The policy on excavated soils in Flanders

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Johan Ceenaeme – OVAM, Belgium
European legislation - waste

  
  - Art. 3. 1° Waste: Any substance or object which the holder discards or intends or is required to discard. Is not considered waste:
    - (b) land (in situ) including unexcavated contaminated soil and buildings permanently connected with land;
    - (c) uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated;
  
- Article 6. End-of-waste status
  
  - 1. Certain specified waste shall cease to be waste within the meaning of point (1) of Article 3 when it has undergone a recovery, including recycling, operation and complies with specific criteria
Flemish Legislation – Waste

- 23/12/2011: Decree concerning the sustainable management of materials and waste
  - Art. 3. 1° Waste: each substance or each object which the owner discards, intends to discard or must discard.
    - Is not considered waste:
      - e) unexcavated, polluted soils

- CHAPTER 4. – End of life phase - waste
  - Art. 38. Excavated soil shall not be regarded as a waste if it is used in accordance with the conditions for the use of excavated soil mentioned in the Decree of 27 October 2006 on soil remediation and soil protection and its implementing orders
Flemish Legislation – Soil

- 27/10/2006: Decree of the Flemish Government concerning Soil Remediation and Soil Protection
- 14/12/2007: Order of the Flemish Government concerning Soil Remediation and Soil Protection (VLAREBO):
  - Chapter XIII: Use of excavated soil
  - Manage the use of excavated soil
    - No use may take place which would result in the deterioration of the present environmental situation (prevent soil contamination)
    - No increase in health or environmental risks (stand still principle)
  - Obligation of soil survey
  - Framework of possible uses
  - Traceability procedure – Juridical protection of different actors (liability)
  - Codes of best practises
  - Soil management organisation
Scope
Use of excavated soil - conditions

- **As soil, outside a cadastral work zone**
  - Free use (annex V VLAREBO)
  - Conc. < conc. receiving soil / < 80 % of Soil Remediation Value (SRV)
  - Conc. > SRV III => soil cleaning is necessary before use (or land-fill if soil cannot be cleaned)

- **As soil, inside a cadastral work zone**
  - Land with similar environmental characteristics
  - No Risk to human health / no effect on the environment / similar activities
  - Conc. > or < 80 % SRV

- **As soil, on location**
  - Use on the same place under the same conditions in the same application
  - Sewage pipes, cables, wires (construction, repair), repair of levees

- **For construction purposes / In or as a solid material**
  - list of well defined applications
  - Foundations, dikes, noise barriers, landfill embankment
Use of excavated soil - conditions

- Concentration
  - Type V
  - Type IV
  - Type III
  - Type II
  - Type I

- Land use type
  - Use for construction purposes
  - Use as soil
  - Free use
  - Background level

Soil Rehabilitation Standard

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# Use of excavated soil - conditions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Use as soil outside a Cadastral Work Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>X ≤ Free use (annex V)</td>
<td>Free use</td>
</tr>
<tr>
<td>Free use &lt; X ≤ SRV III (annex IV)</td>
<td>Use on land use type I – V:</td>
</tr>
<tr>
<td></td>
<td>• survey of receiving soil</td>
</tr>
<tr>
<td></td>
<td>• concentrations &lt; concentrations receiving soil</td>
</tr>
<tr>
<td></td>
<td>• X &lt; 80 % SRV of land use type</td>
</tr>
<tr>
<td>X &lt; 80% SRV I/II</td>
<td>Use on land use type I - V</td>
</tr>
<tr>
<td>80% SRV I/II &lt; X ≤ 80% SRV III</td>
<td>Use on land use type III - V</td>
</tr>
<tr>
<td>80% SRV III &lt; X ≤ SRV III</td>
<td>Use on land use type IV - V</td>
</tr>
<tr>
<td>X &gt; SRV III</td>
<td>No use as soil</td>
</tr>
</tbody>
</table>

