Boden	γ [kN/m³]	γ' [kN/m³]	φ [°]	c [kN/m²]	E_s [MN/m²]	ν [-]	Bezeichnung
	12.0	2.0	15.0	0.0	1.00	0.00	Torf
	20.0	10.0	37.5	0.0	90.0	0.00	Kies

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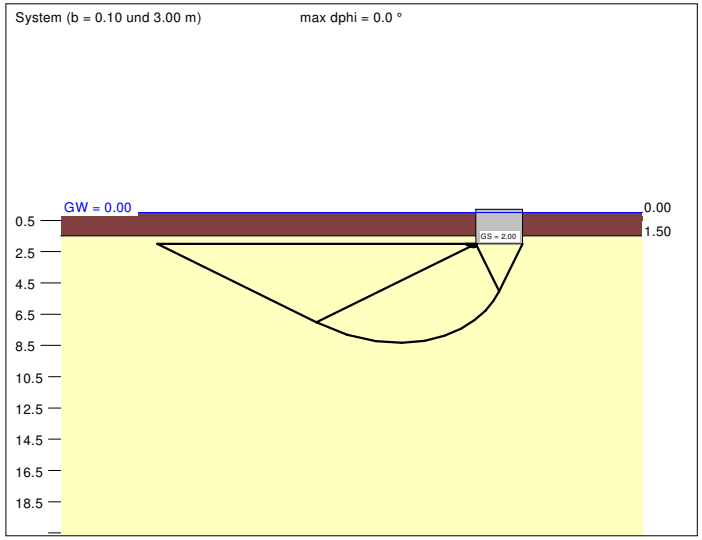
Brunnenfundament

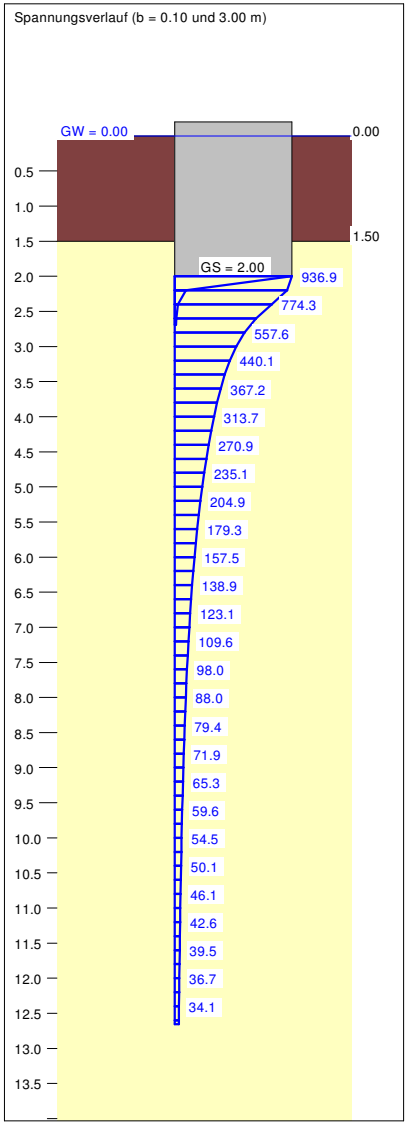
AZ: 15-07-01

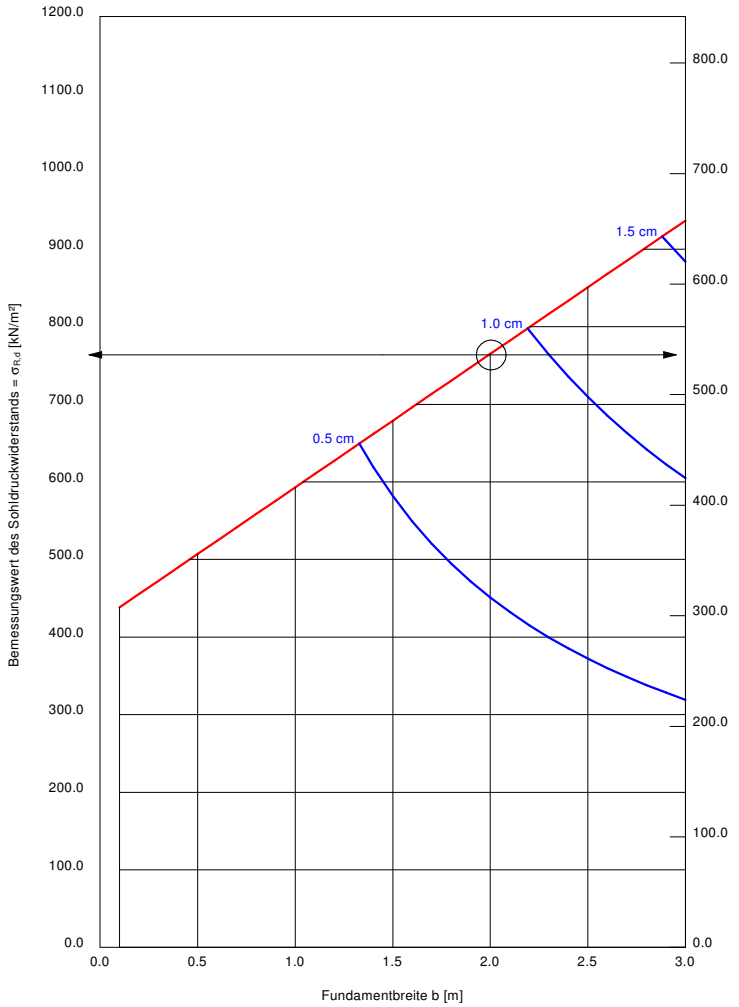
Anlage 4.1

Berechnungsgrundlagen:
Norm: EC 7
Grundbruchformel nach DIN 4017:2006
Teilsicherheitskonzept (EC 7)
Einzelfundament (a/b = 1.00)
γ_{Gr} = 1.40
γ_G = 1.35
γ_Q = 1.50
Anteil Veränderliche Lasten = 0.500

