

A photograph of a railway track stretching into the distance. Overhead power lines and signal lights are visible. The signal lights are green. The sky is clear and blue. The tracks are flanked by green trees.

# Market dialogue meeting 28.6.2017

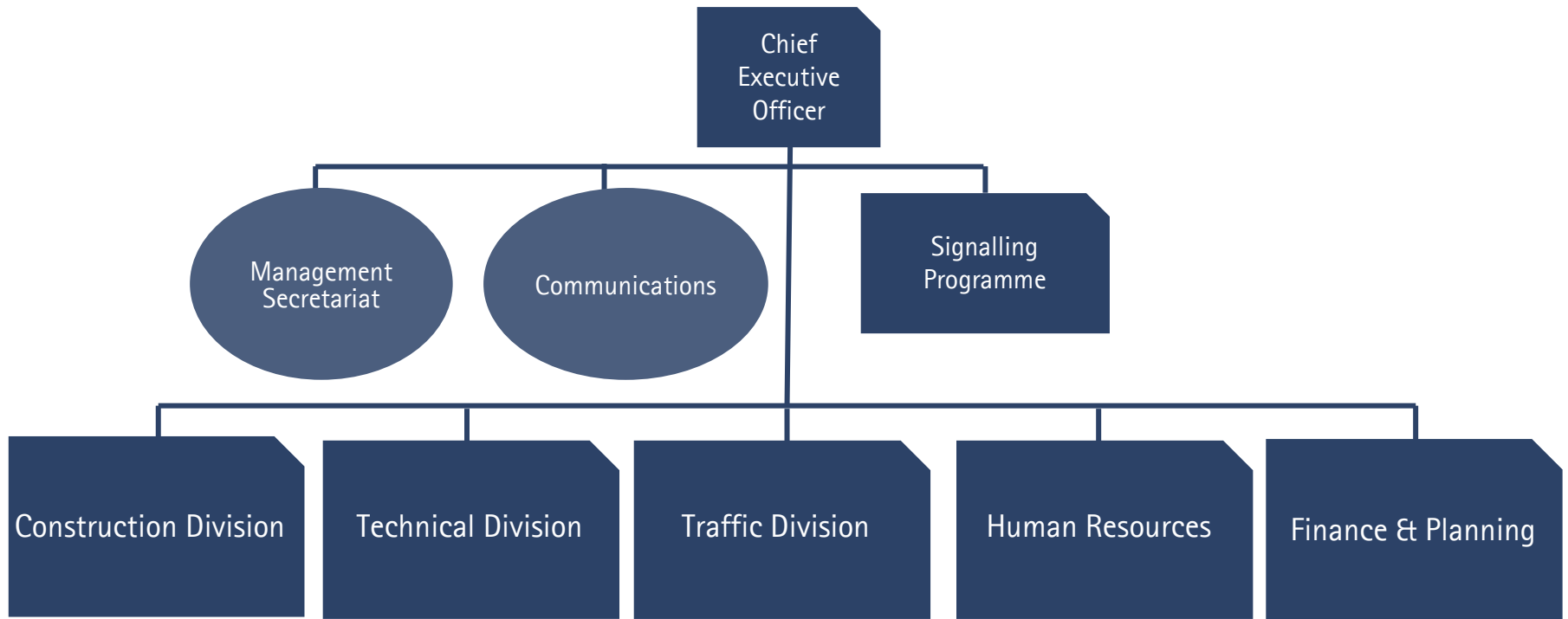
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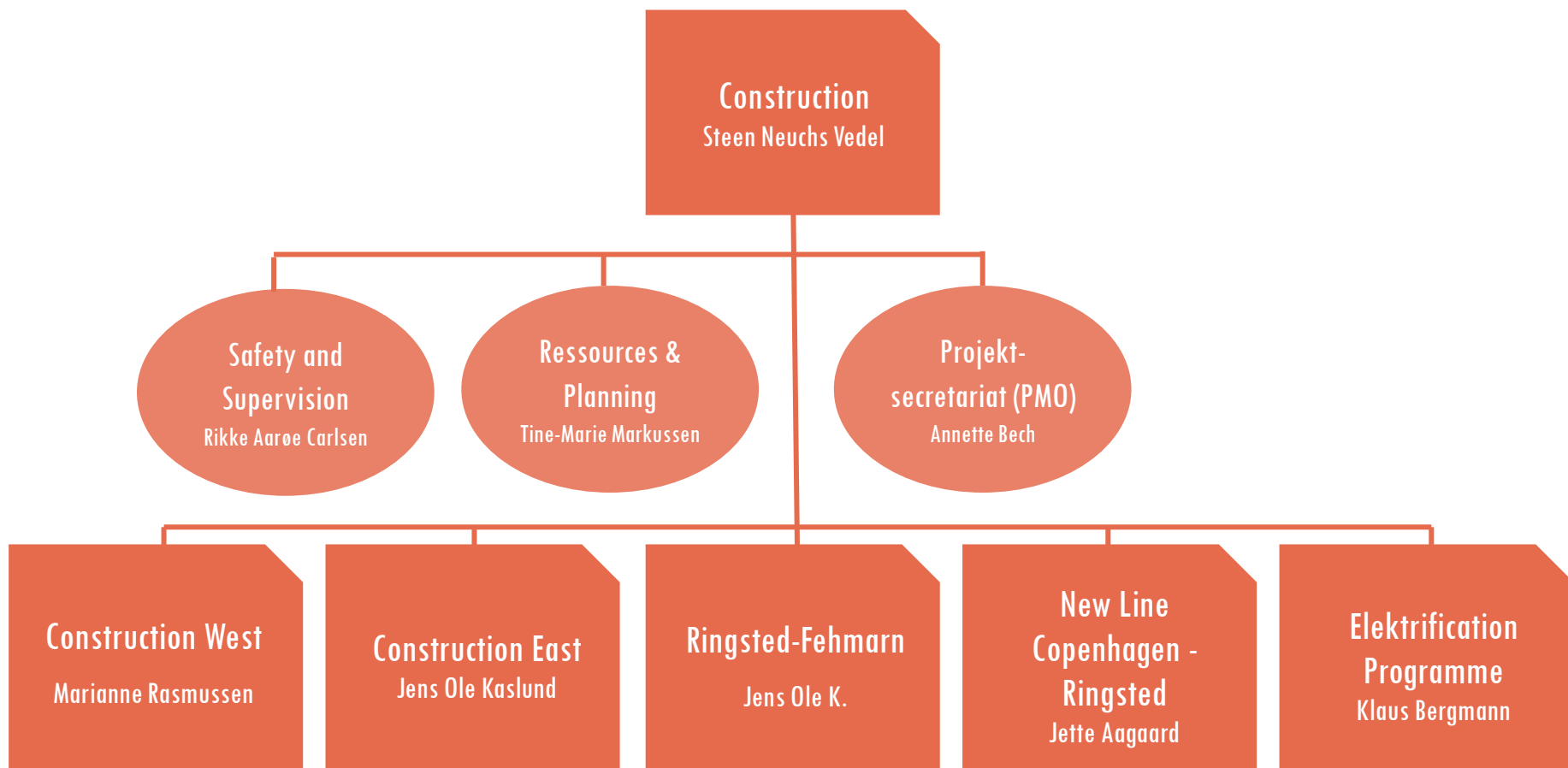
# Agenda

