



HAL
open science

Benchmarking of Excavated Soil Reuse Management in Europe - Development of a French management framework

Céline Blanc, Dominique Darmendrail

► **To cite this version:**

Céline Blanc, Dominique Darmendrail. Benchmarking of Excavated Soil Reuse Management in Europe - Development of a French management framework. 2nd International Conference on Sustainable Remediation, Nov 2012, Vienna, Austria. hal-00762671

HAL Id: hal-00762671

<https://hal-brgm.archives-ouvertes.fr/hal-00762671>

Submitted on 7 Dec 2012

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Benchmarking of Excavated Soil Reuse Management in Europe & Development of a French management framework

Blanc Céline, Darmendrail Dominique, BRGM, France



Benchmarking of Excavated Soil Reuse Management in Europe

> EU Waste Framework Directive

- Defines the legal Framework at EU level
- Implementation at a National Level: different options, different tools

> Challenge with Excavated Soil Reuse in France

> Demand of French Ministry of Environment to develop a national management framework with benefit from some experienced countries.

Benchmarking of Excavated Soil Reuse Management in Europe

> The Netherlands

- Application of soil
 - 60 million tons/year primary (clean) sand
 - 20 million tons/year reuse of lightly contaminated soil
- Turnover 200 million euro/year

> Flanders Belgium

- 20 million tons excavated soil per year from the excavated re-used soil:
 - 75% re-used as soil
 - 5% treated before re-use
 - 20% used in construction material

> France???

Benchmarking of Excavated Soil Reuse Management in Europe

- > **Work based on the ICCL questionnaire (including USA/Canada)**
- > **Assessment of the legal framework of European countries / regions**

Switzerland, Belgium/Flanders & Wallonia, the Netherlands, Finland, Spain /Basque Country, Germany, Italy and the United Kingdom

- Status of Excavated Soils : waste, not waste, polluted, not polluted
- Specific legislation or not for excavated soils : soil legislation, waste legislation
- The consideration of the receptor site and soil qualities
- the basic principles of the national/regional approach (e.g. typology of acceptable / sustainable reuses, site specific or generic, cost-benefits analysis).



Benchmarking of Excavated Soil Reuse Management in Europe

> **With some additional constraints: the French management policy on excavated soils needs to be in agreement :**

- with the national policy on contaminated land management (site specific approach, risk based)
- with the Waste management policy (generic approach with guidelines values, hazardous substances contents source approach)

> **taking into consideration:**

- Local implementation
- Liability issues

Benchmarking of Excavated Soil Reuse Management in Europe

> Finally Focus on 2 countries:

