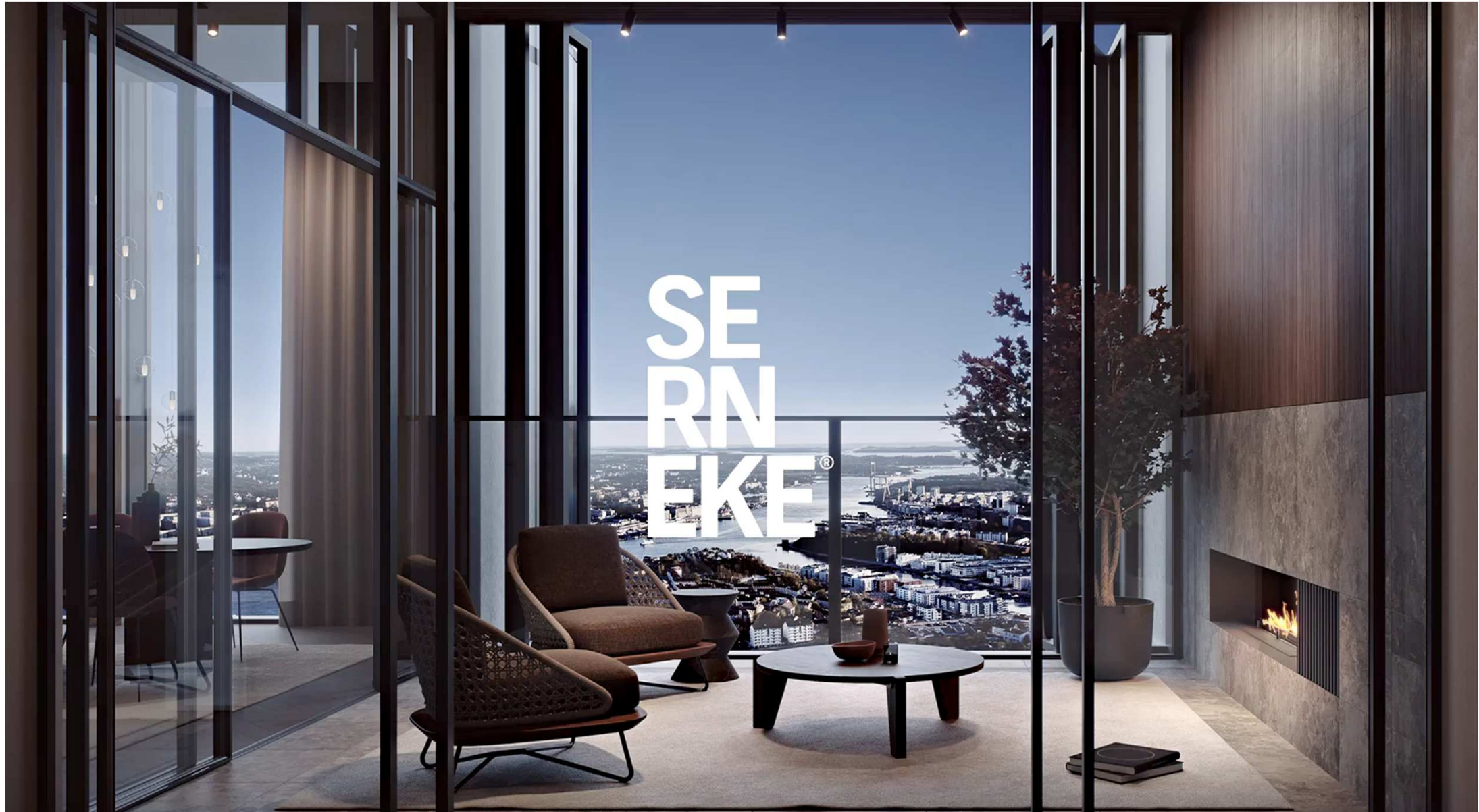


SE
RN
EKE®





Karlatornets grundläggning, en dans på rosor?

Christian Olofsson & Magnus Eckert

Serneke Anläggning AB

TOTALENTREPRENÖR

SERNEKE[®]

UNDERENTREPRENÖR



AARSLEFF

TEKNIKKONSULTER

Norconsult 

geos.

