

Den Nye Bane København-Ringsted

3D modellering



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Hvem er vi?



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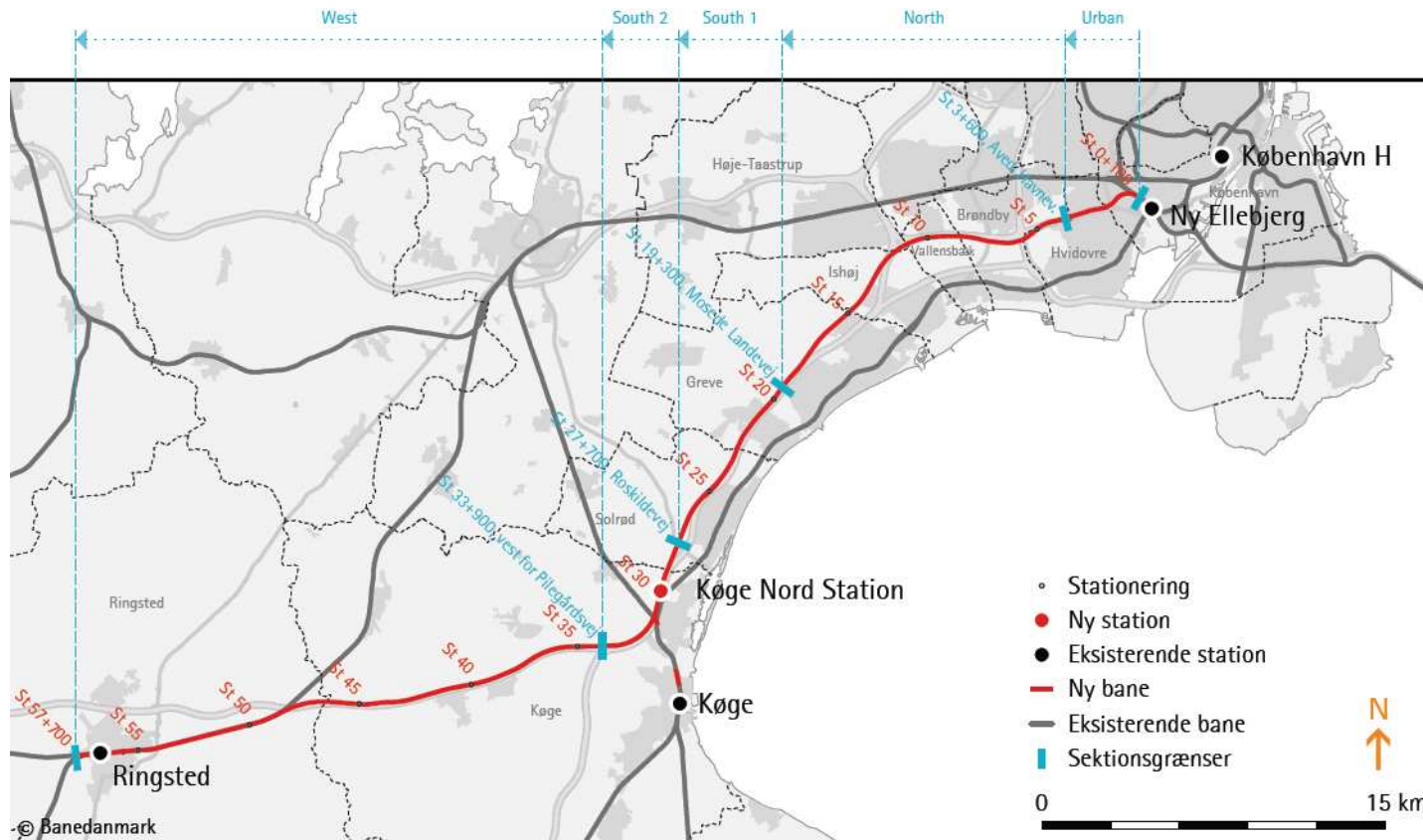
Thyge Pilgaard
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Agenda