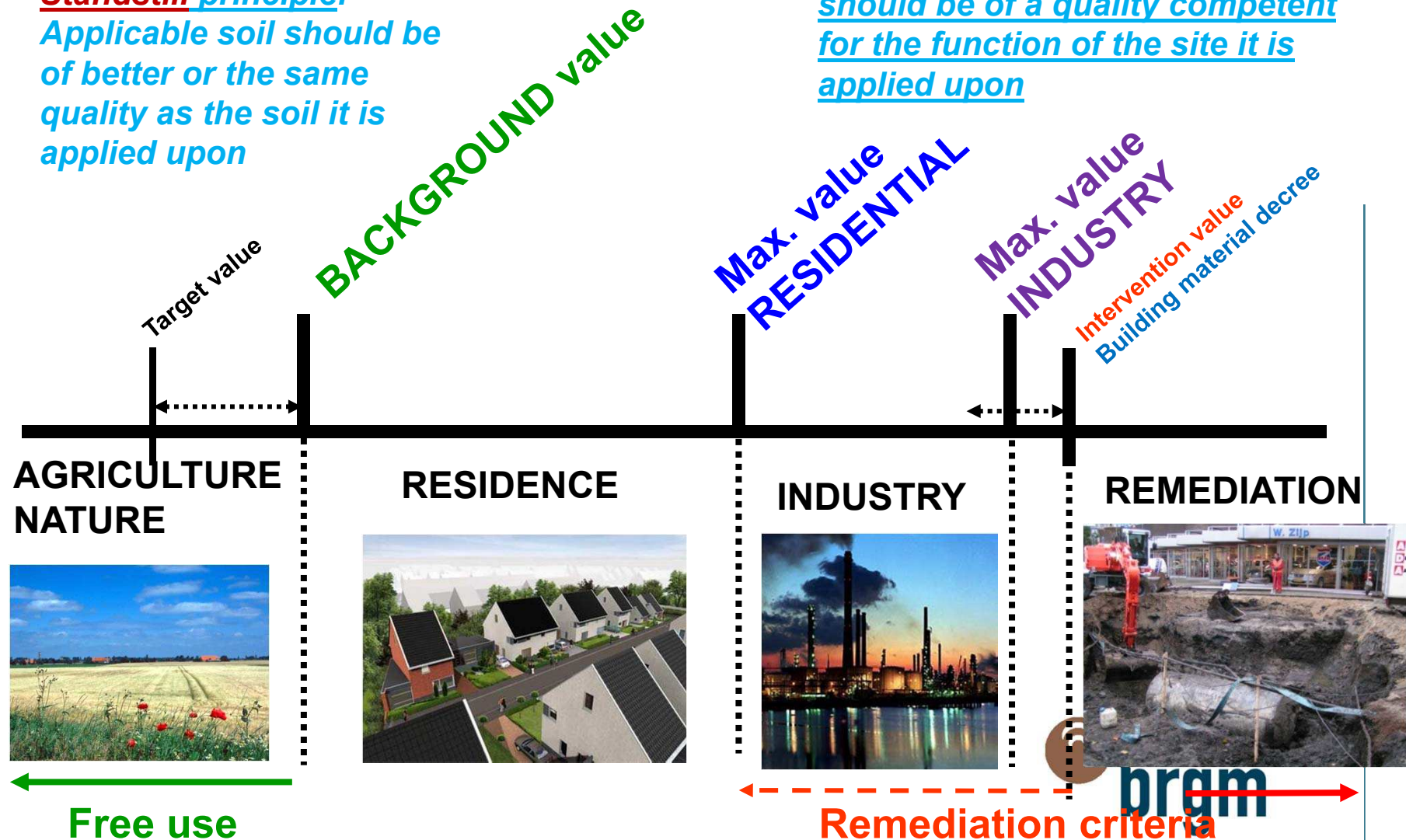
- The Netherlands with a generic approach (Values, Values and Values)
- The United Kingdom with a specific approach (as the French legal framework for contaminated land & sites management)