VBK

COWI



Del av
Älvstaden;
Europas största
stadsutveckling
s-projekt

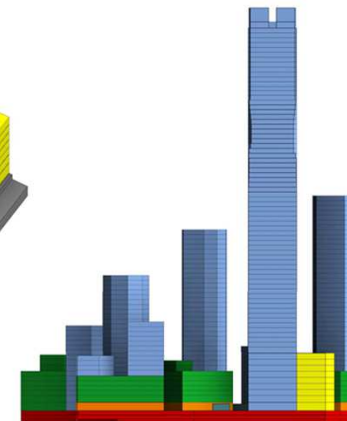
TOMT: ca 32 000 kvm
BTA: 258 300 kvm

BYGGSTART Q1
2017
FÄRDIGSTÄLLT
2020-2023



SERNEKE®

- BOSTÄDER
- KOMMERIELLT
- HOTELL
- KOMMERIELL GATUPLAN
- GARAGE





SERNEKE®

Nordens högsta bostadshus,

246 meter högt,

74 våningar ovan mark

586 lägenheter (våning 5-73)

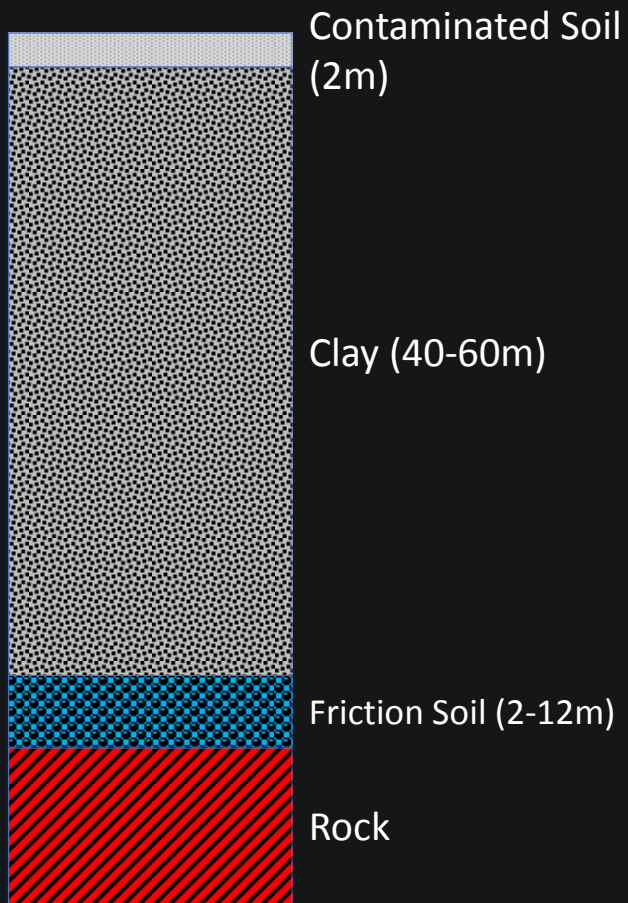
- Hotell & restaurang
- Kontor
- Gym & pool
- Skybar och utsiktsplats

Inflyttning från 2021

Arkitekt: Skidmore, Owings & Merrill



SERNEKE



Clay	
S_t :	10-30
c_u :	20-130 kPa
W_n :	50-95 %
W_L :	60-85 %

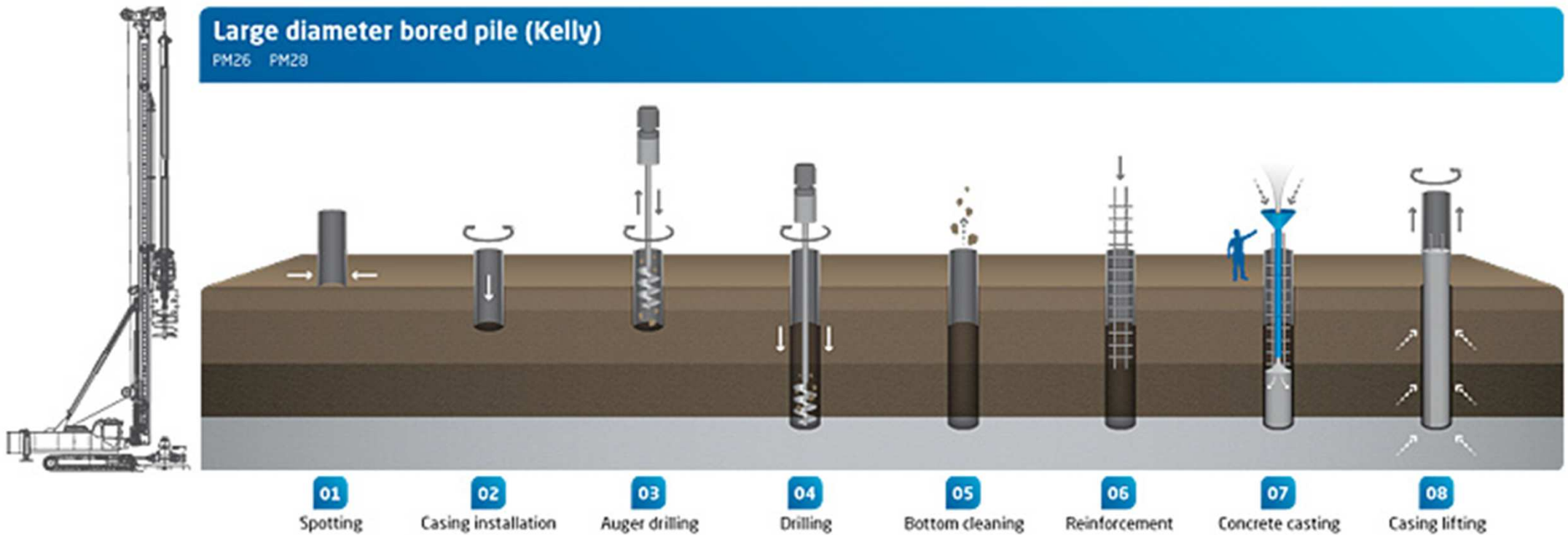
Friction Soil	
φ :	40°
Hfa:	30 blows/0,2m
GW:	Linear
Block:	5-30% (weight)

