortifications 16th-17th c
- Dikes and ditches
- Innundation fields
- bunkerlines
- Military railways and roads



# Fortified Antwerp

city walls



# Fortified Antwerp

Dikes, ditches & bunkerlines



# Fortified Antwerp

River fortresses





# Fortified Antwerp

Inner fortification belt – Brialmont – Brick & mortar – 35ha





## Fortified Antwerp

Inner fortification belt – Brialmont – Brick & mortar – 35ha



# Fortified Antwerp

Inner fortification belt – Brialmont – Brik & mortar – 35ha

# Fortified Antwerp

outer fortification belt – concrete – 12 ha



# Fortified Antwerp

Antitank ditch – 1938-1940 – 33km – 18 m wide x 2 m deep



# Abandoned fortifications



# Overgrown fortifications

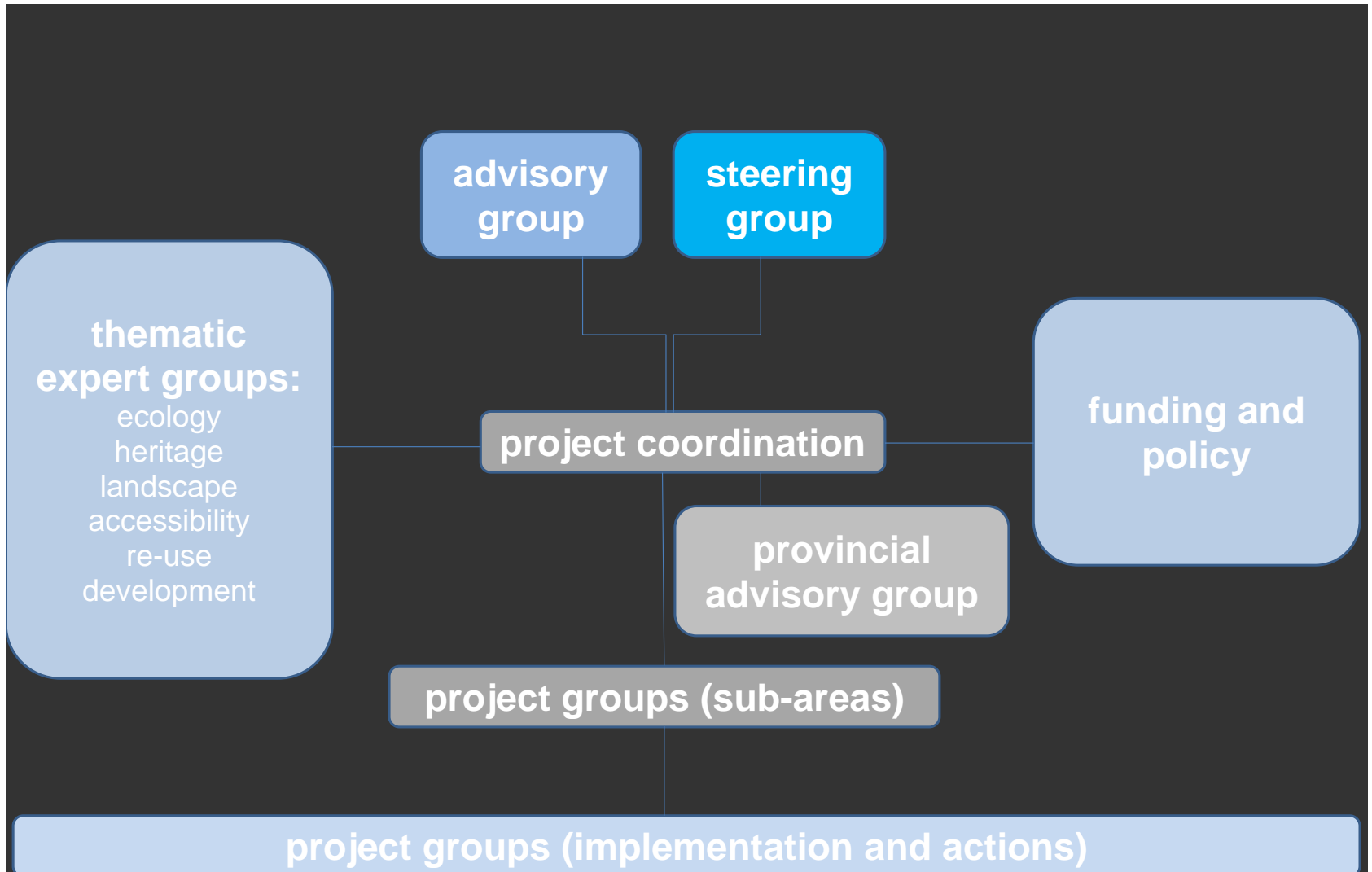


# Habitats



# Consultation model

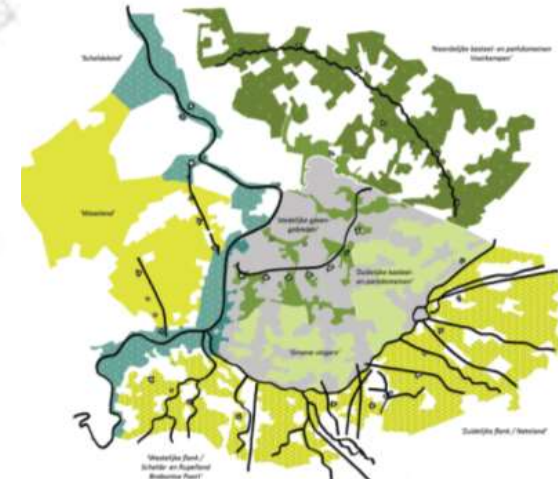
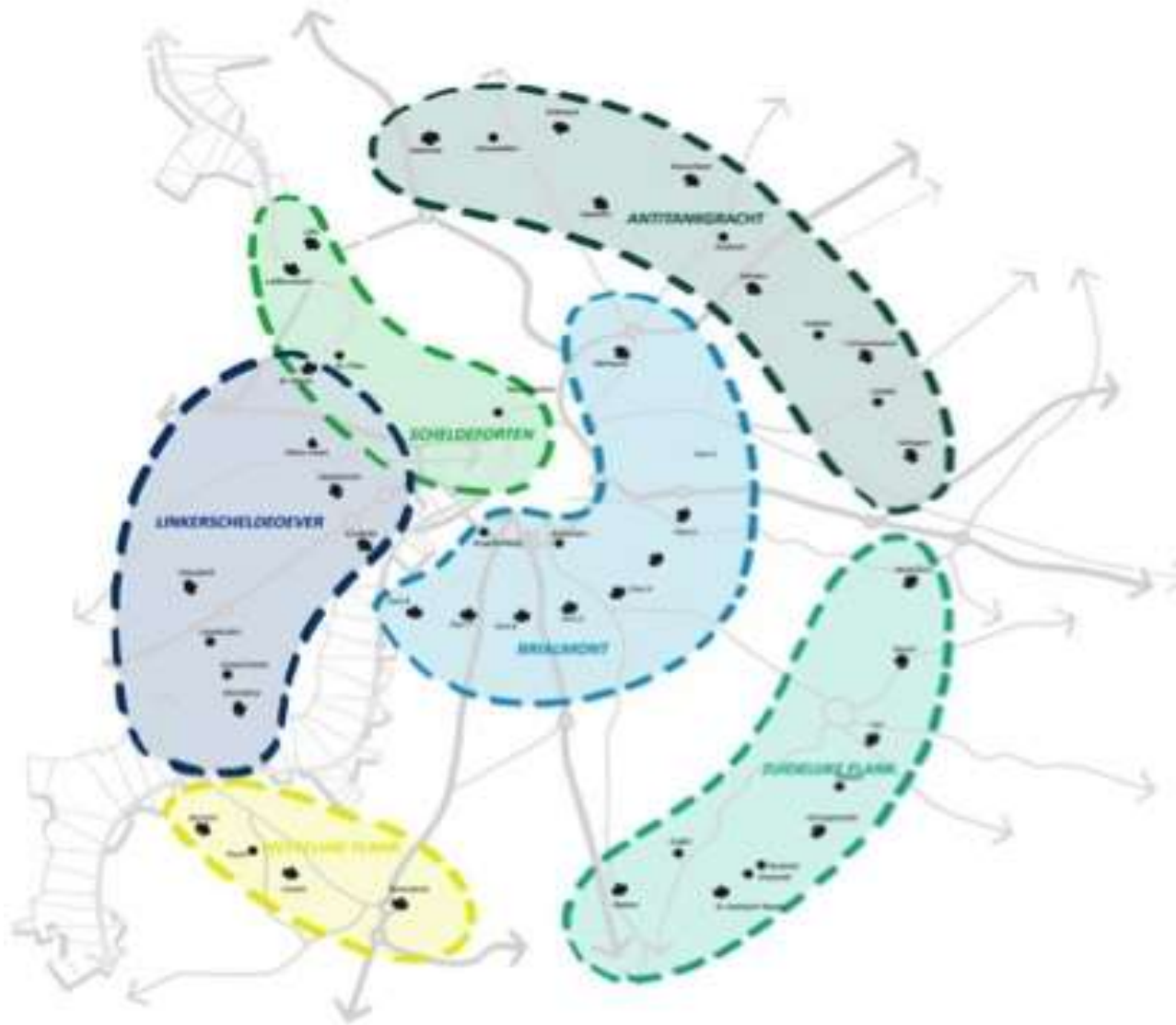
coöperation and networking





# Division in subareas

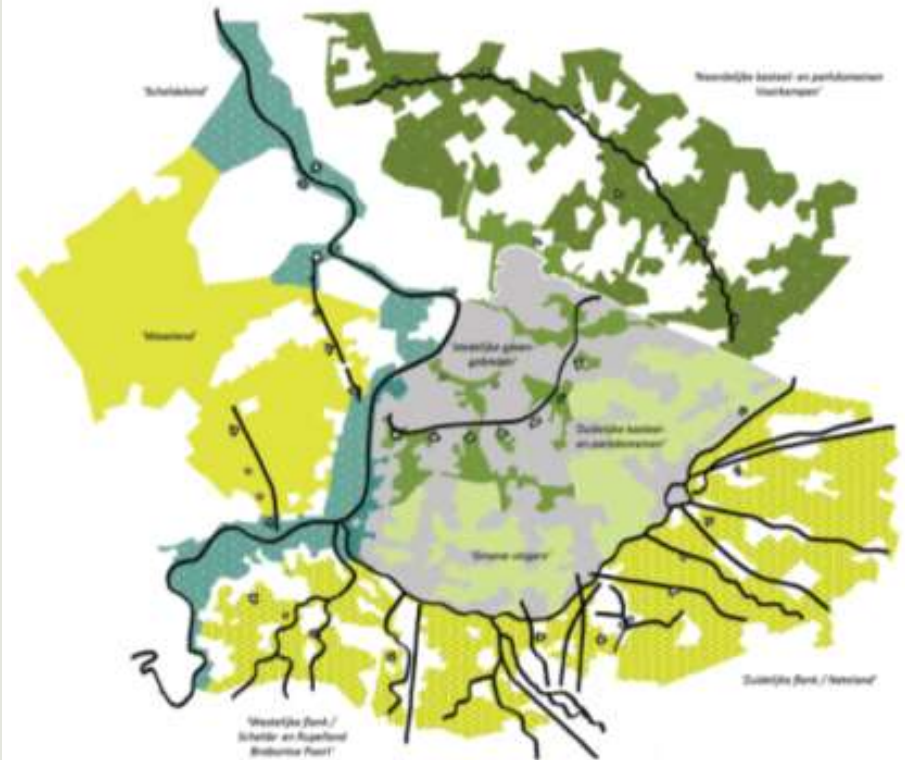
with specific character



# Analysis and vision

Master plan:

- Stakeholders
- What are the needs?
- Lokal input and support
- Division in subarea's
- Development on different levels
- General vision



# Governance model on a regional scale

Strategic plan:

- 3 different types of governance models: state owned, privately owned, mixed ownership.
- 4 types of preservation of the site versus exploitation possibilities (nature vs re-use)



# Perspectives

4 types of preservation of the site



Oelegem



Fort met een "groen" label: de hoofdfunctie is natuur met aandacht voor een eventuele laagdynamische nevenbestemming.



Liezele



Fort met een "rood" label: de hoofdfunctie is wonen/recreatie/diensten/militair... met aandacht voor natuur.



Haasdonk



Fort met een "groen" label met een rode rand: de hoofdfunctie is natuur met een duidelijke mogelijkheid/plaats voor hardere functies.