Content of stones < 5% et < 50 mm / foreign material < 1%
Use of excavated soil - conditions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Use as soil inside a Cadastral Work Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X \leq 80 % \text{ SRV } i$</td>
<td>Free use</td>
</tr>
<tr>
<td>$X &gt; 80 % \text{ SRV } i$</td>
<td>Conditional use:</td>
</tr>
<tr>
<td></td>
<td>• code of best practices</td>
</tr>
<tr>
<td></td>
<td>• no risk of groundwater pollution</td>
</tr>
<tr>
<td></td>
<td>• no health risks</td>
</tr>
</tbody>
</table>

Content of foreign material $< 1\%$
# Use of excavated soil - conditions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Use for construction purposes / In or as a solid material</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X \leq \text{Free use (annex V)}$</td>
<td>Free use</td>
</tr>
<tr>
<td>Free use $&lt; X \leq \text{use for construction purposes (annex VI)}$</td>
<td>Conditional use for construction purposes / In or as a solid material: leaching (annex VII)</td>
</tr>
<tr>
<td></td>
<td>Leaching $\leq$ threshold value</td>
</tr>
<tr>
<td></td>
<td>Leaching $&gt; $ threshold value</td>
</tr>
<tr>
<td>$X &gt; \text{use for construction purposes}$</td>
<td>No use possible</td>
</tr>
</tbody>
</table>

Content of foreign material $< 1\%$
Use of excavated soil - procedures

- **Standard procedures**
  - Technical report
  - Study of receiving land

- **Codes of best practices**
  - Delimitation of cadastral work zone
  - Delimitation of zone for use on location
  - Use of excavated soil on location
  - Use of excavated soil within a cadastral work zone

- **List of use for construction purposes**

- **List of solid materials**
Use of excavated soil - traceability
Use of excavated soil - traceability

1. Commissioner excavation
2. Technical report
3. Conformity technical report
4. Demand Soil transport
5. Permit Soil transport
6. Informing start works
7. Receipt + Transport document
8. Soil management report
9. Copy soil management report

Accredited Soil Management Organisation

End user

Transport document

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Responsabilities

- **Initiator**
  - Commissioner - location of excavation
  - Commissioner - location of use
    - owner: remediation obligation in case of contamination
    - liability for creation new pollution

- **Accredited Soil Remediation Expert**
  - technical report / study receiving soil

- **Contractor / Transporter**

- **Accredited Soil Management Organisation / Accredited Temporary Storage Sites / Accredited Soil Remediation Plant**
  - Traceability procedure
  - Internal organisation quality control
Costs
Use codes for excavated soil

<table>
<thead>
<tr>
<th>Code</th>
<th>X: Use as soil</th>
<th>Y: Inside cadastral word zone (project zone)</th>
<th>Z: Use for construction purposes / In or as a solid material</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
</tr>
<tr>
<td>1</td>
<td>free use</td>
<td>free use</td>
<td>free use</td>
</tr>
<tr>
<td>2</td>
<td>free use</td>
<td>conditional use</td>
<td>conditional use</td>
</tr>
<tr>
<td>3</td>
<td>use on land use type I – V survey of receiving soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>use on land use type III - V survey of receiving soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>use on land use type IV - V survey of receiving soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>no use possible</td>
<td>no use possible</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>no use possible</td>
<td>no use possible</td>
<td></td>
</tr>
</tbody>
</table>
Use of contaminated soil

- **Polluted soils**
  - Treatment possible
    - Treatment: biological, physico-chemical, thermal
    - Dumping: Environmental tax
  - Non-treatable soils
    - Waste originating from remediation operations (remediation projects, excavation projects)
    - Dumping, incineration: No environmental tax
      - Formal approval by OVAM.
      - Declaration of non treatability

- **Transport of soils across borders**
  - Legislation of country involved
Some numbers

- Technical reports: ± 4 500 / year
- Soil investigated: ± 24 000 000 m³ / year
- Soil management reports: ± 5 500 / year
- Soil used: ± 20 000 000 m³ / year
- Quality free use: ± 70 %
- Quality free use < X < SRV III: ± 20 %
- Quality X > SRV III: ± 10 %
New developments

- Recent change of the soil decree: soil materials are under the scope of the regulation
- Soil materials: excavated soil, dredged sediments, soil slurry, bentonite sludge
- New regulation will enter into force on 1st April 2019
Thanks for your attention

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