Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III; report

Drilling date: October 26, 2024

Borehole No. 1

Altitude of the borehole mouth: 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (According to LAS07)	Depth of layer base m (According to BAS77)	Layer thickness, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Pass. Depth. Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion c, kPa	Friction angle φ, deg	Number of blows, N Layer thickness in depth, m	Dynamic resistance q_d, MPa
									Platform. Platform height above water surface: 1.3 m Submersion depth 0.7 m. Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
	0.00	0.00	-0.13	0.00			0.00 0.00 0.00 0.00 0.00 0.00								
									Water of the Curonian Lagoon	-					
	4.30	4.30	-4.43	4.30											
-	4.60	4.60	-4.73	0.30					Silt (sandy) (dy) black, watery	-	1	0	2	1	-
a-N	5.70	5.70	-5.83	1.10					Poorly sorted sand (SaP) gray, dark gray from 4.9 m, from 6.4 m gray, water-bearing, with gravel, from 6.4 m to 7.2 m with sandy clay lenses	Very loose	6	0	9	7	-
	6.50	6.50	-6.63	0.80						Loamy	12	2	8	28	-
	6.90	6.90	-7.03	0.40						Medium dense	15	7	7	82	-
	7.20	7.20	-7.33	0.30						Dense	19	12	6	106	-
a-N	9.60	9.60	-9.73	2.40	3	7.60–9.20			Slightly silty-clayey poorly sorted sand (SaFP) gray, waterlogged	Very dense	24			34	8.2
a-N	11.80	11.80	-11.93	2.20	4	9.60–11.80			Silty sand (siSa) gray, waterlogged	Very dense	22			24	13.1
l-I	15.70	15.70	-15.83	3.90					Sandy clay with low plasticity (saCiL) gray, up to 12.3 m with water-saturated sand lenses	Moderately plastic	40			11	5.2
	5:30 p.m.	-5:30 PM	-5:43 PM	1.60	6	5:40 PM–5:55 PM	5:30 -5:30			Hard	53			56	23.7
Ba-I	7:40 p.m.	-7:40 PM	-7:53 PM	2.10	7	6:30 PM–7:30 PM				Dense	33			15	5.9
	10:30 p.m.	-12:30 a.m.	-12:43	4.90	8	9:00 PM–10:00 PM			Low-silt, loamy, poorly sorted sand (SaFP), gray, watery	Very dense	37			26	10.6
gIII-II	26.20	-26.20	-26.33	1.90	10	25–25.80	26.20 -26.20		Medium-plasticity clay (CiM), gray, with sand	Hard	55			61	20.9
Ba-I	27.80	-27.80	-27.93	1.60					Slightly silty-clayey poorly sorted sand (SaFP) gray, watery, with fine particles	Very dense	37			24	7.7
l	28.30	-28.30	-28.43	0.50	12	27.80–28.80			Sandy low-plasticity clay (saCiL) gray, with sand grains	Hard	53			61	20.5
gIII-II	32.20	-32.20	-32.33	3.90	13	28–30.30			Medium-plasticity clay (CiM), dark gray	Hard	55			72	21.7
					14	30–31.80	32.20 -32.20								
l-I	36.00	-36.00	-36.13	3.80					Sandy clay with low plasticity (saCiL), dark gray, with water-saturated lenses of sandy clay	Hard	53			165	45.4

Schedule of static and dynamic sounding tests, CPTU 1, DPSH 1

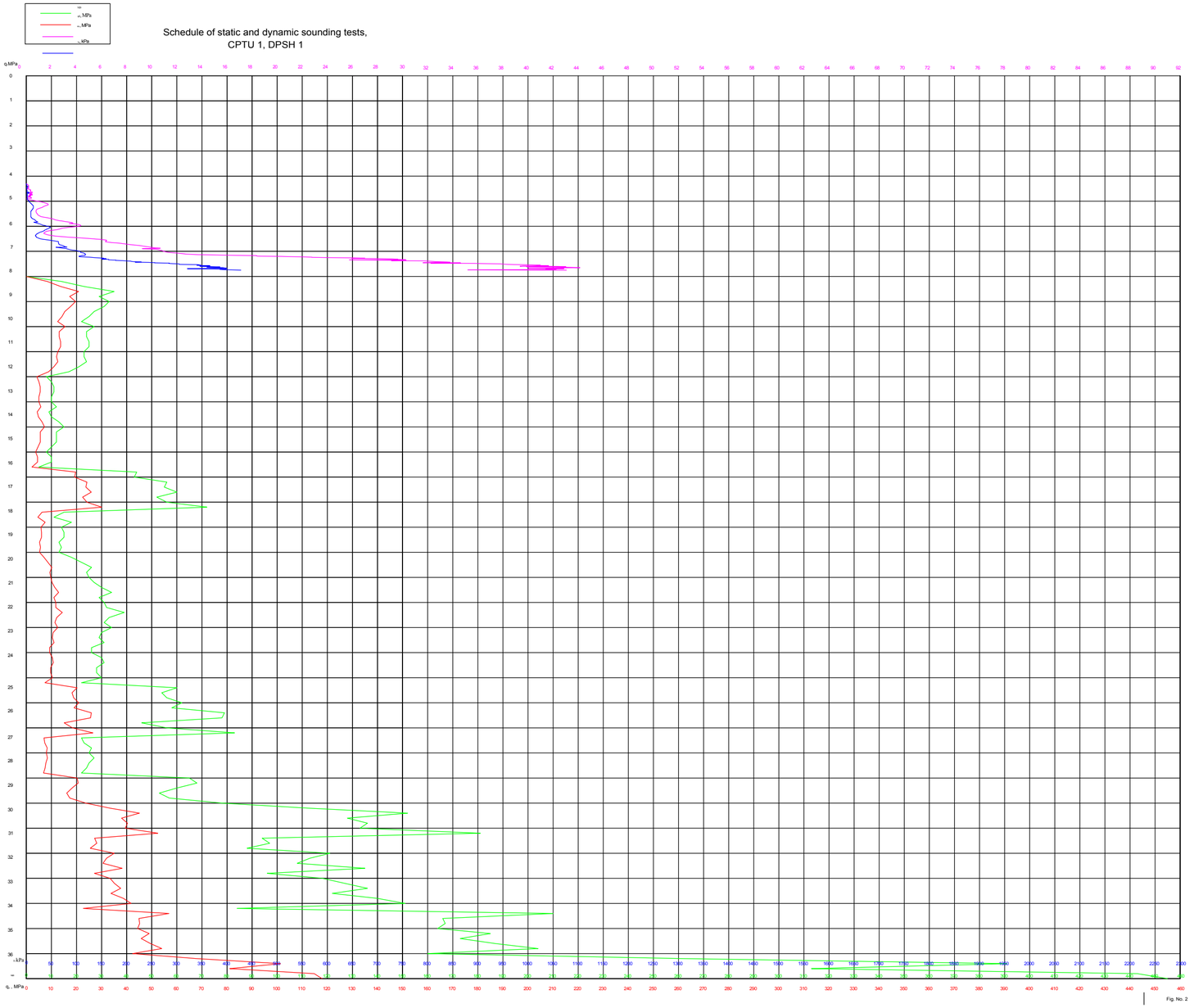


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/30/2024

Borehole No. 2

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)

Well depth 36.00 m

SWECO

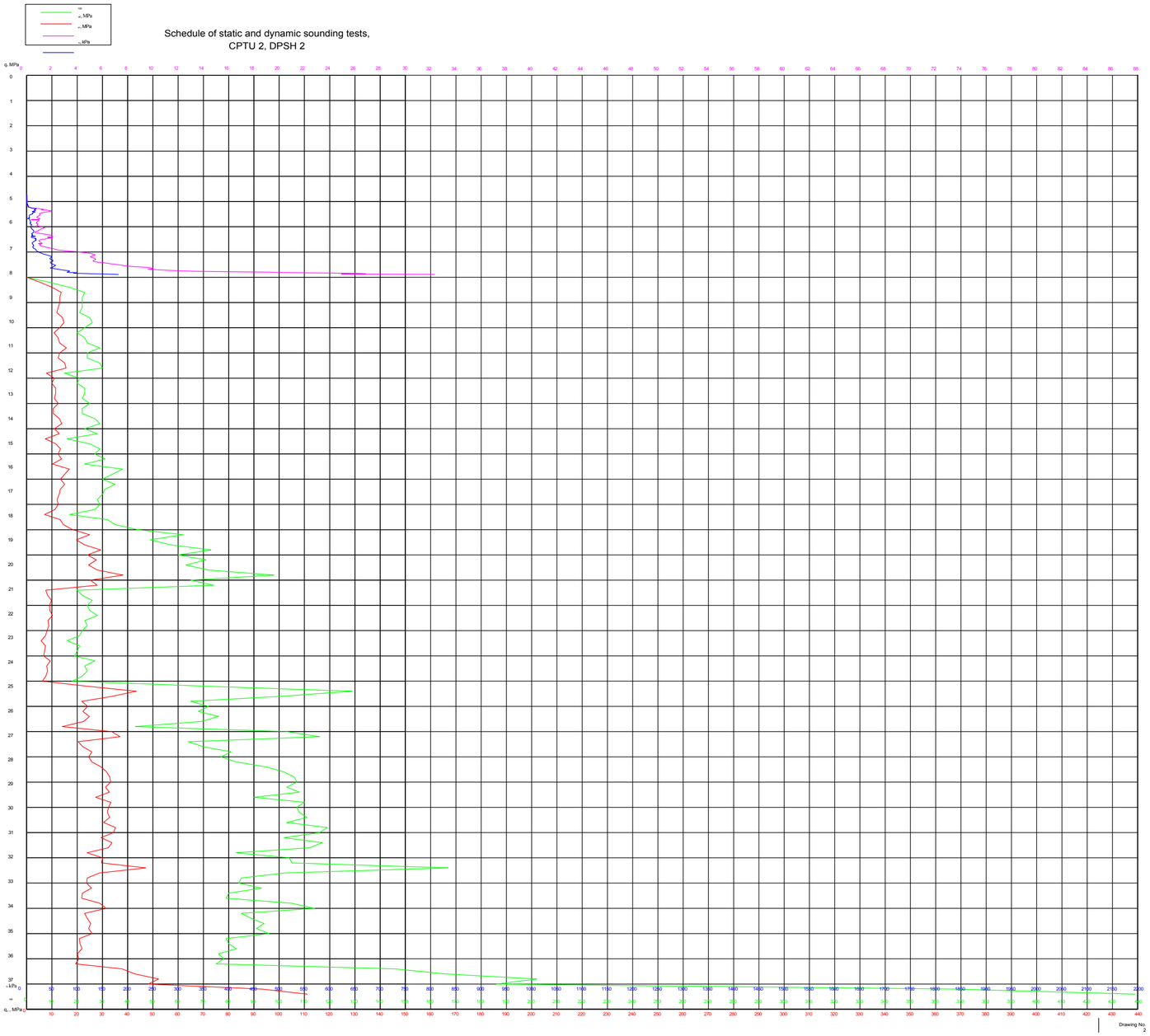
Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (According to LAS07)	Depth of layer base, m (According to BAS77)	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	KS	Cohesion, kPa	Friction angle, °	Number of blows, N	Dynamic cone strength, q_d, MPa
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
	4.70	-4.70	-4.83	4.70	Water of the Curonian Lagoon	-					
a	6.60	-6.60	-6.73	1.90	Gravelly, slightly silty-clayey, poorly sorted sand (grSaFP) dark gray, up to 6.8 m thick, waterlogged, with 1.4% organic matter		9	0.8	8	-	-
	7.00	-7.00	-7.13	0.40		Very crumbly	6	1.6	15	-	
a	7.80	-7.80	-7.93	0.80		Medium density	15	7.2	51	-	
a	10.70	-10.70	-10.83	2.90	Poorly sorted sand (SaP), gray, light gray from 7.3 m, watery, with 0.8% organic matter	Very dense	23			20	10.3
L	11.60	-11.60	-11.73	0.90	Sandy clay with low plasticity (saCtL) brown	Highly plastic	45			- 27	14.
lm	13.60	-13.60	-13.73	2.00	Gravelly, slightly silty-clayey, well-sorted sand (grSaFW) Very dense 38 - gray, watery					- 22	11.2
L	17.80	-17.80	-17.93	4.20	Sandy clay with low plasticity (saCtL), brown, with gravel, gray from 17.8 m	Softly plastic	42			- 26	12.5
	20.40	-20.40	-20.53	2.60		Hard	53			- 63	25.9
lm	24.20	-24.20	-24.33	3.80	Sandy silt (siSa) gray, watery	Very dense	35			- 25	8.9
L	33.60	-33.60	-33.73	9.40	Sandy clay with low plasticity (saCtL), gray, with sand grains	Hard	53			- 96	28.7
lm	36.00	-36.00	-36.13	2.40	Medium-plastic clay (CtM), gray-brown, brown from 34.7 m, with sand	Hard	55			- 167	27.9

Water level, m alt. according to

No.	Depth	Pass.	Depth.	Max.
		0.00	0.00	0.00
		0.00	0.00	0.00
1	4.70-6.50			
2	6.60-8.80			
3	8.60-9.00			
4	9.70-11.20	11.60		
		-11.60		
5	12.60-13.00			
6	18.00-Pbk-4.00			
		8.40		
		-20.40		
7	23.60-24.00			
8	33.60-34.80			

Schedule of static and dynamic sounding tests, CPTU 2, DPSH 2



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III; report

Drilling date: 11/15/2024

Borehole No. 3

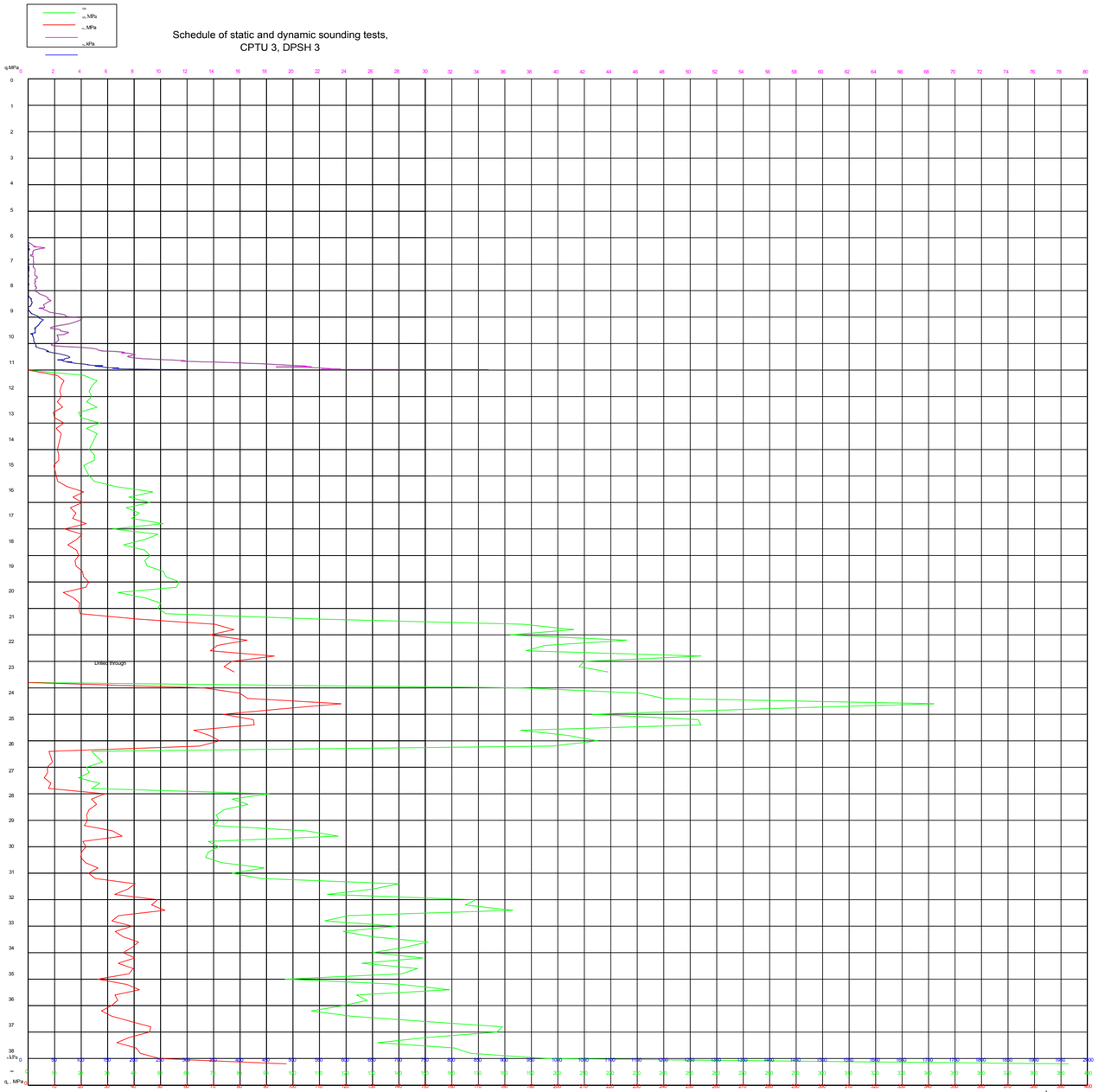
Altitude of the borehole mouth: 0.00 (according to LAS07)
Altitude of the borehole mouth: -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KĶS	Cohesion, kPa	Friction angle, °	Number of blows, np	Dynamic probing, MPa	Dynamic probing, kPa
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-	-
	6.30	6.30	-6.33	6.30	Water of the Curonian Lagoon	-	-	-	-	-	-	-
m h	6.50	6.50	-6.63	0.30	Silt (sandy) (Dy) black, watery	-	1	0	0	1	-	-
m V	8.80	8.80	-8.93	2.30	Slightly silty-clayey, poorly sorted sand (SaFP) dark greenish-gray, silty up to 8.8 m, gray from 8.8 m, light gray from 9.6 m, with shells from 8.8 m to 10.1 m, watery	Very loose	7	0	7	2	-	-
	9.60	9.60	-9.73	0.80		Purus	11	2	8	17	-	-
	10.10	10.10	-10.23	0.50		Very loose	7	0	3	14	-	-
	10.60	10.60	-10.73	0.50		Medium density	15	4	7	50	-	-
	10.90	10.90	-11.03	0.30		Dense	19	10	6	150	-	-
T					T 11.00; -11.30					45	150	
m V	15.30	-15.30	-3:43 PM	4.40	Poorly sorted sand (SaP) light gray, watery	Very dense 23					22	10.9
m	15.70	-15.70	-15.83	0.40	Sandy, low-plasticity silt (saSiL), gray	Hard	48	-	-	40	17.8	
amh	18.40	-18.40	-6:53 PM	2.70	Sandy low-plasticity clay (saCiL) gray, with gravel	Semi-hard	47	-	-	42	17.9	
l	19.10	-19.10	-7:23 PM	0.70	Sandy low-plasticity clay-silt (saCiL-SiL) dark gray	Hard	52	-	-	59	20.9	
l	8:30 PM	-8:30 PM		1.20		Semi-hard	47	-	-	46	18.1	
l			-20:43		Sandy low-plasticity clay (saCiL) gray, with gravel, from 22.7 m to 22.8 m with boulders	Hard	53	-	-	-	198	72.9
	25.40	-25.40	-25.53	5.10							217	59.3
fmh	26.90	-26.90	-27.03	1.50	Sandy silt (siSa) light gray, watery	Very dense 35					-	24.7
l	27.60	-27.60	-27.73	0.70	Sandy clay with low plasticity (saCiL), gray, with sand grains	Hard	53	-	-	89	25.9	
fmh					Sandy silt (SiSa) gray, watery, with sandy silt lenses very dense 35 -						-	71.23
l	29.70	-29.70	-29.83	2.10								
l	36.00	-36.00	-36.13	6.30	Sandy, low-plasticity clay-silt (SaCiL-SiL), dark gray-brown, with gravel, brown from 32.2 m	Hard	52	-	-	112	36.2	

Schedule of static and dynamic sounding tests, CPTU 3, DPSH 3



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/21/2024

Borehole No. 4

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (According to Level)	Depth of layer base m (According to sea level)	Layer thickness, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Friction angle, °	Number of blows, no.	Dynamic cone strength q_d, MPa	Modulus of deformation, MPa
	0.00	0.00	-0.13	0.00			-0.00	0.00	-0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-			
	7.20	-7.20	-7.33	7.20			0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-			
m H	7.50	-7.50	-7.63	0.30							Silt (sandy) (Dy) black, watery	-	1	1.5	0.9	-		
m H	8.40	-8.40	-8.53	0.90							Slightly silty-clayey, poorly sorted sand (SaFP), dark greenish-gray, up to 8.4 m thick, silty, waterlogged	Very loose	7	1	1.7	-		
m H	9.00	-9.00	-9.13	0.60	1	8.50–8.80						Purus	12	2.3	13	-		
															4.7	2.9		
m H	11.10	-11.10	-11.23	2.10							Poorly sorted sand (SaP), light gray, water-saturated, from 10.3 m to 10.5 m with peat lenses	Medium density	15					6.33
												Very dense	23			-	22	11.4
	11.80	-11.80	-11.93	0.70	2	11.65–11.70						Very dense	26			-	25	12.8
m H	12.60	-12.60	-12.73	0.80							Gravelly sand of varying gradation (grSaGr), light gray, water-saturated, from 12.3 m to 12.6 m with lenses of silty sand							
l'	14.70	-14.70	-14.83	2.10							Sandy clay of low plasticity (saCl(L), gray, with coal	Firmly plastic	45			-	33	14.9
	15.80	-15.80	-15.93	1.10	3	15.80–15.90 PM						Semi-coarse	47			-	53	23.9
					4	6.50 PM–6.50 PM												
l'	19.60	-19.60	-19.73	3.80			7.60 PM		19.60		Sandy low-plasticity clay-silt (SaCl(L-SiL), gray, with gravel, from 16.8 m to 17.1 m with sandy silt lenses, from 17.9 m to 18.2 m with boulders	Stiffly plastic	43			-	43	17.7
fmS	24.30	-24.30	-24.43	4.70							Poorly sorted sand (SaP) is light gray, water-saturated, with sandy clay lenses from 20.6 m to 20.8 m	Very dense	36			-	25	9.0
																	21	7.0
fmS	30.80	-30.80	-30.93	6.50	5	27.50–27.80					Silty sand (SiSa) light gray, watery	Very dense	35			-	23	7.2
l'	36.00	-36.00	-36.13	5.20	9	35.50–35.50					Sandy clay with low plasticity (saCl(L), gray, with sand, 33.6 m, brown	Hard	53			-	133	35.6

Schedule of static and dynamic probing tests,
CPTU 4, DPSH 4

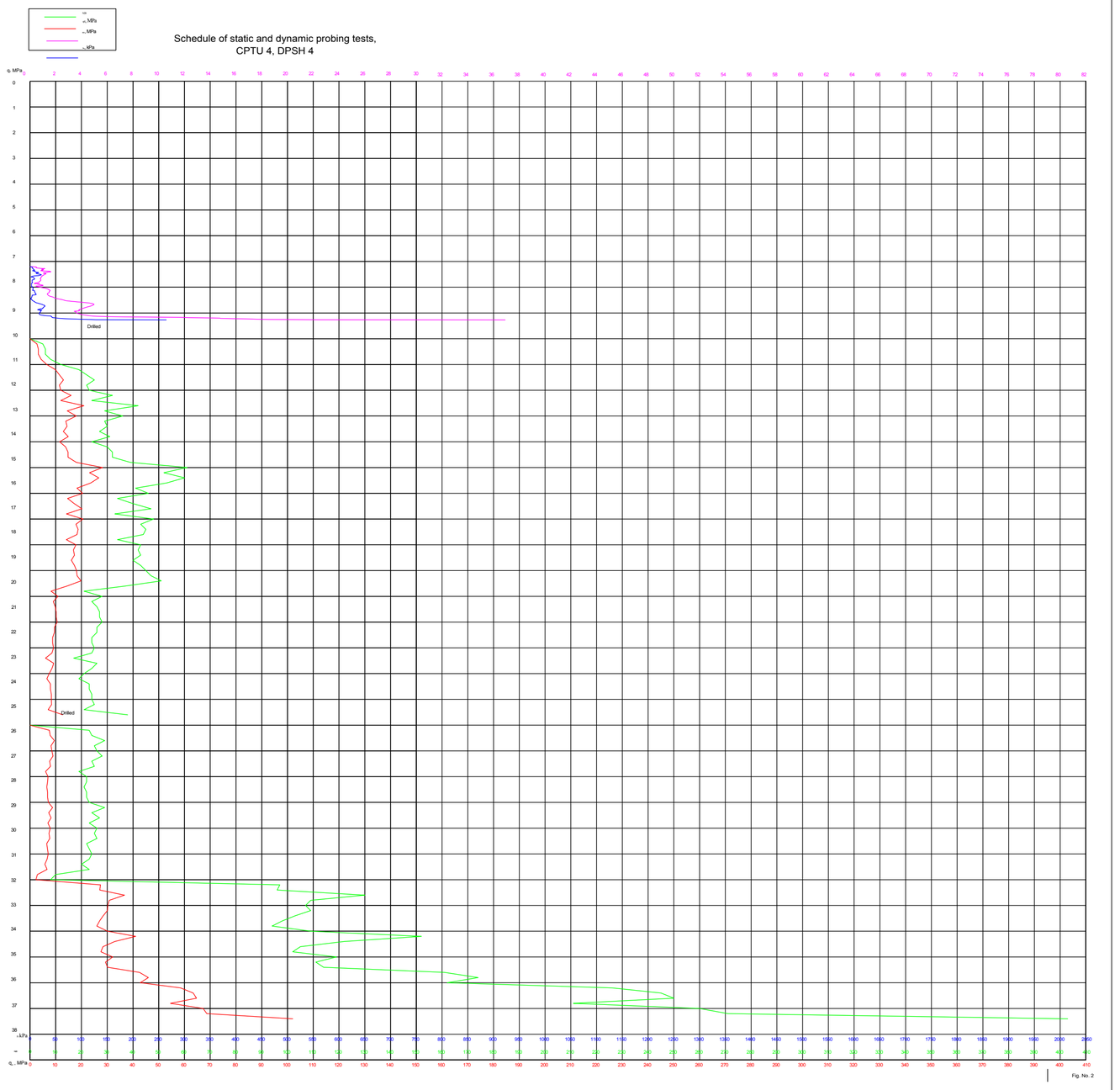


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/22/2024

Borehole No. 5

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (according to LAS07)	Depth of layer base m (according to BAS77)	Layer thickness, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Calc.strength,s MPa	Limit.shear stress, τ CPT Shear strength, s MPa	Dynamic cone strength, qd MPa	
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	
	4.70	4.70	4.83	4.70							Water of the Curonian Lagoon	-	-	-	-	-	
saF	6.40	6.40	6.53	1.70							Slightly silty-clayey poorly sorted sand (SaFP), dark greenish-gray, up to 6.4 m thick, waterlogged	Very loose	7	0.5	3	-	-
saF	8.10	8.10	8.23	1.70							Poorly sorted sand (SaP) gray, light gray from 8.9 m, water-saturated, with coarse sand lenses from 7.2 m to 7.5 m	Very loose	6	1.1	5	-	-
	8.90	8.90	9.03	0.80								Loamy	12	3.6	33	-	
	9.70	9.70	9.83	0.80								Very dense	23		20	07	84
grSa	11.60	11.60	11.73	1.90							Gravelly sand of varying gradation (grSaG), gray, water-saturated, from 11.4 m to 11.6 m with sandy clay lenses	Very dense	25	-	-	21	11.4
saSa	12.10	12.10	12.23	0.50							Sandy loam (saSa), light gray, water-saturated, with sandy clay lenses	Very dense	22	-	-	22	11.4
saCl	15.90	15.90	16.03	3.80	4	15.70	15.90	15.90			Sandy clay with low plasticity (saClL), light gray, with a fine texture	Stiff plastic	45	-	-	21	14.5
saSa	6:30 PM	-6:30 PM	-6:43 PM	2.40							Low-silt, low-clay, poorly sorted sand (SaFP), light gray, watery	Very dense	37	-	-	24	10.6
																25	10.4
saCl	21.80	21.80	21.93	3.50							Sandy clay of low plasticity (saClL), gray, with gravel, from 19.7 m to 19.8 m with gravel, from 22.1 m to 22.2 m with gravel	Puskiets	47	-	4	18.9	
	22.40	22.40	22.53	0.60			22.40	22.40				Hard	53	-	5	19.4	
saSa	25.60	25.60	25.73	3.20							Silty sand (SiSa) gray, water-saturated, light gray from 23.9 m	Very dense	35	-	-	24	8.2
saCl	28.50	28.50	28.63	2.90			28.50	28.50			Sandy clay of low plasticity (saClL) gray, with gravel, from 28.1 m to 28.3 m with lenses of sandy silt	Hard	53	-	9	29.4	
saSi	29.30	29.30	29.43	0.80							Sandy silt (siSa) light gray, watery	Very dense	35	-	-	24	7.2
saCl	33.50	33.50	33.63	4.20							Sandy, low-plasticity clay-silt (saClL-SiL), dark brown, with coal	Hard	52	-	9	26.7	
saCl	36.00	36.00	36.13	2.50							Sandy low-plasticity clay (saClL) brown, with coal.	Hard	53	-	11	28.9	

Schedule of static and dynamic probing tests,
CPTU 5, DPSH 5

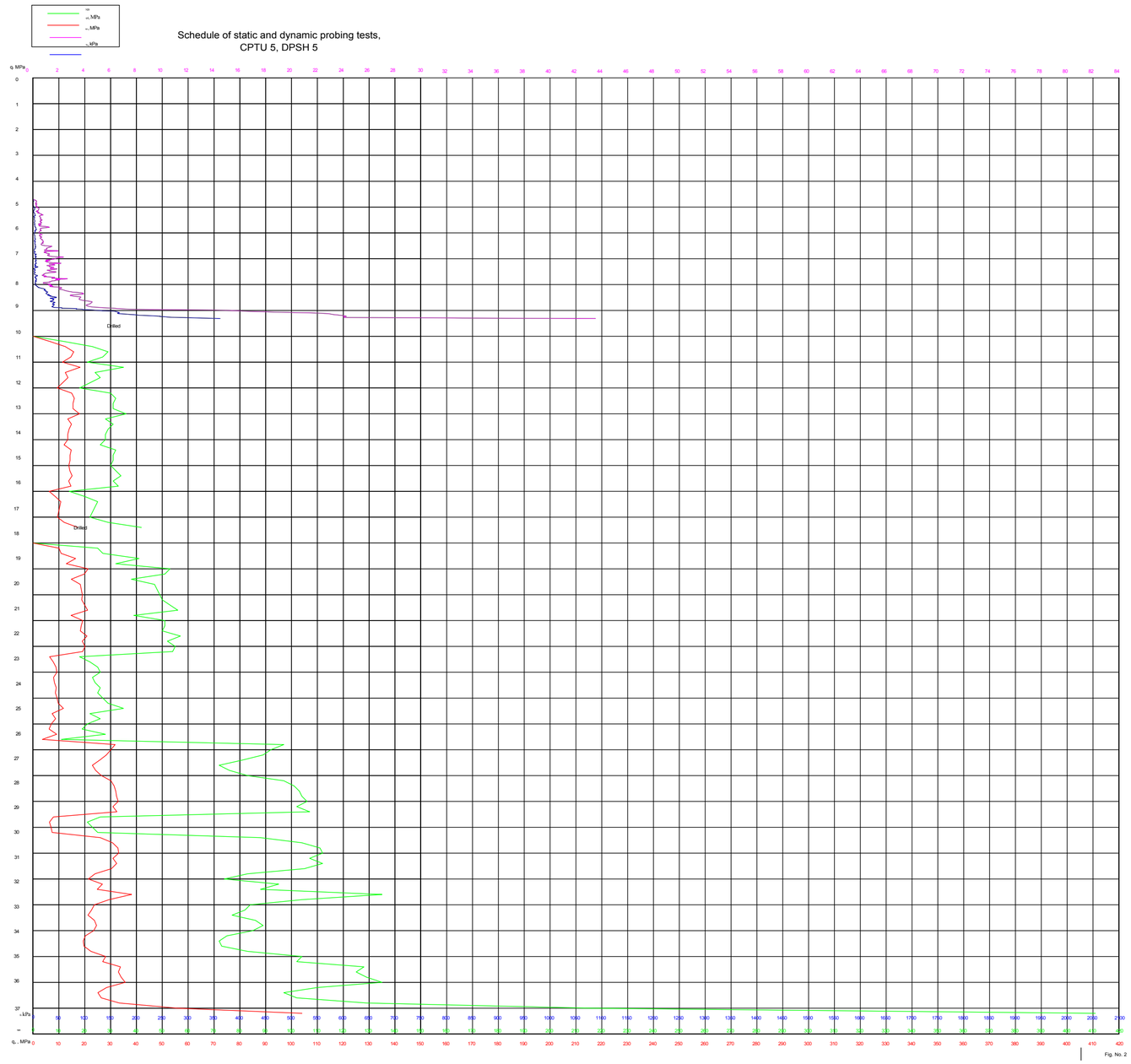


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/22/2024

Borehole No. 6

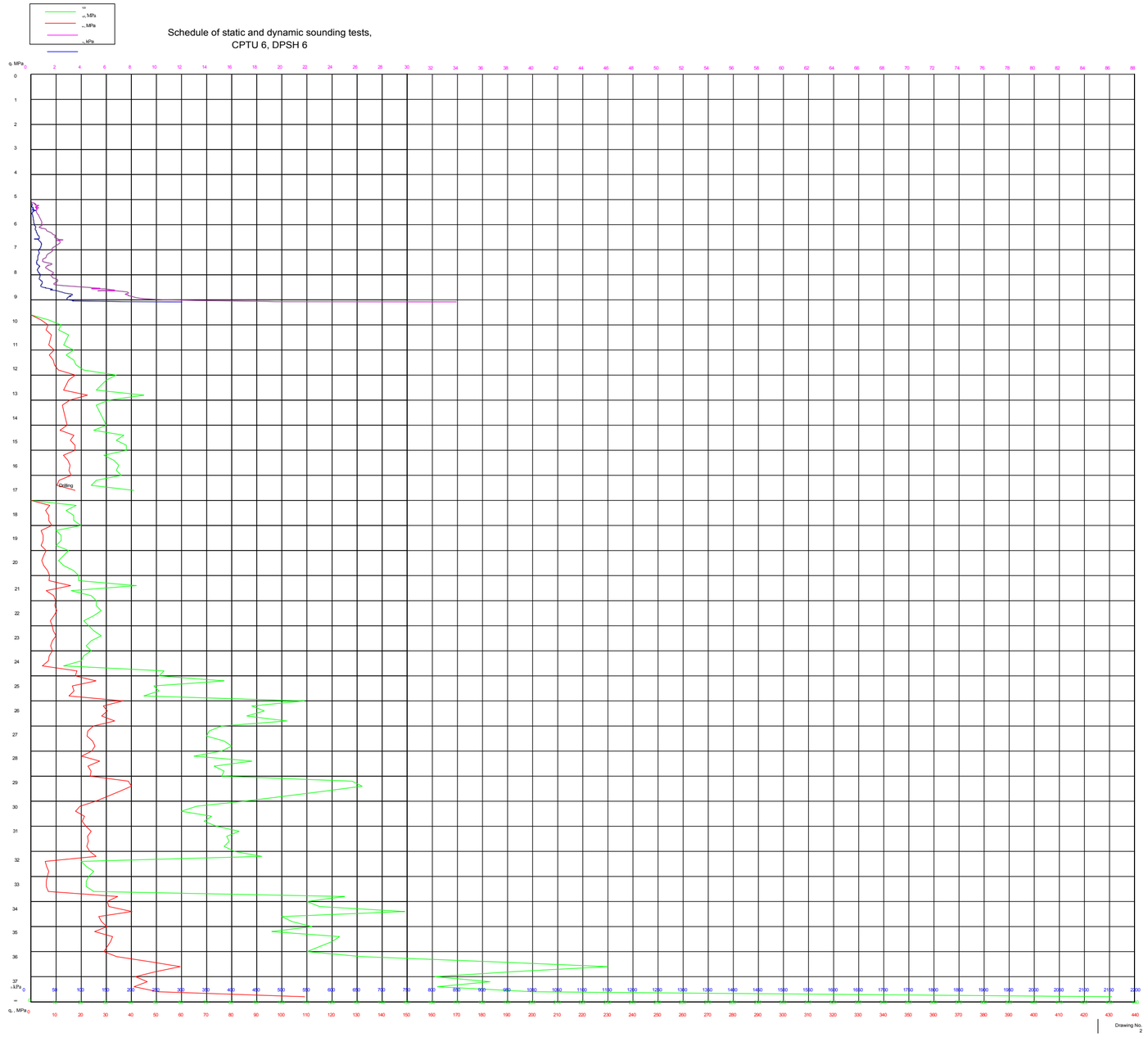
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to BAS77)	Depth of layer base, m (according to LAS07)	Layer thickness, m	Soil elevation alt. according to LAS07: No.	Soil elevation alt. according to LAS07: Depth	Water level, m alt. according to: Pass.	Water level, m alt. according to: Depth.	Water level, m alt. according to: Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Calc. strength, MPa	Lateral pressure strength, kPa	Nanbu criterion, t/m²	Dynamic strength, MPa	Strength %
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-						
	5.10	5.10	-5.23	5.10							Water of the Curonian Lagoon	-						
cl-lV	5.40	5.40	-5.53	0.30							Silt (sandy) (Dy) black, watery	-	1	0.4	2			
a-lV	7.20	7.20	-7.33	1.80							Slightly silty-clayey poorly sorted sand (SaFP), dark gray, up to 7.2 m thick, waterlogged	Very loose	7	1.3	12	-		
	8.40	8.40	-8.53	1.20	1	7.60-8.10					Poorly sorted sand (SaP) gray, light gray from 8.4 m, water-saturated, with shells up to 8.4 m	Very loose	6	1.5	16	-		
	9.00	9.00	-9.13	0.60								Medium density	15	4.6	7	56	-	
a-lV	11.60	11.60	-11.73	2.60	2	10.30–10.80						Dense	19				12	6.5
m-lV	12.80	12.80	-12.93	1.20	3	11.60–12.60					Slightly silty-clayey poorly sorted sand (SaFP) gray, watery	Very dense	24			-	26	13.3
l	16.20	16.20	-16.33	3.40			4.20	16.20			Sandy clay with low plasticity (saCtL) brown, with fine grains	Softly plastic	42			-	31	15.2
lmn	17.40	17.40	-17.53	1.20	4	16.70–5.40 PM					Slightly silty-clayey poorly sorted sand (SaFP), gray-brown, watery	Very dense	37			-		22.6
l	20.40	20.40	-20.53	3.00			5.40 PM	5.40 PM			Sandy clay with low plasticity (saCtL), gray	Softly plastic	42			-	11	5.8
lmn	23.60	23.60	-23.73	3.20	5	20.60–21.30					Low-silt, poorly sorted sandy loam (SaFP), dark greenish-gray, watery	Very dense	37			-	24	8.7
g	31.30	31.30	-31.43	7.70			31.30	-31.30			Sandy clay with low plasticity (saCtL), gray, with sand, light gray from 27.6 m	Hard	53			-	89	24.8
lmn	32.70	32.70	-32.83	1.40	6	32.00–32.70					Silty sand (SiSa) gray, water-saturated, with fine gravel	Very dense	55			-	43	6.4
g	36.00	36.00	-36.13	3.30							Sandy clay with low plasticity (saCtL), gray, with sand, brown from 33.8 m	Hard	53			-	152	35.1

Schedule of static and dynamic sounding tests,
CPTU 6, DPSH 6



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/24/2024

Borehole No. 7

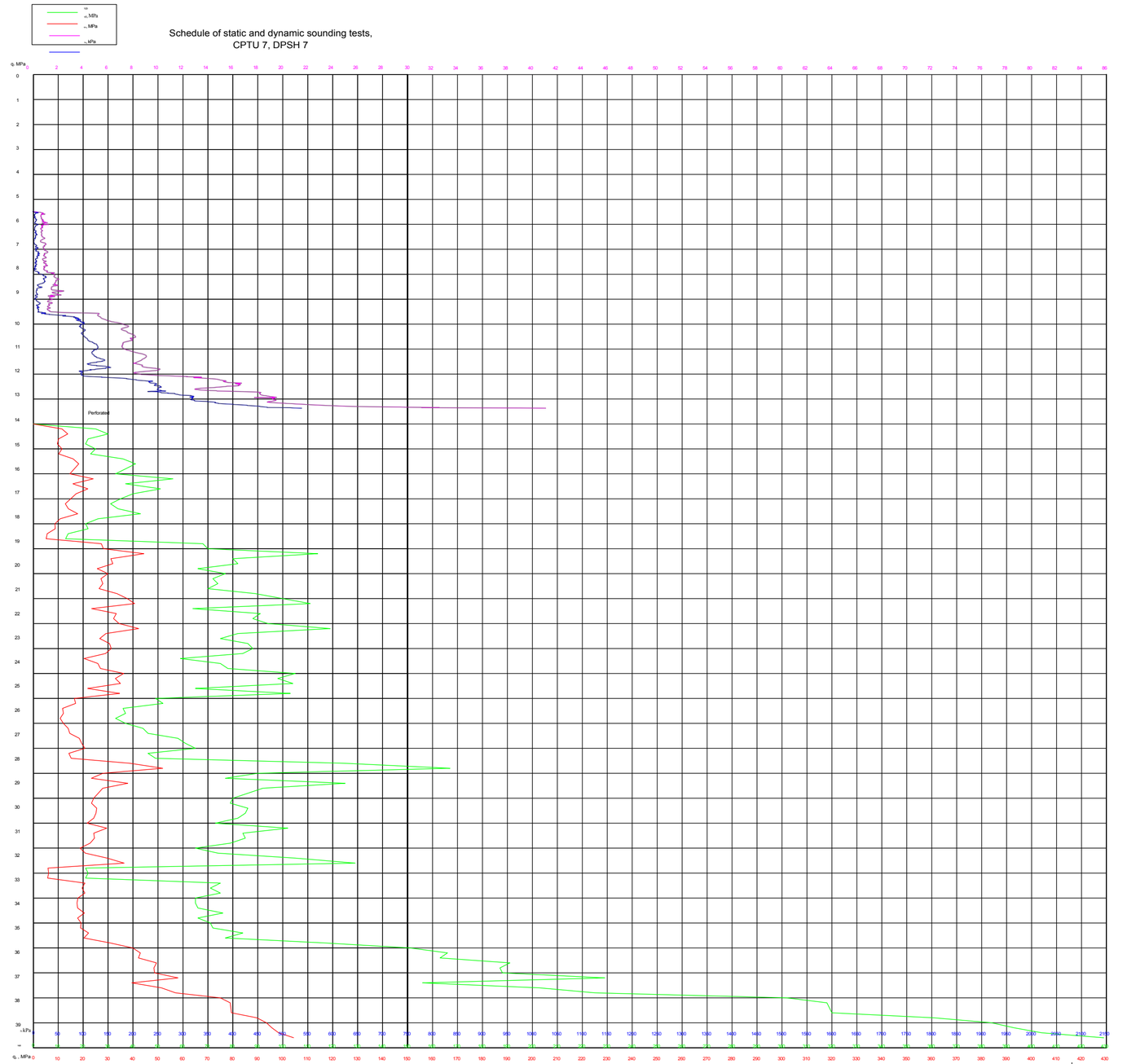
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to BAS77)	Depth of layer base, m (according to LAS07)	Layer thickness, m	Soil elevation alt. according to LAS07, No.	Depth	Water level, m alt. according to Pass.	Depth	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KOS	Cohesion, kPa	Friction angle, °	Number of blows, qd	Dynamic cone penetration, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-
	5.50	5.50	5.63	5.50			0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
a, V	9.50	9.50	9.63	4.00	1	0.00-4.00					Poorly sorted sand (SaP), gray, up to 9.5 m thick, silty, water-saturated, with 0.8% organic matter	Very loose	6	1.1	9	-	-
	12.00	12.00	12.13	2.50	2	9.50-12.00						Medium density	15	7.6	10	-	-
lbIV	13.40	13.40	13.53	1.40							Low-silt, low-clay, poorly sorted sand (SaFP), gray, watery	Dense	33	17.5	27.5	-	-
gIIIkl	14.80	14.80	14.93	1.40			14.80	14.80			Low-plasticity clay (ClL), gray, with sand	Softly plastic	41	-	-	-	19.6 9
lbIV	15.30	15.30	15.43	0.50							Silty sand (biSa) gray, waterlogged	Very dense 35		-	-	23	10.5
l, t	17.70	17.70	17.83	2.40			17.70	17.70			Sandy clay with low plasticity (saCiL) gray	Stiff plastic	45	-	-	46	17.9
lbIV	18.40	18.40	18.53	0.70							Silty sand (biSa) gray, waterlogged	Very dense 35		-	-	23	9.4
					3	18.40-21.70 PM											
					4	9.60-PM-9.60 PM											
l, t	31.80	31.80	31.93	13.40			31.80	31.80			Sandy clay with low plasticity (saCiL) gray	Hard	53	-	77	25.8	
lbIV	32.30	32.30	32.43	0.50							Slightly silty-clayey poorly sorted sand (SaFP) gray, watery	Very dense 37		-	-	22	6.0
l, t	36.00	36.00	36.13	3.70							Sandy clay of low plasticity (saCiL), gray, with water-bearing sand lenses, with gravel, brown from 34.2 m	Hard	53	-	162	27.1	

