

Datarapport: Kornstørrelsesanalyser

Laboratorie analyse af Kerneprøver for Naturstyrelsen

Råstofprojekt 2014

I. Nørgaard & M. Engqvist

DE NATIONALE GEOLOGISKE UNDERSØGELSER
FOR DANMARK OG GRØNLAND,
KLIMA-, ENERGI- OG BYGNINGSMINISTERIET



GEUS

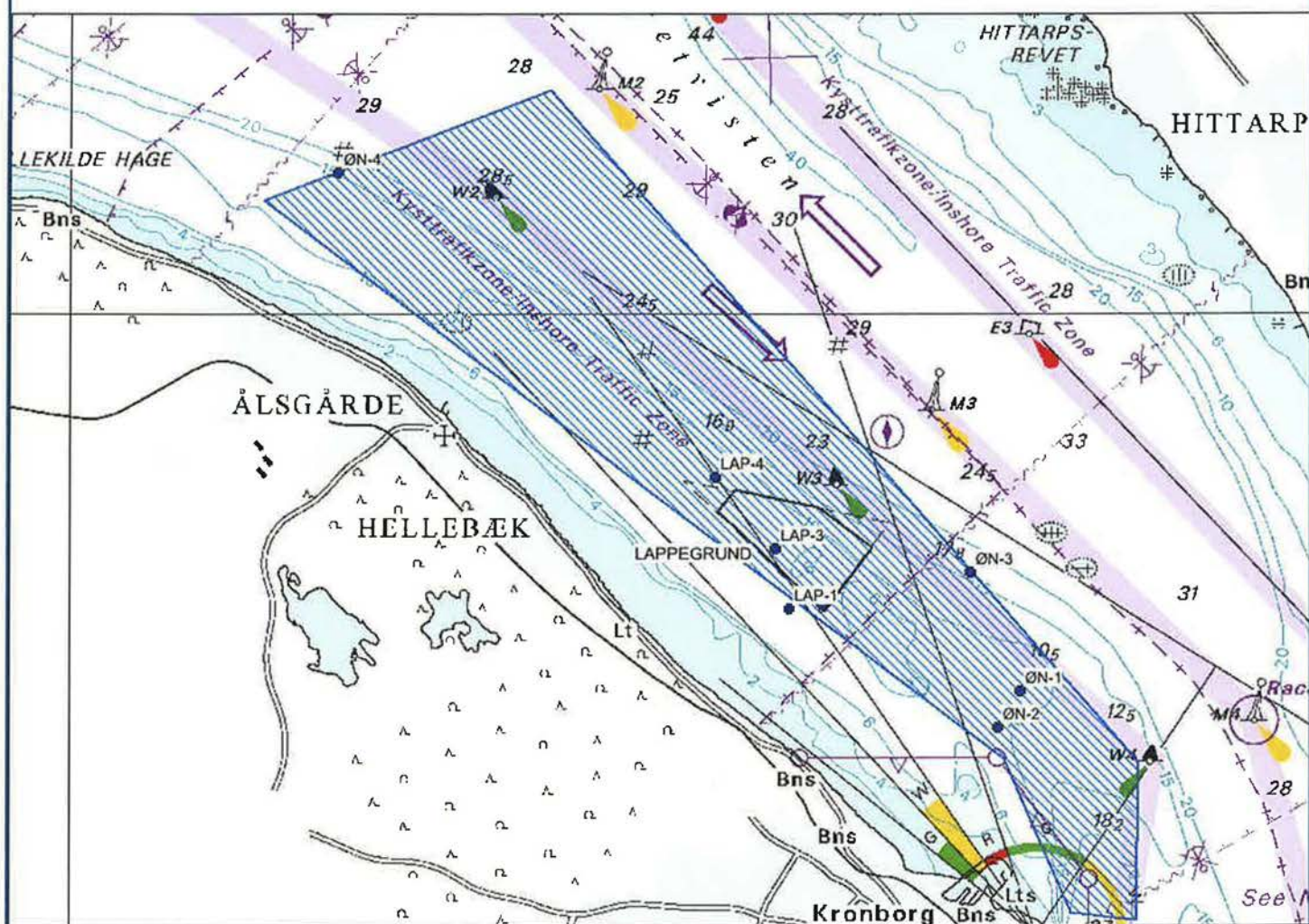
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Råstofprojekt 2014

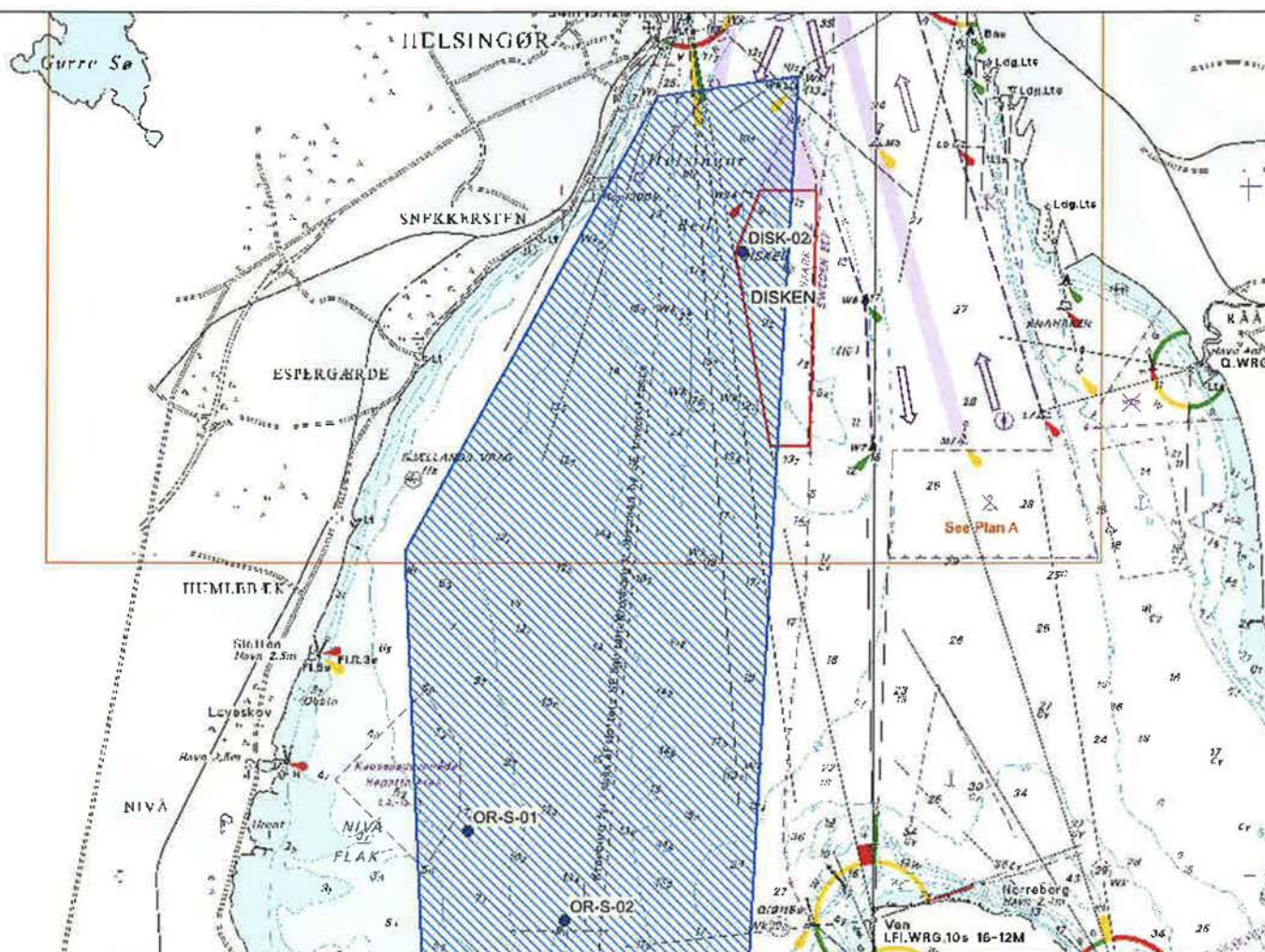
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Råstofkortlægning 2014



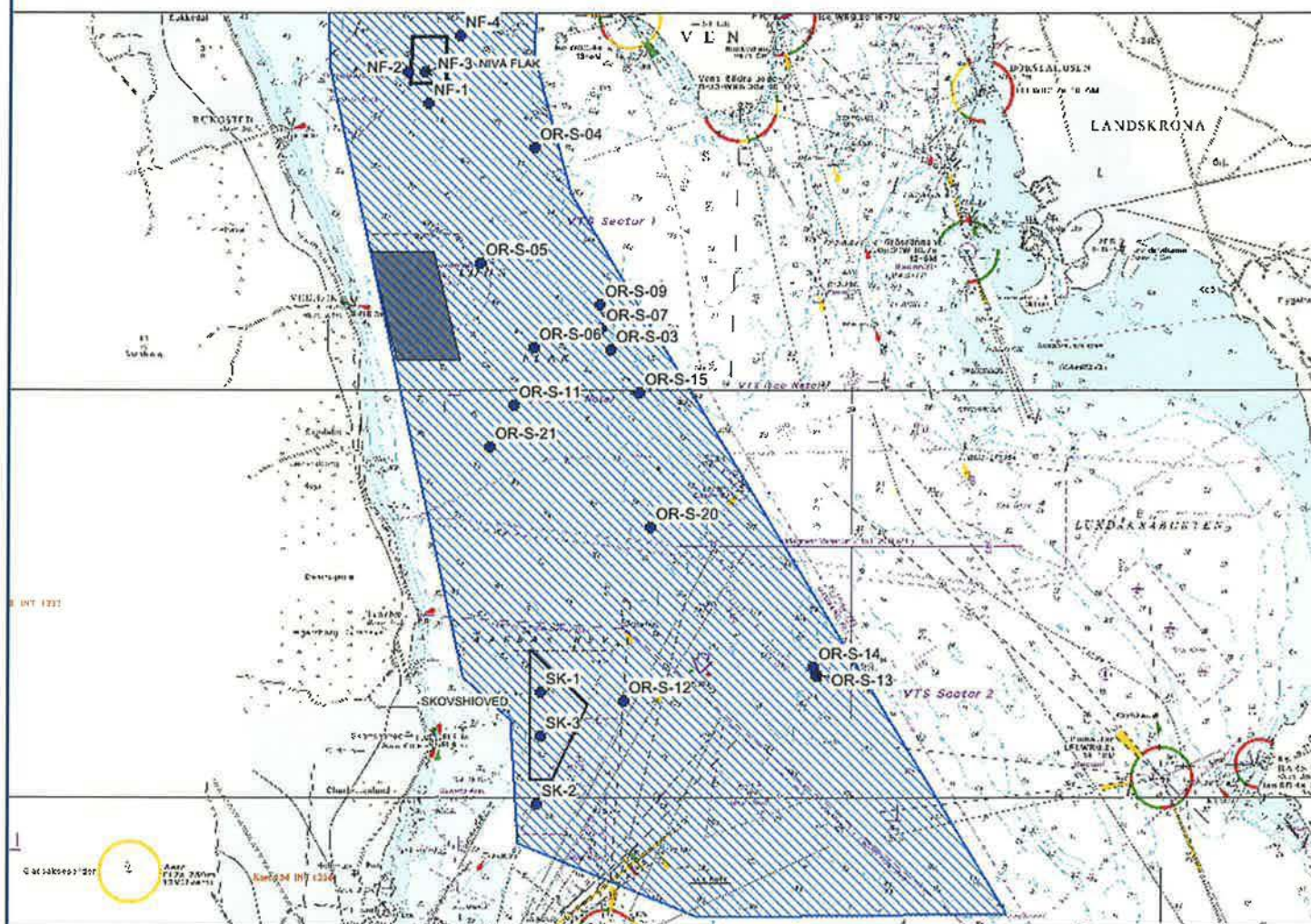
Figur 1 Boringspositioner i Øresund Nord samt Lappegrund

Råstofkortlægning 2014



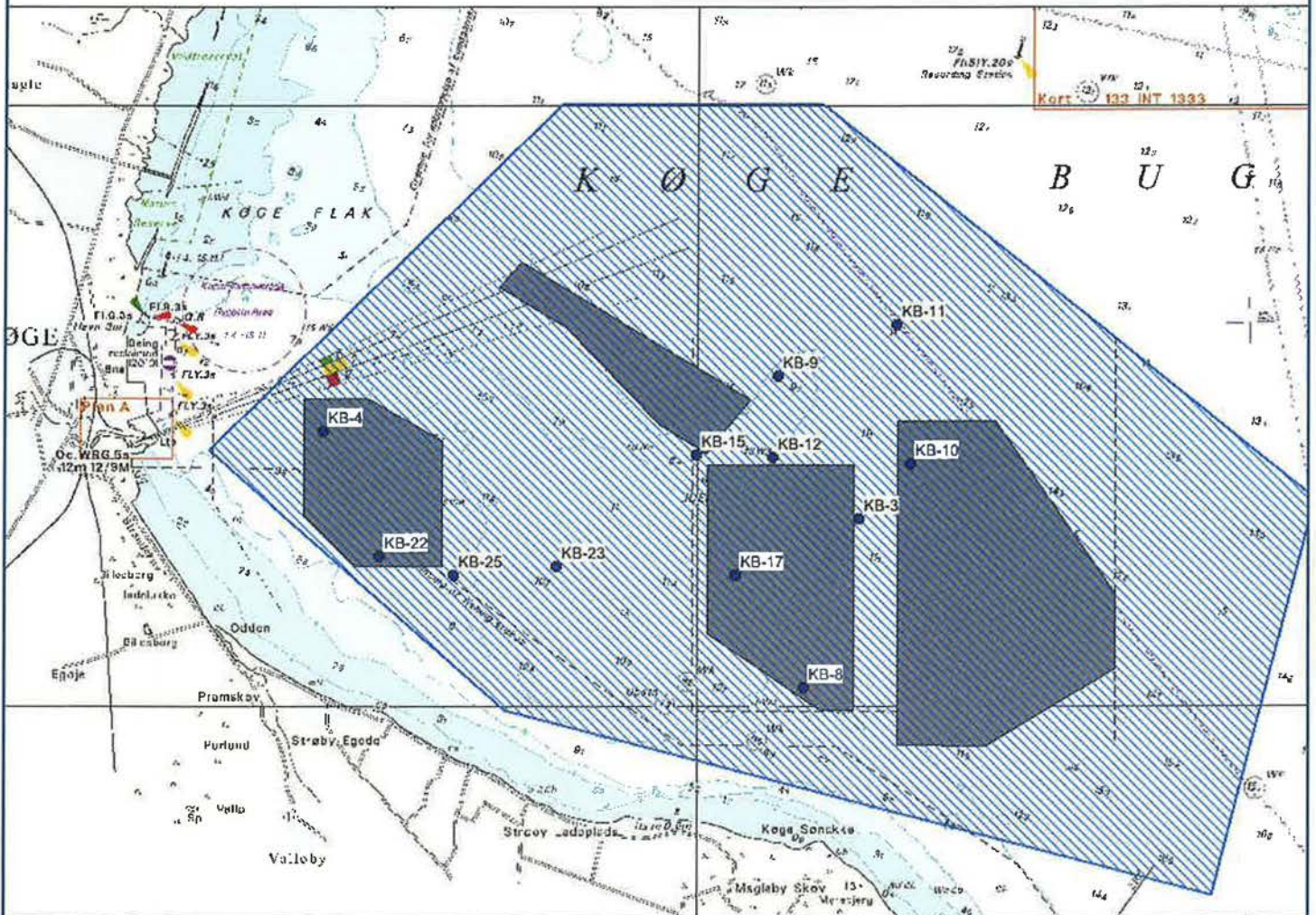
Figur 2 Boringspositioner i Øresund Syd_ nordlig del samt Disken

Råstofkortlægning 2014



Figur 3 Boringspositioner i Øresund Syd_ sydlig del samt Nivå Flak og Skovshoved

Råstofkortlægning 2014



Figur 4 Boringspositioner i Køge Bugt

Boringer NST-2014

Boring	Aktuel position		Aktuel position		Dybde cm
	(UTM) Northing	(UTM) Easting	Northing	Easting	
SK-1	728287	6186663	55° 46.292'	012° 38.376'	0-40
SK-2	728329	6184090	55° 44.911'	012° 38.284'	0-40
SK-3	728332	6185637	55° 45.748'	012° 38.371'	0-70
SK-3	728332	6185637	55° 45.748'	012° 38.371'	180-300
Lap-1	723535	6218847	56° 03.743'	012° 35.432'	0-100
Lap-1	723535	6218847	56° 03.743'	012° 35.432'	200-260
Lap-2	723792	6218893	56° 03.761'	012° 35.680'	0-100
Lap-2	723792	6218893	56° 03.761'	012° 35.680'	250-350
LAP-3	723402	6219317	56° 04.007'	012° 35.329'	0-80
LAP.4	722900	6219855	56° 04.318'	012° 34.886'	0-50
LAP.4	722900	6219855	56° 04.318'	012° 34.886'	50-140
ØN-1	725400	6218289	56° 03.392'	012° 37.232'	0-70
ØN-1	725400	6218289	56° 03.392'	012° 37.232'	100-150
ØN-1	725400	6218289	56° 03.392'	012° 37.232'	200-400
ØN-2	725241	6217987	56° 03.247'	012° 37.039'	0-20
ØN-2	725241	6217987	56° 03.247'	012° 37.039'	100-200
ØN-2	725241	6217987	56° 03.247'	012° 37.039'	300-400
ØN-3	724959	6219204	56° 03.927'	012° 36.880'	0-40
ØN-3	724959	6219204	56° 03.927'	012° 36.880'	50-120
ØN-3	724959	6219204	56° 03.927'	012° 36.880'	150-240
ØN-4	719800	6222098	56° 05.592'	012° 32.010'	0-200
NF-02	724479	6200609	55° 53.915'	012° 35.437'	140-250
NF-03	724846	6200617	55° 53.909'	012° 35.797'	90-180
NF-04	725593	6201853	55° 54.544'	012° 36.576'	50-150
OR-S-01	6204126	723137	55° 55.845'	012° 34.312'	0-100
OR-S-01	6204126	723137	55° 55.845'	012° 34.312'	90-190
OR-S-02	724594	6202898	55° 55.135'	012° 35.642'	200-280
OR-S-4	727460	6199030	55° 52.976'	012° 38.198'	0-200
OR-S-13	734510	6187346	55° 46.490'	012° 44.354'	0-100
OR-S-20	730591	6190532	55° 48.317'	012° 40.763'	0-18
KB 3	713313	6149225	55° 26.560'	012° 22.357'	180-240
KB 3	713313	6149225	55° 26.560'	012° 22.357'	340-380
KB 3	713313	6149225	55° 26.560'	012° 22.357'	0-50
KB 4	704979	6150192	55° 27.300'	012° 14.530'	350-450
KB 8	712595	6146563	55° 25.131'	012° 21.563'	0-60
KB 9	711953	6151384	55° 27.764'	012° 21.136'	0-30
KB 9	711953	6151384	55° 27.764'	012° 21.136'	35-95
KB 9	711953	6151384	55° 27.764'	012° 21.136'	100-190
KB 9	711953	6151384	55° 27.764'	012° 21.136'	205-220
KB 11	713749	6152265	55° 28.190'	012° 22.906'	5-70
KB 12	711923	6150104	55° 27.069'	012° 21.078'	0-140
KB 15	710741	6150085	55° 27.091'	012° 19.941'	0-80
KB 17	711440	6148269	55° 26.089'	012° 20.531'	0-50
KB 17	711440	6148269	55° 26.089'	012° 20.531'	50-100
KB 17	711440	6148269	55° 26.089'	012° 20.531'	330-359
KB 20	706185	6149988	55° 27.150'	012° 15.630'	190-215
KB 20	706185	6149988	55° 27.150'	012° 15.630'	320-370
KB 25	707088	6148055	55° 26.086'	012° 16.416'	25-80
KB 25	707088	6148055	55° 26.086'	012° 16.416'	115-155
KB 25	707088	6148055	55° 26.086'	012° 16.416'	157-183
KB 25	707088	6148055	55° 26.086'	012° 16.416'	260-310

Prøvebehandling

GEUS har foretaget sigteanalyser på 52 Kerneprøver fra Naturstyrelsens Råstofprojekt i Øresund 2014.