- Welcome to Banedanmark – Project director  
Jens Ole Kaslund
- Presentation of projects 2018-2020 – Project director  
Jens Ole Kaslund and Assistant director Marianne Rasmussen
- Meet the projects and the project managers
- Introduction to Banedanmark for prospective suppliers  
Assistant director – Nina Uldal

# Banedanmark's organisation



# Construction Division



# Construction Division

## **A division with in Banedanmark (Rail Net Denmark)**

- We are responsible for planning, managing and implementing fund projects, renewal projects and major construction projects on the Danish rail net.
- We provide high expertise within the areas of tracks, bridges, signaling, traction and rail safety.
- We are goal-oriented and professional in our efforts to efficiently complete projects and ensure that our infrastructure always meets the high regularity and safety requirements it is subjected to.

# Projects 2018

## Eastern Denmark



# F/SP/0455 Track renewal Valby - Frederikssund

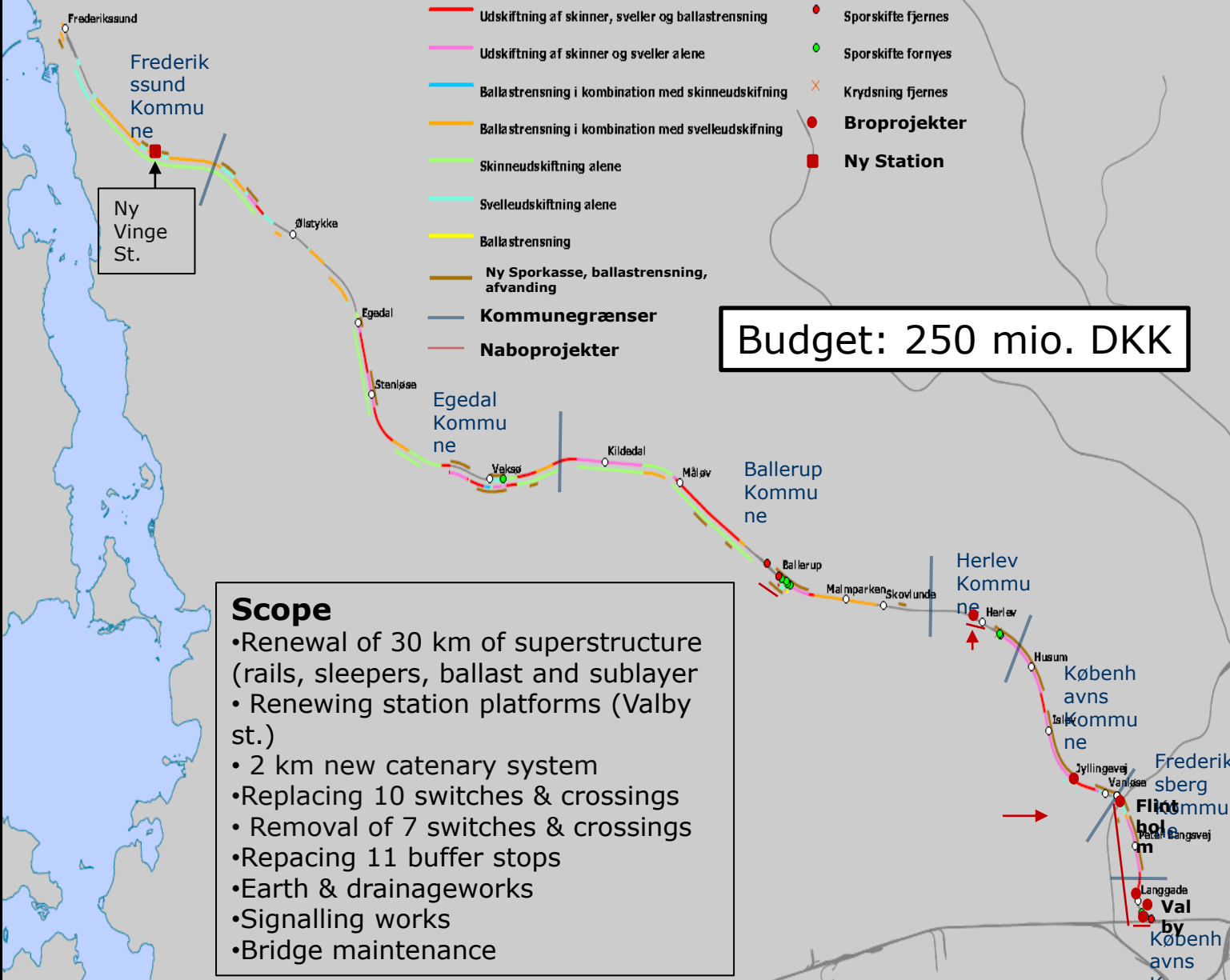
Project manager: Varun Sivapalan vasi@bane.dk

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# Sporfornyelse Valby - Frederikssund, 2018

