

HOListic Management of Brownfield REgeneration (HOMBRE)

Tailored & Sustainable Redevelopment towards Zero Brownfields

Urban Land Management 2065

**Hans van Duijne &
Maaïke Blauw (Deltares)**

In cooperation with:



www.cabernet.org.uk



www.greenland-project.eu



www.timbre-project.eu



www.dais.unive.it/~glocom



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement No 265097



Soil challenge

Soil degradation a world wide challenge!



Soil Sealing in EU:

- loss of important soil functions
- 1990-2000: 375 ha/day lost



Image: EC 2012

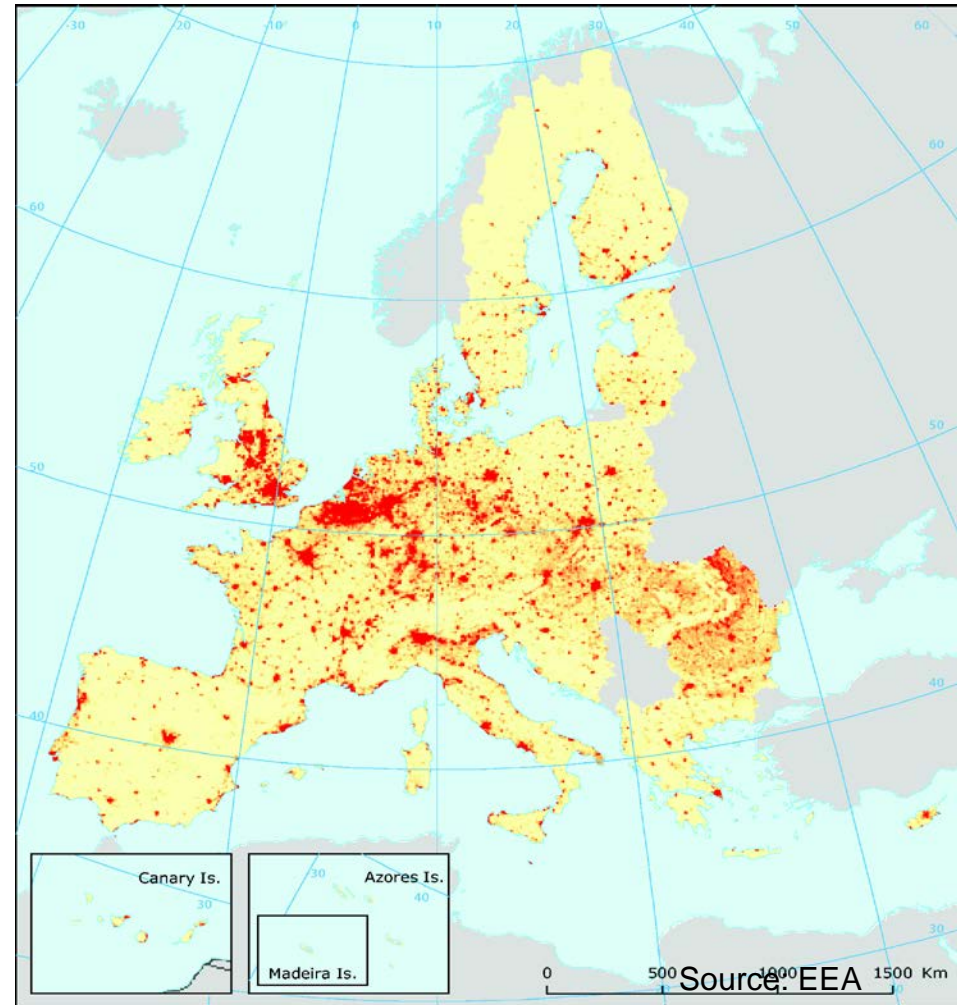
Urbanisation and Structural change cause brownfields