Ved modtagelsen af prøverne er de blevet registreret med følgende 5 kategorier:

- dato
- lokalitet
- fortløbende laboratorienummer
- rekvirent
- analysekrav

Analysemetoder

Sigteanalyse:

Totalprøven er tørret og sigtet gennem en sigtesøjle fra 32 mm. ned til 0,063 mm med $\frac{1}{2}$ phi intervaller, hvilket svarer til 16 sigter. Metoden er tillempet i forhold til DS 405.9 DS/EN 933-1 idet der er indføjet flere sigter end der beskrives i denne standard.

Kornkurven:

Som udgangspunkt for kornstørrelsesanalysen er anvendt DS405.9, DS/EN 933-1. idet der er indføjet flere sigter end der beskrives i denne standard.

Resultater

I bilag 1 er vist kornkurven for sedimentprøverne. Kornkurven viser fordeling af sand, silt og ler i prøverne.

Referencer

Dansk Standard DS 405.9, DS/EN 933-1. Kornstørrelsesfordeling bestemt ved sigteanalyse. Dansk Standardiseringsråd, Kbh. 1978.

Bilag 1

Grain Size Distribution

Geotechnical

Sample Id: DISK-2 0-500 cm
Lab. Id: 14082
Submitter: Naturstyrelsen
Subject: Disken kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 108,92 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,11	0,10	99,90
1,00	0,00	0,07	0,06	99,83
0,710	0,49	0,05	0,05	99,79
0,500	1,00	0,08	0,07	99,72
0,355	1,49	0,14	0,13	99,59
0,250	2,00	1,84	1,69	97,90
0,180	2,47	17,85	16,39	81,51
0,125	3,00	54,87	50,38	31,13
0,090	3,47	22,28	20,46	10,68
0,075	3,74	3,99	3,66	7,01
0,063	3,99	3,26	2,99	4,02
< 0,063	> 3,99	4,38	4,02	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	4,02
Sand, fine (0,063 mm - 0,200 mm):	82,17
Sand, medium (0,2 mm - 0,6 mm):	13,56
Sand, coarse (0,6 mm - 2 mm):	0,25
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,24	2,07
16%	84%	0,19	2,39
25%	75%	0,17	2,53
40%	60%	0,16	2,68
Median 50%	50%	0,15	2,78
75%	25%	0,11	3,13
84%	16%	0,10	3,33
90%	10%	0,09	3,52
95%	5%	0,07	3,90

Moments Statistics

Mean	2,84
Sorting	0,51
Skewness	0,20
Kurtosis	1,26
Uniformity Coefficient	1,79

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

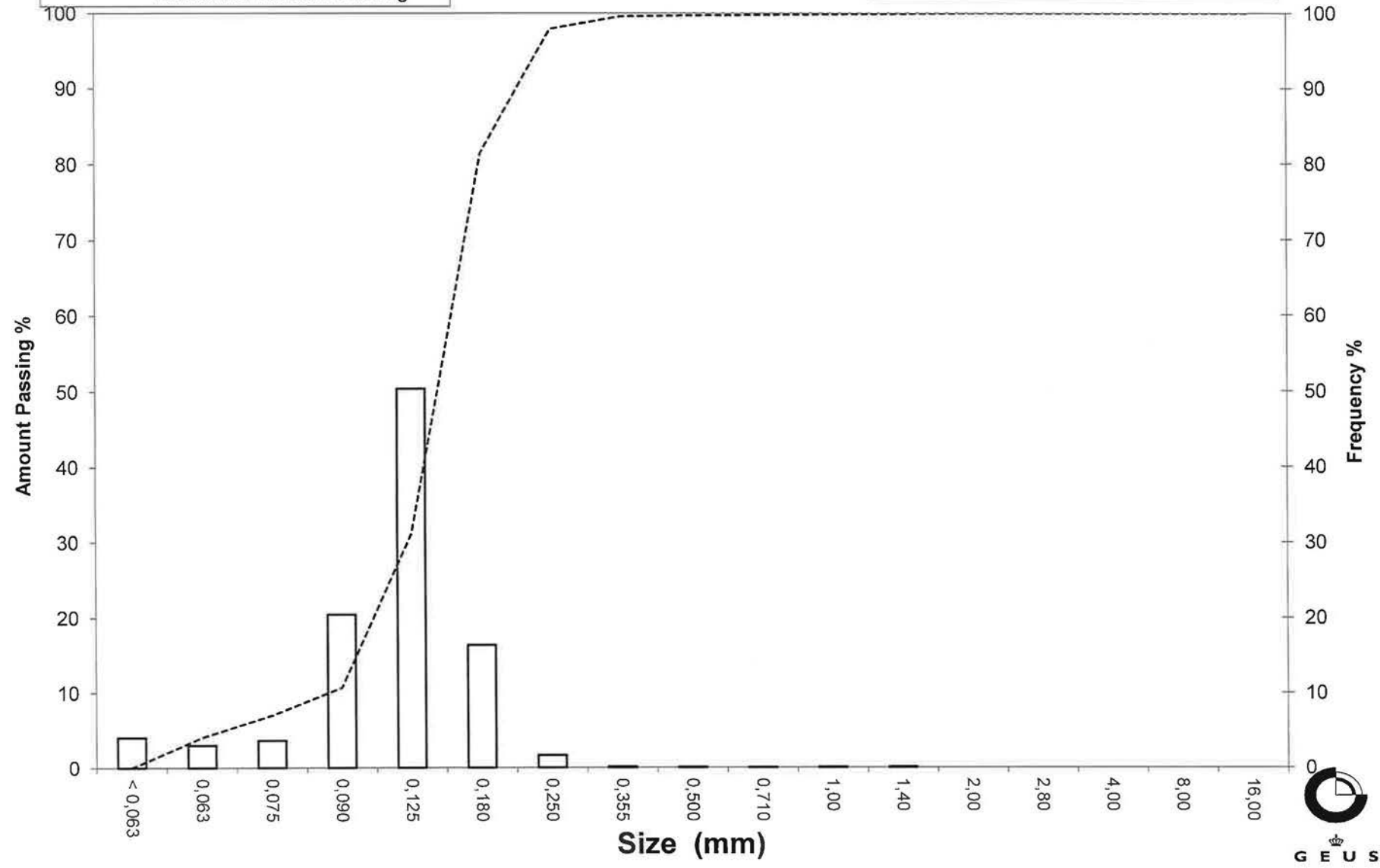
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: DISK-2 0-500 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-3 180-240 cm
Lab. Id: 14083
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 119,9 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,20	0,17	99,83
1,00	0,00	0,22	0,18	99,65
0,710	0,49	0,48	0,40	99,25
0,500	1,00	1,73	1,44	97,81
0,355	1,49	6,06	5,05	92,75
0,250	2,00	22,07	18,41	74,35
0,180	2,47	23,79	19,84	54,50
0,125	3,00	21,77	18,16	36,35
0,090	3,47	22,76	18,98	17,36
0,075	3,74	6,51	5,43	11,93
0,063	3,99	3,20	2,67	9,27
< 0,063	> 3,99	11,11	9,27	0,00

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	9,27
Sand, fine (0,063 mm - 0,200 mm):	50,91
Sand, medium (0,2 mm - 0,6 mm):	38,32
Sand, coarse (0,6 mm - 2 mm):	1,51
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,42	1,25
16%	84%	0,31	1,71
25%	75%	0,25	1,98
40%	60%	0,20	2,33
Median 50%	50%	0,17	2,59
75%	25%	0,10	3,26
84%	16%	0,09	3,54
90%	10%	0,07	3,91
95%	5%	-----	-----

Moments Statistics

Mean	2,61
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	3,01

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

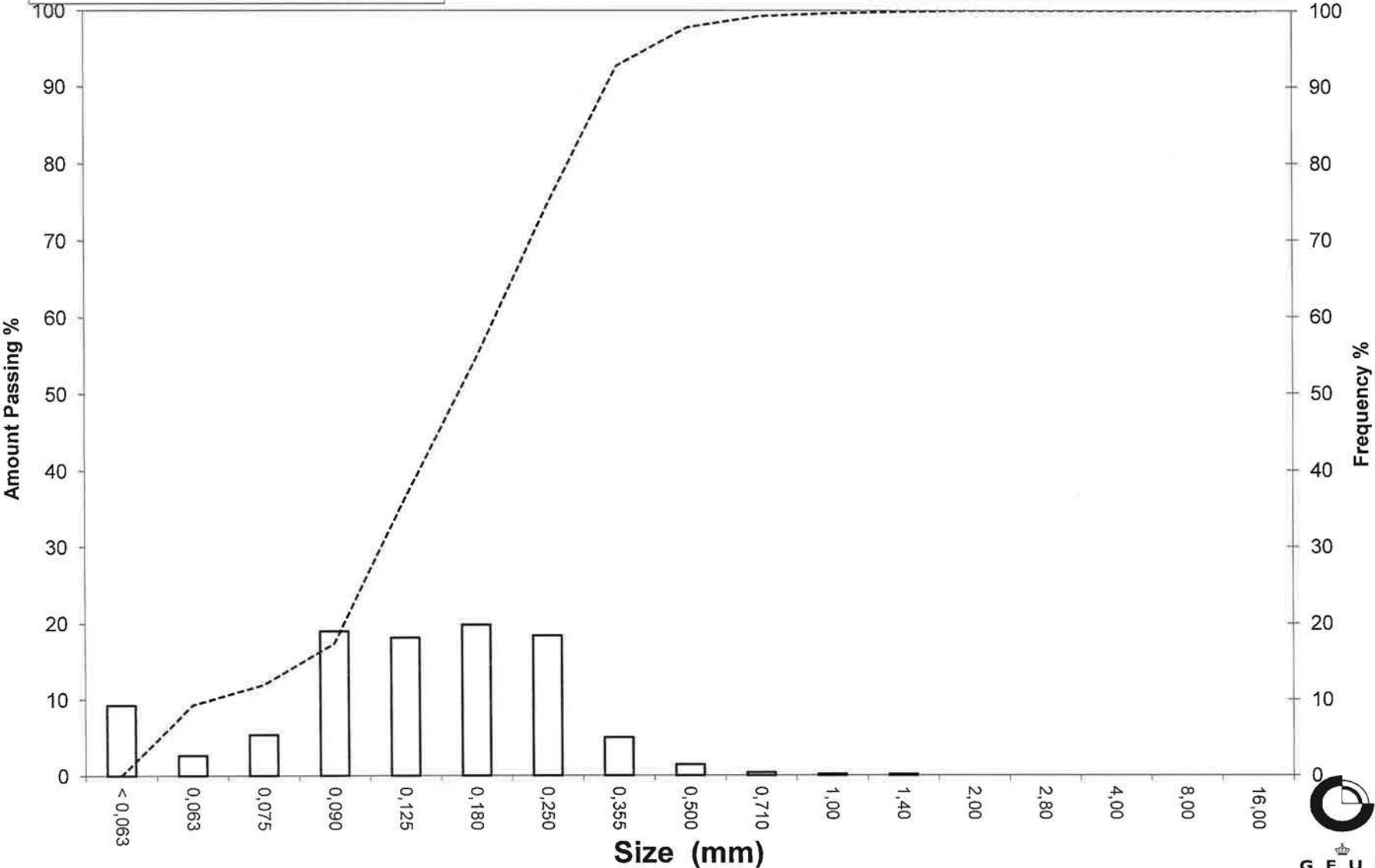
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-3 180-240 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-3 340-380 cm
Lab. Id: 14084
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 104,93 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,02	0,02	99,98
1,00	0,00	0,01	0,01	99,97
0,710	0,49	0,06	0,06	99,91
0,500	1,00	0,37	0,35	99,56
0,355	1,49	2,56	2,44	97,12
0,250	2,00	15,27	14,55	82,57
0,180	2,47	30,41	28,98	53,59
0,125	3,00	32,70	31,16	22,42
0,090	3,47	13,99	13,33	9,09
0,075	3,74	2,65	2,53	6,57
0,063	3,99	1,45	1,38	5,18
< 0,063	> 3,99	5,44	5,18	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	5,18
Sand, fine (0,063 mm - 0,200 mm):	56,68
Sand, medium (0,2 mm - 0,6 mm):	37,86
Sand, coarse (0,6 mm - 2 mm):	0,27
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,34	1,56
16%	84%	0,26	1,94
25%	75%	0,23	2,11
40%	60%	0,20	2,35
Median 50%	50%	0,17	2,53
75%	25%	0,13	2,95
84%	16%	0,11	3,21
90%	10%	0,09	3,44
95%	5%	-----	-----

Moments Statistics

Mean	2,56
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	2,12

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgg-Bulletin 1988)

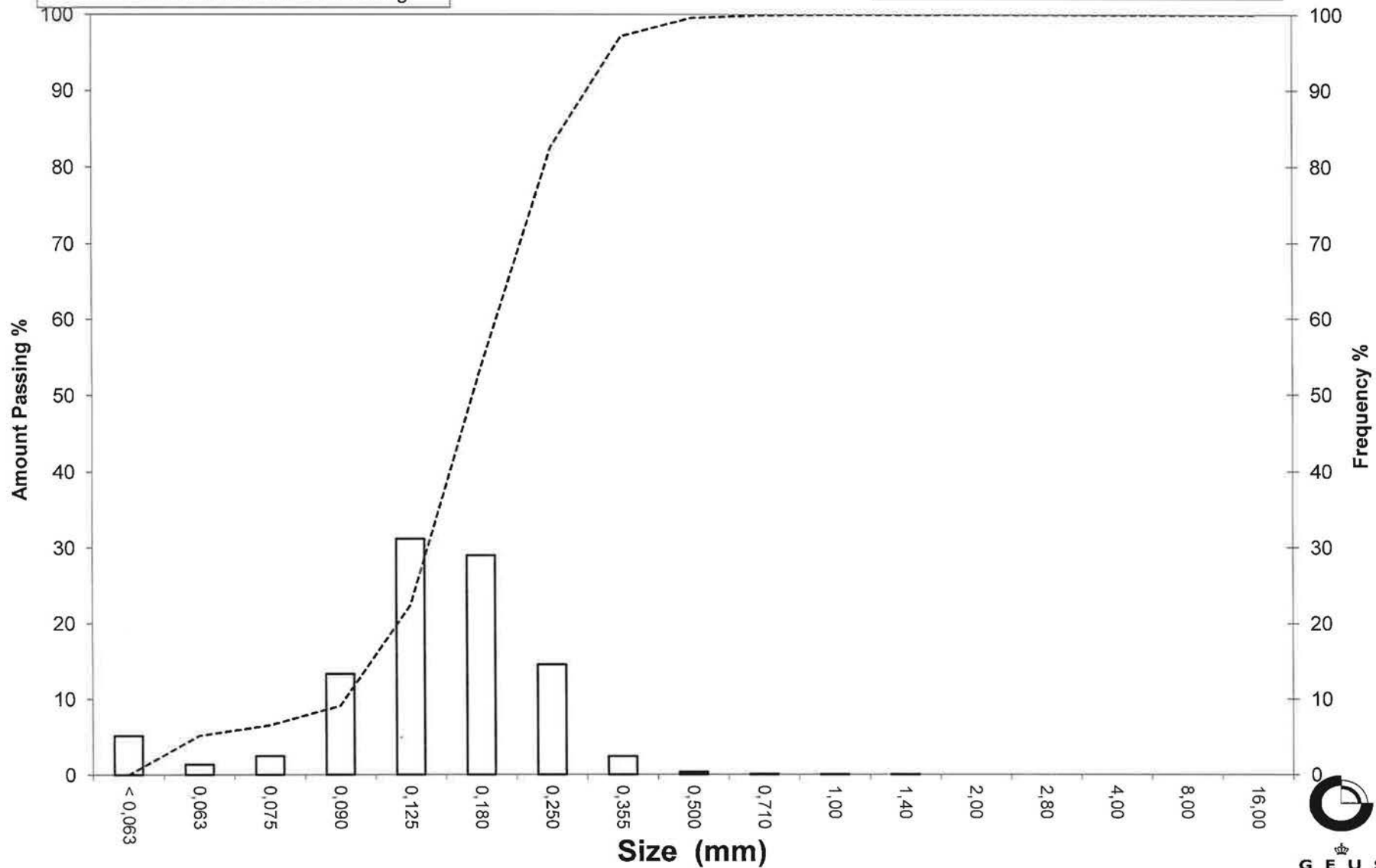
Mean, sorting, skewness and kurtosis are based on

Øster Voldgade 10 1350 København K
 Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: KB-3 340-380 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-3 0-50 cm
Lab. Id: 14085
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 112,42 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,04	0,04	99,96
1,00	0,00	0,00	0,00	99,96
0,710	0,49	0,04	0,04	99,93
0,500	1,00	0,07	0,06	99,87
0,355	1,49	0,28	0,25	99,62
0,250	2,00	2,83	2,52	97,10
0,180	2,47	24,83	22,09	75,01
0,125	3,00	57,18	50,86	24,15
0,090	3,47	16,73	14,88	9,27
0,075	3,74	3,98	3,54	5,73
0,063	3,99	2,00	1,78	3,95
< 0,063	> 3,99	4,44	3,95	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,95
Sand, fine (0,063 mm - 0,200 mm):	77,37
Sand, medium (0,2 mm - 0,6 mm):	18,57
Sand, coarse (0,6 mm - 2 mm):	0,10
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,24	2,04
16%	84%	0,21	2,26
25%	75%	0,18	2,47
40%	60%	0,16	2,61
Median 50%	50%	0,15	2,71
75%	25%	0,13	2,99
84%	16%	0,11	3,24
90%	10%	0,09	3,45
95%	5%	0,07	3,83

