

Presentation – Landfill Covers

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Tveta – landfill and recycling

EU Legislation

- 10^{-9} m/s - bottom sealing
- 50 litres per square meter and year – top sealing - for non-hazardous waste
- 5 litres, respectively for hazardous waste
- Leaching criterias

Background

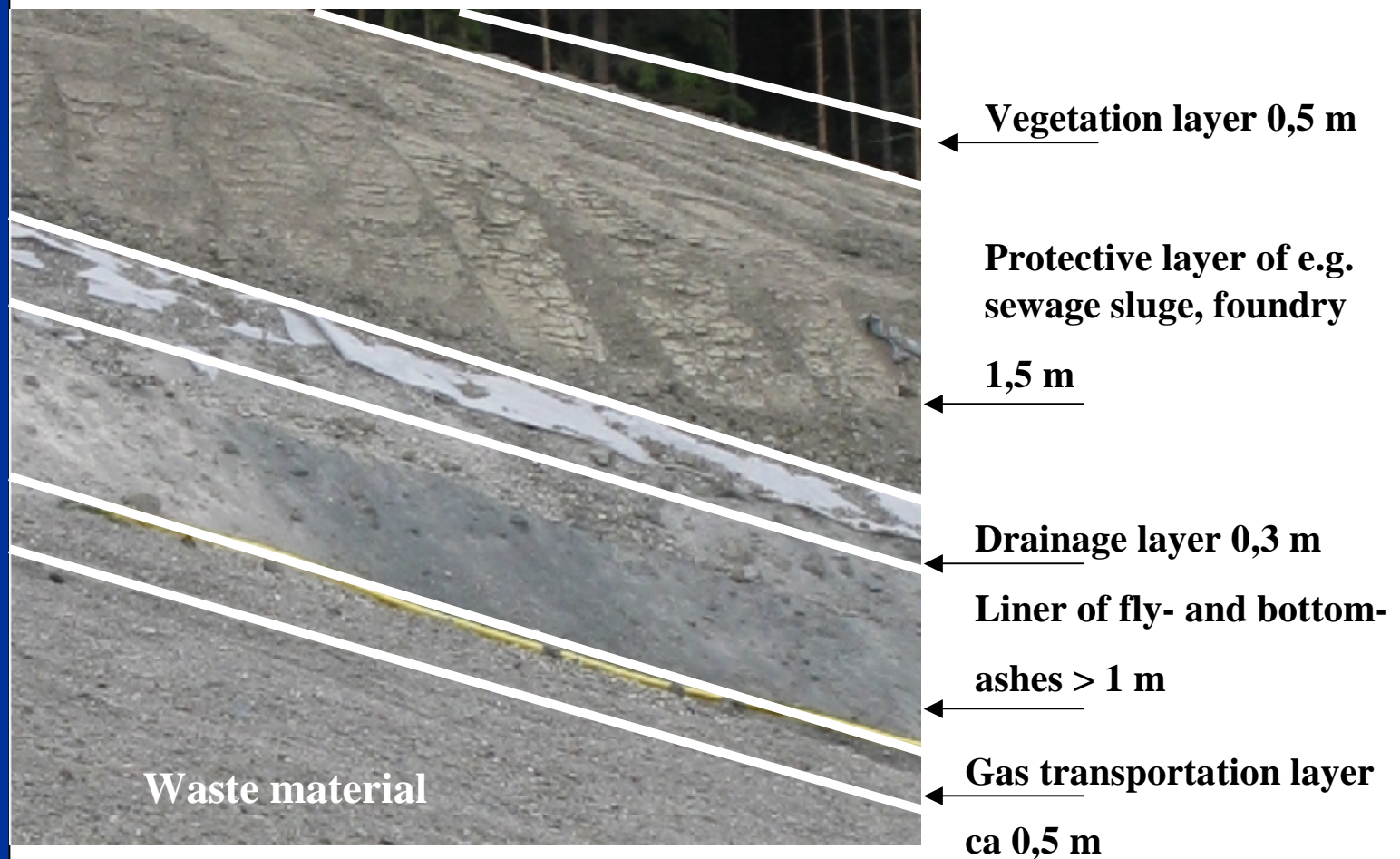
- Requires 100 millions ton before 2010 only in Sweden
- Need for use of secondary materials vs virgin material

Secondary construction materials

Materials investigated for re-use:

- ashes/slag
- sludges
- foundary
- secondary building materials
- contaminated soils
- concrete & asphalt
- industrial wastes
- etc

Closure of Landfill using Ashes as Liners

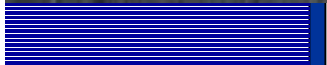


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Lysimeter installation



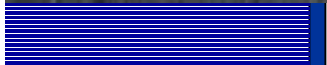
Full scale project



Carbonatisation



Monolithic structure?





Clay mineralisation ?

Ash processes over time

Key words

Fly ashes

Bottom ashes

Slag-
products

Incineration
Biomass

Phase 4 → Clay mineralisation

Phase 3 → Monolithic structure

Phase 2 → Carbonatisation

Phase 1 → Hydratisation

1 år

10 år

100 år

1000 år