Since 1950:

surface area cities increased 78%, only 33% population

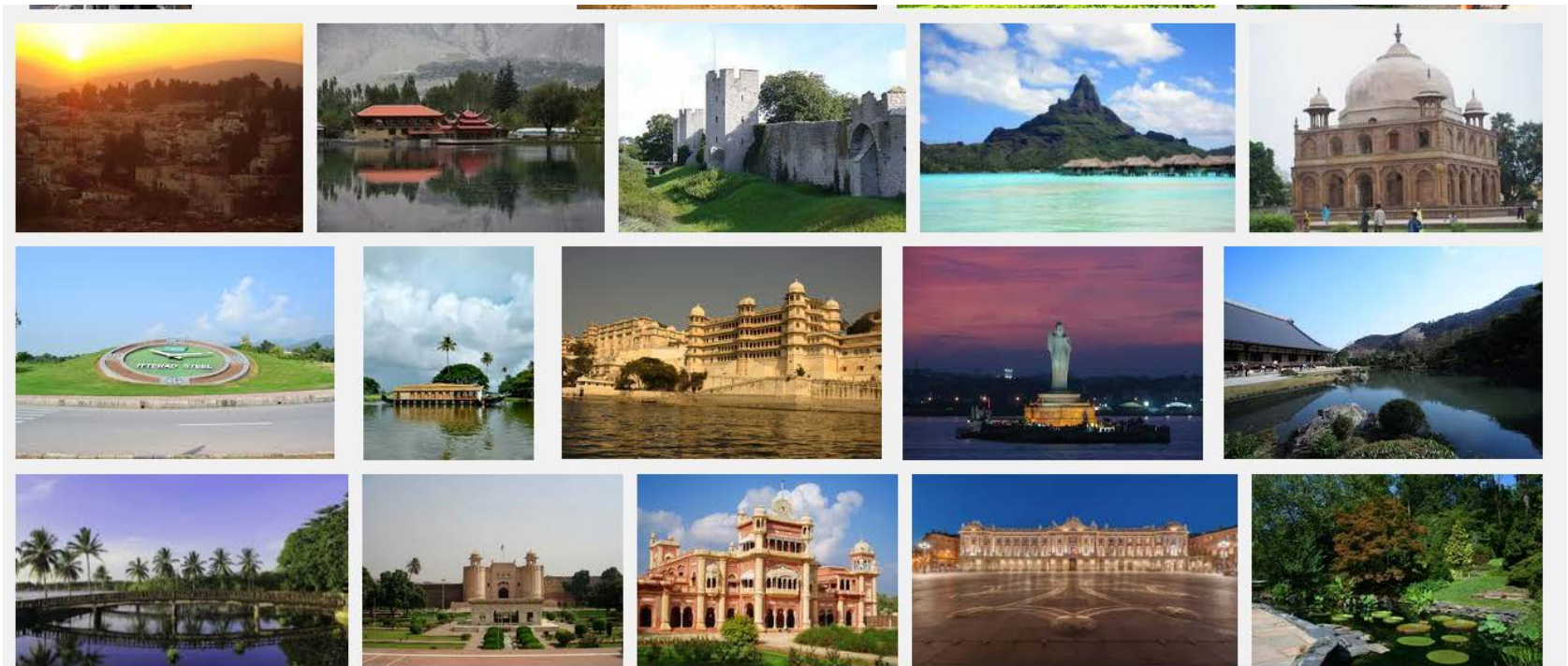
- Urban expansion 1-2 % per year
- Urban sprawl around metropolitan regions
- Decreasing settlement density

➔ **More and more brownfields**



Where do you want to live?