Moments Statistics

Mean	2,74
Sorting	0,52
Skewness	0,17
Kurtosis	1,43
Uniformity Coefficient	1,79

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

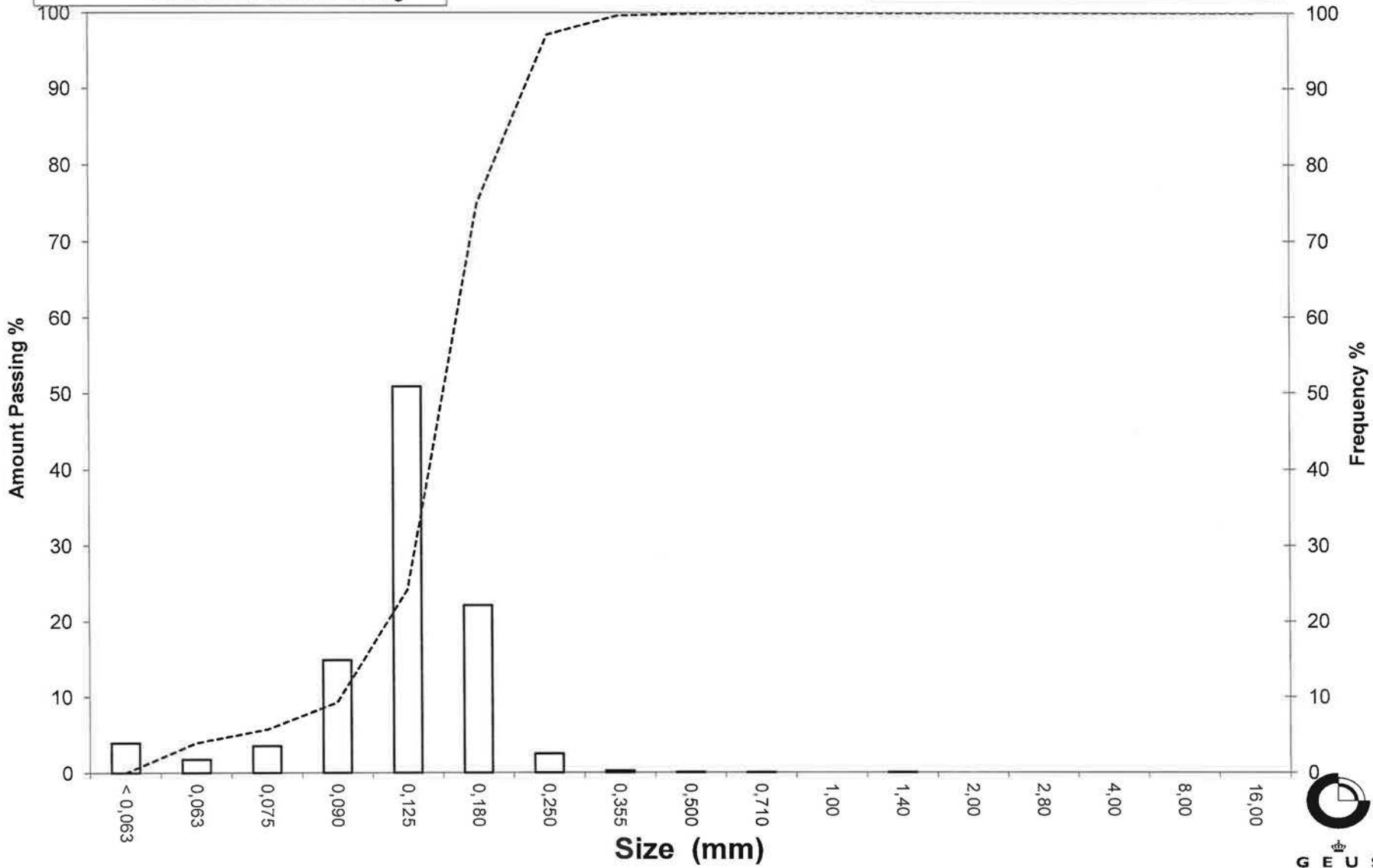
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-3 0-50 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-4 350-450cm
Lab. Id: 14086
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 115,7 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	passing %
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,75	0,65	99,35
1,00	0,00	1,16	1,00	98,35
0,710	0,49	2,73	2,36	95,99
0,500	1,00	15,70	13,57	82,42
0,355	1,49	46,23	39,96	42,46
0,250	2,00	38,91	33,63	8,83
0,180	2,47	7,59	6,56	2,27
0,125	3,00	1,59	1,37	0,90
0,090	3,47	0,35	0,30	0,60
0,075	3,74	0,09	0,08	0,52
0,063	3,99	0,05	0,04	0,48
< 0,063	> 3,99	0,55	0,48	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,48
Sand, fine (0,063 mm - 0,200 mm):	3,67
Sand, medium (0,2 mm - 0,6 mm):	84,73
Sand, coarse (0,6 mm - 2 mm):	11,12
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,69	0,53
16%	84%	0,52	0,93
25%	75%	0,47	1,08
40%	60%	0,42	1,26
Median 50%	50%	0,38	1,39
75%	25%	0,30	1,73
84%	16%	0,27	1,88
90%	10%	0,25	1,98
95%	5%	0,21	2,26

Moments Statistics

Mean	1,40
Sorting	0,50
Skewness	0,02
Kurtosis	1,08
Uniformity Coefficient	1,65

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

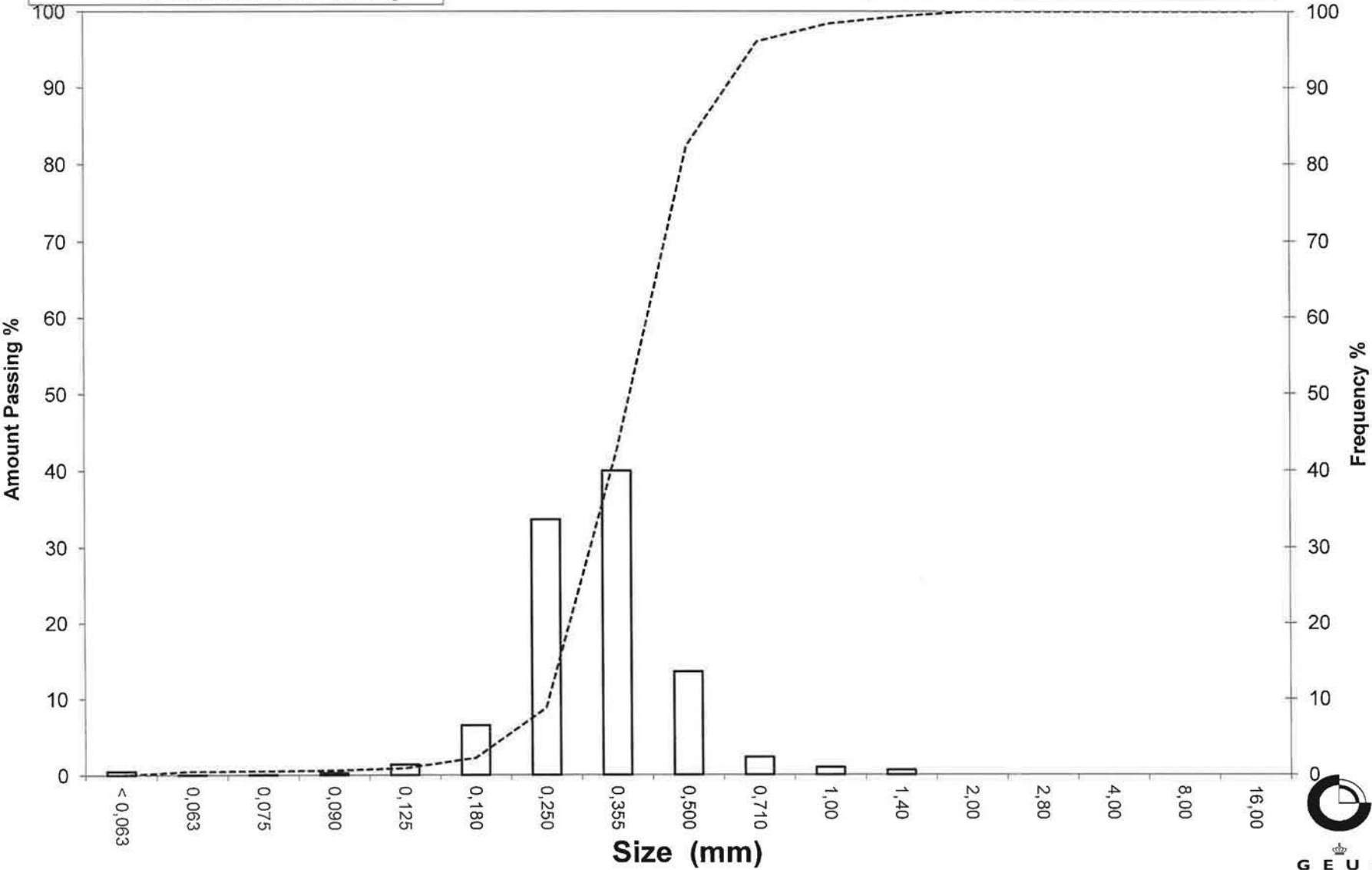
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-4 350-450cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-8 0-60 cm
Lab. Id: 14087
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 110,11 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,33	0,30	99,70
1,00	0,00	0,16	0,15	99,55
0,710	0,49	0,26	0,24	99,32
0,500	1,00	0,63	0,57	98,75
0,355	1,49	1,80	1,63	97,11
0,250	2,00	9,79	8,89	88,22
0,180	2,47	27,69	25,15	63,07
0,125	3,00	42,01	38,15	24,92
0,090	3,47	18,56	16,86	8,06
0,075	3,74	2,68	2,43	5,63
0,063	3,99	1,16	1,05	4,58
< 0,063	> 3,99	5,04	4,58	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	4,58
Sand, fine (0,063 mm - 0,200 mm):	65,68
Sand, medium (0,2 mm - 0,6 mm):	28,76
Sand, coarse (0,6 mm - 2 mm):	0,98
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,33	1,60
16%	84%	0,24	2,07
25%	75%	0,21	2,23
40%	60%	0,18	2,51
Median 50%	50%	0,16	2,63
75%	25%	0,13	3,00
84%	16%	0,11	3,23
90%	10%	0,09	3,41
95%	5%	0,07	3,88

Moments Statistics

Mean	2,64
Sorting	0,64
Skewness	0,06
Kurtosis	1,22
Uniformity Coefficient	1,87

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

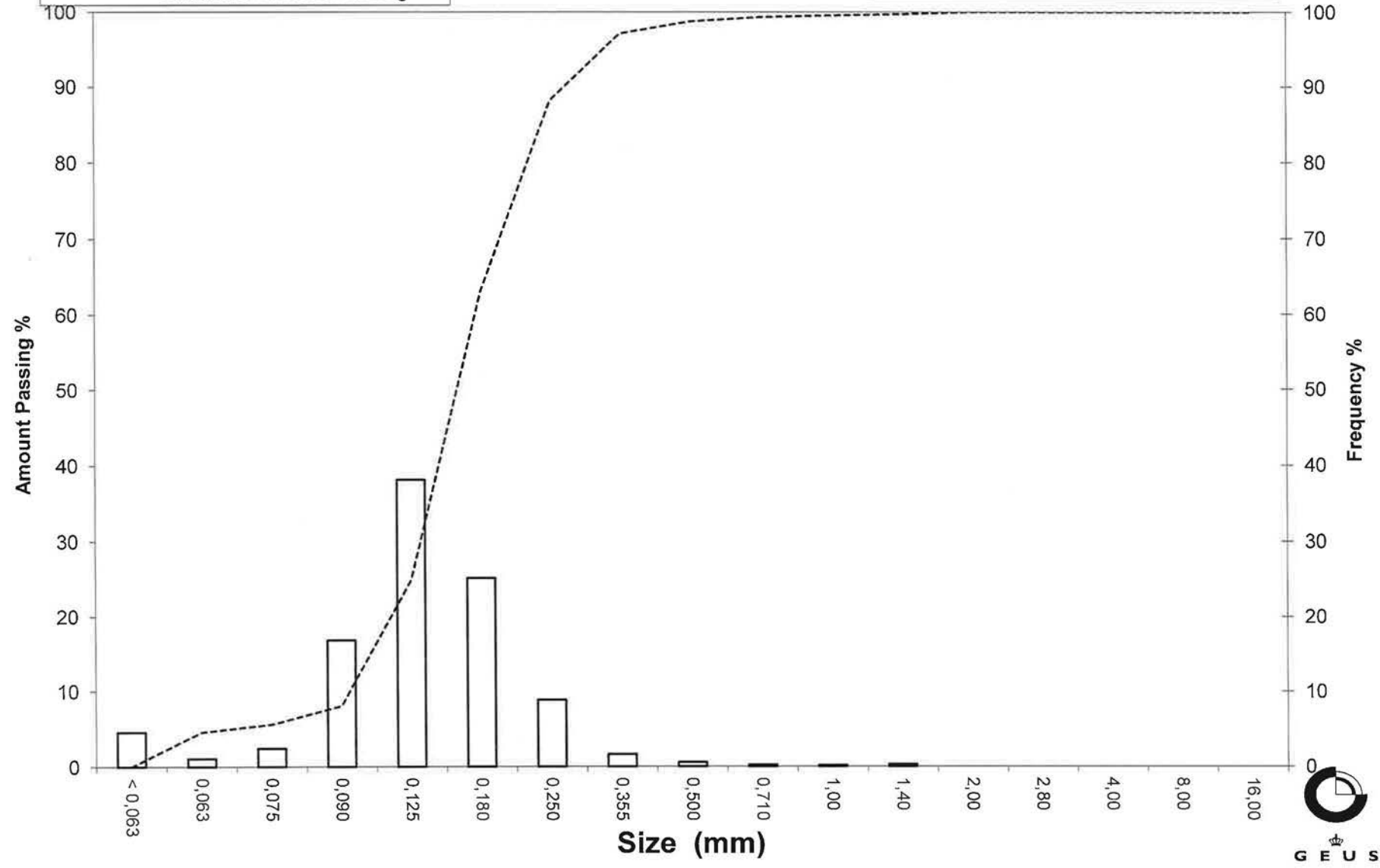
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-8 0-60 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-9 0-30 cm
Lab. Id: 14088
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 101,18 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,24	0,24	99,76
1,00	0,00	0,13	0,13	99,63
0,710	0,49	0,22	0,22	99,42
0,500	1,00	0,74	0,73	98,69
0,355	1,49	3,77	3,73	94,96
0,250	2,00	37,52	37,08	57,88
0,180	2,47	38,10	37,66	20,22
0,125	3,00	16,62	16,43	3,80
0,090	3,47	1,77	1,75	2,05
0,075	3,74	0,35	0,35	1,70
0,063	3,99	0,54	0,53	1,17
< 0,063	> 3,99	1,18	1,17	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,17
Sand, fine (0,063 mm - 0,200 mm):	29,81
Sand, medium (0,2 mm - 0,6 mm):	68,05
Sand, coarse (0,6 mm - 2 mm):	0,97
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,36	1,49
16%	84%	0,32	1,63
25%	75%	0,30	1,74
40%	60%	0,26	1,97
Median 50%	50%	0,24	2,09
75%	25%	0,19	2,40
84%	16%	0,17	2,59
90%	10%	0,15	2,78
95%	5%	0,13	2,95

Moments Statistics

Mean	2,10
Sorting	0,46
Skewness	0,11
Kurtosis	0,91
Uniformity Coefficient	1,76

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

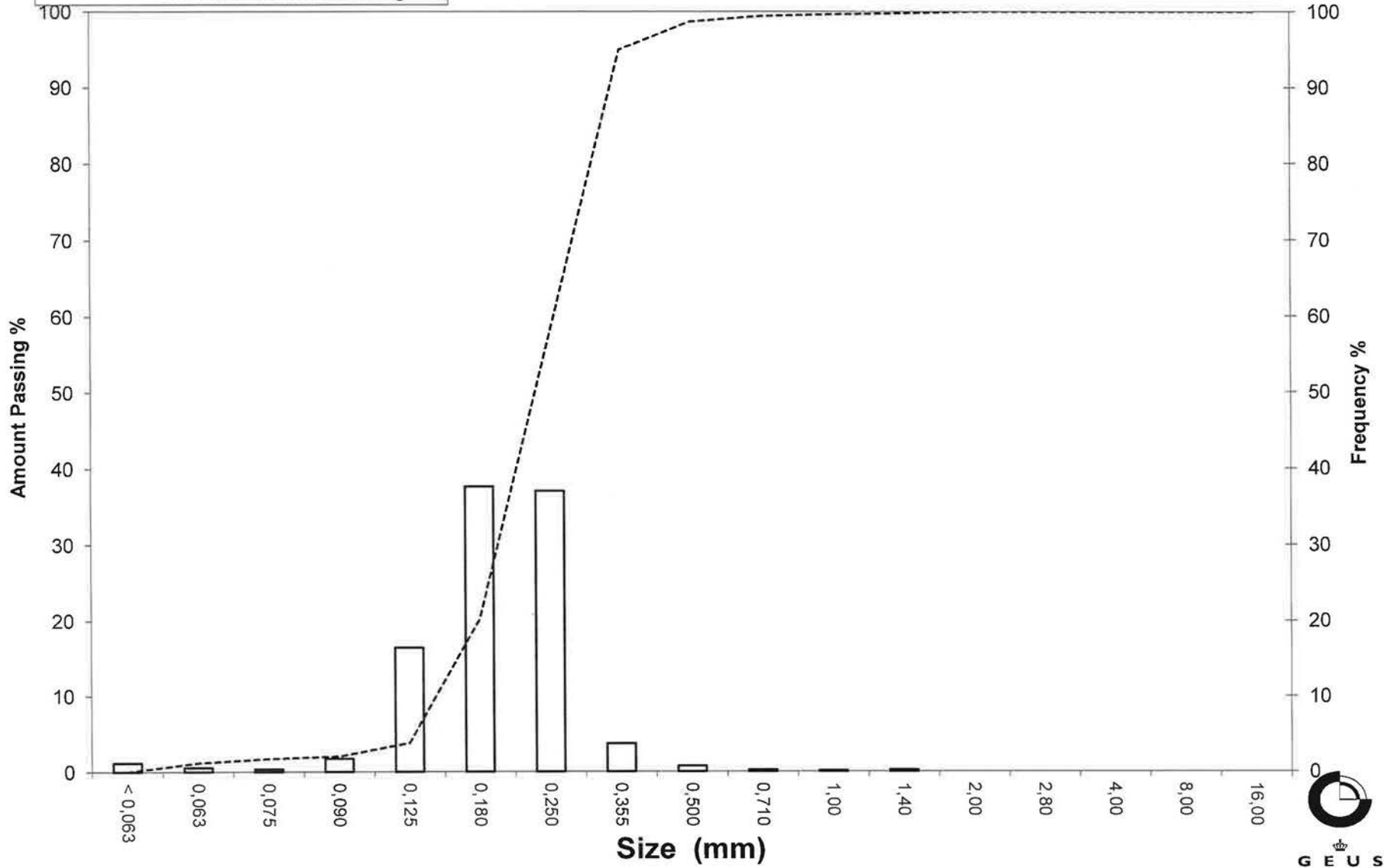
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-9 0-30 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-9 35-95 cm
Lab. Id: 14089
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 116,64 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,07	0,06	99,94
1,00	0,00	0,15	0,13	99,81
0,710	0,49	0,38	0,33	99,49
0,500	1,00	2,03	1,74	97,75
0,355	1,49	6,99	5,99	91,75
0,250	2,00	32,72	28,05	63,70
0,180	2,47	39,55	33,91	29,79
0,125	3,00	21,58	18,50	11,29
0,090	3,47	7,90	6,77	4,52
0,075	3,74	0,97	0,83	3,69
0,063	3,99	0,51	0,44	3,25
< 0,063	> 3,99	3,79	3,25	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	3,25
Sand, fine (0,063 mm - 0,200 mm):	36,23
Sand, medium (0,2 mm - 0,6 mm):	59,09
Sand, coarse (0,6 mm - 2 mm):	1,43
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,43	1,21
16%	84%	0,33	1,62
25%	75%	0,29	1,77
40%	60%	0,24	2,04
Median 50%	50%	0,22	2,17
75%	25%	0,17	2,59
84%	16%	0,14	2,85
90%	10%	0,12	3,08
95%	5%	0,09	3,43

