

A soil strategy for Greater Lyon's urban forest development



Montage images : Agence Base

SOILS & TREES
Standing your Ground

The Arboricultural Association's
52nd National Amenity Conference

In partnership with
SUSTAINABLE SOILS ALLIANCE

University of Exeter

9–12 September 2018

www.trees.org.uk/conference18

UNIVERSITY OF EXETER

GRAND LYON
la métropole

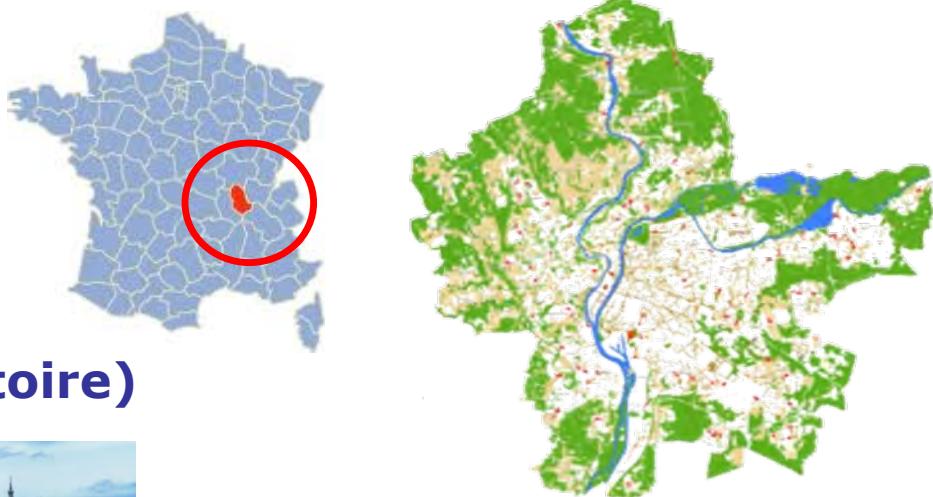
Arboricultural ASSOCIATION
trees.org.uk



Lyon Metropole

- **59 towns**
- **1,4 million inhabitants**
- **53 000 hectares**

- **100 000 street trees**
- **50 000 trees in parcs**
- **3 millions trees (27% territoire)**





The fertility challenge of urban soils...





Brief history of plantation soils





Brief history of plantation soils



Fig. 192. — Wagon de terrassement,
vu de côté.