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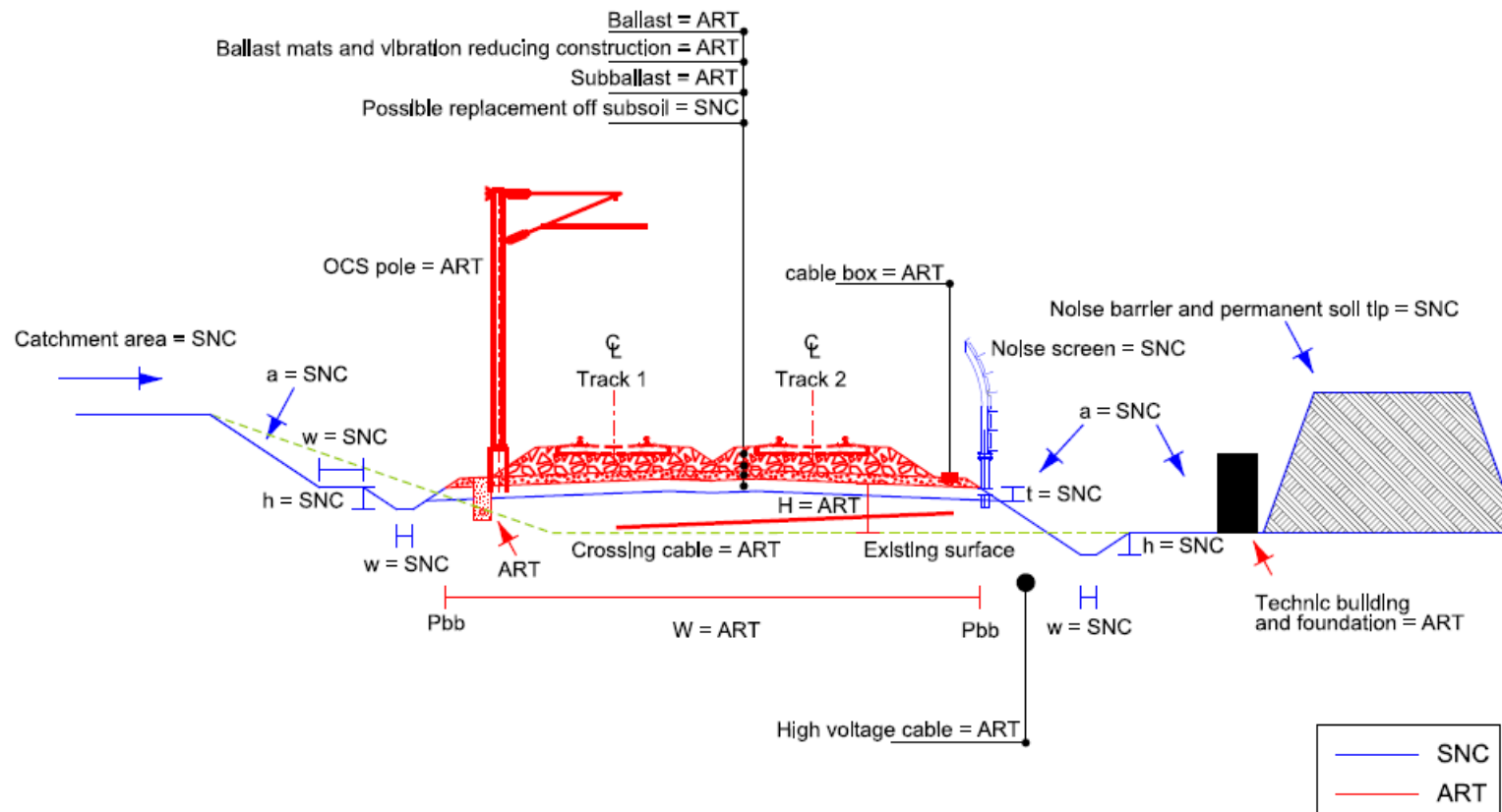
- **Introduktion**
- **Traditionel 3D-modellering**
- **Samlet 3D model**
- **Q/A**