Moments Statistics

Mean	2,21
Sorting	0,65
Skewness	0,11
Kurtosis	1,12
Uniformity Coefficient	2,05

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

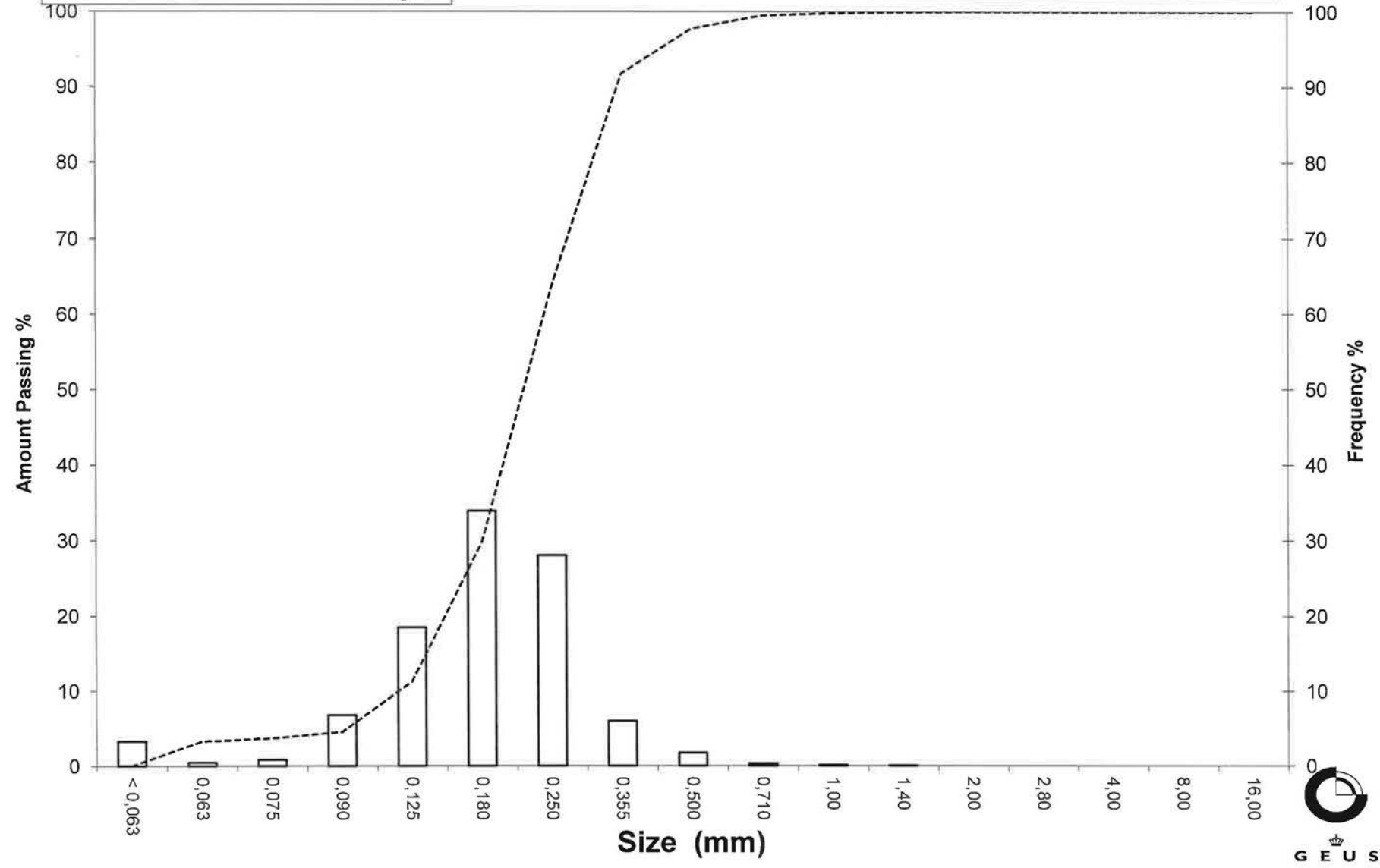
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-9 35-95 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-9 100-190 cm
Lab. Id: 14090
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 113,32 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,08	0,07	99,93
2,80	-1,49	0,13	0,11	99,81
2,00	-1,00	0,33	0,29	99,52
1,40	-0,49	0,11	0,10	99,43
1,00	0,00	0,21	0,19	99,24
0,710	0,49	0,16	0,14	99,10
0,500	1,00	0,28	0,25	98,85
0,355	1,49	0,63	0,56	98,30
0,250	2,00	3,03	2,67	95,62
0,180	2,47	16,85	14,87	80,75
0,125	3,00	49,26	43,47	37,28
0,090	3,47	18,45	16,28	21,00
0,075	3,74	3,80	3,35	17,65
0,063	3,99	3,63	3,20	14,45
< 0,063	> 3,99	16,37	14,45	0,00

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	14,45
Sand, fine (0,063 mm - 0,200 mm):	70,56
Sand, medium (0,2 mm - 0,6 mm):	13,97
Sand, coarse (0,6 mm - 2 mm):	0,55
Gravel (> 2 mm):	0,48
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,25	2,02
16%	84%	0,20	2,36
25%	75%	0,17	2,53
40%	60%	0,15	2,70
Median 50%	50%	0,14	2,83
75%	25%	0,10	3,34
84%	16%	0,07	3,86
90%	10%	-----	-----
95%	5%	-----	-----

Moments Statistics

Mean	3,01
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	-----

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

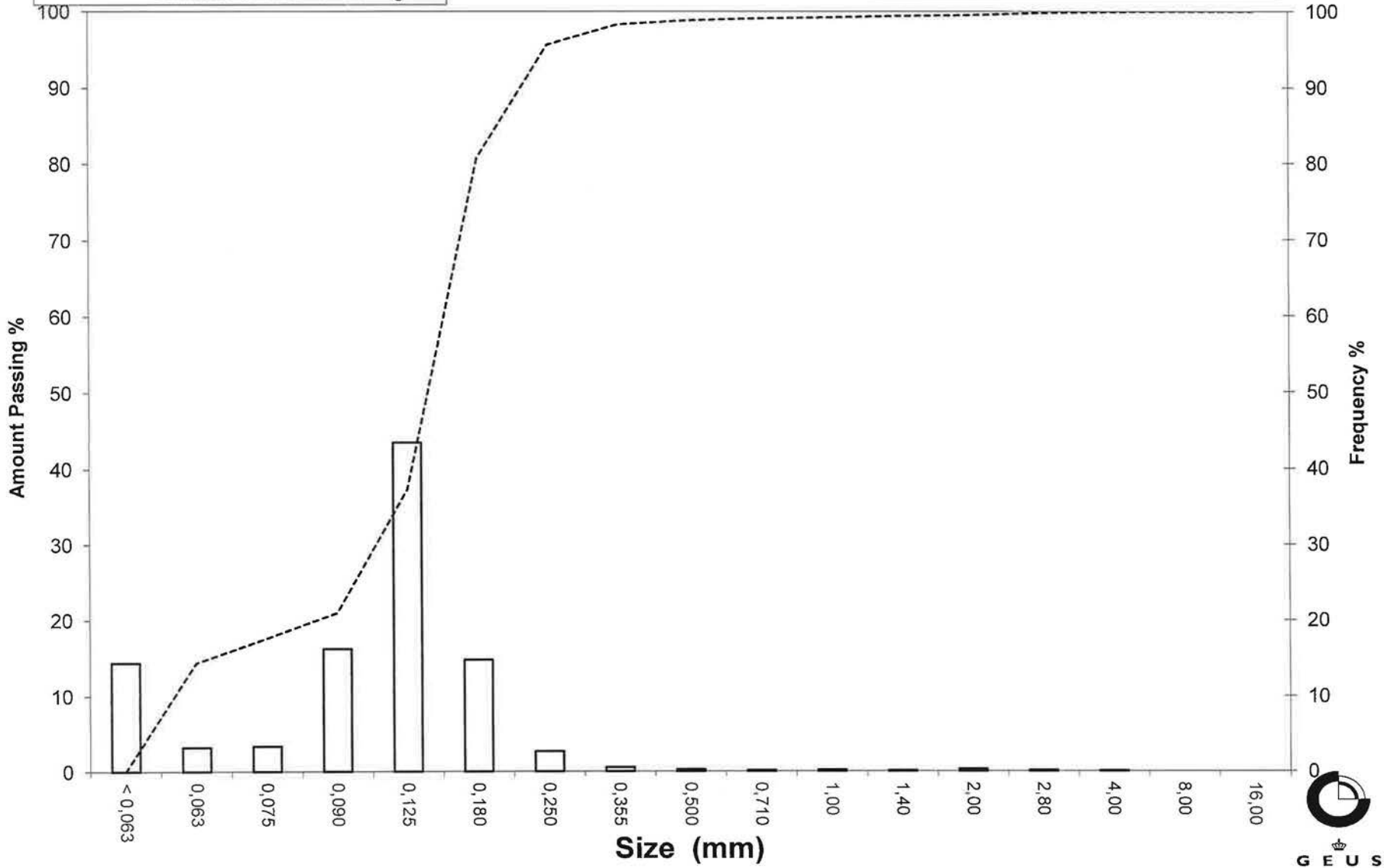
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-9 100-190 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-9 205-220 cm
Lab. Id: 14091
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 105,75 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,06	0,06	99,94
1,00	0,00	0,07	0,07	99,88
0,710	0,49	0,13	0,12	99,75
0,500	1,00	0,25	0,24	99,52
0,355	1,49	0,31	0,29	99,22
0,250	2,00	0,45	0,43	98,80
0,180	2,47	0,57	0,54	98,26
0,125	3,00	2,68	2,53	95,73
0,090	3,47	16,75	15,84	79,89
0,075	3,74	15,02	14,20	65,68
0,063	3,99	15,92	15,05	50,63
< 0,063	> 3,99	53,54	50,63	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	50,63
Sand, fine (0,063 mm - 0,200 mm):	47,79
Sand, medium (0,2 mm - 0,6 mm):	1,22
Sand, coarse (0,6 mm - 2 mm):	0,37
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,12	3,02
16%	84%	0,10	3,34
25%	75%	0,08	3,56
40%	60%	0,07	3,83
Median 50%	50%	-----	-----
75%	25%	-----	-----
84%	16%	-----	-----
90%	10%	-----	-----
95%	5%	-----	-----

Moments Statistics

Mean	3,34
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	-----

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

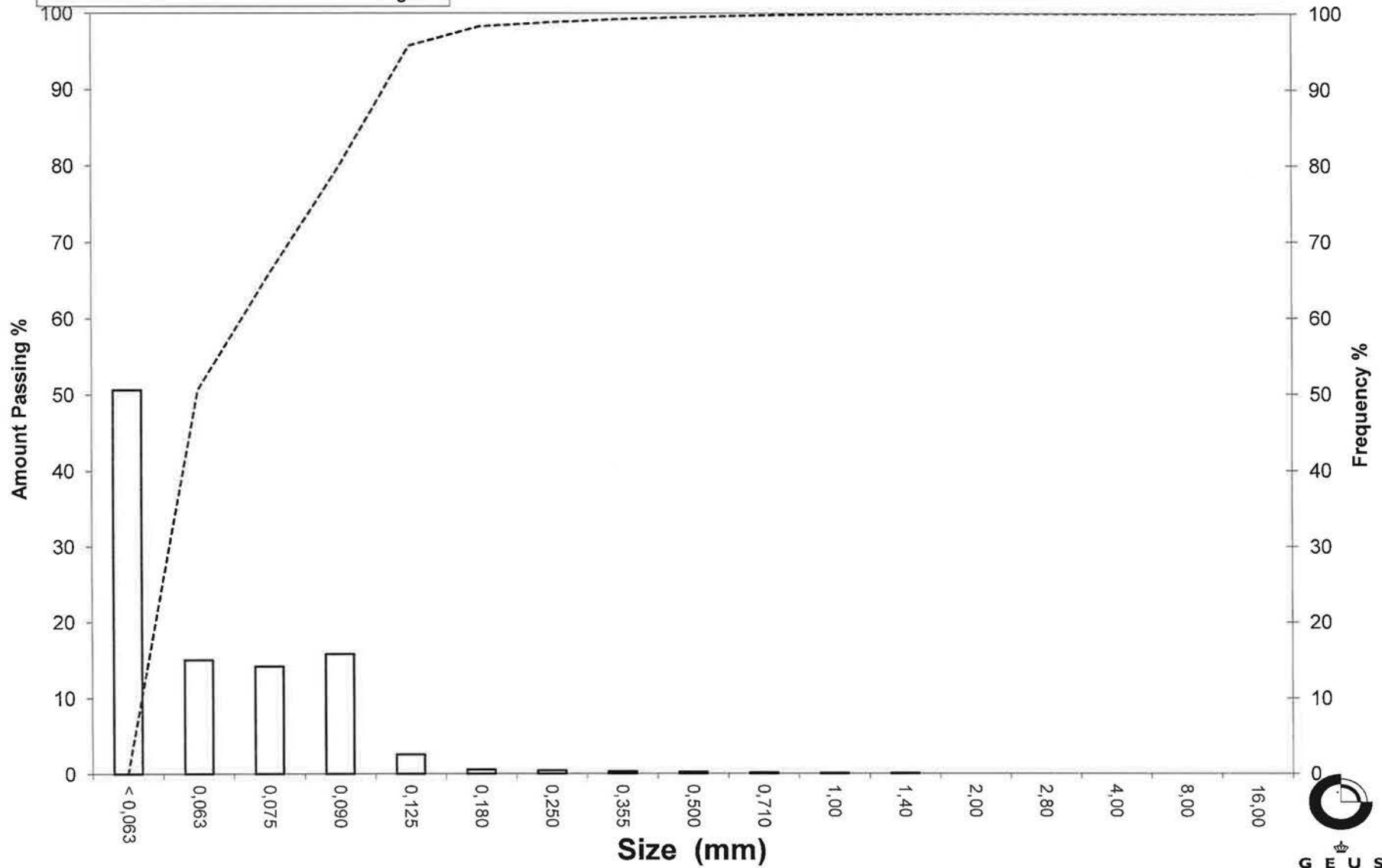
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-9 205-220 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-11 5-70 cm
Lab. Id: 14092
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 112,9 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,01	0,01	99,99
1,00	0,00	0,06	0,05	99,94
0,710	0,49	0,08	0,07	99,87
0,500	1,00	0,27	0,24	99,63
0,355	1,49	0,90	0,80	98,83
0,250	2,00	1,83	1,62	97,21
0,180	2,47	2,04	1,81	95,40
0,125	3,00	19,26	17,06	78,34
0,090	3,47	67,58	59,86	18,49
0,075	3,74	12,20	10,81	7,68
0,063	3,99	4,56	4,04	3,64
< 0,063	> 3,99	4,11	3,64	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	3,64
Sand, fine (0,063 mm - 0,200 mm):	92,28
Sand, medium (0,2 mm - 0,6 mm):	3,82
Sand, coarse (0,6 mm - 2 mm):	0,26
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,18	2,48
16%	84%	0,14	2,80
25%	75%	0,12	3,02
40%	60%	0,11	3,13
Median 50%	50%	0,11	3,21
75%	25%	0,09	3,41
84%	16%	0,09	3,53
90%	10%	0,08	3,68
95%	5%	0,07	3,90

Moments Statistics

Mean	3,18
Sorting	0,40
Skewness	-0,06
Kurtosis	1,48
Uniformity Coefficient	1,46

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

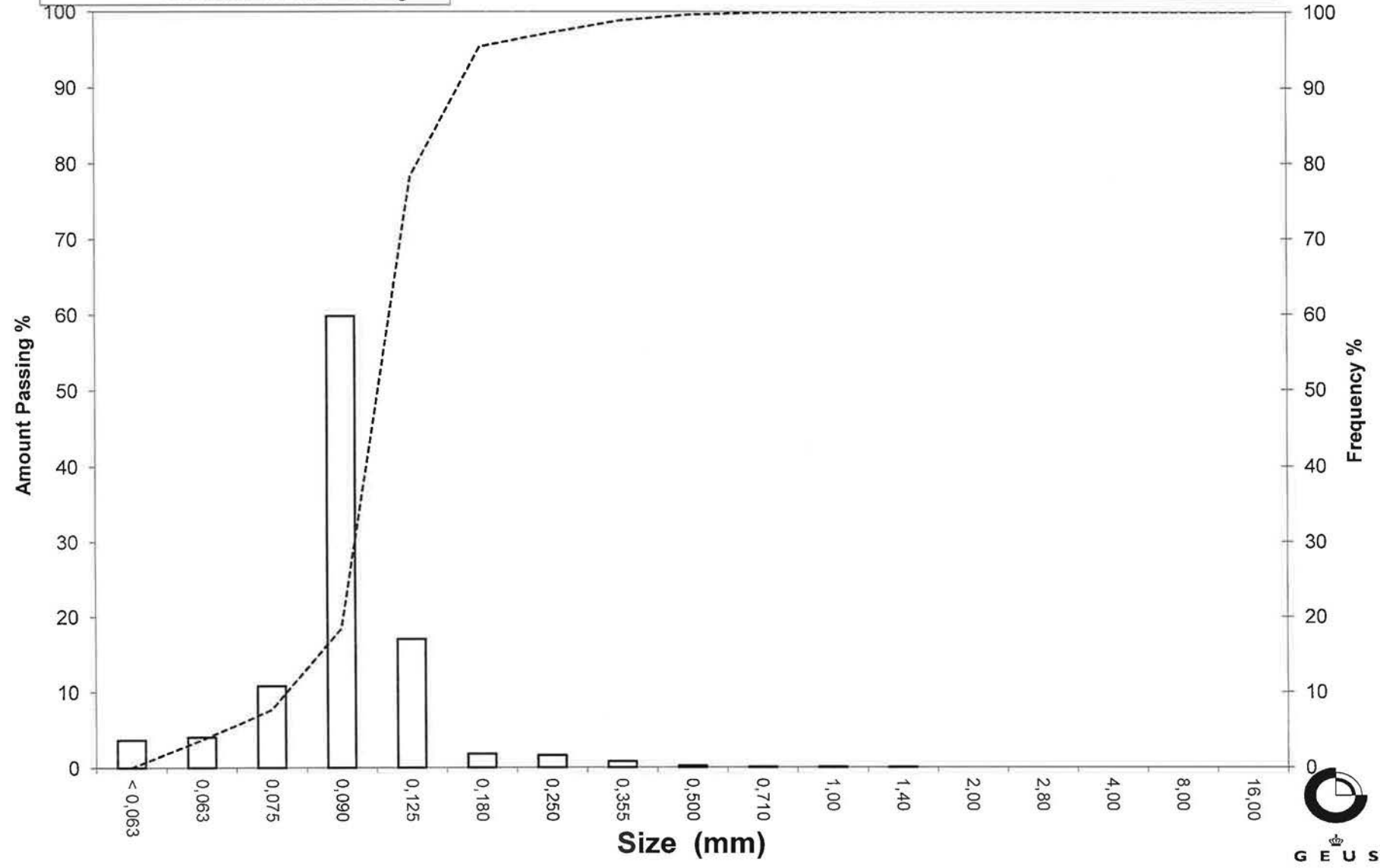
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-11 5-70 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-12 0-140 cm
Lab. Id: 14093
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 115,1 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,13	0,11	99,89
1,40	-0,49	0,23	0,20	99,69
1,00	0,00	0,64	0,56	99,13
0,710	0,49	0,92	0,80	98,33
0,500	1,00	2,58	2,24	96,09
0,355	1,49	7,11	6,18	89,91
0,250	2,00	19,27	16,74	73,17
0,180	2,47	31,24	27,14	46,03
0,125	3,00	38,15	33,15	12,88
0,090	3,47	10,34	8,98	3,90
0,075	3,74	1,69	1,47	2,43
0,063	3,99	0,95	0,83	1,61
< 0,063	> 3,99	1,85	1,61	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,61
Sand, fine (0,063 mm - 0,200 mm):	52,18
Sand, medium (0,2 mm - 0,6 mm):	43,37
Sand, coarse (0,6 mm - 2 mm):	2,73
Gravel (> 2 mm):	0,11
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,47	1,08
16%	84%	0,32	1,65
25%	75%	0,26	1,94
40%	60%	0,22	2,21
Median 50%	50%	0,19	2,39
75%	25%	0,15	2,78
84%	16%	0,13	2,94
90%	10%	0,11	3,14
95%	5%	0,09	3,41