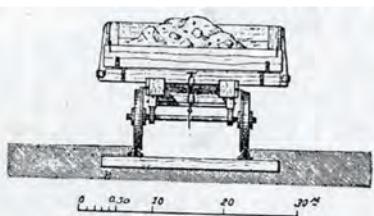
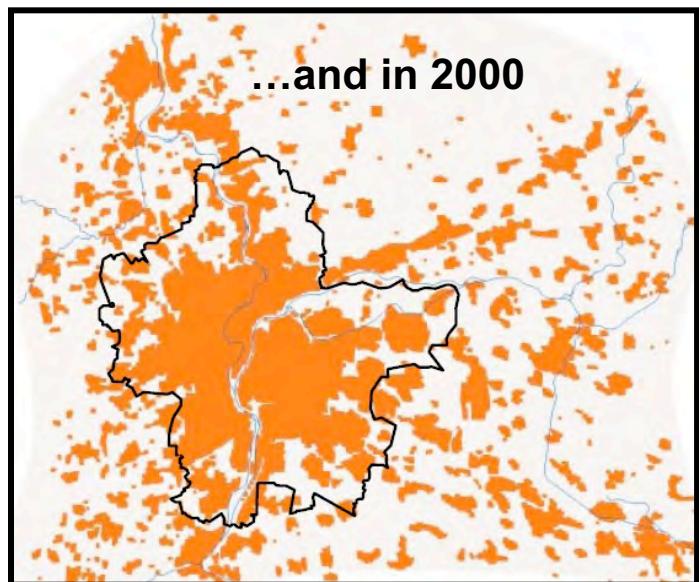
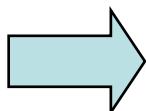
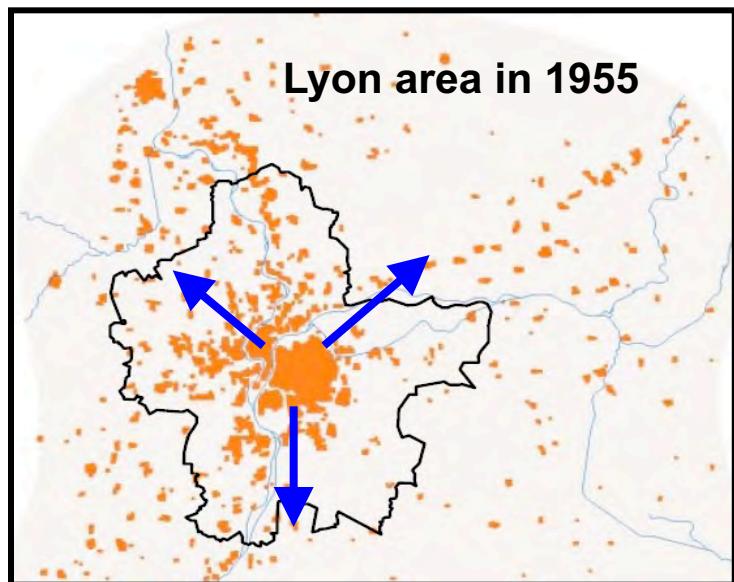
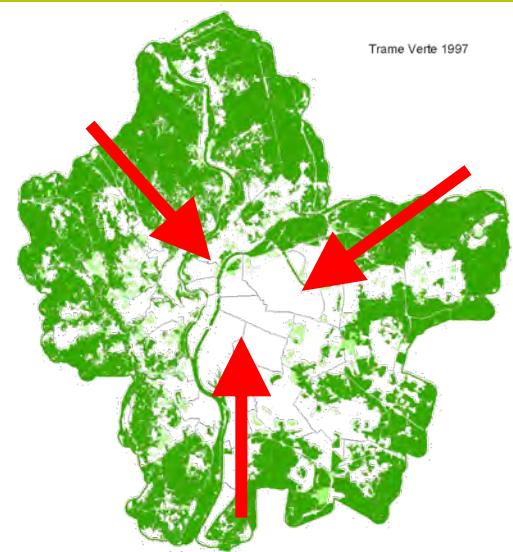