Introduktion: København - Ringsted

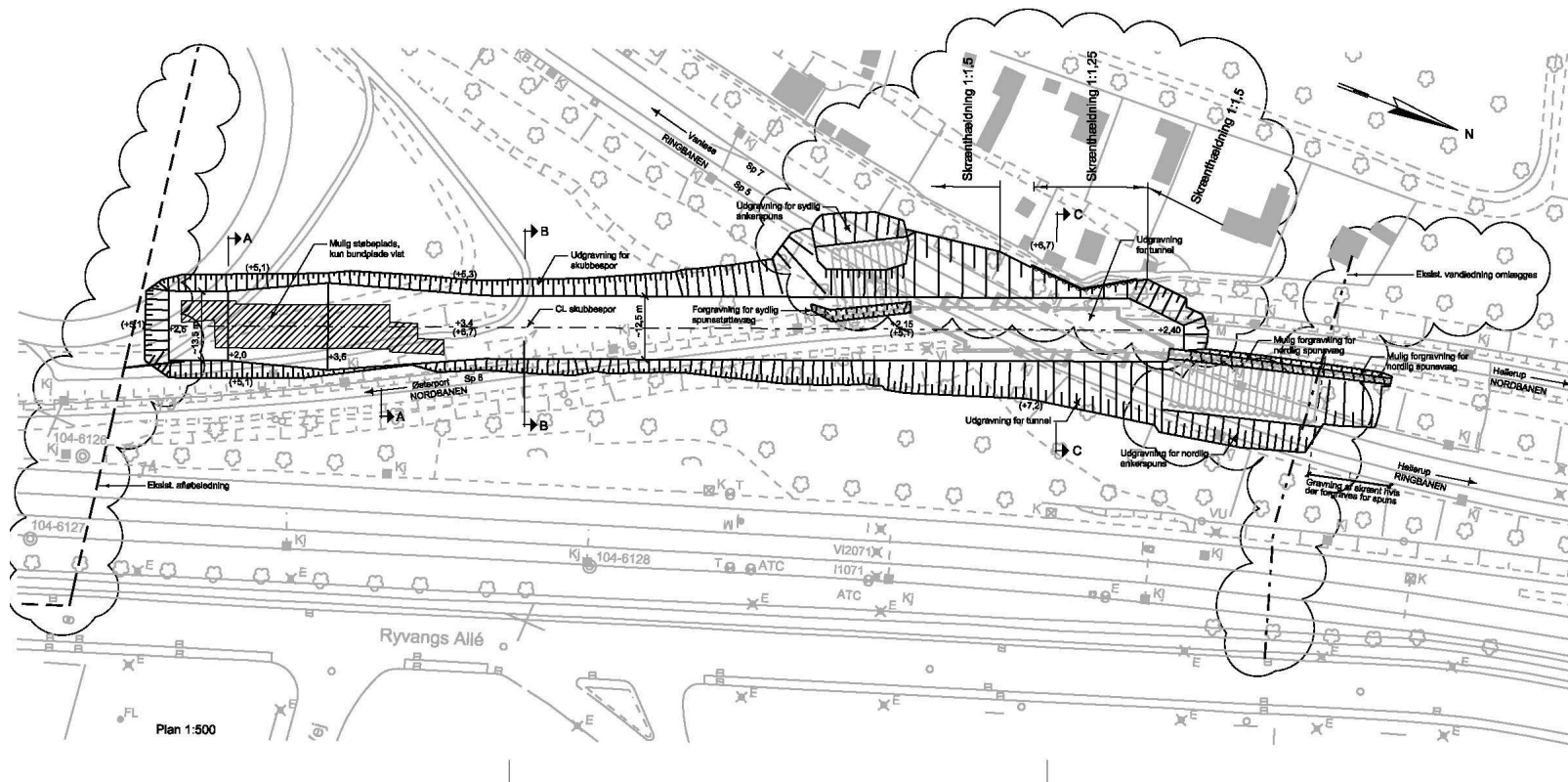


Introduktion: Grontmij's andel

Track - cross section A-A:

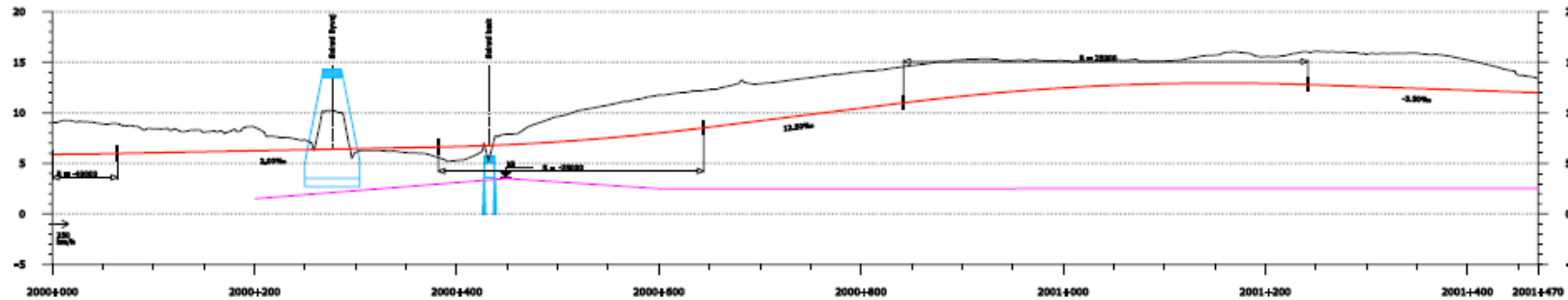


Traditionel 3D-modellering: Visualisering



Traditionel 3D-modellering: Udsætningsprocenter

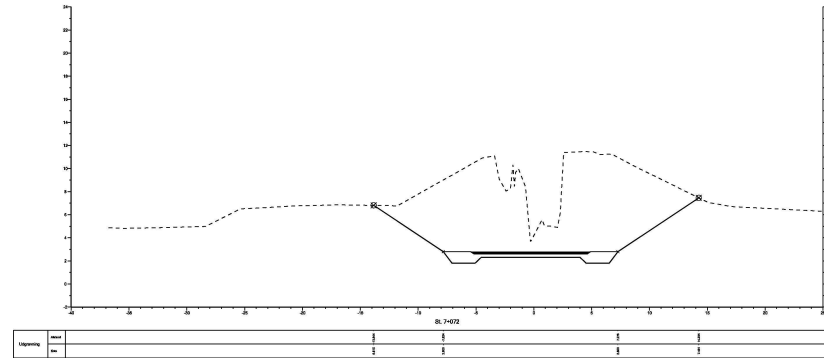
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Traditionel 3D-modellering: Tværsnit og afsætning

Koordinatplan

Grontmij | Carl Bro
Anlæg, Jernbaner
Granskoven 8,
DK-2600 Glostrup



Alignmentfil: S:\BVADM-updrag\APM\100288101_Svanemöllen-Hilleröd.P\Inrail\Pr_Sam-HI.alg
Linieføring: Pr_Sam-HI_V
Sidst revideret: joakim.matti 2010-06-08 07:11:48

Stationering efter opmåling af kilometer tavler.
 Opmåling foretaget af Atkins og COWI 2009
 Koordinatsystem: KP2000Sjælland, DVR90
 Løft angives positivt når projekteret spor ligger over eksisterende spor
 Sideflytning angiver projekterede spors beliggenhed i forhold til eksisterende spor. Negativ sideflytning svarer til venstre, set i retning med stigende stationering

Type	Start st. [m]	Længde [m]	Radius [m]	X [m]	(Nord)Y [m]	Z [m]	Sideflyt. [m]	Løft [m]	Ovh. [mm]
Linie	5780.863			536447.107	6176685.665	1.864	0.000	0.006	
	5790.000			536439.448	6176690.647	1.846	-0.001	0.005	
	5800.000			536431.065	6176696.099	1.826	0.002	-0.001	
	5810.000			536422.682	6176701.552	1.807	0.001	-0.006	
	5820.000			536414.299	6176707.004	1.787	-0.001	-0.006	
	5830.000	103.471		536405.917	6176712.457	1.767	-0.002	-0.002	
	5840.000			536397.534	6176717.909	1.748	-0.000	0.000	