- Safe
- Healthy
- Prosperous
- Social stability
- Fun, beautiful
- Challenging

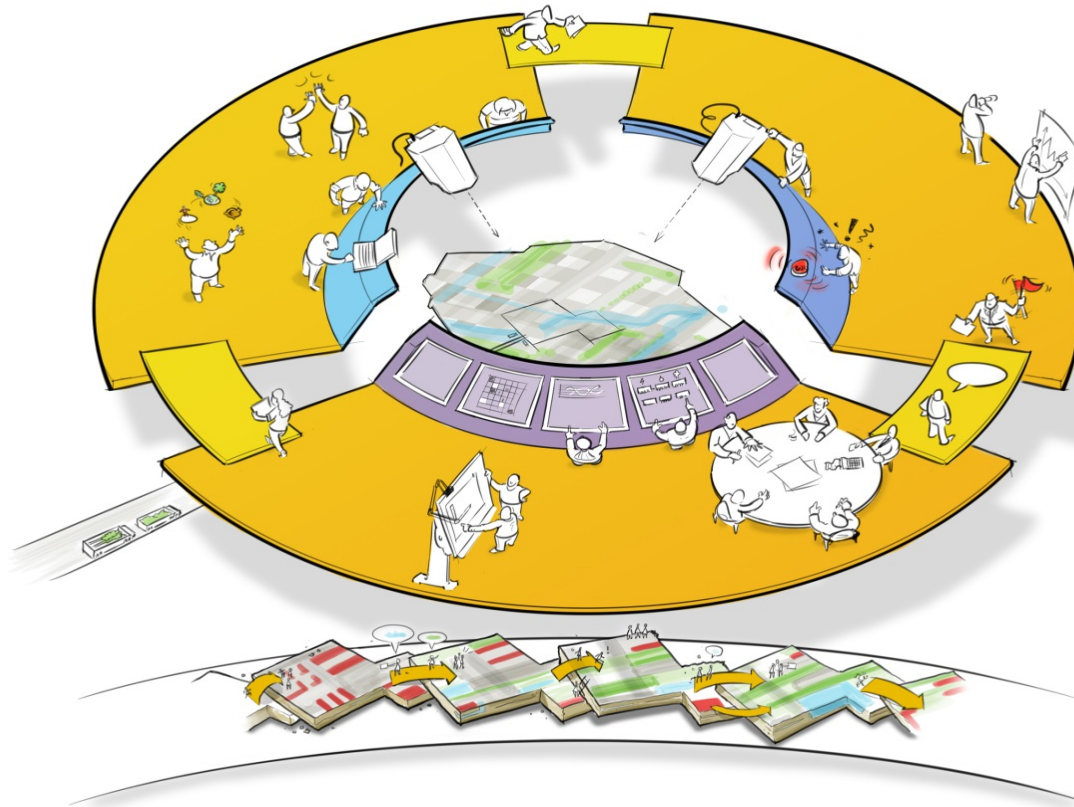


Objectives of HOMBRE

*More dividend from BF regeneration for
environment, economy and society*

- Better understanding of why, how, where and when BFs are formed to avoid future BFs (Zero BFs perspective)
- Better planning and more attractive communication technologies for holistic appraisal of BF regeneration options and early stakeholder involvement (Zero Brownfields Perspective & BF Navigator)
- Develop innovative technology combinations for more sustainable BF regeneration (Technology Trains)
- More creative and more sustainable solutions for land use on current or potential future BFs (Soft re-use)