Schedule of static and dynamic sounding tests,
CPTU 7, DPSH 7



lg. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/18/2024

Borehole No. 8

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

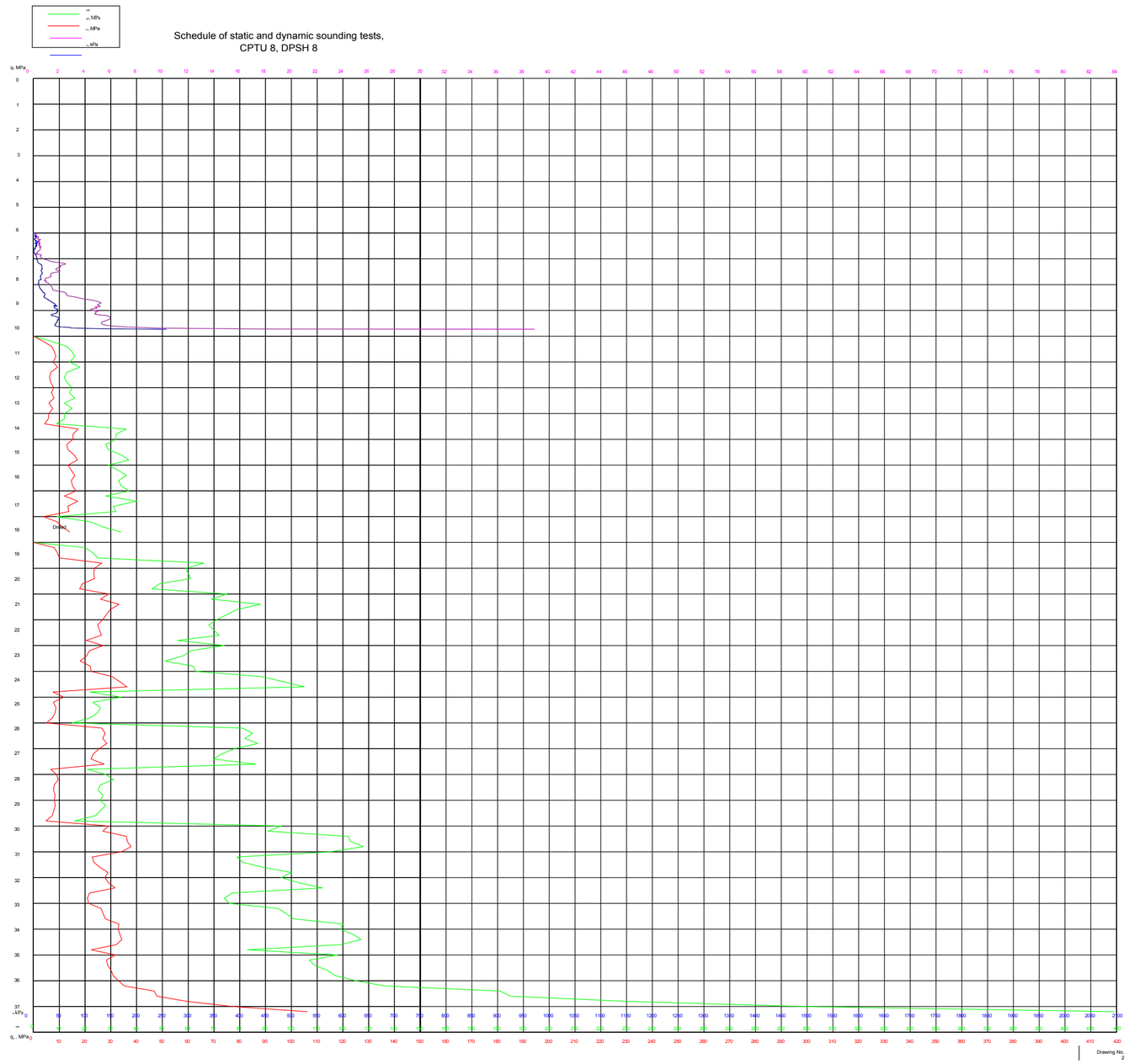
SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (According to LAS07)	Depth of layer base, m (According to BAS77)	Layer thickness, m	Soil elevation according to LAS07, No.	Soil elevation according to LAS07, Depth	Water level, m alt. according to, Pass.	Water level, m alt. according to, Depth.	Water level, m alt. according to, Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	K_0	Cohesion, kPa	Friction angle, °	Number of blows, n_{30}	Dynamic strength, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Water depth: 0.7 m Well measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-
	6.00	6.00	-6.13	6.00			0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
mIV	6.40	6.40	-6.53	0.40							Silt (sandy) (Dy) black, watery	-	1	0	4	5	-
mV	8.30	8.30	-8.43	1.90							Poorly sorted sand (SaP), dark gray, up to 8.3 m thick, water-saturated	Very loose	6	1	2	11	-
	9.10	9.10	-9.23	0.80							Poorly sorted sand (SaP) gray, light gray from 9.1 m, water-saturated, with sandy clay lenses from 13.2 m to 13.5 m	Loose	12	4	3	35	-
	9.60	9.60	-9.73	0.50								Medium density	15	2	3	44	-
aIV	13.50	13.50	-13.63	3.90								Dense	19				13	6.5
l,IV	15.40	15.40	-15.53	1.90							Sandy clay of low plasticity (saCl/L), gray, with gravel	Softly plastic	42	-		32	15.0
	16.90	16.90	-17.03	1.50			16.90	16.90				Stiffly plastic	45	-		34	14.8
lmIV	18.70	18.70	-18.83	1.80							Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense	37	-		-	24.5
																	1.1
l,V	23.70	23.70	-23.83	5.00			23.70	23.70			Sandy clay with low plasticity (saCl/L), gray, with sand grains	Solid	53	-		69	25.5
lmV	24.90	24.90	-25.03	1.20							Sandy silt (saSa) light gray, watery	Very dense	35	-		25	8.6
l,V	26.80	26.80	-26.93	1.90			26.80	26.80			Sandy clay with low plasticity (saCl/L), gray, with sand grains	Hard	53	-		68	22.5
lmV	28.80	28.80	-28.93	2.00							Sandy silt (SiSa) light gray, water saturated, from 28.5 m with sandy clay lenses	Very dense	35	-		26	7.9
l,V	36.00	36.00	-36.13	7.20							Sandy clay with low plasticity (saCl/L), gray, with sand	Hard	53	-		113	31.3

1 SVTU5-31.50

Schedule of static and dynamic sounding tests,
CPTU 8, DPSH 8



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/18/2024

Borehole No. 9

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

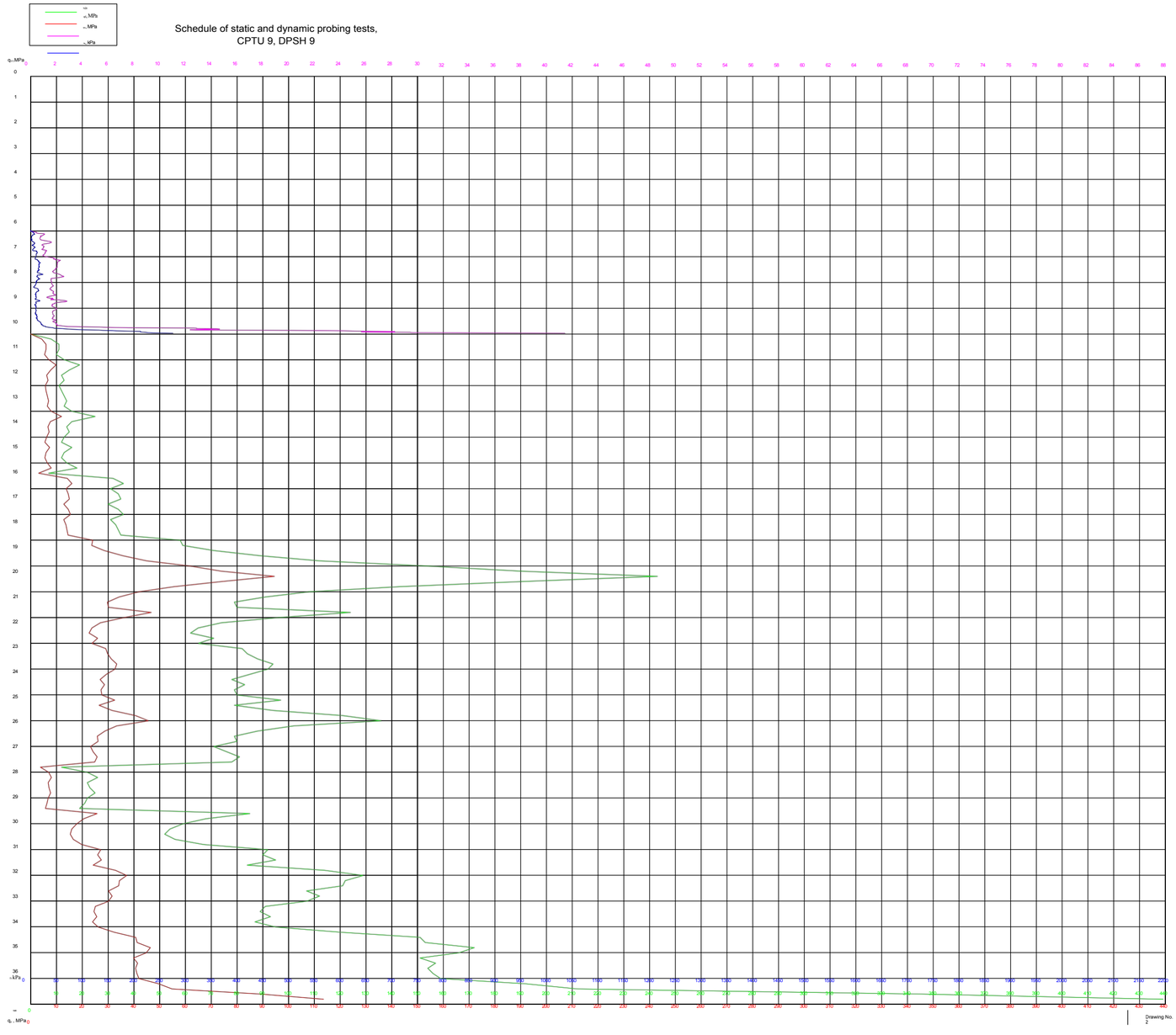
Geological Index	Depth of layer base m	Depth of layer base m Kronshtadt datum	Depth of layer base m Baltic datum	Layer thickness, m
-	0.00	0.00	-0.13	0.00
-	6.00	6.00	-6.13	6.00
aQIV	8.40	8.40	-8.53	2.40
aQIV	9.70	9.70	-9.83	1.30
aQIV	15.40	15.40	-15.53	5.70
gIII	17.10	17.10	-17.23	1.70
gIII	17.80	17.80	-17.93	0.70
lIII	18.60	18.60	-18.73	0.80
lIII	7.90 PM	-7.90 PM	-8.03	1.30
gIII	26.80	26.80	-26.93	6.90
lIII	28.40	28.40	-28.53	1.60
gIII	36.00	36.00	-36.13	7.60

Soil type: No. 3 (13.75)-(-5.25) Kz; 1 (15.50)-(-19.80); 2 (21.45)-(21.75); 4 (27.30)-(27.45)

Water level, m alt. according to LAS07: Pass. Depth 0.00; Max. Depth 0.00 / 17.80 / 26.80

Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Qdc strength, MPa	Qdrod shear strength, kPa	Number of blows, qd	Dynamic strength, MPa
	Platform. Platform height above water surface: 1.3 m; depth below water surface: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
	The waters of the Curonian Lagoon	-	-	-	-	-	-
	Slightly silty-clayey poorly sorted sand (SaFP) dark gray, silty up to 8.4 m, water-saturated	Very loose	7	1.5	10	-	-
		Very crumbly	6	1.9	12	-	-
	Poorly sorted sand (SaF) gray, up to 9.7 m with shells, from 9.7 m light gray, water-saturated				17.5	122	
		Dense	19			13	6.6
	Sandy clay with low plasticity (saCtL) gray, with water-saturated gravelly sand lenses up to 16.2 m, with gravelly sand lenses, from 17.8 m with water-saturated sand lenses, from 17.8 m light gray	Soft and pliable	42	-	-	31	13.3
		Rigid plastic	46			58	43.6
		Hard	53	-	-	56	24.7
	Sandy loam (siSa) light gray, water-saturated	Very dense	35	-	-	160	63.0
	Sandy clay with low plasticity (saCtL) gray, with gravel	Hard	53	-	-	84	29.5
	Silty sand (siSa) light gray, water-saturated	Very dense	35	-	-	29	7.0
	Sandy clay of low plasticity (saCtL), gray, with gravel	Hard	53	-	-	130	35.5

Schedule of static and dynamic probing tests, CPTU 9, DPSH 9



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/16/2024

Borehole No. 10

Altitude of the borehole mouth
0.00 (according to LAS07)
Altitude of the borehole mouth
-0.13 (according to BAS77)
Borehole depth 36.00 m

SWECO

M 1:100

Geological index	Depth of layer base, m	Depth of layer base, m abs. (according to LAS07)	Depth of layer base, m abs. (according to BAS77)	Layer thickness, m	Soil type No.	Water level, m alt. according to LAS07 Depth	Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cale strength, MPa	Bore strength, MPa	Number of blows, n_{10}	Dynamic cone strength, q_d MPa	
											Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Borehole measurements start at a height of 0.0 m on the LAS07 datum. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-	-
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00										
-											The waters of the Curonian Lagoon	-	-	-	-	-	-	-
a,b	6.00	-6.00	-6.13	6.00															
	6.40	-6.40	-6.53	0.40	1	6.80–6.90					Silt (sandy) (Dy) black, waterlogged	-	1	0.5	7	-	-	
b	8.00	-8.00	-8.13	1.60							Slightly silty-clayey poorly sorted sand with a small admixture of organic matter (aSaFP) dark gray, silty up to 8.5 m, watery, with 2.0% organic matter admixture	Very crumbly	5	0.9	9	-	-	
	8.50	-8.50	-8.63	0.50	2	8.00–8.30						Very crumbly	7	1.4	11	-	-	
a,b	8.80	-8.80	-8.93	0.30							Slightly silty-clayey poorly sorted sand (SaFP), gray, from 9.5 m light gray waterlogged, up to 9.5 m with shells, with 1.5% organic matter admixture	Purus	11	3.0	26	-	-	
	9.50	-9.50	-9.63	0.70								Very fluffy	7	2.0	10	-	-	
a,b	9.80	-9.80	-9.93	0.30	3	9.80–10.00						Crumbl	11	3.8	25	-	-	
														10.5	44.0			
a,lV											Poorly sorted sand (SaP), light gray, water-saturated, from 14.3 m to 16.1 m with sandy clay lenses, with gravel.	Very dense	23			24	11.9	
	14.30	-14.30	-14.43	4.50														
	16.10	-16.10	-16.23	1.80								Very loose	6	-		2	1.0	
lmIV					5	4.00 PM–5.00 PM					Silty sand (siSa), light gray, water-saturated, from 18.1 m to 18.4 m with a layer of silty sand	Very dense	35	-		22	9.4	
	18.40	-18.40	-0.53 p.m.	2.30														
gIV					6	10.20 PM–11.10 PM					Sandy clay of low plasticity (saCiL), gray, with gravel, from 23.0 m to 23.1 m with gravel, from 27.2 m to 28.0 m with lenses of silty clay	Solid	53	-	163	316		
	36.00	-36.00	-36.13	17.60														

Schedule of static and dynamic sounding tests,
CPTU 10, DPSH 10

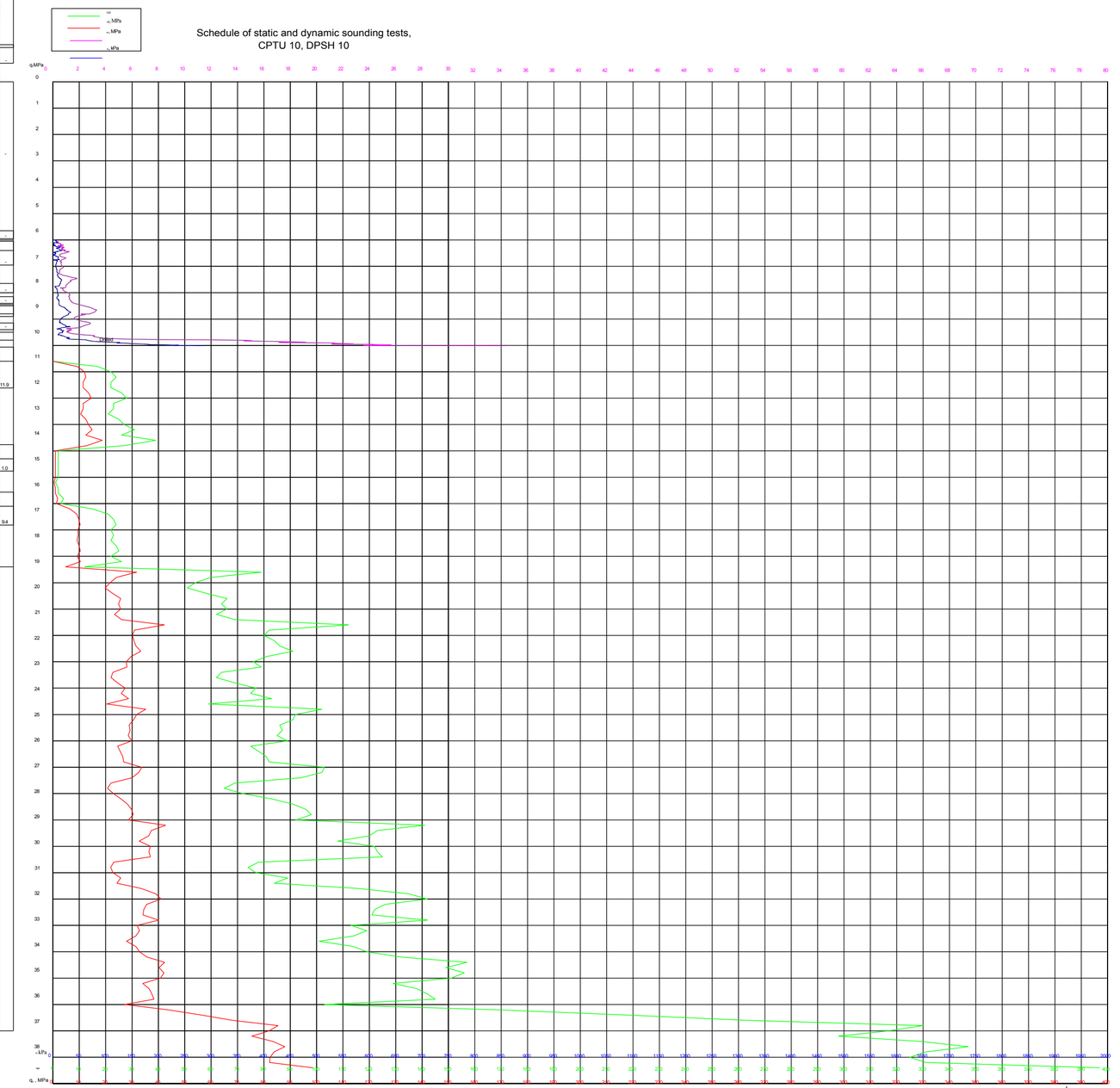


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/29/2024

Borehole No. 11

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 37.50 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to BAS77)	Depth of layer base, m (according to LAS07)	Layer thickness, m	Soil elevation alt. according to LAS07, No.	Soil elevation alt. according to LAS07, Depth	Water level, m alt. according to, Pass. Depth	Water level, m alt. according to, Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cpk-strength, MPa	Lateral friction strength CPT	Number of blows, on Dynamic probing, number/0.2m	Deformation modulus, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m Borehole measurements start at a height of 0.9 m above LAS07. The is variable)	-	-	-	-	-	-
-	5.60	-5.60	-5.73	5.60			0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
m,V	6.10	-6.10	-6.23	0.50						Silt (sandy) (Dy) black, watery	-	1	0.0	0	-	-
m,V	8.10	-8.10	-8.23	2.00	1	6.30-8.70				Slightly silty-clayey, poorly sorted sand with a small amount of organic matter (cSaFP) gray, watery, with 2.0% organic matter	Very loose	5	0.8	9	-	-
a,lV	8.90	-8.90	-9.03	0.80	2	8.50-8.90				Low-silt, loamy, poorly sorted sand (SaFP), gray, watery, containing 1.5% or more organic matter	Loamy	11	2.4	37	-	-
a,lV	10.00	-10.00	-10.13	1.10	3	9.00-10.00				Peat (Pt) black, decomposed, containing at least 41.6% organic matter	-	3	1.0	37	-	-
aV	11.10	-11.10	-11.23	1.10						Poorly sorted sand (SaP), gray, watery, with 0.7% organic matter	Very loose	6	1.2	66	-	-
aV	11.70	-11.70	-11.83	0.60							Medium density	15	7.4	45	-	-
aV	12.80	-12.80	-12.93	1.10	4	11.70-12.70					Very loose	6	2.2	30	-	-
aV	13.80	-13.80	-13.93	1.00	5	13.00-14.50					Loamy	12	3.4	33	-	-
aV	14.60	-14.60	-14.73	0.80						Gravelly sand of varying gradation (grSaG), gray, water-saturated	Dense	21	14.8	33	-	-
gmV	16.00	-16.00	-16.13	1.40	6	9:00 PM-4:00 PM	9:00 PM	9:00 PM		Sandy clay of low plasticity (saCl(L), gray, with gravel	Stiffly plastic	45	2.1	56	-	-
l	16.50	-16.50	-16.63	0.50	7	4:00 PM-4:50 PM	4:00 PM	4:00 PM		Sandy clay-silt of low plasticity (saCL-SiL) gray, with gravel, with water-bearing sand lenses	Semi-hard	46	3.6	109	-	-
l	17.00	-17.00	-17.13	0.50							Rigid plastic	45	3.0	83	-	-
l	21.30	-21.30	-21.43	4.30	8	9:10 PM-10:00 PM	9:30 PM	9:30 PM		Sandy clay with low plasticity (saCl(L), gray, with sand grains	Hard	53	14.7	224	46	17.7
lmV	25.90	-25.90	-26.03	4.60						Slightly silty-clayey poorly sorted sand (SaFP) gray, watery	Very dense	37	-	24	8.4	-
l	34.40	-34.40	-34.53	8.50						Sandy clay with low plasticity (saCl(L), gray, with sand.	Hard	53	-	97	28.1	-
l	35.20	-35.20	-35.33	0.80	9	34.70-36.00					Puskelis	47	-	46	12.6	-
											Hard	53	-	108	27.4	-
l	37.50	-37.50	-37.63	2.30												

Schedule of static and dynamic sounding tests, CPTU 11, DPSH 11

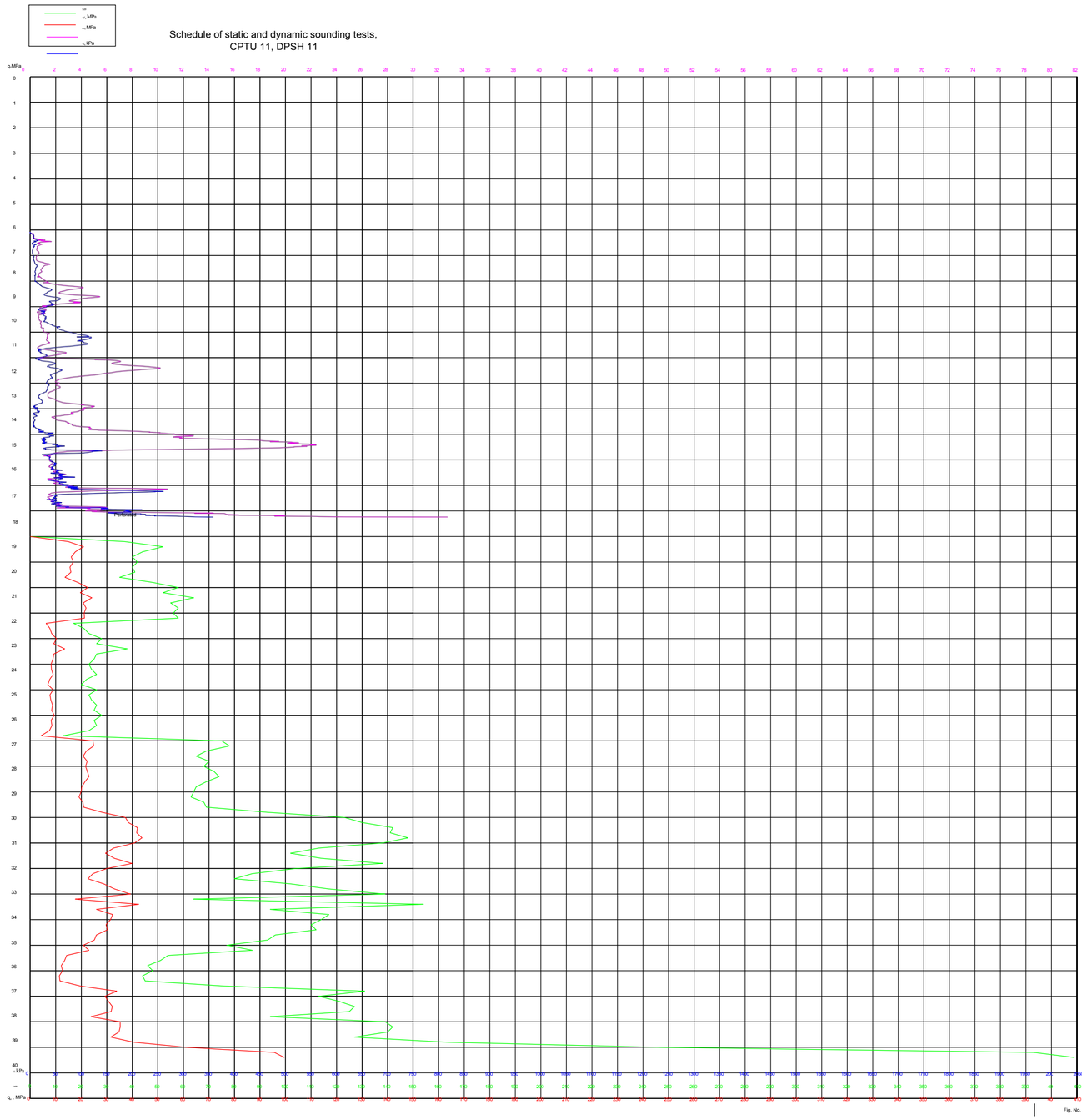


Fig. No.

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/28/2024

Borehole No. 12

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth - 0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological Index	Depth of layer base, m	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil type No.	Depth	Water level, m alt. according to LAS07 Min.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Calc.strength R_c, MPa	Standard strength R_{cn}, MPa	Dynamic cone strength q_d, MPa	
	0.00	0.00	-0.13	0.00					Platform. Platform height above water surface: 1.3 m; depth below water surface: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
	6.10	-6.10	-6.23	6.10					The waters of the Curonian Lagoon	-	-	-	-	-	-
a IV	8.20	-8.20	-8.33	2.10					Poorly sorted sand (SaP) is dark gray, gray from 8.2 m, silty to 8.2 m, water-saturated, with 1.0% organic matter	Very crumbly	6	0.8	5	-	-
a IV	9.00	-9.00	-9.13	0.80	1	8.20–8.50			Sandy, very highly plastic silt with moderate organic matter content (saSi/Cl), dark brown	Loose	12	3.6	31	-	-
b IV	9.70	-9.70	-9.83	0.70					Peat (Pt) dark brown, well-decomposed Poorly sorted	Softly plastic	27	4.6	28	-	-
m IV	10.50	-10.50	-10.63	0.80						-	3	1.3	78	-	-
m IV	10.90	-10.90	-11.03	0.40					sand (SaP) gray, watery	Very loose	6	1.1	9	-	-
a IV	1.20	-13.20	-13.33	2.30					Gravelly sand of varying gradation (grSaG), gray, water-saturated	Loose	13	2.8	23	-	-
	13.50	-13.50	-13.63	0.30						Dense	21	11.2	42	-	-
												36.7	73	-	-
3	15.40	-15.40	-15.53	1.90					Silty sand (siSa) light gray, water-saturated	Very dense	22			21	9.1
L	17.20	-17.20	-17.33	1.80					Sandy clay with low plasticity (saCl/L), gray, with a fine grain	Softly plastic	42	-	-	31	13.4
am	17.60	-17.60	-17.73	0.40					Sandy loam (siSa) light gray, watery	Very dense	35	-	-	20	8.3
L	36.00	-36.00	-36.13	6.40 p.m.					Sandy clay of low plasticity (saCl/L), gray, with gravel, from 19.3 m to 19.4 m with pebbles, from 28.1 m to 28.3 m with boulders	Solid	53	-	-	105	32.6

Water level, m alt. according to LAS07: 0.00 0.00 0.00 0.00; 10.50 10.50; 6.20 6.20 p.m.

Schedule of static and dynamic probing tests, CPTU 12, DPSH 12

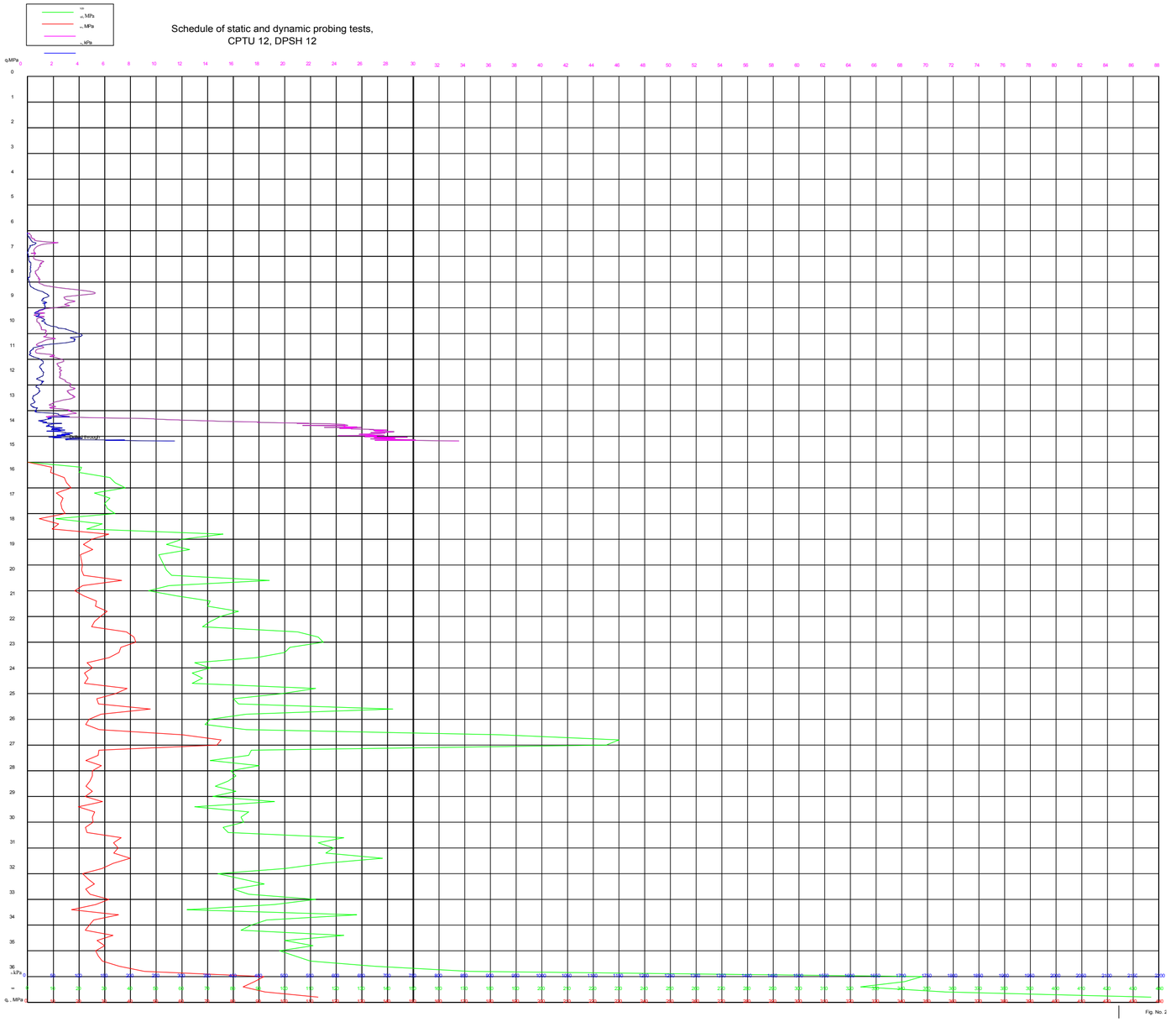


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/28/2024

Borehole No. 13

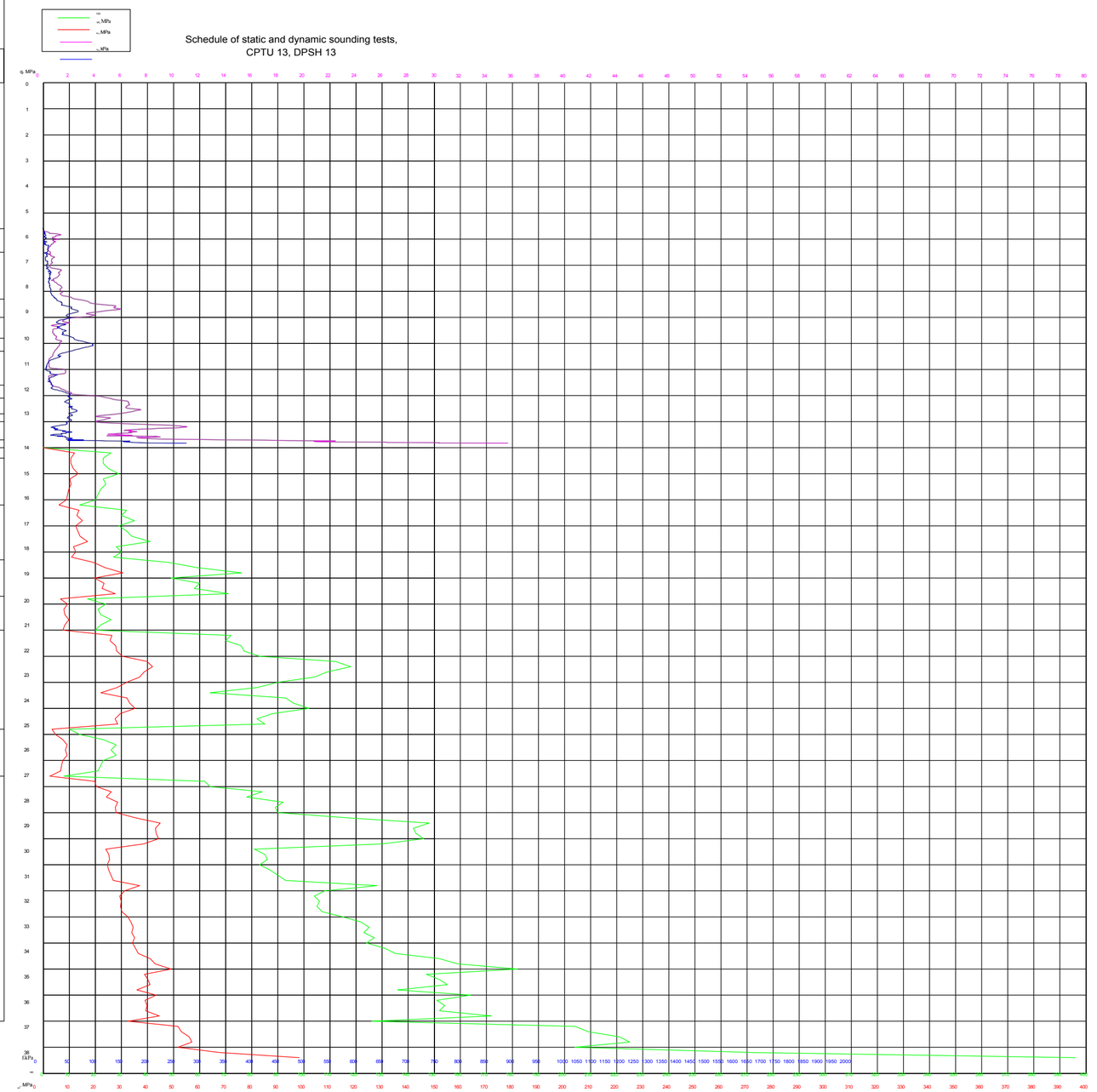
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (According to LAS07)	Depth of layer base m (According to BAS77)	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m according to Pass.	Water level, m according to Depth.	Water level, m according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	KS	Cohesion, kPa	Friction angle, °	Number of blows, N	Dynamic cone strength, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-
	5.60	-5.60	-5.73	5.60							Water from the Curonian Lagoon	-	-	-	-	-	-
a,m	6.50	-6.50	-6.63	0.90	1	6.50–6.10					Slightly silty-clayey, poorly sorted sand with a small amount of organic matter material admixture (siSaFP), dark greenish-gray, watery, with 2.1 Very loose % organic matter		5	0	8.5	-	-
a,m	8.30	-8.30	-8.43	1.80	2	8.30–7.10					Slightly silty-clayey poorly sorted sand (SaFP) gray, from Very loose 8.3 m to 9.0 m with shells, watery, from 1.8 % with organic matter admixture		7	1	1.12	-	-
a,m	9.00	-9.00	-9.13	0.70							Sandy, very highly plastic silt with moderate organic matter content	Loose	11	4.3	47	-	-
a,m	9.80	-9.80	-9.93	0.80	3	9.80–9.80					(saSiVO), dark brown, with 10.2% organic matter	Softly plastic	27	12	39	-	-
a,m	10.30	-10.30	-10.43	0.50	4	10.30–10.20					Peat (Pt) is dark brown, well-decomposed, containing at least 31.2% organic content	-	3	1.2	77	-	-
a,m	11.60	-11.60	-11.73	1.30	5	10.50–11.60	10.90	10.90			Sandy clay with low plasticity and a low organic matter content (saCl), gray, from 10.3 m to 10.5 m with sandy-silt lenses, from Takiai plastic 10.9 m to 11.2 m with water-bearing lenses of fine sand, from 3.1% with organic matter admixture		26	0.8	18	-	-
a,m	12.10	-12.10	-12.23	0.50	6	11.60–11.50	11.90	11.90			Sandy, highly plastic silt with a small amount of organic matter (saSiH), dark brown, with 5.8% organic matter	Stiffly plastic	29	2.4	37	-	-
a,m	12.70	-12.70	-12.83	0.60							Poorly sorted sand (SaP), light gray, gray from 13.0 m, watery	Medium density	19	0.5	53	-	-
a,m	13.00	-1.00 PM	-1.13 PM	0.30								Loose	12	4.6	52	-	-
a,m	13.70	-1.70 PM	-13.83	0.70	7	13.00–13.30						Medium density	16	7.0	38	-	-
a,m	14.40	-14.40	-14.53	0.70							Gravelly sand of varying gradation (grSaG), gray, water-saturated	Very dense 25				25	9.3
a,m	16.20	-16.20	-16.33	1.80							Slightly silty-clayey, poorly sorted sand (SaFP), light brown, water-saturated	Very dense 37			- 23	10.5	
l	18.30	-18.30	-18.43	2.10							Sandy clay with low plasticity (saClL), brown, with a slight grayish tint; gray from 18.3 m	Softly plastic	42		- 30	12.7	
l	19.70	-19.70	-19.83	1.40			19.70	19.70				Hard	53		- 66	23.8	
a,m	21.00	-21.00	-21.13	1.30							Sandy silt (siSa) light gray, watery	Very dense 35			- 22	8.4	
l	24.80	-24.80	-24.93	3.80			24.80	24.80			Sandy clay with low plasticity (saClL), gray, with sand grains	Hard	53		- 82	28.8	
a,m	26.60	-26.60	-26.73	1.80	9	24.80–25.60					Silty sand (SiSa) light gray, watery	Very dense 35			- 25	7.0	
l	36.00	-36.00	-36.13	9.40							Sandy clay with low plasticity (saClL), gray, with sand.	Hard	53		- 120	33.9	

Schedule of static and dynamic sounding tests, CPTU 13, DPSH 13



Drawing No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/27/2024

Borehole No. 14

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (According to LAS07)	Depth of layer base, m (According to BAS77)	Layer thickness, m	Soil elevation according to LAS07, No.	Soil elevation according to LAS07, Depth	Water level, m alt. according to, Pass.	Water level, m alt. according to, Depth	Water level, m alt. according to, Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	KS	q_c strength, MPa	Undrained strength, kPa / Dynamic cone resistance, MPa	Dynamic cone strength, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth to water: 0.7 m Borehole measurements start at a height of 1.0 m above LAS07. The is variable)	-				
	6.20	-6.20	-6.33	6.20			0.00	0.00	0.00		Water of the Curonian Lagoon	-				
	8.30	-8.30	-8.43	2.10							Slightly silty-clayey poorly sorted sand (SaFP) dark gray, gray from 6.3 m, silty to 6.3 m, watery	Very loose	7	0.7	8	-
	8.60	-8.60	-8.73	0.30							Poorly sorted sand (SaP), gray, water-saturated, with shells	Medium density	15	3.1	55	-
	9.20	-9.20	-9.33	0.60							Sandy, very highly plastic silt with moderate organic matter content (SaSIVO), dark brown	Soft plastic	27	1.0	32	-
	9.80	-9.80	-9.93	0.60							Peat (Pt) dark brown, well-decomposed	-	3	0.9	44	-
	11.00	-11.00	-11.13	1.20			11.00	-11.00			Poorly sorted sand (SaP) grayish-brown, light gray from 11.9 m, waterlogged; with sandy clay lenses from 11.8 m to 11.9 m	Purus	12	3.5	40	-
	1:00 PM	-1:00 PM	-1:13 PM	2:00							Sandy, very highly plastic silt with moderate organic matter content (SaSIVO), gray, with a lens of watery silty sand	Softly plastic	27	2.6	79	-
	1:30	-1:30 PM	-1:43 PM	0.50							Poorly sorted sand (SaP), gray, watery	Purus	12	4.4	60	-
	2:20	-1:90 PM	-13:90	0.40								Medium density	15	7.9	63	-
	4:10	-2:20 PM	-14:50	1.90							Gravelly sand of varying gradation (grSaG), gray, watery	Very dense	25	23.6	38	-
	17.20	-5:20	-17.33	1.10								Soft plastic	42	-	35	15.2
	18.20	-18.20	-18.33	1.00								Semi-plastic	45	-	37	15.2
	22.60	-22.60	-22.73	4.40			22.60	-22.60			Sandy clay with low plasticity (saCiL), brown, with gravel; gray from 18.2 m; with boulders from 19.4 m to 19.9 m	Hard	53	-	74	28.1
	23.10	-23.10	-23.23	0.50							Sandy silt (siSa) light gray, watery	Very dense	35	-	20	7.0
	36.00	-36.00	-36.13	12.90							Sandy clay with low plasticity (saCiL), gray, with sand.	Hard	53	-	120	34.7

