



# New canal lock for Södertälje

18-01-2024

Jonathan Greener



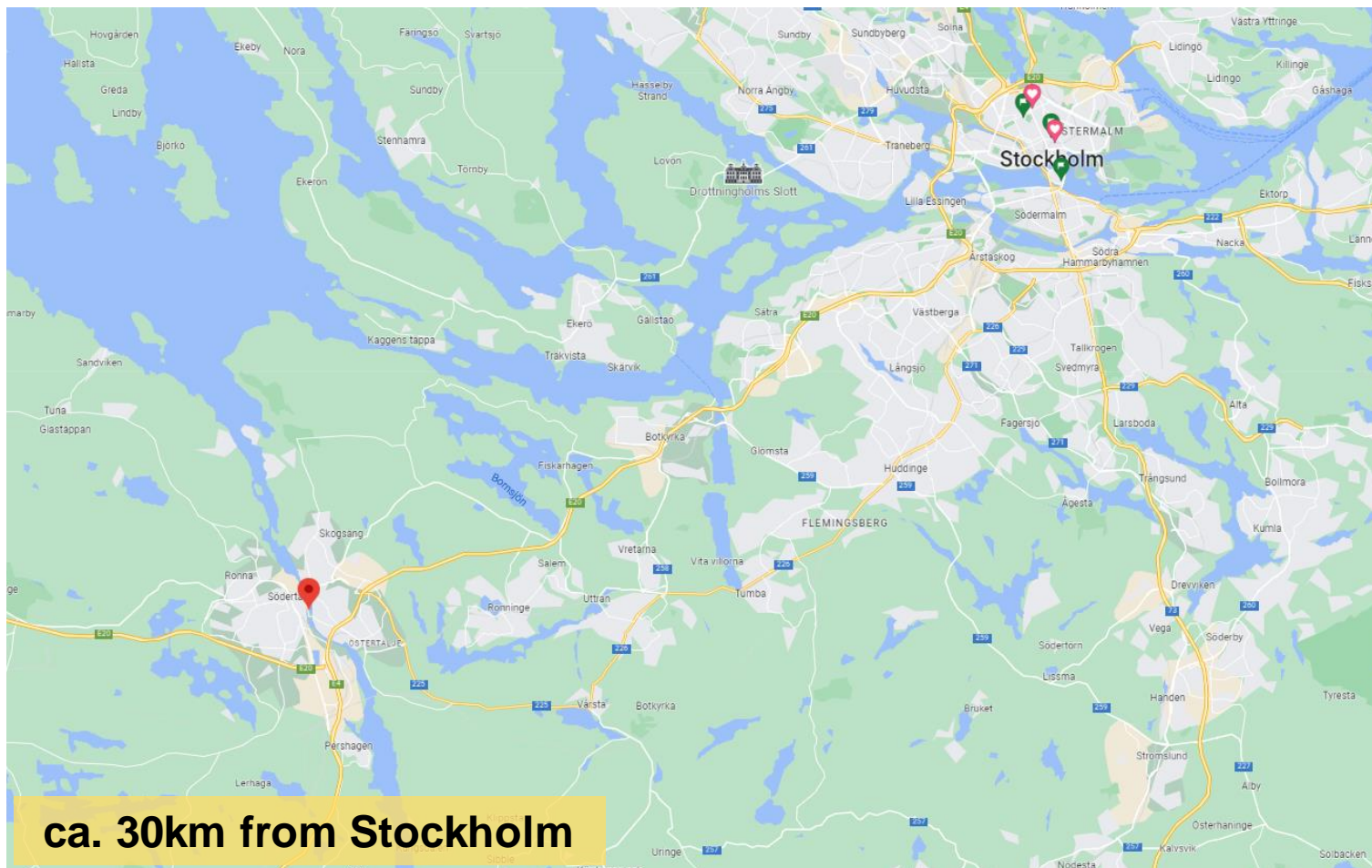
# Bigger Ships

- 100 year old lock in need of replacement
- Previous attempt by other contractor uncompleted
- New project started in 2023 by Peab, with Keller as geotechnical contractor
- Wider, longer lock
- New lock gates, new bascule bridge, replacement key walls
- Keep link open during piling operations