Rock	
UCS:	50-220 MPa
(Uniaxial Compressive Strength)	
DRI:	35-40
(Drilling Rate Index)	

Installationsförfarande - Grävpålar

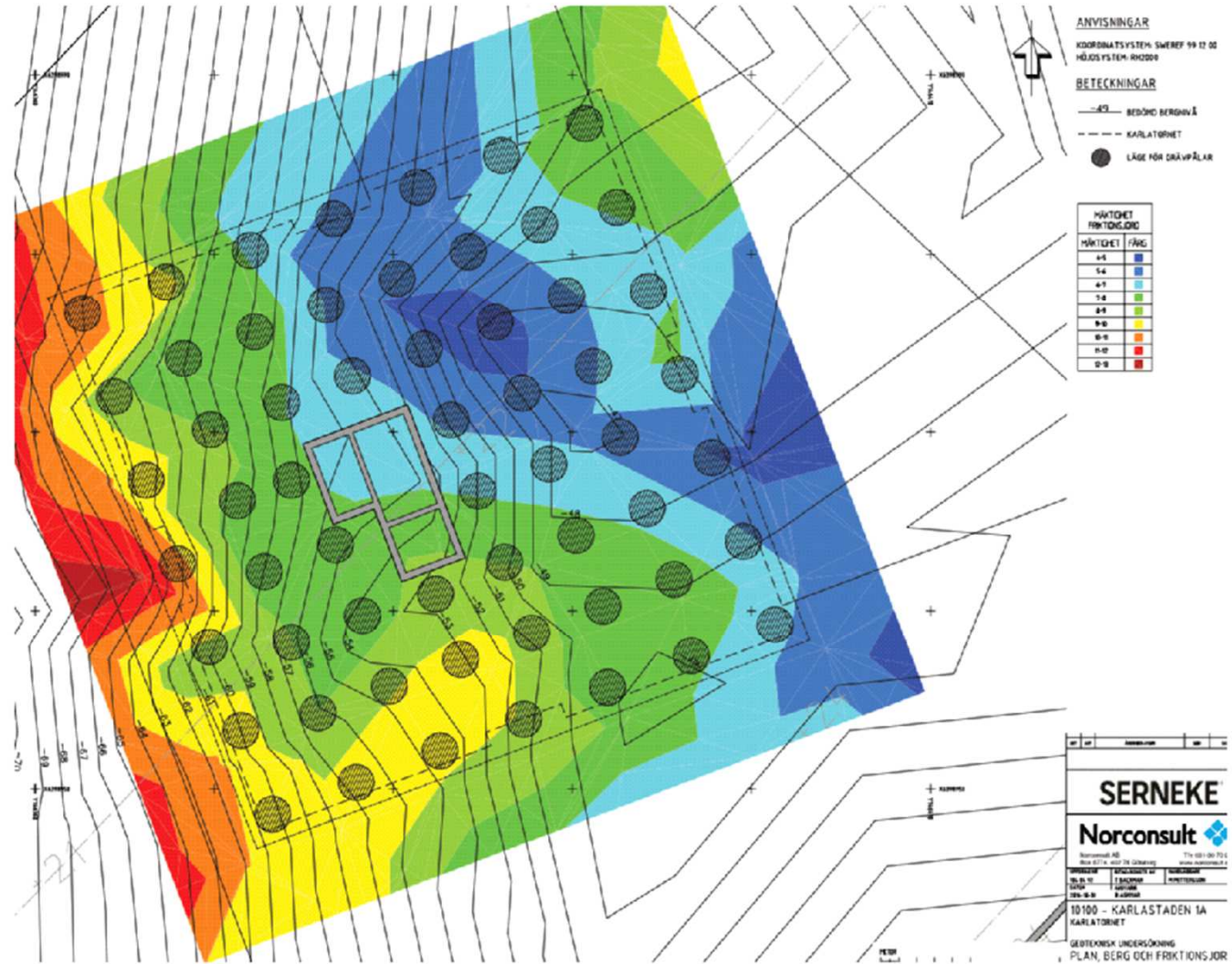
Large diameter bored pile (Kelly)