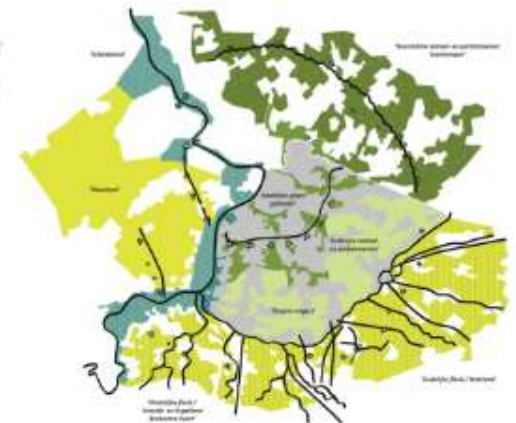
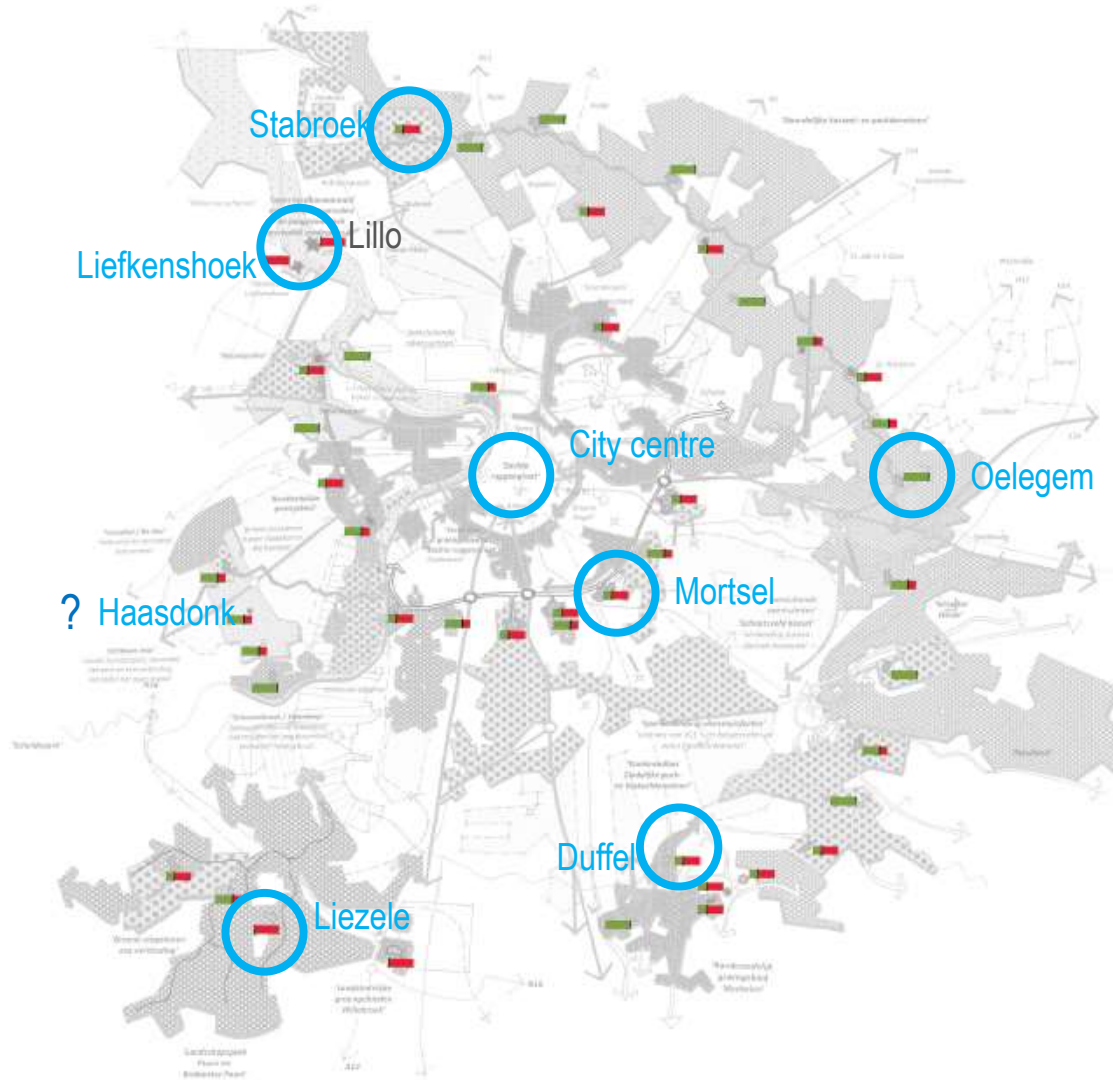
Mortsel



Fort met een "rood" label met een groene rand: de hoofdfunctie is wonen/recreatie/diensten/militair... met een duidelijke mogelijkheid/plaats voor natuur.