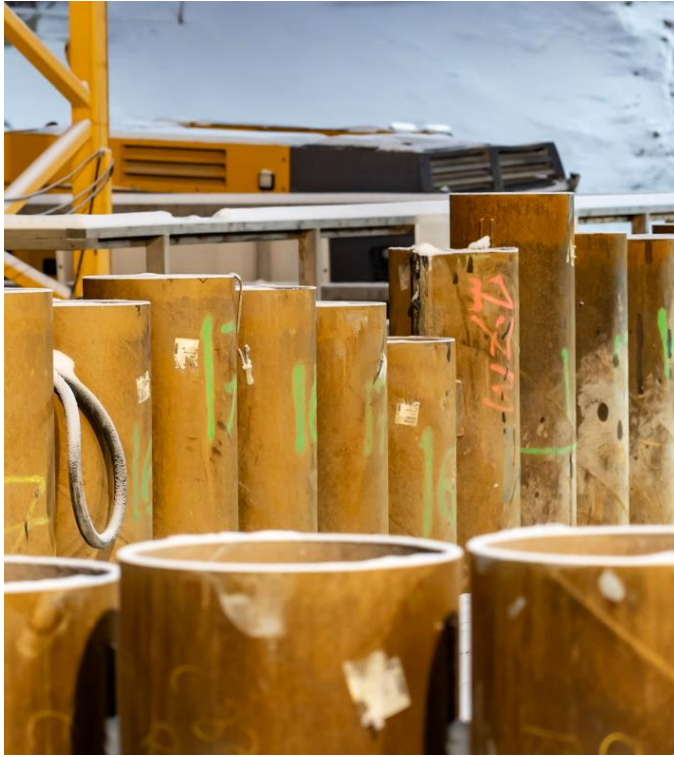


# New Lock for Södertälje



# **KELLER**

## Scope of work



### **RD piles and RD-pile wall**

~ 2 300 pcs

~ 44 500 m

Ø 323 – 1 016mm

### **Anchors (GEWI)**

~ 525 pcs (temporary and permanent)

~ 14 500 m

Ø 43 – 75 mm

### **Sheet pile wall**

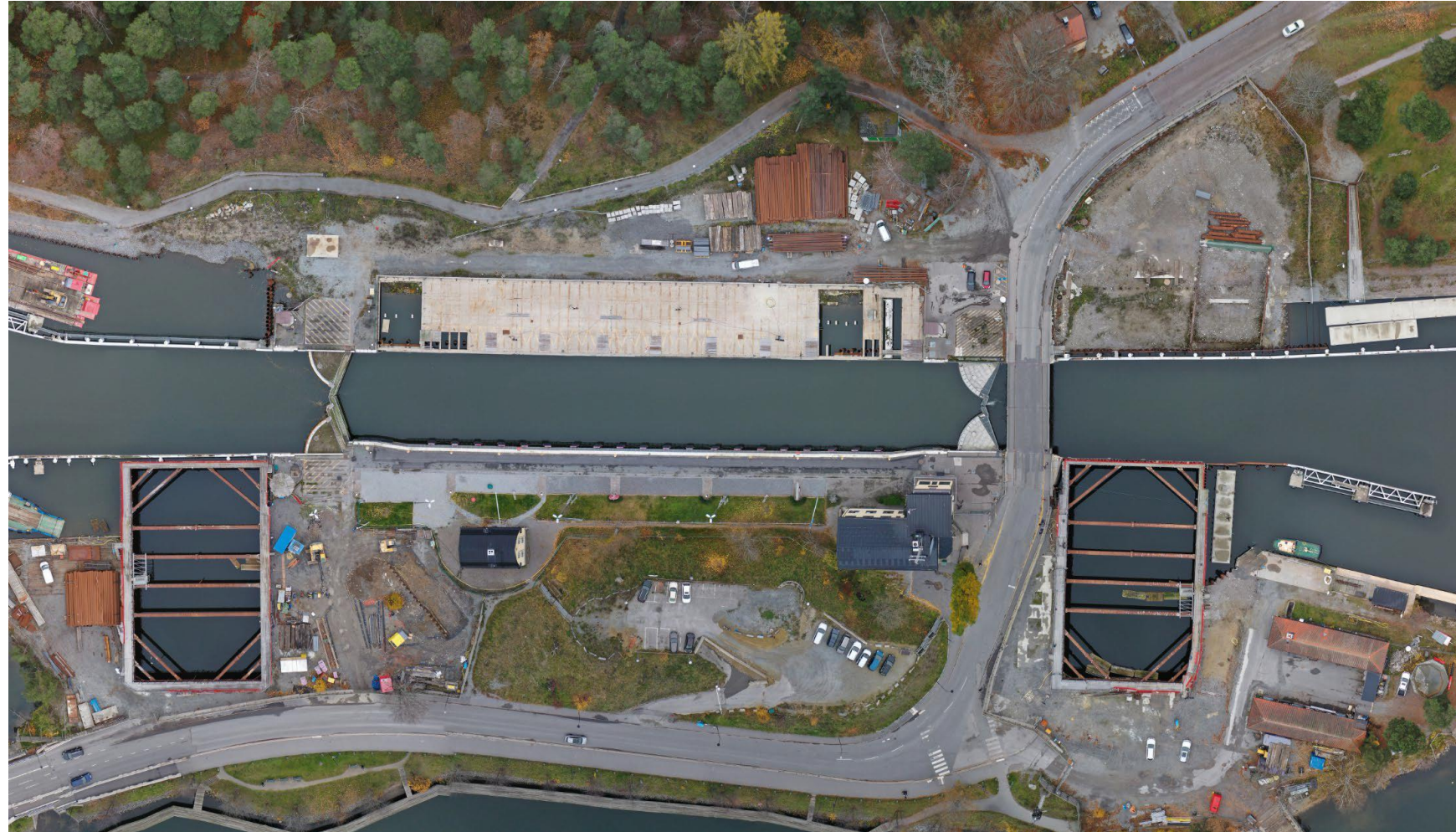
**Hammerband, struts and inclinometers**