Fig. 191. — Wagon de terrassement,
vu de face.





The fertile soils use pattern

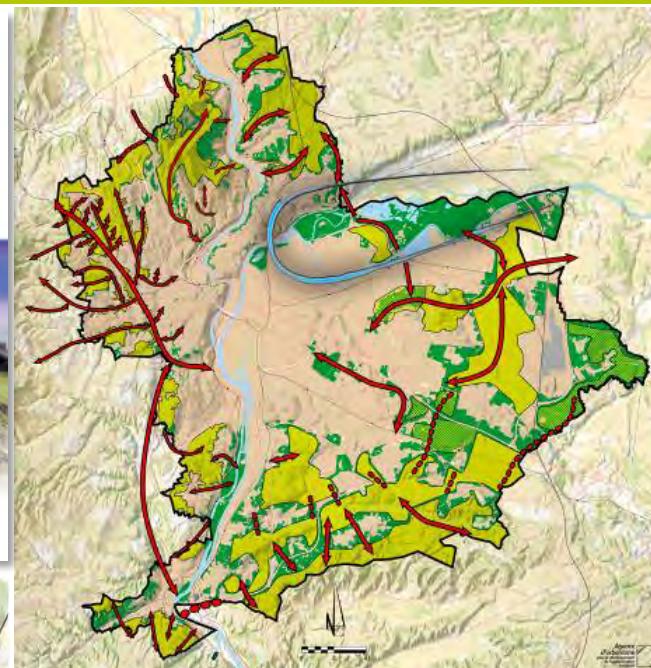
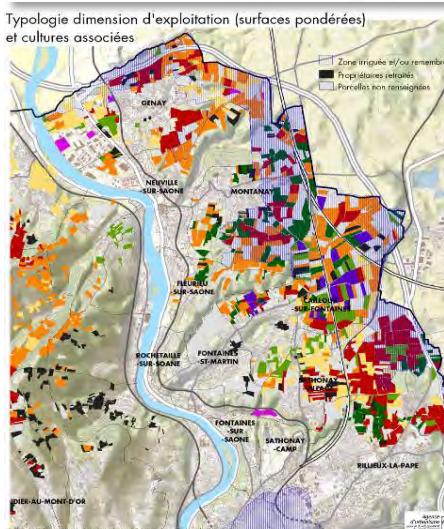