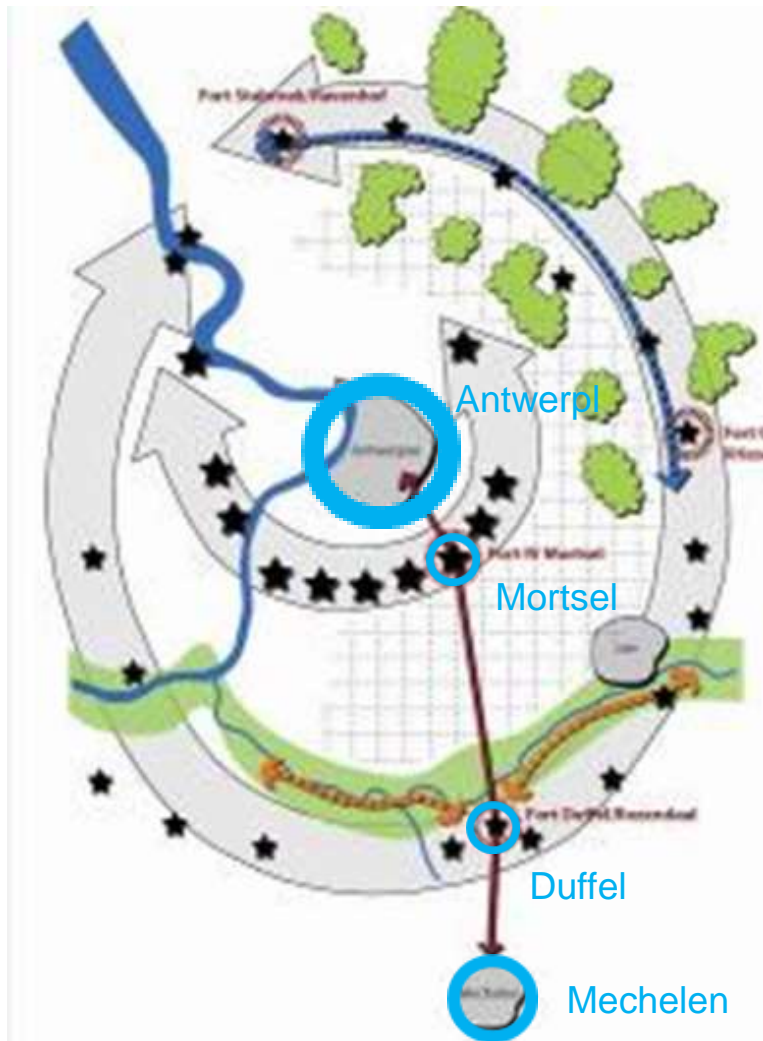
# Polyci map

Overview map with strategic locations and example cases

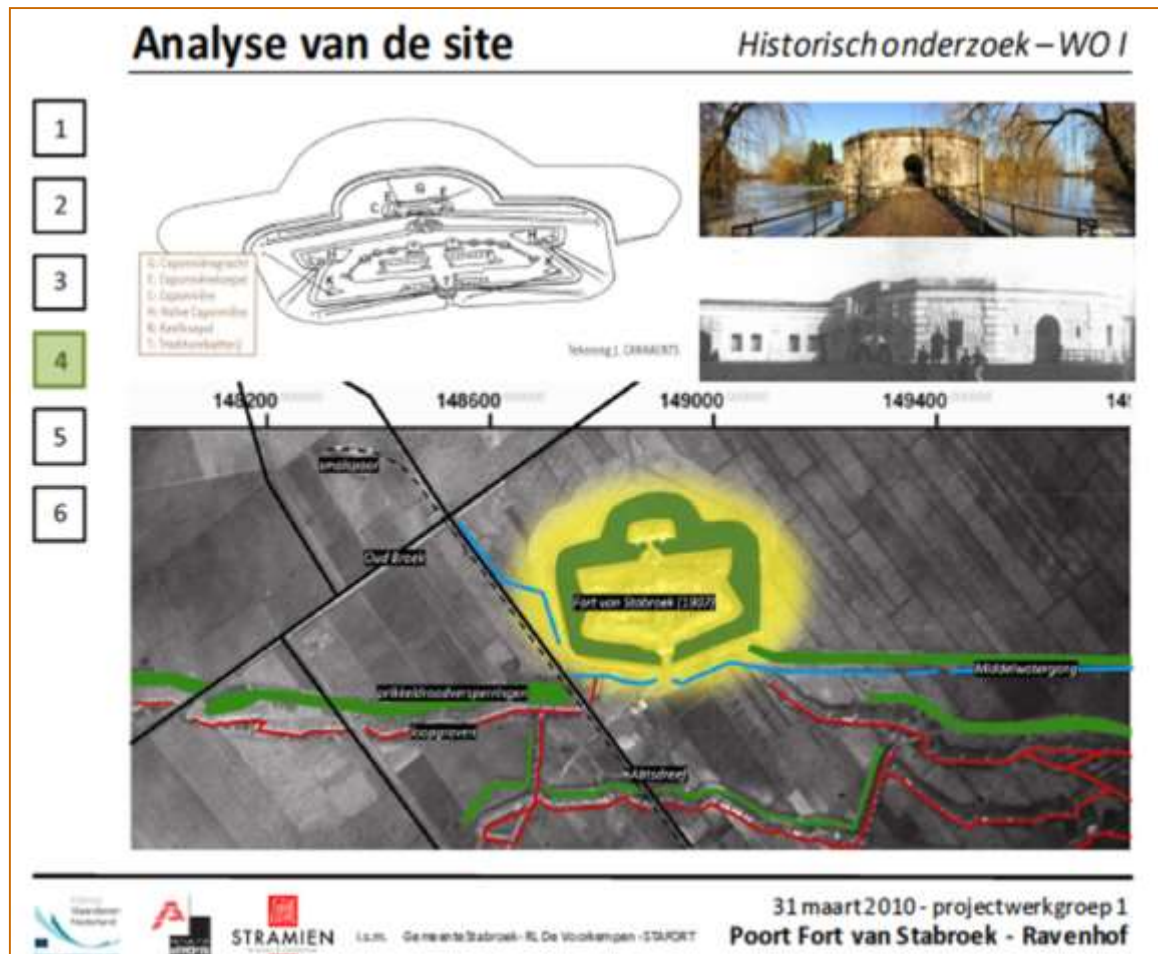


# Public infrastructure for accessibility

connecting both belts



# Analysis of the site



# Information & communication system

<http://fortengordels.be>

- Information
- Knowledge
- Activities
- Visits
- documentation



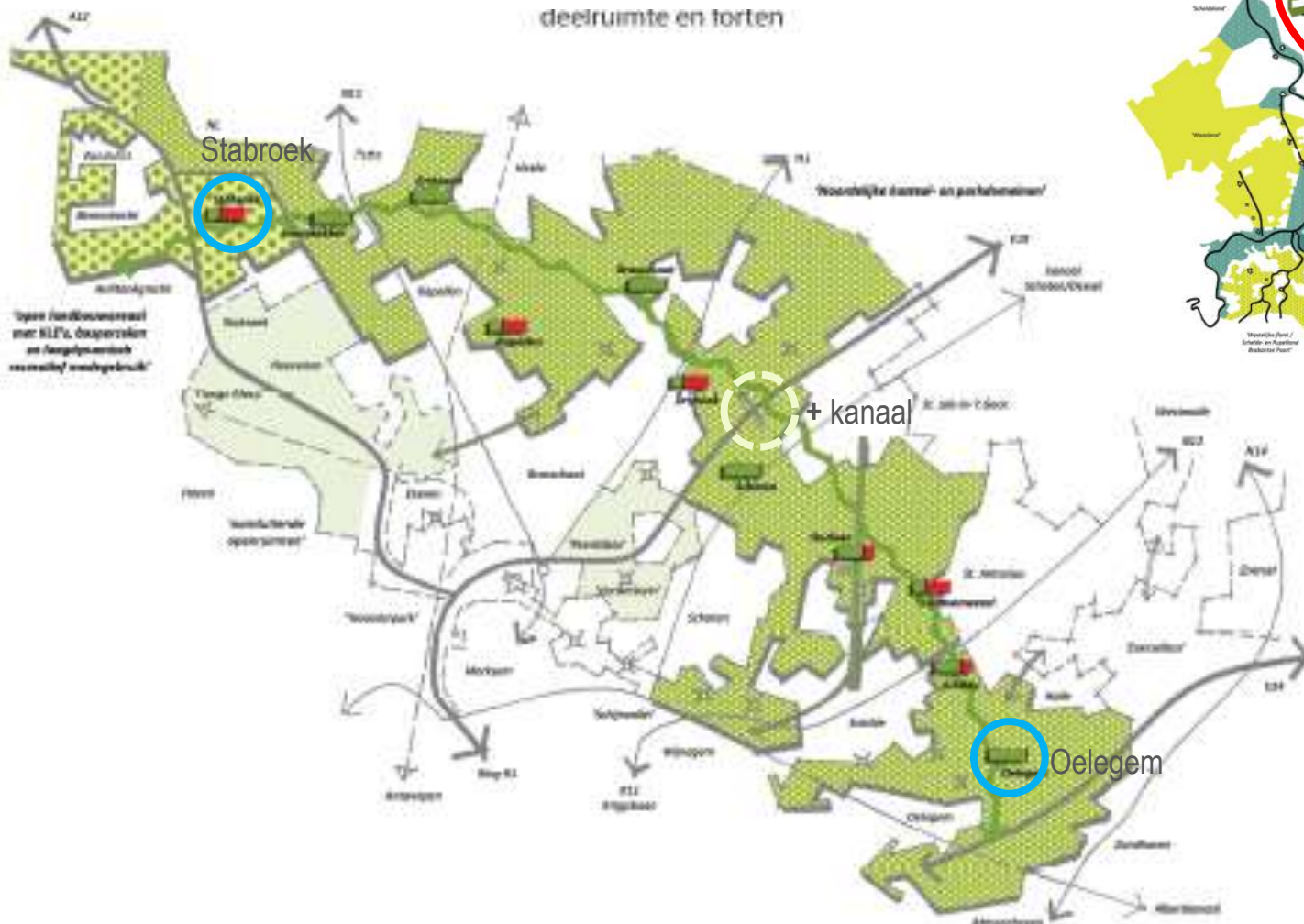


## How can fortifications become a long-term, integrated solution for urban and environmental challenges?

- Antitank ditch as a compound for development and watermanagement ?
- Fortresses as playground for all ages
- Green step stones, corridors and connections in an urbanized region
- Places of remembrance, research and education
- And so much more ...