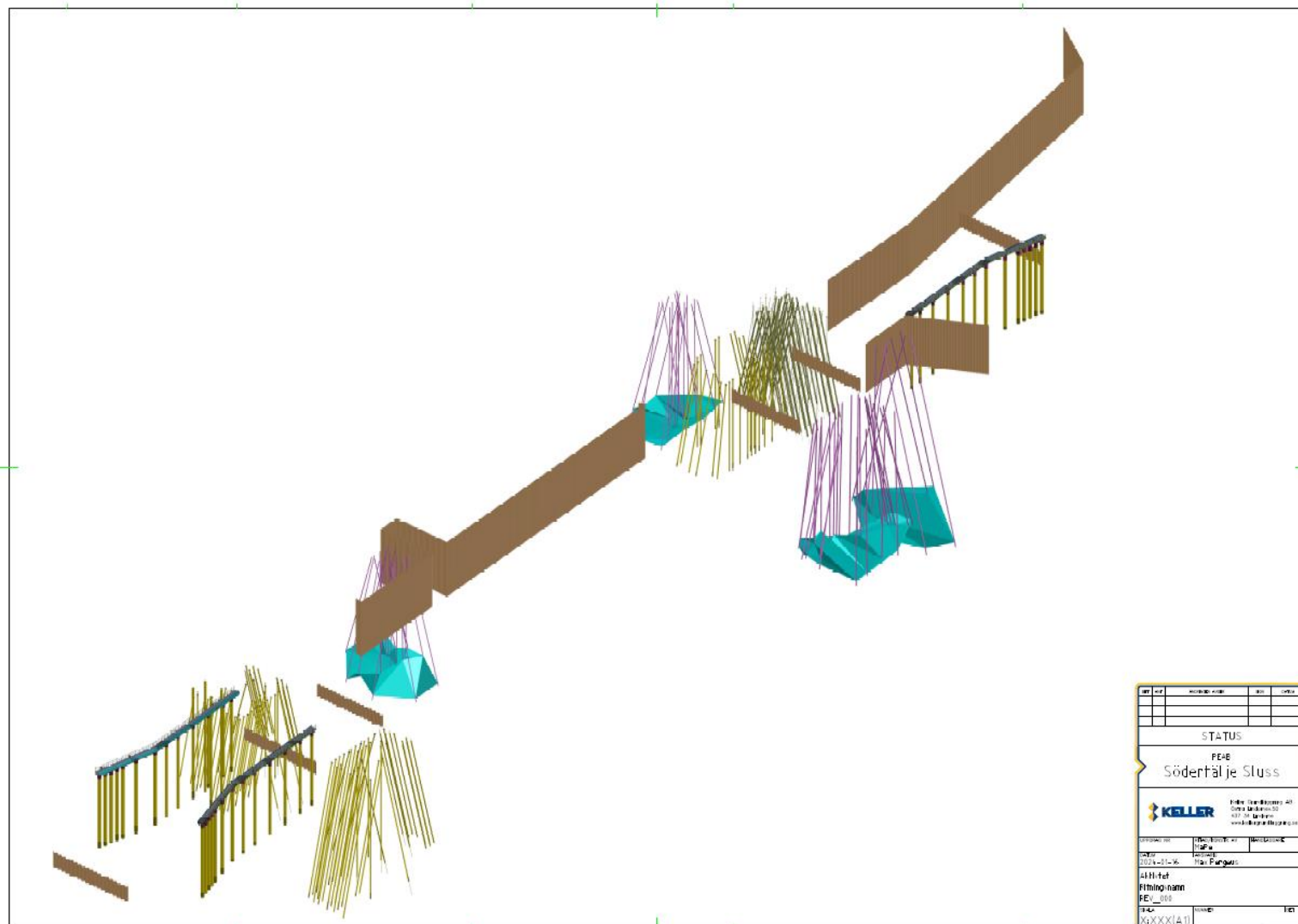