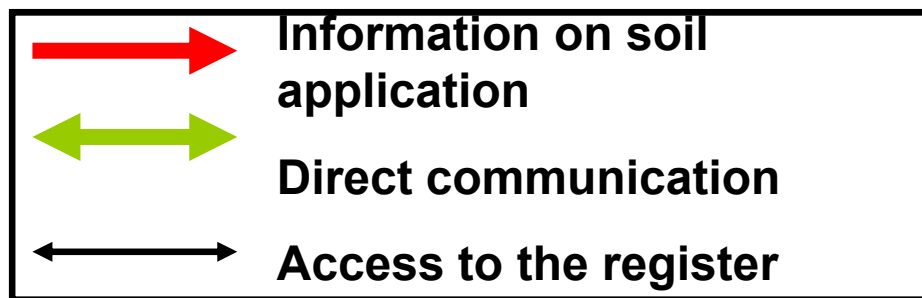
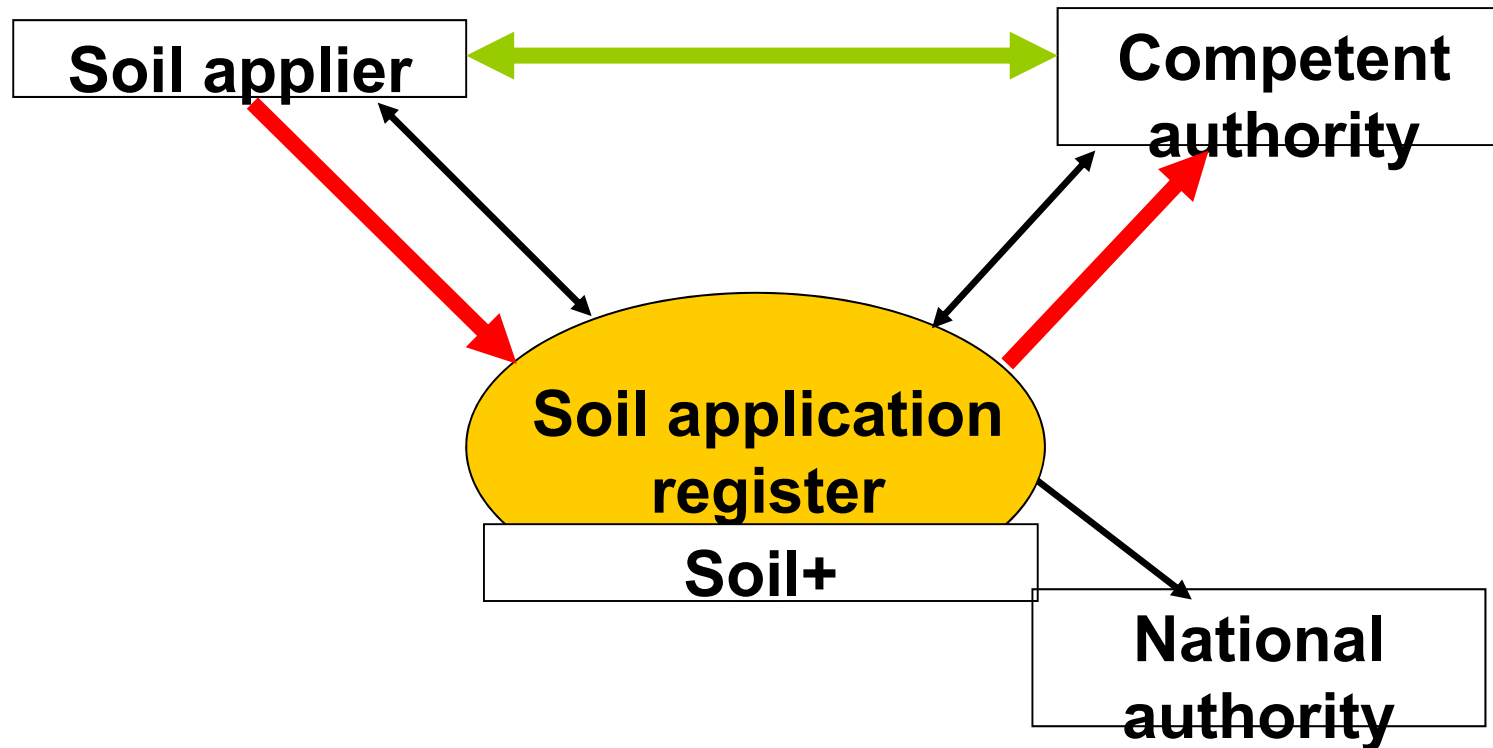
The Netherlands : a generic approach

Standstill principle:
Applicable soil should be of better or the same quality as the soil it is applied upon

Fit for use principle: *Applicable soil should be of a quality competent for the function of the site it is applied upon*



The Netherlands : traceability



D3E / DG

8
Vendredi 7 décembre 2012

The United Kingdom : a specific approach

> **Different methodologies (cf CoP v2):**

- Use on the site of Origin
- Direct transfer
- Cluster/Hub site (if any pre-treatment/ treatment needed)