# Anti-tank ditch

A compound for development and watermanagement ?

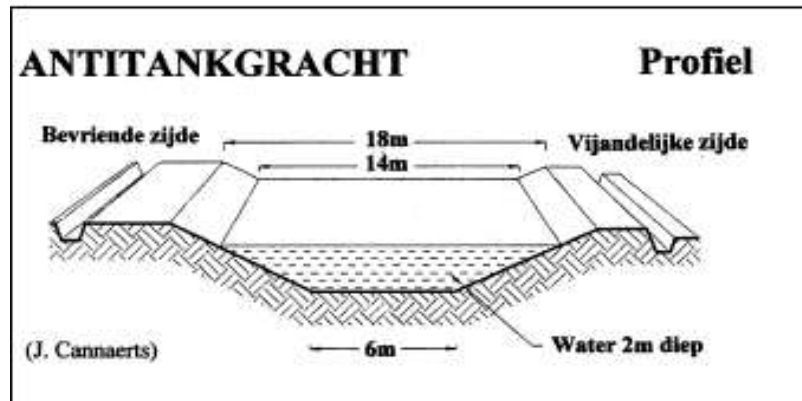


How can fortifications become a long-term, integrated solution for urban and environmental challenges?



# Anti-tank ditch

A compound for development and watermanagement ?



# Stabroek fortress

Start of the antitank-ditch in an open landscape



# Spatial plan

Bats versus people





How can fortifications become a long-term, integrated solution for urban and environmental challenges?

- STAFORT(private investment)
- touristic infopoint & public footpath

# Oelegem fortress

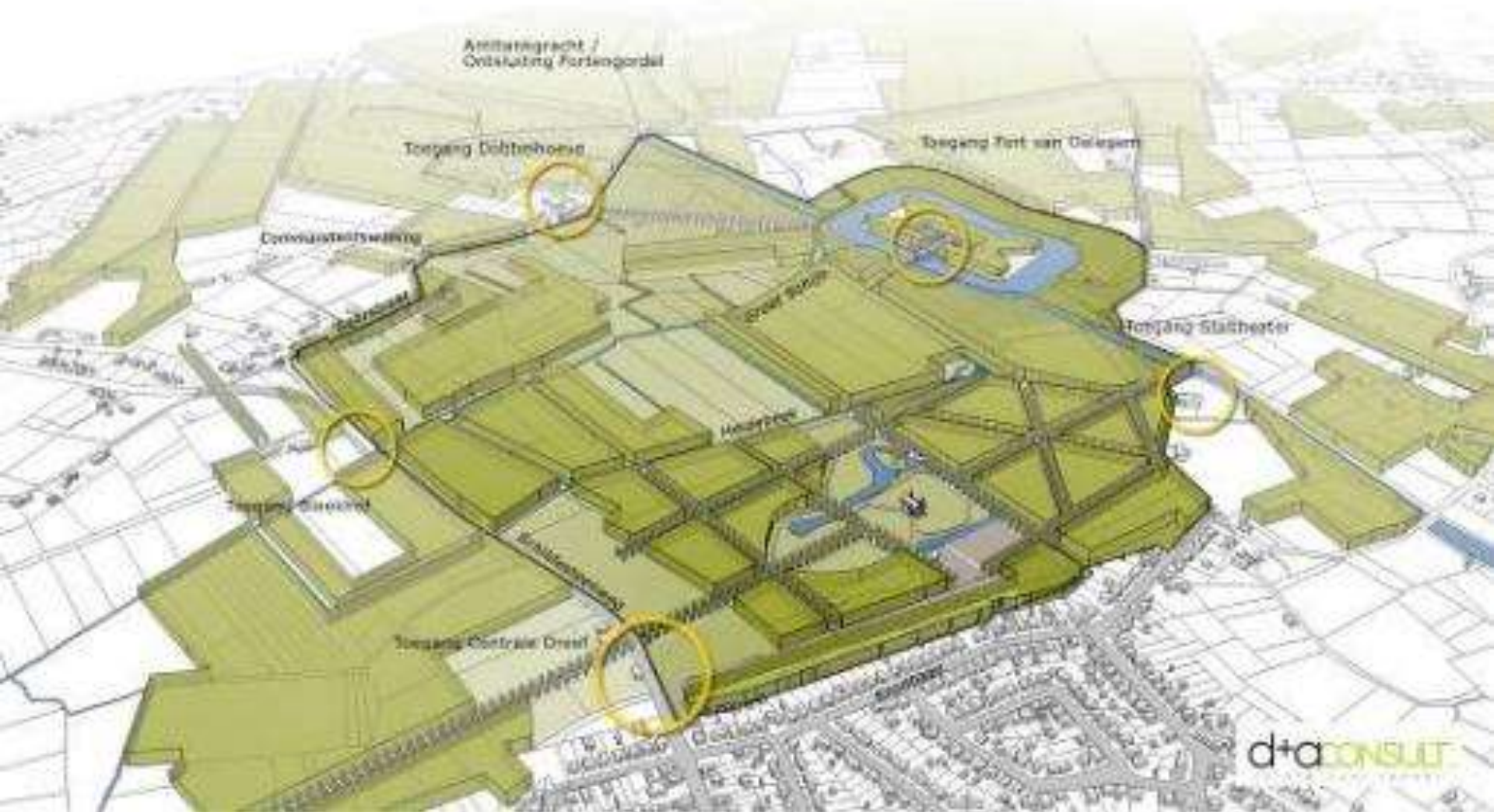
masterplan for nature (habitat)





# Oelegem fortress

masterplan for nature (habitat)



How can fortifications become a long-term, integrated solution for urban and environmental challenges?



# Subarea Brialmont

urbanized area



How can fortifications become a long-term, integrated solution for urban and environmental challenges?



