



Geo

# Some experiences, and my views on the future with NorGeoSpec



BRØDRENE DAHL

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## Items

- Intention with implementing NorGeoSpec 2002
- Projects with fabrics. Certificated under NorGeoSpec 2002.
- Old Projects where reinforcement are used, and where NorGeoSpec 2012 would have been useful
- Benefits, Opportunities and Challenges

- Intention with implementing NorGeoSpec 2002
- To increase the Quality of Fabrics
  - Class 3 became class 2 – The Homogeneity became better – etc.
- To be able to have control over the material that would be delivered
  - Site control, Testing by the road department
- To have a possibility to stop products with bad quality
  - Ability to redraw certificates after control by an accredited organization.

- Projects with fabrics. Certificated under NorGeoSpec 2002



## The beginning

- Projects with fabrics. Certificated under NorGeoSpec 2002



## E 18 Askim



- Projects with fabrics. Certificated under NorGeoSpec 2002



## **E 18 Grimstad - Kristiansand**

- Projects with fabrics. Certificated under NorGeoSpec 2002



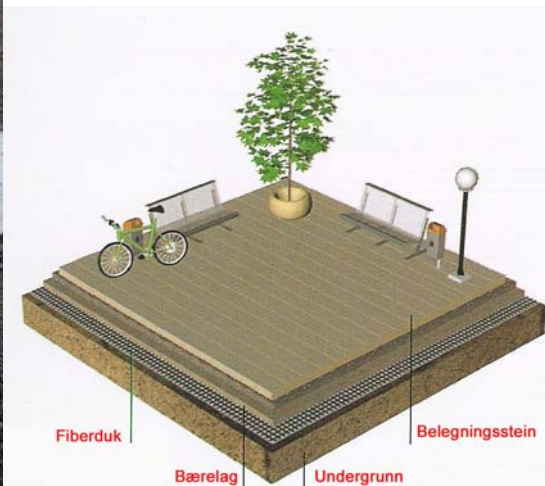
**Used in other applications than roads.**