ARMATURE Verte ET TERRITOIRE URBAIN



Policies for the sanctuarization of natural and agricultural areas



Green envelop
 Protected areas





LouKat © pour l'Agence HYL

**The new challenges of
the sustainable city :
nature in the city as a
factor of resilience**



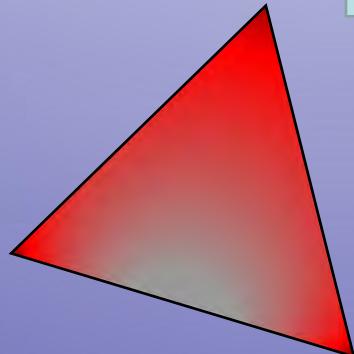


The virtuous triangle

Canopy plan



Local Energy and Climate plan



GRANDLYON
la métropole



PROJET VILLE PERMÉABLE

Comment réussir la gestion des eaux pluviales dans nos aménagements ?

Permeable city project



New logic of urban development

Berge du Rhône

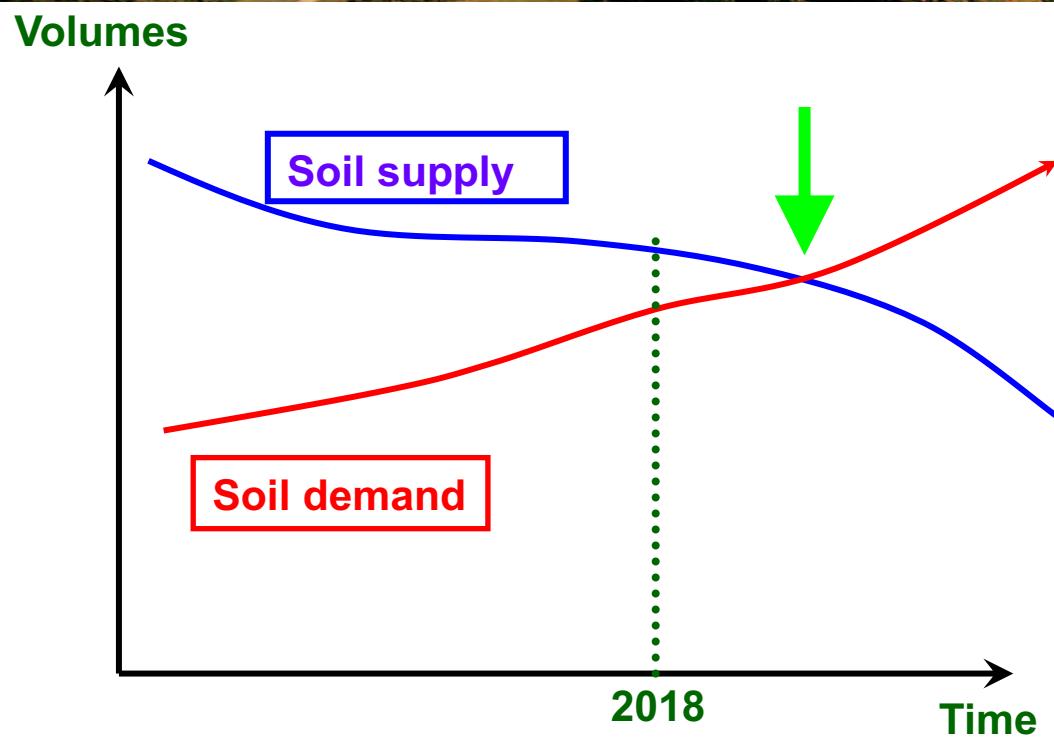
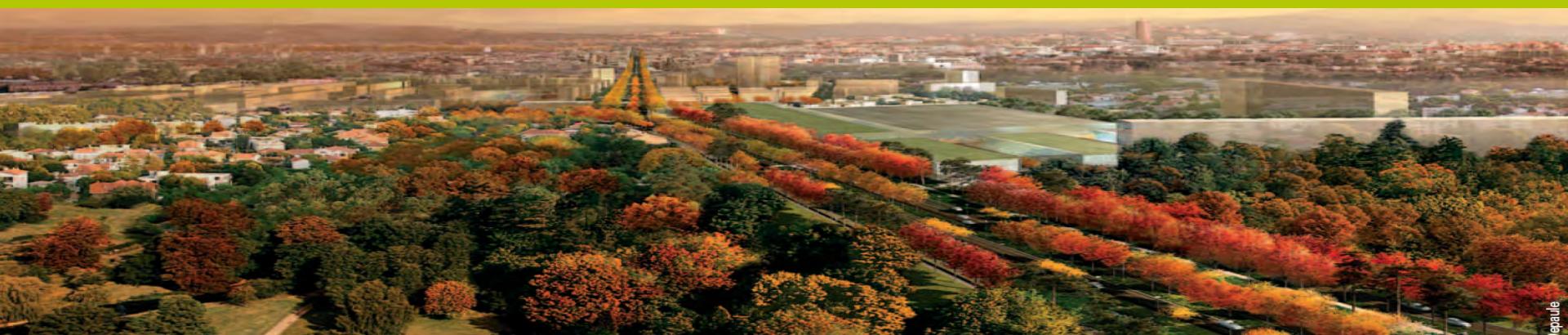