Traditionel 3D-modellering: Mængder

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fra km	til km	længde	Cut	Fill	Subballast	Ballast	Ballastrensning	Skærver	Draen	Inr Rpt dato
7200	7220	20	747.6	2.0	133.6	293.4	0.0	0.0	35.2	2010.05.03
7220	7240	20	672.6	5.6	135.0	294.0	0.0	0.0	28.0	2010.05.03
7240	7260	20	623.0	7.2	138.8	296.6	0.0	0.0	22.2	2010.05.03
7260	7280	20	576.6	4.0	134.0	291.2	0.0	0.0	22.6	2010.05.03
7280	7300	20	595.9	0.4	126.2	326.4	0.0	0.0	23.0	2010.05.03
7300	7320	20	574.5	3.8	126.6	328.6	0.0	0.0	20.0	2010.05.03

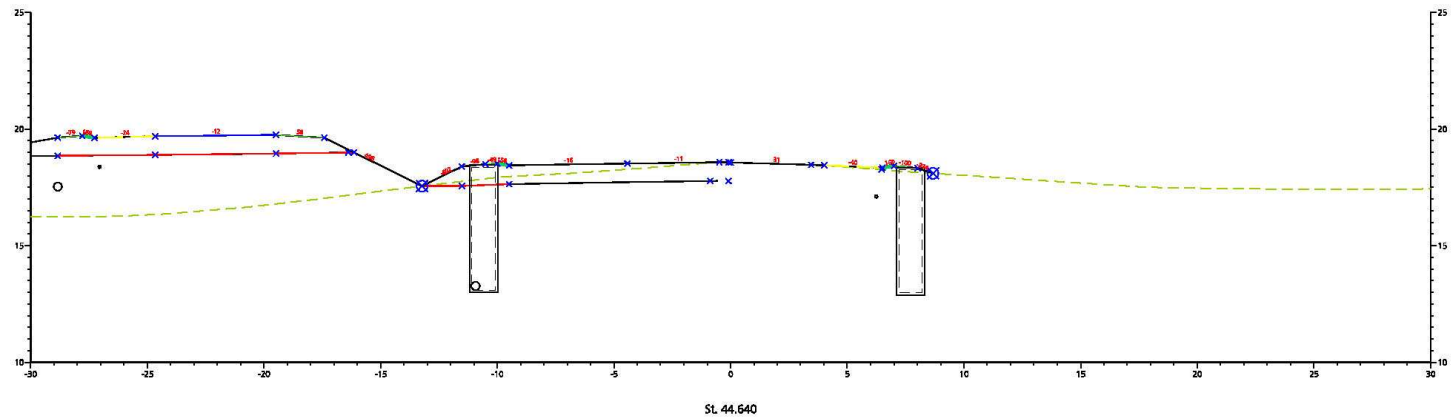
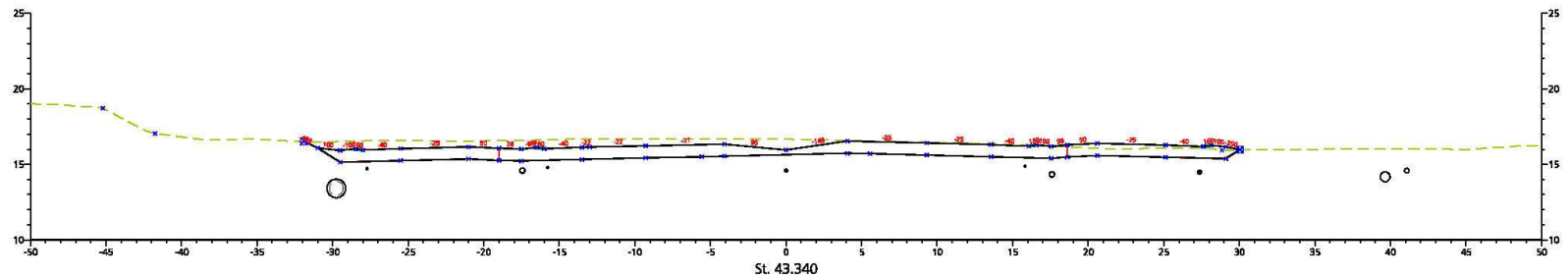
Samlet 3D model: Indhold

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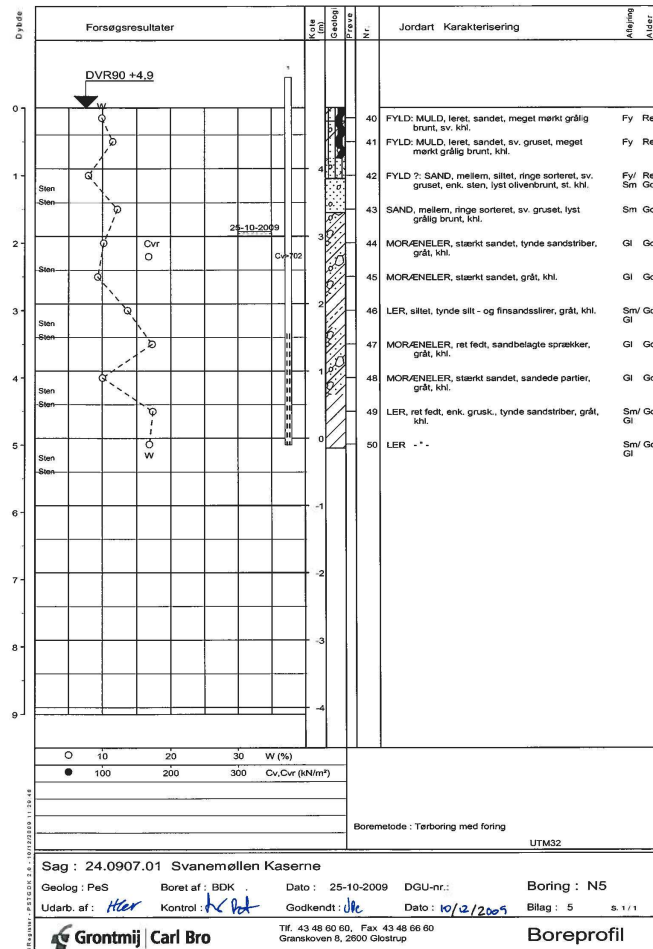
Natur og Miljø	– Forurening og faunapassager
Landskab	– Udsætningsområder og sneværnsbælter
Geoteknik	– Jordbundsforhold og grundvandsspejl
Afvanding	– Grøfter, dræn, pumpestationer og regnvandsbassiner
Støj og vibrationer	– Støjskærme - og volde samt evt. vibrationsdæmpende foranstaltninger
Jordhåndtering	– Mængder
Eksisterende forhold	– Terrændata, ledninger og krydsende veje mm.