> **Suitability for use Approach / reused soil quality**

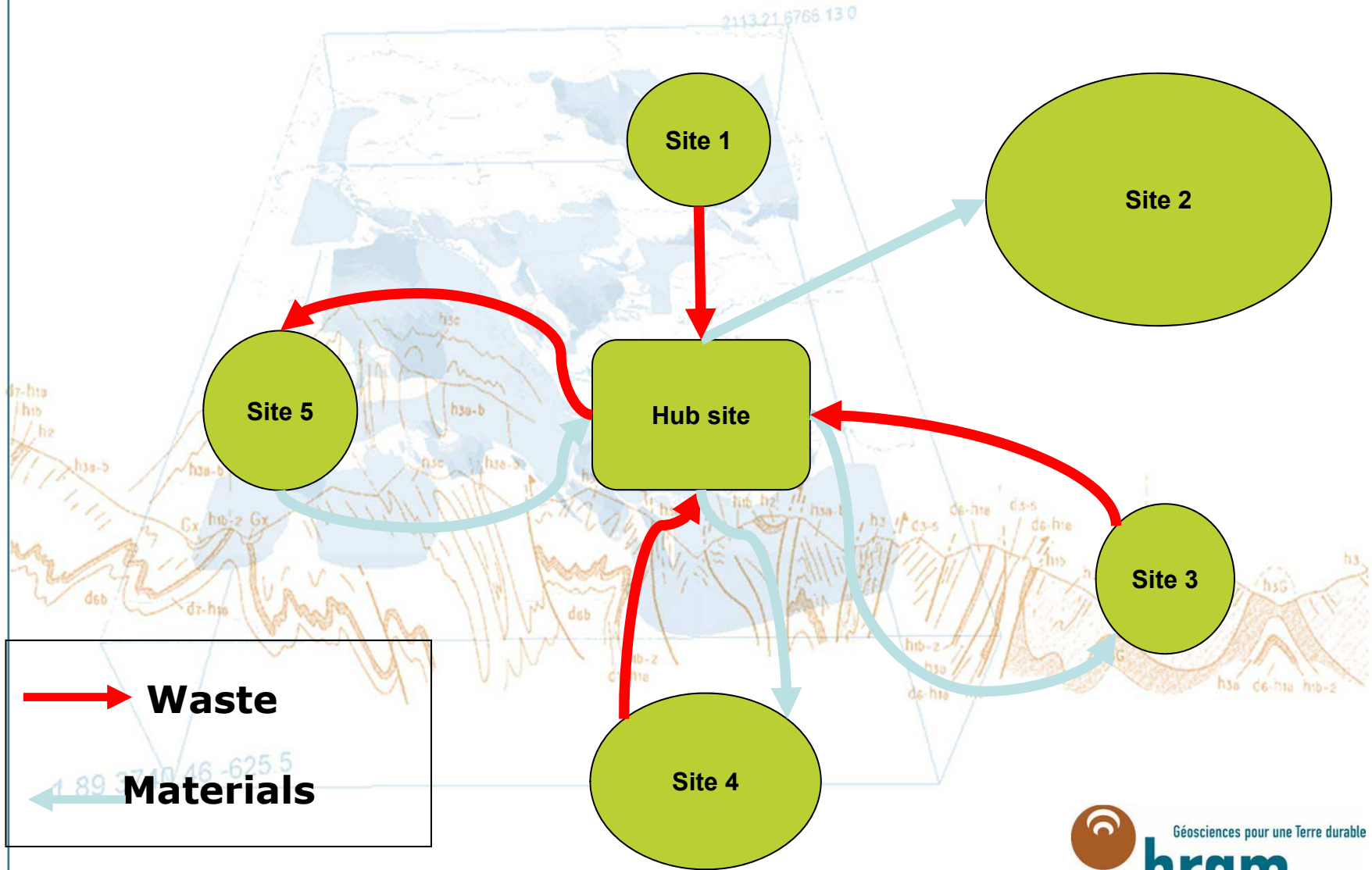
- Prescreening values (CLEA)
- Specific risk assesment if no guideline values or overtaking CLEA values
- Remedial Target Methodology :hydrogeological risk assessment for land contamination

