EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1997-2:2007/AC

June 2010
Juin 2010
Juni 2010

English version
Version Française
Deutsche Fassung

Eurocode 7 - Geotechnical design - Part 2: Ground investigation and testing

Eurocode 7 - Calcul géotechnique - Partie 2: Reconnaissance des terrains et essais

Eurocode 7 - Entwurf, Berechnung und Bemessung in der Geotechnik - Teil 2: Erkundung und Untersuchung des Baugrunds

This corrigendum becomes effective on 2 June 2010 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 2 juin 2010 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 2.Juni 2010 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No.:EN 1997-2:2007/AC:2010 D/E/F

1) Modifications to "Contents"

Under Section 1 General, immediately after the line dedicated to Subclause 1.7, add a line about Subclause 1.8, "Symbols and Units"*, with the page where it can be found.*

Line dedicated to Annex H, replace the page number "134" *with the correct one.*

2) Modifications to 1.2

Title of EN ISO 22476-1, replace "Electrical CPT and CPTU" *with* "Electrical cone and piezocone penetration tests"*.*

Bottom of pages with the references EN ISO 22476-6, EN ISO 22476-8, EN ISO 22476-9, EN ISO 22476-12 and EN ISO 22476-13, insert the following footnote:

"6 to be published".

Just after the reference EN ISO 22476-6, add the following reference:

"EN ISO 22476-7[6]   Geotechnical investigation and testing – Field testing – Part 7: Borehole jack test".

Reference to EN ISO 22476-12, delete footnote mark "[6]"*.*

3) Modification to 1.6

Replace footnote number "6" *with* "7"*, in the text (i.e. at the end of Paragraph (2)) and at the bottom of the page.*

4) Modifications to 1.8

Paragraph (1), Latin letters, between K_{DMT} and I_{L}, add:

"k coefficient of permeability".

Paragraph (1), Greek letters, definition of α, replace "E_{OED}" *with* "E_{oed}"*.*

Paragraph (1), Greek letters, definition of σ'_{p}, replace "effective pre-consolidation pressure" *with* "effective pre-consolidation pressure or effective vertical yield stress in situ"*.*

Paragraph (1), Greek letters, definition of σ_{v0}, replace "total vertical stress" *with* "initial vertical total stress"*.*

Paragraph (1), Greek letters, definition of σ'_{v0}, replace "effective vertical stress" *with* "initial vertical effective stress"*.*

Paragraph (1), Abbreviations, definition of CPT, replace "cone penetration test" *with* "electrical cone penetration test"*.*

Paragraph (1), Abbreviations, between the definition of CPT and that of CPTU, add:

"CPTM   mechanical cone penetration test".

5) Modification to 4.2.2

Paragraph (1)P, replace "EN ISO 22476-1, EN ISO 22476-8, EN ISO 22476-9" *with* "EN ISO 22476-1 to EN ISO 22476-9"*.*

6) Modification to 4.3

Title of the subclause, replace "(CPT, CPTU)" *with* "(CPT, CPTU, CPTM)"*.*

7) Modification to 4.3.2

Paragraph (1)P, replace "mechanical CPT" *with* "CPTM"*.*

8) Modification to 4.8.3

Replace:

"(2) The following influences can affect the evaluation of the results."

with:

"(3) The following influences can affect the evaluation of the results.".

9) Modification to 4.8.4

Paragraph (4), NOTE 2, replace:

"NOTE 2 An example of a correlation to estimate the angle of shearing resistance (φ') of quartz and feldspar sands is given in Annex H."

with:

"NOTE 2 Examples for correlations to estimate the drained (long term) Young's modulus of elasticity (E') and the angle of shearing resistance (φ') of quartz and feldspar sands are given in Annex H.".