Samlet 3D model: Eksisterende ledninger og dræn – Storm and sanitary

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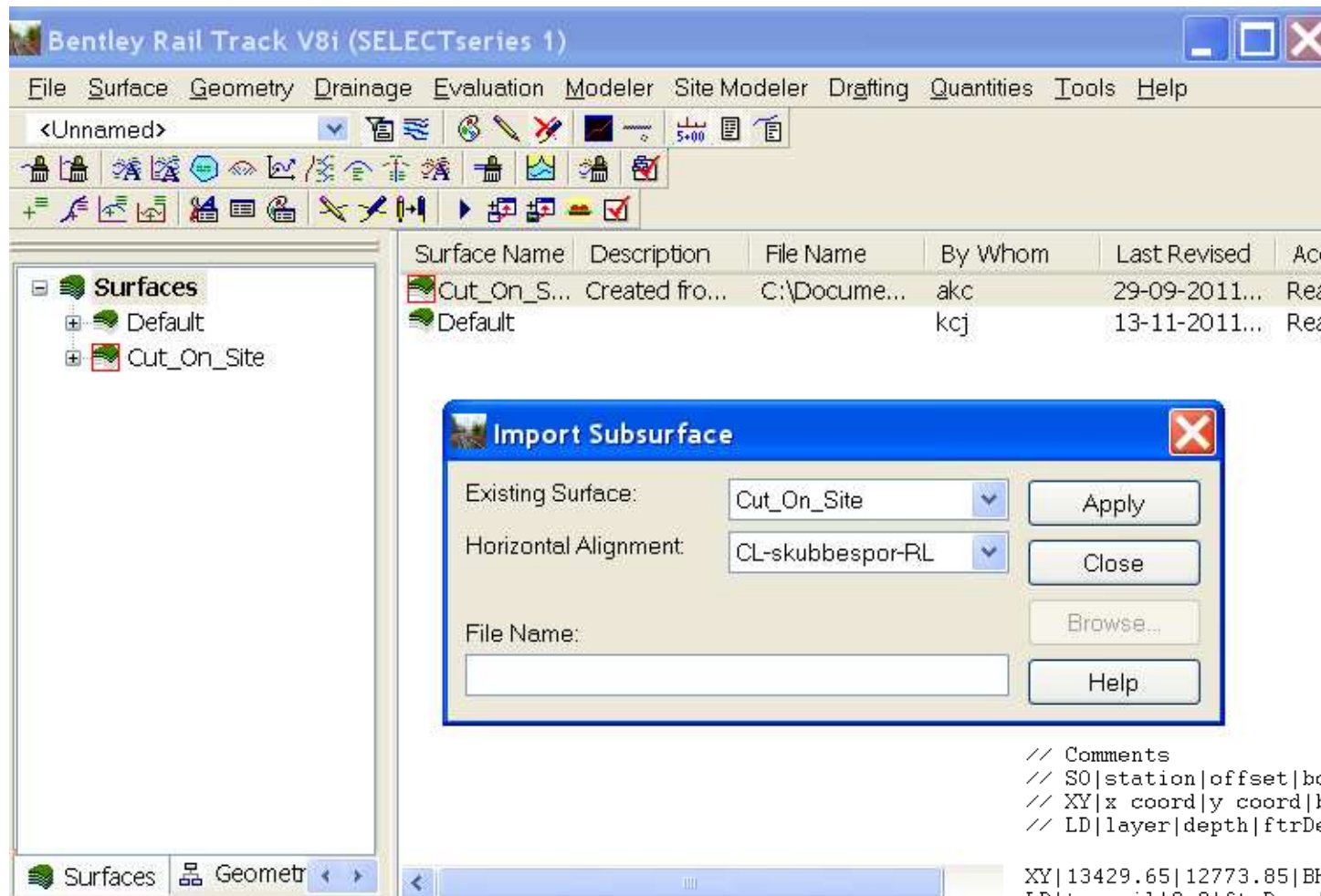


Samlet 3D model: Modellering af underbunden - Data



Boring ID	Kote	Lagnr.	Topkote	Bundkote	Lagtykkelse	Beskrivelse
N5	4.9	1	4.9	3.8	1.1	fy
		2	3.8	3.3	0.5	s
		3	3.3	0.5	2.8	ml
		4	0.1	-0.2	0.3	l