Schedule of static and dynamic sounding tests, CPTU 14, DPSH 14

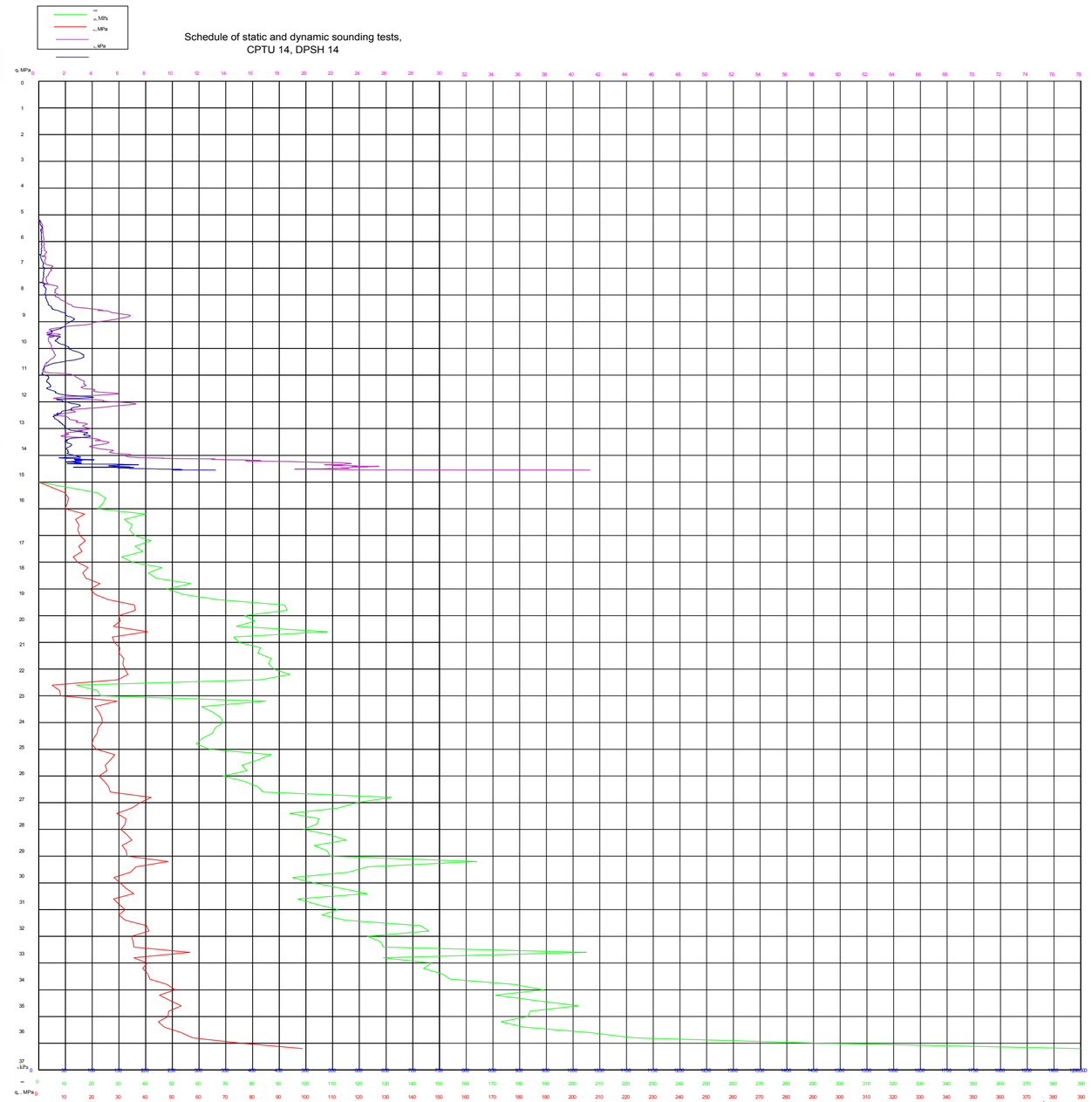


Fig. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/27/2024

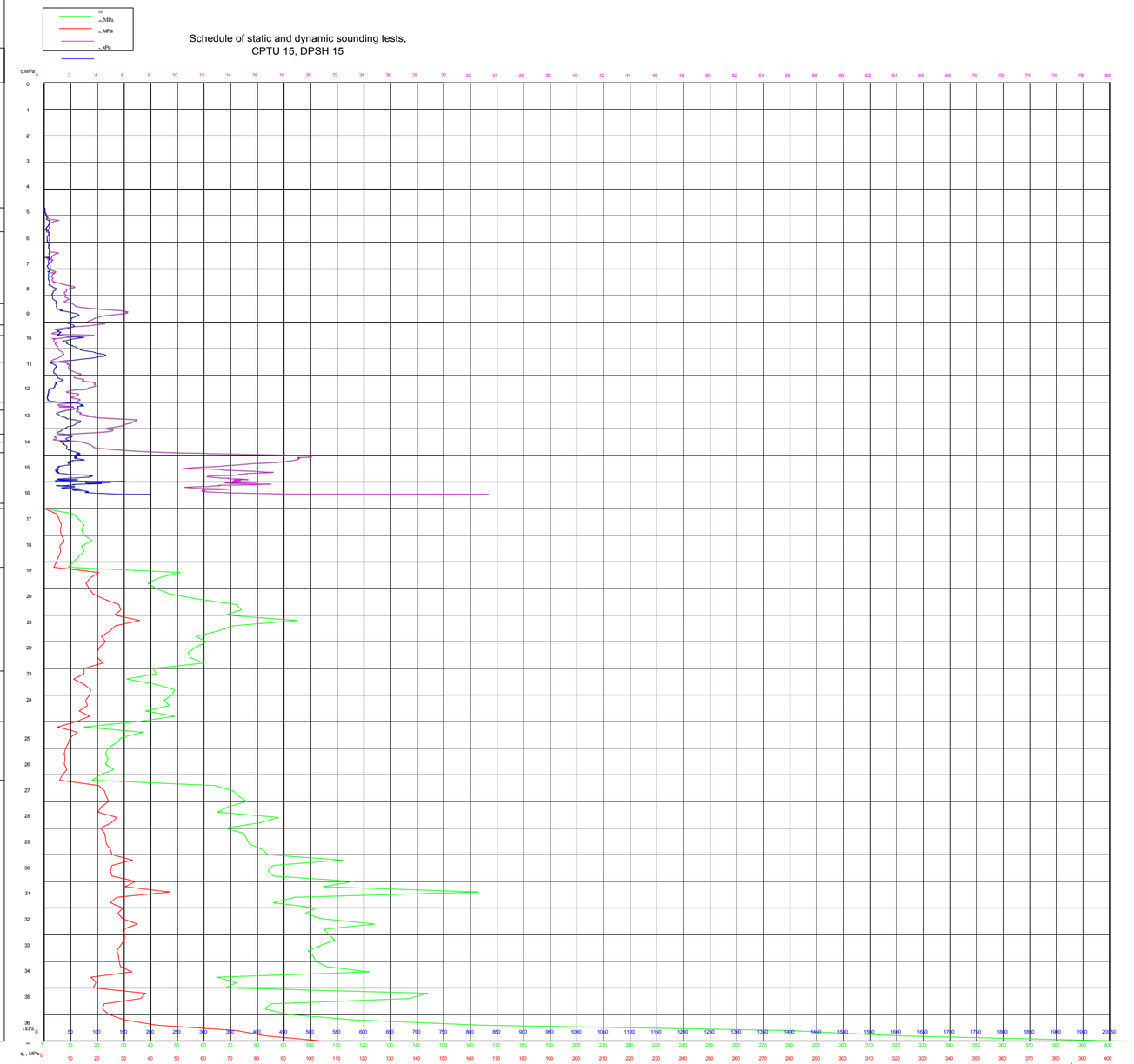
Borehole No. 15

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (According to BAS77)	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Calc.strength, MPa	Static strength, MPa	Number of blows, N30	Dynamic cone strength, MPa	Water content, %
	0.00	0.00	-0.13	0.00		0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-						
	4.70	-4.70	-4.83	4.70		0.00	0.00	0.00		Water of the Curonian Lagoon	-						
a IV	5.60	-5.60	-5.73	0.90	5					Slightly silty (clayey), poorly sorted sand with a small organic matter content (saSaFP), dark gray, lumpy, watery, with Very loose 2.3% organic matter		5	0.3	3.5	-	-	
a IV	8.30	-8.30	-8.43	2.70	2					Poorly sorted sand (SaP) is gray, watery, and contains 0.9% organic matter	Very loose	6	0.9	11	-		
a IV	9.10	-9.10	-9.23	0.80	3					Low silt, low clay, poorly sorted sand (SaFP), gray, watery, with shells, with 1.2% organic matter admixture Sandy, very highly plastic silt with moderate organic matter	Loamy	11	4.1	43	-		
a IV	9.50	-9.50	-9.63	0.40	4					(saSiVO) dark brown, from 9.4 m to 9.5 m with fine sand lenses, with 10.4% organic matter admixture	Hard	30	5.7	38	-		
a IV	10.50	-10.50	-10.63	1.00	5	10:50 -10.50				Gelja (Gy) dark brown, with 19.0% organic matter	-	2	1.2	67	-		
a IV	12.00 12.30	-12.00 -12.30	-12.13 -12.43	1.50 0.30	6					Gravelly sand of varying gradation (grSaG), light gray, watery Sandy, very highly plastic silt with moderate organic matter admixture (SaSiVO) gray, with a lens of watery sand	Loamy / Hard plastic	13 28	2.5 1.9	18 61	- -		
a IV	13.20 13.50	-13.20 -13.50	-13.33 -13.63	0.90 0.30	7					Poorly sorted sand (SaP) light gray, watery Sandy, very highly plastic silt with moderate organic matter admixture (SaSiVO) gray, with a lens of watery sand	Loose / Hard plastic	12 28	4.6 1.3	42 4	- -		
a IV	13.90	-13.90	-14.03	0.40							Loamy	13	4.7	44	-		
a IV	15.80	-15.80	-15.93	1.90						Gravelly sand of varying gradation (grSaG), gray, water-saturated, from 15.4 m with lenses of sandy clay	Dense	21	14.9	57	- -		
a III	18.20	-18.20	-6:33 PM	2.40	8	0.00	0.00	0.00		Sandy loam (SiSa) gray, water-saturated	Dense	18	-	-	13	5.3	
l III	22.10	-22.10	-10:23 PM	3.90	9	10:10 -22.10				Sandy clay with low plasticity (saCiL) brown, with gravel, gray from 18.2 m, light gray from 22.1 m, with water-saturated sand lenses from 22.1 m	Hard	53	-	-	56	21.4	
	24.00	-24.00	-12:13	1.90	10						Softly plastic	42	-	-	43	14.9	
a II	26.20	-26.20	-26.33	2.20						Sandy silt (SiSa) light gray, watery	Very dense	35	-	-	24	8.0	
l I	36.00	-36.00	-36.13	9.80	11					Sandy clay with low plasticity (saCiL), gray, with sand.	Hard	53	-	-	104	20.3	



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/26/2024

Borehole No. 16

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth - 0.13 (according to BAS77)

Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS77)	Depth of layer base, m (according to LAS77)	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Cohesion, MPa	Lateral pressure coefficient, K0	Number of blows, qd	Dynamic resistance, MPa
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
-	4.50	4.50	-4.63	4.50	Water of the Curonian Lagoon	-					
aN2	8.00	8.00	-8.13	3.50	Slightly silty-clayey, poorly sorted sand with a small amount of organic matter material (siSaFP), dark greenish-gray, up to 5.3 m loamy, very loose from 5.3 m, gray, water-saturated, with 2.1%–2.6% organic matter content		5	0.3	0.10	-	-
prV	8.70	8.70	-8.83	0.70	Poorly sorted sand (SaP), gray, from 8.0 m to 8.7 m with shells, water-saturated	Loamy	12	4.7	0.49	-	-
aN2	10.60	10.60	-10.73	1.90	Peat (Pt) is dark brown, well decomposed, with 21.7% organic matter	-	3	1.0	0.43	-	-
aN2	12.00	12.00	-12.13	1.40	Slightly silty-clayey poorly sorted sand (SaFP) gray, watery, with 0.9% organic matter	Very loose	7	1.9	0.28	-	-
aN2	12.90	12.90	-13.03	0.90	Gravelly poorly sorted sand (grSaP), brown, watery	Very loose	8	1.9	0.20	-	-
aN2	15.00 3:40	-3:00 PM	-3:13 PM	2:10 0:40	Gravelly sand of varying gradation (grSaG), brown, water-saturated	Loamy	13	4.0	0.22	-	-
mV	4:00 PM 4:20	-3:40 PM -4:00 PM	-3:53 PM -4:13 PM	0:60 0:30	Gravelly poorly sorted sand (grSaP) brown, waterlogged Poorly sorted sand (SaP) brown, waterlogged, with sandy clay lenses Gravelly poorly sorted sand (grSaP) light gray, waterlogged	Very loose Dense	8 16	1.4 3.5	0.22 0.5	-	-
lmV		-4:20 PM	-4:43 PM		Gravelly, slightly silty-clayey, well-sorted sand (grSaFW) Very dense 38 - gray-brown, water-saturated					24	10.3
-	17.60	-17.60	-17.73	1.30	Stiff plastic	46				21	13.7
l	18.20	-18.20	-18.33	0.60	Sandy clay with low plasticity (saCiL), gray, with sand grains	Hard	53			56	22.1
lmV	22.90 30.80	-22.90 -30.80	-23.03 -30.93	4.70 7.90	Poorly sorted sand (SaP) light gray, watery	Very dense 36				27	8.6
l	36.00	-36.00	-36.13	5.20	Sandy clay with low plasticity (saCiL), gray-brown, with water-saturated sand lenses	Hard	53			1	2.3

Water level, m alt. according to

No.	Depth	Pass. Depth.	Max.
		0.00	0.00
		0.00	0.00
		0.00	0.00
1	0.00–4.50		
2	4.50–7.20		
3	7.20–8.90	10.60	10.60
4	10.60–11.10		
5	11.10–12.80		
6	12.80 PM–1:50 PM		
7	1:50 PM–4:30 PM		
8	22.90–23.80	22.90	22.90
9	28.10–28.40		

Schedule of static and dynamic sounding tests, CPTU 16, DPSH 16

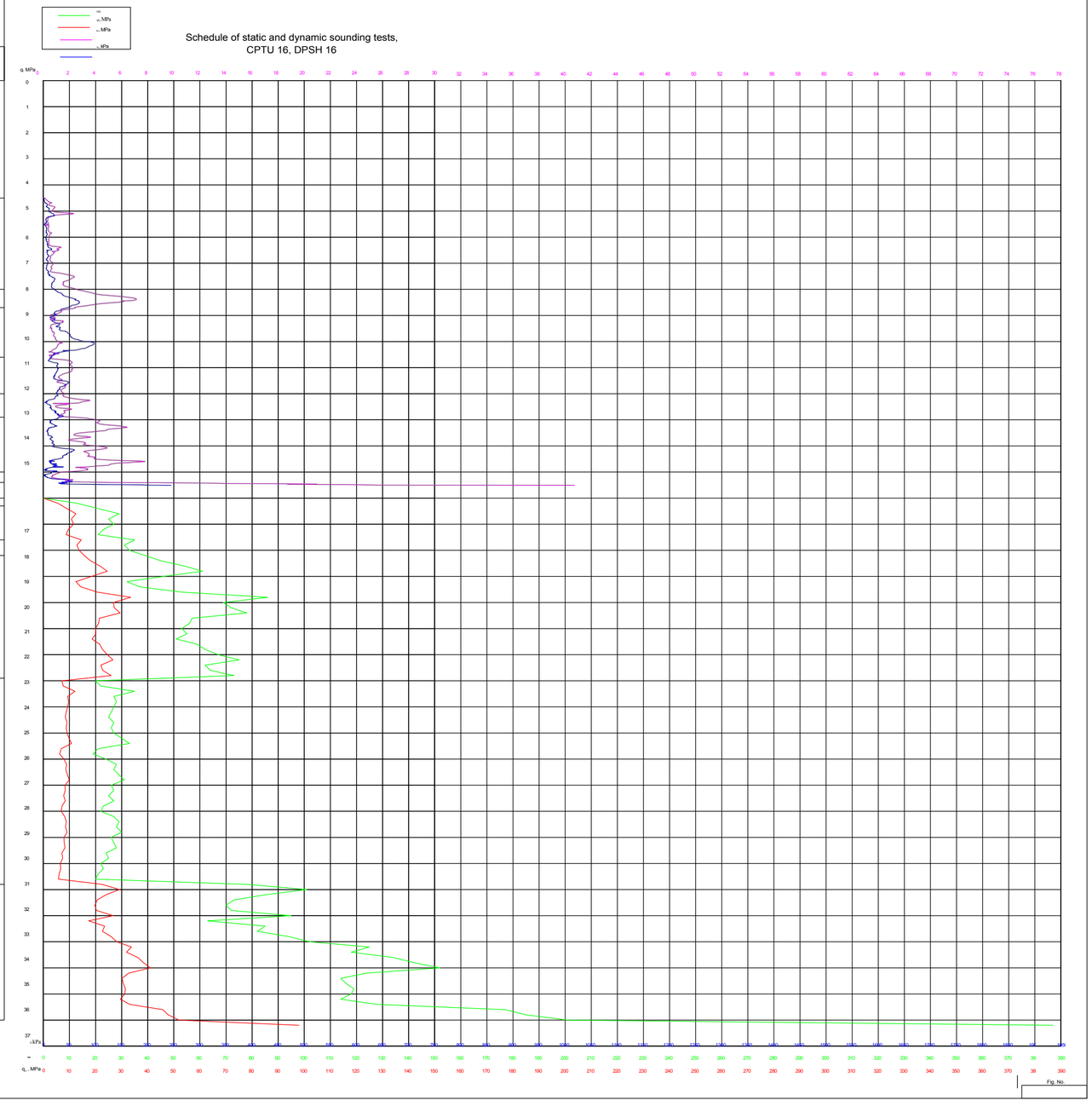


Fig. No.

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/26/2024

Borehole No. 17

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (Kronstadt)	Depth of layer base, m (Kronstadt)	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m alt. according to Pass. Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGE	Cohesion, kPa	Friction angle, °	Number of blows, n_{30}	Dynamic cone strength, q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m Borehole measurements start at a height of 0.0 m above LAS07. The ls variable)	-					
	4.00	4.00	-4.13	4.00			0.00	0.00		Water from the Curonian Lagoon	-					
m IV	5.60	5.60	-5.73	1.60	1	4.00–10.80				Poorly sorted sand (SaP) is light gray, silty, watery, with 1.3% organic matter	Very loose	6	0	14	9	-
a IV	7.30	7.30	-7.43	1.70						Slightly silty-clayey poorly sorted sand (SaFP), gray, watery, with shells	Very loose	7	0	16	11	-
	7.60	7.60	-7.73	0.30							Loose	11	2	0	42	-
	7.90	7.90	-8.03	0.30							Very loose	7	1	4	19	-
	8.90	8.90	-9.03	1.00							Loose	11	2	9	35	-
m IV	10.00	10.00	-10.13	1.10						Sandy, very highly plastic silt with moderate organic matter content (SaSiVO), gray	Softly plastic	27	1	5	45	-
a IV	11.40	11.40	-11.53	1.40	2	10.80–10.90	11.00	11.00		Peat (Pt) dark brown, well-decomposed, from 10.6 m to 10.7 m with with fine sand lenses, from 10.7 m to 11 m with silty clay lenses, with 31.7% organic matter content	-	3	1	3	54	-
	13.00	13.00	-13.13	1.60						Poorly sorted sand (SaP) gray, watery, from 11.9 m to 12.2 m with coarse sand lenses	Loose	12	3	6	30	-
m IV	16.90	16.90	-17.03	3.90							Dense	19			17	3.1 54 - 18.7 9
	18.80	18.80	-18.93	1.90	3	17.60–18.50					Softly plastic	42			36	14.9
l	33.90	33.90	-34.03	15.10	4	27.60–27.90		31.60 31.60		Sandy clay of low plasticity (saCL), brown, with gravel, gray from 18.8 m, brown from 23.7 m, gray from 24.4 m, brown from 25.6 m, from 27.6 m gray, from 31.6 m to 32.1 m with water-bearing lenses of fine sand	Hard	53			84	26.8
lm	36.00	36.00	-36.13	2.10						Medium-plasticity clay (ClM), brown, with sand	Hard	55			160	26.3

Schedule of static and dynamic probing tests,
CPTU 17, DPSH 17

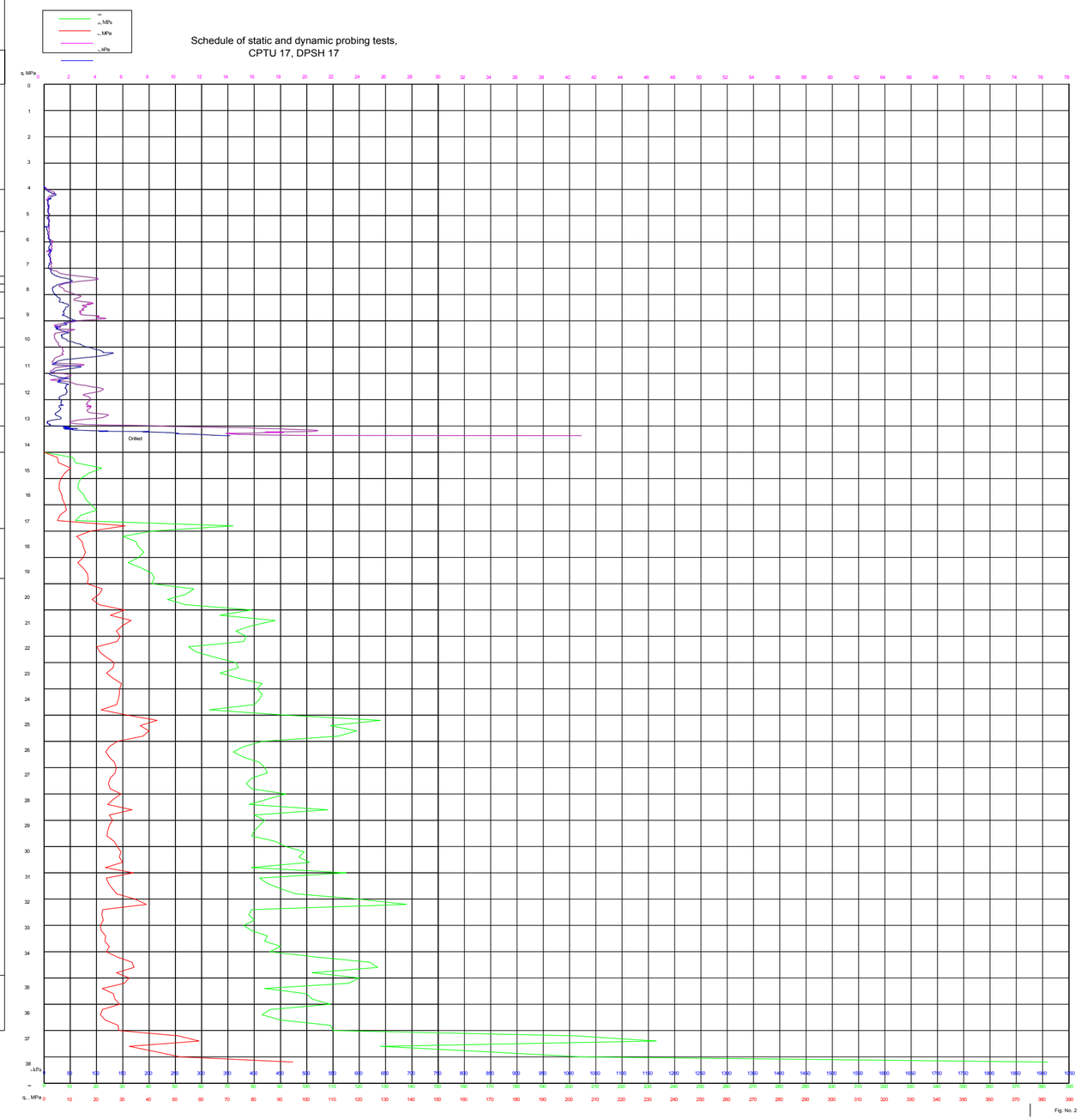


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: November 21, 2024

Well No. 18

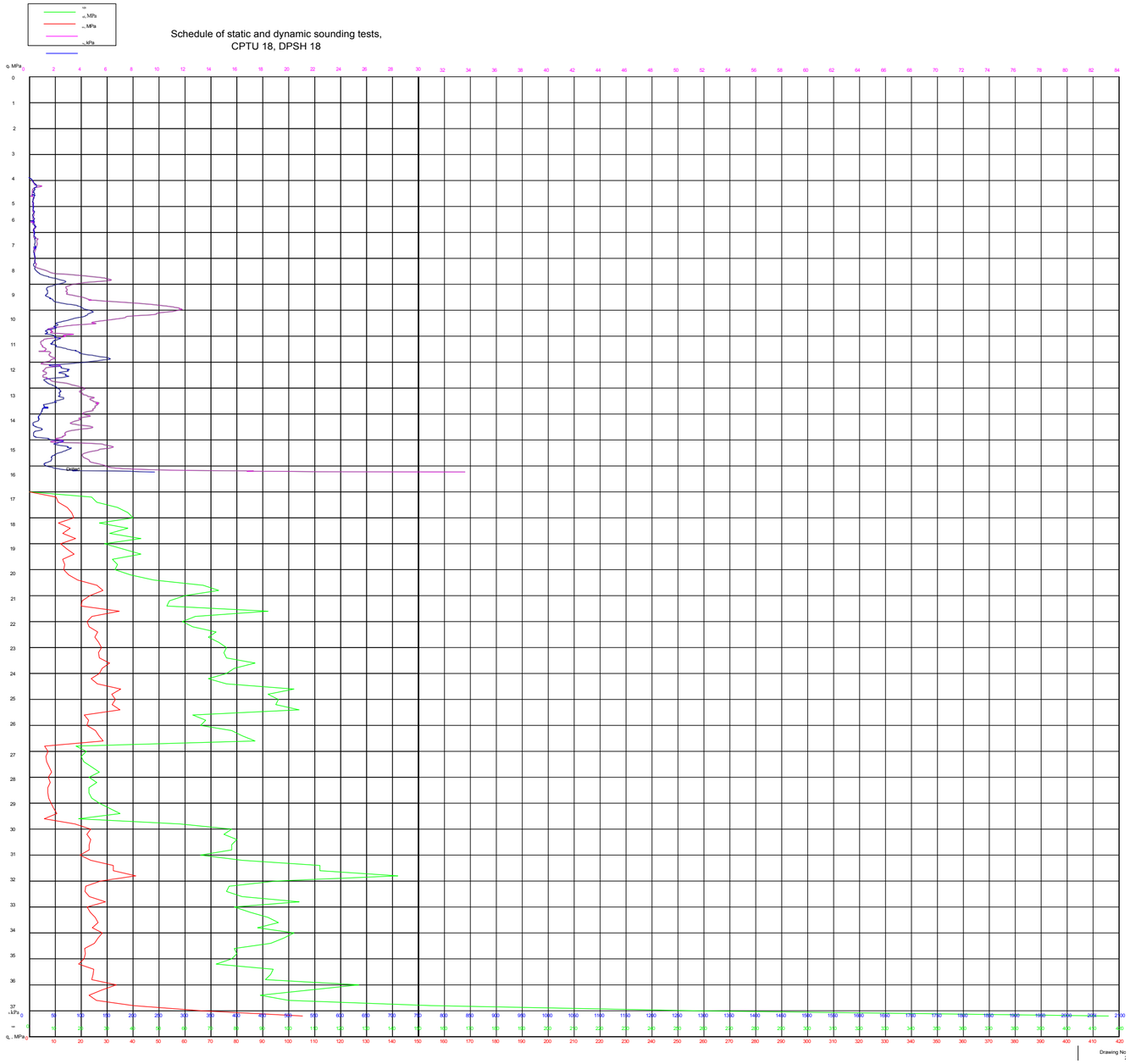
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	dt (according to LAS07) %	dt (according to LAS07) %	Layer thickness, m	Soil elevation alt. according to LAS07 No.	Depth	Water level, m alt. according to Pass.	Depth.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Internal friction angle, °	Number of blows, n_{30}	Dynamic cone resistance R_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.0 m. Borehole measurements start at a height of 0.0 m above LAS07. The te variable)	-	-	-	-	-	-
	3.90	-3.90	-4.03	3.90			0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
a IV	6.30	-6.30	-6.43	2.40	1	4.80–5.10					Slightly silty-clayey, poorly sorted sand with a small admixture of organic matter (siSaFP), dark greenish-gray, lumpy, watery, with fine sand lenses, containing 2.4% organic matter	Very loose	5	0.4	10	-	-
a IV	7.60	-7.60	-7.73	1.30	2	6.60–6.90					Sandy loam with a small amount of organic matter (saSa); gray, watery, with 2.4% organic matter	Very loose	4	0.7	12	-	-
m IV	7.90	-7.90	-8.03	0.30							Silty sand (siSa) gray, water-saturated	Medium density	14	5.0	45	-	-
	8.60	-8.60	-8.73	0.70								Loamy	12	3.4	42	-	-
a IV	9.50	-9.50	-9.63	0.90	3	8.60–9.20					Poorly sorted sand (SaP), gray, from 8.5 m to 10.0 m with shells, from 9.3 m to 9.6 m with peat nodules, water-saturated	Medium density	15	8.5	89	-	-
	10.00	-10.00	-10.13	0.50							Sandy, very highly plastic silt with moderate organic matter content (saSiVO), dark brown, from 10 m to 10.2 m with gypsum lenses	Loamy	12	2.6	44	-	-
	10.70	-10.70	-10.83	0.70	4	10.70–11.00						Softly plastic	27	5.4	64	-	-
					5	11.00–11.30					Peat (Pt) dark brown, well-decomposed, with 42.5%–44.8% organic matter content	-	3	1.5	80	-	-
	11.80	-11.80	-11.93	1.10			11.70	11.70				Purus	12	4.2	56	-	-
a IV	12.80	-12.80	-12.93	0.30	6	12.90–13.20					Poorly sorted sand (SaP) light gray, watery	Medium density	15	5.2	36	-	-
												Purus	12	3.6	22	-	-
	14.10	-14.10	-2:23	1:30								Medium density	15	5.7	67	-	-
	14.40	-14.40	-2:53 PM	0.30								Loose	12	4.9	45	-	-
m IV	15.10	-15.10	-3:23 PM	0.70	7	15.10–15.40					Gravelly sand of varying gradation (grSaG), gray, water-saturated	Dense	21	14.135	-	-	-
	15.40	-15.40	-3:53 PM	0.30													
l	17.90	-17.90	-18.03	2.50							Sandy clay with low plasticity (saCiL) gray, with coarse gravel to a depth of 15.9 m, light gray from 17.4 m, dark gray from 20.3 m, gray from 22.8 m, brown from 24.5 m, gray from 25.0 m	Softly plastic	42	-	-	30	12.7
	19.30	-19.30	-19.43	1.40								Stiffly plastic	45	-	35	14	-
	25.80	-25.80	-25.93	6.50			25.80	25.80				Hard	53	-	-	71	26.6
lmIII	28.70	-28.70	-28.83	2.90	8	27.50–27.80					Gravelly, slightly silty-clayey sand of varying gradation (grSaFG), light gray, watery	Very dense	39			24	7.7
l	33.60	-33.60	-33.73	4.90			31.20	31.20			Sandy clay of low plasticity (saCiL), gray, with gravel, from 29.3 m to 29.5 m with boulders, from 31.2 m to 31.8 m with water-bearing lenses of fine sand	Hard	53	-	-	86	25.1
											Medium-plasticity clay (CiM), brown, with gravel						
lmIII	36.00	-36.00	-36.13	2.40								Hard	55	-	-	99	26.9

Schedule of static and dynamic sounding tests, CPTU 18, DPSH 18



Drawing No :

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/05/2024

Borehole No. 19

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to Drawing)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil elevation acc. according to LAS07: No	Soil elevation acc. according to LAS07: Depth	Water level, m: Pass.	Water level, m: Depth.	Water level, m: Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cube strength, MPa	Dynamic cone resistance, MPa	Dynamic cone strength R_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-				
	3.40	-3.40	-3.53	3.40							Water from the Curonian Lagoon	-				
5	7.20	-7.20	-7.33	3.80	1	0.00–7.20					Slightly silty-clayey, poorly sorted sand with a small admixture of organic matter (oSaFP), greenish-gray, watery, from 3.4 m to 3.7 m with patches of sandy silt, dark gray from 6.2 m, with 2.8% organic matter	Very loose	5	0.5	7	-
a-IV	7.80	-7.80	-7.93	0.60								Purus.	11	3.3	33	-
a-IV	8.10	-8.10	-8.23	0.30							Slightly silty-clayey poorly sorted sand (SaFP), dark gray, watery	Very loose	7	2.0	29	-
a-IV	9.40	-9.40	-9.53	1.30								Loose	11	3.8	47	-
a-IV	10.50	-10.50	-10.63	1.10	2	7.20–10.30					Sandy, very highly plastic silt with a moderate admixture of organic matter (silt sandy loam), dark gray, with a 10.7% admixture of organic matter	Stiffy plastic	28	13.4	11	-
a-IV	11.40	-11.40	-11.53	0.90	3	10.30–10.90	11.30	11.30			Peat (Pt) dark brown, with 45.3% organic matter admixture	-	3	1.8	11	-
a-IV	11.80	-11.80	-11.93	0.40							Poorly sorted sand (SaP), dark gray, watery	Medium density	15	7.8	87	-
a-IV	12.40	-12.40	-12.53	0.60							Peat (Pt) dark brown, well-decomposed, watery	-	3	2.1	61	-
a-IV	13.20	-13.20	-13.33 p.m.	0.80	4	12.60–12.90					Poorly sorted sand (SaP) gray, watery	Loose	12	3.7	41	-
a-IV											Gravelly sand of varying gradation (grSaG), gray, water-saturated	Dense	21	15.6	63	-
a-IV	14.80	-14.80	-14.93	1.60											10	4.4
a-IV	16.70	-16.70	-16.83	1.90							Poorly sorted sand (SaP) is light gray, watery, and ranges from 17.5 m to 17.9 m, with lenses of sandy silt	Dense	19	-	12	5.9
												Softly plastic	42	-	31	13.7
L	18.40	-18.40	-18.53	1.70							Sandy clay with low plasticity (saCIL), gray, with gravel, from 16.7 m to 17.0 m with sandy silt lenses, from 17.0 m to 17.2 m with clay lenses, from 19.5 m dark gray	Stiffy plastic	45	-	33	13.3
L	19.00	-19.00	-7:13 PM	0.60								Hard	53	-	42	16.4
L	19.60	-7:60 PM	-19.73	0.60			19.60	-19.60								
a-III	23.90	-23.90	-24.03	4.30							Sandy silt (siSa) light gray, water-saturated, from 21.2 m with sandy silt lenses	Very dense	35	-	28	9.6
a-III	25.10	-25.10	-25.23	1.20							Sandy, low-plasticity silt (saSiL), light gray	Hard	48	-	72	24.2
a-II	25.70	-25.70	-25.83	0.60			25.70	-25.70			Sandy low-plasticity clay (saCIL) gray, with coarse grains	Hard	53	-	79	25.7
a-II	26.80	-26.80	-26.93	1.10							Slightly silty-clayey poorly sorted sand (SaFP) light gray, watery.	Very dense	37	-	28	8.7
L											Sandy clay with low plasticity (saCIL), gray, with sand	Hard	53	-	1	3.35.0
	28.90	-28.90	-29.03	2.10			28.90	-28.90								
a-III	33.20	-33.20	-33.33	4.30	5	32.50–32.40					Slightly silty-clayey poorly sorted sand (SaFP), light brown, water-saturated, from 30.2 m to 30.5 m with sandy clay lenses, Very dense 37 - from 30.9 m to 31.1 m with sandy clay lenses			-	27	7.7
a-II											Medium-plasticity clay (CIM), brown, with sand	Hard	55	-	90	23.6
	36.00	-36.00	-36.13	2.80												

Schedule of static and dynamic sounding tests,
CPTU 19, DPSH 19

q_c
u_2, MPa
f_s, MPa
u_0, kPa

q_c, MPa

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

u_0, kPa

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850

f_s, MPa

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370

Drawing No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/06/2024

Borehole Gr. 20

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 36.00 m

SWECO

Scale 1:100

Geological Index	Base depth m	Base depth m alt. Baltic 1977	Base depth m alt. According to LAS07	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Shear strength, kPa	Lateral load-bearing CPT tip resistance, MPa	Dynamic probing, MPa
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Well measurements start at a height of 0.0 m according to LAS07. The water level of the Curonian Lagoon is variable).	-	-	-	-	-
-	3.00	-3.00	-3.13	3.00	Water in the Curonian Lagoon	-	-	-	-	-
mIV	6.80	-6.80	-6.93	3.80	Poorly sorted sand (SaP) dark gray, silty to 6.8 m, with sandy silt lenses from 6.8 m, water-saturated	Very fluffy	6	0.4	5	-
	9.50	-9.50	-9.63	2.70		Crumbly	12	3.1	36	-
a IV	10.30	-10.30	-10.43	0.80	Sandy silt of very high plasticity with moderate organic matter content (saSi/VO), greenish-gray	Softly plastic	27	1.2	40	-
bIV	10.90	-10.90	-11.03	0.60	Peat (Pt) dark brown, well-decomposed	-	3	1.8	140	-
	12.80	-12.80	-12.93	1.90	Poorly sorted sand (SaP) gray, watery, from 12.3 m to 12.7 m with peat lenses, from 15.2 m with gravel, with 0.8% organic matter content	Purus	12	3.6	70	-
mIV	14.70	-14.70	-14.83	1.90		Medium density	15	6.5	79	-
	3.00 PM	-15.00	-15.13	0.30		Dense	30	12.7	36	-
	3.20 PM	-15.20	-15.33	0.20		Purus	12	3.6	70	-
	16.00	-16.00	-16.13	0.80		Dense	30	-	118	-
mIV	17.80	-17.80	-17.93	1.80	Sandy loam (siSa) light gray, waterlogged	Very dense	22	-	-	20 8.6
	19.10	-19.10	-19.23	1.30	Sandy clay with low plasticity (saCiL) gray, with fine grains	Rigid-plastic	45	-	-	36 14.6
gIII-II	24.60	-24.60	-24.73	5.50		Hard	53	-	-	75 27.0
lgIII-II	26.20	-26.20	-26.33	1.60	Medium-plasticity clay (CiM) gray-brown, with fine grains	Hard	55	-	-	98 32.1
gIII-II	36.00	-36.00	-36.13	9.80	Sandy low-plasticity clay (saCiL), gray, with a grain size distribution	Hard	53	-	-	125 35.3

Soil type: No. 1 — 1.40 PMd–1.70 PM; No. 2 — 14.20–14.50; No. 3 — 7.40 PMd–8.00 PM; No. 4 — 25.20–25.70; No. 5 — 35.10–35.40

Water level, m alt. according to LAS07: Min. 0.00, Avg. 0.00, Max. 0.00; 10.90 / 10.90

Graph of static and dynamic probing tests, CPTU 20, DPSH 20

q_c, MPa; u_2, MPa; u_0, kPa; q_t, MPa

Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/06/2024

Borehole No. 21

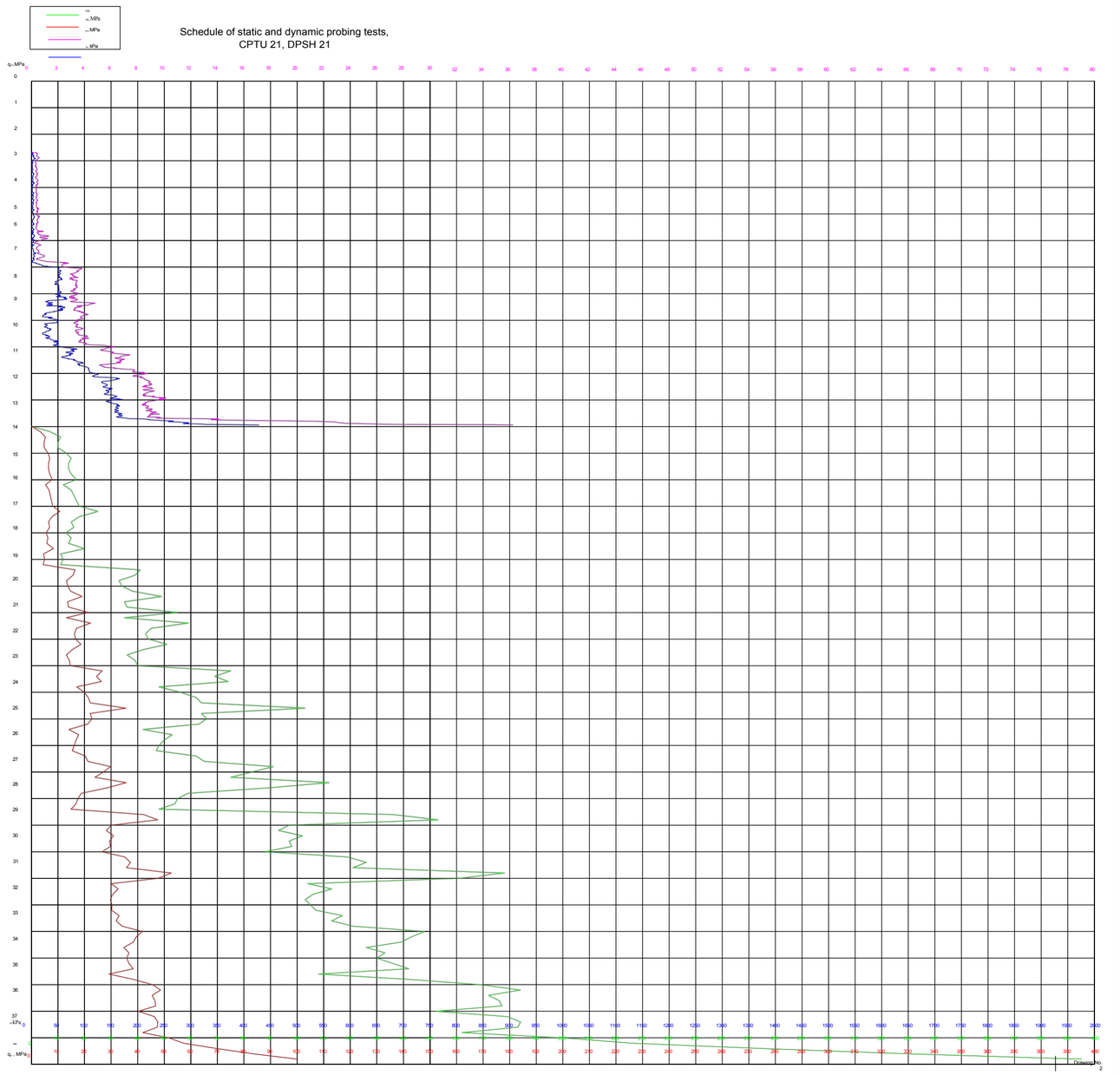
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological Index	Base depth m	Base depth m Baltic 1977	Layer thickness, m	Soil sample No.	Soil sample Depth	Water level, m alt. according to LAS07 Min.	Water level, m alt. according to LAS07 Avg.	Water level, m alt. according to LAS07 Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cyclic strength, kPa (Dynamic probing)	Number of blows, N10	Dynamic cone strength, MPa	Static cone strength, MPa
-	0.00	0.00	-0.13	0.00		0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m, depth below water surface: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
-	2.70	-2.70	-2.83	2.70						Water of the Curonian Lagoon	-	-	-	-	-	-
mQIV	7.00	-7.00	-7.13	4.30						Poorly sorted sand (SaP), greenish-gray, up to 8.7 m thick, water-saturated	Very crumbly	6	0.6	4	-	-
											Purus	12	3.4	50	-	-
	8.70	-8.70	-8.83	1.70						Low-silt, loamy, poorly sorted sand with low organic matter content wood-rich mixture (siSaFP): gray, watery, with shells, from 8.9 m to 9.2 m, with peat lenses	Loamy	10	1.7	34	-	-
mQIV	9.90	-9.90	-10.03	1.20											-	-
mQIV	12.70	-12.70	-12.83	2.80						Poorly sorted sand (SaP) is light brown, watery,	Medium density	15	7.8	123	-	-
														271		
mQIV	5:00 PM	-5:00 PM	-5:13 PM	4:30						Silty sand (siSa) light brown, water-saturated, light gray from 15.2 m	Dense	18			14	6.3
										Poorly sorted sand (SaP) gray-brown, watery	Dense	32	-	-	14	5.7
lmQIV	6:30 PM	-6:30 PM	-18:43	1.30	1	17.60–17.80					Rigid-plastic	45	-	-	37	14.8
-	19.40	-19.40	-19.53	1.10												
lmQIV	36.00	-36.00	-36.13	16.60			23.60 33.40			Sandy clay of low plasticity (saCiL), gray, with gravel, from 23.6 m to 23.9 m with water-bearing lenses of fine sand, from 24.4 m to 25.2 m with clay lenses, from 27.0 m to 29.0 m with clay lenses, from 33.4 m to 33.6 m with water-bearing lenses of fine sand	Hard	53	-	-	97	29.0

Schedule of static and dynamic probing tests,
CPTU 21, DPSH 21



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/07/2024

Borehole No. 22

Altitude of the borehole mouth
0.00 (according to LAS07)
Altitude of the borehole mouth
-0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cone strength q_c, MPa / Standard penetration test, Number of blows, n_{30}	Dynamic cone strength q_d, MPa
	0.00	0.00	0.13	Platform. Platform height above water surface: 1.3 m. Submerging depth: 0.7 m. (Borehole measurements start at a height of 1.3 m above LAS07. The is variable)	-		- - - -	
·	3.00	-3.00	-3.13	Water of the Curonian Lagoon	-		- - - -	
a-v	6.30	-6.30	-6.43	Slightly silty-clayey poorly sorted sand (SaFP) greenish-gray, up to 6.3 m silty, from 6.3 m dark gray, from 7.9 m light brown, from 15.3 m to 15.4 m with peat lenses, waterlogged	Very soft	7	0 4 7 - -	
	7.90	-7.90	-8.03		Purus	11	2 9 31 -	
	8.50	-8.50	-8.63		Medium density	16	7 5 7 1 -	
	17.70	-17.70	-17.83		Very dense 24		24 9 18	27 19.5
								28 12.8
l	18.40	-18.40	-8.53 PM	Sandy clay with low plasticity (saCtL), gray, with sand grains	Softly plastic	42	- - 35 14.3	
	19.30	-19.30	-7.43 PM		Stiffly plastic	45	- - 36 14.4	
	19.60	-7.60 PM	-7.73 Trig.		Hard	53	- - 48 18.7	
fmQ	22.90	-22.90	-23.03	Poorly sorted sand (SaP) light gray, watery	Very dense 36		- - 24 8.9	
l	36.00	-36.00	-36.13	Sandy clay of low plasticity (saCtL), gray, with gravel, from 26.6 m to 26.9 m with clay lenses	Hard	53	- - 124 35.9	

1 BAS40-20.70

2 BAS0-31.50

19.60
-19.60

Schedule of static and dynamic sounding tests,
CPTU 22, DPSH 22

q_c, MPa

q_d, MPa

Drilled

Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/07/2024

Borehole No. 23

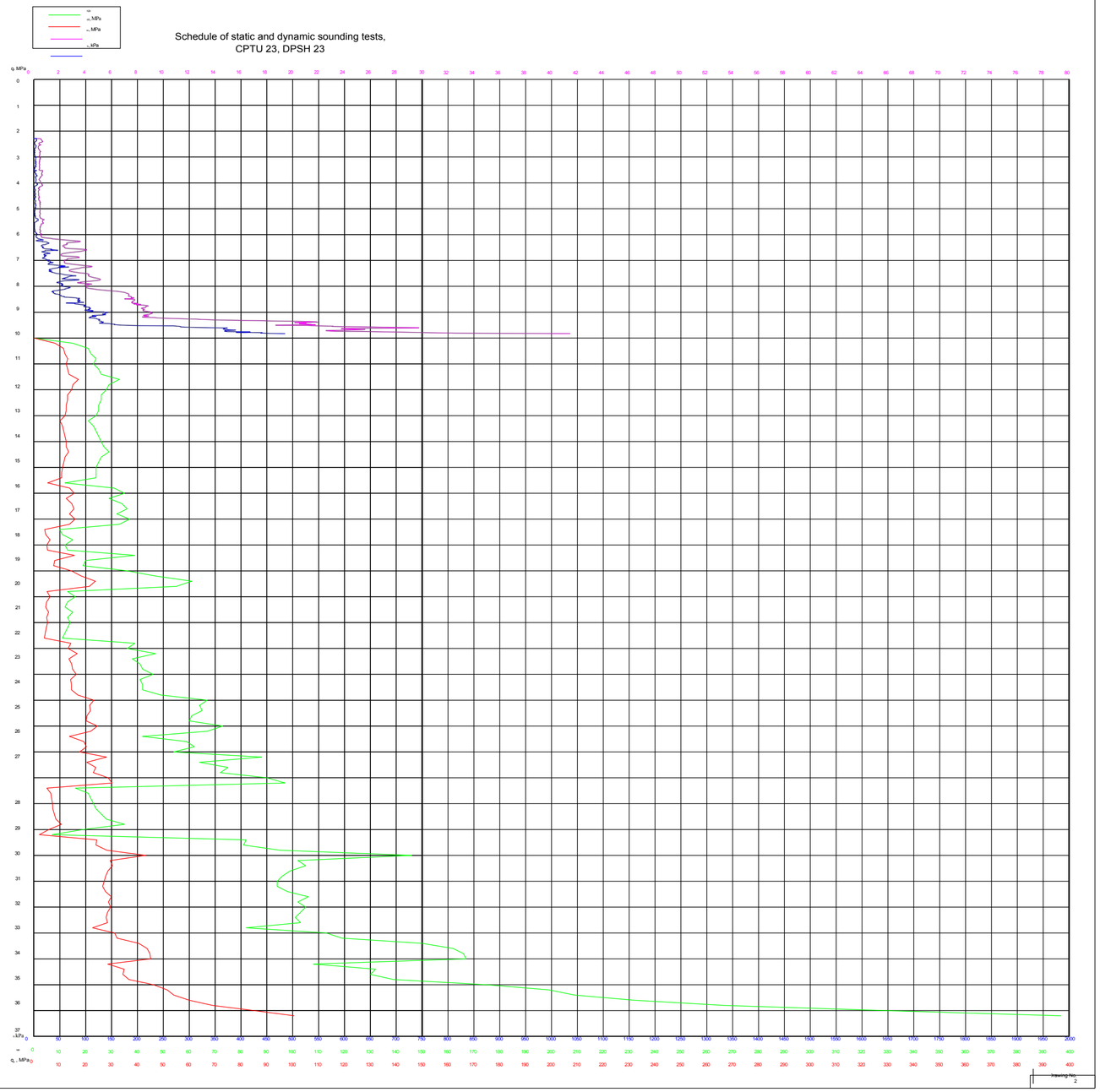
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m Cronstadt BAS77	Depth of layer base m Cronstadt LAS07	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m all. according to Pass.	Water level, m all. according to Depth.	Water level, m all. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Cohesion, kPa	Friction angle, °	Number of blows, N, %	Dynamic cone strength q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth at sea: 0.0 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-
-	2.20	-2.20	-2.33	2.20			0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
m	6.20	-6.20	-6.33	4.00							Poorly sorted sand (SaP), dark gray, up to 6.2 m thick, waterlogged	Very loose	6	0.5	4	-	-
	8.10	-8.10	-8.23	1.90							Poorly sorted sand (SaP) dark gray, from 8.1 m light brown, water-saturated, from 15.7 m to 15.9 m with sandy clay lenses, from 15.5 m to 15.7 m with boulders, water-saturated	Loamy	12	3.4	38	-	
	9.20	-9.20	-9.33	1.10								Medium density	15	7.8	87	-	
m IV	15.70	-15.70	-15.83	6.50								Very dense	23		21.8	348	24	11.6
l	17.30	-17.30	-17.43	1.60							Sandy clay with low plasticity (saCl/L), gray, with fine grains	Softly plastic	42	-	33	14.4	
lmQ	18.40	-18.40	-18.53	1.10							Slightly silty-clayey poorly sorted sand (SaF/P), light gray, water-saturated, from 20.1 m to 20.6 m with medium-grained sand interlayers	Dense	33	-	12	5.0	
	18.90	-18.90	-19.03	0.50	1	to PM=6.40 m						Softly plastic	45	-	26	10.4	
amQ	19.70	-7.70 PM	-19.83	0.80	2	to PM=6.90 m	19.70	19.70	19.70		Sandy clay with low plasticity (saCl/L), gray, with gravel	Hard	53	-	56	19.5	
lmQ	21.80	-9.80 PM	-21.93	2.10							Slightly silty-clayey poorly sorted sand (SaF/P) light gray, watery	Dense	33	-	13	5.0	
l	23.60	-11.60 PM	-23.73	1.80	3	from PM=10.90 m					Sandy clay of low plasticity (saCl/L) gray, with gravel	Semi-rigid	45	-	43	14.7	
	27.30		-27.43	3.70			27.30	27.30	27.30			Hard	53	-	67	22.9	
lmQ	29.10	-27.30	-29.23	1.80							Silty sand (siSa) light gray, watery, with sandy clay lenses	Very dense	35		24	7.3	
l	36.00	-36.00	-36.13	6.90	4	from -32.10 m					Sandy clay with low plasticity (saCl/L), gray, with sand grains	Hard	53	-	126	34.3	