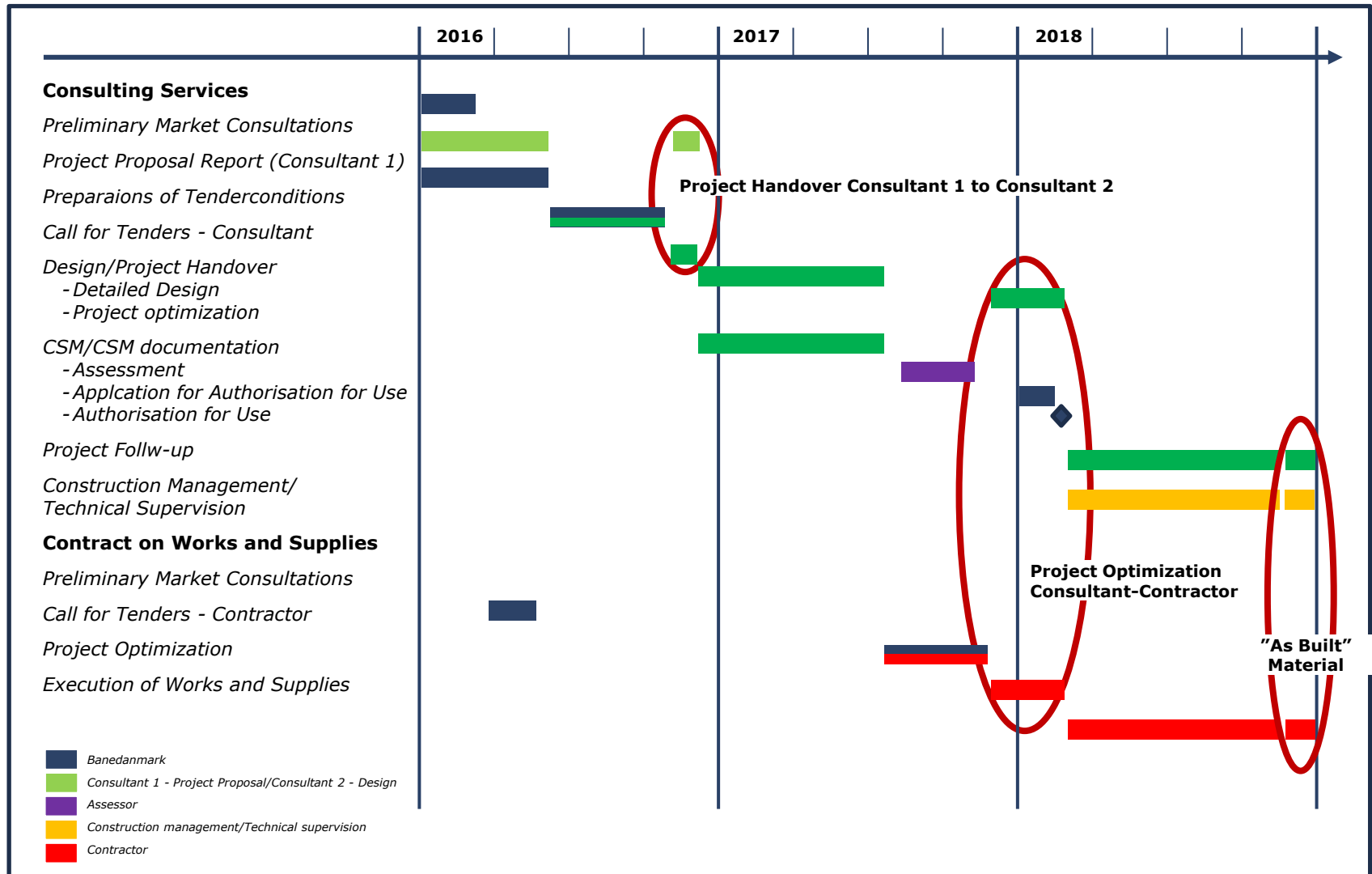
0 0,75 1,5 3 Kilometers



**Budget: 250 mio. DKK**

- Scope**
- Renewal of 30 km of superstructure (rails, sleepers, ballast and sublayer)
  - Renewing station platforms (Valby st.)
  - 2 km new catenary system
  - Replacing 10 switches & crossings
  - Removal of 7 switches & crossings
  - Replacing 11 buffer stops
  - Earth & drainageworks
  - Signalling works
  - Bridge maintenance

# 2. Project Timetable



# FREDERIKSSUNDSBANEN

## Tenders

E0 - Bridges

i-SIGNAL -> i-SIGNAL

Track between stations

E 1 - Signalling

E 4 – Manual track renewal Valby-Ballerup

E 5 – Manual track renewal Ballerup-Frederikssund

E 3 – Valby st.

E 2 - Catenary

E 6 – Renewal of superstructure



# Roskilde-Kalundborg.

Track renewal together with Electrification

Project manager: Michael Løgstrup [mlst@bane.dk](mailto:mlst@bane.dk)

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# Roskilde - Holbæk

## Track renewal together with Electrification Roskilde-Kalundborg

- Combined renewal project with EP
  - Roskilde-Holbæk only EP (lowering of track)
  - Types of works incl. lowering of track, switches & crossings, track renewal, renewal of sleepers and ballast and sub layer
  - Stretch divided in up to 22 different worksites, along the hole stretch
- 
- Timetable is 8-12 weeks beginning in august 2018
- 
1. Vipperød-Holbæk 8 weeks
  2. Roskilde-Vipperød 12 weeks

# Roskilde-Kalundborg

## Total Scope

- 2.8 km renewal sleepers
- 4.2 km renewal ballast and sub layer
- 1.2 km. new track including ballast and sub layer
- Remolding ditches 1.5 km
- Re-design Kalundborg station incl.
  - o 14 switches & crosses.
  - o 2 buffer stops.
  - o Drainage
  
- lowering of track under 12 bridges (due to EP)

Budget: 250 mio. DKK



# Kalundborg Øst, New station east of Kalundborg

Project manager: Britt Tronier [brtr@bane.dk](mailto:brtr@bane.dk)

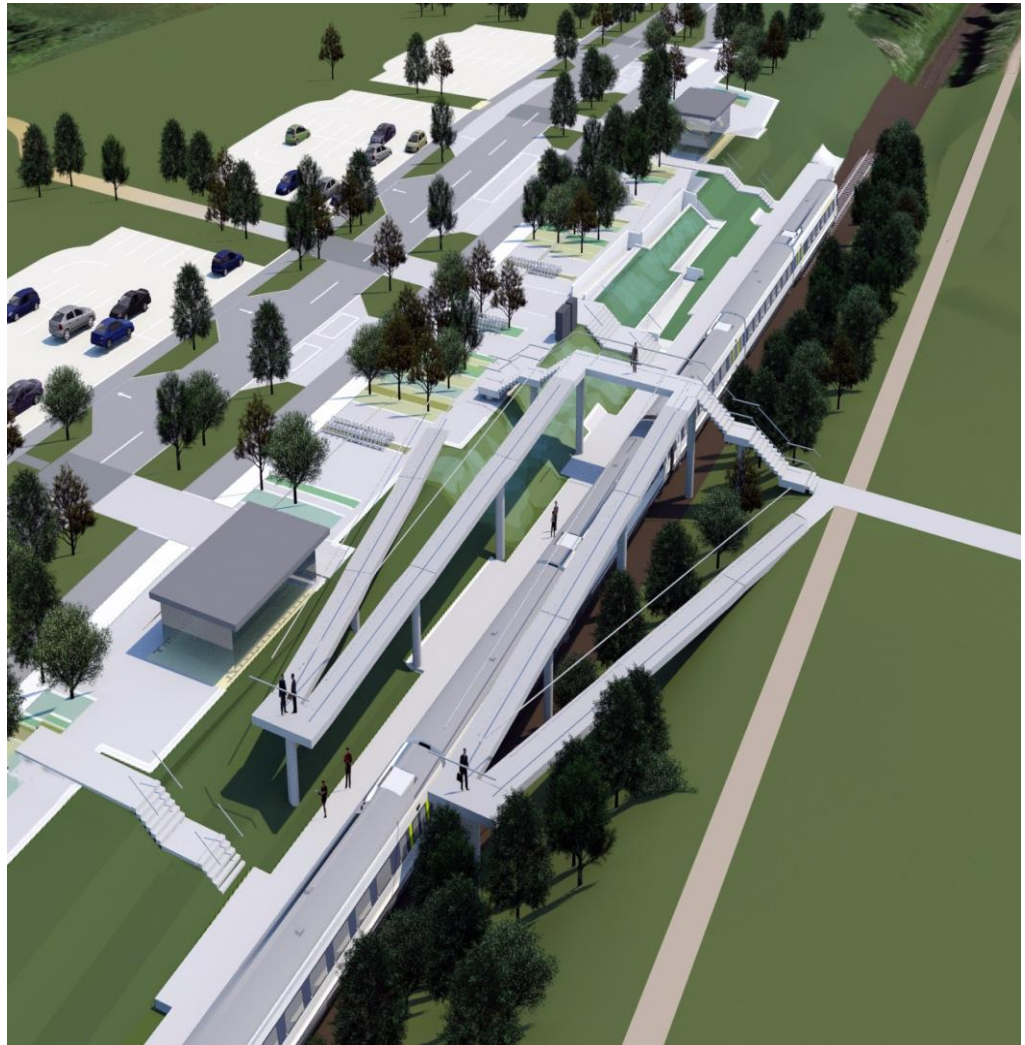
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# Kalundborg Øst, New station East of Kalundborg