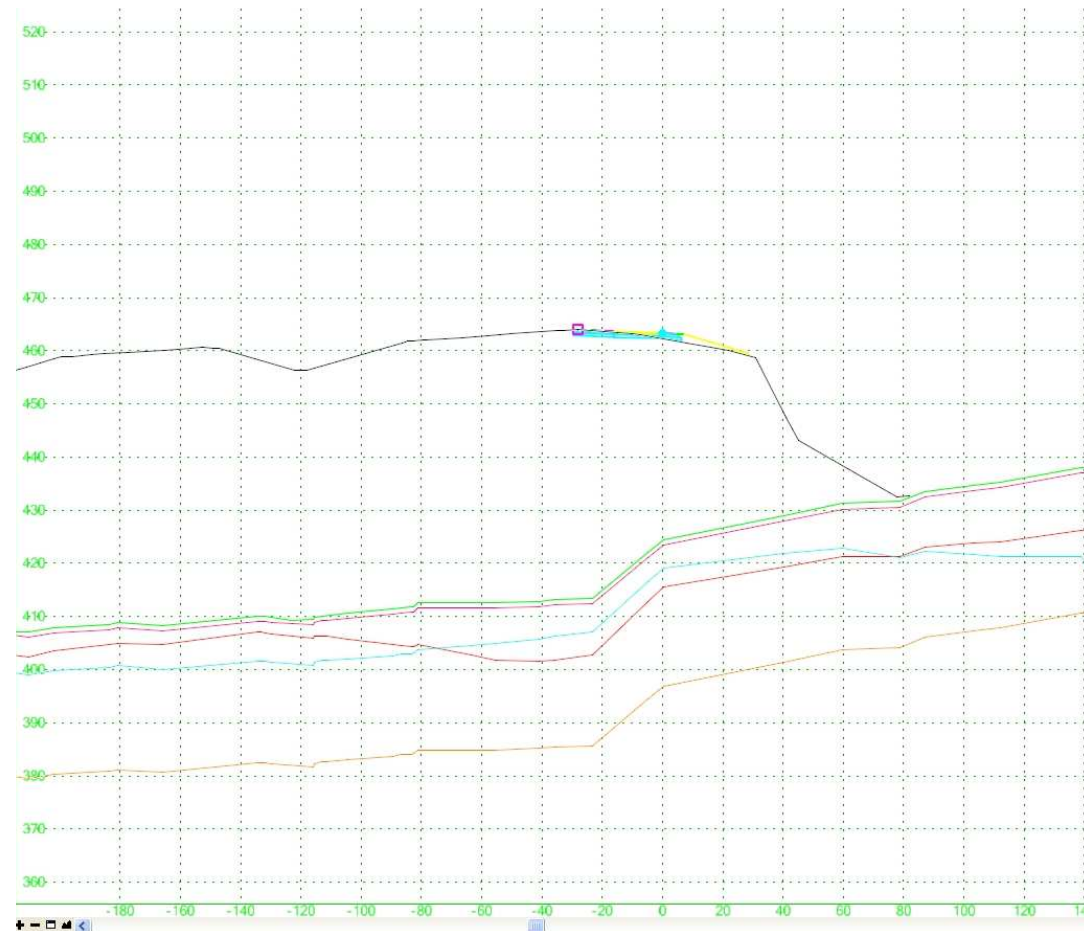
Samlet 3D model: Import til Inroads - Subsurface



```
// Comments
// S0|station|offset|borehole name
// XY|x coord|y coord|borehole name
// LD|layer|depth|ftrDesc|ftrStyle
```

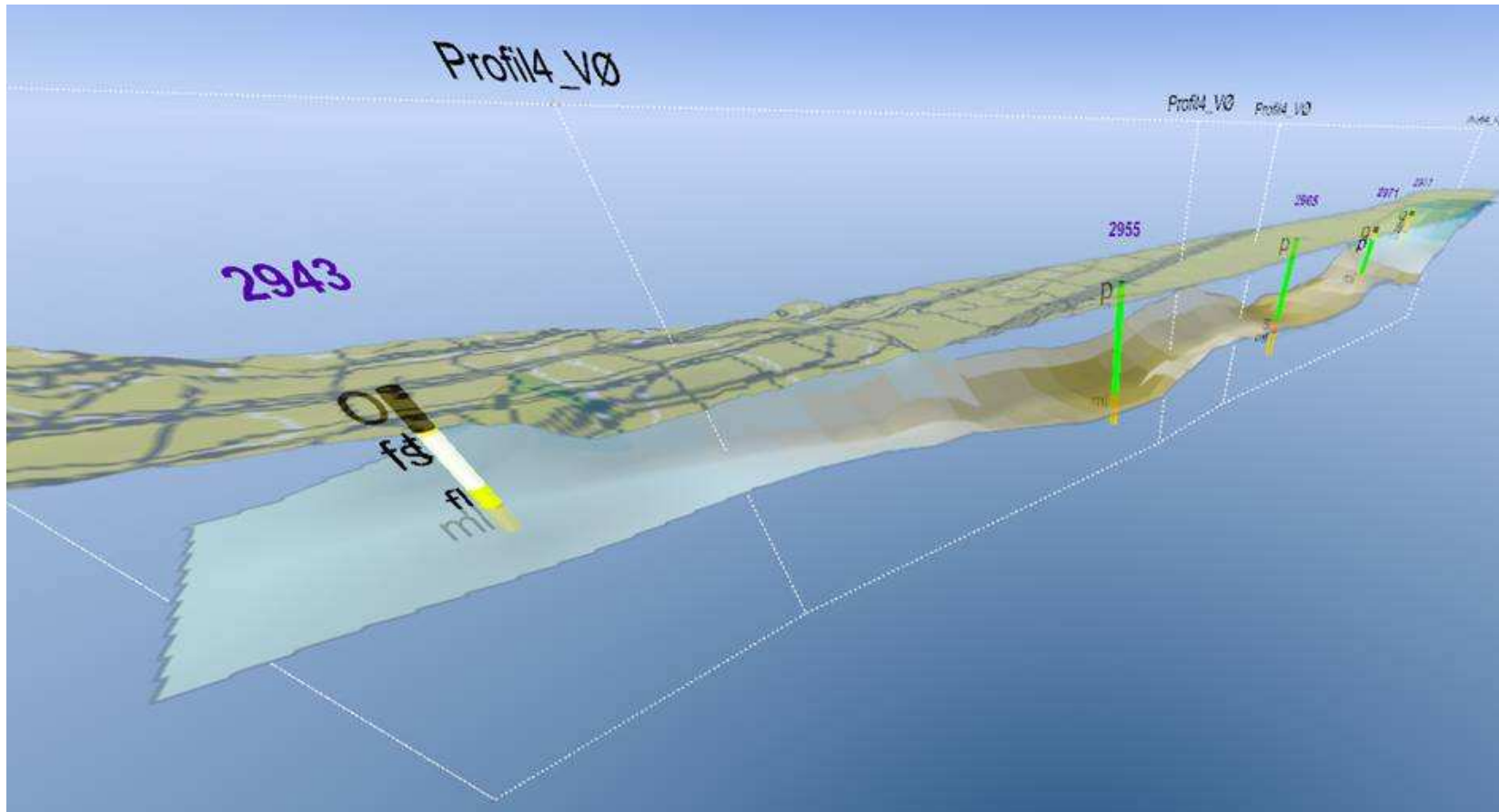
```
XY|13429.65|12773.85|BH1
LD|topsoil|0.0|ftrDesc|Topsoil
LD|sand|1.450|ftrDesc|Sand
LD|clay|2.560|desc|Clay
LD|rock|3.670|description|Rock
```