Moments Statistics

Mean	2,33
Sorting	0,68
Skewness	-0,14
Kurtosis	1,12
Uniformity Coefficient	1,90

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

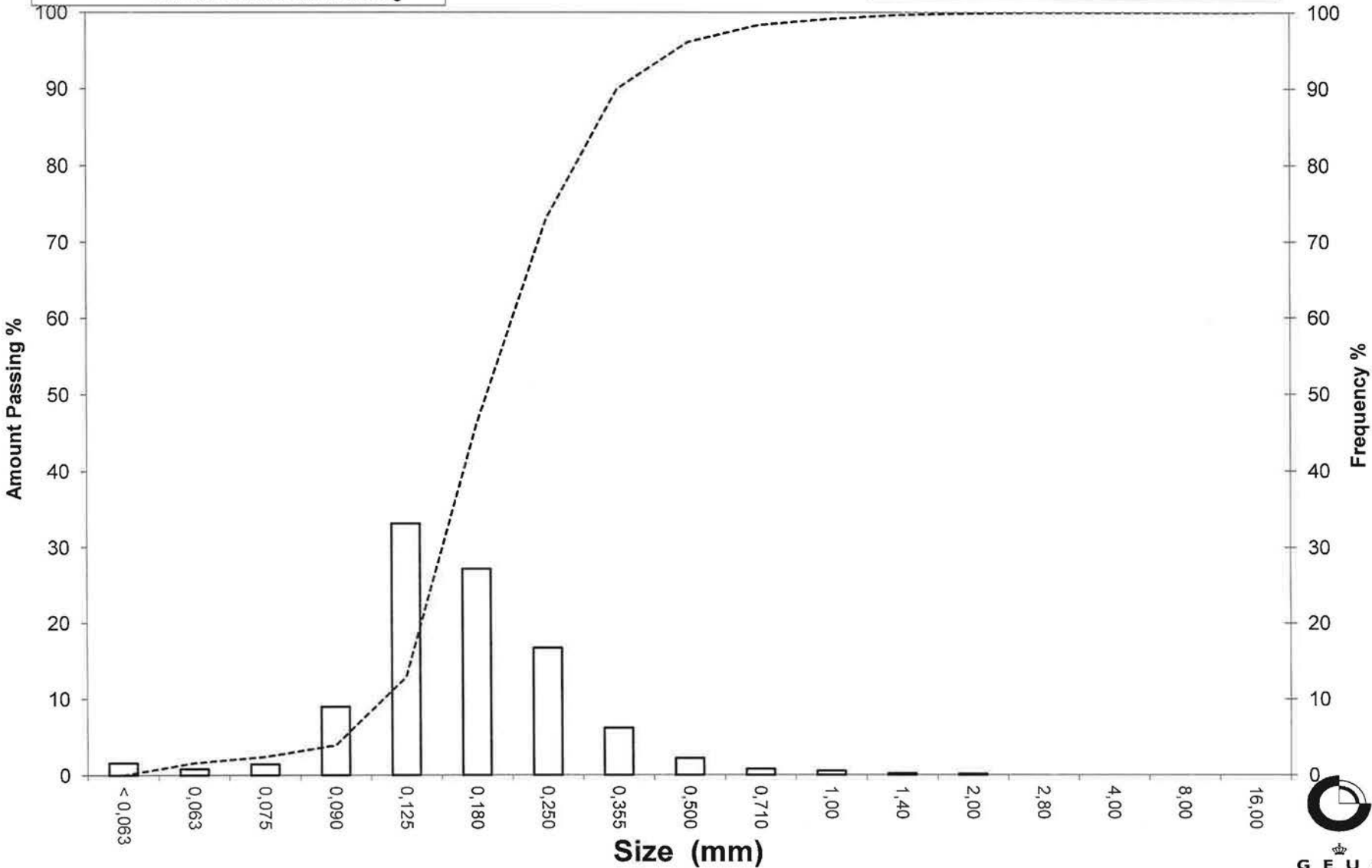
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-12 0-140 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-15 0-80 cm
Lab. Id: 14094
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 112,92 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	passing %
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,01	0,01	99,99
1,00	0,00	0,01	0,01	99,98
0,710	0,49	0,02	0,02	99,96
0,500	1,00	0,27	0,24	99,73
0,355	1,49	4,39	3,89	95,84
0,250	2,00	31,95	28,29	67,54
0,180	2,47	40,47	35,84	31,70
0,125	3,00	28,18	24,96	6,75
0,090	3,47	5,57	4,93	1,82
0,075	3,74	0,67	0,59	1,22
0,063	3,99	0,32	0,28	0,94
< 0,063	> 3,99	1,06	0,94	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	0,94
Sand, fine (0,063 mm - 0,200 mm)	41,01
Sand, medium (0,2 mm - 0,6 mm)	57,90
Sand, coarse (0,6 mm - 2 mm)	0,16
Gravel (> 2 mm)	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,35	1,51
16%	84%	0,31	1,68
25%	75%	0,28	1,85
40%	60%	0,24	2,09
Median 50%	50%	0,22	2,21
75%	25%	0,17	2,60
84%	16%	0,15	2,78
90%	10%	0,13	2,92
95%	5%	0,11	3,15

Moments Statistics

Mean	2,23
Sorting	0,52
Skewness	0,09
Kurtosis	0,90
Uniformity Coefficient	1,78

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

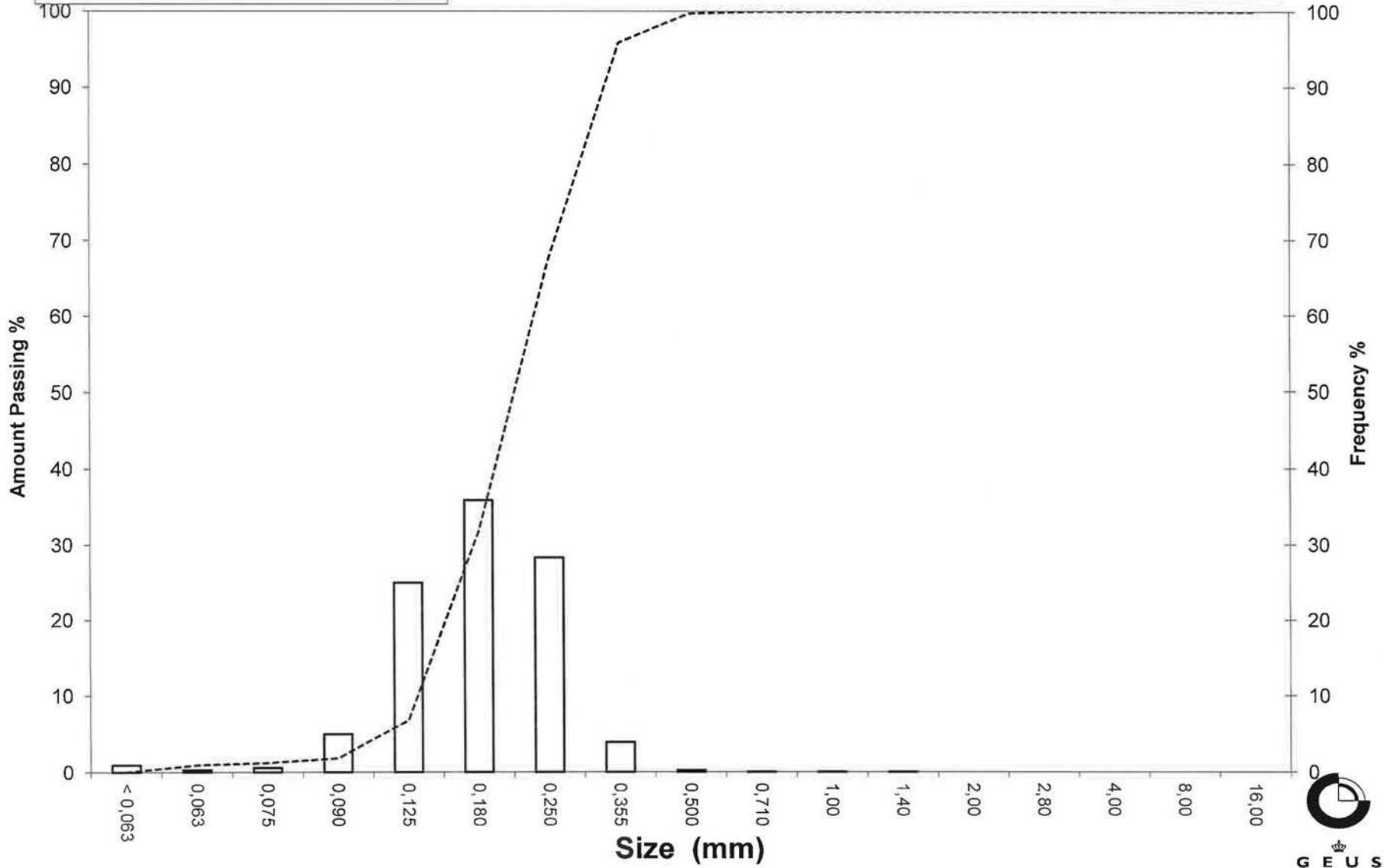
Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-15 0-80 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-17 0-50 cm
Lab. Id: 14095
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 139,38 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,15	0,11	99,89
4,00	-2,00	0,21	0,15	99,74
2,80	-1,49	0,60	0,43	99,31
2,00	-1,00	1,55	1,11	98,20
1,40	-0,49	2,57	1,84	96,36
1,00	0,00	2,89	2,07	94,28
0,710	0,49	3,83	2,75	91,53
0,500	1,00	8,17	5,86	85,67
0,355	1,49	14,09	10,11	75,56
0,250	2,00	35,81	25,69	49,87
0,180	2,47	38,58	27,68	22,19
0,125	3,00	23,08	16,56	5,63
0,090	3,47	4,49	3,22	2,41
0,075	3,74	0,56	0,40	2,01
0,063	3,99	0,34	0,24	1,76
< 0,063	> 3,99	2,46	1,76	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,76
Sand, fine (0,063 mm - 0,200 mm):	28,33
Sand, medium (0,2 mm - 0,6 mm):	58,36
Sand, coarse (0,6 mm - 2 mm):	9,74
Gravel (> 2 mm):	1,80
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,14	-0,19
16%	84%	0,48	1,07
25%	75%	0,35	1,50
40%	60%	0,29	1,78
Median 50%	50%	0,25	2,00
75%	25%	0,19	2,42
84%	16%	0,16	2,65
90%	10%	0,14	2,84
95%	5%	0,12	3,08

Moments Statistics

Mean	1,91
Sorting	0,89
Skewness	-0,26
Kurtosis	1,46
Uniformity Coefficient	2,09

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

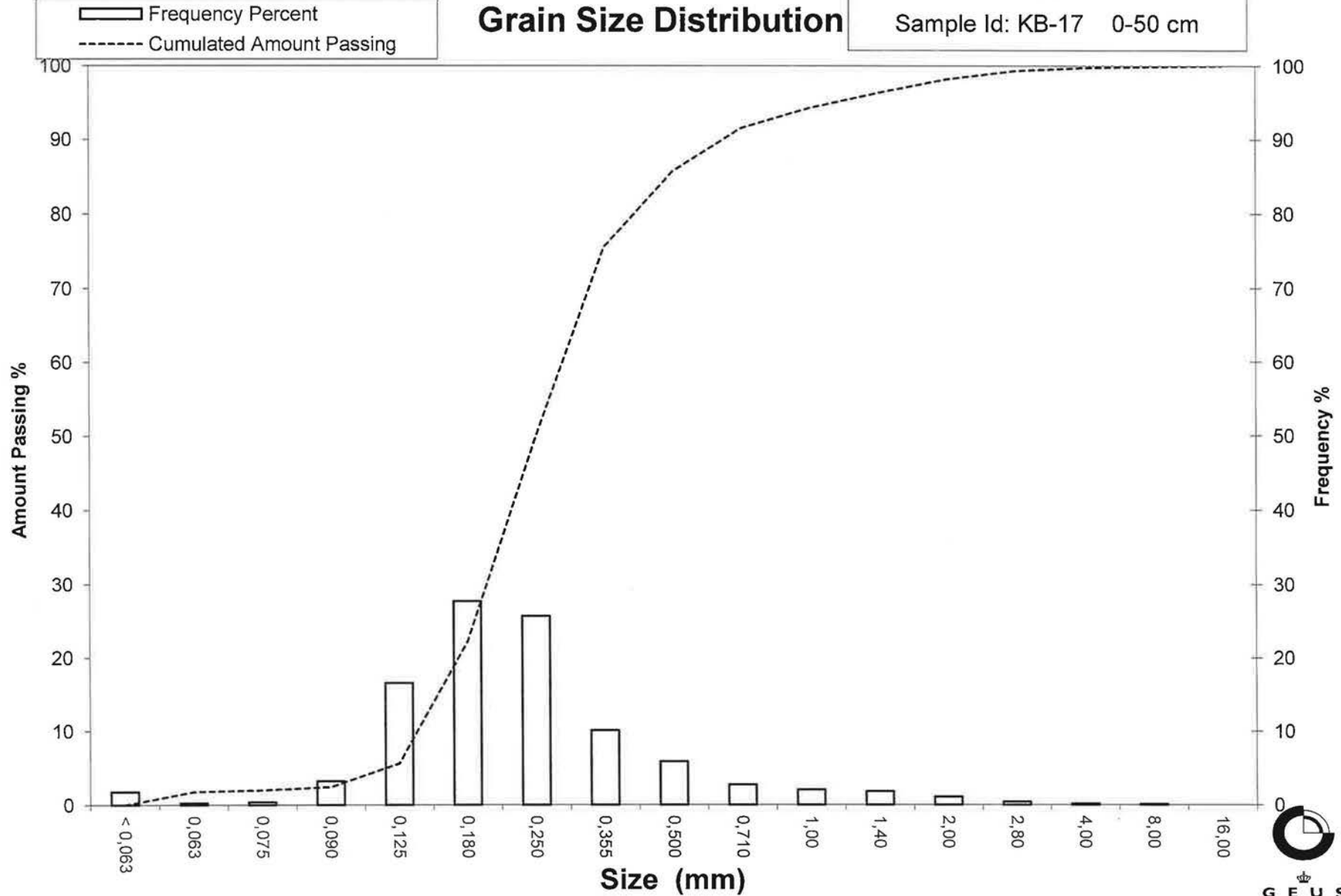
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-17 0-50 cm



Grain Size Distribution

Geotechnical

Sample Id: KB-17 50-100 cm
Lab. Id: 14096
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 8mm.