Schedule of static and dynamic sounding tests, CPTU 23, DPSH 23



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/08/2024

Borehole No. 24

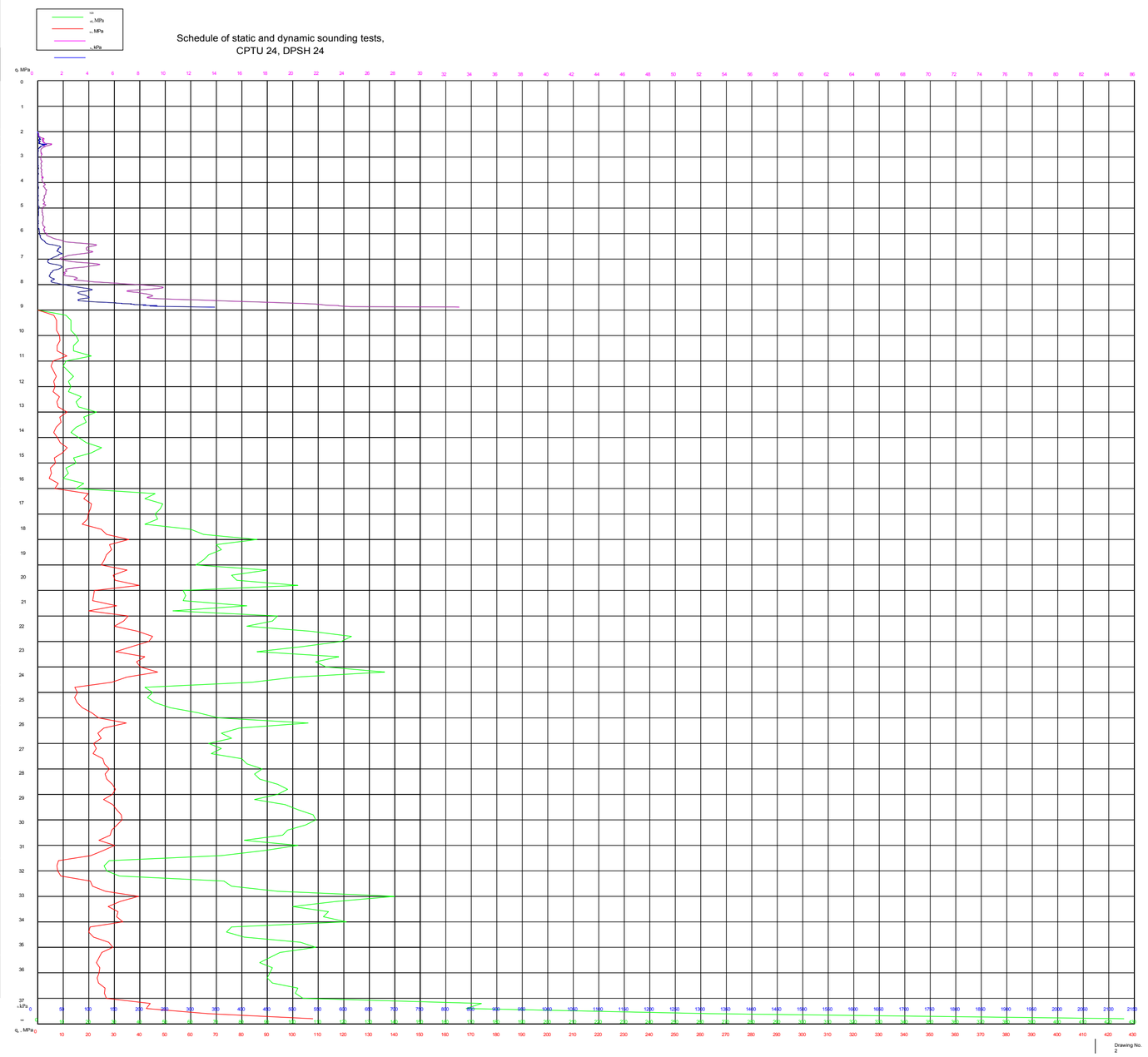
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m according	Depth of layer base m according	Layer thickness, m	Soil elevation LAS07 No	Soil elevation LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Calc.strength,s, MPa	Limit pressure Pl(MPa) CPTU Static cone resist.,qc MPa	Dynamic cone resist.qd, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-		-	-	-
	1.90	1.90	2.03	1.90							Water of the Curonian Lagoon	-		-	-	-
t,sr	2.20	2.20	2.33	0.30							Silt (sandy) (Dz) black, watery Poorly sorted sand (SaP) dark		1	0	0	-
s,sr	3.30	3.30	3.43	1.10	1	2.20-3.30					gray, watery, silty, with shells, with 0.8% organic matter admixture	Very loose	6	0	4	3
s	6.30	6.30	6.43	3.00	2	3.30-6.30					Slightly silty-clayey poorly sorted sand with a small admixture of organic matter (sSaFf) gray, watery, silty, with shells, with 2.2% organic matter	Very loose	5	0	5	2
s,sr	7.90	7.90	8.03	1.60	3	6.30-8.20					Poorly sorted sand (SaF) dark gray, light gray from 8.0 m, water-saturated, with shells up to 7.9 m	Purus	12	3	1	32
	8.60	8.60	8.73	0.70								Medium density	15	6	4	80
s,sr	16.00	16.00	16.13	7.40								Dense	19		15	7.3
l	17.40	17.40	17.53	1.40							Sandy clay with low plasticity (saCl,L) gray	Puskietis	47	-	4	2 17.9
l	18.60	18.60	18.73	1.20	5	17.00-18.50					Sandy, low-plasticity clay-silt (saCtL-SiL), gray	Hard	52	-	65	27.0
l	20.50	20.50	20.63	1.90	6	18.50-20.50	PM 3:50 PM -20.50				Sandy low-plasticity clay (saCtL) dark brown, with sand	Hard	53	-	77	27.9
l	23.70	23.70	23.83	3.20	7	20.50-23.70					Sandy, low-plasticity clay-silt (SaCL-SiL), dark gray, with water-saturated sand lenses	Solid	52	-	100	36.1
	24.50	24.50	24.63	0.80								Stiffly plastic	45	-	4	15.0
l	30.50	30.50	30.63	6.00	8	23.70-30.50					Sandy clay of low plasticity (saCtL) gray, with gravel, with interlayers of medium-coarse and fine sand, dark gray from 28.0 m	Hard	53	-	86	26.7
	31.20	31.20	31.33	0.70	9	30.50-27.50						Softly plastic	42	-	28	8.1
	34.30	34.30	34.43	3.10	10	27.50 PM-10.90						Hard	53	-	90	27.2
l	36.00	36.00	36.13	1.70	11	10.90 PM-12.00										
					12	12.00 PM-11.50										
					13	11.50-34.30					Highly plastic silt (SiH), dark brown, with gravel	Hard	49			93 24.4

Schedule of static and dynamic sounding tests, CPTU 24, DPSH 24



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/09/2024

Borehole No. 25

Altitude of the borehole mouth
0.00 (according to LAS07)
Altitude of the borehole mouth
-0.13 (according to BAS77)

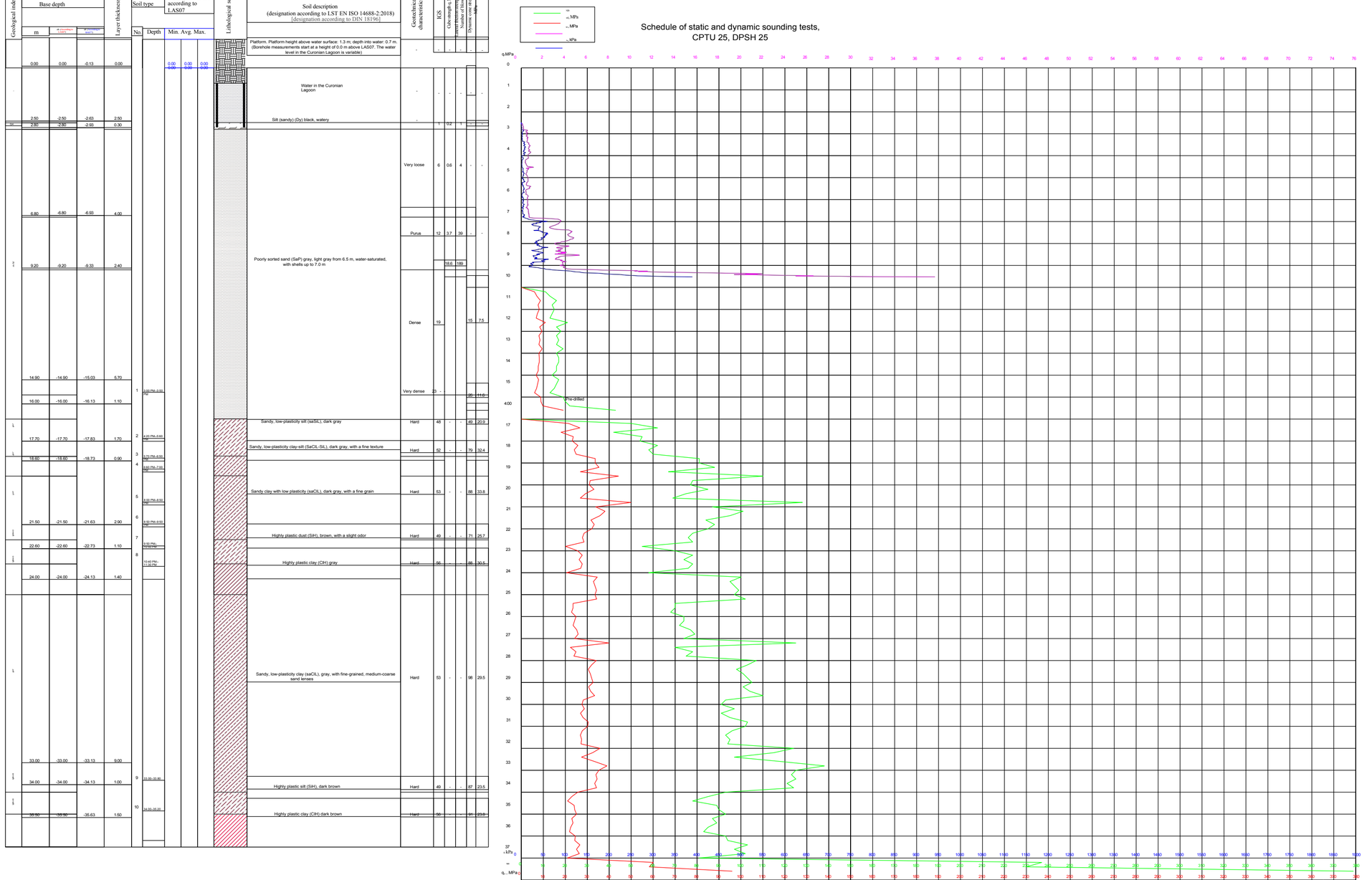
Borehole depth 35.50 m

SWECO

Scale 1:100

Geological index	Base depth m	Base depth m alt. Kronštatas 1955	Base depth m alt. BAS77	Layer thickness, m	No	Soil type Depth	Water level, m alt. according to LAS07 Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IOS	Calc.strength, MPa	Direct shear strength, CKN	Static cone resist., MPa	Dynamic cone strength, MPa	
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-	
-	2.50	-2.50	-2.63	2.50							Water in the Curonian Lagoon	-	-	-	-	-	-	
jv	2.80	-2.80	-2.93	0.30							Silt (sandy) (Dy) black, watery	-	1	0.2	1	-	-	
	6.80	-6.80	-6.93	4.00							Poorly sorted sand (SaP) gray, light gray from 6.5 m, water-saturated, with shells up to 7.0 m	Very loose	6	0.6	4	-	-	
												Purus	12	3.7	39	-	-	
	9.20	-9.20	-9.33	2.40											18.6	180		
												Dense	19			15	7.5	
	14.90	-14.90	-15.03	5.70														
	16.00	-16.00	-16.13	1.10	1	0.00-0.00 PM						Very dense	23	-	-	26	14.6	
l	17.70	-17.70	-17.83	1.70	2	4.20 PM–4.60 PM					Sandy, low-plasticity silt (saSiL), dark gray	Hard	48	-	-	49	20.9	
l	18.60	-18.60	-18.73	0.90	3	5.70 PM–6.00 PM					Sandy, low-plasticity clay-silt (SaCiL-SiL), dark gray, with a fine texture	Hard	52	-	-	79	32.4	
					4	6.60 PM–7.00 PM												
l	21.50	-21.50	-21.63	2.90	5	8.00 PM–8.50 PM					Sandy clay with low plasticity (saCiL), dark gray, with a fine grain	Hard	53	-	-	88	33.8	
gmnm	22.60	-22.60	-22.73	1.10	6	8.50 PM–9.00 PM					Highly plastic dust (SiH), brown, with a slight odor	Hard	49	-	-	71	25.7	
gmnm	24.00	-24.00	-24.13	1.40	7	9.50 PM–Notice PM					Highly plastic clay (CtH) gray	Hard	56	-	-	88	30.6	
					8	10.40 PM–11.00 PM												
l	33.00	-33.00	-33.13	9.00							Sandy, low-plasticity clay (saCiL), gray, with fine-grained, medium-coarse sand lenses	Hard	53	-	-	98	29.5	
gmnm	34.00	-34.00	-34.13	1.00	9	33.00–33.80					Highly plastic silt (SiH), dark brown	Hard	49	-	-	87	23.5	
gmnm	35.50	-35.50	-35.63	1.50	10	34.00–35.20					Highly plastic clay (CtH) dark brown	Hard	56	-	-	91	29.8	

Schedule of static and dynamic sounding tests,
CPTU 25, DPSH 25



Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/10/2024

Borehole No. 26

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth - 0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, abs. (According to LAS07)	Depth of layer base, abs. (According to BAS77)	Layer thickness, m
	0.00	0.00	-0.13	0.00
	2.20	2.20	-2.33	2.20
m IV	2.50	2.50	-2.63	0.30
	6.80	-6.80	-6.93	4.30
	7.20	-7.20	-7.33	0.40
	7.50	-7.80	-7.93	0.30
	8.00	-8.00	-8.13	0.50
	8.30	-8.30	-8.43	0.30
m	8.70	-8.70	-8.83	0.40
	14.80	-14.80	-14.93	6.10
l	16.20	-16.20	-16.33	1.40
l	17.80	-17.80	-17.93	1.60
	18.80	-18.80	-18.93	1.00
l	22.50	-22.50	-22.63	3.70
	23.50	-23.50	-23.63	1.00
	25.80	-25.80	-25.93	2.30
aQIII	29.00	-29.00	-29.13	3.20
aQII	32.10	-32.10	-32.23	3.10
aQI	36.00	-36.00	-36.13	3.90

No.	Soil elevation LAS07, Depth	Water level, m alt. according to Pass.	Depth.	Max.
		0.00	0.00	0.00
		0.00	0.00	0.00
1	2.20–2.50			
3	6.80–8.20			
4	8.20 PM–2.50 PM			
5	16.20–16.70			
6	17.80–18.50			
7	18.80–20.80			
8	8.00 PM–9.90 PM			
9	10.60 PM–11.00 PM			
10	11.50 PM–11.80 PM			
11	12.00–12.20			
12	32.10–33.90			

Lithological section

Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KiS	Cohesion, kPa	Deformation modulus, MPa	Natural moisture, %	Dynamic cone strength q_d, MPa
Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 2.0 m above LAS07. The is variable)	-	-	-	-	-	-
Water from the Curonian Lagoon	-	-	-	-	-	-
Silt (sandy) (Dy) black, watery		1	0	1	1	-
Poorly sorted sand (SaP) light brown, up to 7.2 m thick, water-bearing, dark gray from 2.8 m, light gray from 7.2 m, from 7.5 m to 8.0 m with shells, with 0.0% organic matter admixture	Very crumbly	6	0	7	10	-
	Puhe	12	0	8	30	-
	Medium density	15	7	1	66	-
	Dense	19	0	9	5	13
	Average density	15	7	2	107	-
	Dense	19	10	6	13	-
				38	1	20
	Very dense	23			26	10.2
					27	15.7
Sandy low-plasticity clay-silt (saCIL-SiL) dark gray	Semi-coarse	46	-	46	18.2	
Sandy low-plasticity silt (saSiL) gray	Hard	48	-	50	21.4	
Sandy clay of low plasticity (saCIL) gray-brown, dark brown from 18.8 m, with fine-grained sand, from 24.5 m to 25.2 m with lenses of fine sand	Plastic 40	-		-	62.4	
	Hard	53	-	86	30.3	
	Softly plastic	42	-	42	14.6	
	Hard	53	-	67	22.6	
High-plasticity silt (SiH), dark gray, with gravel	Hard	49	-	82	25.6	
Medium-plasticity clay (CIM) dark gray, with gravel from 1.8 m to 32.1 m	Hard	55	-	87	25.1	
High-plasticity clay (CIH), dark brown	Hard	56	-	1	6	30.9

Schedule of static and dynamic sounding tests, CPTU 26, DPSH 26

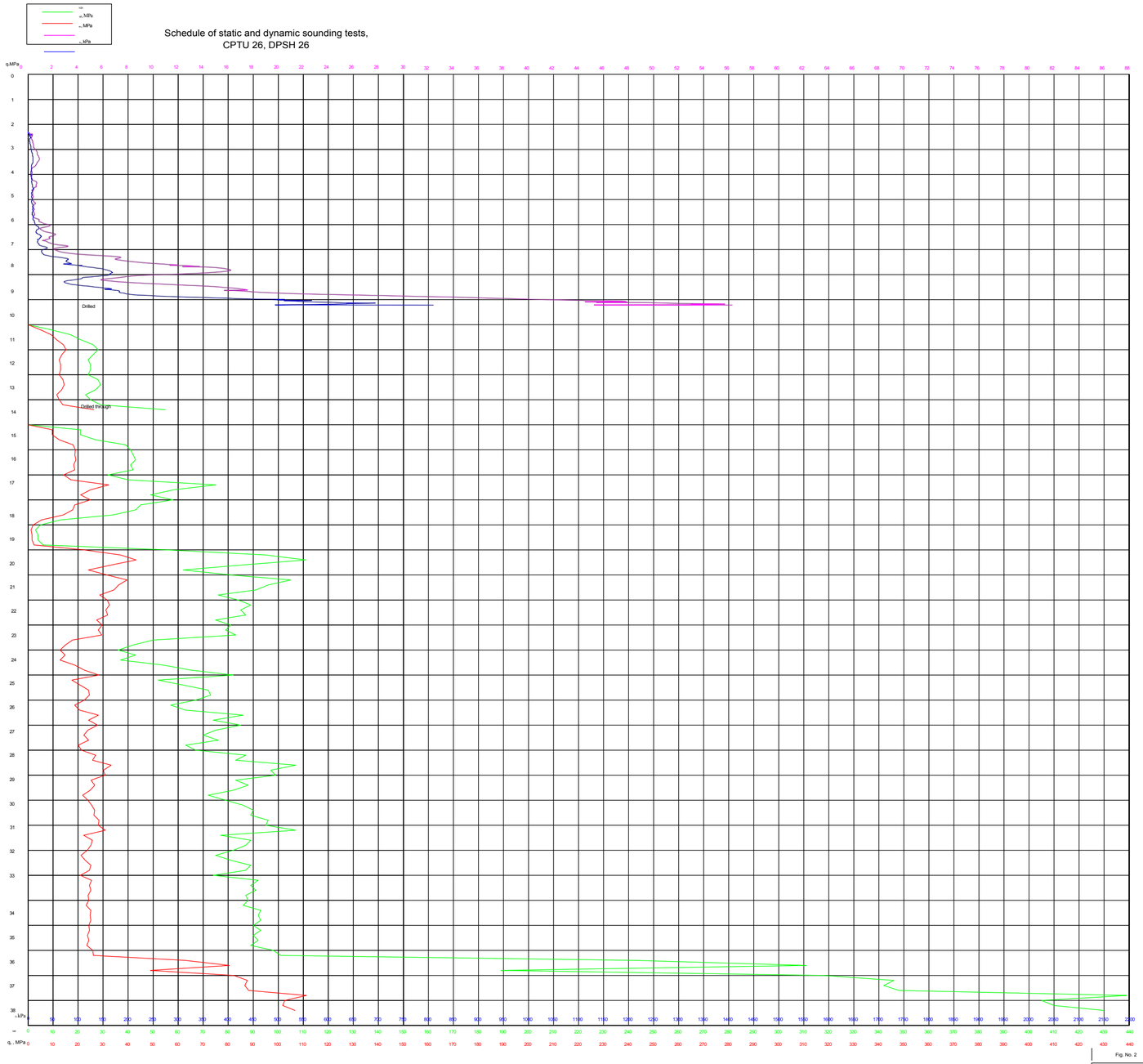


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/11/2024

Borehole No. 27

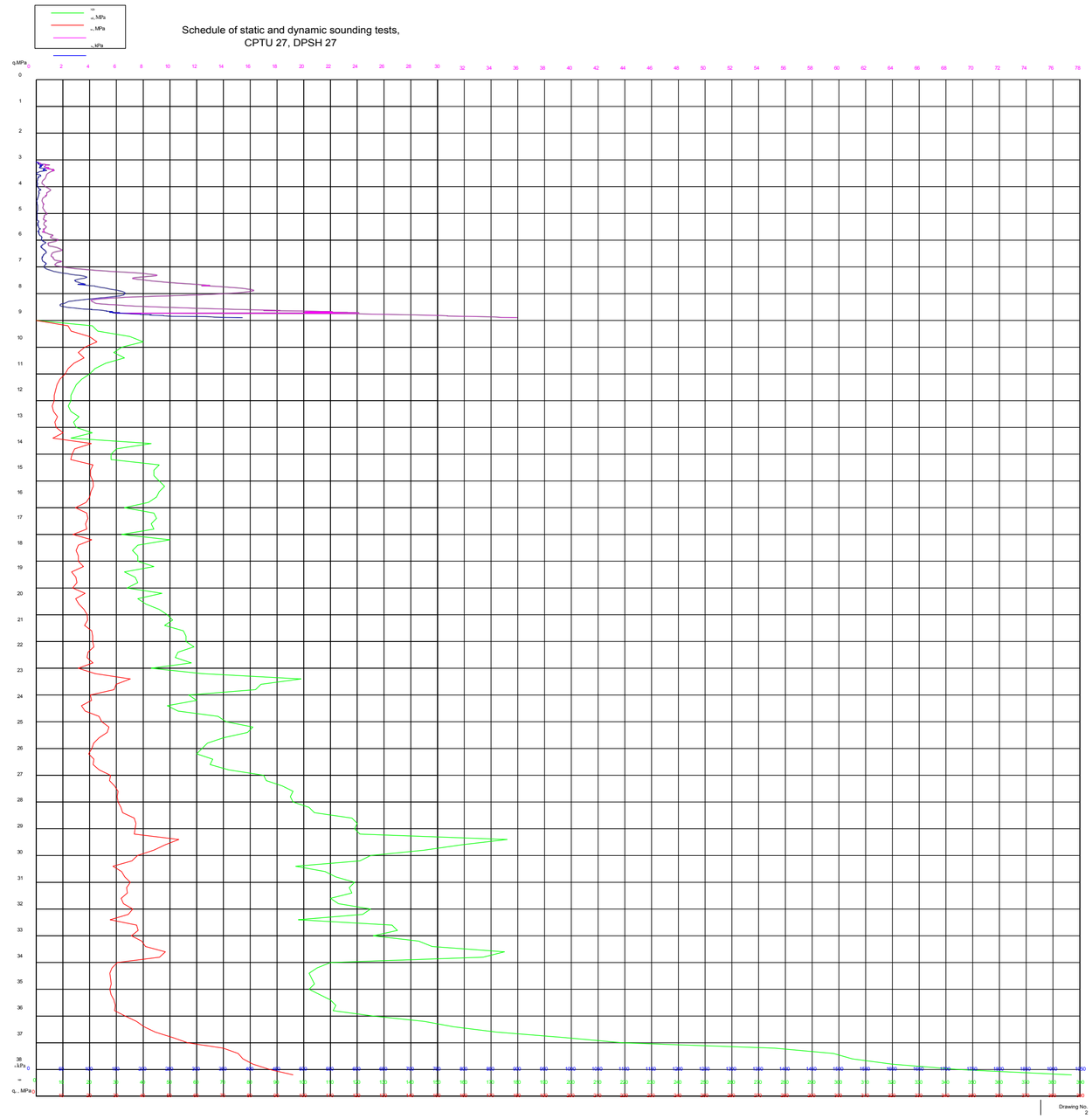
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	No	Soil type, Depth	Water level, m alt. according to LAS07 Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cole strength, MPa	Local shear strength, kPa	Number of blows, N	Deformation modulus, MPa	Density, kN/m³
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Borehole measurements start at LAS07 0.0 m elevation. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-	-
-	3.10	-3.10	-3.23	3.10							Water in the Curonian Lagoon	-	-	-	-	-	-	-
aN2	7.10	-7.10	-7.23	4.00							Poorly sorted sand (SaP) dark gray, watery	Very crumbly	6	0.9	7	-	-	
	7.60	-7.60	-7.73	0.50	1	T 10–7.50						Medium density	15	7.6	67			
	8.10	-8.10	-8.23	0.50								Tightly	35	13.6	156			
	8.40	-8.40	-8.53	0.30								Medium dense	15	5.0	65			
	8.70	-8.70	-8.83	0.30								Dense	20	13.1	90			
															27.4	226		
m IV	11.10	-11.10	-11.23	2.40	2	8.70–8.90					Slightly silty-clayey poorly sorted sand (SaFP) light gray, watery, with 0.4% organic matter	Very dense	24			26	14.2	
lv IV	13.50	-13.50	-13.63	2.40	3	12.00–1.00					Poorly sorted sand (SaP) gray, watery	Dense	19	-	-	15	7.4	
l IV	17.40	-17.40	-17.53	3.90	4	0.00 PM–4.00 AM					Sandy clay of low plasticity (saCtL) brown, from 17.0 m with gravel, from 17.0 m gray, from 21.0 m dark gray	Puskietis	47	-	-	41	18.4	
	19.80	-19.80	-19.93	2.40	5	0.00 PM–7.00 AM						Stiffy plastic	45	-	-	39	15.5	
prm IV	21.80	-21.80	-21.93	2.00	6	8.00 PM–9.00 AM					Highly plastic clay (CtH), dark gray, with a waxy luster	Puskietis	54	-	-	53	19.7	
l IV	36.00	-36.00	-36.13	2:20 PM							Sandy clay with low plasticity (saCtL) dark gray, light gray from 24.0 m, brown from 32.2 m	Hard	53	-	-	106	31.4	

Schedule of static and dynamic sounding tests,
CPTU 27, DPSH 27



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/11/2024

Borehole No. 28

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

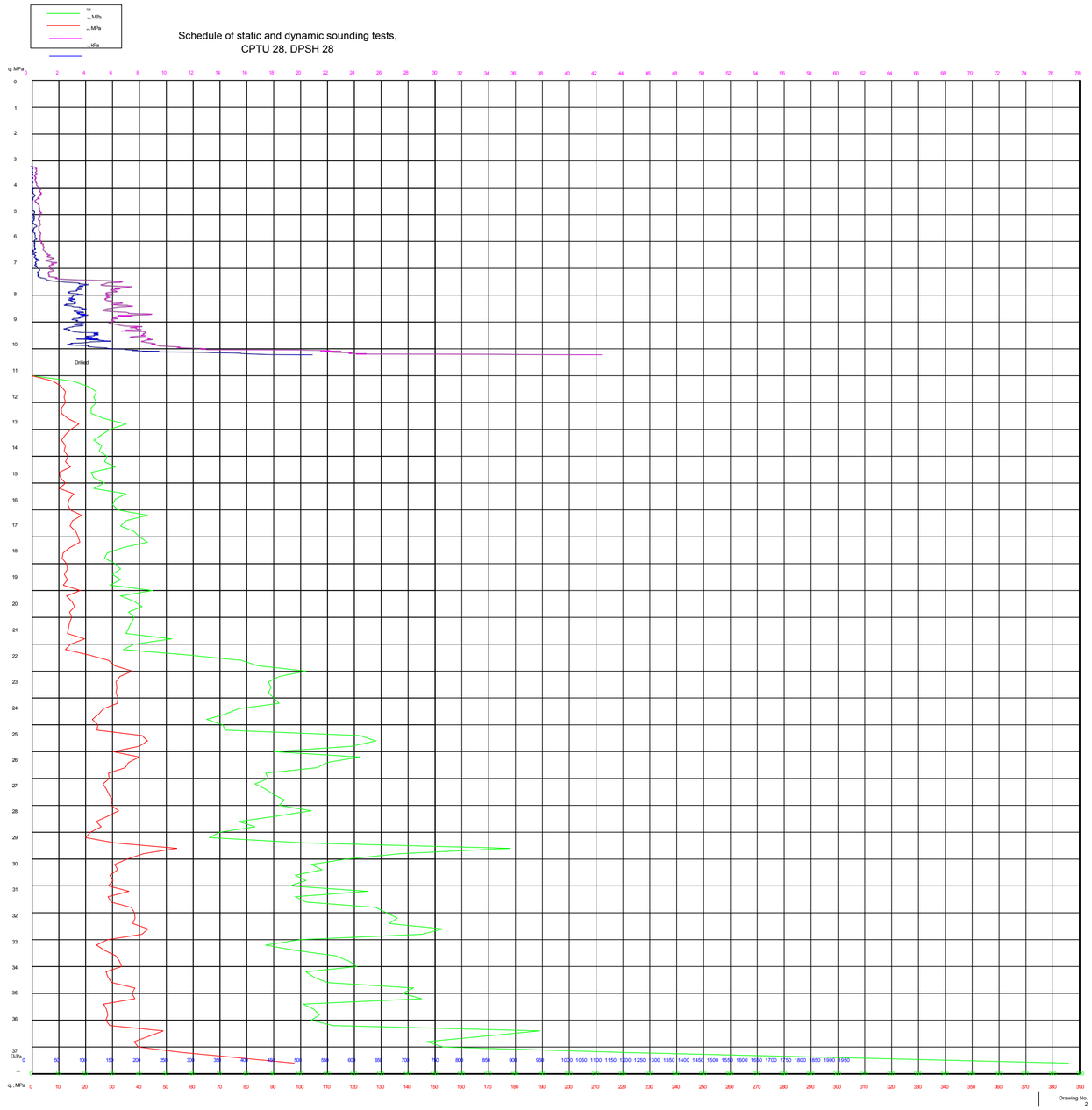
SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (according to BAS77)	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	KS	Cohesion, kPa	Internal friction angle, °	Number of blows, N	Dynamic cone strength, qd, MPa
	0.00	0.00	0.13	0.00		0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-
-	3.20	-3.20	-3.33	3.20		0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
mPr	7.40	-7.40	-7.53	4.20						Poorly sorted sand (SaP) dark gray, with shells up to 4.1 m, gray from 4.1 m, water-saturated, with sandy-silt lenses from 4.1 m	Very loose	6	0.3	8.5	-	-
	8.90	-8.90	-9.03	1.50							Medium density	15	6.1	80	-	-
mPr	10.00	-10.00	-10.13	1.10						Slightly silty-clayey poorly sorted sand (SaFP), gray, watery, with shells	Medium density	16	8.1	69	-	-
mPr	15.40	-15.40	-3.53 PM	5.40						Poorly sorted sand (SaP), gray, water-saturated, from 14.7 m to 15 m with sandy clay lenses, from 15.1 m to 15.4 m with gravelly sand	Very dense	23	-	33	4.3	24
	5.60	-5.60	-17.73	2.20						Sandy clay of low plasticity (saCL) gray, with gravel, from 22.3 m to 22.4 m with gravel, from 21.3 m dark gray, from 23.3 m gray	Stiffy plastic	45	-	36	15.5	-
	18.30	-18.30	-18.43	0.70							Softly plastic	42	-	39	12.2	-
	9.30 PM	-21.30	-21.43	3.00							Stiffy plastic	45	-	37	14.3	-
pr	32.50	-32.50	-32.63	11.20							Hard	53	-	190	31.6	-
prn	36.00	-36.00	-36.13	3.50						Highly plastic dust (SiH), brown, with a slight odor	Hard	49	-	125	33.3	-

T 34.00–36.10

Schedule of static and dynamic sounding tests,
CPTU 28, DPSH 28



Drawing No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/12/2024

Borehole No. 29

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 36.00 m

SWECO

Scale 1:100

Geological index	Base depth, m	Base depth, m (according to LAS07)	Base depth, m (according to BAS77)	Layer thickness, m	Soil type No.	Depth	Water level, m alt. according to LAS07 Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGE	Cohesion, MPa	Sand friction angle, °	Number of blows, N	Dynamic cone strength, MPa	Humidity, %
-	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-	-
-	4.10	4.10	-4.23	4.10							The waters of the Curonian Lagoon	-	-	-	-	-	-	-
mV	7.00	7.00	-7.13	2.90							Poorly sorted sand (SaP) dark gray, up to 7.0 m silty, water-saturated	Very loose	6	0.6	4	-	-	-
aIV	7.70	7.70	-7.83	0.70	1	7.90–8.20					Poorly sorted sand (SaP) is light gray, watery, and contains shells down to a depth of 7.5 m; from 13.0 m to 14.1 m, it is interbedded with layers of medium-grained sand	Medium density	18	10.4	98	-	-	-
	8.40	8.40	-8.53	0.70								Tarnish	18	14.9	146	-	-	-
	9.30	9.30	-9.43	0.90								Medium density	15	8.2	90	-	-	-
	14.10	14.10	-14.23	4.80								Very dense	23	-	200	-	-	-
aIV	15.30	15.30	-15.43	1.20								Hard	53	-	-	60	27.7	-
	16.80	16.80	-16.93	1.50								Softly plastic	42	-	-	32	14.0	-
	21.60	21.60	-21.73	4.80	2	22.20–22.50					Sandy clay of low plasticity (saCiL), gray, with gravel, from 15.3 m to 16.7 m with sandy silt lenses, brown from 21.6 m, dark gray from 22.5 m, from 22.7 m gray, with gravel, from 25.7 m to 27.4 m with interlayers of silty sand	Rigid-plastic	46	-	-	39	15.2	-
	31.10	31.10	-31.23	9.50								Hard	53	-	-	85	27.2	-
aIV	36.00	36.00	-36.13	4.90							Medium-plasticity clay (CiM), brown, with fine grains	Hard	55	-	-	113	30.4	-

Schedule of static and dynamic sounding tests,
CPTU 29, DPSH 29

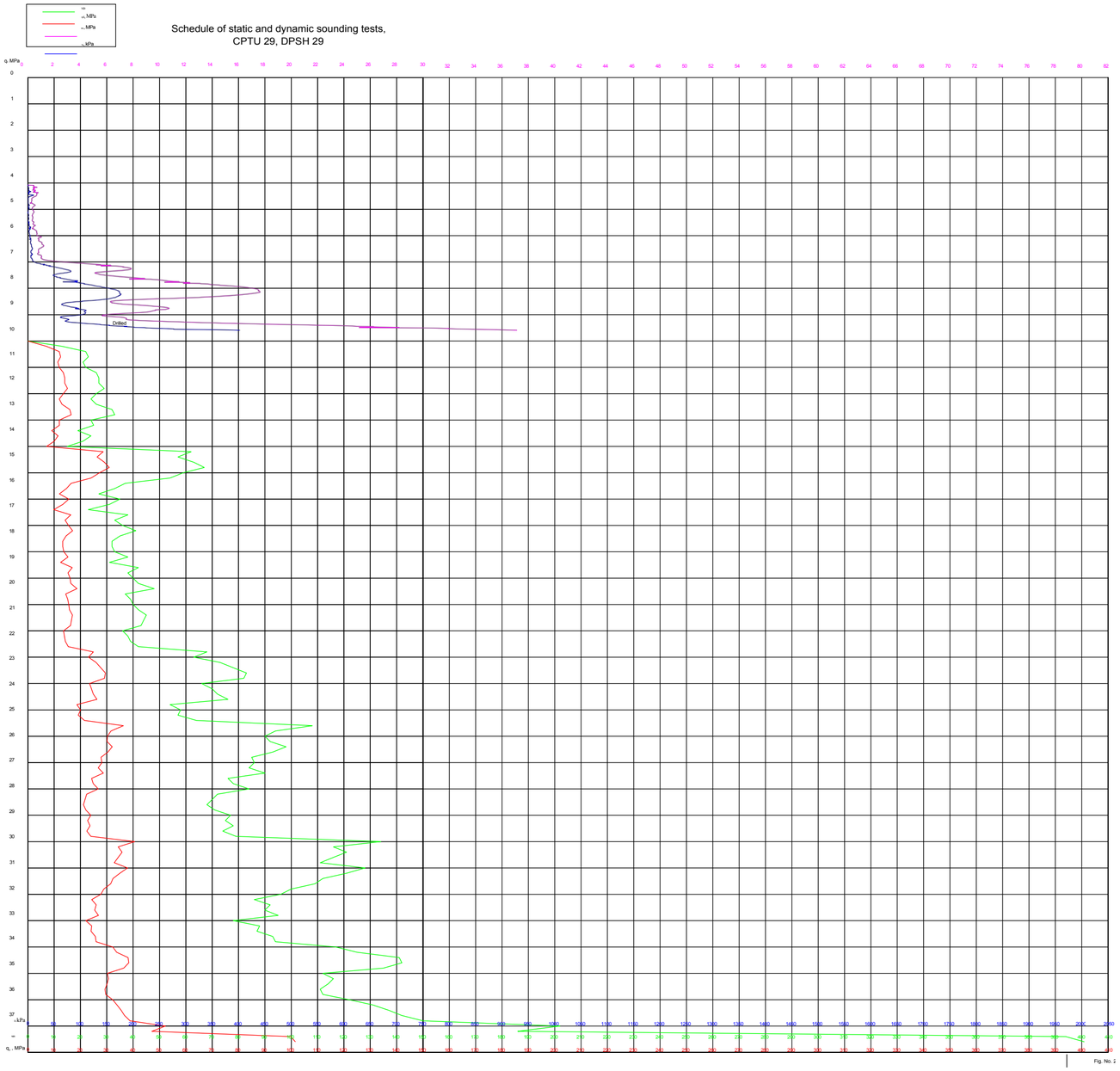


Fig. No. 1

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/12/2024

Borehole No. 30

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)

SWECO

Well depth 36.00 m

Scale 1:100

Geological index.	Depth of layer base m	Depth of layer base m (According to LAS07)	Depth of layer base m (According to BAS77)	Thickness of the layer, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Min.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	KS	Cone resistance, MPa	Friction resistance, MPa	Number of blows, N	Dynamic cone strength, qd	Strength, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water level: 1.3 m Depth into the water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-		-	-	-	-	
	3.50	-3.50	-3.63	3.50			0.00	0.00		Water from the Curonian Lagoon	-		-	-	-	-	
H	7.30	-7.30	-7.43	3.80						Slightly silty-clayey poorly sorted sand (SaFP) dark gray, silty up to 7.3 m, gray from 7.3 m to 8.9 m, with shells, waterlogged	Very loose	7	0.8	6	-	-	
	8.90	-8.90	-9.03	1.60							Medium density	16	6.6	96	-		
H	13.80	-13.80	-13.93	4.90						Poorly sorted sand (SaP) light gray, watery	Very dense	23			21.0	177	
																25	12.8
	14.90	-14.90	-15.03	1.10						Low-plasticity clay (CiL), gray	Hard	51			-	45	21.1
L	16.20	-16.20	-16.33	1.30							Stiffy plastic	44			-	29	8.9
	5:20 PM	-5:20 PM	-5:33 PM	1.00	1	to 16.90					Softy plastic	41			-	32	13.7
	6:40 PM	-6:40 PM	-6:53 PM	1.20	2	to 18.20					Softy plastic	42			-	33	15.3
L	23.50	-23.50	-23.63	5.10						Sandy low-plasticity clay (saCiL), gray, with gravel, from 18.9 m to 19.3 m with interlayers of silty sand, from 22.4 m to 22.8 m with interlayers of silty sand, from 24.4 m to 24.5 m with gravel	Rigidly plastic	45			-	36	14.3
	25.60	-25.60	-25.73	2.10			25.60	25.60			Hard	53			-	75	23.8
H	27.80	-27.80	-27.93	2.20	3	to 26.60				Slightly silty-clayey poorly sorted sand (SaFP), light gray, water-saturated, from 27.3 m to 27.4 m with a sand layer	Very dense	37			-		27.4 6
H	28.50	-28.50	-28.63	0.70						Sandy loam (siSa), light gray, water-saturated, with sandy clay lenses	Very dense	35			-	25	7.4
L	36.00	-36.00	-36.13	7.50						Sandy clay with low plasticity (saCiL), gray, with sand grains	Hard	53			-	124	37.8