HOMBRE Zero Brownfield Framework



Tailored & Sustainable Redevelopment towards Zero Brownfields

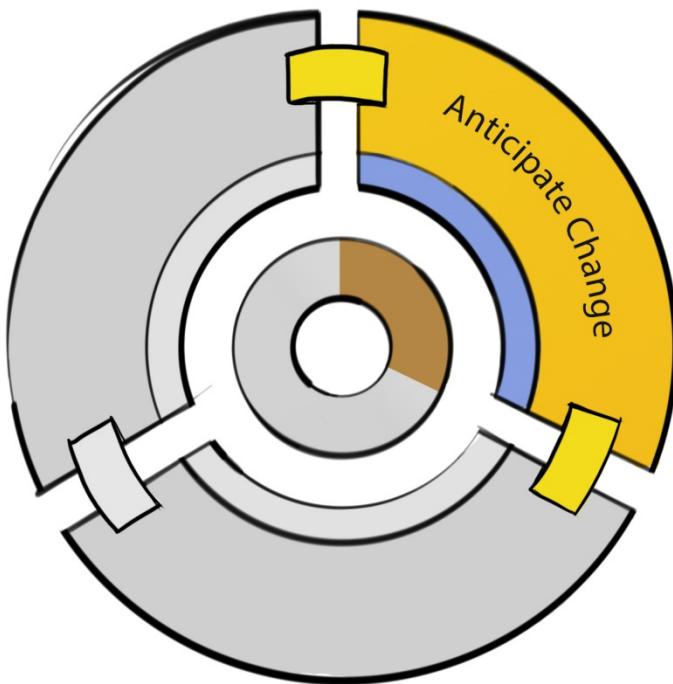


Anticipate Change

Wednesday 15/10

9:40 - Early Warning Indicators
Gerald Jan Ellen

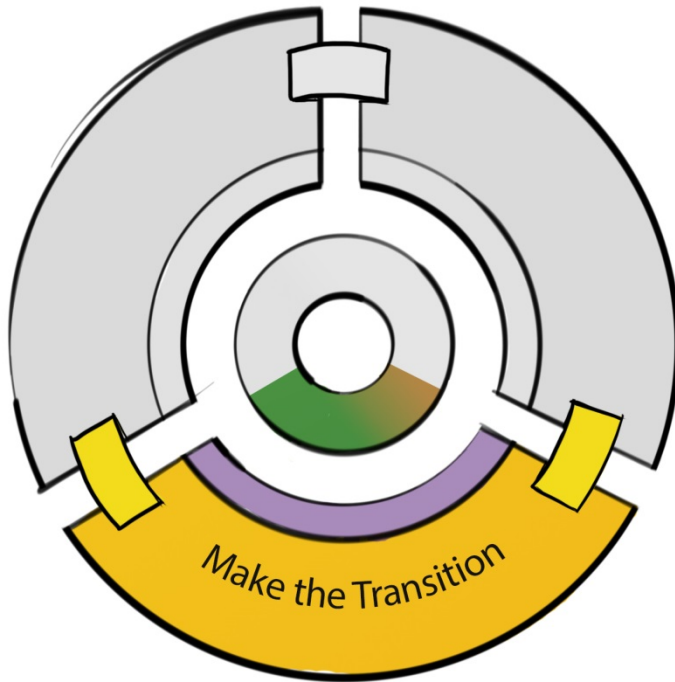
10:40 - Towards the Anticipation
of Brownfields Emergence
Elsa Limasset