10) Modification to 5.4.2

Paragraph (4), replace "(4)" *with* "(4)P"*.*

11) Modification to 5.9.2.3

Paragraph (3), last sentence, replace "compression curves" *with* "test curves"*.*

12) Modification to 5.12.5.2

Paragraph (1), replace "(1)P" *with* "(1)"*.*

13) Modification to Annex A

Table A.1, 2nd column Test results, replace "Value of organic content" *with* "Loss on ignition"*.*

14) Modification to B.2

Replace Table B.1 with the following table:

"Table B.1— Example of the selection of ground investigation methods in different stages

Preliminary investigations		Design investigations			Control investigations	
Desk study of topographical, historical, geological and hydrogeological maps Mineral extraction Aerial photo-interpretation Archives of previous construction works and investigations Site inspection Preliminary geophysical surveys Preliminary intrusive investigations	**Fine soil** CPT, SS, DP, SE FVT or SPT OS TP, PS, OS GW **Coarse soil** SS, CPT, DP, SR SPT AS, OS, TP GW **Rock** SR, CPT, MWD PLT CS, AS, TP GW	Preliminary choice of foundation method Preliminary choice of foundation method Preliminary choice of foundation method	**Pile foundation**	SS, CPT, DP, SR FVT, SPT, PIL PS, OS, CS, PMT GWC	Verification of choice of foundation method and design procedure, control of ground improvement works and stability during construction	PIL, Pile driving tests, Stress wave measurements GWC, settlements, Inclinometers
			Shallow foundation	SS or CPT, DP FVT, DMT or PMT, BJT PS, OS, CS, TP GWC		Check of the soil type Check of the stiffness (CPT) Settlements, Inclinometers, GWC Volume change potential due to water content change
			Pile foundation	CPT, DP, SR SPT, DMT, PIL OS,, TP GWO		PIL, Pile driving tests Stress wave measurements GWC, settlements Inclinometers
			Shallow foundation	CPT,DP SPT, PMT, BJT, DMT, PLT OS, TP GWO		Check of the soil type Check of the stiffness (CPT, DP, SPT) Settlements
			Pile or shallow foundation	SR, MWD, mapping of discontinuities RDT, PMT, BJT TP, CS GWO		Check inclination and discontinuities in the rock and its surface Check contact between pile toe/ foundation and rock surface Verify water conditions of flow and pressure

| Abbreviations			
Field testing		**Sampling**	
BJT	Borehole jack test	PS Piston sampler	
DP	Dynamic probing	CS Core sampler	
SR	Soil/rock sounding	AS Auger sampler	
SS	Static sounding (e,g, weight sounding test, WST)	OS Open sampler	
CPT(U)	Cone penetration test (with pore pressure recording)	TP Test pit sampling	
SPT	Standard penetration test		
PMT	Pressuremeter test		
DMT	Dilatometer test	**Groundwater measurements**	
FVT	Field vane test	GW Groundwater measurements	
PLT	Plate load test	GWO Groundwater measurements with open system	
MWD	Measuring while drilling	GWC Groundwater measurements with closed system	
SE	Seismic measurements		
PIL	Pile load test		
RDT	Rock dilatometer test		
	Notes:		
	Soils include naturally deposited and anthropogenic deposits		
	Surveying and logging are not included in this chart		
	Laboratory tests are not presented on this table		

".

15) Modifications to B.3

Paragraph (10), entry b), replace "If no stratum which is slightly permeable to groundwater is encountered" *with* "If no stratum of low permeability is encountered"*.*

Replace Figure B.5 with the following one:

"
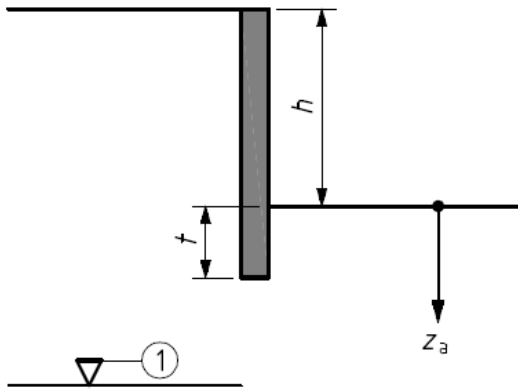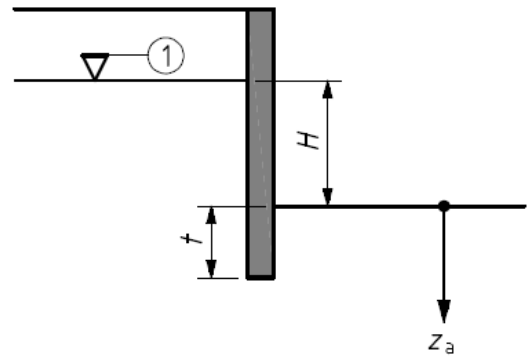
a)   **b)**

".