ZAC des Girondins





Fertile soils : the programmed inversion of the supply/demand ratio

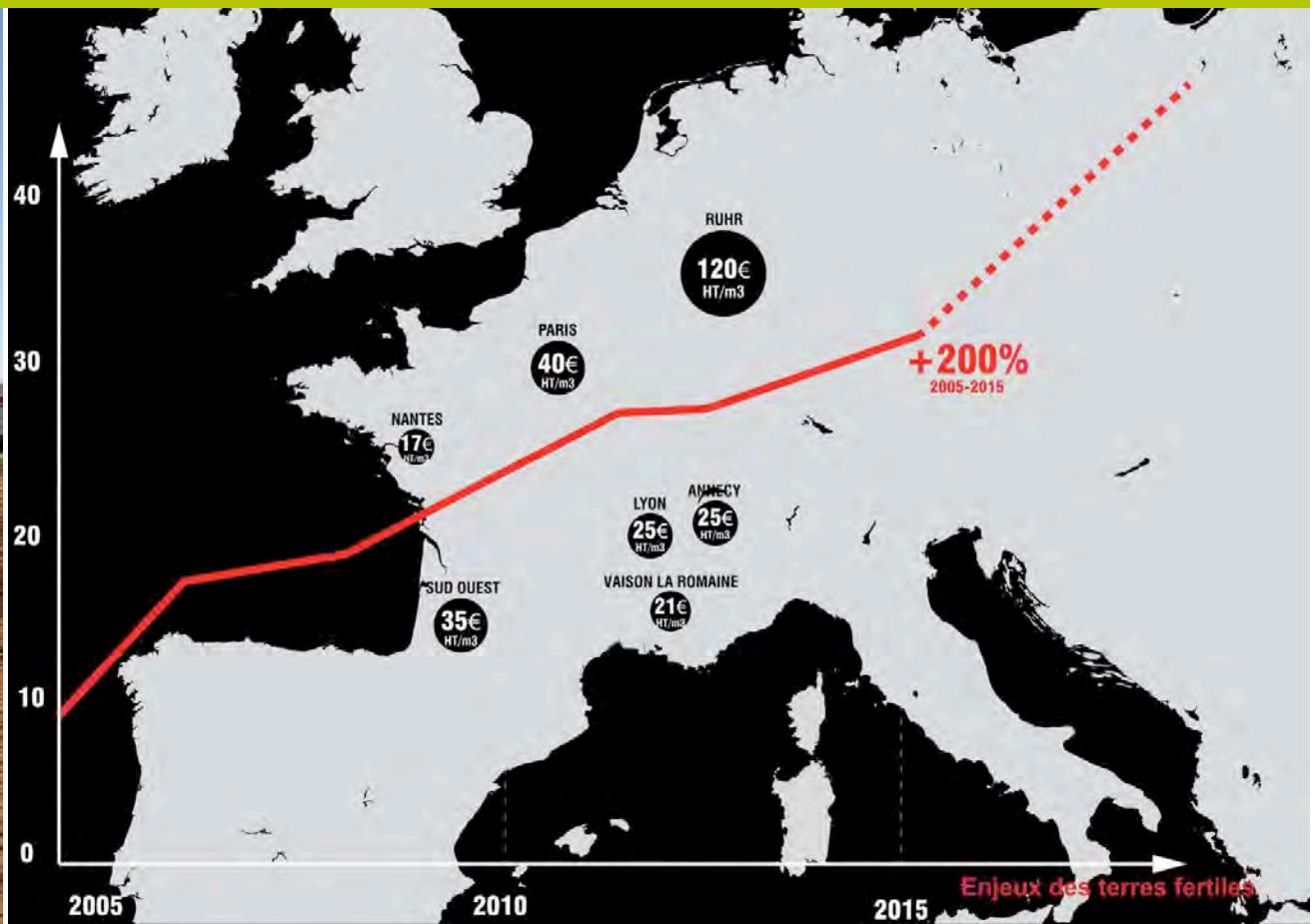


Source : Herzog & de Meuron

The consequences of this evolution :

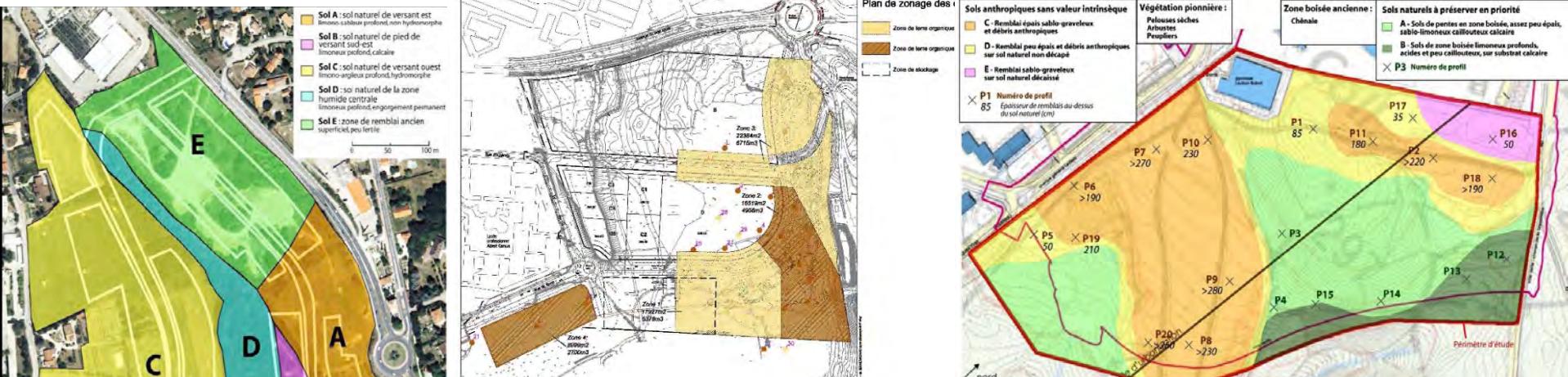
- Cost implications of fertile soils
- Quality implications
- Impact of supply distances