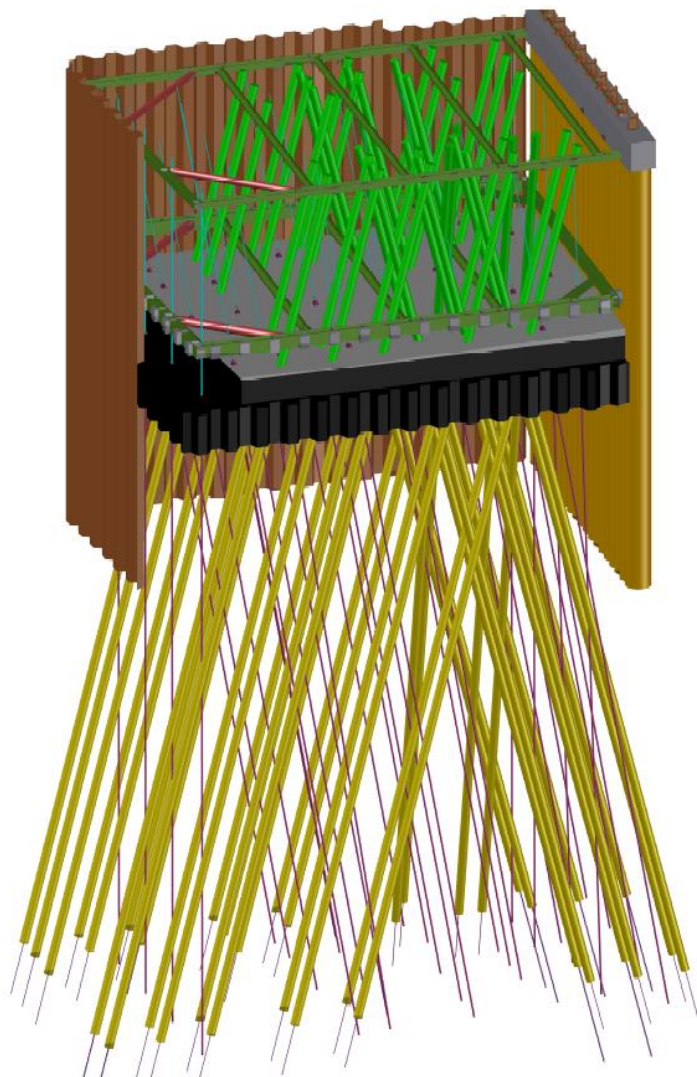