> **Area approach / materials management plan (report)**

> **Linkage with land planning / land development (building permit)**

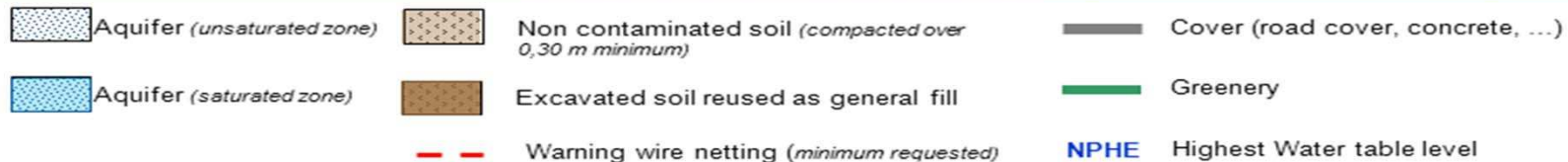
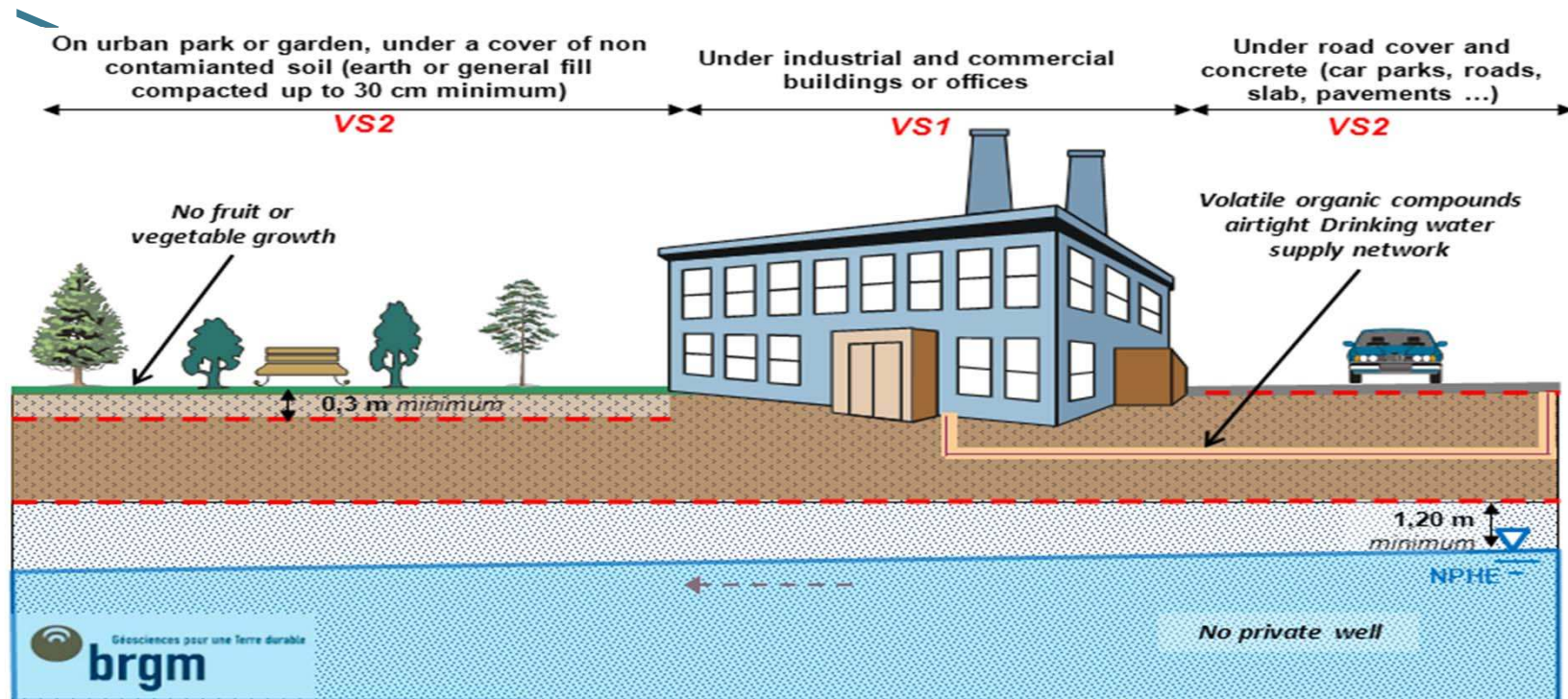


Version 1: Cluster sites



French management Framework (2012)