Total Weight 207,16 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	10,77	5,20	94,80
4,00	-2,00	29,31	14,15	80,65
2,80	-1,49	19,38	9,36	71,30
2,00	-1,00	18,11	8,74	62,56
1,40	-0,49	15,80	7,63	54,93
1,00	0,00	9,83	4,75	50,18
0,710	0,49	8,82	4,26	45,93
0,500	1,00	12,53	6,05	39,88
0,355	1,49	15,60	7,53	32,35
0,250	2,00	23,00	11,10	21,24
0,180	2,47	16,18	7,81	13,43
0,125	3,00	12,62	6,09	7,34
0,090	3,47	4,69	2,26	5,08
0,075	3,74	1,30	0,63	4,45
0,063	3,99	1,08	0,52	3,93
< 0,063	> 3,99	8,14	3,93	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,93
Sand, fine (0,063 mm - 0,200 mm):	11,74
Sand, medium (0,2 mm - 0,6 mm):	27,09
Sand, coarse (0,6 mm - 2 mm):	19,80
Gravel (> 2 mm):	37,44
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	8,31	-3,05
16%	84%	4,95	-2,31
25%	75%	3,27	-1,71
40%	60%	1,80	-0,85
Median 50%	50%	0,99	0,02
75%	25%	0,29	1,81
84%	16%	0,20	2,30
90%	10%	0,15	2,75
95%	5%	0,09	3,50

Moments Statistics

Mean	0,00
Sorting	2,15
Skewness	0,03
Kurtosis	0,76
Uniformity Coefficient	12,07

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

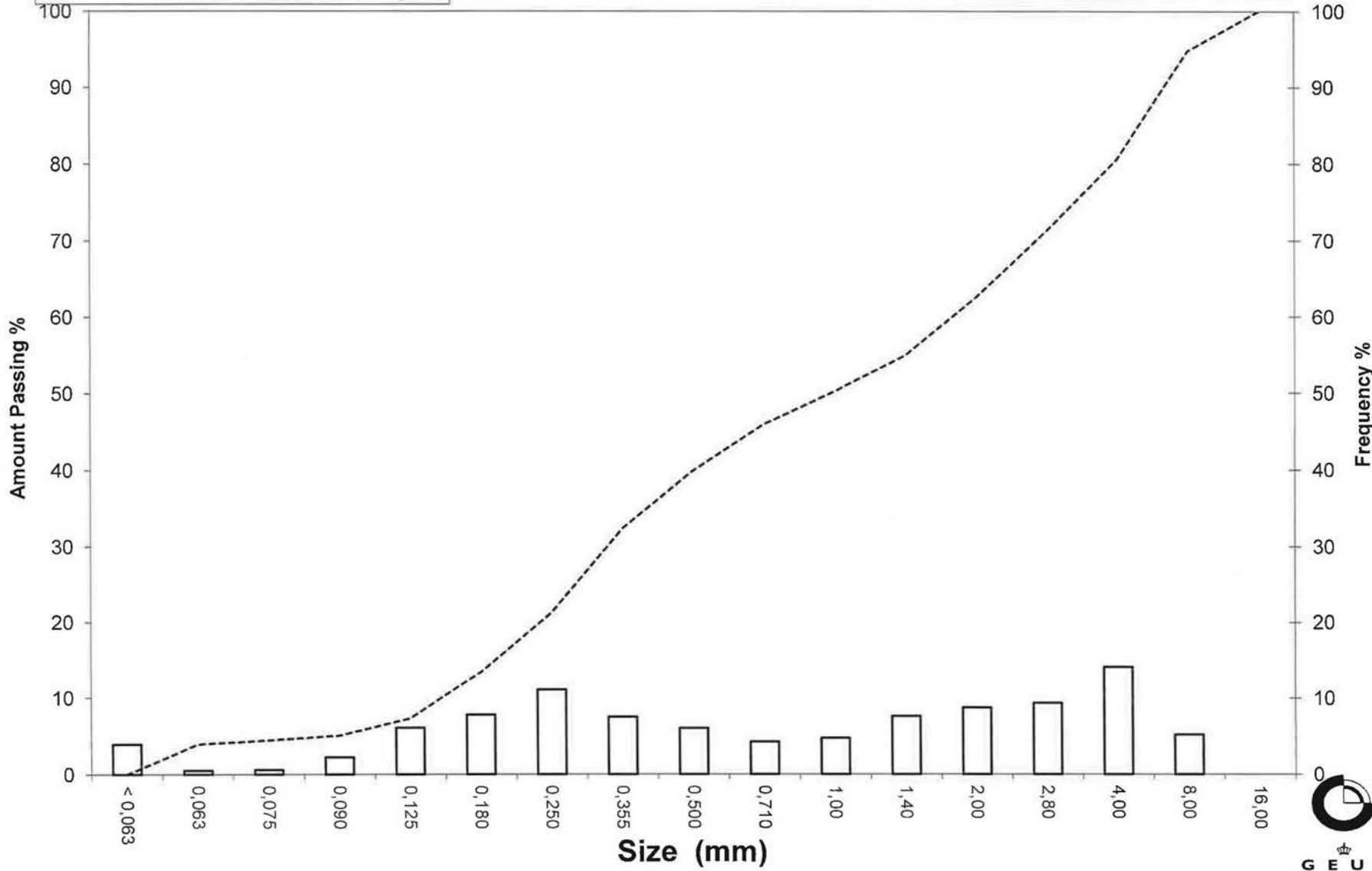
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-17 50-100 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-17 330-359 cm
Lab. Id: 14097
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 111,85 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	1,06	0,95	99,05
4,00	-2,00	0,00	0,00	99,05
2,80	-1,49	0,16	0,14	98,91
2,00	-1,00	0,19	0,17	98,74
1,40	-0,49	0,20	0,18	98,56
1,00	0,00	0,28	0,25	98,31
0,710	0,49	0,36	0,32	97,99
0,500	1,00	0,60	0,54	97,45
0,355	1,49	1,20	1,07	96,38
0,250	2,00	5,40	4,83	91,55
0,180	2,47	23,32	20,85	70,70
0,125	3,00	52,95	47,34	23,36
0,090	3,47	17,81	15,92	7,44
0,075	3,74	2,46	2,20	5,24
0,063	3,99	1,31	1,17	4,07
< 0,063	> 3,99	4,55	4,07	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	4,07
Sand, fine (0,063 mm - 0,200 mm):	72,59
Sand, medium (0,2 mm - 0,6 mm):	21,05
Sand, coarse (0,6 mm - 2 mm):	1,03
Gravel (> 2 mm):	1,26
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,33	1,62
16%	84%	0,22	2,15
25%	75%	0,19	2,36
40%	60%	0,17	2,58
Median 50%	50%	0,16	2,68
75%	25%	0,13	2,98
84%	16%	0,11	3,20
90%	10%	0,10	3,39
95%	5%	0,07	3,78

Moments Statistics

Mean	2,68
Sorting	0,59
Skewness	0,01
Kurtosis	1,44
Uniformity Coefficient	1,75

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

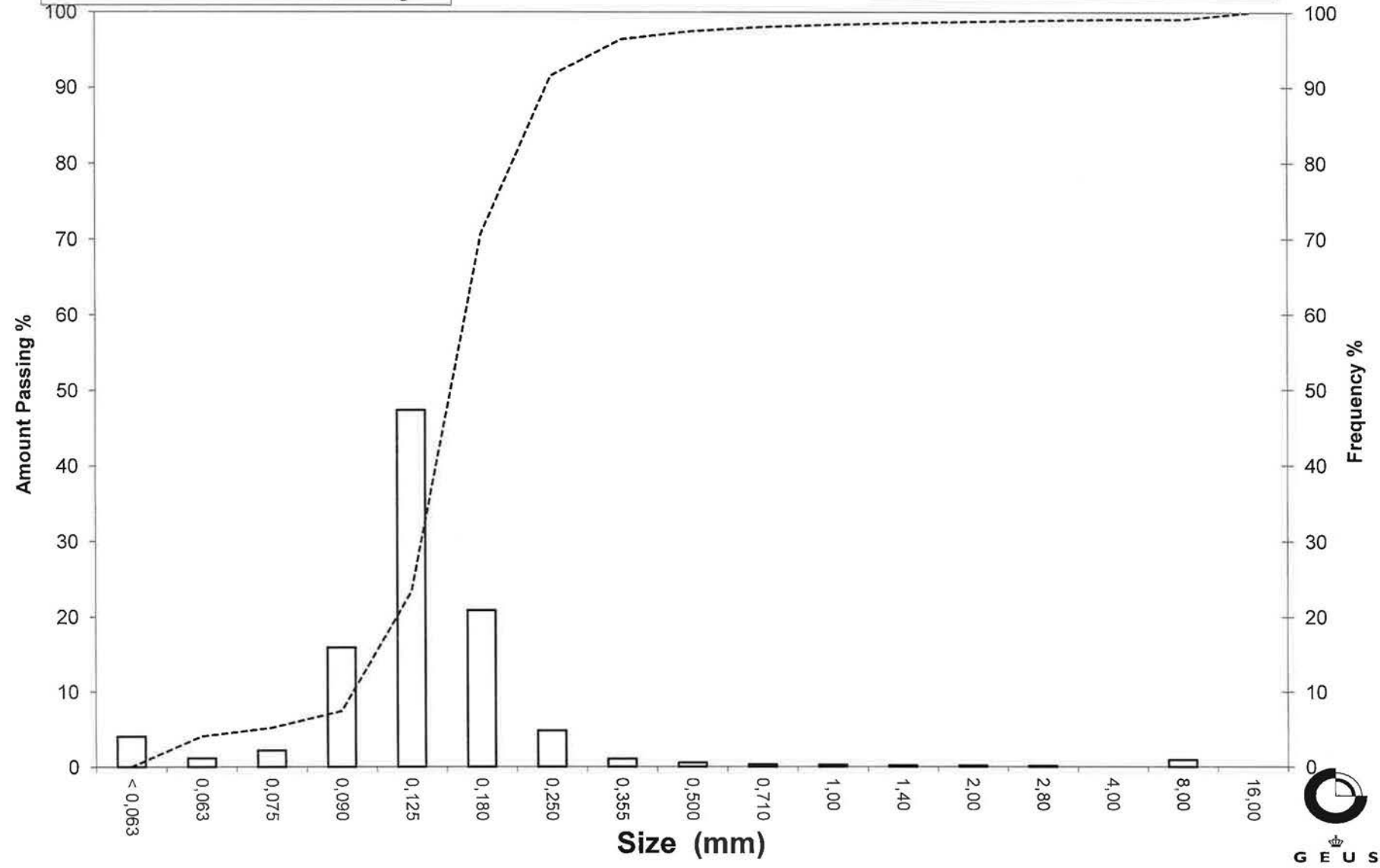
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-17 330-359 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-20 190-215 cm
Lab. Id: 14098
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 132 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,19	0,14	99,86
2,80	-1,49	0,54	0,41	99,45
2,00	-1,00	0,62	0,47	98,98
1,40	-0,49	1,22	0,92	98,05
1,00	0,00	3,74	2,83	95,22
0,710	0,49	7,87	5,96	89,26
0,500	1,00	21,41	16,22	73,04
0,355	1,49	36,34	27,53	45,51
0,250	2,00	37,29	28,25	17,26
0,180	2,47	15,87	12,02	5,23
0,125	3,00	5,07	3,84	1,39
0,090	3,47	0,68	0,52	0,88
0,075	3,74	0,10	0,08	0,80
0,063	3,99	0,09	0,07	0,73
< 0,063	> 3,99	0,97	0,73	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,73
Sand, fine (0,063 mm - 0,200 mm):	7,94
Sand, medium (0,2 mm - 0,6 mm):	72,09
Sand, coarse (0,6 mm - 2 mm):	18,22
Gravel (> 2 mm):	1,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,99	0,02
16%	84%	0,64	0,64
25%	75%	0,53	0,93
40%	60%	0,43	1,21
Median 50%	50%	0,38	1,40
75%	25%	0,28	1,84
84%	16%	0,24	2,04
90%	10%	0,21	2,27
95%	5%	0,18	2,50

Moments Statistics

Mean	1,36
Sorting	0,73
Skewness	-0,10
Kurtosis	1,11
Uniformity Coefficient	2,08

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

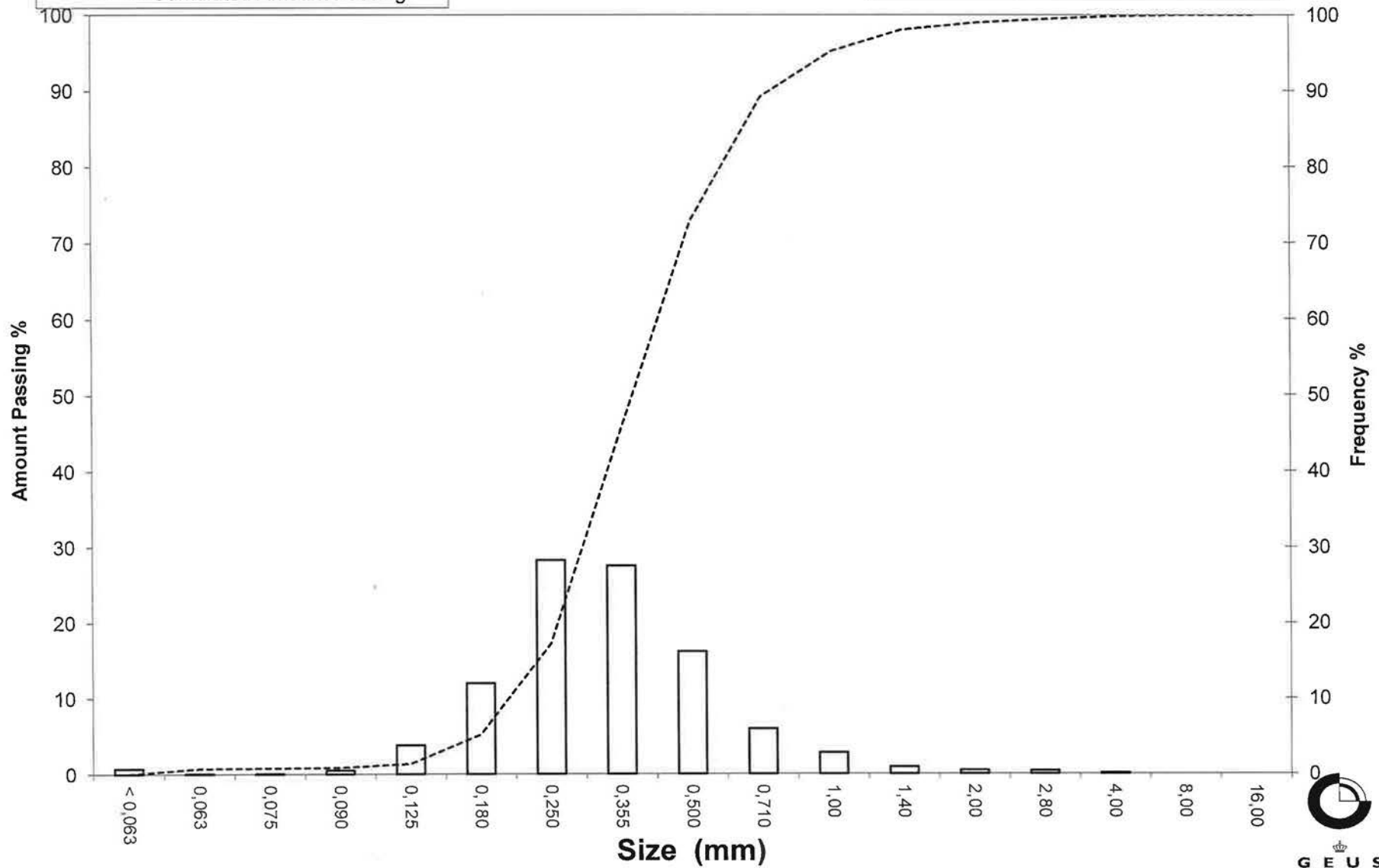
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-20 190-215 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-20 320-370 cm
Lab. Id: 14099
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 103,24 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,04	0,04	99,96
2,00	-1,00	0,09	0,09	99,87
1,40	-0,49	0,04	0,04	99,84
1,00	0,00	0,10	0,10	99,74
0,710	0,49	0,13	0,13	99,61
0,500	1,00	0,32	0,31	99,30
0,355	1,49	0,84	0,81	98,49
0,250	2,00	4,67	4,52	93,97
0,180	2,47	19,47	18,86	75,11
0,125	3,00	41,63	40,32	34,78
0,090	3,47	22,06	21,37	13,42
0,075	3,74	5,10	4,94	8,48
0,063	3,99	3,20	3,10	5,38
< 0,063	> 3,99	5,55	5,38	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	5,38
Sand, fine (0,063 mm - 0,200 mm):	75,12
Sand, medium (0,2 mm - 0,6 mm):	18,96
Sand, coarse (0,6 mm - 2 mm):	0,42
Gravel (> 2 mm):	0,13
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,27	1,87
16%	84%	0,21	2,23
25%	75%	0,18	2,48
40%	60%	0,16	2,65
Median 50%	50%	0,15	2,78
75%	25%	0,11	3,20
84%	16%	0,09	3,41
90%	10%	0,08	3,65
95%	5%	-----	-----

Moments Statistics

Mean	2,81
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	2,00

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

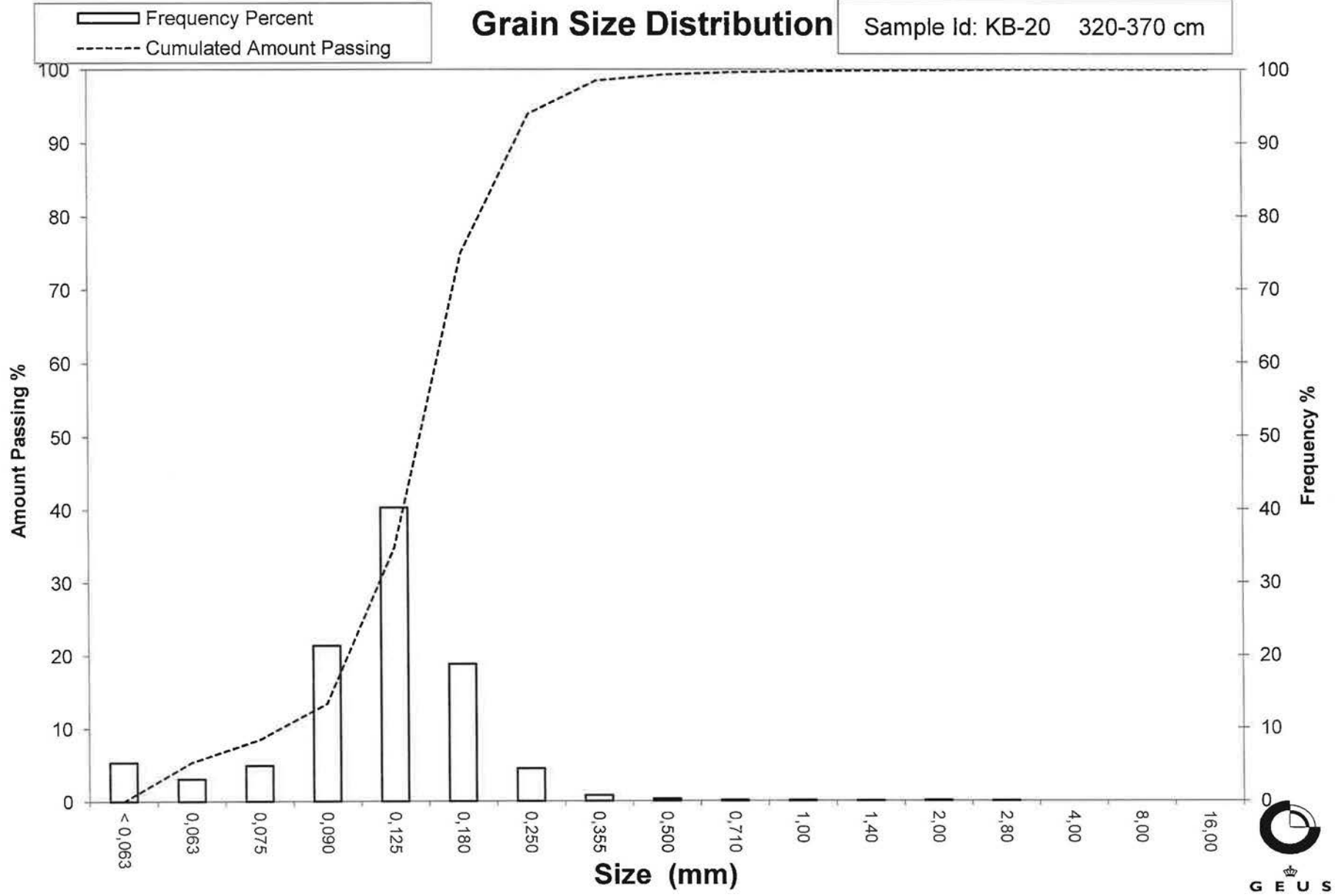
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-20 320-370 cm



Grain Size Distribution

Geotechnical

Sample Id: KB-25 25-80 cm
Lab. Id: 14100
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 8mm.