PM26 PM28



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Assessed
Rock Surface
Depth and
Overlaying
Friction Soil



Clay
Collaps of bore hole
Skin friction casing
Thickness of soil layer
Heave



Clay
Casing (temporary or permanent)
Local experiance of the "Gothenburg Clay", time, "glue"
Cased excavation
Stabilising media – slurry or water

Friction Soil
Blocks in moraine
Ground water
Thickness of soil layer

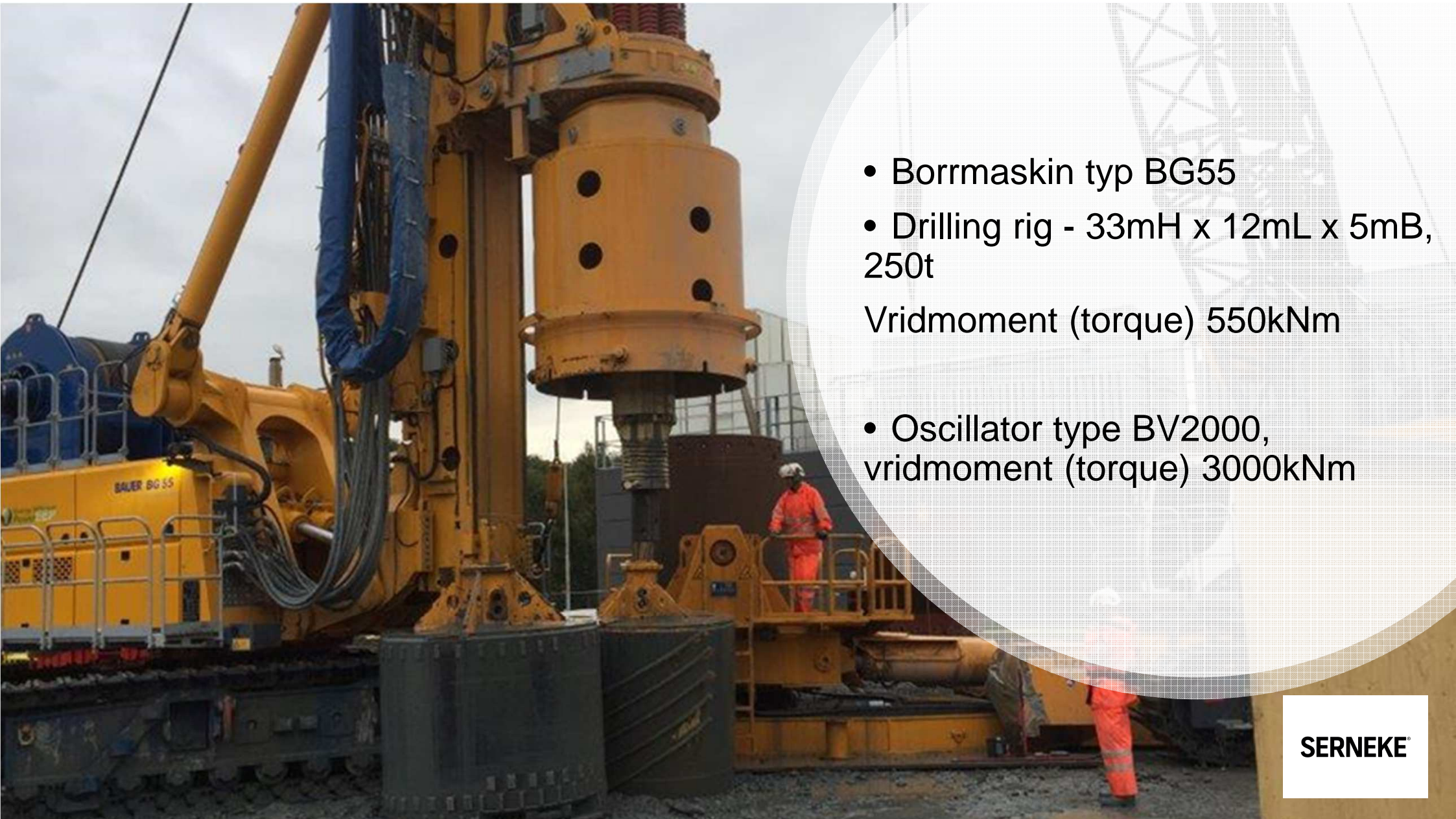


Friction Soil
Adequate equipment, operators
Stabilising media – slurry or water
Cased excavation