Samlet 3D model: Import til Inroads - Subsurface



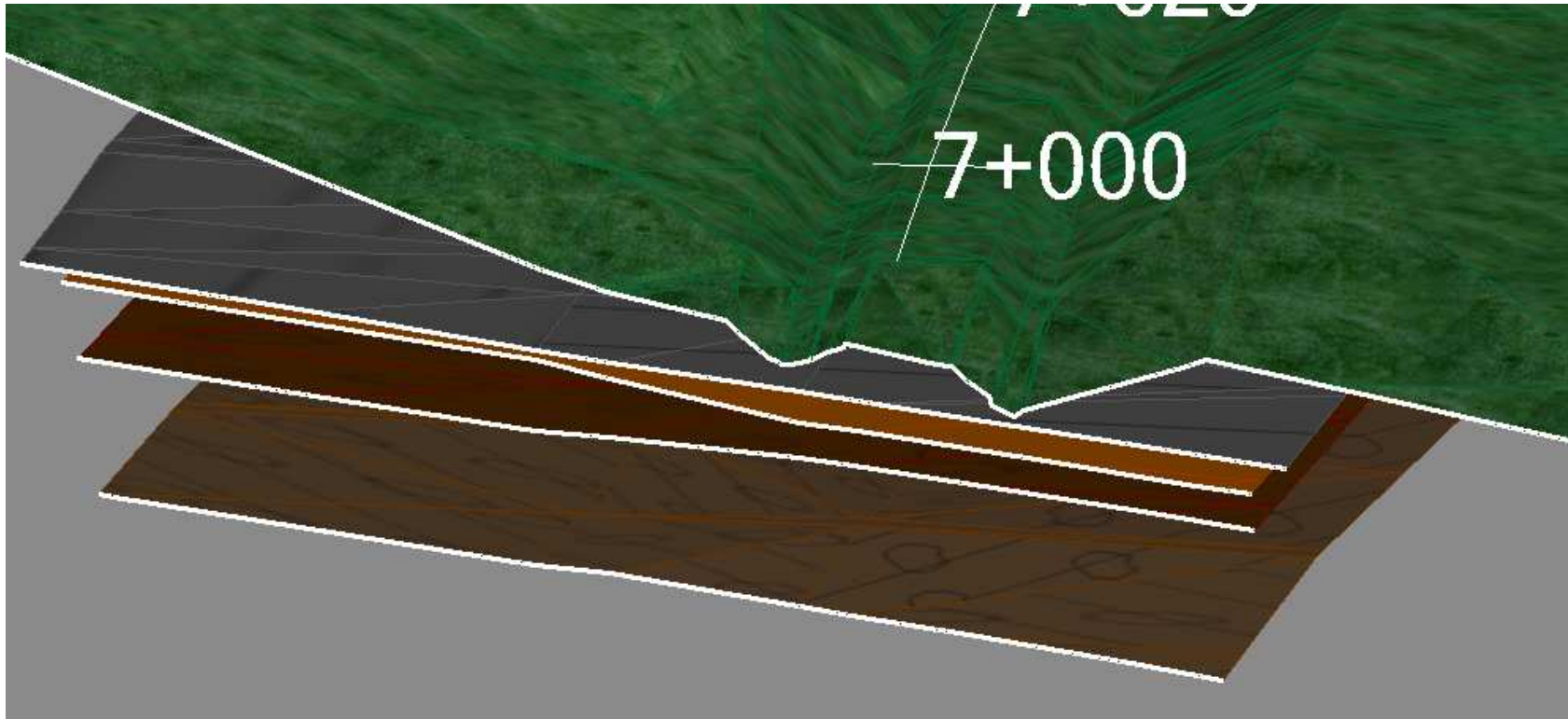
Samlet 3D model: Modellering af underbunden - Geoscene 3D