# Work areas

- 4 lock locations
- Lock walls
- Bridge pit and abutment
- North and South key walls
- Channel

19 separate 'jobs' making up the geotechnical scope









## Installing piles - small rigs

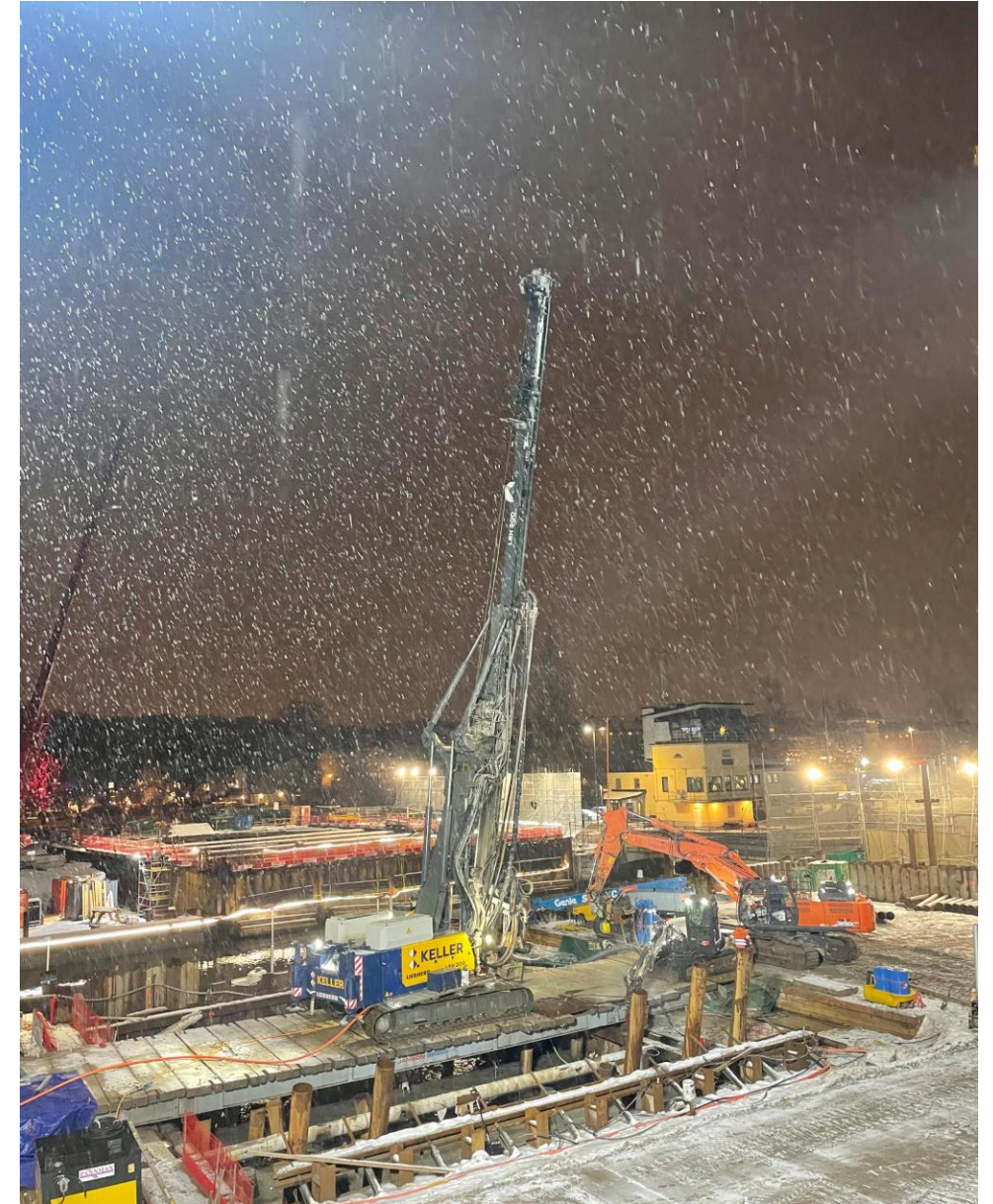
- From floating barges within existing structures
- 10m water depth
- 323mm diameter foundation piles, temporary GEWI uplift anchors, permanent DCP anchors





