

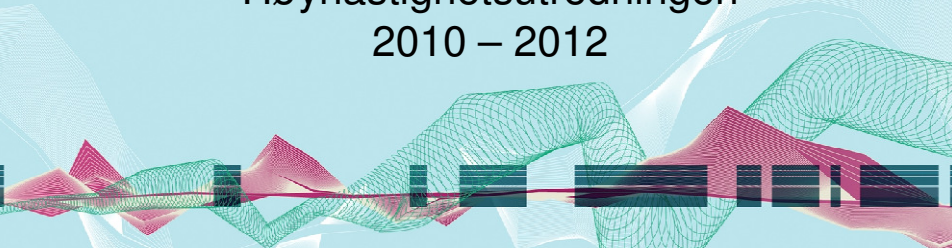


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## Høyhastighetsutredningen 2010 – 2012



### Main Technical Premises – Based on Phase 2

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Seniorrådgiver

Oslo  
17. Juni 2011



Group plc

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OUR VISION:

THE OUTSTANDING  
IER OF SPECIALIST  
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## From Phase 2 to Phase 3

- Phase 2 General Studies: Technical recommendations for Phase 3 Corridor Studies
- Phase 3 Consultants challenged on Phase 2 interpretations to be common for all 4 corridors.
- 7 Cross Corridor Working Groups established: The 4 consultants' discipline experts working together.
- In principle: All technical questions from consultants to JBV being returned to Working Group.
- In principle one concluding note from each working group as basis for all 4 corridors/ consultants.



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## Working Groups

- Alignment
- Civil Works
- Stations
- Construction Processes/ Methods
- Cost and Quantums
- Mapping and Environment
- Traffic Noise

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## Alignment Scenarios

Defined by JBV

Scenario D:

- D1: Design speed 330 P+F Trains
- D2: Design speed 330 P Trains Only
- Deviations accepted where recommendable.

Scenario C (IC standard)

- Design speed 250 P+F Trains
- Deviations accepted where recommendable.

Scenario B

- 20 % reduced travel time end-to-end

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## Alignment Parametres

Technical Parametres:

- Design Speed 250- 330 km/h: TSI
- Design Speed <250 km/h: JBV Teknisk Regelverk

Crucial parametres - at this stage:

- Horizontal Curve Radius (6300 – 4000 – 3200 m)
- Gradient (12,5 – 25 – 35 o/oo)



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## Civil Works

Discussions and agreement on common approach for:

- Foundation/ substructure
  - Specific demands for slabtrack and for speeds > 250?
- Tunnel Design Principles
- Construction Principles Civil Works



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## Stations

Discussions and agreement on common approach for:

- Main principles for
  - Location Principles
  - Design Principles



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## Construction Processes/ Methods

Discussions and agreement on common approach for:

- Construction Process:
  - Transport works and mass logistic
- Traffic Consequences
  - Taboo zones
  - Road Traffic
  - Rail Traffic





## Cost and Quantums

Discussions and agreement on common approach for:

- Understanding and improving the Atkins (F+G) Cost Model
- Quantum Calculation Principles
- Cost for site specific installations



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## Mapping and Environment

- Establishing a common interactive mapping system
- Common approach to input for environment analysis:
  - Energy Consumption
  - Climate Consequences
- Common approach to other parts of EIA





## Experience (so far)

- Small client organisation
- Four parallel and similar studies
- Four highly skilled consultants
- Detailed design parameters left to the 4 consultants' experts for decision.
- Cooperation between experts from 4 (normally competing) consultants has been
  - Somewhat unusual for consultants, but gradually accepted (?)
  - A major support for the client.



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## Phase 3 Consultant Groups

- Rambøll (NO/SE)
  - IGV Stuttgart (DE)
  - ILF (AU)
- Multiconsult (NO)
  - WSP (SE)
- Sweco (NO/SE)
  - Pöyry (DE)
- Norconsult (NO)
- AsplanVIAK (NO)
  - VWI (DE)
  - Misa (NO)
- Atkins (UK)



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