Rock
Hardness/DRI
Inclined surface approx 1:1
Unfavorable crack plans
Framented surface



Rock
Adequate equipment, operators
Adequate equipment, operators
Drilling depths into rock
Drilling depths



- Borrmaskin typ BG55
- Drilling rig - 33mH x 12mL x 5mB, 250t

Vridmoment (torque) 550kNm

- Oscillator type BV2000, vridmoment (torque) 3000kNm

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Borring och schakt



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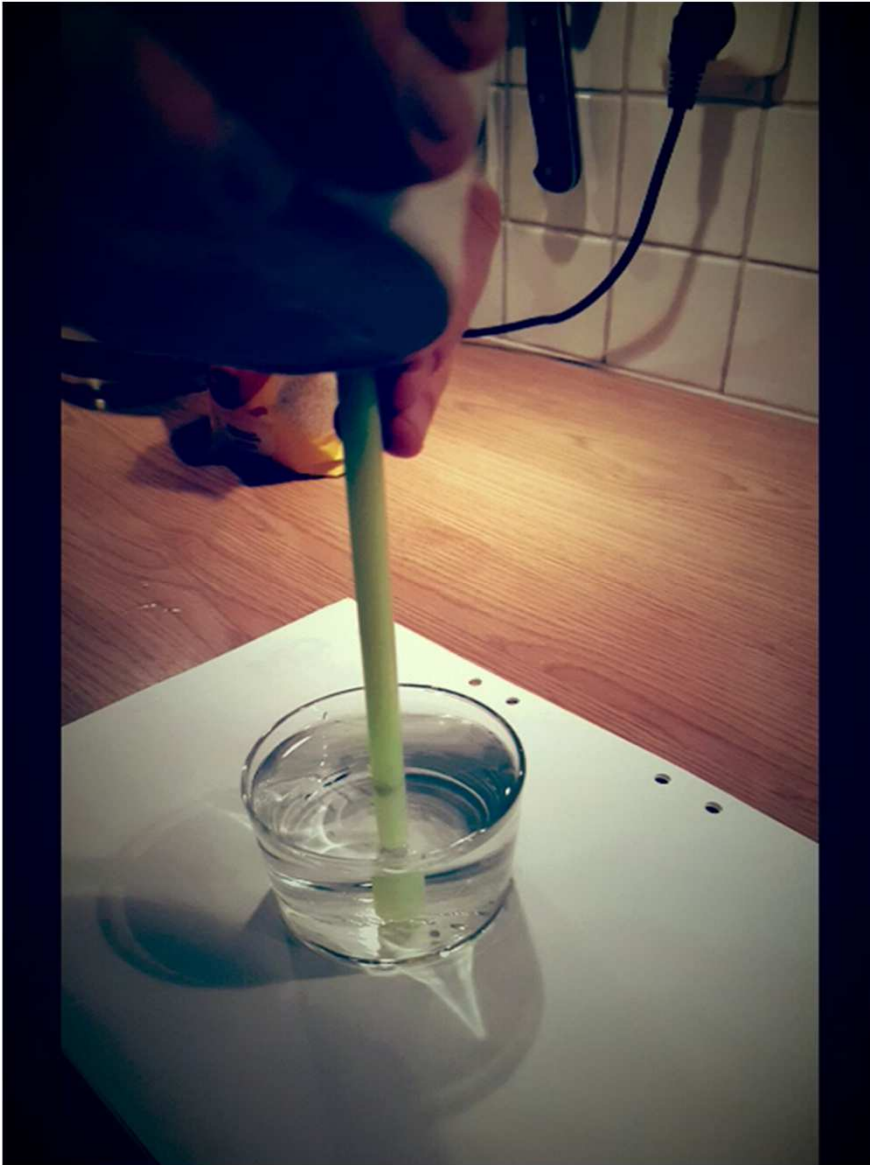
Mammutsugning och gjutning