...Opportunities to invent other logics



1. Improve soil knowledge to value fertile materials

- **Perform soil diagnosis in place**
- **Integrate soil conservation into project objectives**
- **Organize recovery and storage**
- **Develop re-use strategies**
- + **Adapt the earthworks and the choice of trees and plants**



Preserve and rationalize the use of
a non-renewable resource

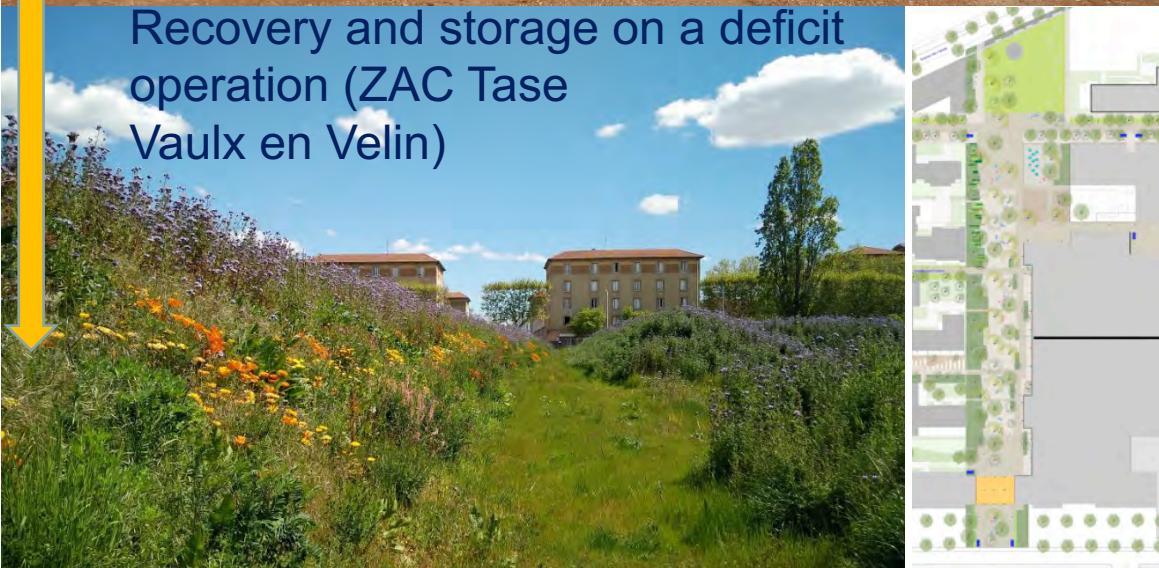
Meyzieu Panettes's green car park development



Excess fertile soils



Recovery and storage on a deficit operation (ZAC Tase Vaulx en Velin)