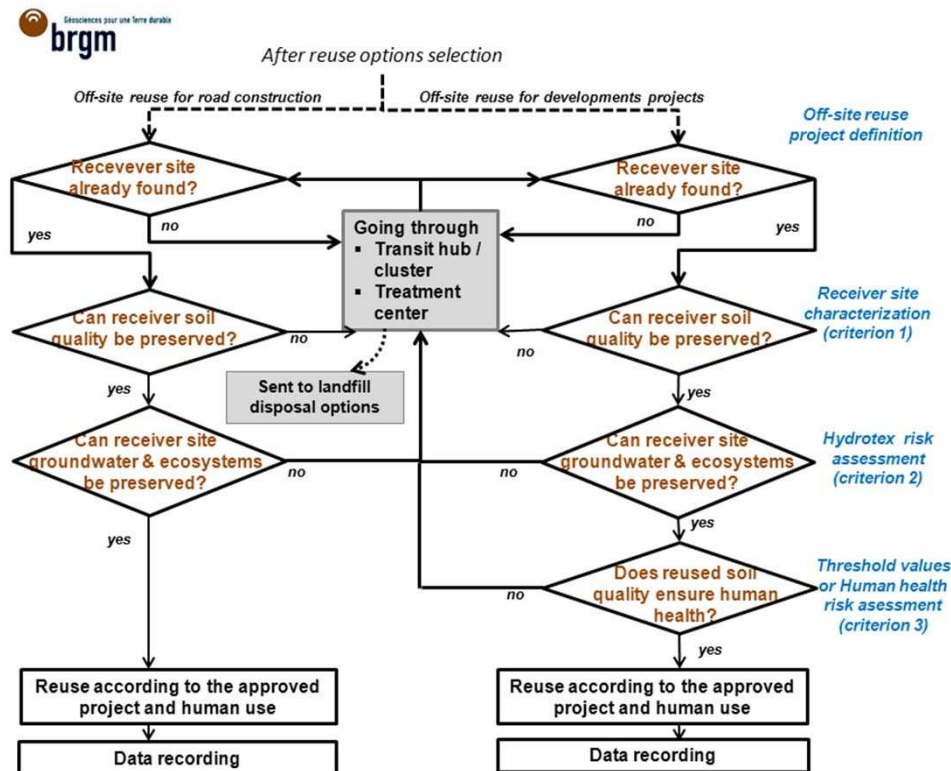
- > Excavated soils can be reused on a receiver sites:
 - For road construction,
 - As part of a development project (for which a building permit or an EIS is issued and under conditions)



erre durable

French management Framework

> Reuse if the three following criteria are respected:



- Criterion 1: **STAND STILL PRINCIPLE** (soil quality of the receiving site is maintained)
- Criterion 2: water resources and ecosystems are preserved beneath the receiver site, SPECIFIC hydrogeological risk assessment : HYDROTEX
- Criterion 3: Excavated soils are compatible with the future use of the receiver site (only in the context of development projects): Threshold values for the most common pollutant otherwise SPECIFIC RISK ASSESSMENT

Off-site reuse global approval scheme

French management Framework

> **Guidance for the reuse of excavated soils in off-site locations (March 2012) - testing for one year**

- Semi-generic Values for assessing potential risks of reuse
- For Groundwater resources (if needed) and Soil

> **Development of an information traceability system (TERRASS) in order to :**

- Ensure materials traceability from the excavation site to the receiver site,
- Bring information on the status, location and quality of stocks,
- Connect soil producers / site owners and users of excavated soil,
- Enable the competent authorities to make their regulatory controls
- Produce useful indicators for monitoring the implementation.

> **Further developments**

- Methodology for construction materials reuse
- Regulatory obligations



> **Guidance on the French Environment Ministry web site :**
<http://www.developpement-durable.gouv.fr/Guide-de-reutilisation-hors-site.html>

> **HydroTex**
http://www.developpement-durable.gouv.fr/IMG/pdf/Guide_hydrotex.pdf

> **TERRASS**
<http://terrass.brgm.fr>

Thank you for your attention