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Mammutsugning och gjutning

Tremie-gjutning



SERNEKE®

Tremie-gjutning



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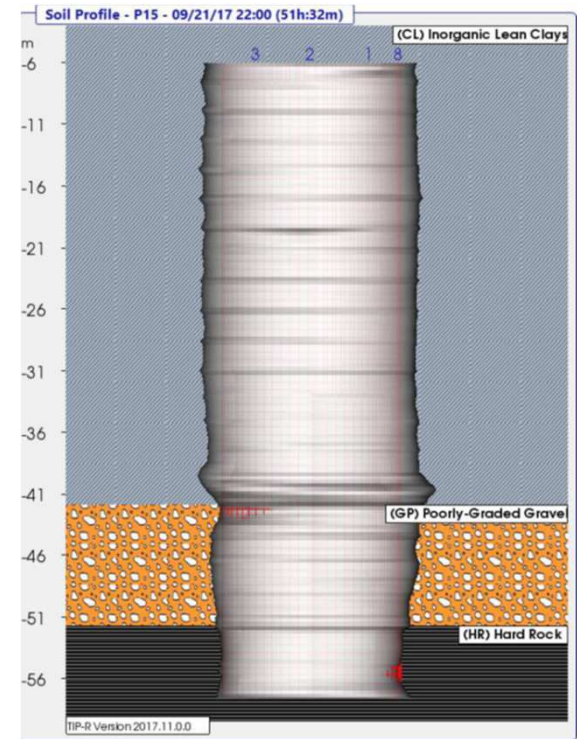
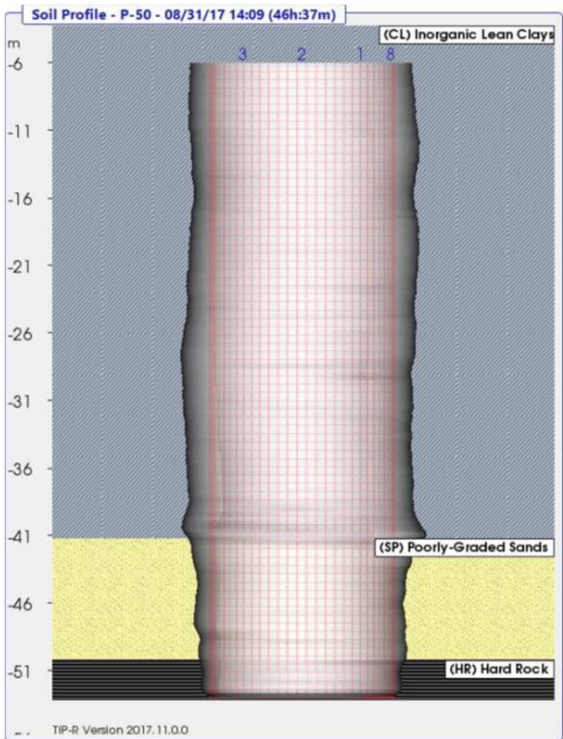