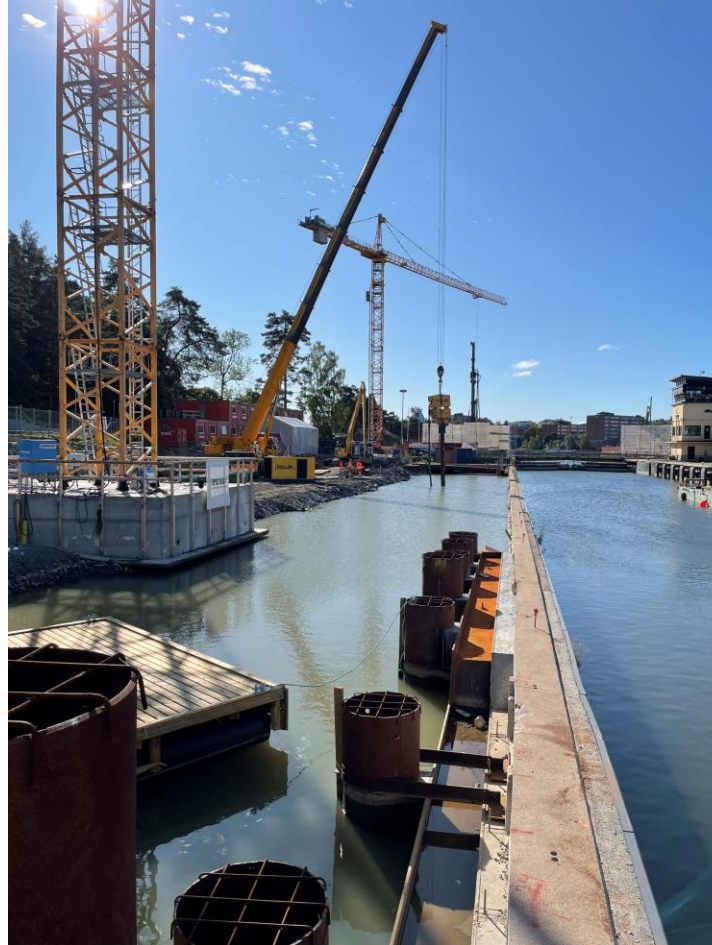
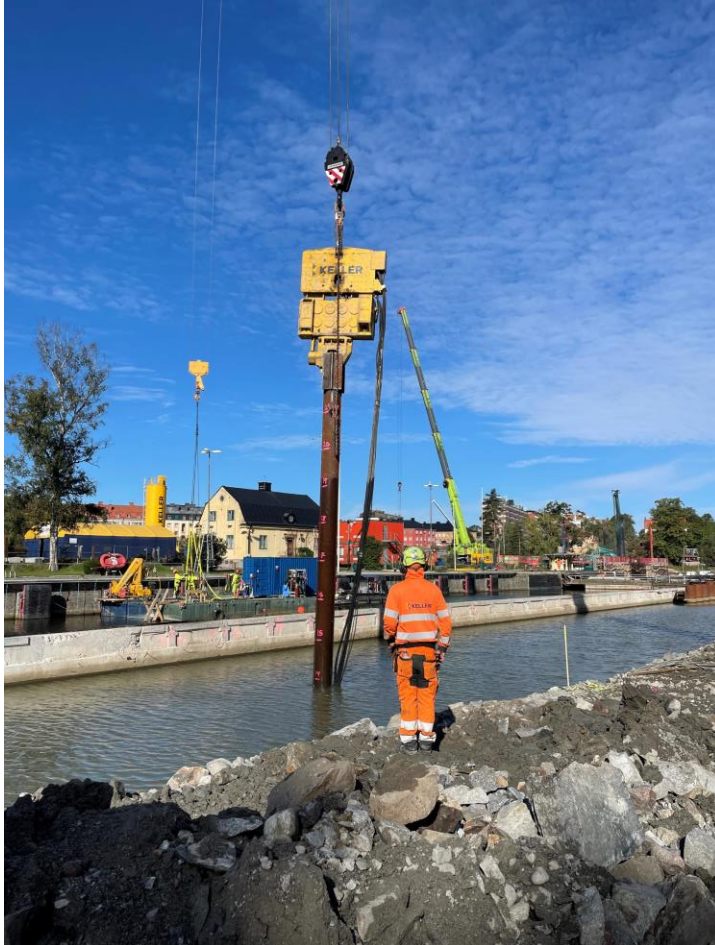
## Installing piles – larger rigs

- From a jack-up barge
- From a temporary bridge structure
- 323mm and 508mm RD pilewalls, 406mm foundation piles, 1016mm diameter Key support piles





## Installing piles – hanging vibro



- 406mm diameter RD-Pilewall



# Testing piles – PDA test with Juntann hammer



- 8 ton dropweight hammer
- 10 – 18 degrees inclination
- 406mm diameter 60m long foundation pile for new bridge
- Thanks to Juntann for their assistance





# Current situation

- 1/3 of geotechnical works completed
- Half of all geotechnical works will be undertaken in 2024
- 7 work fronts, 5 drilling rigs currently operating
- August 2025 expected completion for Keller





# Thanks

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