2. Create a “stock exchange” for fertile materials throughout the Greater Lyon

Mutualize urban projets

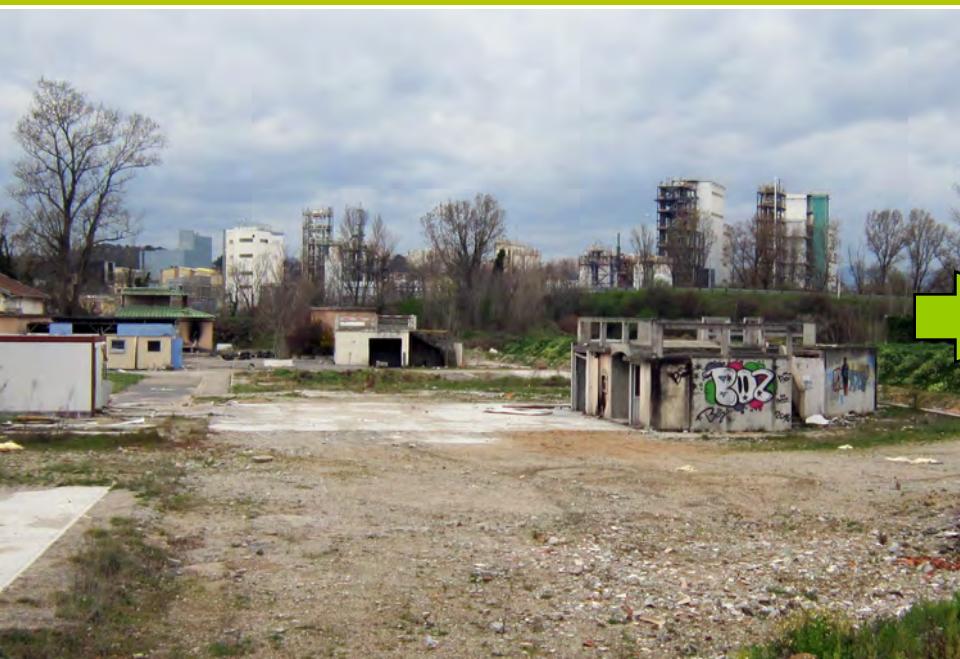


- Nature of materials
- Mobilizable volumes
- Location of the sites
- Timing of achievements

3. Develop techniques for reconstituting fertile substrates



4. Develop existing soils improvement techniques



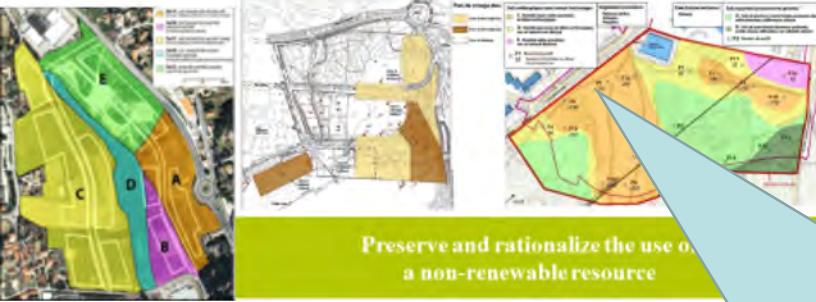
Lône de Pierre
Bénite :

The Chemistry
Valley



1. Improve soil knowledge to value fertile materials

- Perform soil diagnosis in place
- Integrate soil conservation into project objectives
- Organize recovery and storage
- Develop re-use strategies
- + Adapt the earthworks and the choice of trees and plants



Meyzieu Panettes's green car park development



2. Create a “stock exchange” for fertile materials throughout the Greater Lyon

Mutualize urban projets



combined approach for projects



3. Develop techniques for reconstituting fertile substrates



4. Develop existing soils improvement techniques





Thank you for your attention !

The Tree Charter documents can be searched on :

<http://blogs.grandlyon.com/developpementdurable> heading « actions/charte de l'arbre »



Frédéric SEGUR
La Métropole de Lyon
Délégation au développement
urbain et au Cadre de Vie
VVN – Patrimoine Végétal
Service Arbres et Paysage
Tél. (+33) 4 78 95 70 65
fsegur@grandlyon.com