Armering och kärnbrörning

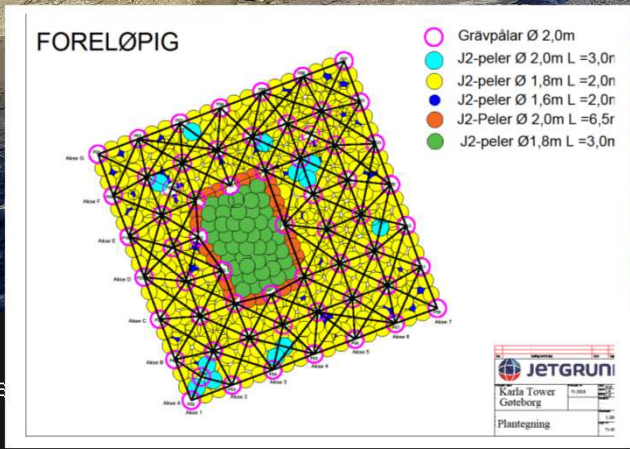
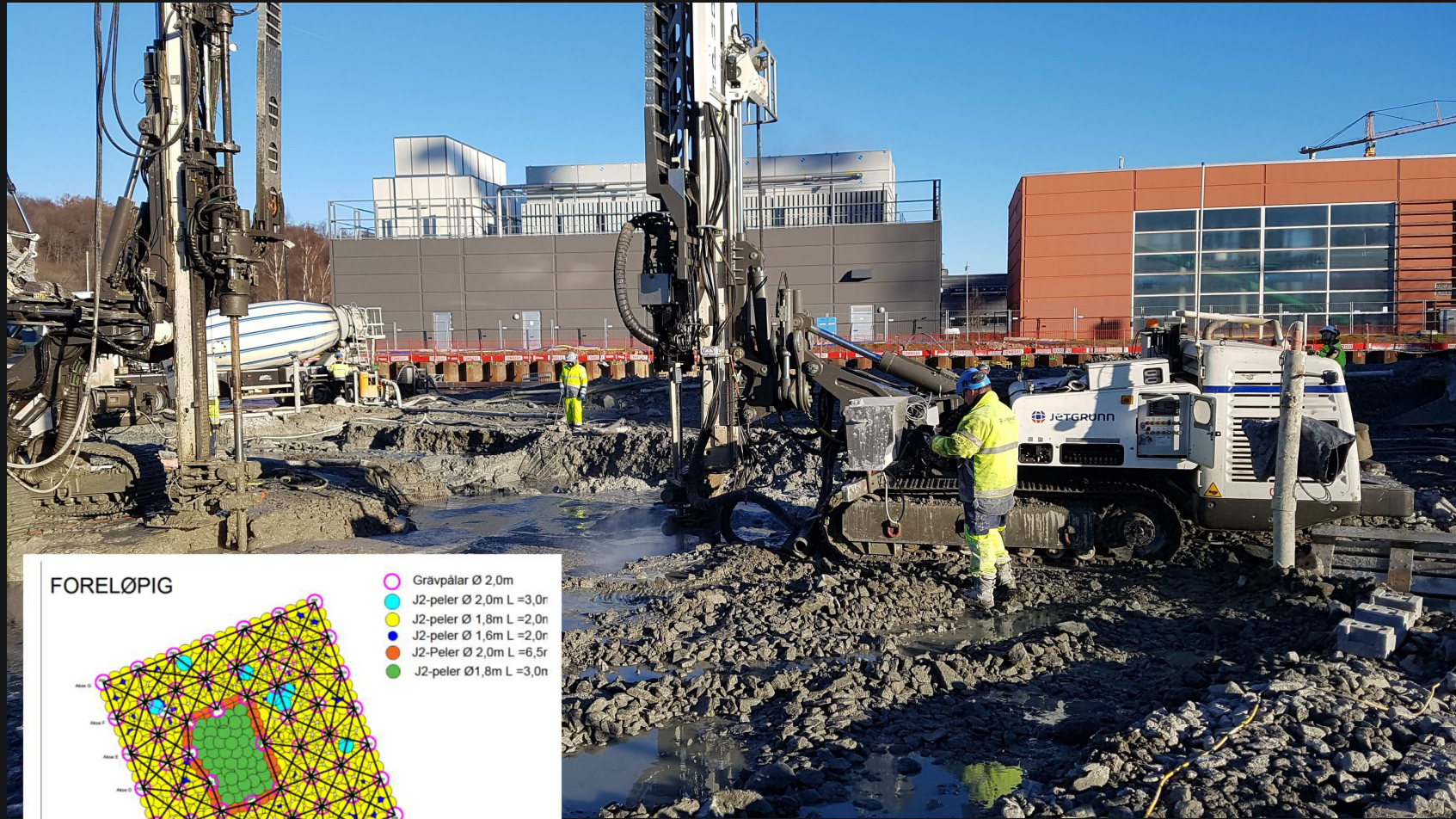


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Thermal Integrity Profiling (TIP)