The new Station Kalundborg Øst will be positioned east of Kalundborg and it will provide access to infrastructure to the district around it, including the employees working at Novo and the new city area that Kalundborg is planning to build around the new station.

This photo gives an overview of the new station



# Kalundborg Øst, New station East of Kalundborg

The project consists of a platform at one side, two ramps on each side of the tracks and a bridge combining the two ramps.

The detailed design and the tender material will be finished in Q4 2017. The execution is expected to be during 2018, combined with the track renewal project Holbæk – Kalundborg.



# Projects 2019



A photograph of railway tracks stretching into the distance. Overhead power lines and signal lights are visible. The signal lights are green, indicating a clear path. The tracks are flanked by green trees and bushes.

# NFSP 0467 – Track renewal Høje Taastrup Station – Roskilde Station

Project manager: Tom Møller Rasmussen [tmr@bane.dk](mailto:tmr@bane.dk)

**banedanmark**



# Project presentation

Line: regional line TIB 1, 3. and 4. mainline

Length: app. 10 km pr. track

Station with works: Høje Tåstrup

Year of execution: 2019

Method of works: automatic track renewal

Budget: +250 mio. DKK

# Scope

Renewal of:

New super structure on the whole stretch

Drainage on the whole stretch between 2. and 3. main line

12 switches – most of which are at Høje Tåstrup Station

Derived works interlocking and adjustment of catenary system



# NF/SP/0468 Track renewal Ringsted-Korsør

Project manager: Christoffer Bogh [chbo@bane.dk](mailto:chbo@bane.dk)

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# Track renewal between Ringsted-Korsør

Estimated project cost; 600 mio. DKK.

- New track: 22,5 km
- New sleepers: 35,8 km
- Ballast cleaning: 51,1 km
- New sub layer: 32,2 km
- New switches: 33 (Slagelse, Sorø, Forlev og Fjennerslev)
- Removal of switches: 23 (Slagelse)
- New track layout in Slagelse which eliminate maintenance cost and improve traffic
- Drainage: 3,3 km.
- Track lowering on 8 different locations due to limited catenary space
- Earth issues, Tjæreby og Forlev
- Interlocking and catenary works due to track renewal



# NF/KS/0121 Renewal of the catenary system on the Urban DC-Rail of Copenhagen

Project manager: Lars Thomsen [ltho@bane.dk](mailto:ltho@bane.dk)

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# Renewal of the catenary system on the Urban DC-Rail of Copenhagen

- 1:1 replacement of the catenary system between Østerport and Holte.
- The project includes replacement of around 700 poles and masts, wires etc.
- Derived works; equally bonding and power supply cables
- The work is planned to be done in mostly trainfree intervals of 4 hour duration during the night.
- Starting from Holte to Østerport
- Budget: 100 mio. DKK

## Time schedule

- Project currently in detailed design phase.
- Tender for contract will be announced Q1 2018.
- Companies on the BDK qualification list will be invited
- Execution phase will start Q3 2018 and end Q4 2019



## Favrholm, New station South of Hillerød

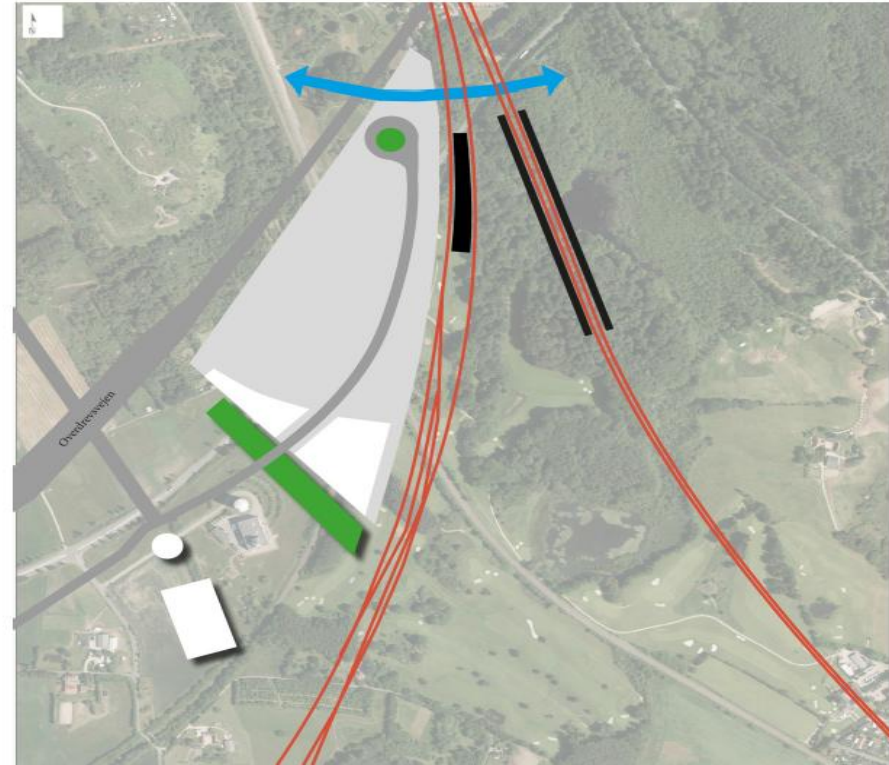
Project manager: Ane Gro Jørgensen [angf@bane.dk](mailto:angf@bane.dk)

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# Favrholm, New station South of Hillerød

The new Station Favrholm will be positioned to service the district around it, including the new Hospital of Nordsjælland (North Zealand). It will improve the passengers' ability to transfer between two train systems, Frederiksværkbanen and S-banen, and, in the so-called option, renders it possible to increase train operation on Frederiksværkbanen in connection to the project upgrading Hillerød Station.



