
Case studies on geosynthetic applications

NGS seminar, Talinn (May 2014)



Lagoon covering

Skutskär, Sweden



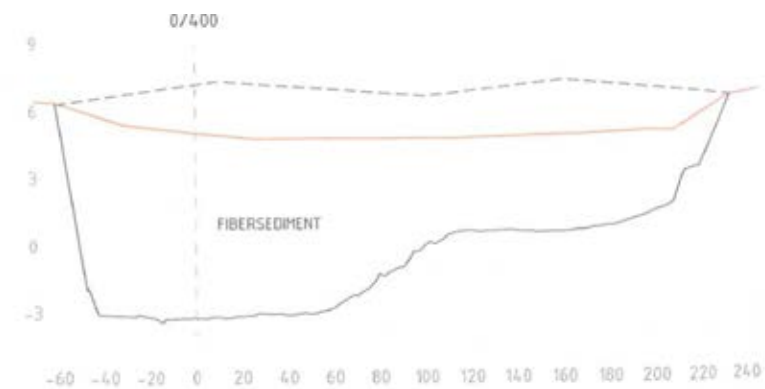
Background

- Pulp mill location of StoraEnso
- Mill founded in 1894
- 350 people workforce with 530.000 tons of pulp production
- Wish to cover lagoon (former harbour):
 - Containing 600.000 m3 of quick silver in the sludge dredged in 2001 from the area around it
 - Goal: cover lagoon and expand storage area (tree logs)
- FLA / TCG:
 - Material design, Production and Supply



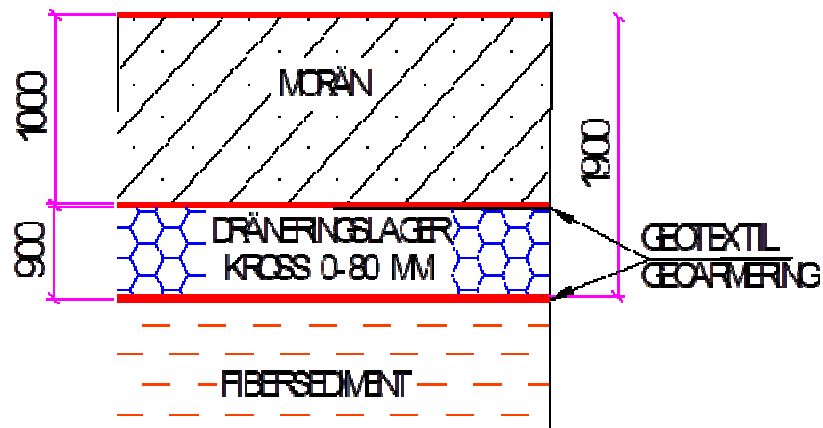
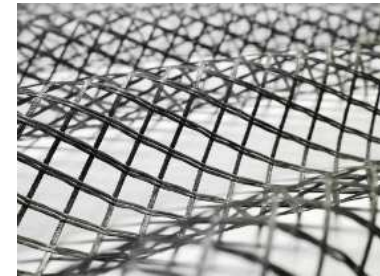
Project details

- Total covered area: 85.000 m²
- Sediments: TS = 25-40 %
- Undrained shear strength: 5-25 kPa
- Sediment thickness: 3 m - 8 m, average about 6 m
- Fill height: 2 m – 3,4 m
- Settlements: 0,5 – 1,0 m



Materials used

- 250.000 m² TenCate Polyfelt TS50N (non woven)
- 124.280 m² TenCate Miragrid GX35/35 (geogrid)
- 141.500 m² TenCate Miragrid GX55/55 (geogrid)



Status today



Project finished, stabile,
final settlement process



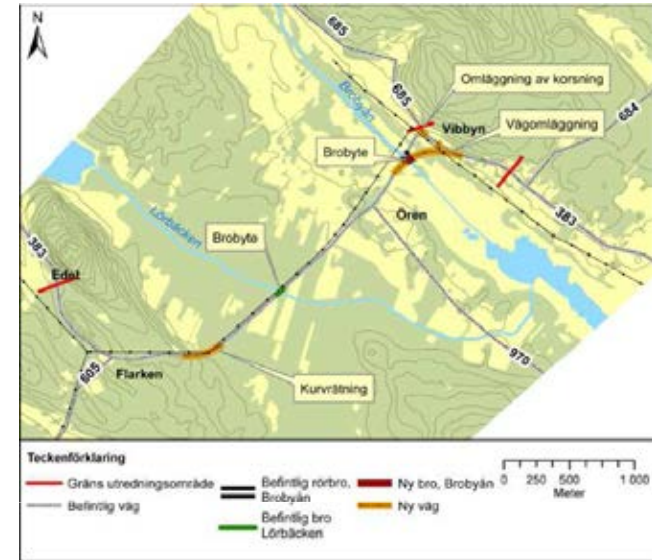
Piled Embankment, Väg 383

Vibbyn – Flarken (Luleå), Sweden



Background

- Road 383 between Vibbyn and Flarken is not solid ground all year and is in need of reinforcement.
- Wild life area and natural water ways need to be preserved
- Road can flood several times a year (closed down) and is not safe on certain parts of the full track.



Project details

- Road diversion (partly) and two bridges replaced (also to facilitate migration of fish)
- Combination of wood and concrete piles drilled over largest part of the track
- Straightening of two curves and improving of the bearing capacity of the road section .
- FLA / TCG:
 - Material design, Production and Supply



Materials used

- TenCate Geolon PET 150 (175 kN/m woven)
- TenCate Geolon PET 300 (330 kN/m woven)
- TenCate Geolon PET 400 (440 kN/m woven)



Status today



Project still ongoing,
ready in 2014



Thank you for your attention !



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