Schedule of static and dynamic sounding tests, CPTU 30, DPSH 30

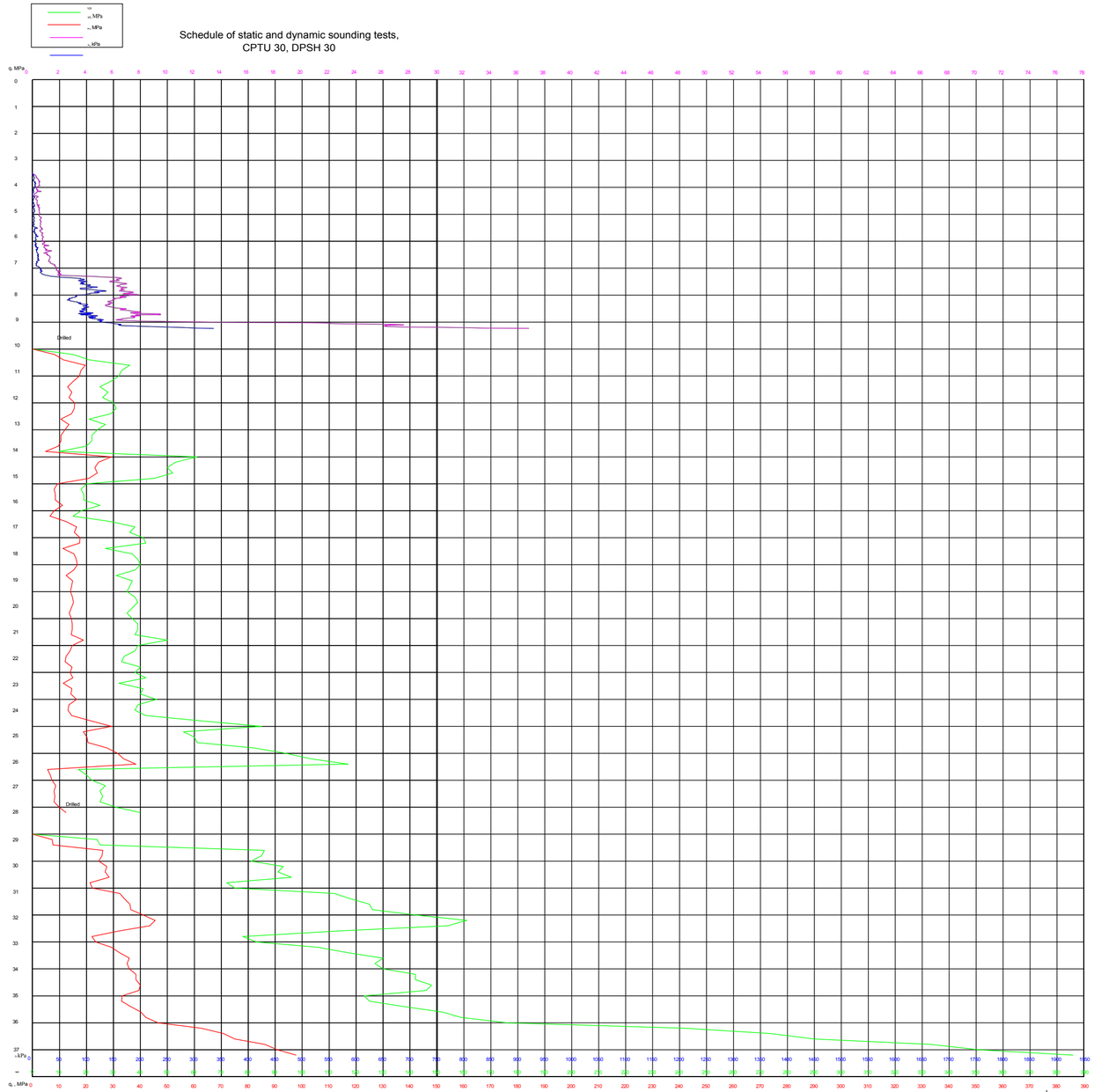


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/13/2024

Borehole No. 31

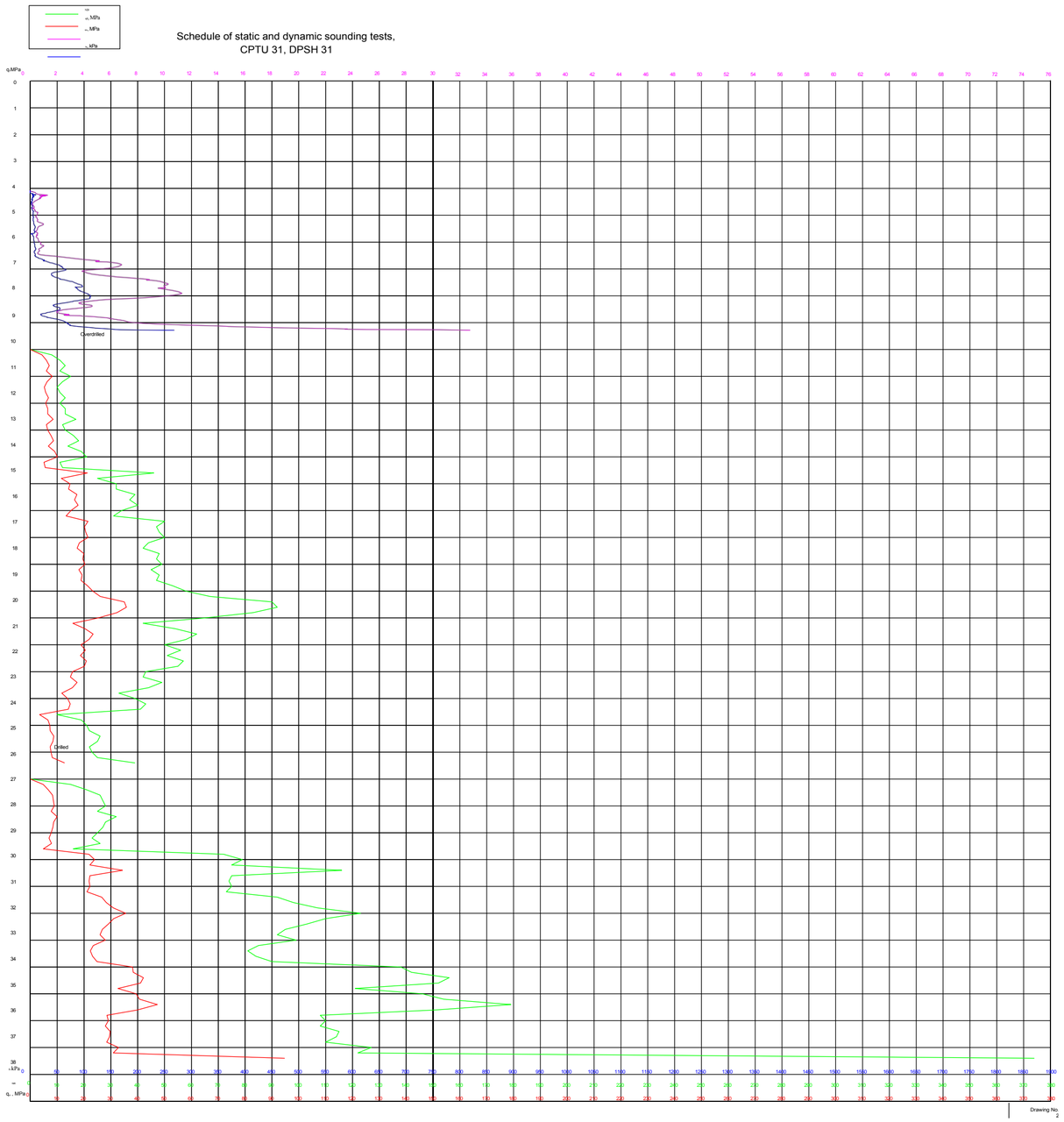
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base dh (according to LAS07) m	Depth of layer base dh (according to BAS77) m	Layer thickness, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	K/S	Cohesion c_u kPa	Lateral friction strength f_s kPa	Tip resistance q_c MPa	Dynamic cone resistance q_d MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	-
-	4.10	-4.10	-4.23	4.10			0.00	0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
a IV	4.40	-4.40	-4.53	0.30							Silt (sandy) (Dy) black, waterlogged	-	1	0	0.4	-	-
a IV	6.70	-6.70	-6.83	2.30							Slightly silty-clayey, poorly sorted sand (SaFP) dark gray, up to 6.6 m silty, waterlogged	Very loose	7	0	8.8	-	-
a IV	7.00	7.00	7.13	0.30								Medium density	16	6	2.40	-	-
a IV	7.30	-7.30	-7.43	0.30							Slightly silty-clayey poorly sorted sand (SaFP) gray, water-bearing, from 8.1 m with shells	Puras	11	4	7.50	-	-
a IV	7.60	-7.60	-7.73	0.30								Medium density	16	9	7.1	-	-
a IV	8.00	-8.00	-8.13	0.40								Dense	20	10	5.4	-	-
a IV	8.30	-8.30	-8.43	0.30								Medium density	16	6	2.93	-	-
a IV	8.80	-8.80	-8.93	0.50								Loose	11	2	3.40	-	-
a IV	9.10	-9.10	-9.23	0.30								Medium density	15	7	0.68	-	-
a IV	14.60	-14.60	-14.73	5.50							Poorly sorted sand (SaP) light gray, watery	Dense	19			19.7	66
a IV	15.20	-15.20	-15.33	0.60								Stiff plastic	45	-	-	34	15.9
l IV	18.80	-18.80	-18.93	3.60							Sandy clay with low plasticity (saCiL), gray, with sand grains	Semi-coarse	47	-	-	43	18.3
l IV	21.10	-21.10	-21.23	2.30								Hard	53	-	-	65	24.9
l IV	21.80	-21.80	-21.93	0.70								Semi-hard	47	-	-	55	20.6
l IV	23.60	-23.60	-23.73	1.80								Silty plastic	45	-	-	40	14.2
							23.80		23.80								23.7
lmIII	28.60	-28.60	-28.73	5.00							Silty sand (SiSa) light gray, watery	Very dense	35			-	
																	24.6
lgIII	30.10	-30.10	-30.23	1.50							Medium-plasticity clay (CiM), brown, with sand	Hard	55	-	-	81	24.1
					1	28.60-30.10											
					2	30.10-30.60											
l IV	34.60	-34.60	-34.73	4.50							Sandy clay with low plasticity (saCiL), dark gray-brown, from 30.1 m gray, with sand.	Hard	53	-	-	166	29.8
lmIII	36.00	-36.00	-36.13	1.40							Medium-plasticity clay (CiM), brown, with sand	Hard	55	-	-	117	30.4

Schedule of static and dynamic sounding tests, CPTU 31, DPSH 31



Drawing No 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/13/2024

Borehole No. 32

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 36.00 m

SWECO

Scale 1:100

Geological Index	Depth of layer base m	Depth of layer base according to LAS07	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Shear strength c_u, kPa	Deformation strength E_{def}, MPa	Dynamic cone strength q_d, MPa	
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Well measurements start at a height of 0.0 m according to LAS07. The water level of the Curonian Lagoon is variable)	-	-	-	-	-
	4.50	4.50	-4.63	4.50	Water of the Curonian Lagoon	-	-	-	-	-
a	7.10	7.10	-7.23	2.60	Sandy loam with a low organic matter content (osiSa), dark gray, crumbly, water-retentive, with 3.2% organic matter	Very loose	4	0.7	5	-
3	8.40	8.40	-8.53	1.30	Slightly silty-clayey poorly sorted sand (SaFP), gray, from 9.7 m light gray, water-saturated, from 8.4 m with shells, with 1.8% organic matter admixture	Purus	11	1.4	45	-
	9.80	9.80	-9.93	1.40		Medium density	16	7	9	-
	14.90	14.90	-15.03	5.10		Very dense	24			24 11.8
L	15.90	15.90	-16.03	1.00	Sandy, low-plasticity silt (saSiL), gray	Hard	48	-	-	43 19.3
	21.70	21.70	-21.83	5.80	Sandy clay with low plasticity (saCtL), brown, gray from 19.6 m	Highly plastic	45	-	-	37 14.8
	22.40	22.40	-22.53	0.70						
	23.40	23.40	-23.53	1.00		Hard	53	-	-	53 19.3
mQ	23.90	23.90	-24.03	0.50	Highly plastic clay (CtH), dark brown	Puskelts	54	-	-	44 15.4
L					Silty sand (siSa) gray, watery	Very dense	35	-	-	23 7.9
	28.40	28.40	-28.53	4.50	Medium-plastic clay (CtM), dark gray, from 24.1 m to 24.3 m, with gravel	Hard	55	-	-	90 29.0
L	33.50	33.50	-33.63	5.10	Sandy clay with low plasticity (saCtL), gray, with a fine texture	Hard	53	-	-	105 30.2
L	36.00	36.00	-36.13	2.50	Medium-plasticity clay (CtM), gray, with a fine grain	Hard	55	-	-	99 26.0

Soil type: No. 1 (5.10–5.40), 2 (7.40–7.70), 3 (10.00 Pas–11.00 Pas)

Water level, m alt. according to LAS07: Pass. Depth Max. 0.00 0.00 0.00 a.m.; 11.40 11.40

Schedule of static and dynamic probing tests, CPTU 32, DPSH 32

q_c, MPa; u_2, MPa; f_s, MPa; R_f, %

q_d, MPa

Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/14/2024

Borehole No. 33

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological Index	Depth of layer base m	Depth of layer base m (Chrzanów - LAS07)	Depth of layer base m (Kuznica - BAS77)	Layer thickness, m	Soil type No.	Water level, m alt. according to LAS07 Depth	Pass.	Depth Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cone resistance, MPa	Friction resistance, kPa	Number of blows, -	Dynamic cone strength q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth below water surface: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
	5.00	-5.00	-5.13	5.00			0.00	0.00		Water of the Curonian Lagoon	-	-	-	-	-	-
S	8.20	-8.20	-8.33	3.20			0.00	0.00		Slightly silty-clayey poorly sorted sand (SaFP), dark greenish-gray, silty to 7.3 m, gray from 7.3 m, with shells, water-saturated	Very crumbly	7	0.8	2	-	-
	9.00	-9.00	-9.13	0.80			0.00	0.00			Medium density	46	0.2	32	-	-
	9.50	-9.50	-9.63	0.50			0.00	0.00			Loose	11	3.8	26	-	-
	10.20	-10.20	-10.33	0.70			0.00	0.00			Medium density	16	8.6	62	-	-
													18.3	119		
Q IV	15.40	-15.40	-15.53	5.20						Poorly sorted sand (SaP) is light gray and watery	Dense	19			13	6.2
L	16.10	-16.10	-16.23	0.70						Sandy low-plasticity silt (saSiL) gray	Hard	48	-	-	41	18.2
	19.30	-19.30	-19.43	3.20						Sandy clay of low plasticity (saCiL) brown, with gravel, gray from 19.3 m, with gravel from 16.1 m to 16.3 m	Hard	53	-	-	86	36.0
															52	20.2
	22.60	-22.60	-22.73	3.30						Medium-plasticity clay (CiM), dark brownish-gray	Rigid-plastic	45	-	-	38	14.1
											Hard	55	-	-	67	19.9
	23.60	-23.60	-23.73	1.00	2	23.10-23.60										
							23.90	23.90		Sandy, low-plasticity silt (saSiL), gray, with sandy silt lenses, ranging from 23.9 m to 24.2 m with water-bearing gravelly sand lenses	Hard	48	-	-	71	23.8
	25.90	-25.90	-26.03	2.30												
	34.10	-34.10	-34.23	8.20						Sandy clay with low plasticity (saCiL), gray, with a slight grayish tint	Hard	53	-	-	118	34.2
										Medium-plastic clay (CiM), gray, with a sandy texture	Hard	55	-	-		
	36.00	-36.00	-36.13	1.90											98	44.0

Schedule of static and dynamic sounding tests, CPTU 33, DPSH 33

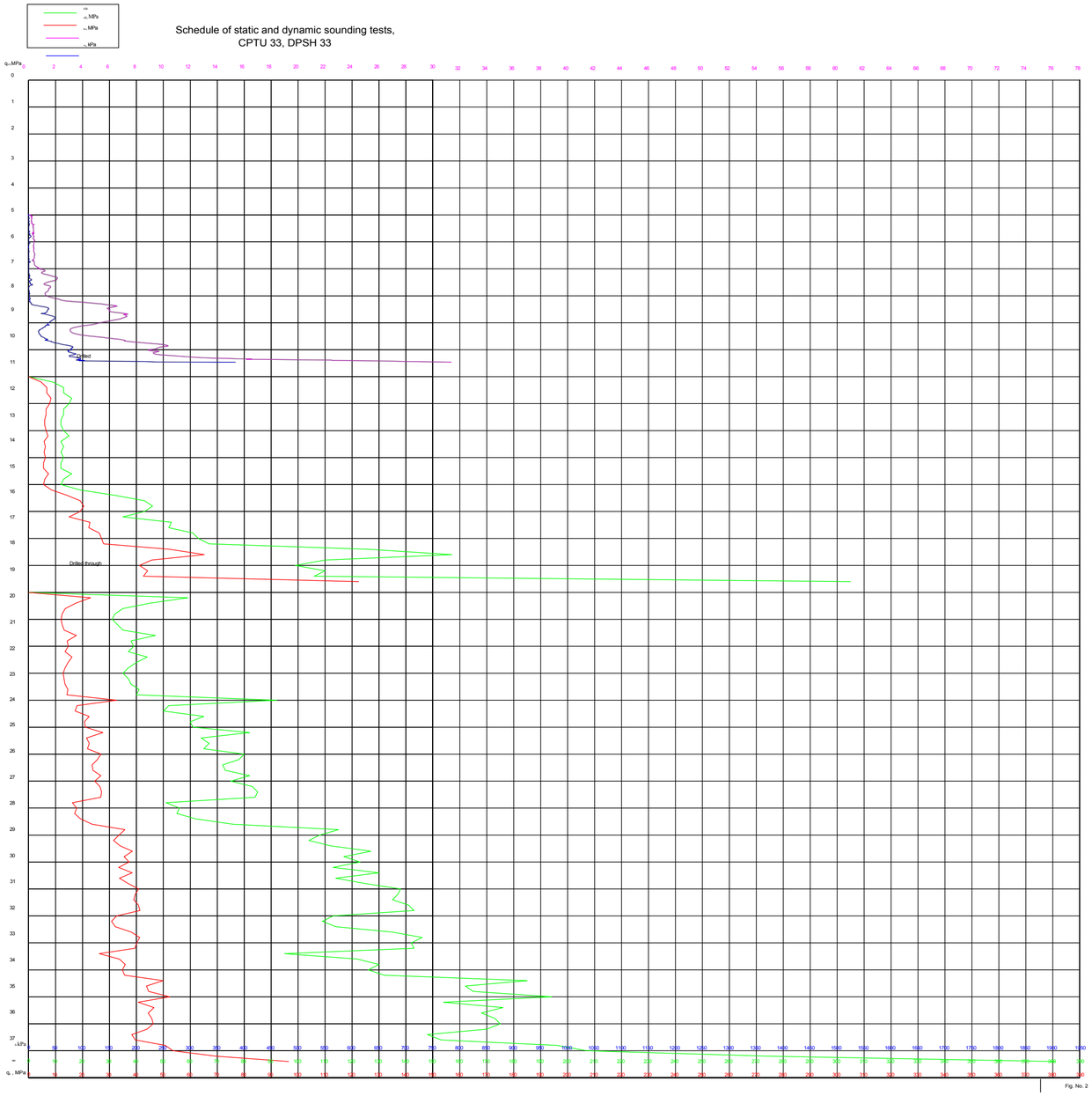


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/14/2024

Borehole No. 34

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m Baltic Sea	Depth of layer base m Baltic Sea	Thickness of the layer, m	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Unconfined compressive strength, kPa	Number of blows, qc	Dynamic cone resistance, MPa
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
-	5.70	-5.70	-5.83	5.70	Water of the Curonian Lagoon	-					
m IV	7.20	-7.20	-7.33	1.50	Slightly silty-clayey, poorly sorted sand with a small admixture of organic matter (oSaFP), dark greenish-gray, muddy, watery, with 2.4% organic matter	Very loose	5	0	5.4	-	-
m IV	9.10	-9.10	-9.23	1.90	Poorly sorted sand (SaP), gray, watery	Very loose	6	1	12.9	-	-
m IV	9.70	-9.70	-9.83	0.60	Slightly silty-clayey poorly sorted sand (SaFP) light gray, watery, with 1.1% organic matter	Loose	11	5.1	36	-	-
m IV	11.90	-11.90	-12.03	2.20	Poorly sorted sand (SaP), light gray, watery	Medium density	15	6	4.79	-	-
	15.20	-15.20	-15.33	3.30		Very dense	23		24.4	232	-
l IV	17.90	-17.90	-18.03	2.70	Sandy, low-plasticity silt (saSiL) gray	Solid	48	-	56	23.8	-
l IV	18.60	-18.60	-18.73	0.70	Low-plasticity clay (ClL), gray, with sand	Stiffly plastic	44	-	36	14.5	-
lmIV	19.50	-19.50	-19.63	0.90	High plasticity clay (ClH), dark brownish gray	Semi-coarse	54	-	46	18.1	-
l IV	26.10	-26.10	-26.23	6.60	Sandy low-plasticity clay (saCiL), gray, with a stony texture; from 19.5 m to 20.6 m with water-bearing lenses of fine sand; from 19.7 m to 19.8 m with clay lenses, from 23.2 m to 23.7 m with water-bearing silty sand lenses, from 25.2 m to 25.5 m with clay lenses	Hard	53	-	77	27	-
l IV	27.30	-27.30	-27.43	1.20	Sandy low-plasticity clay-silt (saCiL-SiL), light gray, with water-bearing sand lenses	Hard	52	-	235	74.6	-
lmIV	28.70	-28.70	-28.83	1.40	Sandy clay with low plasticity (saCiL), gray, with sand.	Hard	53	-	76	23.5	-
fmIV	30.90	-30.90	-31.03	2.20	Low-silt, low-clay, poorly sorted sand (SaFiP), light gray, watery	Very dense	37		-	24	7.0
lgmIV	34.00	-34.00	-34.13	3.10	Medium-plasticity clay (ClM) dark brownish-gray, with sandy-silt lenses, with coal, brown from 33.2 m	Hard	55	-	99	27.5	-
lgmIV	36.00	-36.00	-36.13	2.00	Highly plastic clay (ClH) brown, with coal	Hard	56	-	161	26.4	-

Water level, m alt. according to

No.	Depth	Pass.	Depth.	Max.
		0.00	0.00	0.00
		0.00	0.00	0.00
1	0.00-1.50			
2	1.50-8.40			
3	2.00 PM-2.70 PM			
4	8.00-8.50 PM			
5	7.00 PM-7.20 PM	7:00 PM	7:00 PM	
6	10.50 PM-10.90 PM	11.20 PM	11.20 PM	
		26.10	26.10	
		28.70	28.70	
7	32.50-33.00			
8	34.00-36.00			

Schedule of static and dynamic sounding tests, CPTU 34, DPSH 34

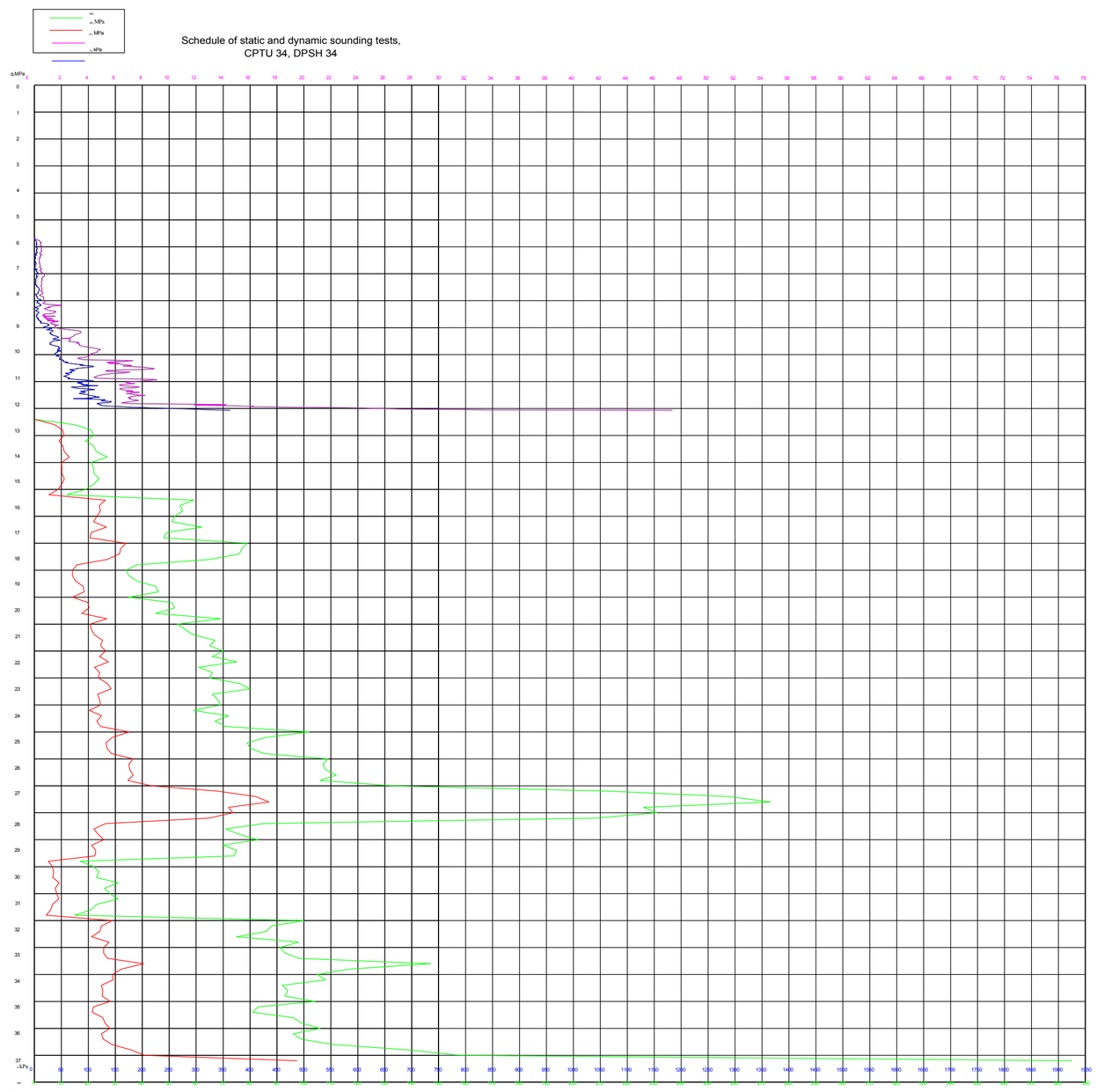


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/28/2024

Borehole No. 35

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 18.00 m

SWECO

M 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m
	0.00	0.00	-0.13	0.00
.	7.40	-7.40	-7.53	7.40
a IV	9.30	-9.30	-9.43	1.90
	9.70	-9.70	-9.83	0.40
	10.20	-10.20	-10.33	0.50
	10.50	-10.50	-10.63	0.30
a IV	12.20	-12.20	-12.33	1.70
	14.70	-14.70	-14.83	2.50
f	6.00 PM	-6.00 PM	-6.13 PM	3.30

Soil type No.	Depth	Water level, m alt, according to LAS07 Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cohesion, kPa	Angle of internal friction, °	Number of blows, N	Dynamic cone strength, q_d, MPa
		0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Well measurements start at a height of 0.0 m on the LAS07 datum. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
						The waters of the Curonian Lagoon	-	-	-	-	-	-
1	1.80–8.10					Slightly silty-clayey poorly sorted sand (SaFP) gray, loamy, watery, with 1.8% organic matter admixture	Very loose	7	0.8	8	-	-
							Crumbl	12	3.4	31	-	-
							Very crumbly	6	1.7	25	-	-
							Purus	12	3.6	26	-	-
2	13.10–13.45					Poorly sorted sand (SaF) light gray, watery, from 9.6 m to 9.8 m with sandy silt lenses	Medium density	15	7.4	73	-	-
									27.7	174		
							Tarkius	19			42	6.7
3	17.00–17.40					Sandy clay with low plasticity (saCtL), gray, with a fine texture	Hard	53	-	-	48	20.8

Schedule of static and dynamic sounding tests,
CPTU 35, DPSH 35

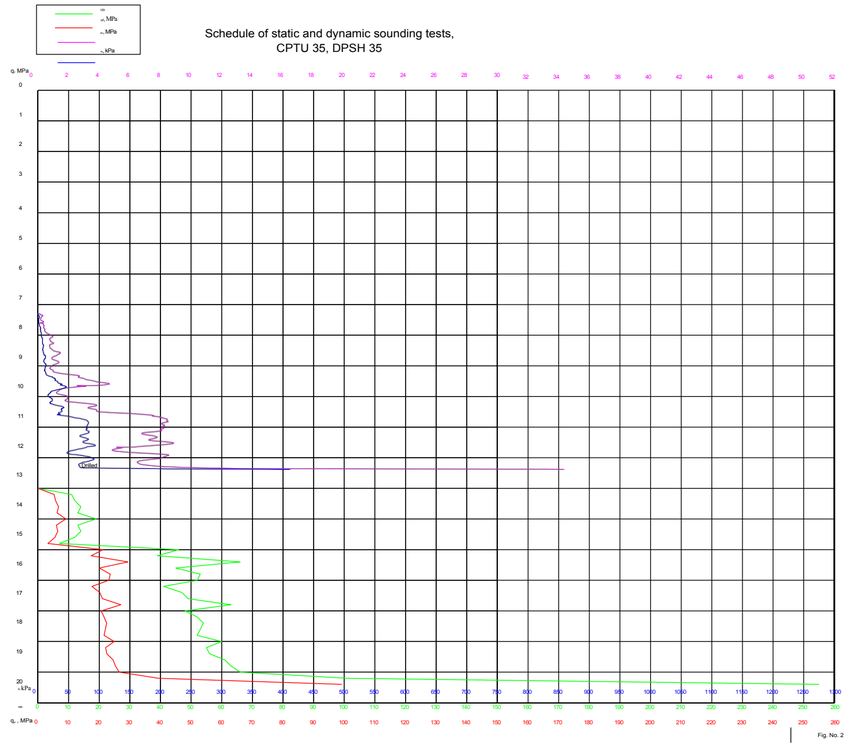


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

Borehole No. 36

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)

Well depth 20.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cone resistance q_c, MPa	Limit resistance q_{dyn}, MPa	Number of blows, pc	Dynamic cone resistance q_d, MPa
	0.00	0.00	-0.13	0.00			0.00 0.00	0.00 0.00	0.00 0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
	7.30	7.30	7.13	7.30							Water of the Curonian Lagoon	-					
a IV	9.70 9.90	9.70 9.90	9.83 10.03	2.50 0.20	1	2.40-7.70					Slightly silty-clayey, poorly sorted sand with a small amount of organic matter m 2.0% Very loose organic matter		5	1.0	11	-	-
												- - -

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/16/2024

Borehole No. 37

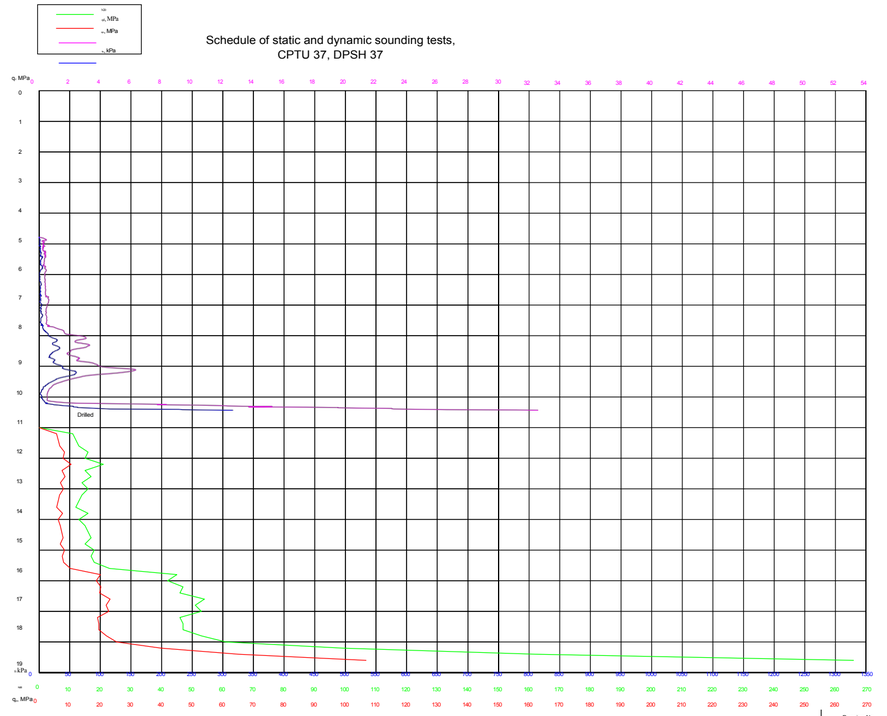
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 18.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil elevation alt. according to LAS07, No.	Soil elevation alt. according to LAS07, Depth	Water level, m alt. according to, Pass.	Water level, m alt. according to, Depth	Water level, m alt. according to, Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Friction angle, °	Cube strength, MPa	Dynamic cone strength q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth at height: 0.0 m (Borehole measurements start at a height of 1.0 m above LAS07. The is variable)	-					
	4.80	-4.80	-4.93	4.80			0.00	0.00	0.00		Water from the Curonian Lagoon	-					
H	5.80	-5.80	-5.93	1.00							Silt (sandy) (Dy) black, watery	-	1	0	3	-	-
H	8.00	-8.00	-8.13	2.20	1	0.00–8.00					Slightly silty-clayey, poorly sorted sand with a small admixture of organic matter (clSaFP), dark greenish-gray, dark gray from 8.0 m, silty, watery, with a 2.5%–2.8% admixture of organic matter	Very loose	5	0	9	4	-
H	8.40	-8.40	-8.53	0.40	2	8.00–8.40						Purus	10	2	9	25	-
H	8.70	-8.70	-8.83	0.30								Very loose	5	2	2	4	-
H	9.40	-9.40	-9.53	0.70	3	8.40–8.70					Poorly sorted sand (SaP) light gray, watery, with shells	Loose	12	3	9	39	-
H	10.20	-10.20	-10.33	0.80								Very loose	6	0	9	10	-
H	15.80	-15.80	-15.93	5.60	4	11.80–11.80					Low-silt, poorly sorted sandy loam (SaFP), light brown, watery	Dense	20			15	7.2
L	17.50	-17.50	-17.63	1.70							Sandy, low-plasticity silt (saSiL), gray	Hard	48			46	20.6
	18.00	-18.00	-18.13 PM	0.50							Sandy low-plasticity clay (saCiL) gray, with gravel	Hard	53			50	20.6

Schedule of static and dynamic sounding tests, CPTU 37, DPSH 37



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

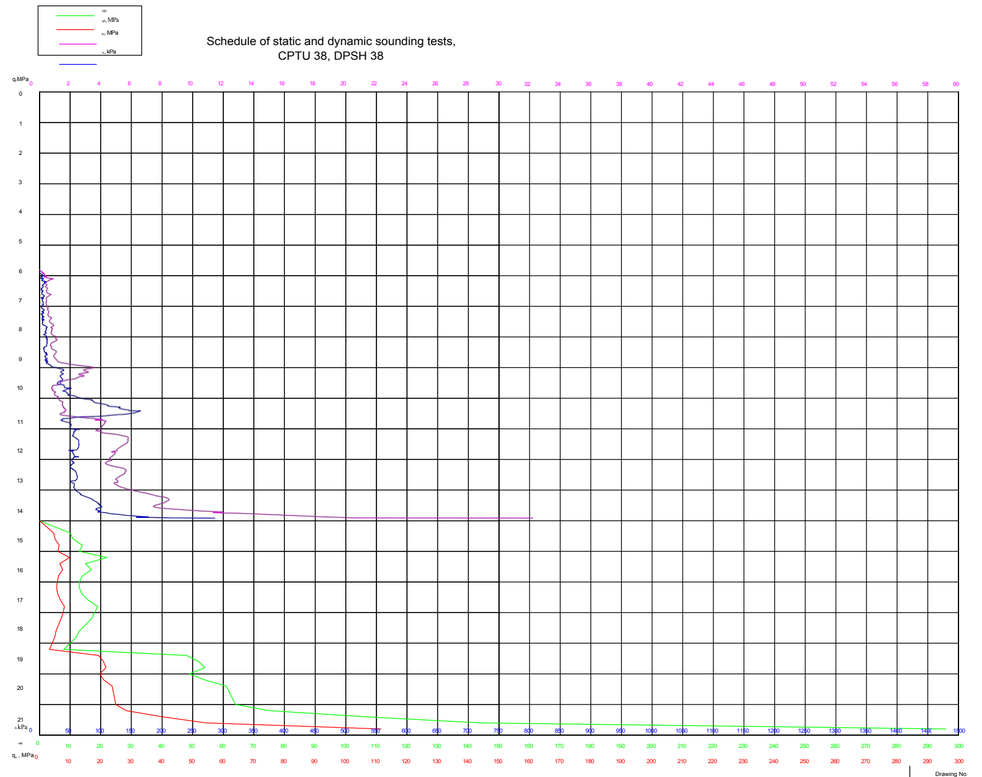
Borehole No. 38

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 20.50 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (According to LAS07)	Depth of layer base, m (According to BAS77)	Layer thickness, m	Soil elevation LAS07, No.	Soil elevation LAS07, Depth	Water level, m alt. according to, Pass.	Water level, m alt. according to, Depth.	Water level, m alt. according to, Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cone resistance q_c, MPa	Total sounding resistance q_t, MPa	Number of blows, n_{10}	Dynamic cone resistance q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
	5.80	-5.80	-5.93	5.80			0.00	0.00	0.00		Water of the Curonian Lagoon	-					
H	8.90	-8.90	-9.03	3.10	1	6.80					Slightly silty-clayey poorly sorted sand (SaFP), greenish-gray, muddy up to 7.6 m, bluish-gray from 8.9 m, water-saturated, with 1.4%–1.5% organic matter admixture	Very loose	7	0.7	7	-	-
	9.30	-9.30	-9.43	0.40							Sandy, very highly plastic silt with a moderate admixture of organic matter (saSiVO), dark brown, with 14.3% organic matter admixture, with lenses of water-saturated silty sand	Loose	11	2.9	32	-	-
H	10.00	-10.00	-10.13	0.70	3	9.30					Peat (Pt) dark brown, well-decomposed, with 45.5% organic	Hard	30	3.9	42	-	-
H	10.60	-10.60	-10.73	0.60	4	10.00–10.60					contaminants, watery	-	3	1.5	118	-	-
	11.20	-11.20	-11.33	0.60							Slightly silty-clayey poorly sorted sand (SaFP), light gray, water-saturated, from 16.2 m to 16.5 m with sandy clay lenses, from 16.9 m to 17.4 m with sandy clay lenses	Loose	11	4.0	51	-	-
	11.70	-11.70	-11.83	0.50								Medium density	16	6.6	62	-	-
	12.20	-12.20	-12.33	0.50								Loose	11	4.7	65	-	-
	13.70	-13.70	-13.83	1.50								Medium density	16	6.6	70	-	-
	18.40	-18.40	-18.53	4.70	5	13.70–18.40						Dense	20			13	5.7
L	20.50	-20.50	-20.63	2.10							Sandy clay of low plasticity (saCiL), gray-brown, with sand lenses, with gravel.	Hard	53			- 63	24.4



Drawing No

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/16/2024

Borehole No. 39

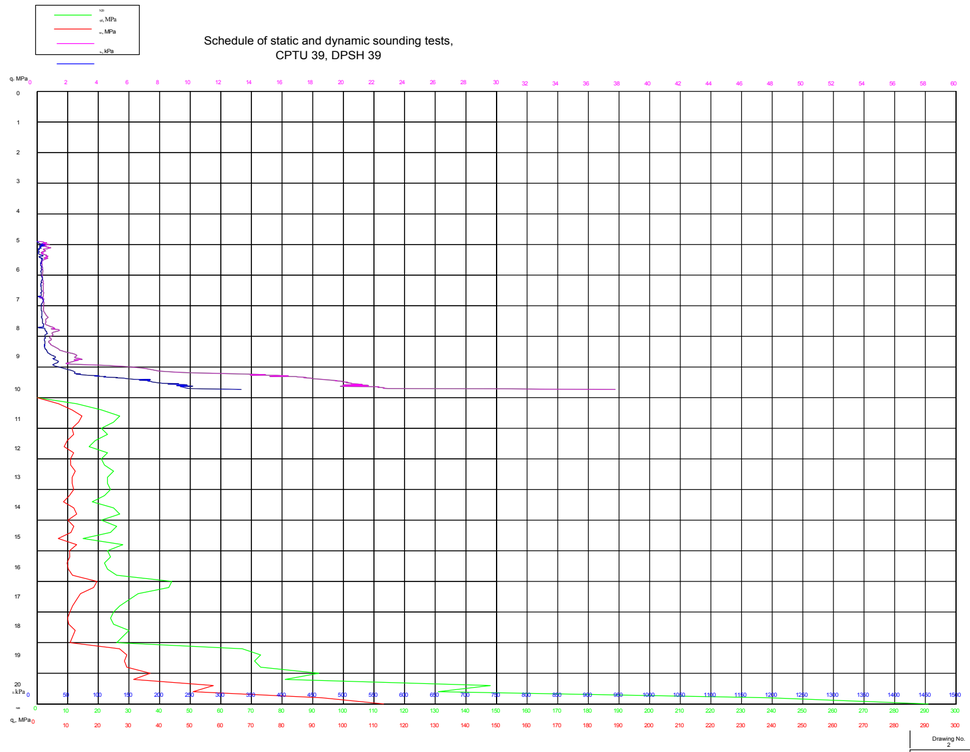
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 20.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (According to BAS77)	Depth of layer base m (According to LAS07)	Stratum thickness, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cone resistance, MPa	Number of Blows, N30	Dynamic cone strength q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth at the bottom: 4.9 m (Borehole measurements BSH at a height of 0.6 m above LAS07. The is variable)	-				
	4.90	-4.90	-5.03	4.90							Water of the Curonian Lagoon	-				
m IV	6.90	-6.90	-7.03	2.00	1	6.9–6.90					Slightly silty-clayey, poorly sorted sand with a small organic matter content (cSaFP), dark gray, lumpy, watery, with Very loose 2.7% organic matter		5	0.4	7	-
	8.50	-8.50	-8.63	1.60								Very loose	6	0.8	11	-
	9.00	-9.00	-9.13	0.50	2	8.6–8.90						Puna	12	2.4	27	-
	9.20	-9.20	-9.43	0.30								Medium dense	15	8.9	60	-
	9.50	-9.50	-9.63	0.20	3	9.0–9.50						Dense	19	15.4	154	-
													22	9.2	239	-
m V	15.90	-15.90	-16.03	6.40							Poorly sorted sand (SaP) dark gray, light gray from 9.5 m, with shells from 7.7 m to 8.9 m, water-saturated	Very dense	23		22	10.7
l	17.80	-17.80	-17.93	1.90	4	17.50–17.80					Sandy, low-plasticity clay-silt (saCiL-SiL), gray, with fine grains	Stiffy plastic	43		30	13.8
l	20.00	-20.00	-20.13	2.20							Sandy, low-plasticity clay (saCiL), gray-brown, with coal.	Hard	53		94	36.9

Schedule of static and dynamic sounding tests, CPTU 39, DPSH 39



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

Borehole No. 40

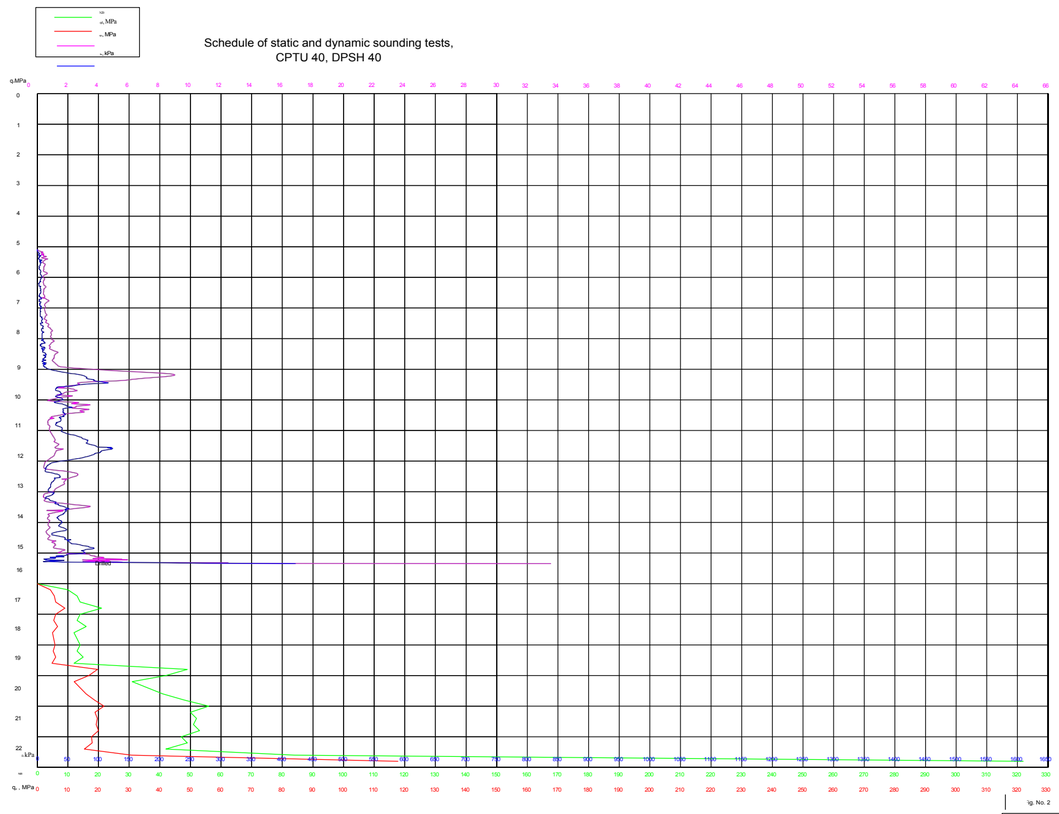
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 21.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Layer thickness, m	Soil elevation according to LAS07, No.	Depth	Water level, m alt. according to Pass.	Depth.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cohesion, MPa	Friction angle, °	Deformation modulus, MPa	Dynamic cone resistance, MPa
	0.00	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
-	5.20	5.20							Water from the Curonian Lagoon	-					
a IV	9.00	3.80	1	6.80–7.10					Slightly silty-clayey poorly sorted sand (SaFP) greenish gray, silty up to 9.0 m, gray and watery from 9.0 m, 1.4% to 1.7% with organic matter admixture	Very loose	7	0.7	7	-	-
	9.40	0.40	2	9.10–9.40						Medium dense	16	6.9	64	-	-
	10.10	0.70	3	9.80–9.90						Very loose	7	2.2	47	-	-
	10.50	0.40								Purus	11	2.6	45	-	-
a IV	11.00	0.50	4	10.80–10.90					Gītja (Gy) brown, with 23.0% organic matter	-	2	0.8	37	-	-
l IV	11.90	0.90	5	11.00–11.60					Peat (Pt) dark brown, well decomposed, with 53.3% organic matter content	-	3	1.1	82	-	-
	12.30	0.40	6	11.90–12.10	12.30	12.30	12.30		Sandy, very highly plastic silt with moderate organic matter content (saSi(Or)), dark brown, with 16.7% organic matter content	Very plastic	27	0.6	20	-	-
δ	13.60	1.30							Poorly sorted sand (SaP) light gray, watery, from 13.0 Very loose m to 13.3 m with sandy silt lenses		6	1.6	27	-	-
									Sandy, very highly plastic silt with moderate organic matter impurity (SaSi(Or)) light brown, with 13.3% organic matter impurity	Firmly plastic	28	0.8	40	-	-
a IV	14.30	0.70	7	14.00–14.30					Gītja (Gy) dark brown, with wood residues, with 23.7% organic matter admixture	-	2	1.6	53	-	-
l IV	15.20	0.90	8	14.50–14.80	15.20	15.20	15.20		Sandy loam (siSa) light brown, watery	Dense	31	10.6	107	-	-
l IV	16.00	0.80													
a IV	18.60	2.60	9	5:30 PM–5:60 PM					Slightly silty-clayey poorly sorted sand (SaFP) light gray, watery	Dense	33	-	13	5.4	
L	21.00	2.40							Sandy clay with low plasticity (saCl(L)), gray-brown, with fine grains	Hard	53	-	43	16.8	

Schedule of static and dynamic sounding tests, CPTU 40, DPSH 40



Ig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/02/2024

Borehole No. 41

Altitude of the borehole mouth
0.00 (according to LAS07)
Altitude of the borehole mouth
-0.13 (according to BAS77)