The project basically consists of the Main Proposal and the Option. The two parts can be built simultaneously or in stages where the Main Proposal is built first, followed by the Option. Moreover, the Option can either be built in two stages with first one and then two reversal tracks.

# The Main Proposal



The main proposal includes establishing an interchange station for S-banen and Frederiksværkbanen; consisting of two new side platforms at the existing S-bane as well as one new platform at Frederiksværkbanen

Budget: 140 mio. DKK

The Main Proposal furthermore entails the establishment of access routes and a forecourt with, amongst other things, commuter parking.

Finally, the main proposal includes a proposal for compensating facilities for Hillerød Golf Club, whose facilities will be affected by the building of the Station.

# Projects 2020





NFSP 0467 – Track renewal Copenhagen Central  
Station – Høje Tåstrup Station

Project manager: Mette Stender [mems@bane.dk](mailto:mems@bane.dk)

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# Project presentation

Line: regional line TIB 1, 1. and 2. main line

Length: app. 18 km pr. track

Stations with works: Copenhagen Central Station, Glostrup, Høje  
Tåstrup

Year of execution: 2020 (works on CCS likely 2019)

Method of works: manual as well as automatic track renewal

Budget: +150 mio. DKK

# Scope

Renewal of:

27 switches – of which 10 are at Copenhagen Central Station

Tracks

Sleepers

Ballast

Drainage

Stretches with new superstructure to be defined

Derived works interlocking and adjustment of catenary system

# Projects 2018

## Western Denmark



# NF/SP/0472– Track renewal Langå – Hobro

Project manager: Hanne Svendsen [hhe@bane.dk](mailto:hhe@bane.dk)

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## Facts:

Line: TIB 24

Year of execution: 2018

Budget: 200 mio. DKK

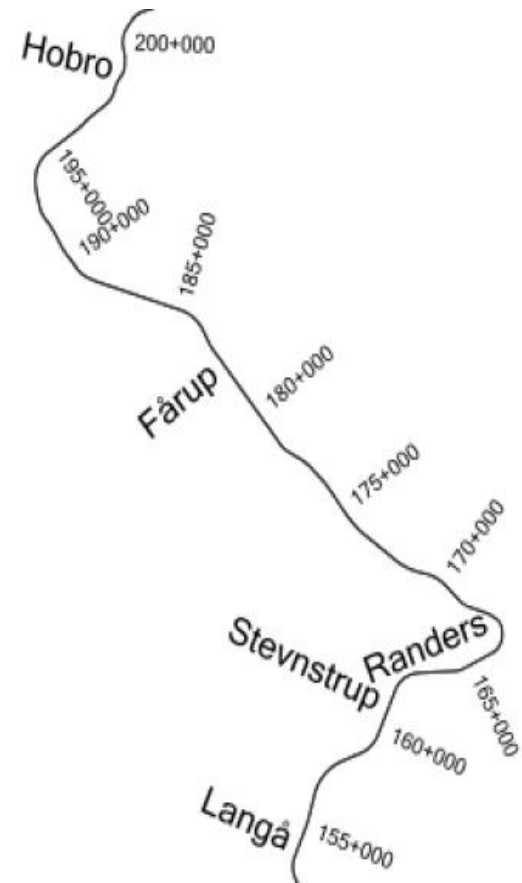
## Description:

The project includes track and switches renewal and the works on drainage, platforms, interlocking and high voltage derived from this.

Beside the tracks between stations, tasks on the stations Stevnstrup, Randers, Fårup and Hobro are also part of the scope of the project.

The project will be divided into two contracts:

- 1: track/drainage/earth works/platforms
- 2: Interlocking and high voltage



## **Main activities:**

### **Tender track works:**

- Replacement of 26 switches
- Closure of 12 switches
- Rail track replacement: app. 77 km
- Replacement of sleepers: app. 72 km
- Ballast cleaning: app. 82 km
- New sub layer: app. 12 km mainly at stations
- New platforms at Randers st. and Hobro st.
- Drainage works

Option: Maintenance work at some bridges

### **Sikringsudbud:**

- Interlocking works connecting a new interlocking cabin Randers (New interlocking cabin will be provided by the client)
- Interlocking works derived from track replacement
- Removal of switch number I at Stevnstrup (interlocking System)
- New switch heating point on all switches
- New platform lighting at Randers station



