INITIAL DATA

Soil properties

No.	Description	Unit Wt [kN/m³]	K0	Ka	Kp	Kac	Kpc	Kr	Earth pressure coefficients.
1	Made Ground	16.00	0.66	0.49	2.04	1.40	2.86	0.50	Calculated
2	Firm London Clay	17.00	0.63	0.45	2.20	1.35	2.97	0.50	Calculated
3	Very Stiff London Clay	19.50	0.63	0.44	2.28	1.32	3.02	0.50	Calculated

No.	c0 [kN/m²]	y0 [m]	Gradient of c [kN/m²/m]	E0 [kN/m²]	Gradient of E [kN/m²/m]	Drained/ Undrained
1	0.00	0.00	0.00	15000.	0.00	Undrained
2	30.00	0.00	0.00	15000.	0.00	Undrained
3	60.00	0.00	0.00	15000.	0.00	Undrained

Parameters used to calculate Earth pressure coefficients

No.	Phi [°]	Delta/Phi Ratio	Beta [°]	Cw/C Ratio
1	20.00	0.00	0.00	0.00
2	22.00	0.00	0.00	0.00
3	23.00	0.00	0.00	0.00

Soil Strength Partial Factors

Document and case:	tan Phi'	c'	Cu	E
EC7 DA1 Combination 2 (2011)	1.25	1.25	1.40	1.00

Note: Only the parameters in bold have been affected by Partial Factors, No geometry or other factors have been changed.

Design Soil properties after applying Partial Factors

No.	Unit Wt [kN/m³]	K0	Ka	Kp	Kac	Kpc	Kr	Earth pressure coefficients.
1	16.00	0.66	**0.56**	**1.78**	**1.50**	**2.67**	0.50	Calculated
2	17.00	0.63	**0.53**	**1.89**	**1.46**	**2.75**	0.50	Calculated
3	19.50	0.63	**0.51**	**1.95**	**1.43**	**2.79**	0.50	Calculated

No.	c0 [kN/m²]	y0 [m]	Gradient of c [kN/m²/m]	E0 [kN/m²]	Gradient of E [kN/m²/m]	Drained/ Undrained
1	0.00	0.00	0.00	15000.	0.00	Undrained
2	24.00	0.00	0.00	15000.	0.00	Undrained
3	48.00	0.00	0.00	15000.	0.00	Undrained

Parameters used to calculate design Earth pressure coefficients

No.	Phi [°]	Delta/Phi Ratio	Beta [°]	Cw/C Ratio
1	**16.23**	0.00	0.00	0.00
2	**17.91**	0.00	0.00	0.00
3	**18.76**	0.00	0.00	0.00

Surcharge properties

No.	Stage	Side	Level	Pressure	Partial Factor	Offset	Width	Ks
	In	Out		[m]	[kN/m²]	[m]	[m]	
1	0	-	Left	0.00	10.00	1.00	1.00	5.00 0.00

Note: Only the parameters in bold have been affected by Partial Factors.

Surcharge Design properties

No.	Stage	Side	Level	Pressure	Offset	Width	Ks
	In	Out		[m]	[kN/m²]	[m]	[m]	
1	0	-	Left	0.00	10.00	1.00	5.00 0.00

Strut properties

No.	Stage		Node	Level [m]	Prestress [kN/m]	Stiffness [kN/m/m]	Angle [°]	Lever arm [m]
	In	Out						
1	1	-	4	-1.00	0.00	100000.00	0.00	0.30

STAGE 0 : INITIAL CONDITION

Ground level [m] LEFT: 0.00 RIGHT: 0.00 Soil zones changed

Water data on LEFT side

No.	Level [m]	Pressure [kN/m²]	Unit wt. [kN/m³]
1	0.00	0.00	10.00

Water data on RIGHT side

No.	Level [m]	Pressure [kN/m²]	Unit wt. [kN/m³]
1	0.00	0.00	10.00

Analysis details

SAFE model with redistribution and without friction at wall/soil interface

	Left	Right
E profile Generated		
Boundary distances [m] :	50.00	50.00

Convergence control parameters

Maximum number of iterations : 900
Tolerance for displacement convergence [mm] : 0.01
Tolerance for pressure convergence [kN/m²] : 0.10
Damping coefficient : 1.00
Maximum incremental displacement [m] : 1.00

RESULTS FOR STAGE 0 : Initial condition

Surcharge or strut changes

Surcharge no. 1 applied at this stage

Summary Results

	Node	Level [m]	Displacement [mm]	Moment [kNm/m]	Shear [kN/m]
Top wall node	1	0.00	0.00	0.00	0.00

STAGE 1 : PERMANENT CONDITION

Ground level [m] LEFT: 0.00 RIGHT: -2.80 Soil zones changed and wall EI changed

Water data on LEFT side

No.	Level [m]	Pressure [kN/m²]	Unit wt. [kN/m³]
1	-1.00	0.00	10.00

Water data on RIGHT side

No.	Level [m]	Pressure [kN/m²]	Unit wt. [kN/m³]
1	-2.80	0.00	10.00

RESULTS FOR STAGE 1 : Permanent Condition

Surcharge or strut changes

Strut no 1 inserted at this stage

Summary Results

	Node	Level [m]	Displacement [mm]	Moment [kNm/m]	Shear [kN/m]
Top wall node	1	0.00	-1.64	0.00	0.00
Above strut 1	4	-1.00	0.80	-6.26	21.21
Below strut 1				-6.26	-58.78
Dig level (R)	8	-3.04	5.32	66.56	-9.61
Max BM	9	-3.51	6.10	68.04	2.32
Wall toe	18	-7.50	8.69	0.00	0.00

Strut Forces

No.	Node no.	Strut force [kN/m]	Horiz force [kN/m]	Moment [kNm/m]	Max strut force [kN/m]
1	4	79.99	79.99	0.00	79.99