# Fortress nr 4 – Mortsel

## masterplan

In urban context:

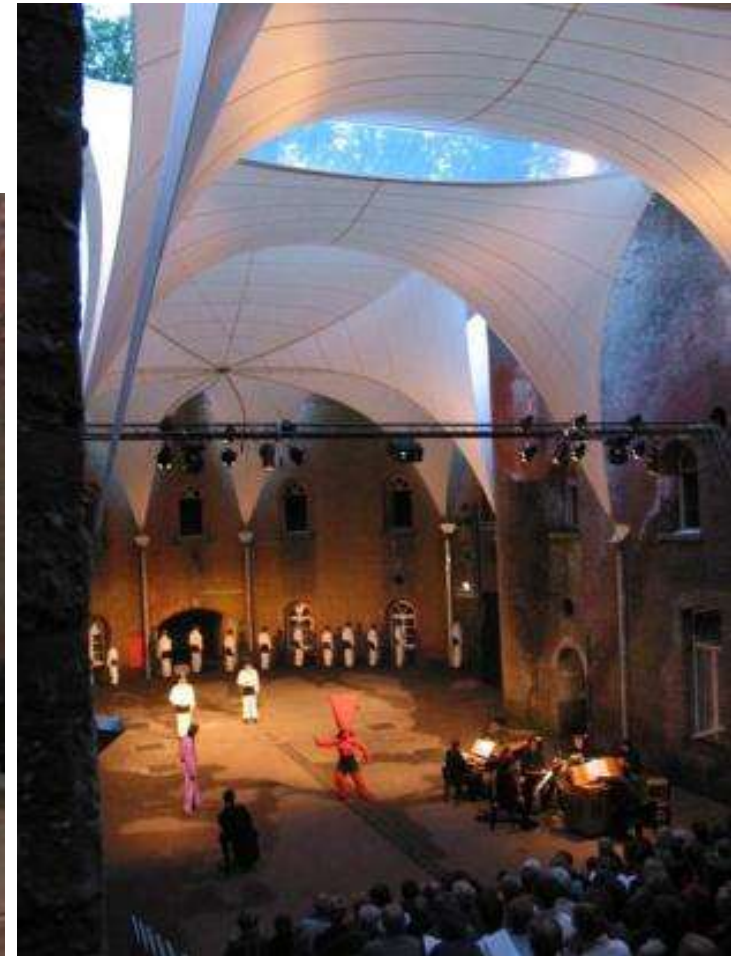
- Need for public green (park)
- Horeca (Bar4)
- cultural events (theater, music)
- Family (Fortbom, kidstheater)
- Youth (party)
- Playgrounds
- Dogwalking
- Community-work
- Small holdings



# How can fortifications become a long-term, integrated solution for urban and environmental challenges?

Public space for:

- Cultural events (theater, concerts)
- Family events (Fortbom, kidstheater)
- Youth (party)



How can fortifications become a long-term, integrated solution for urban and environmental challenges?



Public green:

- Park
- Horeca (Bar4)
- Outdoor events (FortBom)
- playgrounds





# Railwayfortress Duffel

open space area and rivers



# Duffel fortress

public funding of the Kempens Landscape foundation

- strategic project Fortification belts of Antwerp: 98 000 €
- Life BatAction: 182 000 €
- Interreg Forts and Lines of Border Wide Perspective: 301 000 €
- Interreg HERE: 150 000 €
- Interreg Walls and Gardens: 141 000 €
- Restoration grant: 700 000 €
- Flemish Tourism : 262 000 €
- Duffel city: 431 000 €
- Province Antwerpen: 86 000 € and staff



# How can fortifications become a long-term, integrated solution for urban and environmental challenges?



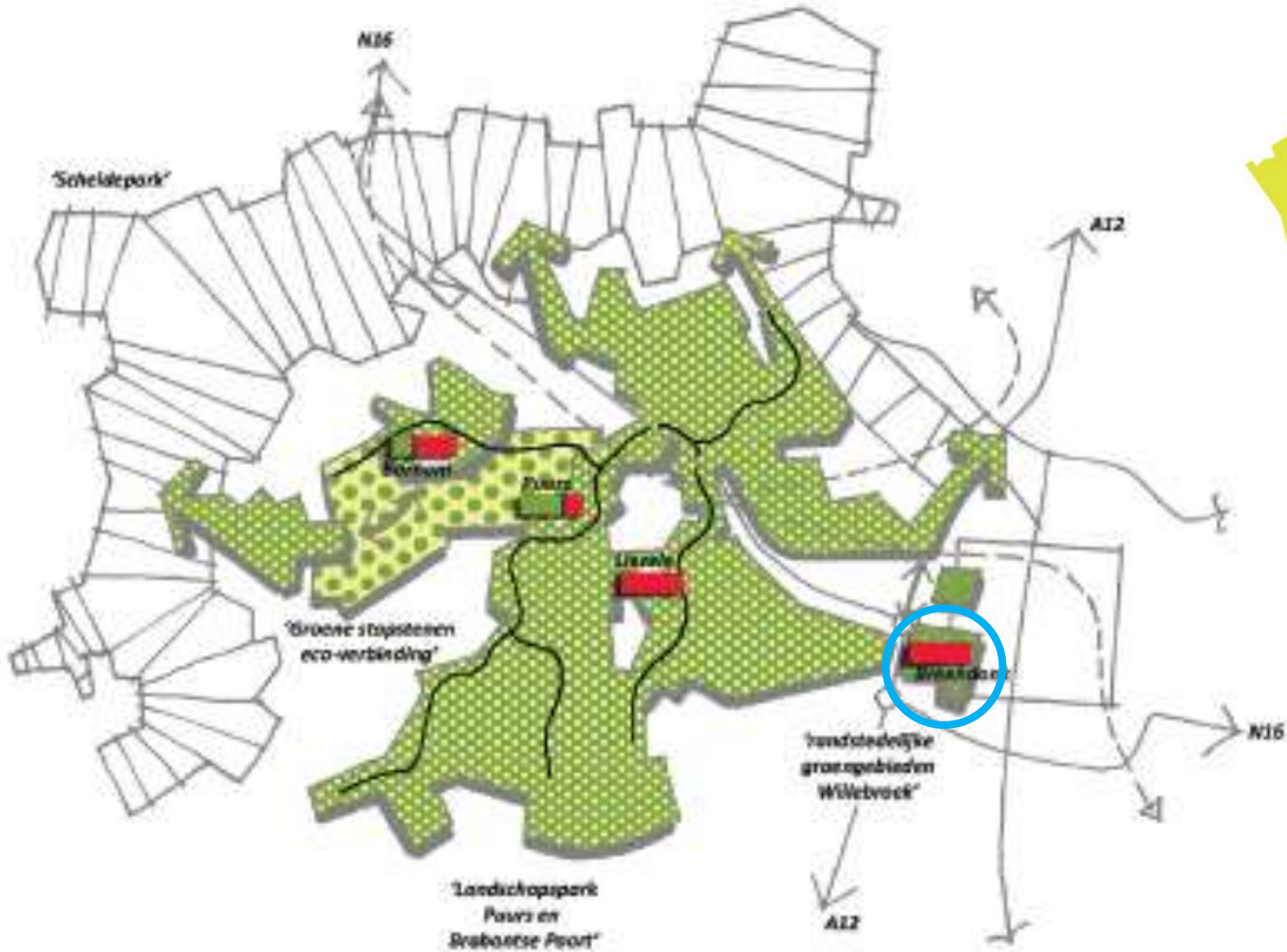


How can fortifications become a long-term, integrated solution for urban and environmental challenges?