# Electrification Programme: Preparatory Works Aarhus-Lindholm

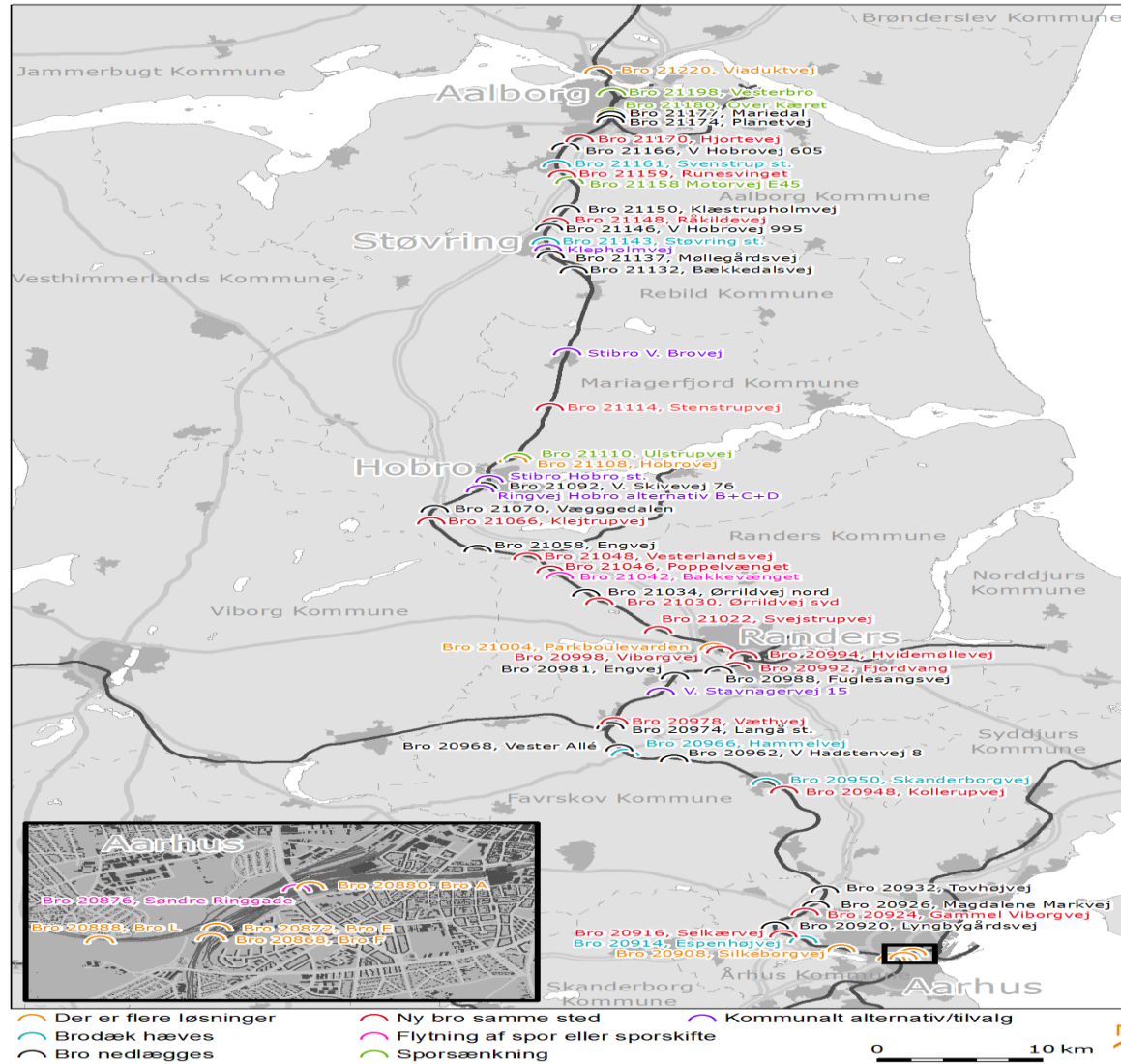
Project manager: Jens Søgaard Nielsen – [json@bane.dk](mailto:json@bane.dk)

Presented today by project manager Søren Berg Paarup

banedanmark



# EP Preparatory Works Aarhus-Lindholm



# EP Preparatory Works Aarhus-Lindholm

## Project scope:

Customization of 57 bridge sites to comply with new track clearance requirements by

- 7 bridge elevations
- 20 complete re-erectings
- 5 complete re-erectings at new positions
- 5 track lowerings
- 20 bridge decommissionings

Additional activities to accommodate future traction current are

- Earthing/bonding (BPU)
- Clear-cutting of vegetation
- Land acquisition
- Protection of Electromagnetic sensitive installations

The project is divided in 8 bridge contracts with execution in 2018, 2019, 2020 og 2021

The project is expected to be politically adopted mid 2017

# Projects 2019



# Track renewal Fyn 2019

Project manager: Per Henriksen phen@bane.dk

**banedanmark**



# Track renewal Fyn 2019

1. Renewal of sleepers: 22,7 km
2. Ballast cleaning: 39,5 km, including 9,0 km renewal of sub layer.
3. Replacement of 2 switches
4. Associated works regarding catenary, interlocking and ATC.
5. Draining works : 1,3 km
6. Replacement of track cabel 3,5 km

# Track renewal Fyn 2019

## Description:

- A typical renewal project, the work is mainly done, while we are operating traffic in the neighboring track. A smaller part of the work is placed west of Odense, but the majority of the work is located between Odense and Nyborg.
- Point 1. and 2 might be part of a total tender for the big track renewal machinery, including several of the 2019 projects.

# Projects 2020





# NF/SP/0473– Track renewal Hobro – Aalborg

Project manager: Hanne Svendsen [hhe@bane.dk](mailto:hhe@bane.dk)

banedanmark



## Facts:

Line: TIB 24

Year of execution: 2020

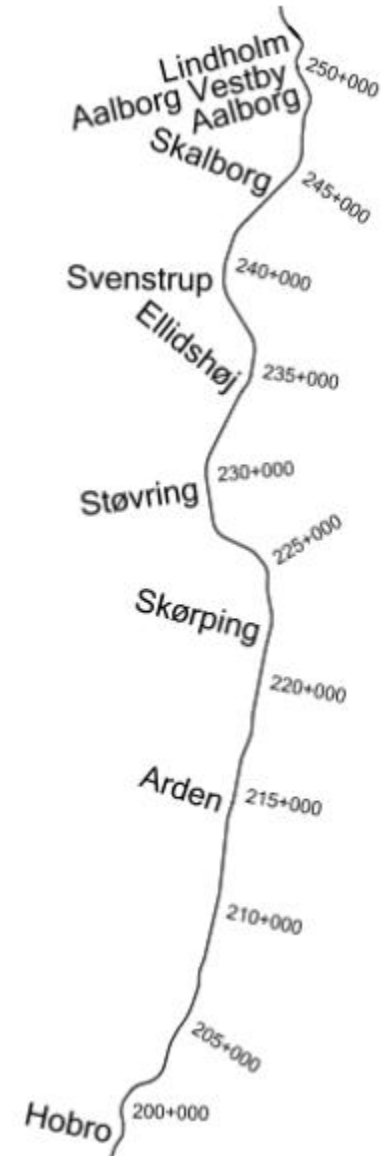
Budget: 200 mio. DKK

## Description:

The project includes track and switches renewal and works on dams, drainage and high voltage derived from this.

Beside the tracks between stations, tasks on the stations Skørping and Aalborg are also part of the scope of the project.

The interlocking work will be provided by the client



## **Main activities:**

- Replacement of 44 switches
- Closure of 27 switches
- Adjustment of the switch heating point
- Rail track replacement: app. 51 km
- Replacement of sleepers: app. 65 km
- Ballast cleaning: app. 102 km including some renewal of the sub layer
- Work on platforms
- Drainage works
- Work on dams



# Track renewal Fredericia – Aarhus 2020

Project manager: Per Henriksen phen@bane.dk

banedanmark



## Track renewal Fredericia – Aarhus 2020

1. Renewal of rails : 45,1 km
2. Renewal of sleepers: 16,2 km
3. Ballast cleaning: 64,6 km, including 10,0 km renewal of sub layer.
4. No. of switches : 29
5. Draining works : 10 km
6. Associated works regarding catenary, interlocking and ATC.

## Track renewal Fredericia – Aarhus 2020

### Description:

- A renewal project, still in the early stages.
- This project covers works of the first 76, out of 106 km of the tracks between Fredericia and Aarhus and is working closely together with our bridge department, to prepare the tracks for the EP and SP programs.