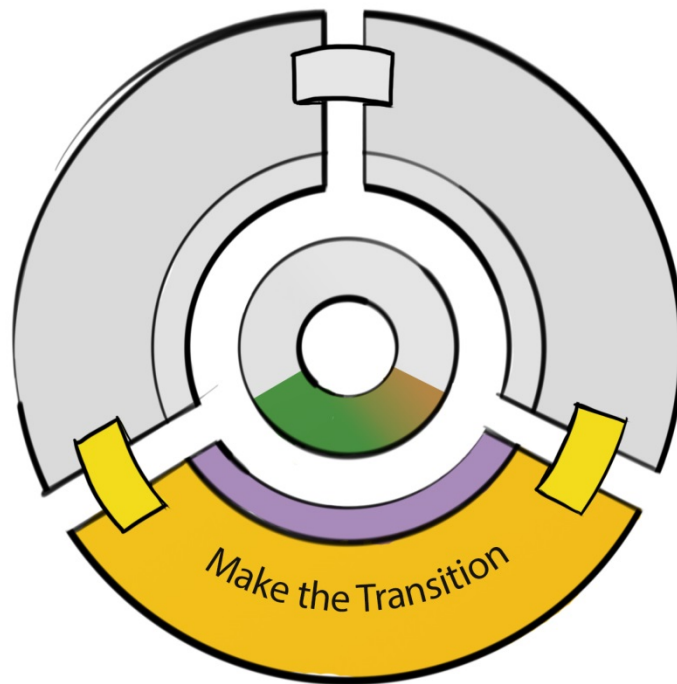
Because seeing is believing

Tuesday 14/10

15:00 - Brownfield Navigator
Linda Maring



Identify synergistic sequential & parallel technology combinations



Wednesday 15/10

11:40 - Smoothing the transition of BF to new uses

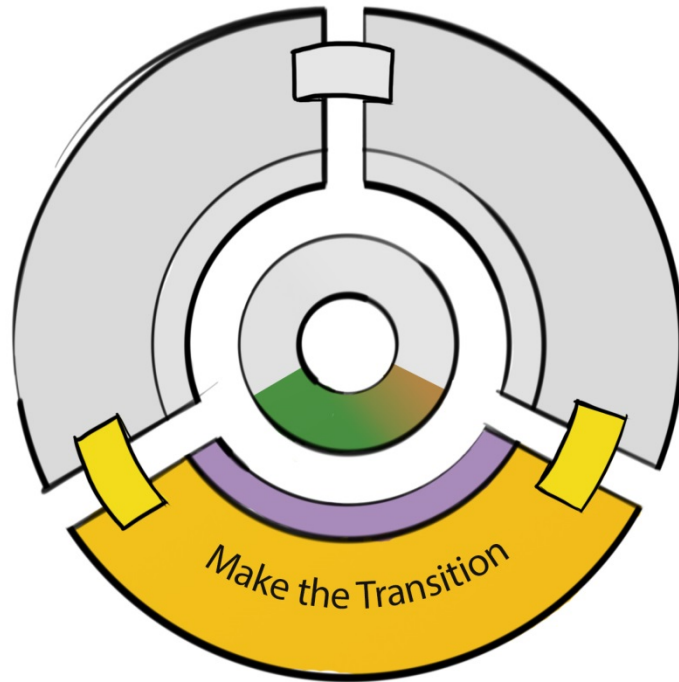
Martijn Smit

11:40 - Solec Kujawski case –
HOMBRE philosophy
Wojciech Irminski

12:10 - Re using excavated material – Renato Baciocchi

12:40 - Treatment of subsoil and alkaline residues - Wouter van der Star

Improving overall sustainability & value



Tuesday 14/10

16:30 - Conceptual models
sustainability assessment

Pierre Menger

17:00 - Biomass production on BF
Karl Eckert

Wednesday 15/10

10:10 - Decision support and
Opportunity Matrix of BF

Victor Beumer

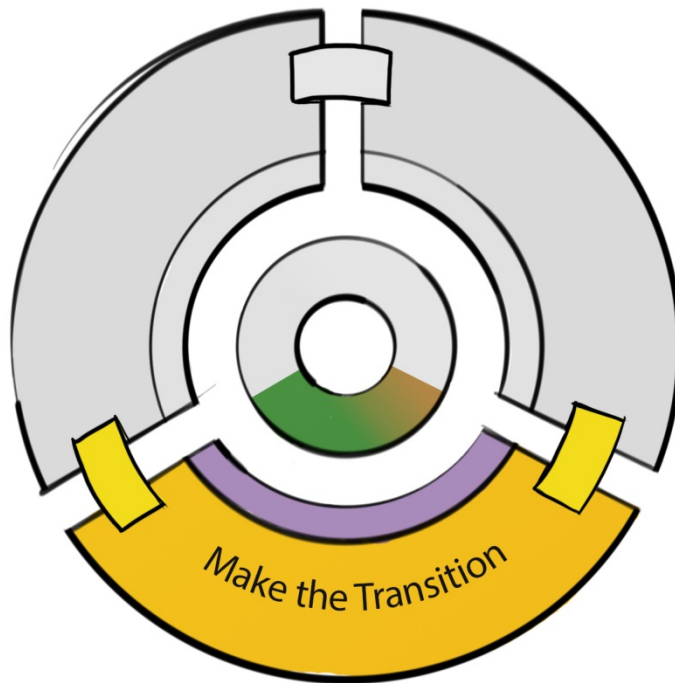
16:50 - Immobilisation of metals
using biochar and green waste
compost