People with autism get work experience in the fortress brasserie.

# Subarea Western flank

agricultural area





# Breendonk fortress

National WWII memorial and education-center

How can fortifications become a long-term, integrated solution for urban and environmental challenges?



# Conclusions

## SWOT

### negative

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- Change of politics every 6 years
- Laws and rules (nature versus cultural heritage)
- Every one for himself
- Steering force
- Opposing interests
- Lack of continuity
- Top down or bottom up
- Stand still

### positive

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- Basis is laid
- Laws and rules (nature, urban planning)
- Integrated approach
- Steering power
- Common interests
- Golf Movement
- Implementation on all levels
- flexibility



# Recommendations

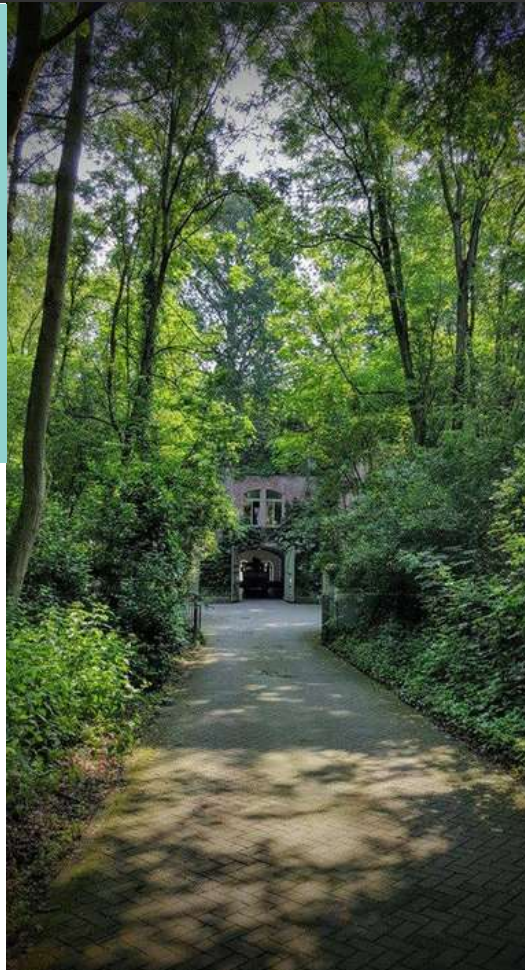
- In head and heart
- Political structure
- Organised consultations and cooperation
- Flexible but binding rules
- Integrated approach
- Eco-System Services
- Heritage-System Services
- Heritage development model

# Bolwerk

Simon Stevin Foundation



<http://www.simonstevin.org>



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## Antwerp

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## den Bosch

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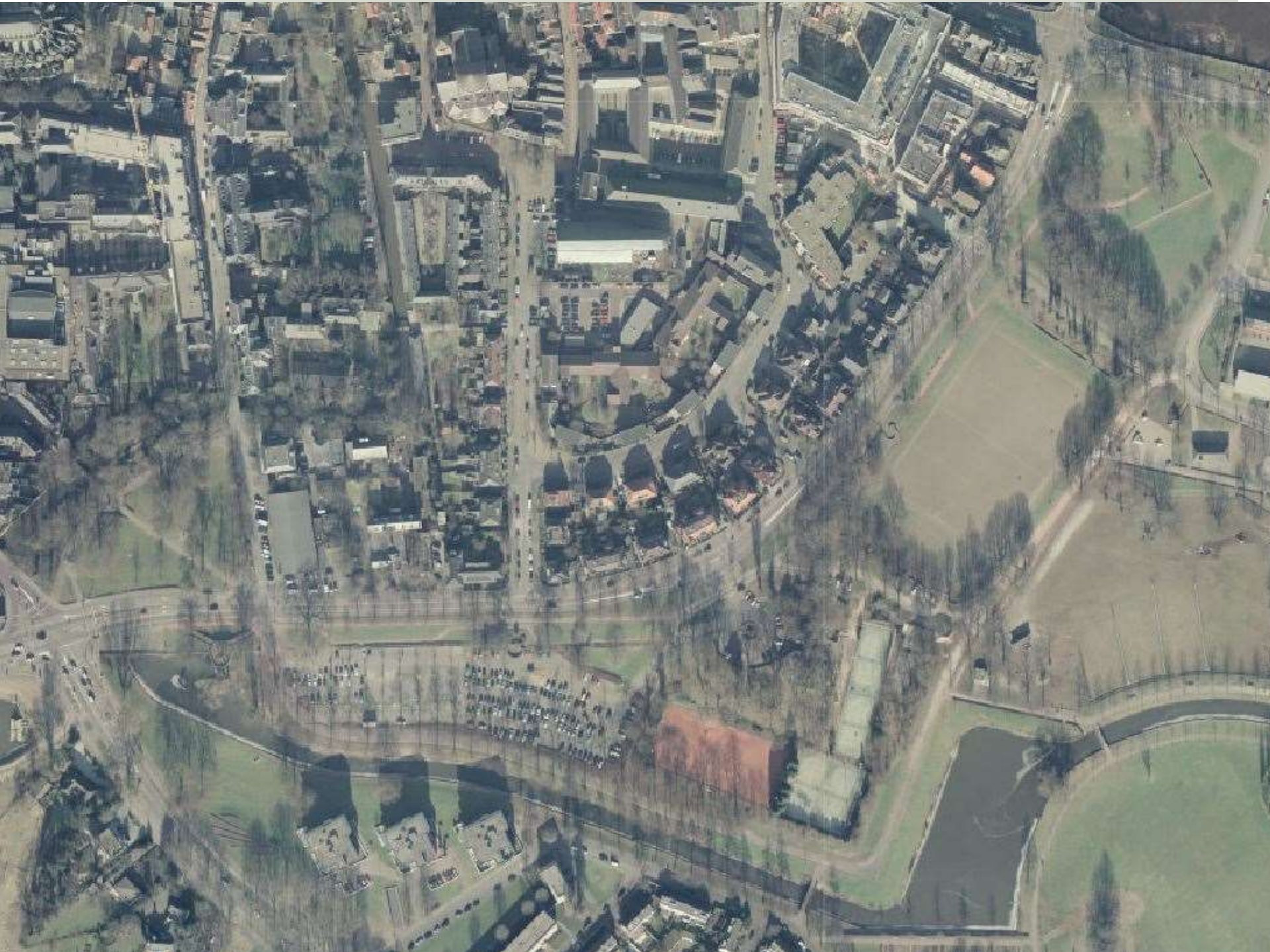
# 's Hertogenbosch