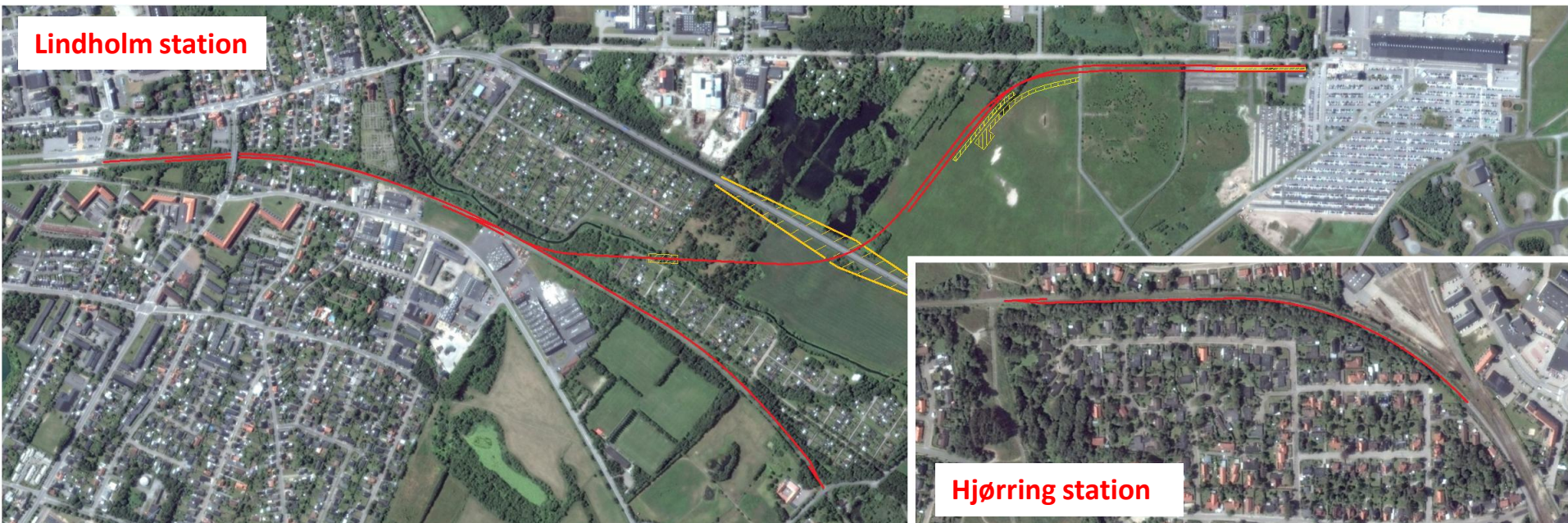
## New line to Aalborg Airport and Double tracks in Lindholm & Hjørring

Project manager: Helene Hundstrup Granhøj [hel@bane.dk](mailto:hel@bane.dk)