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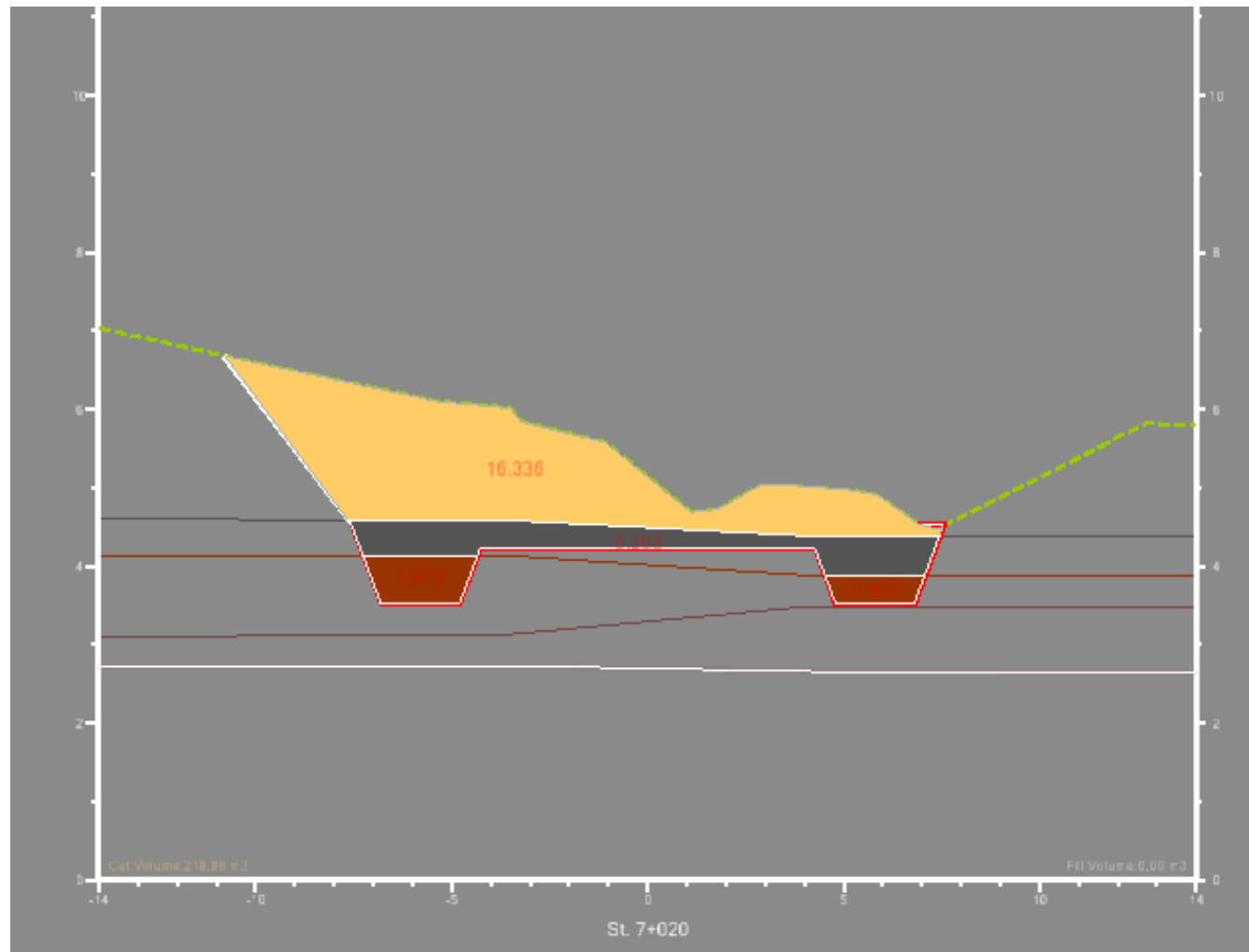
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Samlet 3D model: Visualisering



Samlet 3D model: Tværsnit inddelt i lag

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Samlet 3D model: Mængder

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Volumes with Parent Surface Report

Report Created: 9/30/2011
Time: 2:16pm

Cross Section Set Name: CL-skubbespor-RL
Alignment Name: CL-skubbespor-RL
Input Grid Factor: 1
Note: All units in this report are in meters, square meters and cubic meters unless specified otherwise.

Station	Type	Area	Volume Factor	Adjusted Volume	Included in Mass Ordinate?	Mass Ordinate
6+990.000	Normal Cut:	16.192	0	0	Yes	0
	Normal Fill:	0.001	0	0	Yes	0
	Added Cut:		0	0	Yes	0
	Added Fill:		0	0	Yes	0
	3-Clay - :	1.877	0	0	Yes	0
	2-Sand - :	0	0	0	Yes	0
	5-ClayTill - :	1.269	0	0	Yes	0
	4-SandyTill - :	13.046	0	0	Yes	0
	1-Topsoil - :	2.01	0	0	No	0
	Bundsikringsgrus - Cut_On_Site:	7.803	0	0	No	0
	SG---- - Cut_On_Site:		0	0		
7+000.000	Normal Cut:	16.786	134	134	Yes	1685
	Normal Fill:	0	0	0	Yes	0
	Added Cut:		0	0	Yes	0
	Added Fill:		0	0	Yes	0

Q&A