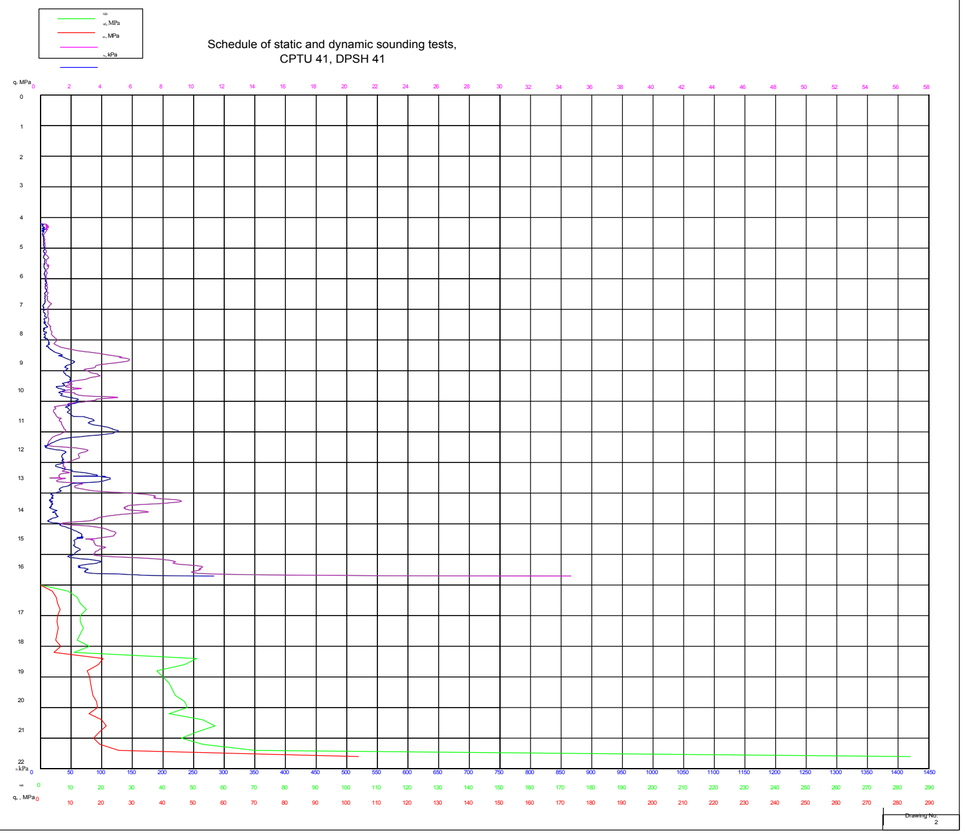
Well depth 21.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m according to BAS77	Depth of layer base m according to LAS07	Layer thickness, m	Soil elevation alt. according to LAS07 No.	Depth	Water level, m alt. according to Min.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Friction angle, °	Number of blows, no.	Deformation modulus, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
-	4.20	4.20	-4.33	4.20			0.00	0.00		Water of the Curonian Lagoon	-					
s	6.30	6.30	-6.43	2.10	1	4.2–6.3 m				Low-silt, loamy, poorly sorted sand (SaFP) that is greenish-brown, watery, and contains 1.0% organic matter	Very loose	7	0	4	6	-
a IV	7.00	7.00	-7.13	0.70	2	6.3–7.0 m				Slightly silty-clayey poorly sorted sand with a low organic matter content (oSaFP) is greenish-brown, watery, with 2.9% organic matter	Very loose	5	0	5	7	-
m IV	8.30	8.30	-8.43	1.30	3	7.0–7.70				Poorly sorted sand (SaP) grayish-brown, from 8.0 m to 10.1 m with with shells, watery	Very loose	6	0	8	9	-
	9.30	9.30	-9.43	1.00	4	8.0–9.30					Loamy	12	3	9	40	-
	9.70	9.70	-9.83	0.40							Very loose	6	2	2	38	-
	10.10	10.10	-10.23	0.40							Purus	12	3	0	48	-
a IV	12.50	12.50	-12.63	2.40	5	10.40–10.80				Gītja (Gy) dark brown, with sandy clay lenses, containing 11.2% organic matter	-	2	1	3	57	-
m IV	13.00	13.00	-13.13	0.50	6	12.00–1.00 p.m.	1.00 a.m.	12.00		Peat (Pt) dark brown, well decomposed, with 39.8% organic matter content	-	3	2	3	59	-
	13.70	13.70	-13.83	0.70	8	2.0 PM–1.70 PM					Medium density	15	7	0	20	-
m IV	15.00	15.00	-15.13	1.30						Poorly sorted sand (SaP) light brown, watery, with fine particles	Loose	12	3	7	48	-
m IV	15.60	15.60	-15.73	0.60	7	3.0 PM–3.30 PM				Silty sand (siSa) is grayish-brown, watery, with fine gravel.	Medium density	14	8	5	72	-
															12.5	
lmIII	18.20	18.20	-18.33	2.60	9	4.0 PM–4.75 PM				Slightly silty-clayey poorly sorted sand (SaFP) light brown, watery	Dense	33				12.5
																0.0
gIII	21.00	21.00	-21.13	2.80						Sandy clay with low plasticity (saCtL) brown, with fine grains	Hard	53	-	-	44	17

Schedule of static and dynamic sounding tests,
CPTU 41, DPSH 41



Drawing No.
2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/02/2024

Borehole No. 42

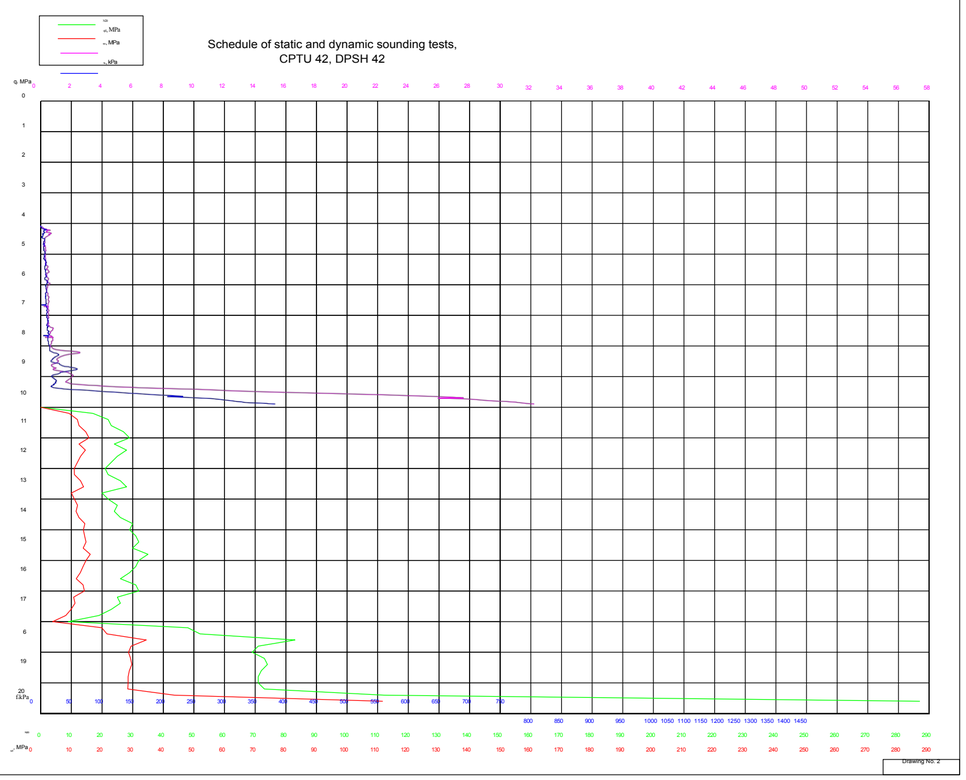
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 20.00 m

SWECO

M 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil type No.	Depth	Water level, m alt. according to LAS07 Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion c_u, MPa	Cohesion c_{ur} (remoulded), MPa	Deformation modulus E_M, MPa	Deformation modulus E_{oed}, MPa
-	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Borehole measurements start at a height of 0.0 m according to LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
.	4.10	4.10	4.23	4.10							The waters of the Curonian Lagoon	-	-	-	-	-	-
a IV	9.30	9.30	9.43	5.20	1	5.80-6.10					Poorly sorted sand (SaP), dark gray, silty up to 6.1 m, gray from 6.1 m, water-saturated, with peat lenses from 12.2 m to 12.5 m, light brown from 9.3 m, with gravelly sand . with 1.8% organic matter admixture	Very crumbly	6	0.7	13	-	-
	9.60	9.60	9.73	0.30								Tankus	19	12.8 28.4	88 200	-	-
	17.00	17.00	17.13	7.40								Very dense	23			26	12.3
	17.80	17.80	17.93	0.80	2	6.00 PM–5.80 PM						Rigid plastic	45	-	-	48	20.0
a	20.00	8:00 PM	8:13 PM	2.20							Sandy clay of low plasticity (saCl), gray, with gravel, from 17.0 m to 17.2 m with sandy silt lenses, from 17.2 m to 71.5 m with clay lenses	Hard	53	-	-	97	38.7

Schedule of static and dynamic sounding tests,
CPTU 42, DPSH 42



Drilling No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/28/2024

Borehole No. 43

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 21.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m (rounding LAS07)	Depth of layer base m (rounding LAS07)	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Cole strength, kPa	Calcium carbonate content, %	Number of blows, N	Dynamic cone strength, q_d MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0 m above LAS07. The is variable)	-					
	6.70	-6.70	-6.83	6.70							Water of the Curonian Lagoon	-					
m-H	9.00	-9.00	-9.13	2.30	1	0.00–7.50					Slightly silty-clayey poorly sorted sand (SaFP), dark gray, up to 7.4 m silty, from 7.4 m light gray, water-saturated, with 1.7% organic matter	Very loose	7	0.9	16	-	
m-H	10.20 10.50	-10.20 -10.50	-10.33 -10.63	1.20 0.30	2	0.00–9.40	10.20 -10.20				Sandy, very highly plastic silt with moderate organic matter content (xSiVO), dark brown, with 14.3% organic matter content	Softly plastic Medium density	27 15	1.5 7.2	54 75	- -	
														14.4	42		
m-H	12.00	-12.00	-12.13	1.50	3	9.00–11.10					Poorly sorted sand (SaP) light brown, watery, with fine particles	Dense	19				10.5
m-H	13.40	-1.40 p.m.	-1.53 p.m.	1.40							Sandy loam (xiSa) light brown, watery	Dense	18				- 14 7.0
m-H	16.60	-16.60	-16.73	3.20	4	16.00–17.20					Slightly dusty-clayey, poorly sorted sand (SaFP), light brown, water-saturated, with fine particles	Dense	20				- 16 7.4
m-H	18.20	-18.20	-18.33	1.60							Poorly sorted sand (SaP) brown, with coal, watery	Dense	32				- 12 6.1
m-H	21.00	-21.00	-0:13 PM	2.80							Sandy clay with low plasticity (saCiL), gray-brown, with organic matter	Hard	53				- 56 22.4

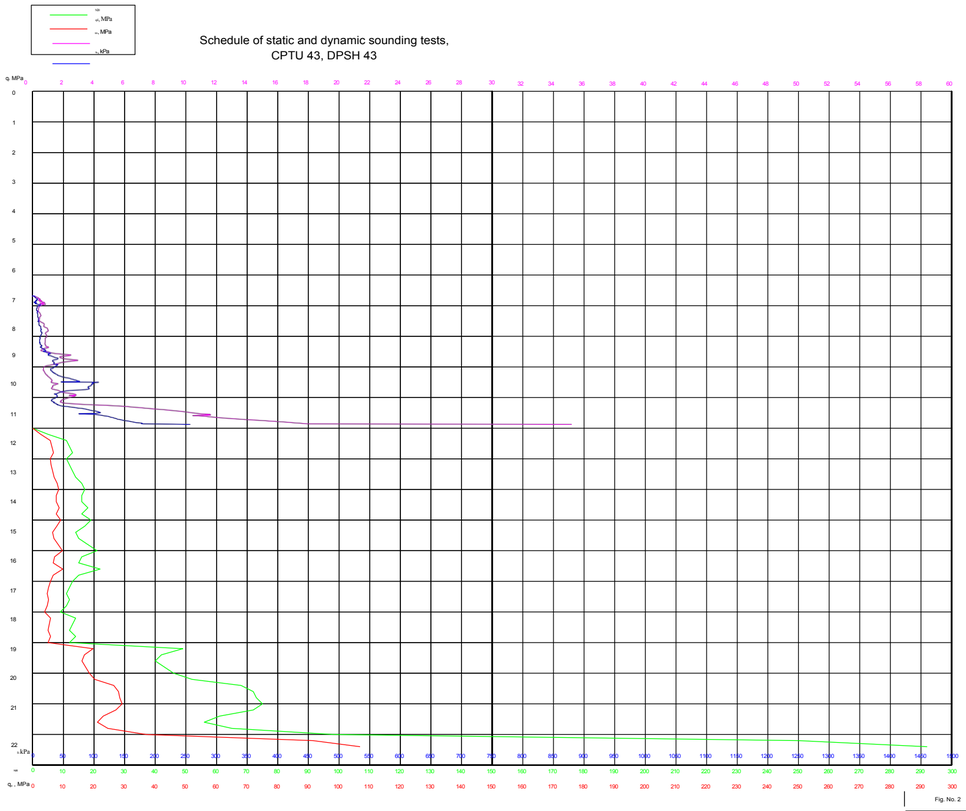


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 44

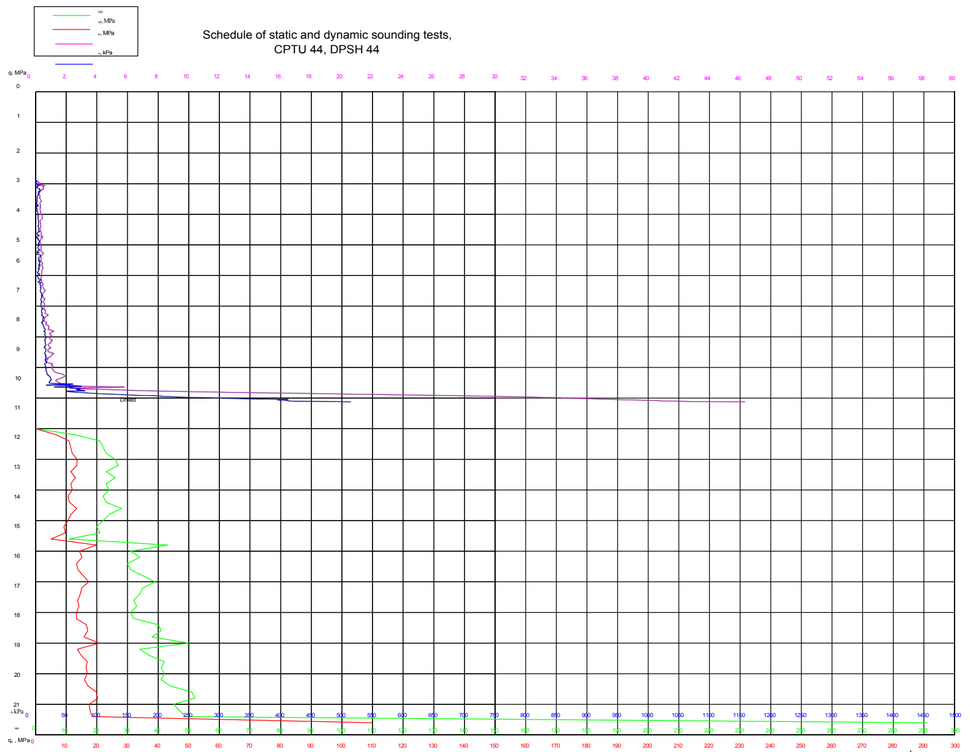
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 20.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (Datum BAS77)	Depth of layer base, m (Datum Cronstadt)	Layer thickness, m	Soil type No.	Water level, m alt. according to LAS07: Depth	Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cohesion, MPa	Friction angle, °	Number of blows, N30	Dry mass density, kN/m³	Moisture content, %
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-	-
-	2.90	2.90	-3.03	2.90							The waters of the Curonian Lagoon	-	-	-	-	-	-	-
aQIV	3.80	3.80	-3.93	0.90	1	3.80-3.70					Slightly silty-clayey poorly sorted sand (SaFPl), greenish-gray, up to 3.8 m thick, waterlogged, with 1.3% organic matter	Very loose	7	0.3	3	-	-	-
	7.40	7.40	-7.53	3.60	2	4.00-4.30					Slightly silty-loamy, poorly sorted sand with a small amount of organic matter (oSaFPl), greenish-gray, watery, with 2.2% organic matter	Very loose	5	0.4	6	-	-	-
	9.50	9.50	-9.63	2.10								Very crumbly	6	1.0	17	-	-	-
mIV	9.80	9.80	-9.93	0.30								Purus	12	4.4	57	-	-	-
														30.6	261			
	14.80	14.80	-14.93	5.00	3	7.50-7.80					Poorly sorted sand (SaP) gray, watery, light gray from 9.5 m	Very dense	25			21	19	10.4
lV	17.80	17.80	-17.93	3.00	4	17.60-17.80					Sandy clay with low plasticity (saCl/L) gray, with fine grains, from 15.1 m to 15.4 m with sandy silt lenses, from 15.4 m to 16.7 m with sandy silt lenses	Rigid plastic	45	-	-	36	19	15.1
	20.00	20.00	-20.13	2.20								Hard	53	-	-	43	17	17.1

Schedule of static and dynamic sounding tests, CPTU 44, DPSH 44



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

Borehole No. 45

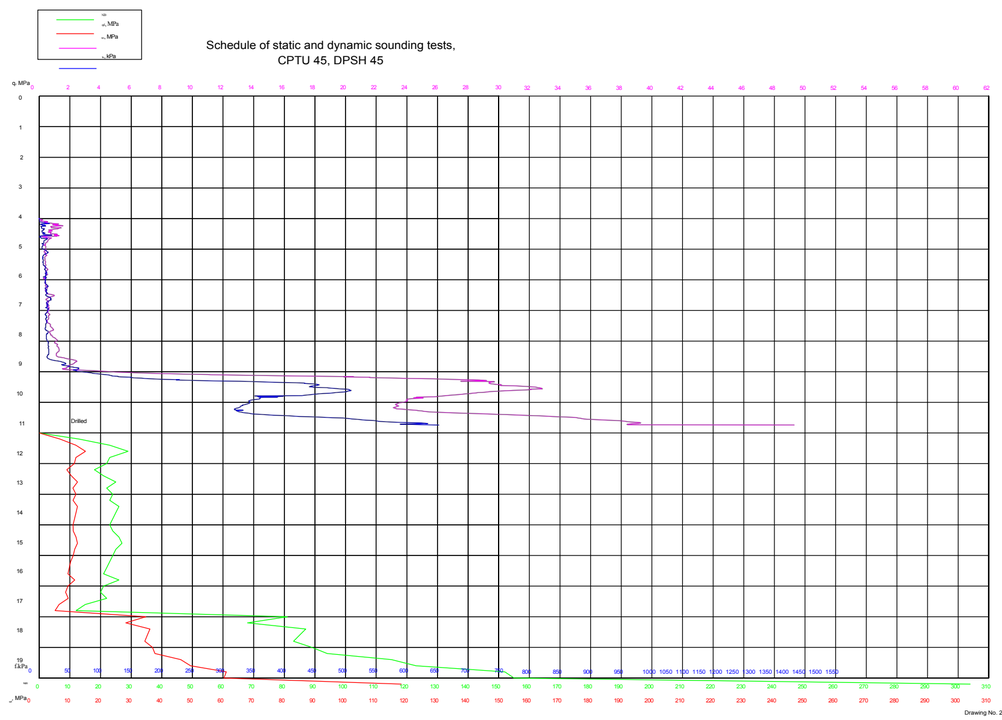
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 19.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base at Dnieprog	Depth of layer base at BAS77	Layer thickness, m	Soil elevation LAS07 No.	Soil elevation LAS07 Depth	Water level, m all. according to Pass.	Water level, m all. according to Depth.	Water level, m all. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KGS	Cole strength, MPa	Density, g/cm³	Number of blows, n	Dynamic cone strength, q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Soil elevation LAS07: 0.00 (Borehole measurement starts at a height of 0.0 m above LAS07. Curonian Lagoon (the water level is fluctuating)	-	-	-	-	-	-
	4.00	-4.00	-4.13	4.00							Water of the Curonian Lagoon	-	-	-	-	-	-
a	9.00 9.30	-9.00 -9.30	-9.13 -9.43	5.00 5.30	1	4.0–4.60					Slightly silty-clayey poorly sorted sand (SaFP) greenish gray, from 7.0 m gray to 4.7 m silty, waterlogged, with 1.5% organic matter admixture 1.9% organic matter	Tanlua	20	99.9	1.19	-	-
a	14.80	-14.80	-14.93	5.50	2 3	9.0–9.60 14.0–14.40					Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense	23	29.3	1.22	22	10.8
aQ	16.70	-16.70	-16.83	1.90							Sandy silt (siSa) light gray, watery	Very dense	35	-	-	23	9.7
g	19.00	-19.00	-19.13	2.30							Sandy clay with low plasticity (SaCtL), brown, with sand.	Hard	53	-	-	99	36.9

Schedule of static and dynamic sounding tests, CPTU 45, DPSH 45



Drawing No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 46

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth - 0.13 (according to BAS77)
Well depth 21.50 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Lithological section	Soil Description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Cohesion, kPa	Deformation modulus, MPa	Number of blows, N, pcs	Dynamic cone strength, MPa
	0.00	0.00	-0.13	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The ik variable)	-					
	8.00	-8.00	-8.13	8.00		Water of the Curonian Lagoon	-					
a,b	8.70	-8.70	-8.83	0.70		Silt (sandy) (Dy) black, watery	-	1	0	7	6	-
a,b	9.10	-9.10	-9.23	0.40		Poorly sorted sand (SaP), gray, watery, with 2.2% organic matter	Medium density	15	6	3	39	-
a,b	10.00	-10.00	-10.13	0.90			Dense	19	10	6	71	-
a,b	10.40	-10.40	-10.53	0.40			Medium density	15	8	3	48	-
a,b	12.50	-12.50	-12.63	2.10		Low-silt, loamy, poorly sorted sand with a low organic matter content (cSaFP), gray, watery, with 3.5% organic matter	Very loose	5	1	2	15	-
a,b	13.50	-13.50	-13.63	1.00		Poorly sorted sand (SaP), gray, watery, with 0.7% organic matter	Very loose	6	1	6	23	-
aHol	13.80	-13.80	-13.93	0.30			Dense	42	0	8	93	-
aHol	15.80	-15.80	-15.93	2.00		Silty sand (siSa) gray-brown, watery	Dense	31			11	5.0
aHol	19.20	-19.20	-19.33	3.40		Poorly sorted sand (SaP) gray-brown, watery, with gravel	Dense	32			17	7.2
aHol	21.50	-21.50	-21.63	2.30		Sandy clay with low plasticity (saCiL) brown, with sand lenses, with gravel	Hard	53			61	23.2

1 ІГЭ-11.36
2 ІГЭ-12.63 а-н.
3 ІГЭ-1.10
4 ІГЭ-18.30
5 ІГЭ-Pla-1.50
Pla

Schedule of static and dynamic sounding tests, CPTU 46, DPSH 46

q_c MPa
f_s MPa
u_2 MPa
R_f %

q_c MPa
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

u_2, kPa
50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600

R_f, %
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320

q_c, MPa
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320

Drawing No.
1

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 47

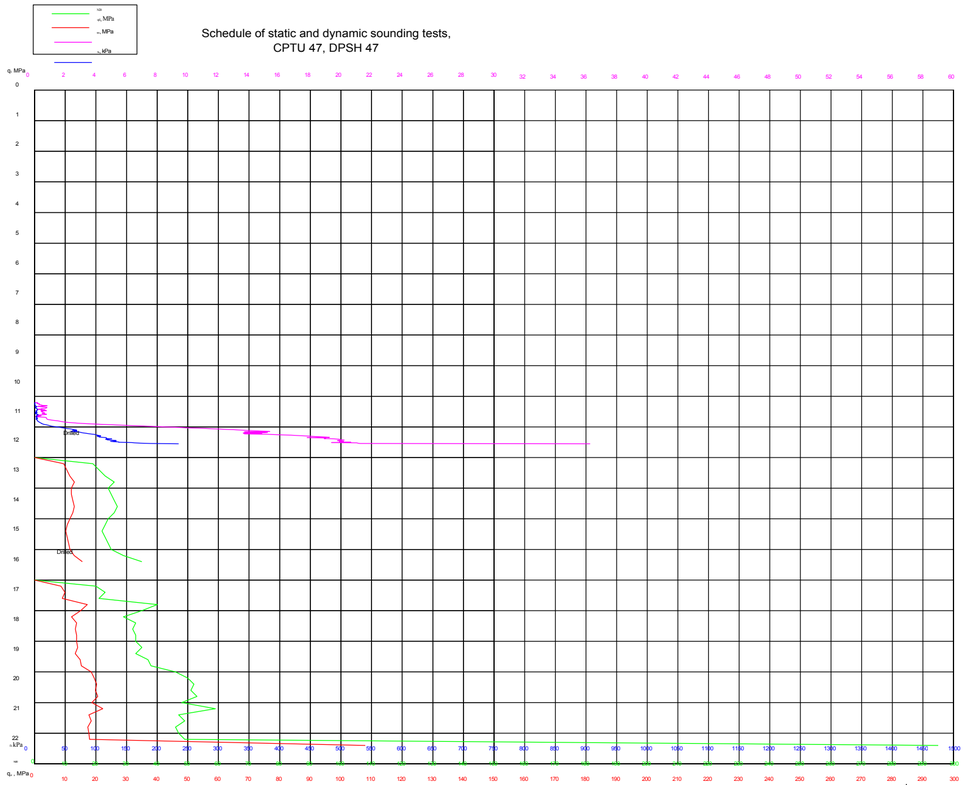
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 21.00 m

SWECO

M 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil type No.	Water level, m alt. according to LAS07 Depth	Water level, m alt. according to LAS07 Min.	Water level, m alt. according to LAS07 Avg.	Water level, m alt. according to LAS07 Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS	Cohesion, kPa	Standard resistance to dynamic penetration, N	Dynamic cone resistance, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Well measurements start at a height of 0.0 m on the LAS07 datum. The water level in the Curonian Lagoon is variable)	-	-	-	-	-
	10.20	-10.20	-10.33	10.20							The waters of the Curonian Lagoon	-	-	-	-	-
a-N	11.00	-11.00	-11.13	0.80							Slightly silty-clayey poorly sorted sand (SaEP), gray, watery, with 1.7% organic matter	Very loose	7	1.4	6	-
	11.40	-11.40	-11.53	0.40	1	11.00–11.35						Dense	20	14.9	82	-
a-N	13.20	-13.20	-13.33	1.80	2	11.40–12.94					Poorly sorted sand (SaP), gray, with gravel, watery	Very dense	23	-	-	-
					3	12.50–1.00									22	11.2
Bmm	15.20	-15.20	-15.33	2.00							Slightly silty-clayey poorly sorted sand (SaFP), dark gray, watery	Very dense	37	-	-	25
															32	14.2
Dmm	16.80	-16.80	-16.93	1.60							Silty sand (siSa) gray-brown, waterlogged	Very dense	35	-	-	-
															21	9.1
J-I	18.80	-18.80	-18.93	2.00	4	5.80–4.30 PM					Sandy clay with low plasticity (saCIL), gray-brown, with a fine texture	Stiff plastic	45	-	-	34
	21.00	-21.00	-21.13	2.20								Hard	53	-	-	49

Schedule of static and dynamic sounding tests, CPTU 47, DPSH 47



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

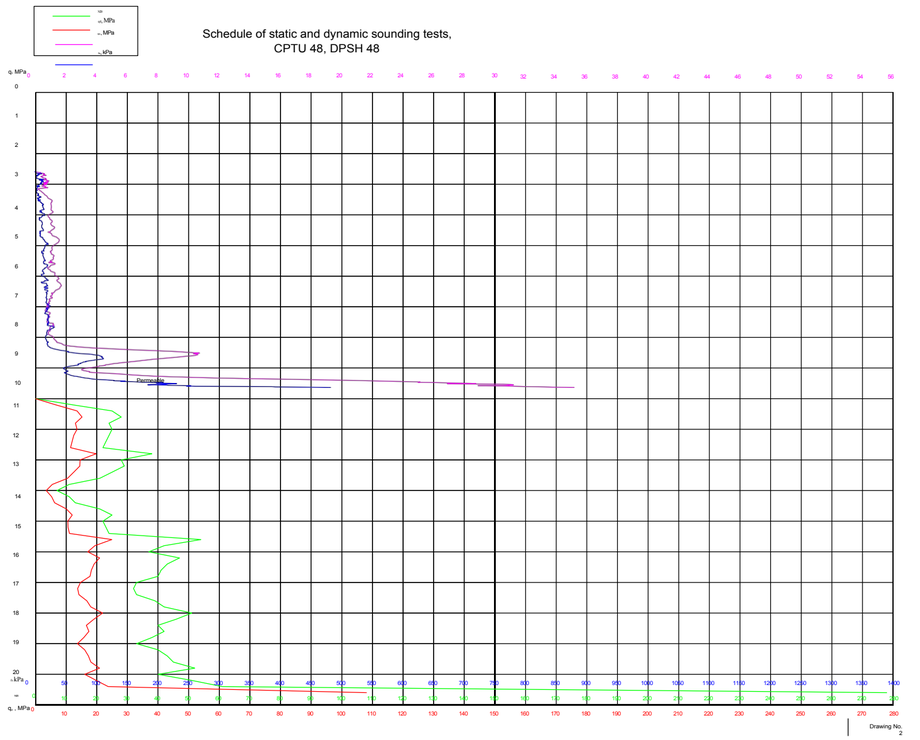
Borehole No. 48

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 19.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil elevation alt. according to LAS07: No.	Soil elevation alt. according to LAS07: Depth	Water level, m alt. according to: Pass. Depth.	Water level, m alt. according to: Max.	Lithological section	Soil description (marking according to LST EN ISO 14688-2:2018) [marking according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Deformation modulus E, MPa (according to CPTU)	Dynamic cone strength q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water surface: 1.3 m. Submersion depth: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-				
	2.60	-2.60	-2.73	2.60						Water of the Curonian Lagoon	-				
H	6.80	-6.80	-6.93	4.20	1	0.00–3.10				Poorly sorted sand (SaP) dark gray, gray from 3.0 m, silty to 3.0 m, water-saturated, with gravel from 3.0 m, containing 0.7% organic matter	Very loose	6	1	11	12
H	8.30	-8.30	-8.43	1.50	2	3.10–7.60				Slightly silty-clayey poorly sorted sand with a small amount of organic matter (oSaFP), dark gray, watery, with 2.6% organic matter	Very loose	5	1	10	21
H	9.20	-9.20	-9.33	0.40						Slightly silty, poorly sorted sand (SaFP), dark gray, watery, with fine sand grains	Medium density	16	7	9	74
	9.50	-9.50	-9.63	0.30							Loose	11	4	2	58
H	11.70	-11.70	-11.83	2.20						Slightly silty-clayey poorly sorted sand (SaFP) gray, watery	Dense	20	15.5	16	168
											Very dense	24			20
L	13.50	-13.50	-13.63	1.80	3	12.10–12.60	13.50	13.50		Low-plasticity clay-silt (CiL-SiL) gray	Hard	50		21	10.2
H	14.60	-14.60	-14.73	1.10						Silty sand (siSa) gray, water-saturated	Very dense	35		23	10.9
											Semi-coarse	47		41	19.6
L	15.90	-15.90	-16.03	1.30	4	4.40 PM–4.50 PM				Sandy clay with low plasticity (saCiL), gray, up to 15.4 m with water-bearing lenses of sandy clay, brown from 15.9 m, gray from 16.7 m, with gravel.	Stiffly plastic	45		31	14.8
L	16.70	-16.70	-16.83	0.80											
	19.00	-19.00	-19.13	2.30	5	5.20 PM–5.90 PM					Hard	53		41	17.7



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

Borehole No. 49

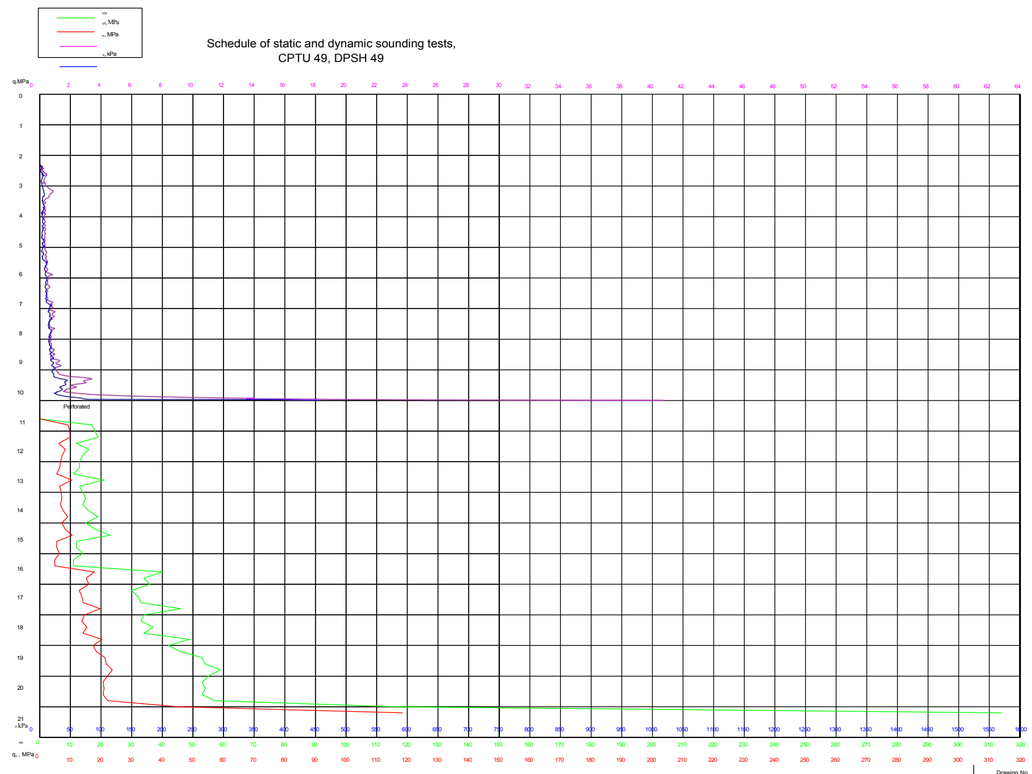
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 20.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base m according to LAS07	Depth of layer base m according to BAS77	Layer thickness, m	Soil elevation alt. according to LAS07 No.	Soil elevation alt. according to LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth.	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Calc.strength q, MPa	Layer height LTT	Number of blows, N	Dynamic probing strength q, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth 0.7 m Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-	-	-	-	-	
	2.40	2.40	2.53	2.40							Water of the Curonian Lagoon	-	-	-	-	-	
a IV	8.40	8.40	8.53	6.00							Poorly sorted sand (SaP) dark gray, gray from 4.1 m, down to 3.3 Very loose, silty, water-saturated	-	6	0,5	9	-	-
l IV	8.80	8.80	8.93	0.40							Gittja (Gy) gray, watery	-	-	2,1	3,3	-	-
a IV	9.20	9.20	9.33	0.40							Poorly sorted sand (SaP) gray, watery	Very loose	6	1,2	22	-	-
a IV	9.90	9.90	10.03	0.70								Puruls	12	2,9	36	-	-
a IV	13.60	13.60	13.73	3.70	1	14.10–14.50					Silty sand (siSa) light gray, watery	Dense	18	-	-	14	7,2
lmIII	15.60	15.60	15.73	2.00							Slightly silty-clayey poorly sorted sand (SaFP) gray brown, water-saturated, from 13.7 m to 14.0 m with sandy clay lenses	Dense	33	-	-	15	7,0
g III	17.60	17.60	17.73	2.00							Sandy low-plasticity clay (saCiL) gray, with gravel	Stiffly plastic	45	-	-	34	15,3
g III	20.00	20.00	20.13	2.40								Hard	53	-	-	50	20,3

Schedule of static and dynamic sounding tests,
CPTU 49, DPSH 49



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

Borehole No. 50

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 20.50 m

SWECO

Scale 1:100

Geological Index.	Depth of layer base, m	Depth of layer base, m (alt. according to LAS07)	Layer thickness, m	Soil type No.	Water level, m alt. according to LAS07: Depth	Pass. Depth Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Friction angle, °	Number of blows, N	Dynamic cone strength, q_d, MPa
	0.00	0.00	-0.13	0.00	0.00	0.00 0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-
	2.50	-2.50	-2.63	2.50				Water of the Curonian Lagoon	-	-	-	-	-	-
3	8.00	-8.00	-8.13	5.50				Poorly sorted sand (SaP) dark gray, silty up to 4.2 m, gray from 4.2 m, with sandy clay lenses from 5.3 m to 7.2 m, water-saturated	Very loose	6	0.5	28	-	-
a Q	9.90	-9.90	-10.03	1.90	1 8.30–8.60			Slightly silty-clayey poorly sorted sand (SaFfP), gray, watery, with 1.8% organic matter	Very crumbly	7	1.3	22	-	-
	10.50	-10.50	-10.63	0.60				Gravelly sand of varying gradation, gray (grSaG), gray, water-saturated	Tankus	21	16.8	97	-	-
a Q	13.20	-13.20	-13.33	2.70				Sandy loam (siSa) light gray, waterlogged	Very dense	22	-	-	23	11.9
L	15.90	-15.90	-16.03	2.70	3 15.10–15.70	15.90 -3.50 PM		Sandy clay with low plasticity (saCiL), gray-brown, with a fine texture	Highly plastic	46	-	-	31	14.3
a Q	6.20 PM	-18.20	-18.33	2.30				Slightly silty-clayey poorly sorted sand (SaFfP), gray, watery	Very dense	37	-	-	24	10.4
L	20.50	-20.50	-20.63	2.30				Sandy low-plasticity clay (saCiL) gray-brown, with fine grains	Hard	53	-	-	66	25.7

Schedule for static and dynamic probing tests, CPTU 50, DPSH 50

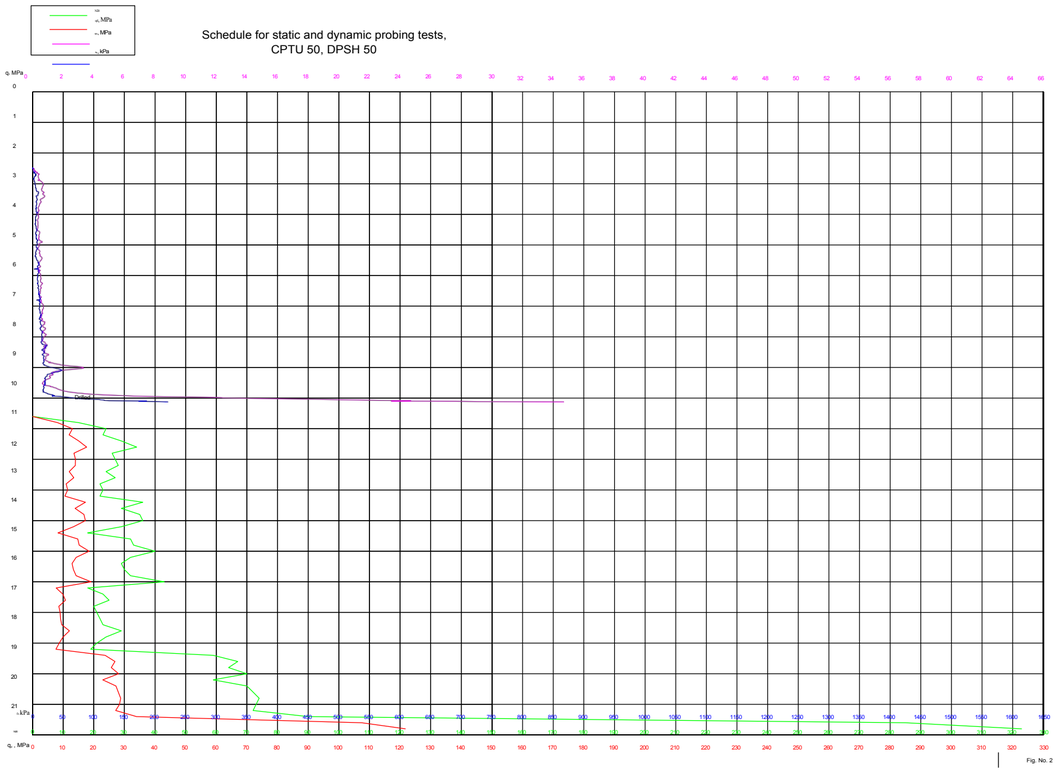


Fig. No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/29/2024

Borehole No. 51

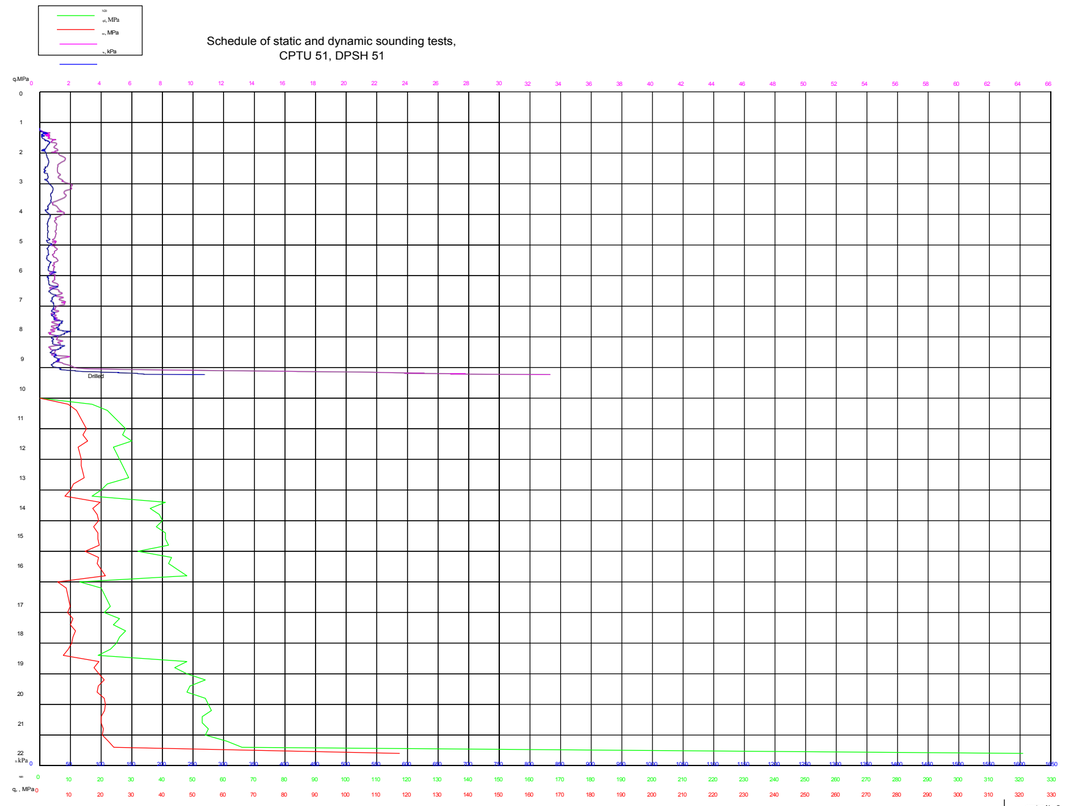
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 21.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to BAS77)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil elevation according to LAS07, No.	Soil elevation according to LAS07, Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, MPa	Lateral resistance, kPa	Number of blows, N	Dynamic cone resistance, MPa	Shear strength, kPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Submersion depth: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-						
	1.20	1.20	-1.33	1.20			0.00	0.00	0.00		Water of the Curonian Lagoon	-						
m IV	4.90	4.90	-5.03	3.70	1	0.00-6.80					Poorly sorted sand (SaP) is dark gray, watery, from 1.2 m to 1.5 m with sludge lenses, silty up to 4.9 m, with 1.1% organic Very loose material admixture		6	1.2	13	-		
m IV	6.80	6.80	-6.93	1.90	2	6.80-9.80	6.80		6.80		Sandy, very highly plastic silt with moderate organic matter content (silt-sandy silt), gray, with 15.1% organic matter	Hard	30	1.0	17	-		
m IV	9.10	9.10	-9.23	2.30							Poorly sorted sand (SaP) gray, watery	Very loose	6	1.4	27	-	23.1	
m IV	13.20	13.20	-1:33 p.m.	4.10								Very dense 23					23	10.2
l	16.00	16.00	-16.13	2.80	3	9.80 PM-3:00 PM			4:00 PM -16.00		Sandy clay with low plasticity (saCl/L), gray-brown, with sand grains	Puskietis	47			-	36	18.6
lmm	18.60	18.60	-18.73	2.60							Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense 37				-	22	9.4
l	21.00	21.00	-21.13	2.40							Sandy clay with low plasticity (saCl/L), gray-brown, with sand.	Hard	53			-	52	19.9

Schedule of static and dynamic sounding tests, CPTU 51, DPSH 51



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 52

Altitude of the borehole mouth
0.00 (according to LAS07)
Altitude of the borehole mouth
-0.13 (according to BAS77)
Well depth 22.00 m