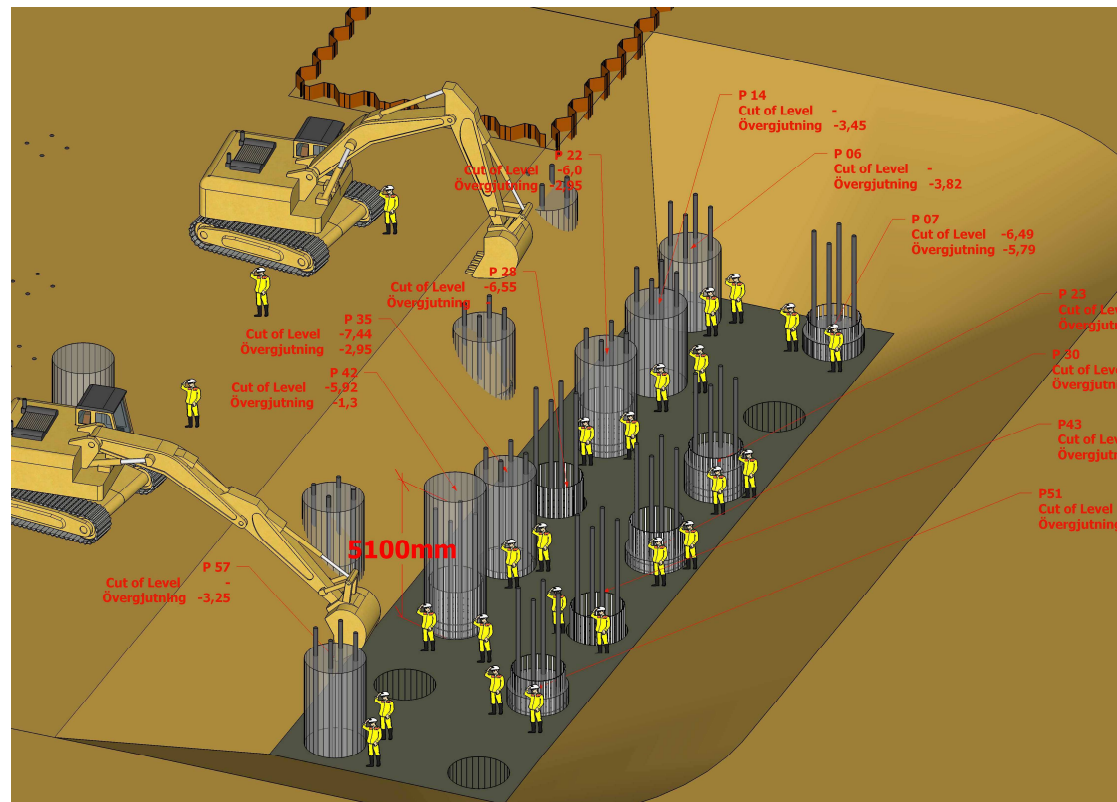
Jet Grouting, nov-18

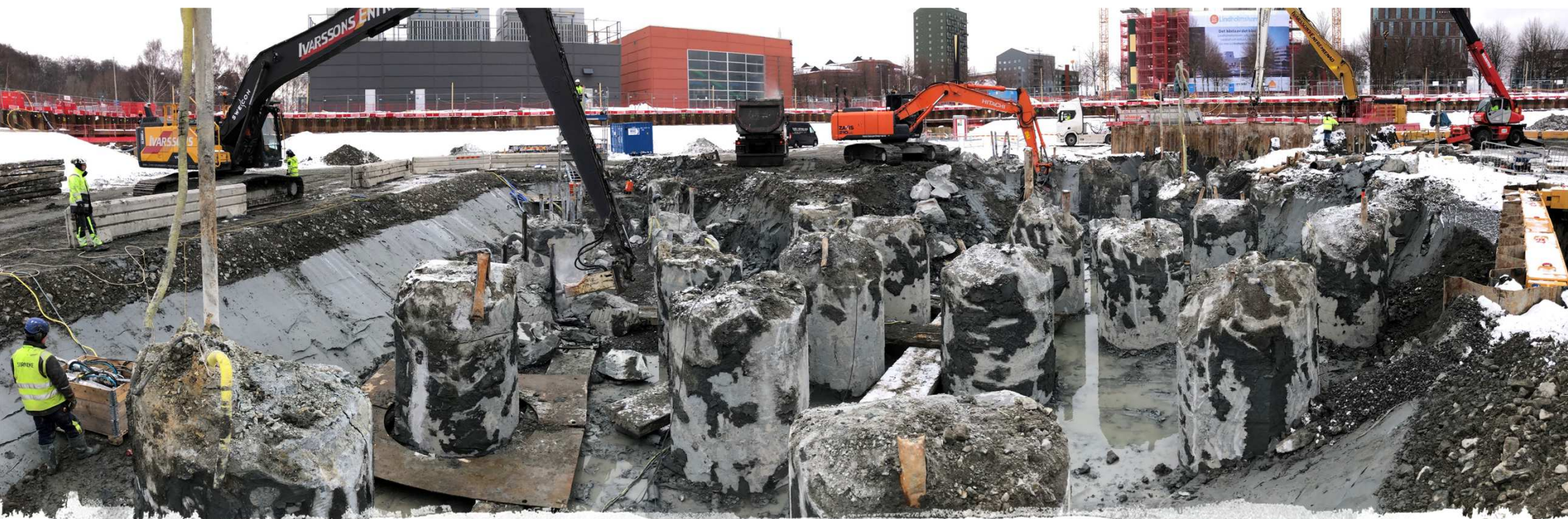


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Detaljschakt runt grävpålar





Detaljschakt runt grävpålar



Pile Cap Removal with Cropper
and/or the Elliott Pile Breaking
Method

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Ta-da



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Läxor till nästa
gång....