16) Modification to D.3

Paragraph (2), replace:

"t is the time, in years"

with:

"z_i is the depth influenced by the foundation pressure and width, respectively, in m".

17) Modification to D.4

Paragraph (1), replace Table D.2 with the following table:

"

Soil	q_c	α
Low-plasticity clay	$q_c \leq 0{,}7$ MPa $0{,}7 < q_c < 2$ MPa $q_c \geq 2$ MPa	$3 < \alpha < 8$ $2 < \alpha < 5$ $1 < \alpha < 2{,}5$
Low-plasticity silt	$q_c < 2$ MPa $q_c \geq 2$ MPa	$3 < \alpha < 6$ $1 < \alpha < 2$
Very plastic clay Very plastic silt	$q_c < 2$ MPa $q_c > 2$ MPa	$2 < \alpha < 6$ $1 < \alpha < 2$
Very organic silt	$q_c < 1{,}2$ MPa	$2 < \alpha < 8$
Peat and very organic clay	$q_c < 0{,}7$ MPa $50 < w \leq 100$ (%) $100 < w \leq 200$ (%) $w > 200$ (%)	 $1{,}5 < \alpha < 4$ $1 < \alpha < 1{,}5$ $0{,}4 < \alpha < 1.0$
Chalks	$2 < q_c \leq 3$ MPa $q_c > 3$ MPa	$2 < \alpha < 4$ $1{,}5 < \alpha < 3$
Sands	$q_c < 5$ MPa $q_c > 10$ MPa	$\alpha = 2$ $\alpha = 1{,}5$

".

18) Modifications to D.5

Paragraph (1), formula, replace "σ'_{v0}" *with* "σ'_{v}".

Paragraph (2), replace twice "(range of validity: $5 \leq q_c \leq 30$)" *with* "(range of validity: 5 MPa $\leq q_c \leq$ 30 MPa)".

Paragraph (2), replace "(range of validity: $0{,}6 \leq q_c \leq 3{,}5$)" *with* "(range of validity: 0,6 MPa $\leq q_c \leq$ 3,5 MPa)".

19) Modifications to D.7

Paragraph (2), key to the formulas, replace "$F_{max;shaft;z}$" *with* "$p_{max;shaft;z}$".
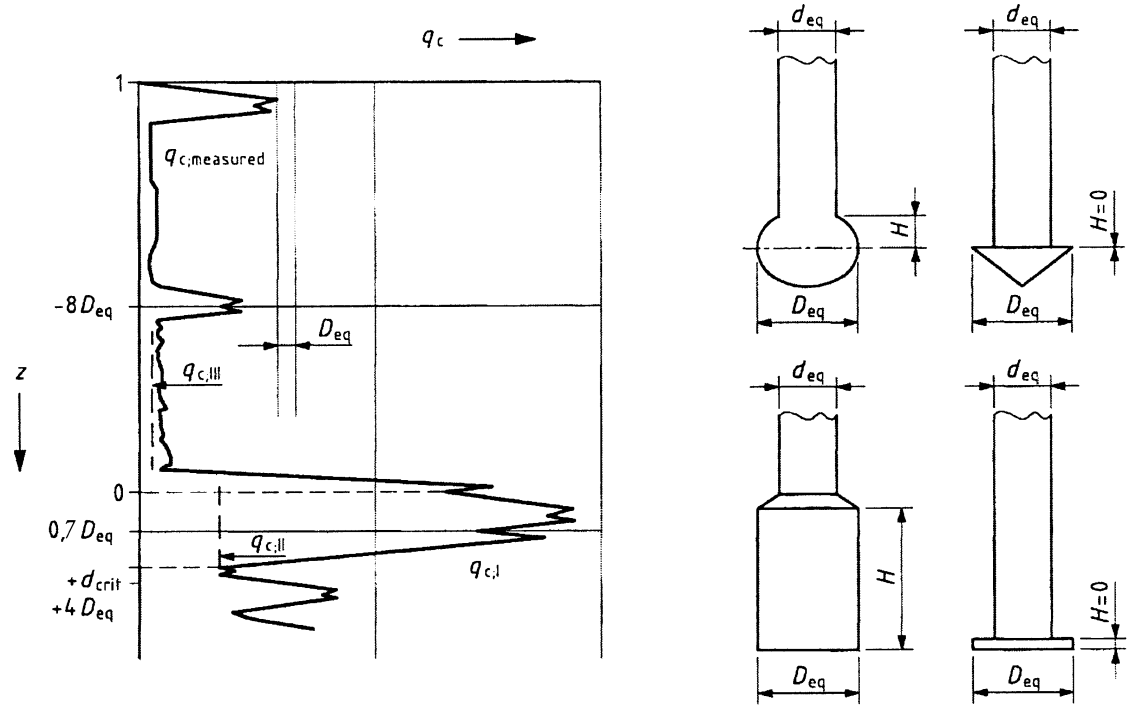
Paragraph (3), replace:

"$0{,}8 D_{eq} < d_{crit} < 4 D_{eq}$"

with:

"$0{,}7 D_{eq} < d_{crit} < 4 D_{eq}$".

Paragraph (4), replace Figure D.2 with the following figure:

"

".

20) Modifications to E.2

Paragraph (1), formula for the calculation of s, replace "a" with "α" as exponent.

Paragraph (1), Table E.3, 3rd column (E_M/p_{LM}), 3rd row (Clay - Over-consolidated), replace "<16" with ">16".

21) Modification to F.1

Paragraph (3), replace Table F.1 and the following line immediately under it:

"

	Very loose	**Loose**	**Medium**	**Dense**	**Very dense**
$(N_1)_{60}$	$0-3$	$3-8$	$8-25$	$25-42$	$42-58$

I_D $0\% - 15\%$ $15\% - 35\%$ $35\% - 65\%$ $65\% - 85\%$ $85\% - 100\%$

For $I_D > 0,35$ it corresponds to $(N_1)_{60}/I_D^2 \cong 60$."

with the following table:

"

	Very loose	**Loose**	**Medium**	**Dense**	**Very dense**
$(N_1)_{60}$	$0 - 3$	$3 - 8$	$8 - 25$	$25 - 42$	$42 - 58$
I_D	$0\ \% - 15\ \%$	$15\ \% - 35\ \%$	$35\ \% - 65\ \%$	$65\ \% - 85\ \%$	$85\ \% - 100\ \%$

".

22) Modifications to I.5

Paragraph (3), formula, replace "1,5" *with* "-0,15" *as exponent of the second factor.*

Paragraph (4), formula, replace " $\mu = \left(\dfrac{0,43}{w_L} \right) \times \left(\dfrac{c_{fv}}{0,585 w_L \times \sigma'_{v0}} \right)^{0,15}$ " *with*

" $\mu = \left(\dfrac{0,43}{w_L} \right)^{0,45} \times \left(\dfrac{c_{fv}}{0,585 w_L \times \sigma'_{v0}} \right)^{-0,15}$ ".

Paragraph (4), NOTE, replace:

"NOTE   This equation stems from Hansbo. (1957). For additional information see X.3.6."

with:

"NOTE   The equation $c_{fv} = 0,45 \times w_l \times \sigma'_p$ stems from Hansbo (1957). For additional information see X.3.6.".

23) Modification to Annex J

Paragraph (1), replace "$3,0 \geq I_{DMT} \geq 10$" *with* "$I_{DMT} \geq 3$ ".

24) Modification to K.2

Figure K.1, just above the figure number and title, delete:

"**Error! Unknown switch argument.**".

25) Modification to X.3

Title of the clause and footnote, replace footnote number "7" *with* "8" *in the title and in the footnote at the bottom of the page.*