Total Weight 206,88 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	3,61	1,74	98,26
4,00	-2,00	9,77	4,72	93,53
2,80	-1,49	8,29	4,01	89,53
2,00	-1,00	11,54	5,58	83,95
1,40	-0,49	16,68	8,06	75,88
1,00	0,00	22,00	10,63	65,25
0,710	0,49	23,42	11,32	53,93
0,500	1,00	22,11	10,69	43,24
0,355	1,49	18,57	8,98	34,27
0,250	2,00	19,01	9,19	25,08
0,180	2,47	14,30	6,91	18,17
0,125	3,00	14,38	6,95	11,21
0,090	3,47	7,37	3,56	7,65
0,075	3,74	1,83	0,88	6,77
0,063	3,99	1,55	0,75	6,02
< 0,063	> 3,99	12,45	6,02	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	6,02
Sand, fine (0,063 mm - 0,200 mm):	14,12
Sand, medium (0,2 mm - 0,6 mm):	28,19
Sand, coarse (0,6 mm - 2 mm):	35,62
Gravel (> 2 mm):	16,05
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	5,24	-2,39
16%	84%	2,01	-1,01
25%	75%	1,37	-0,45
40%	60%	0,87	0,21
Median 50%	50%	0,63	0,66
75%	25%	0,25	2,00
84%	16%	0,16	2,62
90%	10%	0,11	3,14
95%	5%	-----	-----

Moments Statistics

Mean	0,76
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	7,65

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

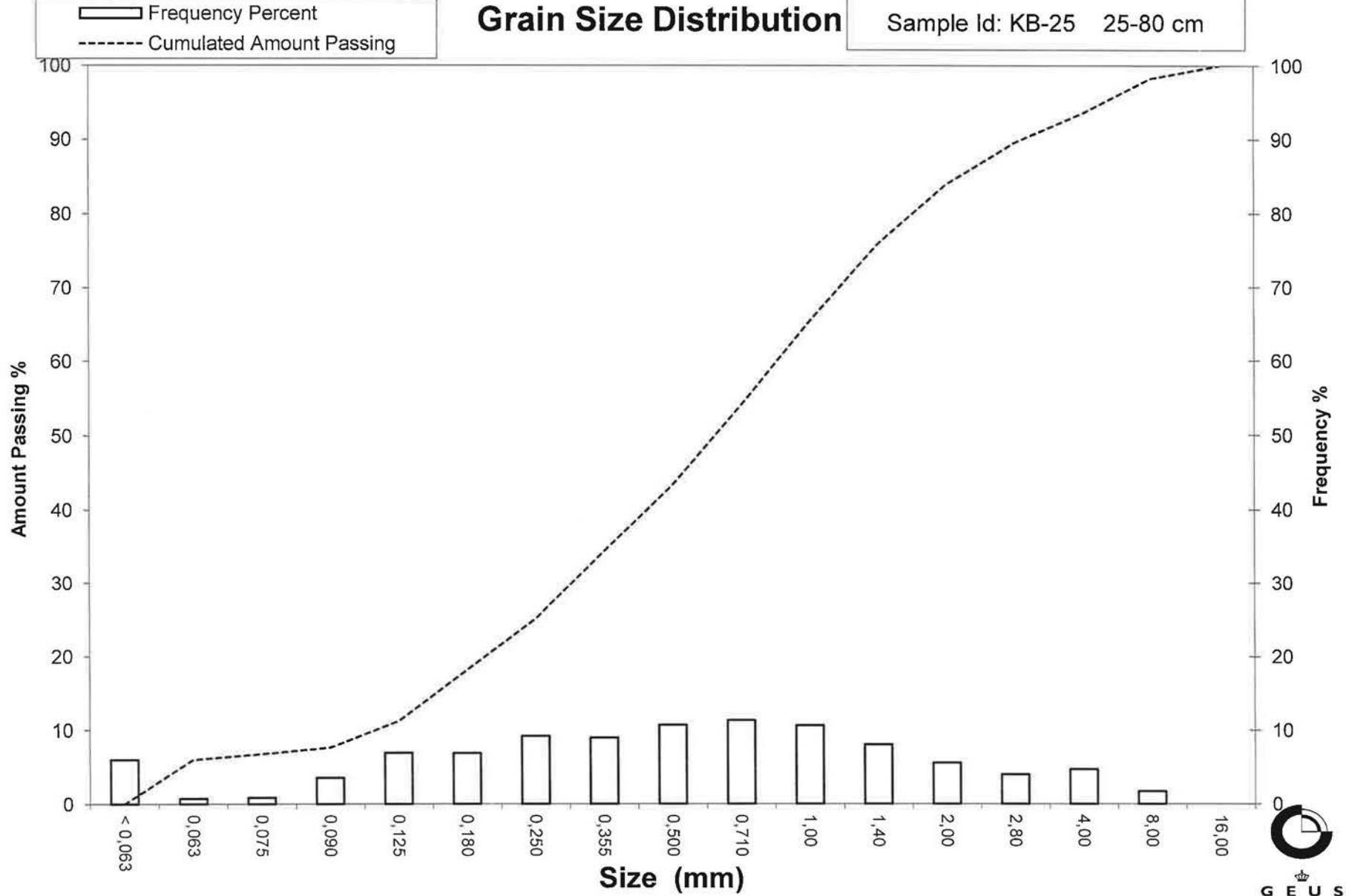
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-25 25-80 cm



Grain Size Distribution

Geotechnical

Sample Id: KB-25 115-155 cm
Lab. Id: 14101
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 102,09 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,02	0,02	99,98
1,40	-0,49	0,02	0,02	99,96
1,00	0,00	0,10	0,10	99,86
0,710	0,49	0,23	0,23	99,64
0,500	1,00	0,82	0,80	98,83
0,355	1,49	2,62	2,57	96,27
0,250	2,00	11,78	11,54	84,73
0,180	2,47	29,19	28,59	56,14
0,125	3,00	36,50	35,75	20,38
0,090	3,47	13,50	13,22	7,16
0,075	3,74	2,52	2,47	4,69
0,063	3,99	1,61	1,58	3,11
< 0,063	> 3,99	3,18	3,11	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	3,11
Sand, fine (0,063 mm - 0,200 mm):	61,19
Sand, medium (0,2 mm - 0,6 mm):	34,91
Sand, coarse (0,6 mm - 2 mm):	0,76
Gravel (> 2 mm):	0,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,34	1,54
16%	84%	0,25	2,01
25%	75%	0,23	2,14
40%	60%	0,19	2,40
Median 50%	50%	0,17	2,55
75%	25%	0,13	2,92
84%	16%	0,11	3,14
90%	10%	0,10	3,36
95%	5%	0,08	3,70

Moments Statistics

Mean	2,57
Sorting	0,61
Skewness	0,05
Kurtosis	1,14
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

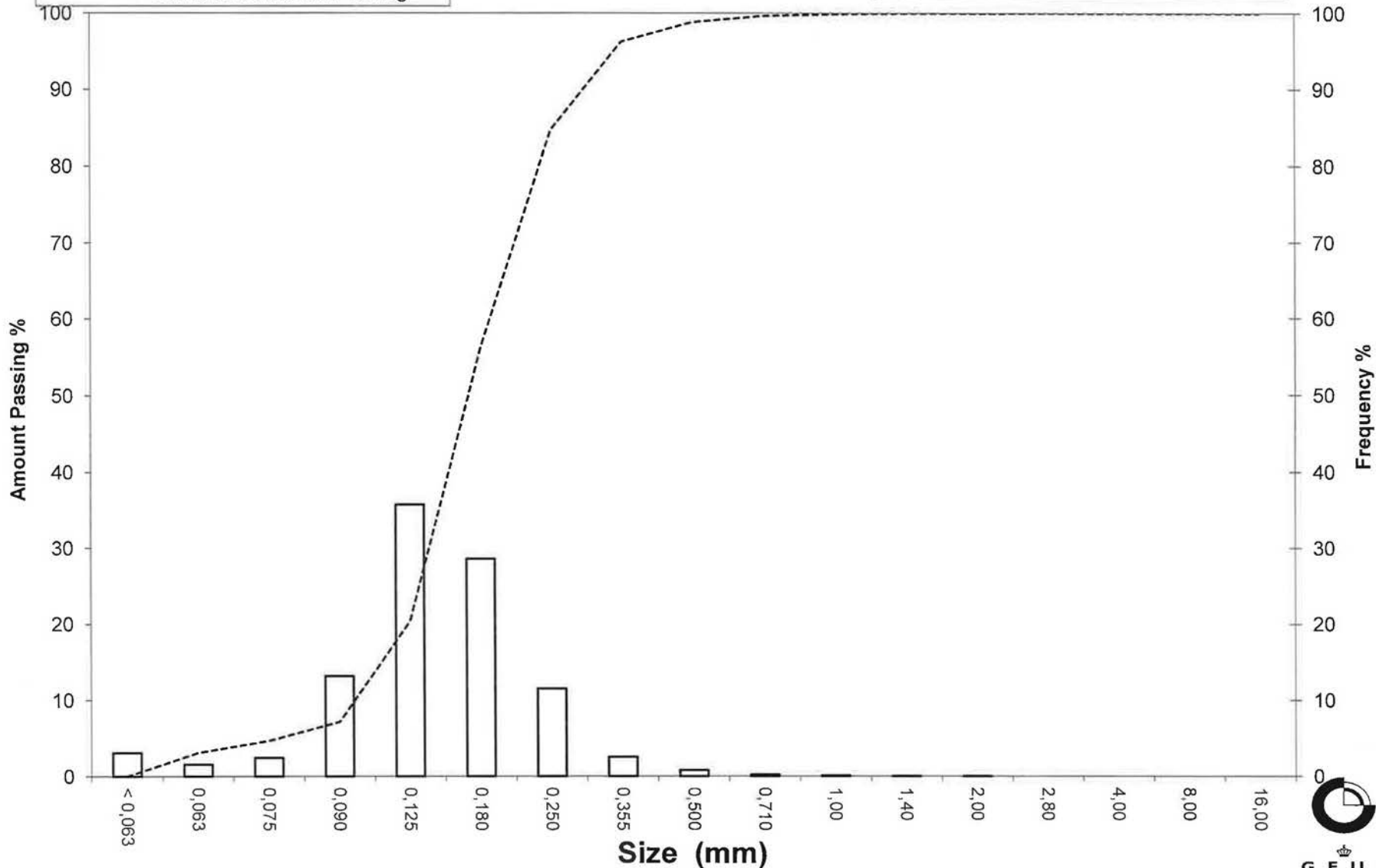
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-25 115-155 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-25 157-183 cm
Lab. Id: 14102
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard &M. Elmqvist
Remarks: For mat. < 16mm.



Total Weight 890,05 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	201,21	22,61	77,39
8,00	-3,00	142,35	15,99	61,40
4,00	-2,00	120,76	13,57	47,83
2,80	-1,49	47,19	5,30	42,53
2,00	-1,00	40,73	4,58	37,95
1,40	-0,49	36,24	4,07	33,88
1,00	0,00	51,97	5,84	28,04
0,710	0,49	66,76	7,50	20,54
0,500	1,00	83,85	9,42	11,12
0,355	1,49	31,35	3,52	7,60
0,250	2,00	12,31	1,38	6,22
0,180	2,47	10,53	1,18	5,03
0,125	3,00	12,50	1,40	3,63
0,090	3,47	6,28	0,71	2,92
0,075	3,74	2,00	0,22	2,70
0,063	3,99	1,53	0,17	2,53
< 0,063	> 3,99	22,49	2,53	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	2,53
Sand, fine (0,063 mm - 0,200 mm):	2,84
Sand, medium (0,2 mm - 0,6 mm):	10,24
Sand, coarse (0,6 mm - 2 mm):	22,35
Gravel (> 2 mm):	62,05
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	-----	-----
16%	84%	-----	-----
25%	75%	14,80	-3,89
40%	60%	7,59	-2,92
Median 50%	50%	4,64	-2,21
75%	25%	0,88	0,18
84%	16%	0,61	0,72
90%	10%	0,45	1,14
95%	5%	0,18	2,48

Moments Statistics

Mean	-0,75
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	16,72

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

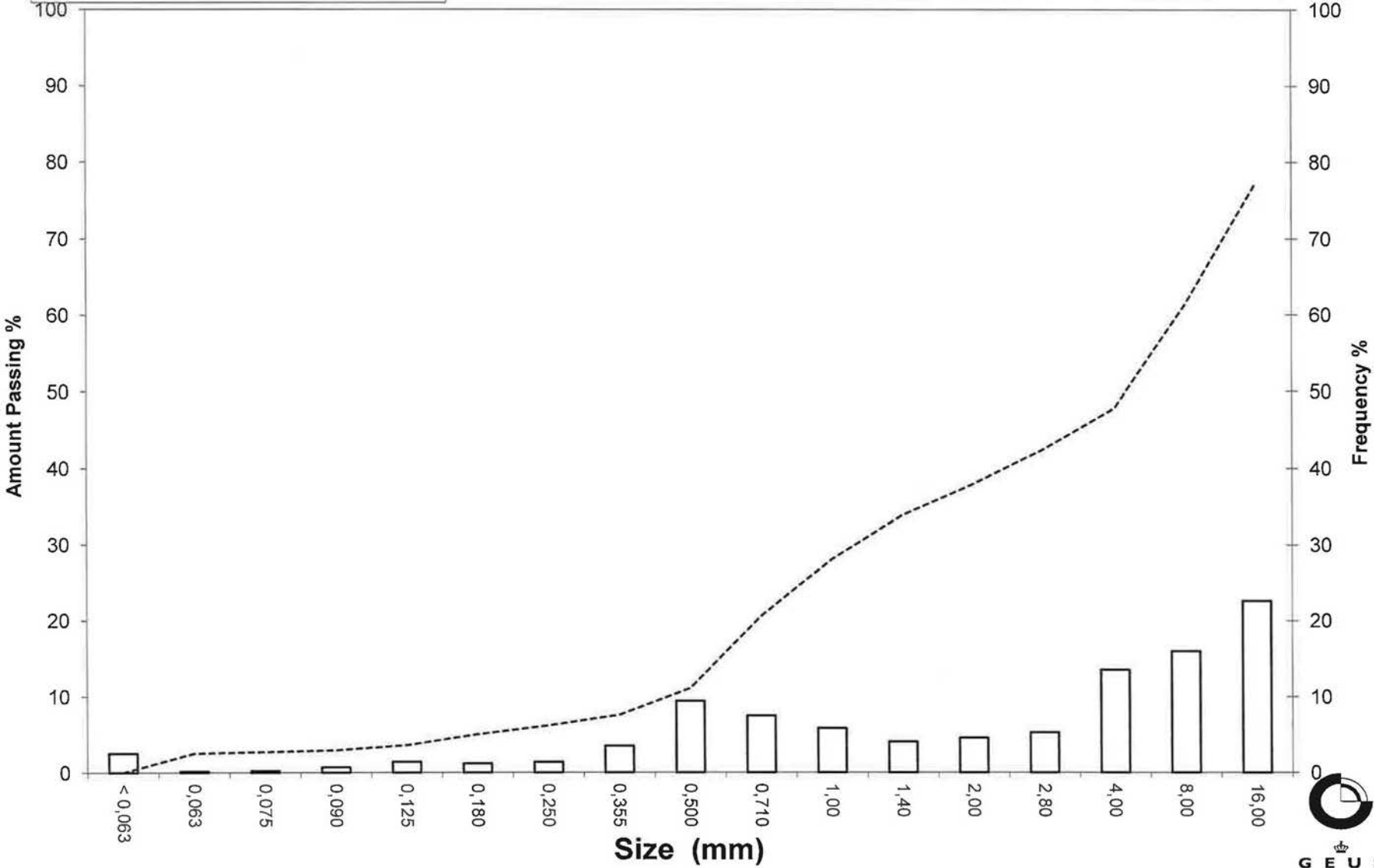
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-25 157-183 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: KB-25 260-310 cm
Lab. Id: 14103
Submitter: Naturstyrelsen
Subject: Køge Bugt kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard &M. Elmquist
Remarks: For mat. < 8mm.



Total Weight 224,61 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	3,35	1,49	98,51
4,00	-2,00	7,98	3,55	94,96
2,80	-1,49	6,30	2,80	92,15
2,00	-1,00	8,12	3,62	88,54
1,40	-0,49	13,13	5,85	82,69
1,00	0,00	20,55	9,15	73,54
0,710	0,49	49,34	21,97	51,57
0,500	1,00	65,98	29,38	22,20
0,355	1,49	30,18	13,44	8,76
0,250	2,00	11,57	5,15	3,61
0,180	2,47	4,17	1,86	1,75
0,125	3,00	1,96	0,87	0,88
0,090	3,47	0,53	0,24	0,65
0,075	3,74	0,13	0,06	0,59
0,063	3,99	0,07	0,03	0,56
< 0,063	> 3,99	1,25	0,56	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	0,56
Sand, fine (0,063 mm - 0,200 mm)	1,73
Sand, medium (0,2 mm - 0,6 mm)	33,90
Sand, coarse (0,6 mm - 2 mm)	52,35
Gravel (> 2 mm)	11,46
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	4,05	-2,02
16%	84%	1,53	-0,62
25%	75%	1,06	-0,09
40%	60%	0,82	0,28
Median 50%	50%	0,70	0,52
75%	25%	0,52	0,94
84%	16%	0,43	1,21
90%	10%	0,37	1,44
95%	5%	0,28	1,85