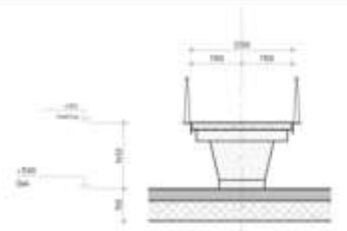
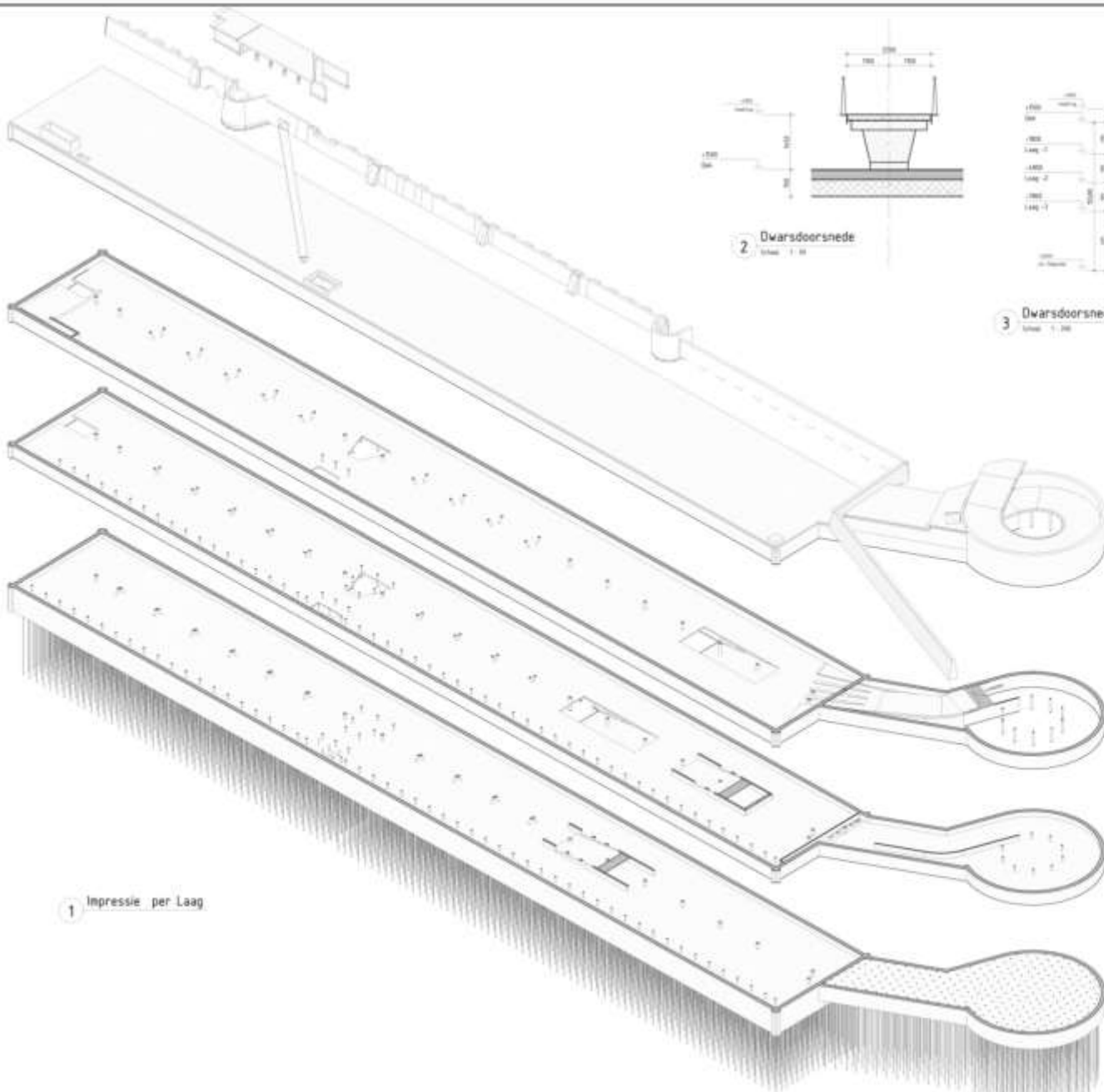


Carpark 2012

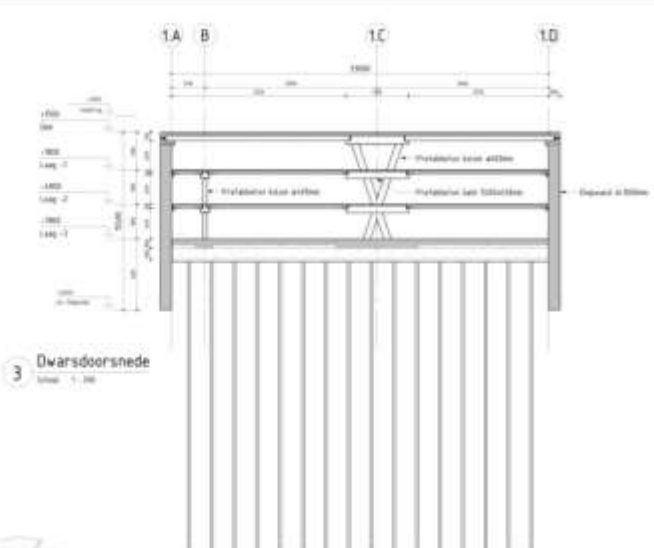








2 Dwaarsdoorsnede  
Schaal 1:50



3 Dwaarsdoorsnede  
Schaal 1:50

1 Impressie per Laag

A. Concept	F. Uitvoeren	23-12-2017
Van: Architect	Waar: Site	
Projectnaam: 3.101 Engelen	Projectnr: 62.01.01.00001	
Linnemanslaan 136 Postbus 4026 3320 AA Rotterdam Tel: 010 201 22 22 Fax: 010 424 12 00 info@arcadis.nl www.arcadis.nl		
<b>Studio Leon Thier</b> Deventerweg 10 2004 TG Oost-Beemster Tel: 010 204 40 00 Fax: 010 204 44 00 info@studiokunststof.nl www.studiokunststof.nl		
<b>Architecten</b> Samenwerkende Architectenbureaus		
Project: Park de Vlaar		
Omschrijving: Impressie per Laag Eindhoven		
Tek.: 2224-2017-000001		
Tekent: G. van der Vliet	Beoordelt: J. van der Vliet	
Aankleef: 01	Datum: 2017-12-23	
Aankleef: 02	Projectnr: 62.01.01.00001	
Productiecode: E01834.000098	CV: CV1-4101	A







# Carpark 2016











# Thank you for your attention

Sources:

- [Fortengordels.be](http://Fortengordels.be)
- [Antwerpenmorgen.be/projecten/kipdorpsite](http://Antwerpenmorgen.be/projecten/kipdorpsite)
- [bouwenaandenbosch.nl/projecten/zuiderpark-stadswalzone](http://bouwenaandenbosch.nl/projecten/zuiderpark-stadswalzone)
- [Atfort.eu](http://Atfort.eu)
- [Efforts-europe.eu](http://Efforts-europe.eu)