$\gamma_{(G,Q)} = 0.500 \cdot \gamma_Q + (1 - 0.500) \cdot \gamma_G$
$\gamma_{(G,Q)}$ = 1.425
Gründungssohle = 2.00 m
Grundwasser = 0.00 m
Grenztiefe mit p = 20.0 %
Grenztiefen spannungsvariabel bestimmt
Sohldruck
Setzungen







a [m]	b [m]	$\sigma_{R,d}$ [kN/m²]	$R_{n,d}$ [kN]	$\sigma_{E,k}$ [kN/m²]	s [cm]	cal φ [°]	cal c [kN/m²]	γ_2 [kN/m³]	$\sigma_ü$ [kN/m²]	t_g [m]	UK LS [m]
0.10	0.10	438.3	4.4	307.6	0.03	37.5	0.00	10.00	8.00	2.69	2.21
0.20	0.20	455.5	18.2	319.7	0.06	37.5	0.00	10.00	8.00	3.21	2.42
0.30	0.30	472.7	42.5	331.7	0.09	37.5	0.00	10.00	8.00	3.67	2.63
0.40	0.40	489.9	78.4	343.8	0.12	37.5	0.00	10.00	8.00	4.09	2.84
0.50	0.50	507.1	126.8	355.9	0.15	37.5	0.00	10.00	8.00	4.49	3.06
0.60	0.60	524.3	188.7	367.9	0.19	37.5	0.00	10.00	8.00	4.87	3.27
0.70	0.70	541.5	265.3	380.0	0.22	37.5	0.00	10.00	8.00	5.24	3.48
0.80	0.80	558.7	357.6	392.1	0.26	37.5	0.00	10.00	8.00	5.60	3.69
0.90	0.90	575.9	466.5	404.1	0.30	37.5	0.00	10.00	8.00	5.95	3.90
1.00	1.00	593.1	593.1	416.2	0.35	37.5	0.00	10.00	8.00	6.29	4.11
1.10	1.10	610.3	738.4	428.3	0.39	37.5	0.00	10.00	8.00	6.63	4.32
1.20	1.20	627.4	903.5	440.3	0.44	37.5	0.00	10.00	8.00	6.97	4.53
1.30	1.30	644.6	1089.4	452.4	0.49	37.5	0.00	10.00	8.00	7.30	4.74
1.40	1.40	661.8	1297.2	464.4	0.54	37.5	0.00	10.00	8.00	7.63	4.96
1.50	1.50	679.0	1527.8	476.5	0.59	37.5	0.00	10.00	8.00	7.95	5.17
1.60	1.60	696.2	1782.3	488.6	0.64	37.5	0.00	10.00	8.00	8.28	5.38
1.70	1.70	713.4	2061.8	500.6	0.70	37.5	0.00	10.00	8.00	8.60	5.59
1.80	1.80	730.6	2367.2	512.7	0.76	37.5	0.00	10.00	8.00	8.92	5.80
1.90	1.90	747.8	2699.5	524.8	0.82	37.5	0.00	10.00	8.00	9.23	6.01
2.00	2.00	765.0	3060.0	536.8	0.88	37.5	0.00	10.00	8.00	9.55	6.22
2.10	2.10	782.2	3449.4	548.9	0.94	37.5	0.00	10.00	8.00	9.87	6.43
2.20	2.20	799.4	3869.0	561.0	1.01	37.5	0.00	10.00	8.00	10.18	6.64
2.30	2.30	816.6	4319.6	573.0	1.07	37.5	0.00	10.00	8.00	10.49	6.85
2.40	2.40	833.8	4802.5	585.1	1.14	37.5	0.00	10.00	8.00	10.80	7.07
2.50	2.50	851.0	5318.4	597.2	1.21	37.5	0.00	10.00	8.00	11.11	7.28
2.60	2.60	868.1	5868.7	609.2	1.29	37.5	0.00	10.00	8.00	11.42	7.49
2.70	2.70	885.3	6454.1	621.3	1.36	37.5	0.00	10.00	8.00	11.73	7.70
2.80	2.80	902.5	7075.8	633.4	1.44	37.5	0.00	10.00	8.00	12.04	7.91
2.90	2.90	919.7	7734.9	645.4	1.52	37.5	0.00	10.00	8.00	12.35	8.12
3.00	3.00	936.9	8432.2	657.5	1.60	37.5	0.00	10.00	8.00	12.65	8.33

$\sigma_{E,k} = \sigma_{of,k} / (\gamma_{Gr} \cdot \gamma_{(G,Q)}) = \sigma_{of,k} / (1.40 \cdot 1.43) = \sigma_{of,k} / 1.99$ (für Setzungen)
Verhältnis Veränderliche(Q)/Gesamtlasten(G+Q) [-] = 0.50