**banedanmark**



# New line to Aalborg Airport and Double tracks in Lindholm & Hjørring



## Project scope:

App. 5 km new track on dams

7 Switches

3 track stoppers

Track lowering of 1 meter below Viaduktvej

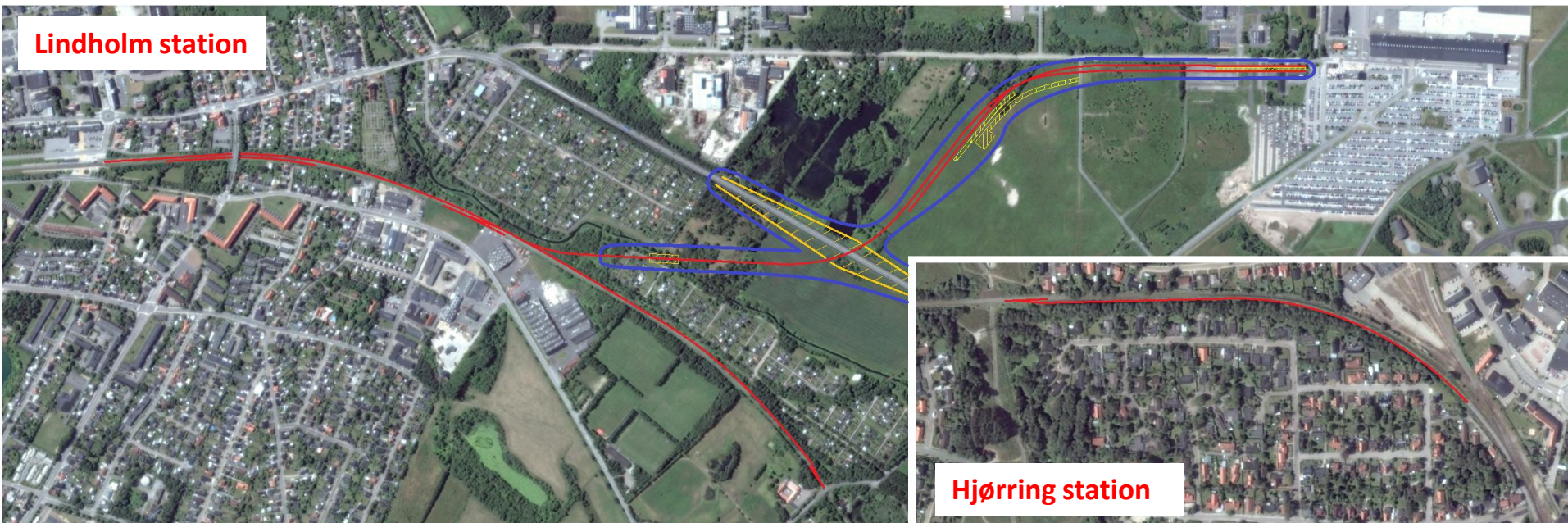
New overpassing over Lindholm Å

New underpassing under Thistedvej

New station at Aalborg Airport

New restorative maintenance facilities with grate platform

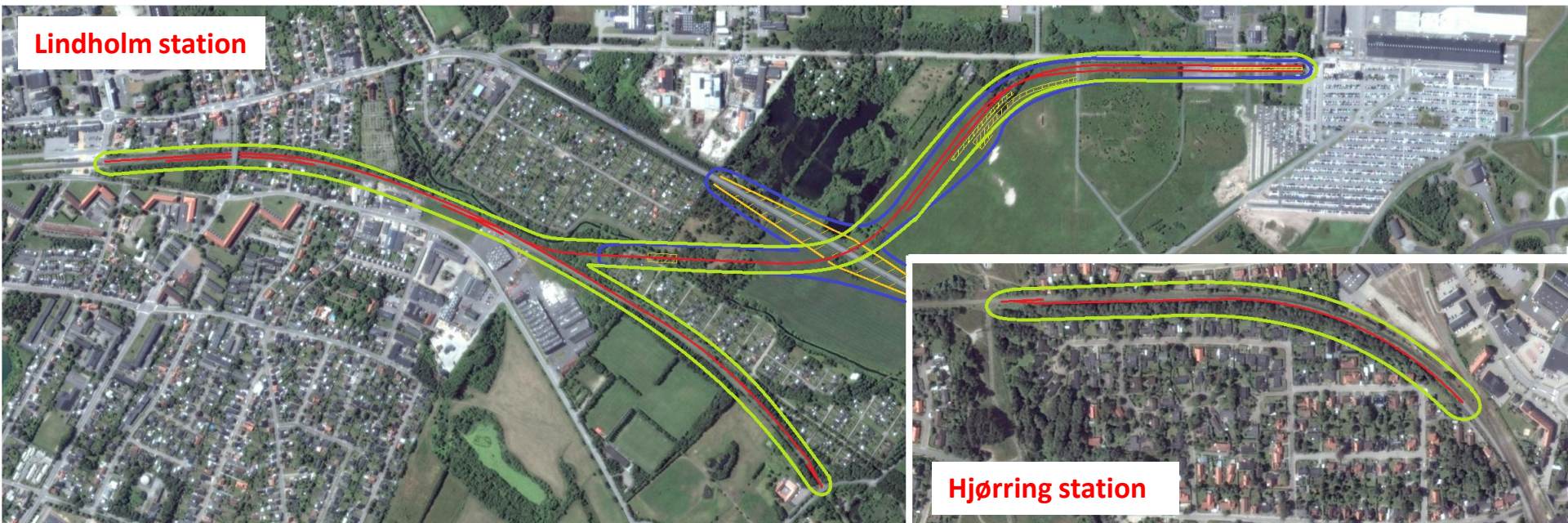
# New line to Aalborg Airport and Double tracks in Lindholm & Hjørring



**Turnkey contract for:  
earth work, drainage and constructions.**

**Execution period: early 2019 – medio 2020**

# New line to Aalborg Airport and Double tracks in Lindholm & Hjørring



**Main contract for:  
Track work, earth work and drainage.**

**Execution period: early 2020 – Q3 2020**



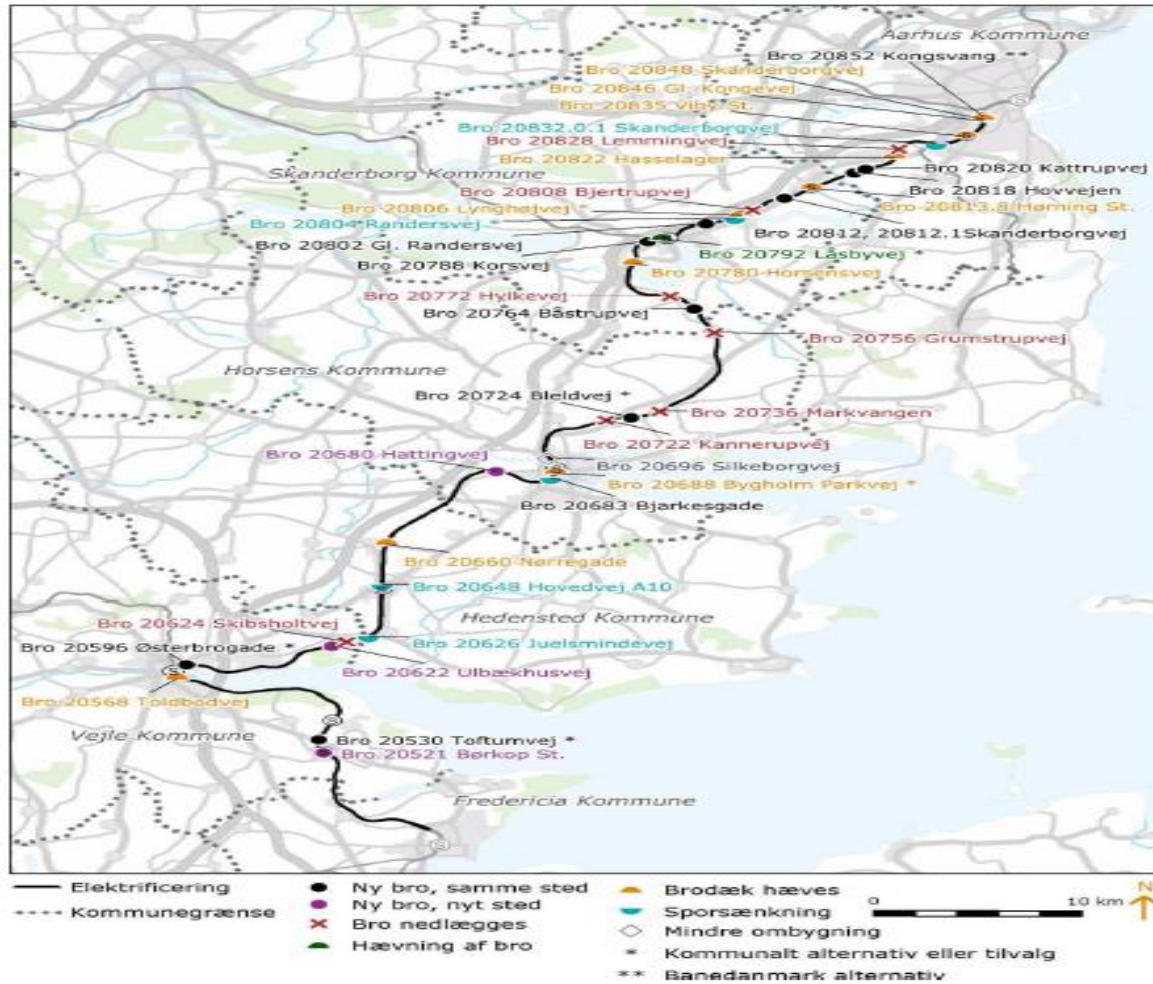
# Electrification Programme: Preparatory works Fredericia-Aarhus

Project manager: Søren Berg Paarup – [spra@bane.dk](mailto:spra@bane.dk)

banedanmark



# EP Preparatory works Fredericia-Aarhus



## EP Preparatory works Fredericia-Aarhus

### Project scope:

Customization of 38 bridge sites -

- Bridge elevations
- Complete re-erectments
- Complete re-erectments at new positions
- Track lowerings
- Decommissioning

On the whole stretch the following is to be executed

- Earthing/bonding (BPU)
- Clear cutting of vegetation
- Land acquisition
- Electric traction easement

The project is divided into bridge contracts with execution in 2020 and 2021 (perhaps also in 2022)

The project is expected to be politically adopted in the second half of 2017

# Agenda

- Welcome to Banedanmark – Project director  
Jens Ole Kaslund
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Jens Ole Kaslund and Assistant director Marianne Rasmussen
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