- Projects with fabrics. Certificated under NorGeoSpec 2002



**Used on privat  
projects**





## NorGeoSpec 2012 Old Projects where road reinforcement are used



**E 18 Askim**

## NorGeoSpec 2012 Old Projects where road reinforcement are used



### **Municipal road on Hitra**

## NorGeoSpec 2012 Old Projects where road reinforcement are used



### **Municipal road in Bodø**



## NorGeoSpec 2012 Old Projects where road reinforcement are used



**E 6 Østfold**



## NorGeoSpec 2012 Old Projects where road reinforcement are used



**E 6 Østfold and  
E 18 Askim**

## NorGeoSpec 2012 Old Projects where reinforced earth are used



### Small Privat Wall in Sandefjord

## NorGeoSpec 2012 Old Projects where reinforced earth are used



### IØS Waste Landfill



## NorGeoSpec 2012 Old Projects where reinforced earth are used



### **Sound barriere in Akeland E 18**



## NorGeoSpec 2012 Old Projects where reinforced earth are used



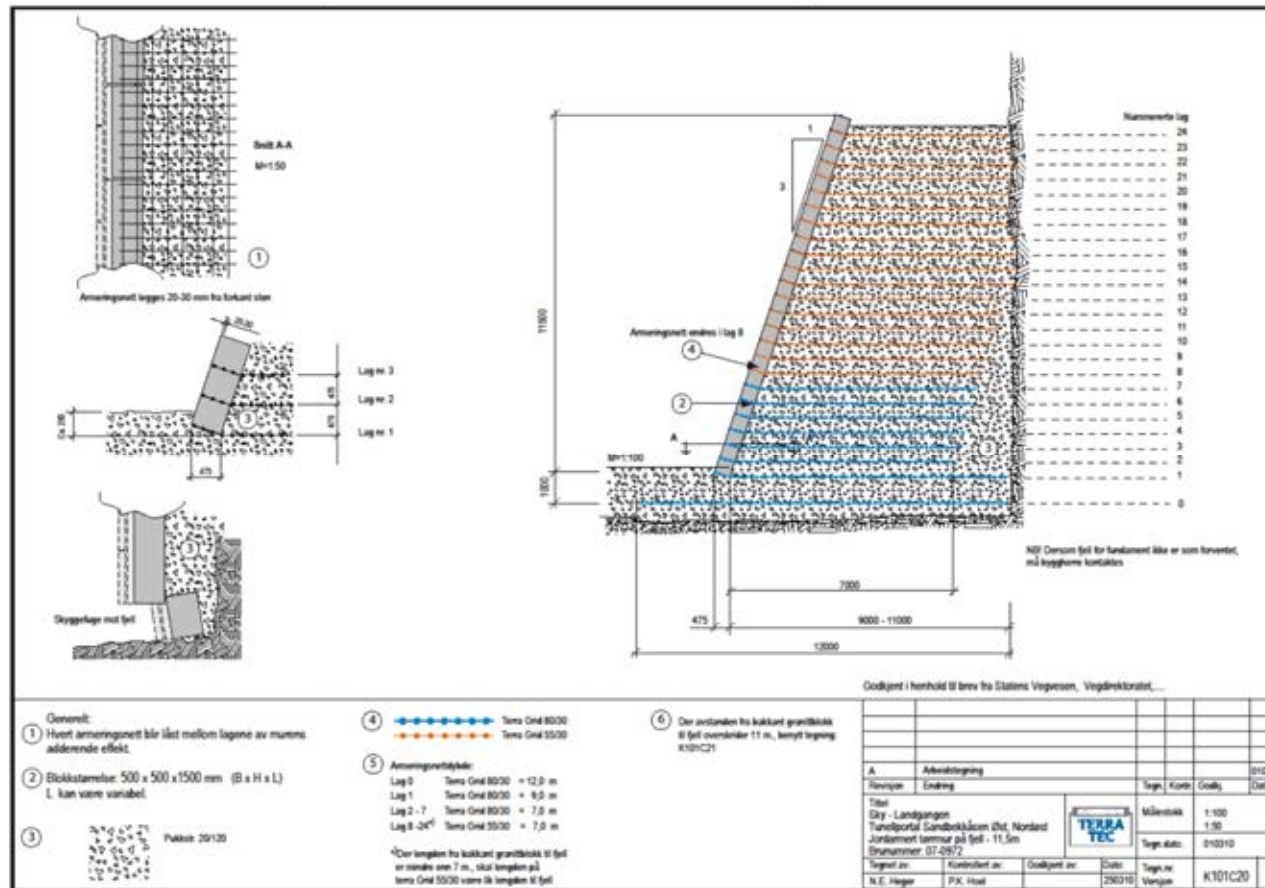
### Holmenkollen Ski Jump

## NorGeoSpec 2012 Old Projects where reinforced earth are used



### E 18 Sky - Langangen

# NorGeoSpec 2012 Old Projects where reinforced earth are used



# E 18 Sky - Langangen

## NorGeoSpec 2012 Old Projects where reinforced earth are used



**Voss – Naturell  
Stone Wall**





Ensuring quality is  
always important

- **Benefits, Opportunities and Challenges**

## **Benefits**

- **Better control with the quality**
- **Easier to find the right product to use**
- **Fabricks - Same quality for all type of constructions**
- **For Fabrics the producers can concentrate on 5 types for the Nordic and Baltic market**
- **We are sure that the European norms and CE marking are followed**

- **Benefits, Opportunities and Challenges**

## **Opportunities**

- **Development of the markets**
- **Use of more economical solutions**
- **Possible to have control with the use**
- **Better support from the System owners on certificated products.**
- **Easier to have overview of the available products for the contractor.**

- Benefits, Opportunities and Challenges

## Challenges

### ➤ Cost of the system

- ✓ To day the market on reinforcement are to small to absorb this cost.
- ✓ Price Increase 3% - 6%

### ➤ Acceptance from the system owner on use of the products

- ✓ Publically support the use of the system.
- ✓ Accept the experience that are among the experts on this system



success will  
provide a larger  
market for  
Geosynthetics



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