Sarah Jones

You cannot manage that which you do not understand

Thursday 16/10

9:40 - HOMBRE BR2 tool for
understanding urban systems
Matthew Ashmore



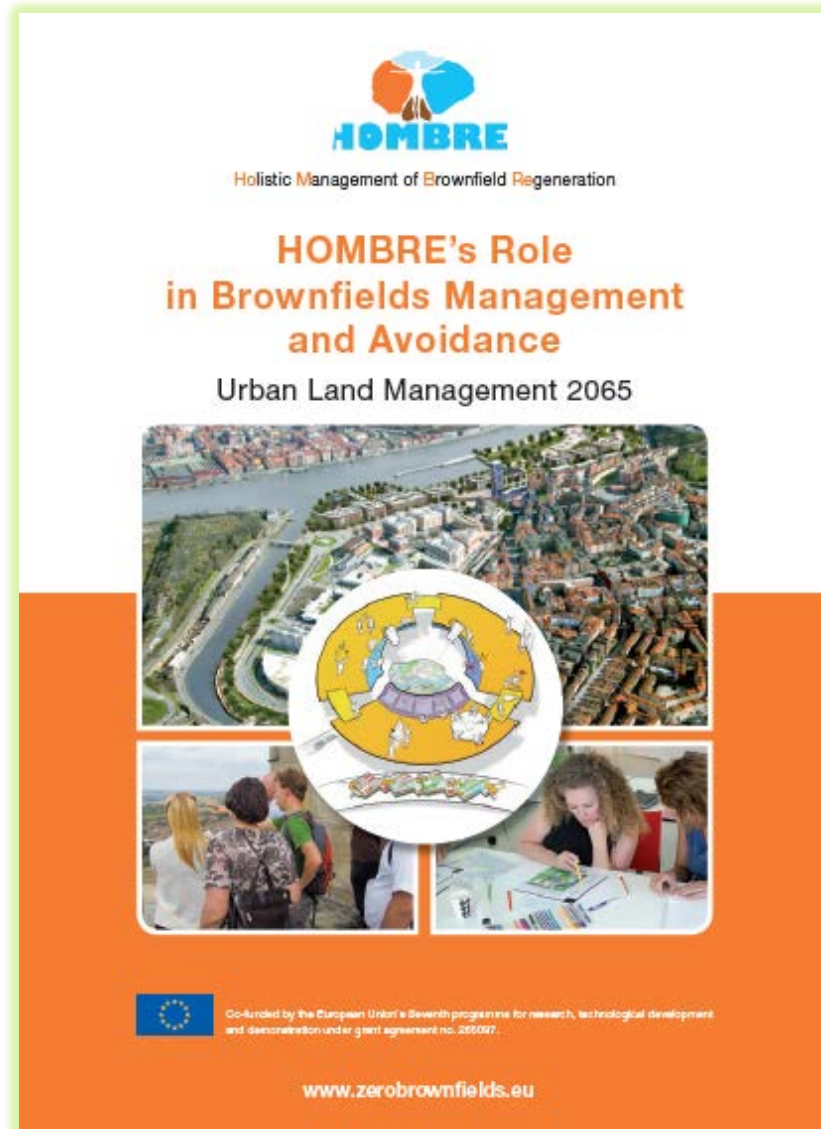
Take home messages



1. BF sites are valuable latent resources
2. Land use decisions should deliver 'Return on Investment' - RoI
3. Understanding environmental, social, economic & governance performance of urban systems
4. Looking for new opportunities with a future long term perspective in mind
5. Multiple land uses likely deliver RoI
6. Implementing sub surface technologies uplift RoI
7. Multiple soft end uses uplift RoI for land unsuited or unneeded for hard development
8. Online map tools can help identify creative land use options



Enjoy your
conference





CABERNET 2014

4th International Conference on Managing Urban Land

Tailored & Sustainable Redevelopment towards *Zero Brownfields*

Final Conference of the EU FP7 Project “HOMBRE” In cooperation with the EU FP 7 Projects “Greenland”, “TIMBRE” & “GLOCOM”,

#cabernet2014



CABERNET

International Conferences on Managing Urban Land

2005 Belfast (Northern Ireland UK)

2007 Stuttgart (Germany)

2012 Ustron (Poland)

2014 Frankfurt (Germany)

2016 ...

@cabernet4EU

Linkedin Group: CABERNET



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Conference Chairs

Hans van Duijne

HOMBRE Coordinator

Hans has extensive experience in the management of large international projects in the field of soil and groundwater and river basin management. He is a project manager of international projects for Deltares.



Professor Paul Nathanail

CABERNET Co-Director

Paul is Professor of Engineering Geology at the University of Nottingham where he researches, teaches and consults on risk based land management and sustainable urban land management



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TIMBRE

Tailored Improvement of Brownfield Regeneration in Europe

- Supporting end-users overcome existing barriers by having developed customised problem- and target-oriented packages of technologies, approaches and management tools for a megasite's reuse planning and remediation provided on this website.

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GLOCOM

Global Partners in Contaminated Land Management

- strengthening the quality of research by developing international collaborations and advance the decision making on complex issues in contaminated land management.

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GREENLAND

Gentle remediation of trace element contaminated land

- **Gentle remediation options (g.r.o.)** include various mainly plant-based approaches to remediate trace element contaminated soils at **low cost** and without significant negative effects for the environment.
- Although g.r.o. comprise very **innovative and efficient** technologies, they are still not widely used as practical site solution due to several barriers.
- Greenland will solve the remaining problems and bring gentle remediation options (phytoremediation, in situ stabilisation) into practical application.



HOMBRE

Holistic Management of Brownfield Regeneration

- Bringing about a paradigm shift to **‘Zero Brownfields’** where Brownfields become islands of urban opportunity delivering useful services for society...
- by looking for synergies between different services that might leverage change where none was previously possible

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