SWECO

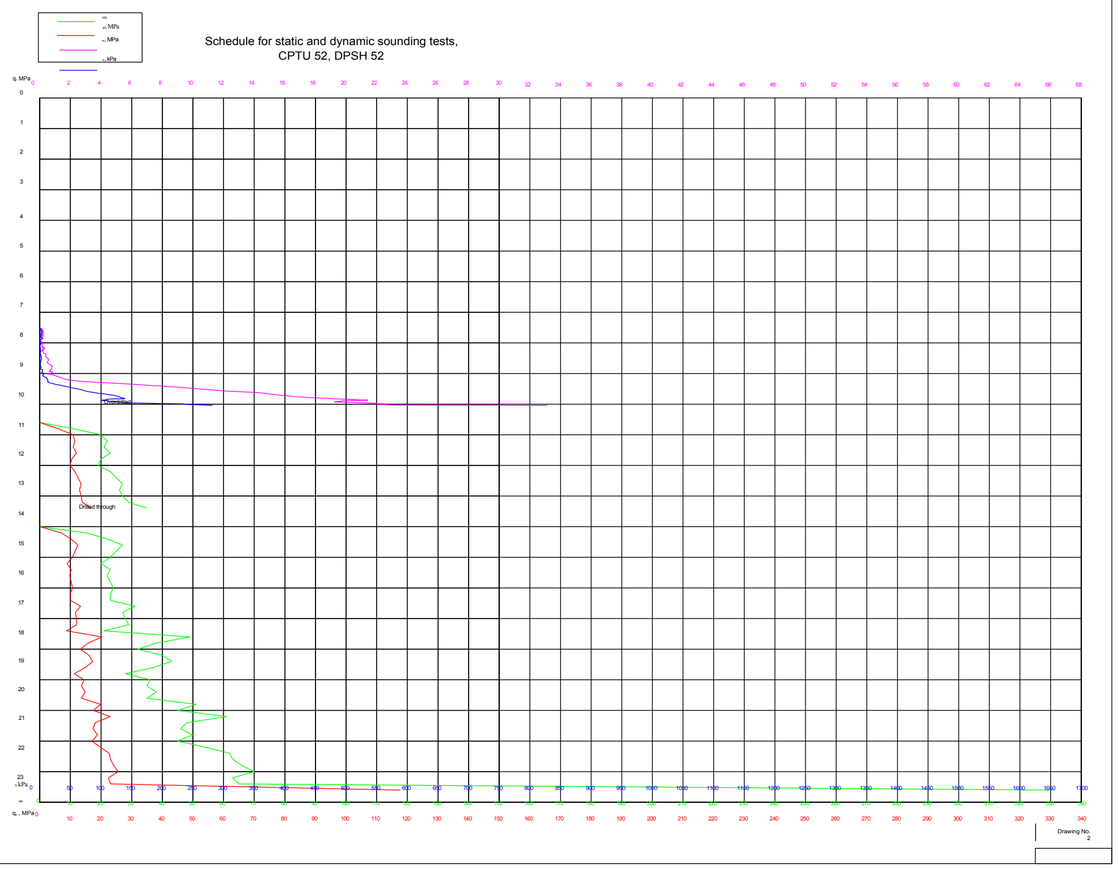
M 1:100

Geological index	Depth of layer base m	Depth of layer base at borehole mouth (BAS77)	Depth of layer base at borehole mouth (LAS07)	Layer thickness, m
	0.00	0.00	-0.13	0.00
	7.50	-7.50	-7.63	7.50
a IV	9.20	-9.20	-9.33	1.70
LH	9.50	-9.50	-9.63	0.30
a IV	10.90	-10.90	-11.03	0.40
	11.80	-11.80	-11.93	1.90
a IV	13.00	-13.00	-13.13	1.20
lmIII	17.70	-17.70	-17.83	4.70
gIII-II	19.50	-19.50	-19.63	1.80
g II	22.00	-22.00	-22.13	2.50

Soil type No.	Water level, m alt. according to LAS07 Depth	Min.	Avg.	Max.
		0.00	0.00	0.00
1	7.50–8.20			
2	8.20–9.00			
3	9.00–9.50			
4	9.50–11.80			
5	120 PM–3.00 m			
6	9.20 PM–7.50 m			

Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Angle of internal friction, °	Number of blows, N	Dynamic cone resistance, MPa
	Platform. Platform height above water surface: 1.3 m, depth into water: 0.7 m. (Borehole measurements start at a height of 0.0 m on the LAS07 datum. The water level in the Curonian Lagoon varies)	-	-	-	-	-	-
	The waters of the Curonian Lagoon	-	-	-	-	-	-
	Low-silt, loamy, poorly sorted sand (SaFP), gray, up to 7.5 m, loamy, water-saturated, with 1.0%–1.7% organic matter	Very crumbly	-	-	0.4	3	-
	Silty sand (siSa), gray, water-saturated	Medium density	14	5.8	29	-	-
		Dense	19	15.6	31.5	-	-
	Poorly sorted sand (SaP) gray, watery	Very dense	23	-	-	21	11.1
	Silty sand (siSa) gray, water-saturated	Very dense	22	-	-	24	12.2
	Poorly sorted sand (SaP) gray-brown, watery	Very dense	36	-	-	26	11.0
	Low-plasticity clay (ClL) gray-brown, with fine grains	Softly plastic	41	-	-	36	14.6
	Sandy clay with low plasticity (saClL), dark brown, with fine grains	Hard	53	-	-	52	19.6

Schedule for static and dynamic sounding tests,
CPTU 52, DPSH 52



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 53

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 21.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base (according to LAS07)	Depth of layer base (according to BAS77)	Layer thickness, m	Soil elevation according to LAS07 No.	Soil elevation according to LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Depth	Water level, m alt. according to Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Calc.strength, kPa	Limit shear strength, kPa	Natural shear strength, kPa	Dynamic cone strength, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth in water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-		-	-	-	-
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Water of the Curonian Lagoon	-		-	-	-	-
	9.00	-9.00	-9.13	9.00													
S	10.00	-10.00	-10.13	1.00	1	9.80–10.00					Poorly sorted sandy-clayey sand (SaFP) that is dark gray, lumpy, and contains 1.3% organic matter	Very loose	7	0	4	5	-
Sa	12.00	-12.00	-12.13	2.00	2	11.80–12.00					Poorly sorted sand (SaP) gray, with shells, watery, with 0.5%–1.3% organic matter admixture	Very loose	6	1	1	13	-
a1Ⅲ	12.30	-12.30	-12.33	0.30	3	12.00–12.20					Slightly silty clayey poorly sorted sand (SaFP) gray, watery	Very loose	7	2	4	19	-
	13.00	-13.00	-13.13	0.80	4	12.80–13.00					Sandy loam (siSa) gray-brown, watery, with fine grains	Very dense	35	22	4	135	-
L	14.00	-14.00	-14.13	1.00							Sandy clay with low plasticity (saCtL) gray, with watery with sand lenses	Soft plastic	42		-		94.3
Sa	16.50	-16.50	-16.63	2.50	6	16.00–16.00					Poorly sorted sand (SaP) gray, watery, with fine particles	Dense	32		-	1	6.3
a2Ⅲ	16.90	-16.90	-17.03	0.40	7	16.90–16.90						High-lower	45	-	-	35	15.0
	18.50	-18.50	-18.63	1.60	8	17.90–17.90					Sandy clay with low plasticity (saCtL), gray, turning brown at 16.9 m, with gravel	Softly plastic	42		-	31	13.7
L	21.00	-21.00	-21.13	2.50								Hard	53		-	49	19.0

Schedule of static and dynamic sounding tests,
CPTU 53, DPSH 53

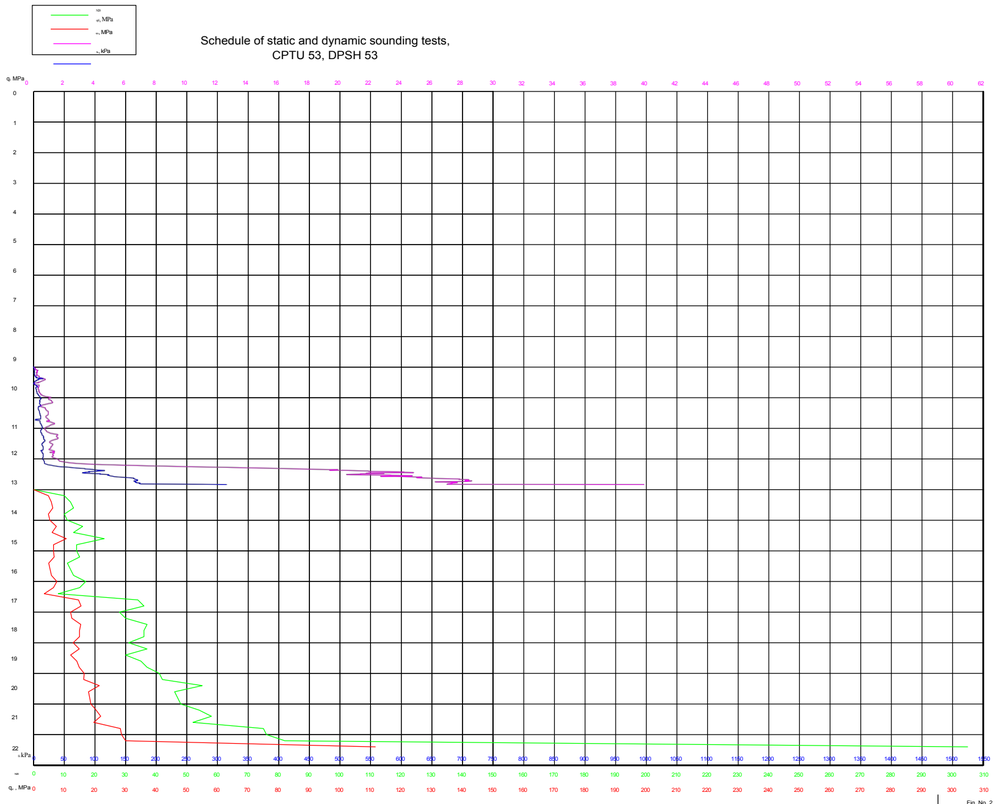


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 54

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 21.00 m

SWECO

Scale 1:100

Geological Index	Depth of layer base, m	Depth of layer base, m (according to Ordnance Datum)	Depth of layer base, m (according to Ordnance Datum)	Layer thickness, m
	0.00	0.00	-0.13	0.00
	9.00	-9.00	-9.13	9.00
GM	9.60	-9.60	-9.63	0.50
	10.40	-10.40	-10.53	0.90
m IV	11.70	-11.70	-11.83	1.30
	12.10	-12.10	-12.23	0.40
	12.70	-12.70	-12.83	0.60
lmV	13.60	-13.60	-13.73	0.90
lmIII	17.30	-17.30	-17.43	3.70
lmII	18.10	-18.10	-18.23	0.80
lmIII	6:40 PM	-6:40 PM	-18.53	0.30
	21.00	-21.00	-21.13	2.60

Soil type No.	Water level, m alt. according to LAS07: Depth	Pass.	Depth Max.
	0.00	0.00	0.00
1	8.00–9.00		
2	9.60–10.40		
3	10.60–11.60		
4	2.60 PM–3.00 PM		
	18.10		
	-18.10		

Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	RQS	Cohesion, MPa	Static resistance (CPT), MPa	Standard penetration, N	Dynamic cone strength, q_d, MPa	
Platform. Platform height above water surface: 1.3 m; depth below water surface: 0.7 m. (Borehole measurements start at a height of 0.0 m above LAS07. The water level in the Curonian Lagoon is variable)	-	-	-	-	-	-	-
The waters of the Curonian Lagoon	-	-	-	-	-	-	-
Silt (sandy) (Dy) black, watery	-	1	0.2	2	-	-	
Poorly sorted sand (SaP), gray, watery, with shells, from 11.2 m with lenses of silty sand	Very loose	6	0.8	14	-	-	
	Purus	12	3.4	35	-	-	
	Medium density	15	7.0	68	-	-	
	Dense	19	17.3	130	-	-	
Slightly silty-clayey poorly sorted sand (SaFP), gray, water-saturated, from 13.0 m to 14.5 m with sandy clay lenses	Dense	33	-	-	44	45	
Poorly sorted sand (SaP), gray-brown, watery	Dense	32	-	-	16	7.0	
Sandy clay with low plasticity (saCtL) gray, with a fine texture	Softly plastic	42	-	-	35	14.3	
Slightly silty-clayey, poorly sorted sand (SaFP), gray-brown, watery	Dense	33	-	-	11	4.4	
Sandy clay with low plasticity (saCtL), gray-brown, with a slight sheen	Hard	53	-	-	68	22.6	

Schedule of static and dynamic probing tests, CPTU 54, DPSH 54

q_c, MPa

Drilled

q_d, kPa

q_c, MPa

Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 10/26/2024

Borehole No. 55

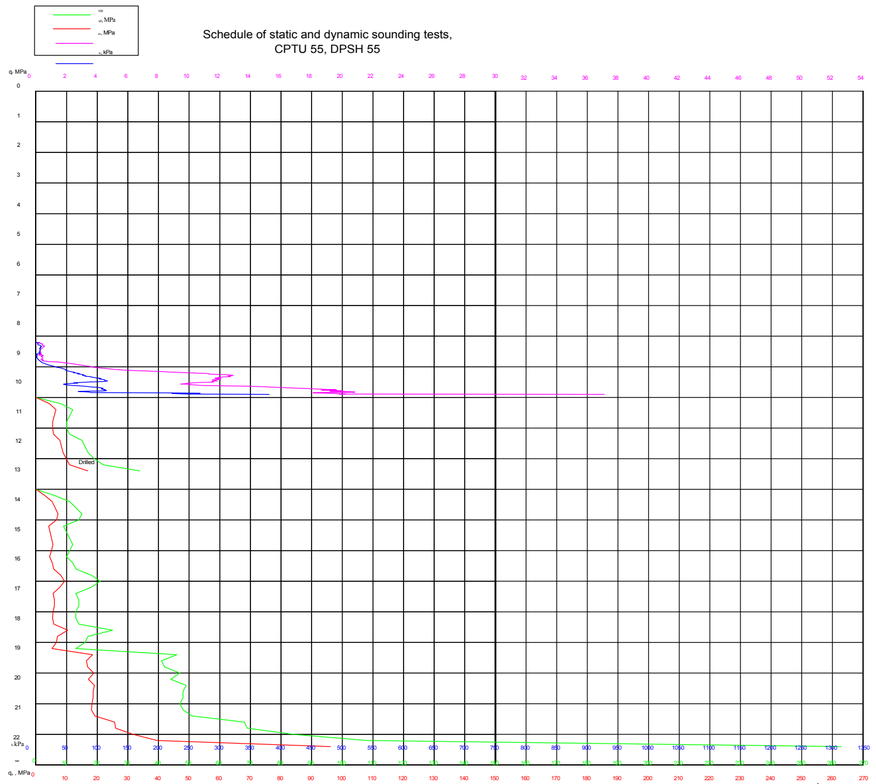
Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Borehole depth 21.00 m

SWECO

M 1:100

Geological index	Depth of layer base m	Depth of layer base at chainage 1+000 m	Depth of layer base at chainage 1+100 m	Layer thickness, m	Soil type No.	Depth	Water level, m alt. according to LAS07 Min.	Avg.	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	K,S	Cohesion c, MPa	Sand and gravel strength, CPT Static cone resistance, MPa	Dynamic cone resistance, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00	0.00		Platform. Platform height above water surface: 1.3 m; depth into water: 0.7 m. (Well measurements start at a height of 0.0 m on the LAS07 datum. The water level in the Curonian Lagoon is variable)	-	-	-	-	-
	8.20	-8.20	-8.33	8.20							The waters of the Curonian Lagoon	-	-	-	-	-
a,lV	8.90	-8.90	-9.03	0.70							Slightly silty-clayey poorly sorted sand (SaFP), gray, watery, with 1.0% organic matter	Very loose	7	0.5	5	
	9.10	-9.10	-9.23	0.20								Porous	11	3.7	32	-
					1	8.10-8.30						Dense	20	10.5	75	-
	9.60	-9.60	-9.73	0.50									18.1	126		
a,lV	12.80	-12.80	-12.93	3.20	2	10.80-11.00					Poorly sorted sand (SaP), gray, watery	Dense	19		15	8.0
bmIII	6:20 PM	-6:20 PM	-18.33	5.40	3	3:00 PM-5:00 PM					Slightly silty-clayey, poorly sorted sand (SaFP), gray-brown, watery	Dense	33	-	13	5.6
g	21.00	-21.00	-21.13	2.80							Sandy clay with low plasticity (saCiL), brown, with sand lenses, with gravel	Hard	63	-	47	16.3

Schedule of static and dynamic sounding tests, CPTU 55, DPSH 55



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/03/2024

Borehole No. 56

Altitude of the borehole mouth 0.29 (according to LAS07)
Altitude of the borehole mouth 0.16 (according to BAS77)
Well depth 21.00 m

SWECO

Scale 1:100

Geological index	Depth of the layer base m	Depth of the layer base d_n according	Depth of the layer base d_n according	Layer thickness, m	Soil type, e.g., LAS07 No.	Depth	Water level, m alt. according to Min.	Avg.	Max.	Lithological section	Soil description (symbol according to LST EN ISO 14688-2:2018) [symbol according to DIN 18196]	Geotechnical characteristics	KiS	Cohesion, kPa	Effective angle, °	Number of blows n_{20}	Dilatancy, strength, %	q_c, MPa
	0.20	0.09	-0.04	0.20														
m IV	0.60	0.31	0.44	0.40							Silt (sandy) (Dy) black, watery	-	1	0	2	5	-	
m IV	6.00	-5.71	-5.84	5.40	2	0.60–5.90					Poorly sorted sand (SaP) gray, watery, with 0.8%–1.0% organic matter	Very loose	6	1	1	8	-	
m IV	7.20	-6.91	-7.04	1.20							Sandy loam with a small amount of organic matter (osiSa) brown, from 6.7 m with fine sand lenses	Very loose m to 7.0	4	0	0	15	-	
m IV	8.10	-7.81	-7.94	0.90							Slightly silty-clayey poorly sorted sand (SaFP) gray, water-bearing	Very loose	7	1	2	16	-	
m IV	9.50	-9.21	-9.34	1.40	3	6.80–8.90					Gilija (Gy) brown, watery, sandy, with 12.9% organic matter	-	2	1	3	26	-	
m IV	10.30	-10.01	-10.14	0.80	4	8.90–10.10					Poorly sorted sand (SaP), gray, water-saturated, with shells, from 10 m with gravel	Medium density	15	7	9	60	-	19.1 MPa
m IV	11.90	-11.61	-11.74	1.60	5	10.70–11.00					Sandy loam (siSa) light brown, water-saturated	Dense	18				-	40.6
m IV	13.90	-13.61	-13.74	2.00							Gravelly sand of varying gradation (grSaG) gray, water-saturated	Very dense	25	-			-	25 12.3
Mmm	17.50	-17.21	-17.34	3.60	6	15.00–15.60					Silty sand (siSa) light brown, water-saturated	Very dense	35	-			-	21 10.2
l	18.60	-18.31	-18.44	1.10							Sandy, low-plasticity clay-silt (saCiL-SiL), gray, with fine grains	Stiffly plastic	43				-	34 14.4
l	21.00	-20.71	-20.84	2.40							Sandy low-plasticity clay (saCiL), gray-brown, with coal	Hard	53				-	46 18.5

Static and dynamic sounding test schedule, CPTU 56, DPSH 56

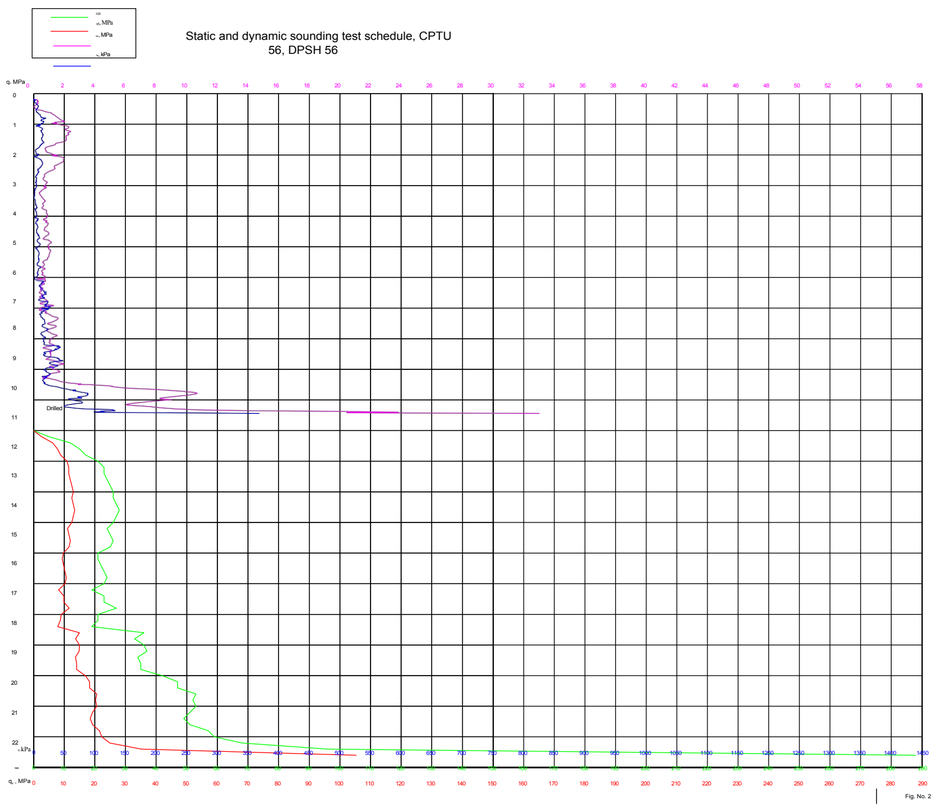


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/03/2024

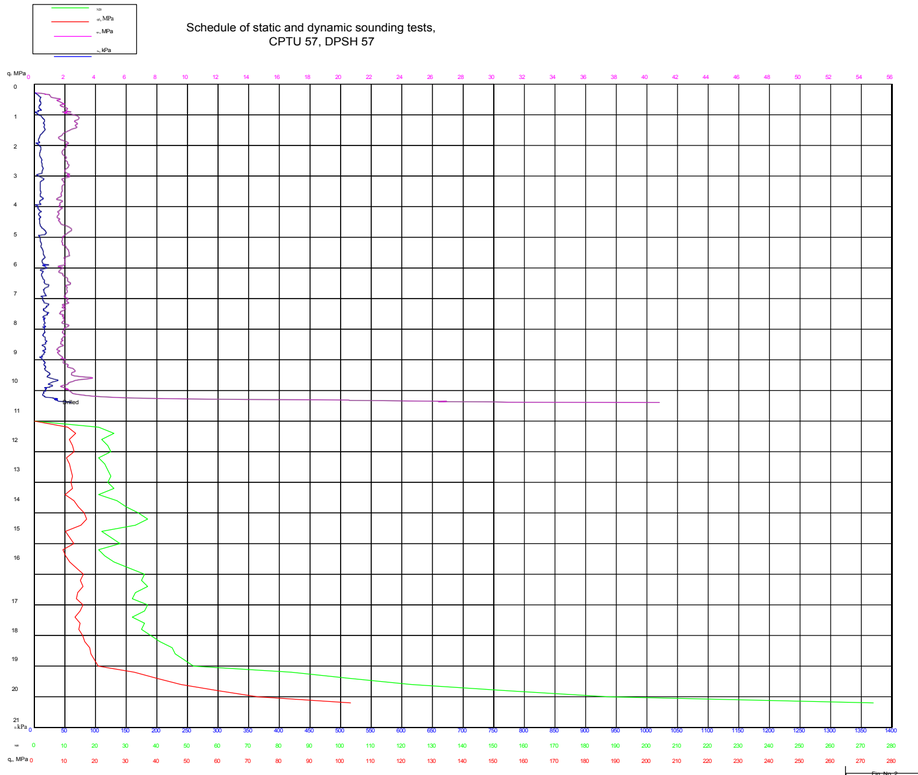
Borehole No. 57

Altitude of the borehole mouth 0.28 (according to LAS07)
Altitude of the borehole mouth 0.15 (according to BAS77)
Well depth 20.00 m

SWECO

Scale 1:100

Geological index	Depth of the bottom of the layer, m	Depth of the bottom of the layer, m (according to BAS77)	Depth of the bottom of the layer, m (according to LAS07)	Layer thickness, m	Soil elevation according to LAS07, No. Depth	Water level, m alt. according to Min.	Water level, m alt. according to Max.	Lithological section	Soil description (symbol according to LST EN ISO 14688-2:2018) [symbol according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Angle of internal friction, °	Density, t/m³	Dynamic cone strength, qd MPa
						0.30	0.02		Water						
mH	0.30	-0.02	-0.15	0.30					Peat (Pt) black, watery, with 42.3% organic matter						
	1.00	-0.72	-0.85	0.70	1 s=-0.85				Poorly sorted sand (SaP), gray, watery, with 0.8% organic matter		-		3	1.8	0 - -
mlV	1.50	-1.22	-1.35	0.50	2 s=-1.45					Very loose	6	2.4	11	-	-
									Slightly silty-clayey poorly sorted sand (SaFP), gray, watery, with 1.3% organic matter admixture	Very loose	7	1.9	11	-	-
	5.60	-5.32	-5.45	4.10	3 s=-5.35										
					4 s=-7.25				Poorly sorted sand (SaP), gray, watery, from 9.8 m with gravel, with 1.0% organic matter	Very loose	6	1.9	17	-	-
	9.20	-8.92	-9.05	3.60						Loamy	12	3.0	23	-	-
	10.30	-10.02	-10.15	1.10	5 s=-9.70							28.2	45		
										Very dense	23				22 11.0
	13.40	-13.12	-1.25 PM	3.10	6 s=-10.90 to -12.90										
mlIII	2.60	-14.32	-2.45 PM	1.20					Silty sand (siSa) gray-brown, watery	Very dense	35	-	30	14.3	
	3.40	-15.12		0.80					Poorly sorted sand (SaP) gray-brown, water-saturated Silt-sand	Very dense	56	-	34	11.0	
mmIII	3.80	-15.52	-3.25 PM	0.40					(siSa) light brown, water-saturated	Very dense	35	-	25	10.9	
			-15.65												
	17.40	-17.12	-17.25	1.60	7 s=-16.00 to -17.10	16.80	16.83		Sandy clay with low plasticity (saCtL), gray, turning brown at 16.8 m, with water-bearing interlayers of silty sand at 16.8 m	Softly plastic	42	-	35	14.9	
lV										Hard	53	-	64	25.6	
	20.00	-19.72	-19.85	2.60											



Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date 10/17/2024

Borehole No. 58

Altitude of borehole mouth 0.00
(according to LAS07)
Well mouth elevation -0.13
(according to BAS77)
Borehole depth 18.00 m

SWECO

Scale 1:100

Geological index	Depth of the base of the stratum, m	Depth of the base of the stratum, m (according to LAS07)	Depth of the base of the stratum, m (according to BAS77)	Layer thickness, m	Ground elevation according to LAS07: No.	Depth	Water level, m: Pass. Depth	Max.	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Angle of internal friction, °	Number of blows, N,1/3	Dynamic cone strength q_d, MPa
	0.00	0.00	-0.13	0.00			0.00	0.00		Platform. Platform height above water surface: 1.3 m Depth to the first water: 0.7 m (Borehole measurements start at a height of 0.0 m above LAS07. The is variable)	-					
	1.40	-1.40	-1.53	1.40			0.00	0.00		Water in the Curonian Lagoon	-					
a N	4.60	-4.60	-4.73	3.20	1	1.40–4.70				Poorly sorted sand (SaP), greenish-gray, watery, from 1.4 m very loose to 1.5 m with silt lenses, with 0.8% organic matter admixture		6	0	26	-	-
a N	9.80	-9.80	-9.93	5.20	2	7.30–7.60				Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery, with 1.5% organic matter	Very loose	7	0	31	8	-
a N	10.80	-10.80	-10.93	1.00	3	10.60–10.70				Gravelly sand of varying gradation (grSaG), light gray, water-saturated	Medium density	17	8	37	83	-
l	11.40	-11.40	-11.53	0.60							Hard	53	4	5	150	-
l	11.90	-11.90	-12.03	0.50						Sandy clay with low plasticity (saCtL), gray, with sand grains	Puskiets	47	4	1	134	- -
l	13.40	-13.40	-1.53	1.50			13.20	13.20			Stiffy plastic	45	2	5	67	-
l	15.30	-3:30 PM	-3:43 PM	1.90	4	14.40–14.80 PM–1.80 PM				Sandy, low-plasticity silt (saSiL), light brown, water-bearing, from 13.2 m to 13.6 m with loose texture, from 14.1 to 14.4 m with sandy loam with lenses	Hard	48			23.4	102
																72 32.9
gmm	18.00	-18.00	-18.13	2.70	5					Medium-plastic clay (CtM), gray, with sand	Hard	55				- 65 28.0

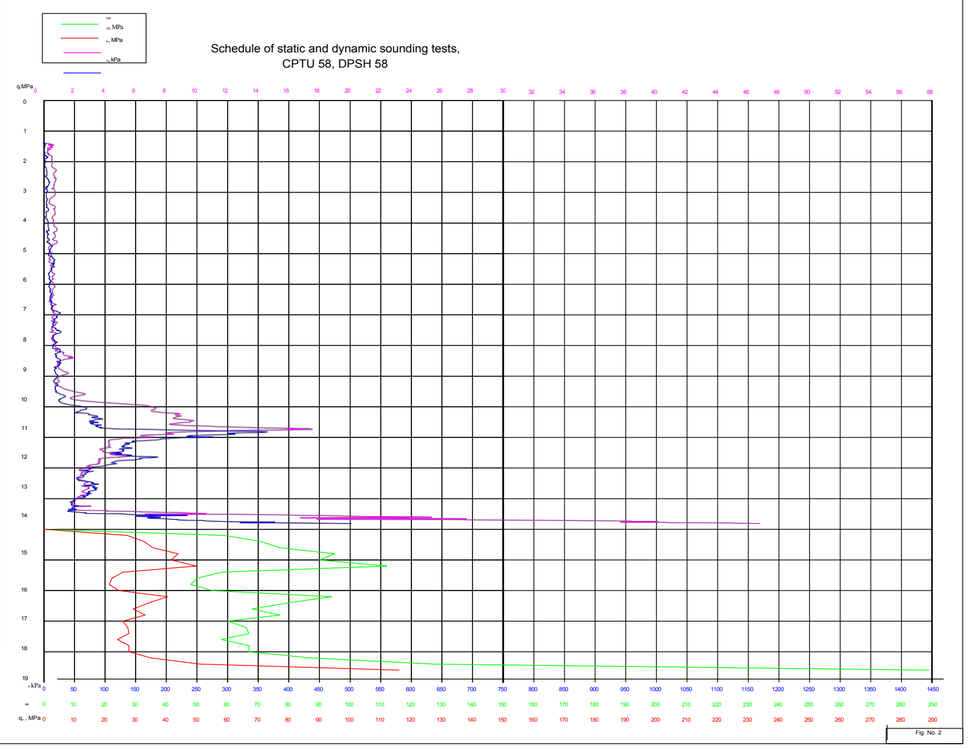


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 11/19/2024

Borehole No. 59

Altitude of the borehole mouth 0.00 (according to LAS07)
Altitude of the borehole mouth -0.13 (according to BAS77)
Well depth 36.00 m

SWECO

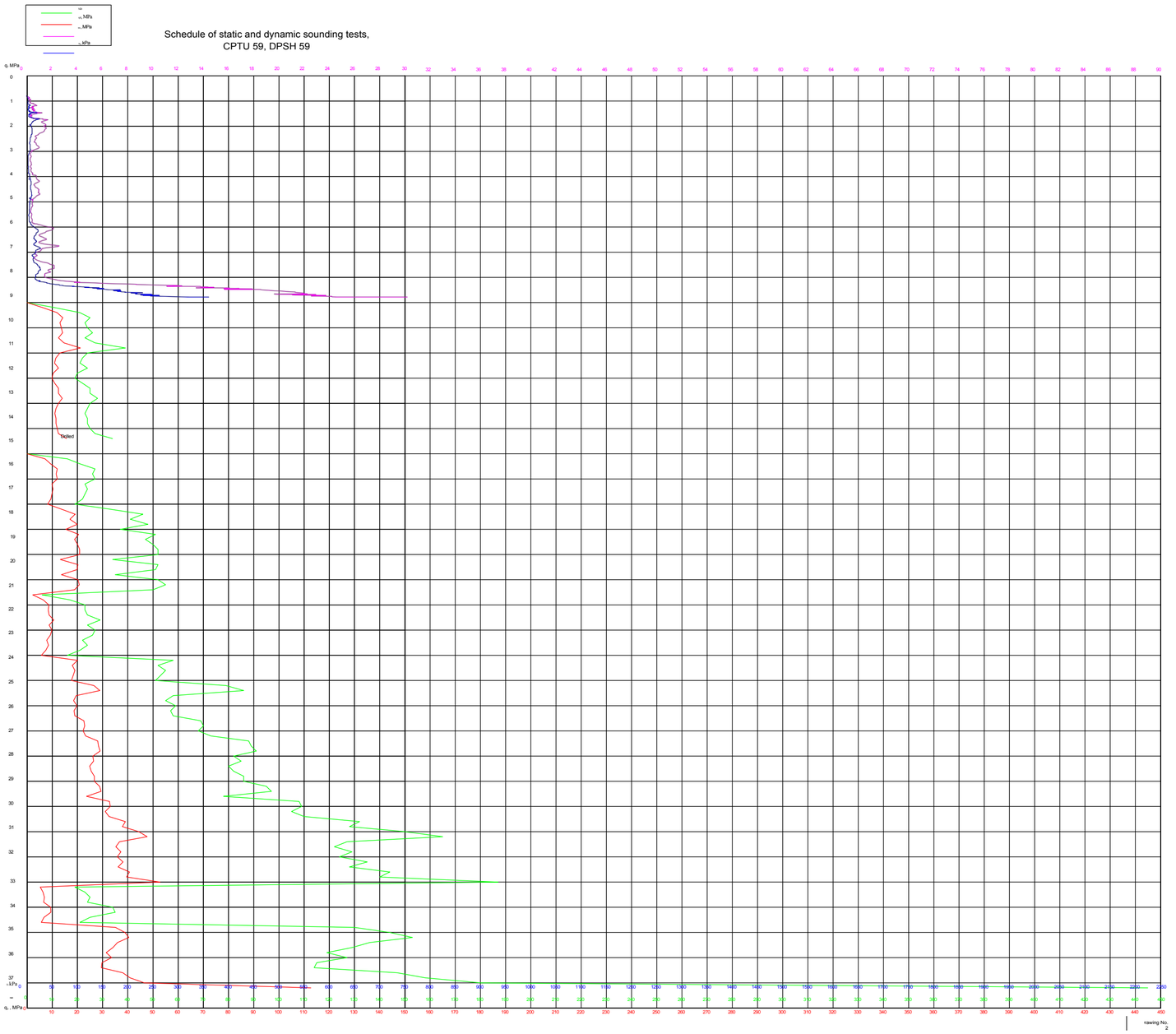
Scale 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (according to LAS07)	Depth of layer base, m (according to BAS77)	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) (designation according to DIN 18196)	Geotechnical characteristics	IGS	Calc.weight q, MPa	Laboratory tests: 1 CPT, 2 Natural moisture, %	Dynamic cone resistance, q, MPa
	0.00	0.00	-0.13	0.00	Platform. Platform height above water surface: 1.3 m Submersion depth: 1.7 m (Borehole measurements start at a height of 0.7 m above LAS07. The is variable)	-				
	0.80	0.80	-0.93	0.80	Water of the Curonian Lagoon	-				
a IV	8.00 8.30	-8.00 -8.30	-8.13 -8.43	7.20 0.30	Slightly silty-clayey poorly sorted sand (SaFP) dark gray, gray from 1.7 m, silty up to 1.7 m, waterlogged, with 1.2% organic matter admixture 1.3% organic matter		7	0.9	10	-
	8.60	-8.60	-8.73	0.30		Puras Dense	12 19	4.2 8.7	32 14.4	-
								22	9.2	52
a IV	12.60	-12.60	-12.73	4.00	Poorly sorted sand (SaP) light brown, watery	Very dense 23				22 11.8
	13.60	-13.60	-13.73	1.00	Sandy loam (laSa) gray-brown, waterlogged	Very dense 25			24	12.3
										27 12.6
	15.90	-15.90	-16.03	2.30	Slightly silty-clayey poorly sorted sand (SaFP) gray-brown, watery	Very dense 37			-	
										22 10.0
	17.40	-17.40	-17.53	1.50	Poorly sorted sand (SaP) gray-brown, water-saturated	Very dense 36			24	10.5
L	20.60	-20.60	-8.73 PM	3.20	Sandy clay of low plasticity (saCtL), dark brown, with gravel, gray from 19.2 m, with lenses of sandy silt from 20.4 m to 20.5 m	Puskiets	47		-	47 18.7
	21.30	-9.30 PM	-9.43 PM	0.70	Gravelly, slightly silty-clayey, well-sorted sand (grSaFW), gray, watery	Very dense 38			-	17 6.4
					Poorly sorted sand (SaP) light gray, waterlogged	Very dense 36			26	9.5
a IV a III	10:40 PM 11:10	-10:40 PM -11:10 PM	-10:53 PM -11:23	1.10 0.70	Slightly silty-clayey, poorly sorted sand (SaFP), light gray, waterlogged	Very dense 37			27	7.4
L	32.20	-32.20	-32.33	9.10	Sandy clay with low plasticity (saCtL), gray, with sand grains	Hard	53		-	96 29.7
	33.70	-33.70	-33.83	1.50	Silty sand (SiSa) light gray, watery	Very dense 35			27	7.3
L	36.00	-36.00	-36.13	2.30	Sandy clay with low plasticity (saCtL), gray, with sand:	Hard	53		-	134 35.2

Water level, m alt. according to

No.	Depth	Pass.	Depth.	Max.
		0.00	0.00	0.00
		0.00	0.00	0.00
1	0.80–8.00			
2	8.00–8.60			
3	11.40–11.70			
4	16.00–16.60			
5	18.40–18.90			
6	19.60–20.10			
		20.60	20.60	
8	21.00–21.80			
9	32.00–32.70			
		32.20	32.20	
10	33.10–33.40			

Schedule of static and dynamic sounding tests, CPTU 59, DPSH 59



rawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/06/2024

Borehole No. 60

Altitude of the borehole mouth 0.28 (according to LAS07)
Altitude of the borehole mouth 0.15 (according to BAS77)
Well depth 36.00 m

SWECO

M 1:100

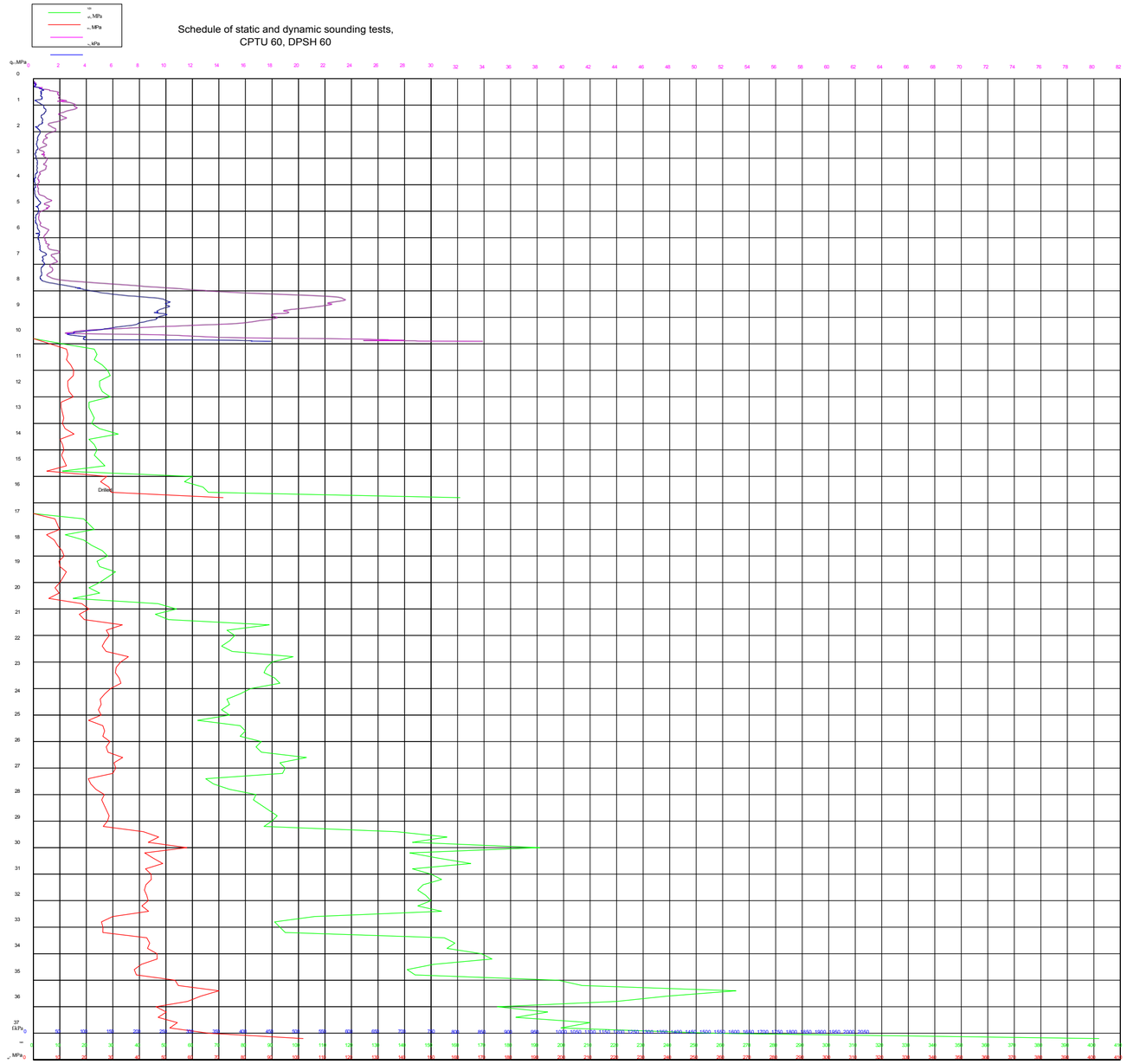
Geological index	Depth of layer base m	Depth of layer base m bsl (Baltic)	Depth of layer base m bsl (according to LAS07)	Layer thickness, m
	0.40	-0.12	-0.25	0.30
	0.80	-0.52	-0.65	0.40
a,fsI	1.60	-1.32	-1.45	0.80
a,fsI	5.40	-5.12	-5.25	3.80
a,fsI	7.60	-7.32	-7.45	2.20
	8.00	-7.72	-7.85	0.40
a,fsI	8.70	-8.42	-8.55	0.70
a,fsI	9.30	-9.02	-9.15	0.60
a,fsI	9.70	-9.42	-9.55	0.40
a,fsI	11.30	-11.02	-11.15	1.60
fsI	11.70	-11.42	-11.55	0.40
fsI	12.50	-12.22	-12.35	0.80
fsI	13.10	-12.82	-12.95	0.60
fsI	14.90	-14.62	-14.75	1.80
fsI	15.90	-15.62	-15.75	1.00
fsmI	19.70	-19.42	-7:55 PM	3.80
fsI	21.30	-21.02	-21.15	1.60
saCl	26.40	-26.12	-26.25	5.10
saCl	36.00	-35.72	-35.85	9.60

Soil type No.	Depth
1	0.90–1.20
2	3.20–3.50
3	7.10–7.45
4	8.60–8.70
5	10.30–10.60
6	13.80–13.90
7	15.90 -15.62
8	9:02 PM–10:20 AM

Water level, m above sea level according to LAS07: Min. Avg. Max.

Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Dynamic penetration, Number of blows, n_{10}	Dynamic cone strength, q_d, MPa
Water		-	-	-	-
Silt (sandy) (0y) dark brown/dark gray, watery		1	0.2	5	-
	Very fluffy	7	1.7	16	-
Slightly silty-clayey poorly sorted sand (SaFP) gray, watery, with 1.0% organic matter admixture	Loose	11	2.6	17	-
Low-silt, loamy, poorly sorted sand with a small amount of organic matter (sSaFP), dark gray, water-saturated, ranging from 3.8 m to 4.0 m with lenses of fine sand, containing 2.1% organic matter	Very loose	5	0.8	7	-
Poorly sorted sand (SaP), gray, water-saturated, from 7.5 m to 7.6 m with lenses of silty sand, containing 1.2% organic matter	Very loose	6	1.2	14	-
	Medium density	14	7.7	61	-
Silty sand (siSa) light brown, waterlogged	Very dense	22	20.8	216	-
	Tardius	36	17.4	226	-
	Medium density	14	6.4	112	-
			11.5	180	-
Slightly silty-clayey poorly sorted sand (SaFP) light brown, water-saturated	Very dense	24	-	-	21 11.0
Gravelly sand of varying gradation (grSaG), gray, water-saturated	Very dense	25	-	-	25 13.0
Slightly silty-clayey poorly sorted sand (SaFP) gray, waterlogged	Very dense	27	-	-	24 12.4
Gravelly, low-silt-clay, variously graded sand (grSaFG), gray, waterlogged	Very dense	39	-	-	22 11.1
Sandy low-plasticity clay-silt (saCIL-SiL) gray, with lenses of water-saturated sand	Hard	52	-	-	23 11.1
Sandy low-plasticity clay (saCIL), gray, with gravel, from 15.5 m to 15.9 m with boulders	Hard	53	-	-	61 27.7
Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense	37	-	-	22 10.4
Sandy clay with low plasticity (saCIL), gray, with fine grains	Hard	53	-	-	64 24.1
Medium-plasticity clay (CIM) dark brown, with fine grains	Hard	55	-	-	83 28.4
Sandy clay with low plasticity (saCIL), gray, with a grayish-green tint, brown from 32.8 m	Solid	53	-	-	147 41.4

Schedule of static and dynamic sounding tests, CPTU 60, DPSH 60



Drawing No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/07/2024

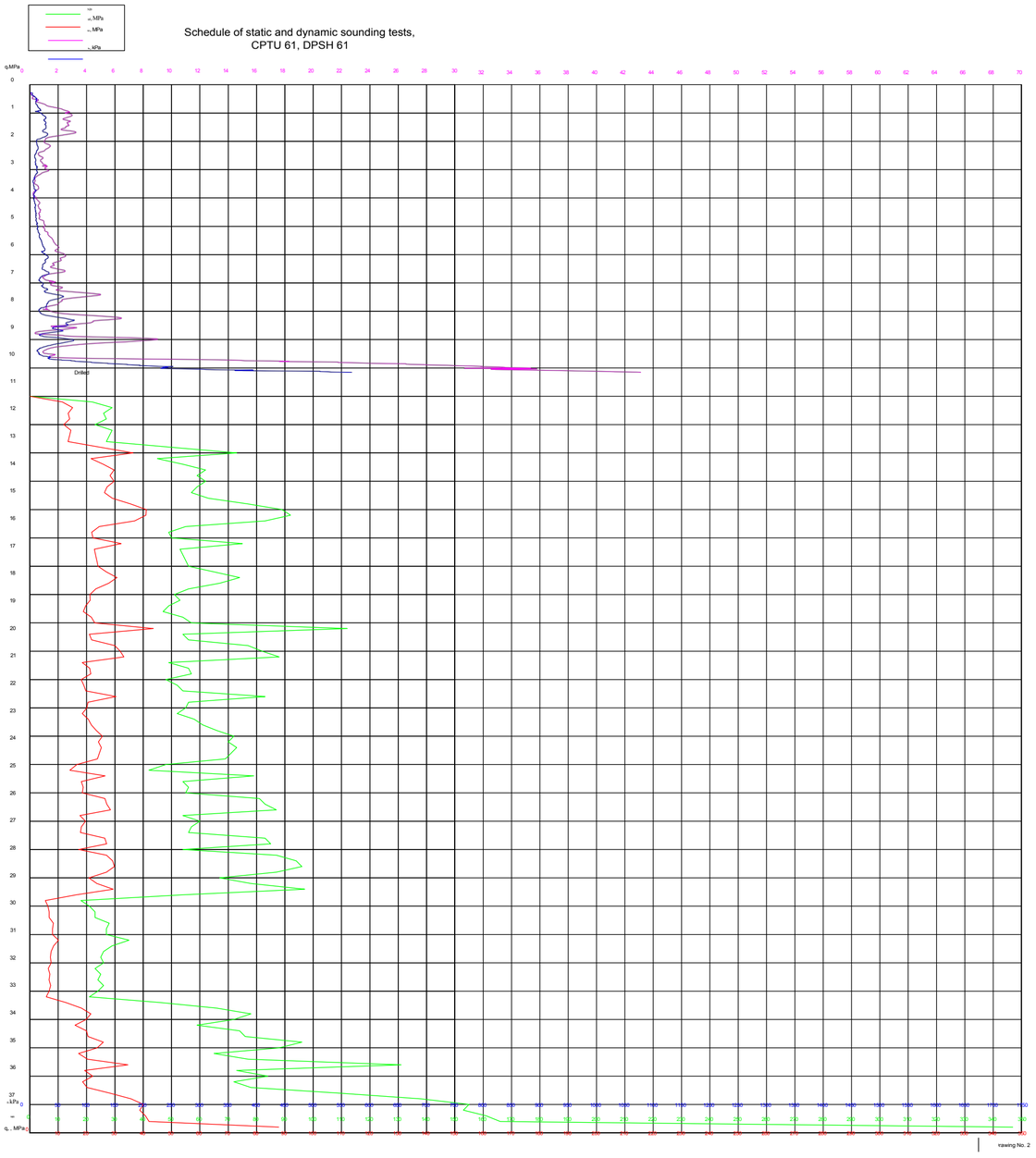
Borehole No. 61

Altitude of the borehole mouth 0.25 (according to LAS07)
Altitude of the borehole mouth 0.12 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of the layer base, m	Depth of the layer base, m (according to LAS07)	Depth of the layer base, m (according to BAS77)	Layer thickness, m	No.	Soil type, Depth	Water level, m alt. according to LAS07	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	KS, Cohesion, kPa	KS, Cohesion, kPa	KS, Friction angle, °	KS, Friction angle, °	Dynamic cone strength q_d, MPa	Dynamic cone strength q_d, MPa
	0.00	-0.05	-0.18	0.30					Water	-						
	0.70	-0.45	-0.58	0.40	1	0.30–0.70			Slightly silty-clayey poorly sorted sand (saSaF), light gray, watery, with 0.6% organic matter	Very loose	7	0.4	9	-	-	-
	1.80	-1.55	-1.68	1.10	2	0.80–1.40				Purus	12	2.5	24	-	-	-
					3	2.70–3.00			Poorly sorted sand (SaF), gray, dark gray from 1.8 m, from 5.1 m, dark gray from 7.3 m, gray from 7.6 m, watery, with 0.6%–1.4% organic matter	Very crumbly	6	1.2	16	-	-	-
	7.30	-7.05	-7.18	5.50	4	6.60–6.10										
	7.60	-7.35	-7.48	0.30						Purus	12	3.7	46	-	-	-
	8.10	-7.85	-7.98	0.50	5	7.30–7.60				Very crumbly	6	1.7	25	-	-	-
	8.40	-8.15	-8.28	0.30	6	7.60–8.00				Purus	12	4.9	56	-	-	-
	9.80	-8.55	-8.68	0.40						Very crumbly	6	2.1	50	-	-	-
	9.20	-8.95	-9.08	0.40						Crumbly	12	4.9	50	-	-	-
	9.60	-9.35	-9.48	0.40	7	8.60–9.20				Very crumbly	5	1.4	20	-	-	-
					8	9.30–9.60			material admixture				24.9	199	-	-
	10.80	-10.55	-10.68	1.20	9	10.10–10.50			Silty sand (siSa) light gray, watery, with 0.6% organic matter	Very dense	22				-	-
	12.70	-12.45	-12.58	1.90					Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense	24	-	-	23	15.6	
	14.20	-13.95	-14.08	1.50	10	12.80–13.20			Low-plasticity clay-silt (ClL-SiL), gray-brown, water-saturated	Hard	50	-	-	58	28.1	
	17.40	-17.15	-17.28	3.20	11	15.40–15.70			Sandy, low-plasticity clay-silt (SaCL-SiL), gray, water-saturated, boulder ranging from 15.0 m to 15.2 m	Hard	52	-	-	65	28.7	
	28.70	-28.45	-28.58	11.30			28.70 -28.45		Sandy clay with low plasticity (saCtL), gray, with a slight grayish tint	Hard	53	-	-	66	23.3	
	32.30	-32.05	-32.18	3.60					Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense	37	-	-	25	7.3	
	33.20	-32.95	-33.08	0.90						Semi-hard	47	-	-	64	17.6	
	36.00	-35.75	-35.88	2.80					Sandy clay with low plasticity (saCtL), gray, with gravel, brown from 34.6 m	Hard	53	-	-	89	23.6	



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/08/2024

Borehole No. 62

Altitude of the borehole mouth 0.24 (according to LAS07)
Altitude of the borehole mouth 0.11 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of layer base m	Depth of layer base (according to LAS07)	Depth of layer base (according to BAS77)	Layer thickness, m
	0.30	-0.06	-0.19	0.30
	0.60	-0.36	-0.49	0.30
	1.50	-1.26	-1.39	0.90
	1.90	-1.66	-1.79	0.40
	4.70	-4.46	-4.59	2.80
	6.60	-6.36	-6.49	1.90
	7.00	-6.76	-6.89	0.40
	7.70	-7.46	-7.59	0.70
	8.10	-7.86	-7.99	0.40
	10.80	-10.56	-10.69	2.70
	11.90	-11.66	-11.79	1.10
	17.70	-17.46	-17.59	5.80
	21.30	-21.06	-21.19	3.60
	11.20	-22.96	-11.09	1.90
	36.00	-35.76	-35.89	12.80

No.	Soil type Depth	Water level, m alt. according to LAS07 Min	Avg.	Max.
1	0.00-0.40	0.00	0.00	0.00
2	0.40-2.90	0.20	0.24	0.24
3	3.50-3.80			
4	4.60-5.10			
5	6.60-6.90			
6	9.30-9.60	11.90		
7	19.30-19.60	11.66		
8	28.45-28.65	9.00		
		11.00		
		21		

Cement description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cone resistance q_c, MPa	Unconfined compressive strength q_u, kPa	Dynamic cone strength q_d, MPa
Water	-				
Poorly sorted sand (SaP) dark gray, watery, with 1.4% organic matter	Very loose	6	0.1	2	-
	Very loose	6	0.5	4	-
	Crumbly	12	2.6	22	-
Slightly silty-clayey poorly sorted sand with a low organic matter content (cSaFP) dark gray, water-saturated, with 2.2% organic matter	Very fluffy	5	0.9	7	-
Poorly sorted sand (SaP) gray, water-saturated, with 1.6% organic matter content	Very fluffy	6	1.2	11	-
Slightly silty-clayey poorly sorted sand (SaFP) dark gray, up to 7.5 m with wood remnants, with amber lenses, from 7.5 m gray, watery, with 1.7% organic matter admixture	Fluffy	11	3.3	36	-
	Very crumbly	7	1.9	22	-
	Dense	20	10.6	93	-
			52.3	999+	
	Very dense	24			23 12.9
Sandy clay with low plasticity (saCtL), brown, with a high clay content	Hard	53	-	-	34 18.0
Poorly sorted sand (SaP) gray, watery, light gray from 12.8 m	Very dense	36	-	-	24 11.2
Sandy clay with low plasticity (saCtL), brown, with a high clay content	Hard	53	-	-	76 29.6
Slightly silty-clayey poorly sorted sand (SaFP), gray, watery	Very dense	37	-		24 8.7
Medium-plastic clay (CtM), gray, with a slight greenish tint, turning brown from 32.6 m	Hard	55	-	-	104 30.4

Schedule of static and dynamic sounding tests, CPTU 62, DPSH 62

q_c, MPa
f_s, MPa
u, MPa

Direct

q_d, MPa

Fig. No. :

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/09/2024

Borehole No. 63

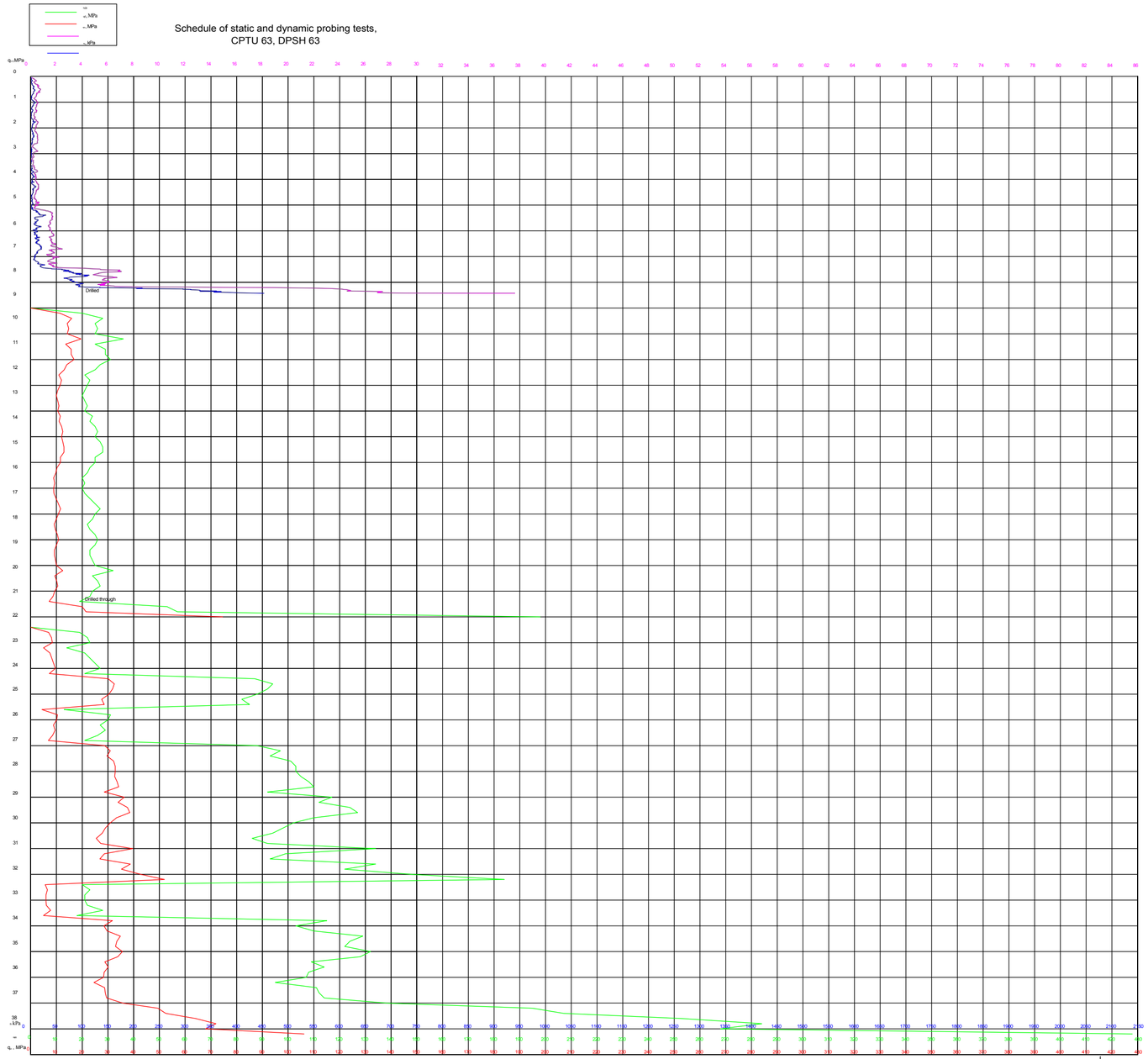
Altitude of the borehole mouth 0.29 (according to LAS07)
Altitude of the borehole mouth 0.16 (according to BAS77)
Well depth 36.00 m

SWECO

M 1:100

Geological Index	Depth of the bottom of the layer m	m (according to LAS07)	m (according to BAS77)	Layer thickness, m	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	Lithological section	No.	Depth	Soil type	Water level, m above sea level according to LAS07	Pos.	N	Mx	Mk	Cohesion, kPa	Friction angle, °	Natural water content, %	Dynamic probing, MPa
	0.00	-0.29		0.29	Silt (sandy) (Dy) dark brown, watery	-										1	10	-	-
m IV	3.50	-3.21	-3.34	3.20	Slightly silty-clayey poorly sorted sand (SaFP) gray, watery	Very fluffy										7	0.4	4	-	-
m IV	4.30	-4.01	-4.14	0.80	Low-silt, loamy, poorly sorted sand with a low organic matter content (oSaFP) gray, with silt, watery, with 2.4% organic matter	Very crumbly		1	3.60–4.10							5	0.4	4		
m IV	7.40	-7.11	-7.24	3.10	Poorly sorted sand (SaP), gray, from 6.6 m to 7.4 m with shells, water-saturated, with 1.3% organic matter	Very fluffy		2	6.60–6.80							6	1.3	11	-	-
	8.10	-7.81	-7.94	0.70		Medium density										14	6.6	79		
m IV	11.80	-11.51	-11.64	3.70	Silty sand (siSa) light brown, water-saturated, from 11.6 m to 11.8 m with lenses of silty sand	Very dense										22			20.6	257
																			25	13.6
fmIII	14.20	-13.91	-14.04	2.40	Poorly sorted sand (SaP) gray-brown, watery	Very dense										36	-	-	23	11.2
fmIII	16.10	-15.81	-15.94	1.90	Gravelly, slightly silty-clayey sand of varying gradation (grSaFG), light gray, water-saturated	Very dense										39	-	-	24	10.9
fmIII	20.40	-20.11	-20.24	4.30	Poorly sorted sand (SaP) light brown, watery, from 19.6 m to 19.9 m with sandy clay lenses	Very dense										36	-	-	25	10.0
l IV	9:10 PM	-20.81	-20.94	0.70	Sandy clay with low plasticity (saCiL), gray, with fine grains	Puskietis					21.10 -20.81					47	-	-	43	16.2
fmIII					Slightly silty-clayey poorly sorted sand (SaFP), light brown, watery	Very dense										37	-	-	21	7.7
gmIII	23.30	-23.01	-23.14	2.20	Sandy clay of low plasticity (saCiL), gray, with gravelly layers, from 24.1 m with water-bearing lenses of gravelly sand	Hard										53	-	-	77	26.5
fmIII	24.60	-24.31	-24.44	1.30	Gravelly, slightly silty-clayey sand of varying gradation (grSaFG), light brown, water-saturated	Very dense					24.60 -24.31					39	-	-	27	8.0
	25.90	-25.61	-25.74	1.30																
l IV	31.30	-31.01	-31.14	5.40	Sandy clay with low plasticity (saCiL), gray, with a fine-grained texture	Hard										53	-	-	110	33.3
fmIII					Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense					31.30 -31.01					37	-	-	22	6.1
	32.70	-32.41	-32.54	1.40																
gmIII	36.00	-35.71	-35.84	3.30	Medium-plasticity clay (CIM) dark brown, with fine grains	Hard										55	-	-	115	30.5

Schedule of static and dynamic probing tests,
CPTU 63, DPSH 63



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: December 9, 2024

Borehole No. 64

Altitude of the borehole mouth 0.27 (according to LAS07)
Altitude of the borehole mouth 0.14 (according to BAS77)
Borehole depth 36.00 m

SWECO

M 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (Baltic system)	Depth of layer base, m (Kronshtadt datum)	Layer thickness, m	Soil type No.	Soil type Depth	Water level, m above sea level according to LAS07	Lithological section	Cement description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Calculated strength, MPa	Shear resistance through CPTU cone, kPa	Dynamic cone strength, MPa	
	0.00	0.27	0.14	0.00			0.00 0.27 0.14		Water						
	0.70	-0.43	-0.56	0.40					Clayey, sandy fill with a layer of sandy silt, organic inclusions	Very loose	6	1.1	13	-	-
	1.40	-1.13	-1.26	0.70						Purus	12	2.7	17	-	-
	7.10	-6.83	-6.96	5.70	2	2.60-2.80			Poorly sorted sand (SaP), gray, light gray from 7.0 m, water-saturated	Very crumbly	6	0.9	6	-	-
	7.90	-7.63	-7.76	0.80						Dense	19	13.3	126	-	-
	11.20	-10.93	-11.06	3.30						Very dense	23	31.2	341	25	13.6
	12.90	-12.63	-12.76	1.70					Silty sand (siSa) light gray, water-saturated, from 11.9 m to 12.2 m with a layer of silty sand	Very dense	22	-	-	24	12.1
	15.80	-15.53	-15.66	2.90			15.80 15.53		Slightly silty-clayey, poorly sorted sand (SaFsP), dark brown, waterlogged	Very dense	37	-	-	26	12.3
	17.90	-17.63	-17.76	2.00	3	19.15-19.75	17.90 17.63		Sandy clay of low plasticity (saCl/L), brown, with gravel, gray from 16.4 m, from 17.9 m to 18.2 m with water-bearing layers of fine sand lenses, from 19.7 m to 21.8 m with silty clay lenses	Hard	53	-	-	81	32.0
	22.10	-21.83	-21.96	6.30	4	21.80-21.85									
	22.40	-22.13	-22.26	0.30			22.40 22.13		Low-plasticity clay (Cl/L), dark brown, from 22.4 m to 22.7 m with water-saturated lenses of fine sand	Hard	51	-	-	113	37.5
	28.40	-28.13	-28.26	6.30	5	28.00-28.30 28.64-28.90	28.40 28.13		Sandy silt (siSa) light gray, watery, from 28.9 m to 29.1 m with lenses of sandy silt	Very dense	35	-	-	25	6.8
	29.20	-28.93	-29.06	0.80	6				Sandy, low-plasticity silt (saSiL), dark brown, with gravel	Hard	48	-	-	90	26.4
	30.40	-30.13	-30.26	1.20											
	36.00	-35.73	-35.86	5.60	7	34.10-34.50			Sandy clay of low plasticity (saCl/L) gray, with coal, with water-bearing lenses of silty sand to a depth of 33.8 m, brown from 34.3 m, with abundant coal from 34.3 m	Hard	53	-	-	147	39.6

Schedule of static and dynamic probing tests, CPTU 64, DPSH 64

q_c, MPa
u_2, MPa
u_0, MPa
f_s, kPa

q_c, MPa: 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84

Depth, m: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

f_s, kPa: 0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050 2100

u_2, MPa: 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420

u_0, MPa: 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420

Drawing No 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/12/2024

Well No. 65

Altitude of the borehole mouth
0.27 (according to LAS07)
Altitude of the borehole mouth
0.14 (according to BAS77)
Well depth: 36.00 m

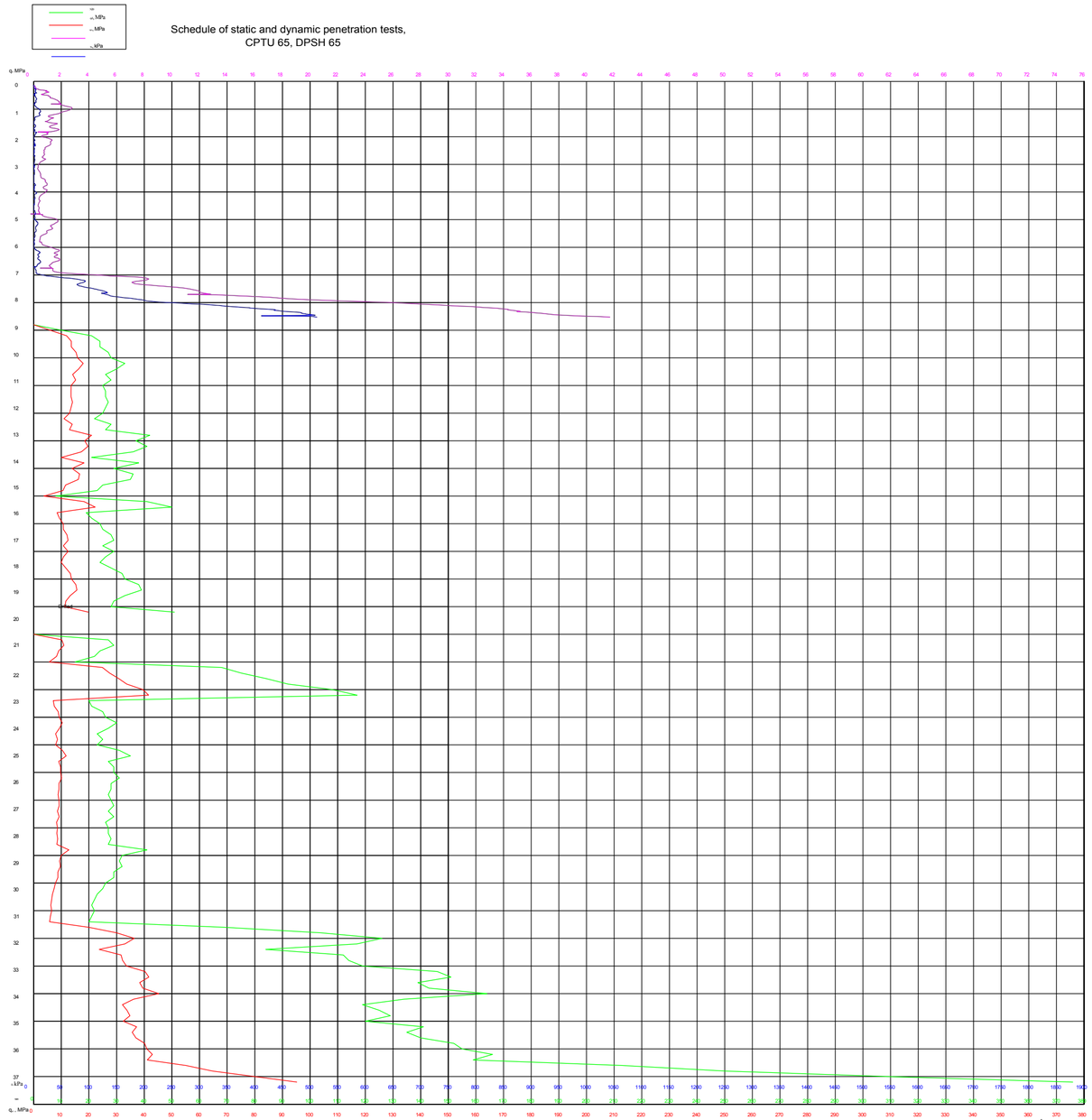
SWECO

Scale 1:100

Geological index	Depth of the layer base m	Depth of the layer base m Ukraine	Depth of the layer base m Kronshtadt	Layer thickness, m	Soil type, e.g., LAS07 No.	Soil type, e.g., LAS07 Depth	Water level, m alt. according to Pass.	Water level, m alt. according to Min.	Water level, m alt. according to Max.	Lithological section	Soil description (symbol according to LST EN ISO 14688-2:2018) [symbol according to DIN 18196]	Geotechnical characteristics	IGS	Cone strength q_c, MPa	Core recovery, % Number of blows, N	Dynamic cone strength q_d, MPa
	0.14	0.13	-0.01	0.15			0.27	0.27	0.27		Water	-				
	0.35	-0.08	-0.21	0.20							Silt (SiSa), light brown, water-saturated	-	1	0.3	2	-
a IV	7.00	-6.73	-6.86	6.65							Poorly sorted sand (SaP) dark gray, from 3.4 m to 3.6 m with sandy silt lenses, from 6.9 m light gray, watery	Very loose	6	1	14	- -
	7.40	-7.13	-7.26	0.40								Medium density	15	7.5	10	- -
	7.90	-7.63	-7.76	0.50								Dense	19	10.5	13	- -
a IV	11.40	-11.13	-11.26	3.50							Lightly silty-clayey, poorly sorted sand (SaFP), light gray, water-saturated, from 9.4 m to 9.8 m with lenses of coarse sand	Very dense	24	32.3	383	23 12.8
a IV	12.50	-12.23	-12.36	1.10							Poorly sorted sand (SaP) light brown, watery, from 11.9 m to 12.1 m with lenses of silty sand, from 12.1 m to 12.3 m with gravel, from 12.3 m to 12.5 m with lenses of silty sand	Very dense	23	-	-	- 26 13.2
l	13.60	-13.33	-1:46 PM	1.10			13.60 -13.33				Sandy low-plasticity clay-silt (saCtL-SiL) is gray, with gravel. Puskietis		46	-	-	- 36 17.9
bmQ	15.10	-14.83	-14.96	1.50							Silty sand (SiSa) light brown, water-saturated	Very dense	35			- 27 12.6
apC	15.60	-15.33	-15.46	0.50			15.60 -15.33				Sandy clay with low plasticity (saCtL), gray, with sand	Hard	53	-	-	- 44 20.3
bmQ	21.10	-20.83	-20.96	5.50							Sandy loam (SiSa) light brown, waterlogged	Very dense	35			- 30 12.7
bmQ	22.40	-22.13	-22.26	1:30			10:40 PM -22.13				Sandy clay with low plasticity (saCtL), gray, with sand grains	Hard	53	-	-	- 90 33.0
bmQ	29.80	-29.53	-29.66	7.40							Silty sand (SiSa) light gray, water-saturated, from 28.4 m to 28.7 m with sandy clay lenses	Very dense	35			- 27 8.9
bmQ	30.30	-30.03	-30.16	0.50							Gravelly, slightly silty-clayey sand of varying gradation (grSaFG), brown, water-saturated	Very dense	39			- 22 6.3
l	36.00	-35.73	-35.86	5.70							Sandy clay of low plasticity (saCtL) gray, with gravel, brown from 33.2 m, gray from 33.6 m, brown from 35.4 m	Hard	53	-	-	- 134 36.3

Z 10:30 AM–12:30 AM

Schedule of static and dynamic penetration tests, CPTU 65, DPSH 65



Drawing No. 2

Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/12/2024

Well No. 66

Altitude of the borehole mouth
0.27 (according to LAS07)
Altitude of the borehole mouth
0.14 (according to BAS77)
Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of the layer base, m			Layer thickness, m
	m	abs. (according to LAS07)	abs. (according to BAS77)	
a IV	0.29	0.02	-0.11	0.29
	7.00	-6.73	-6.86	6.75
	7.50	-7.23	-7.36	0.50
	7.90	-7.63	-7.76	0.40
	11.60	-11.33	-11.46	3.70
a	12.70	-12.43	-12.56	1.10
5	13.30	-13.03	-13.16	0.60
	15.00	-14.73	-14.86	1.70
aIII	16.60	-16.33	-16.46	1.60
	17.10	-16.83	-16.96	0.50
aIII	20.60	-20.33	-20.46	3.50
aIII	28.30	-28.03	-28.16	7.70
aIII	32.40	-32.13	-32.26	4.10
aIII	36.00	-35.73	-35.86	3.60

Soil type	No.	Depth
	1	0.00–0.30
3	2	16.50–17.70
	4	35.00–35.40

Water level, m alt. according to LAS07: 0.27 (0.00), 0.13 (0.00), 0.27 (0.00)

Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	k_s	Cohesion c_u, kPa	Friction angle, °	Dynamic cone strength q_d, MPa	
Water	-	-	-	-	-	-
Very fluffy	6	1.0	11	-	-	
Poorly sorted sand (SaP) gray, light gray from 6.9 m, watery	Medium density	15	9.6	90	-	-
	Tankus	19	13.3	147	-	-
			25.0	293		
	Very dense	23			23	12.7
Slightly silty-clayey poorly sorted sand (SaFP), light gray, watery	Very dense	24	-	-	25	12.7
Sandy, very highly plastic silt with moderate organic matter content (as SiO_2), gray-brown, with a slight grayish tint, gray from 13.1 m	Hard	30	-	-	43	21.0
Sandy loam (siSa) brownish-gray, waterlogged, with 1.6% organic matter	Very dense	22	-	-	25	11.8
Slightly silty-clayey poorly sorted sand (SaFP), brown, watery	Very dense	37	-	-	25	11.0
Sandy clay with low plasticity (saCtL), gray, with fine grains	Hard	53	-	-	51	22.1
Sandy loam (siSa), light brown, waterlogged	Very dense	35	-	-	25	10.0
Slightly silty-clayey, poorly sorted sand (SaFP), light brown, water-saturated	Very dense	37	-	-	24	8.2
Gravelly, slightly silty-clayey, well-sorted sand (grSaFW), light brown, water-saturated, from 31.2 m to 31.6 m with sandy clay lenses, from 31.2 m to 31.3 m with gravel	Very dense	38	-	-	25	7.2
Medium-plastic clay (CtM) dark brown, light gray from 34.6 m	Hard	95	-	-	196	62.3

Schedule of static and dynamic sounding tests,
CPTU 66, DPSH 66

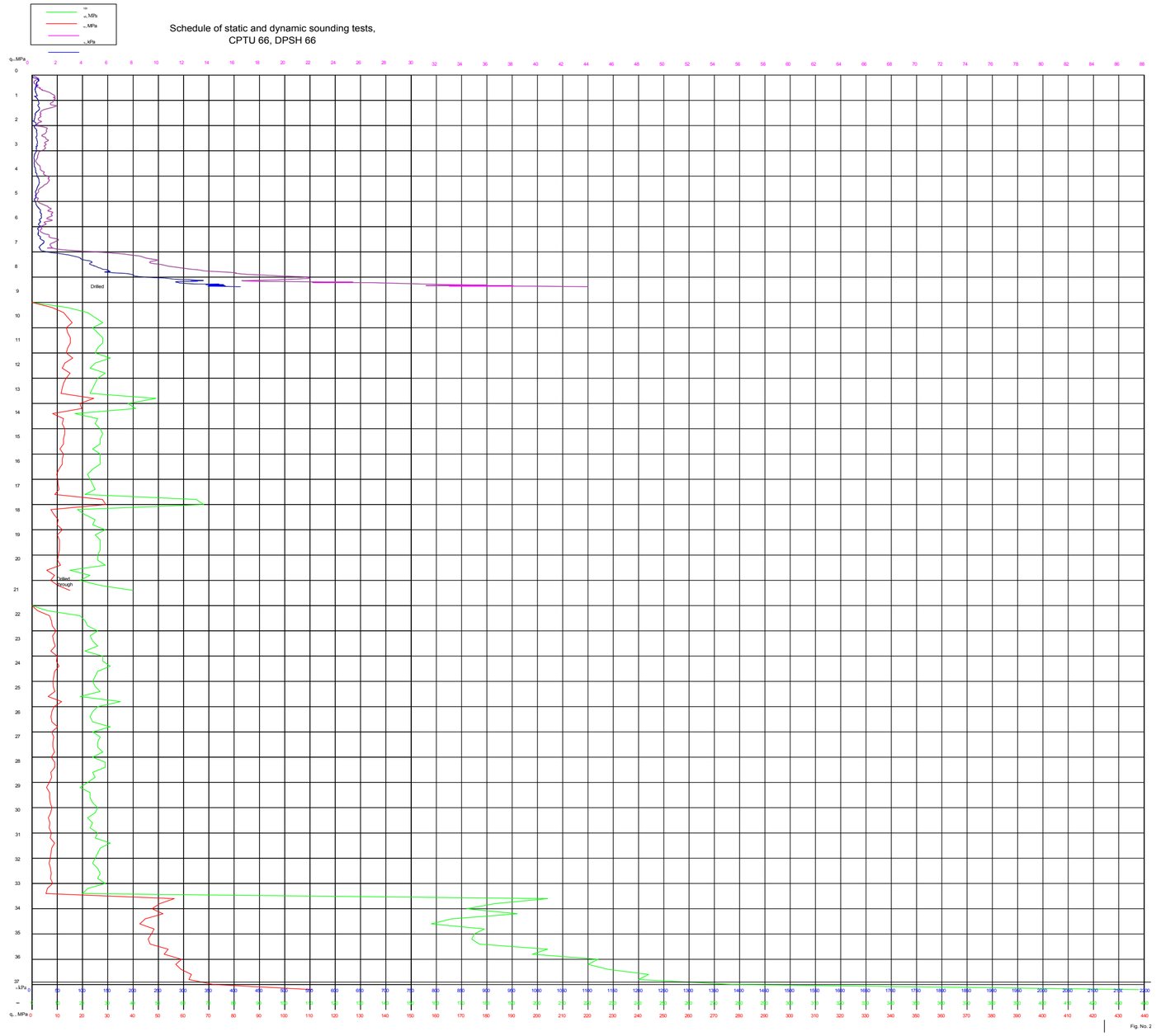


Fig. No. 2

Design engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/13/2024

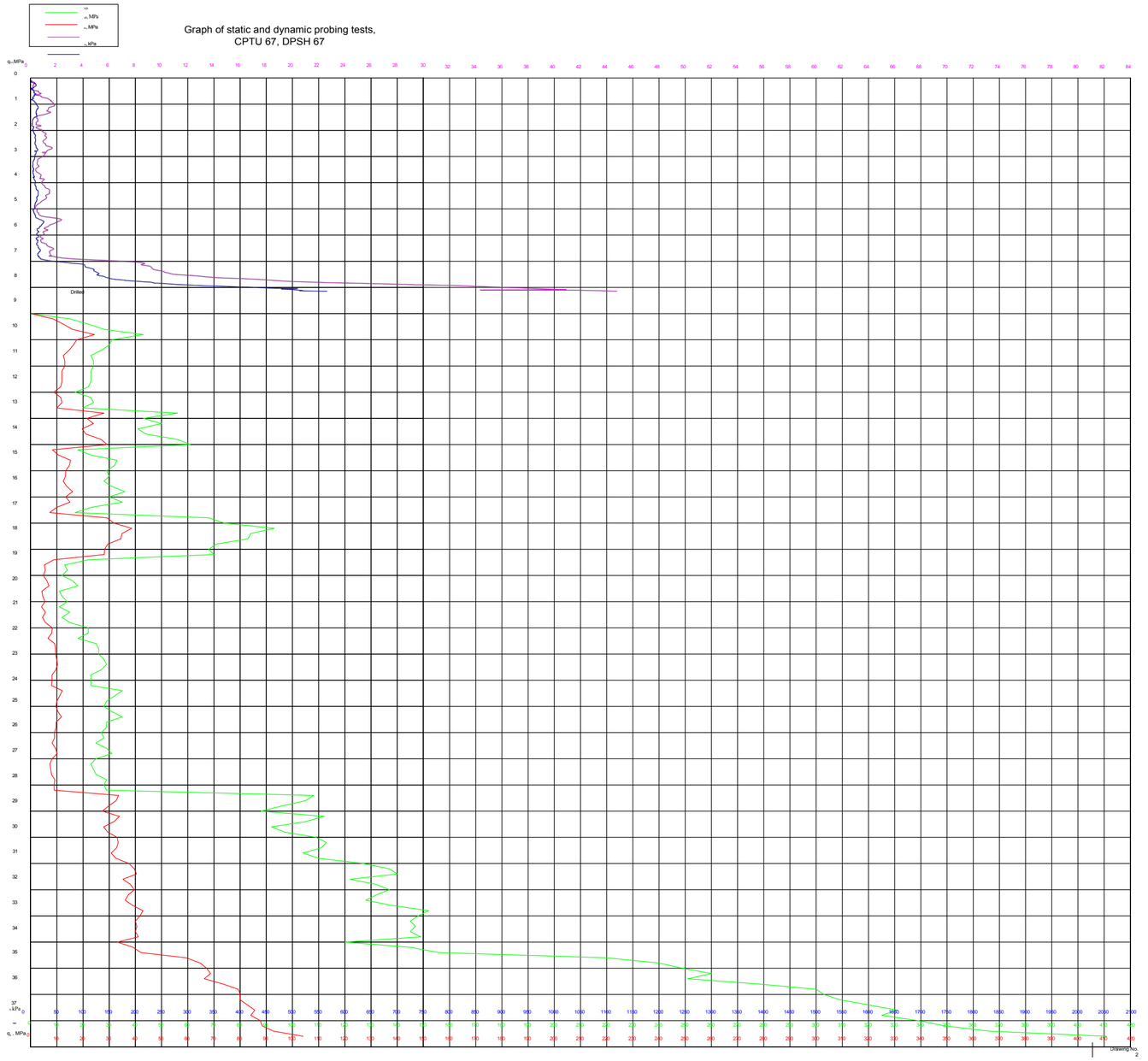
Well No. 67

Altitude of the borehole mouth 0.26 (according to LAS07)
Altitude of the borehole mouth 0.13 (according to BAS77)
Well depth 36.00 m

SWECO

M 1:100

Geological index	Depth of layer base, m	Depth of layer base, m (Baltic system)	Depth of layer base, m (Quaternary system)	Layer thickness, m	No.	Soil type	Depth	Water level, m alt. according to LAS07	Lithological section	Soil description (designation according to LST EN ISO 14688-2:2018) [designation according to DIN 18196]	Geotechnical characteristics	IGS	Cohesion, kPa	Friction angle, °	Number of blows, N30	Dynamic cone strength, qd	Static cone resistance, qc
	0.26	0.13	0.00	0.26				0.26		Water	-	-	-	-	-	-	-
a IV	6.90	-6.64	-6.77	6.80						Slightly silty-clayey poorly sorted sand (SaFP), gray, ranging from 6.8 m light gray, water-saturated	Very crumbly	7	1.0	10	-	-	
	7.40	-7.14	-7.27	0.50							Medium density	16	8.3	88	-	-	
	7.80	-7.54	-7.67	0.40							Dense	20	14.7	155	-	-	
													34.4	303			
a IV	12.60	-12.34	-12.47	4.80						Silty sand (siSa), light gray, water-saturated, from 12.3 m to 12.4 m with a gravelly sand lens	Very dense	32			23	12.7	
l	14.20	-13.94	-14.07	1.60				14.20 -13.94		Sandy clay with low plasticity (saCtL), dark brown, with fine grains	Hard	53	-	-	46	22.5	
lmIII	16.60	-16.34	-16.47	2.40						Sandy silt (siSa) light gray, watery	Very dense	35	-	-	29	13.0	
gIII-l	18.40	-18.14	-18.27	1.80				18.40 -18.14		Sandy clay with low plasticity (saCtL), gray, with fine grains	Hard	53	-	-	70	29.1	
l	21.00	-20.74	-20.87	2.60	1 2		0.00-754.-8.70) 8.10-754.-8.40)			Low-plasticity clay (ClL), gray, with water-saturated clayey sand lenses	Softly plastic	41	-	-	14	5.6	
lmIII	23.60	-23.34	-23.47	2.60						Silty sand (siSa) light gray, watery	Very dense	36	-	-	26	9.2	
l	25.60	-25.34	-25.47	2.00	3 4		25.40-25.60 26.10-26.40			Slightly silty-clayey poorly sorted sand (SaFP) light gray, watery	Very dense	37	-	-	29	9.7	
	26.60	-26.34	-26.47	1.00						Sandy loam (siSa) light gray, waterlogged	Very dense	35	-	-			
lmIII	27.20	-26.94	-27.07	0.60						Gravelly, slightly dusty-clayey, well-sorted sand (grSaFW), gray, watery	Very dense	38	-	-	26	8.3	
															29	9.1	
l	31.60	-31.34	-31.47	4.40						Sandy, low-plasticity clay (saCtL) gray, with gravel	Hard	53	-	-	116	34.2	
lmIII	36.00	-35.74	-35.87	4.40						Medium-plastic clay (ClM) dark brown, with fine grains	Hard	56	-	-	223	59.6	



Engineering geological and geotechnical investigations for the preparation of a project for the construction of new quays and shore reinforcements in the southern part of the port, as well as dredging works, classified as Geotechnical Category III, report

Drilling date: 12/14/2024

Well No. 68

Altitude of the borehole mouth 0.27 (according to LAS07)
Altitude of the borehole mouth 0.14 (according to BAS77)

Well depth 36.00 m

SWECO

Scale 1:100

Geological index	Depth of the layer base, m	Depth of the layer base, m (according to BAS77)	Depth of the layer base, m (according to LAS07)	Layer thickness, m	Soil sample No.	Soil sample Depth	Water level, m alt. according to LAS07 Pro	Nam	Mas	Lithological section	Soil description (marking in accordance with LST EN ISO 14688-2:2018) [marking in accordance with DIN 18196]	Geotechnical characteristics	IGS	Shear strength, kPa	Shear strength, kPa	Number of impacts, N30	Dynamic cone strength, qd, MPa
	0.40	-0.13	-0.27	0.35			0.27		0.00		Silt (sandy) (Dy) dark brown, watery	-	1	0.1	-	-	
	6.90	-6.63	-6.76	6.50							Slightly silty-clayey poorly sorted sand (SaFP) gray, from 1.8 m dark gray, watery	Very crumbly	7	10	92	-	-
	7.20	-6.93	-7.06	0.30								Medium dense	16	5.6	43	-	-
	7.60	-7.33	-7.46	0.40								Dense	20	14.7	157	-	-
	10.90	-10.63	-10.76	3.30	1	10.80–10.46						Very dense	24		30.1	329	22 12.0
	12.80	-12.53	-12.66	1.90	2	11.00–11.66					Silty sand (siSa) gray, watery	Very dense	22	-	-	22	11.3
	13.60	-13.33	-13.46	0.80			13.60 13.33				Sandy clay with low plasticity (saCl/L), gray, with fine grains	Hard	53			45	21.0
	15.90	-15.63	-15.76	2.30							Slightly silty-clayey poorly sorted sand (SaFP), gray, watery	Very dense	37	-	-	23	10.8
	16.70	-16.43	-16.56	0.80			16.70 16.43				Sandy clay with low plasticity (saCl/L), gray, with fine grains	Hard	53			66	29.5
	18.50	-18.23	-18.36	1.80							Silty sand (siSa) gray, watery	Very dense	36	-	-	23	9.5
	36.00	-35.73	-35.86	17.50							Sandy low-plasticity clay (saCl/L) gray, with gravel	Hard	53	-	128	369	

Graph of static and dynamic sounding tests, CPTU 68, DPSH 68

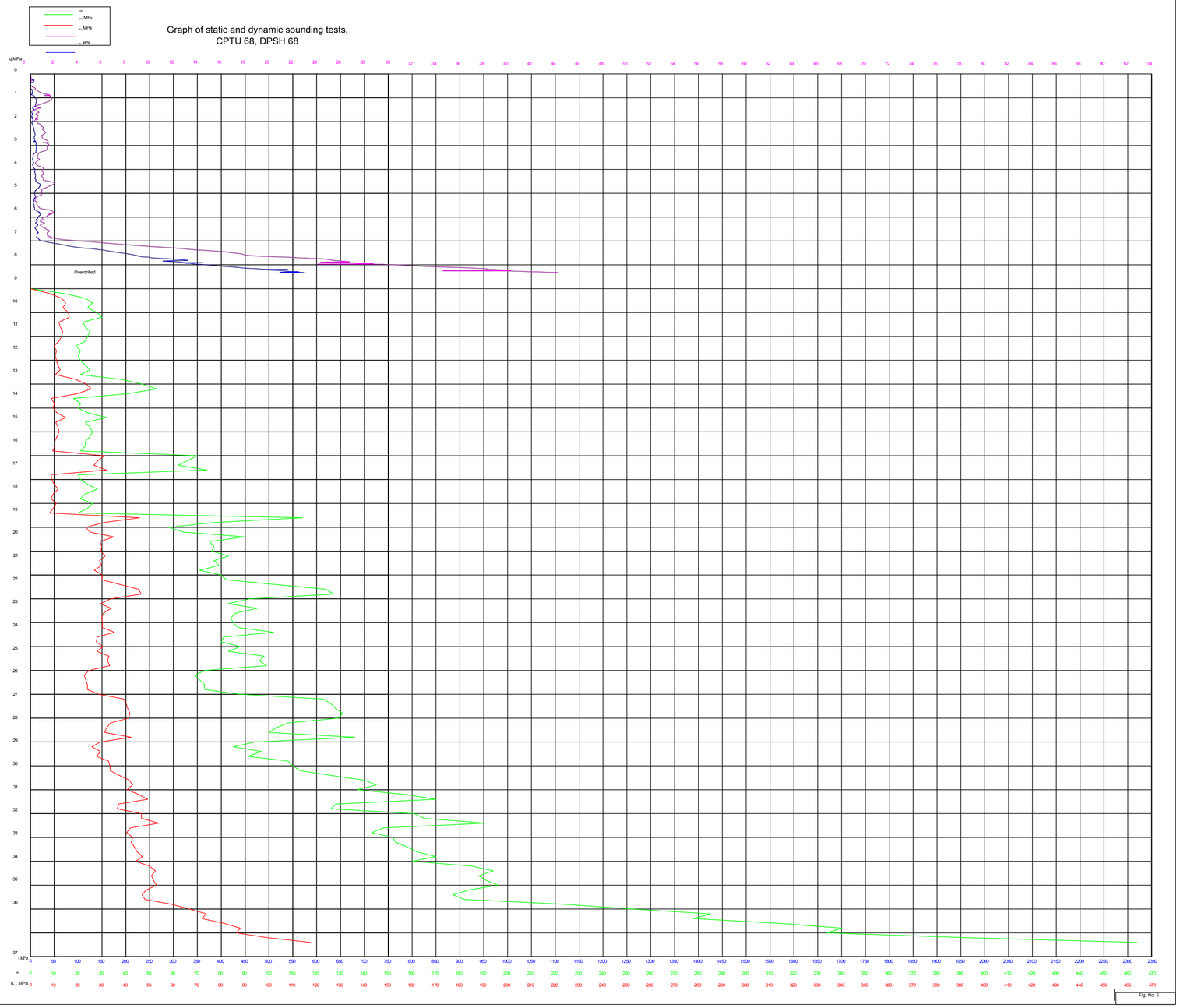


Fig. No. 2