Moments Statistics

Mean	0,37
Sorting	1,04
Skewness	-0,28
Kurtosis	1,53
Uniformity Coefficient	2,23

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

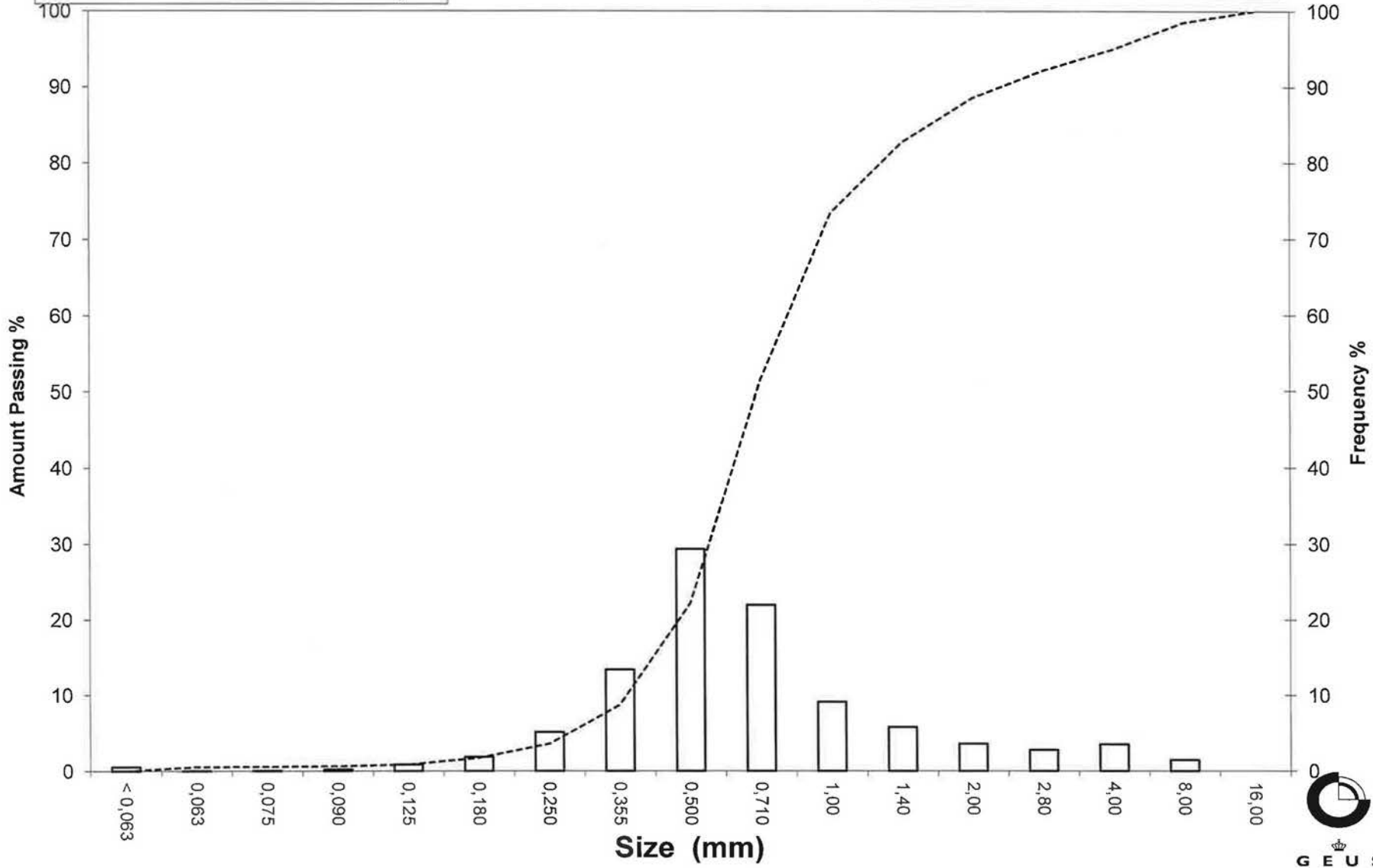
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: KB-25 260-310 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: LAP-1 0-100 cm
Lab. Id: 14104
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 128,35 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	1,01	0,79	99,21
4,00	-2,00	0,04	0,03	99,18
2,80	-1,49	0,09	0,07	99,11
2,00	-1,00	0,08	0,06	99,05
1,40	-0,49	0,12	0,09	98,96
1,00	0,00	0,42	0,33	98,63
0,710	0,49	1,44	1,12	97,51
0,500	1,00	8,40	6,54	90,96
0,355	1,49	19,00	14,80	76,16
0,250	2,00	33,83	26,36	49,80
0,180	2,47	44,96	35,03	14,77
0,125	3,00	16,79	13,08	1,69
0,090	3,47	1,41	1,10	0,59
0,075	3,74	0,17	0,13	0,46
0,063	3,99	0,05	0,04	0,42
< 0,063	> 3,99	0,54	0,42	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,42
Sand, fine (0,063 mm - 0,200 mm):	24,36
Sand, medium (0,2 mm - 0,6 mm):	69,30
Sand, coarse (0,6 mm - 2 mm):	4,97
Gravel (> 2 mm):	0,95
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,63	0,67
16%	84%	0,43	1,21
25%	75%	0,35	1,51
40%	60%	0,29	1,78
Median 50%	50%	0,25	2,00
75%	25%	0,20	2,32
84%	16%	0,18	2,45
90%	10%	0,16	2,64
95%	5%	0,14	2,85

Moments Statistics

Mean	1,89
Sorting	0,64
Skewness	-0,24
Kurtosis	1,11
Uniformity Coefficient	1,82

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

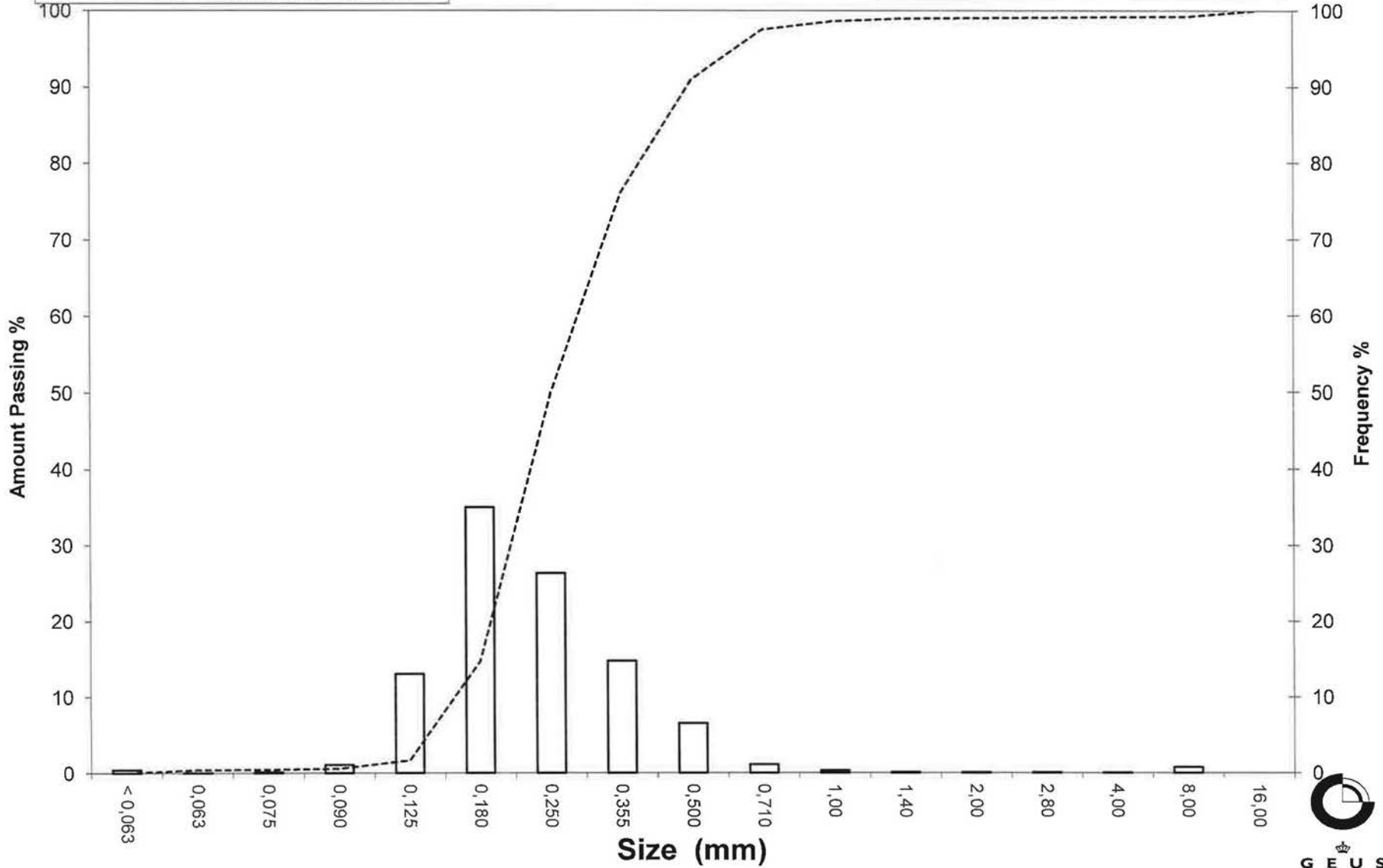
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-1 0-100 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: LAP-1 200-260 cm
Lab. Id: 14105
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 125,58 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,62	0,49	99,51
2,80	-1,49	0,38	0,30	99,20
2,00	-1,00	0,54	0,43	98,77
1,40	-0,49	0,68	0,54	98,23
1,00	0,00	1,21	0,96	97,27
0,710	0,49	3,17	2,52	94,74
0,500	1,00	13,53	10,77	83,97
0,355	1,49	29,47	23,47	60,50
0,250	2,00	25,48	20,29	40,21
0,180	2,47	24,79	19,74	20,47
0,125	3,00	20,39	16,24	4,24
0,090	3,47	3,59	2,86	1,38
0,075	3,74	0,48	0,38	1,00
0,063	3,99	0,21	0,17	0,83
< 0,063	> 3,99	1,04	0,83	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,83
Sand, fine (0,063 mm - 0,200 mm):	25,28
Sand, medium (0,2 mm - 0,6 mm):	62,99
Sand, coarse (0,6 mm - 2 mm):	9,67
Gravel (> 2 mm):	1,23
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,74	0,44
16%	84%	0,50	1,00
25%	75%	0,44	1,17
40%	60%	0,35	1,50
Median 50%	50%	0,30	1,73
75%	25%	0,20	2,35
84%	16%	0,16	2,60
90%	10%	0,14	2,79
95%	5%	0,13	2,97

Moments Statistics

Mean	1,78
Sorting	0,78
Skewness	0,03
Kurtosis	0,88
Uniformity Coefficient	2,44

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

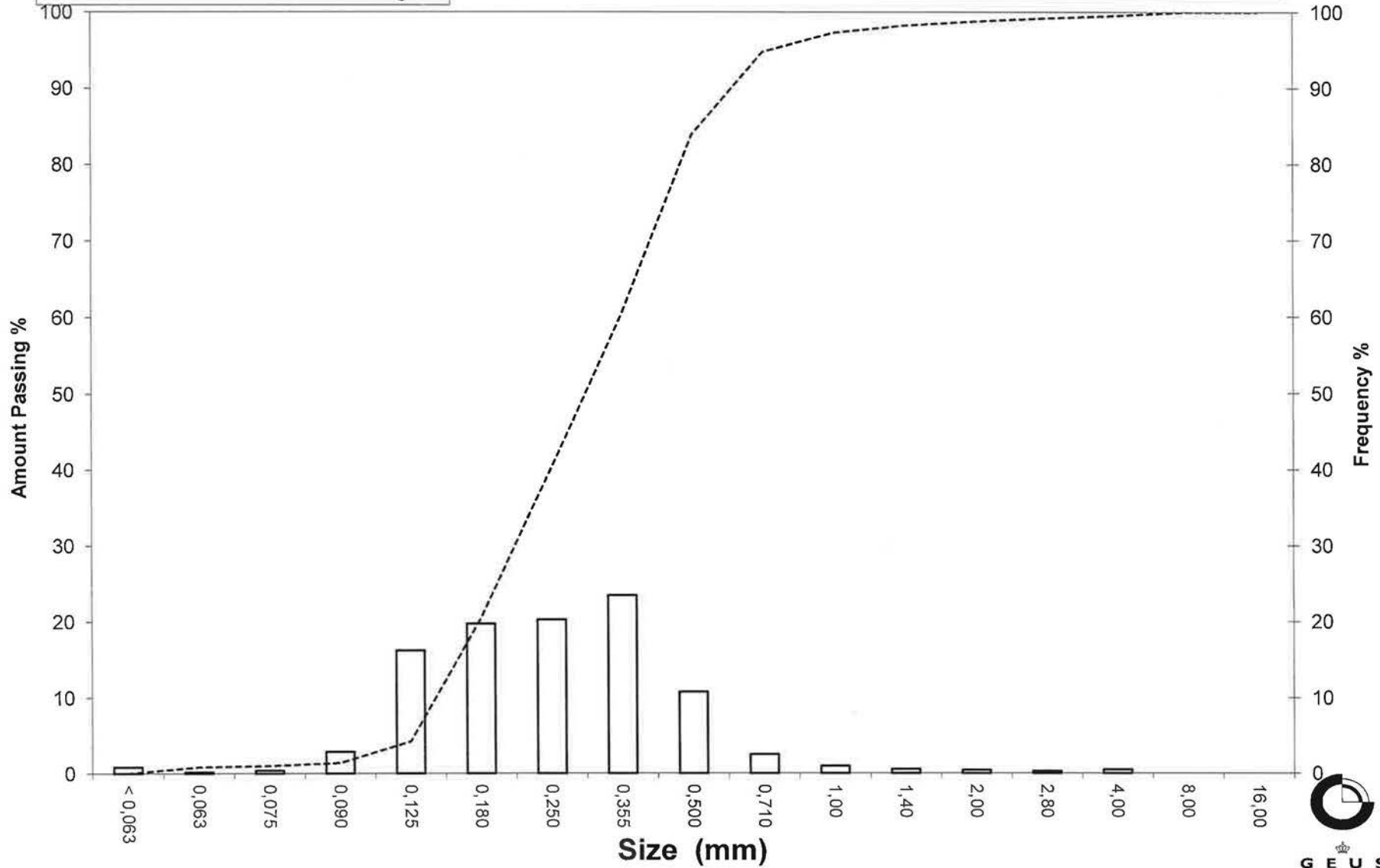
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-1 200-260 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: LAP-2 0-100 cm
Lab. Id: 14106
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 107,06 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,17	0,16	99,84
1,00	0,00	0,12	0,11	99,73
0,710	0,49	0,28	0,26	99,47
0,500	1,00	3,28	3,06	96,40
0,355	1,49	10,13	9,46	86,94
0,250	2,00	18,79	17,55	69,39
0,180	2,47	48,44	45,25	24,15
0,125	3,00	23,62	22,06	2,08
0,090	3,47	1,24	1,16	0,92
0,075	3,74	0,12	0,11	0,81
0,063	3,99	0,04	0,04	0,78
< 0,063	> 3,99	0,83	0,78	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,78
Sand, fine (0,063 mm - 0,200 mm):	36,30
Sand, medium (0,2 mm - 0,6 mm):	60,79
Sand, coarse (0,6 mm - 2 mm):	2,14
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,48	1,06
16%	84%	0,34	1,57
25%	75%	0,28	1,82
40%	60%	0,24	2,09
Median 50%	50%	0,22	2,18
75%	25%	0,18	2,46
84%	16%	0,16	2,65
90%	10%	0,14	2,79
95%	5%	0,13	2,92

Moments Statistics

Mean	2,13
Sorting	0,55
Skewness	-0,18
Kurtosis	1,18
Uniformity Coefficient	1,63

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

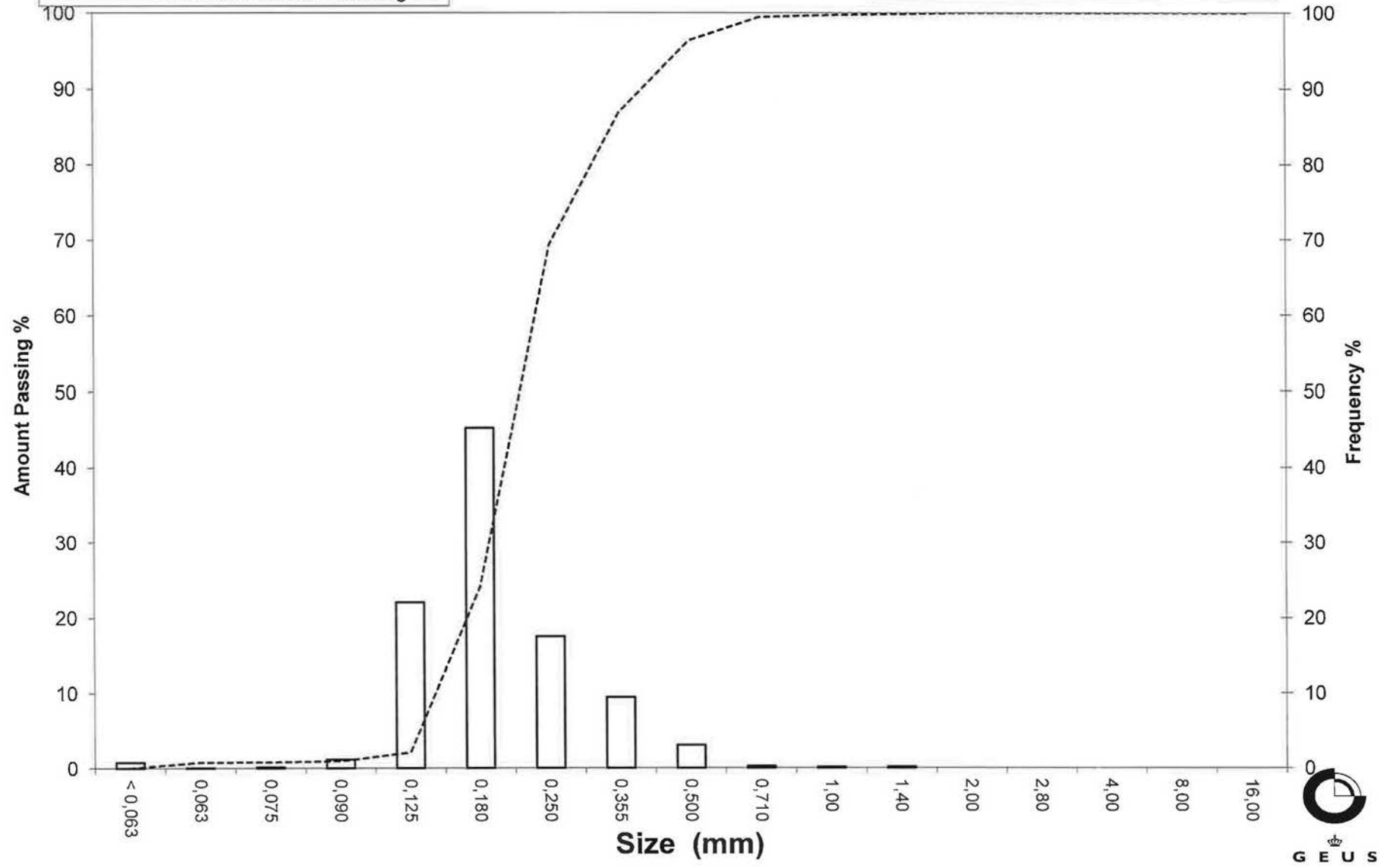
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-2 0-100 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: LAP-2 250-350 cm
Lab. Id: 14107
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 110,94 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,01	0,01	99,99
1,00	0,00	0,02	0,02	99,97
0,710	0,49	0,02	0,02	99,95
0,500	1,00	0,03	0,03	99,93
0,355	1,49	0,21	0,19	99,74
0,250	2,00	2,40	2,16	97,58
0,180	2,47	41,00	36,96	60,62
0,125	3,00	49,33	44,47	16,15
0,090	3,47	11,33	10,21	5,94
0,075	3,74	1,96	1,77	4,17
0,063	3,99	1,09	0,98	3,19
< 0,063	> 3,99	3,54	3,19	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,19
Sand, fine (0,063 mm - 0,200 mm):	67,99
Sand, medium (0,2 mm - 0,6 mm):	28,76
Sand, coarse (0,6 mm - 2 mm):	0,06
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,25	2,03
16%	84%	0,22	2,16
25%	75%	0,21	2,27
40%	60%	0,18	2,48
Median 50%	50%	0,17	2,58
75%	25%	0,14	2,88
84%	16%	0,12	3,01
90%	10%	0,10	3,27
95%	5%	0,08	3,61

Moments Statistics

Mean	2,58
Sorting	0,45
Skewness	0,15
Kurtosis	1,06
Uniformity Coefficient	1,72

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

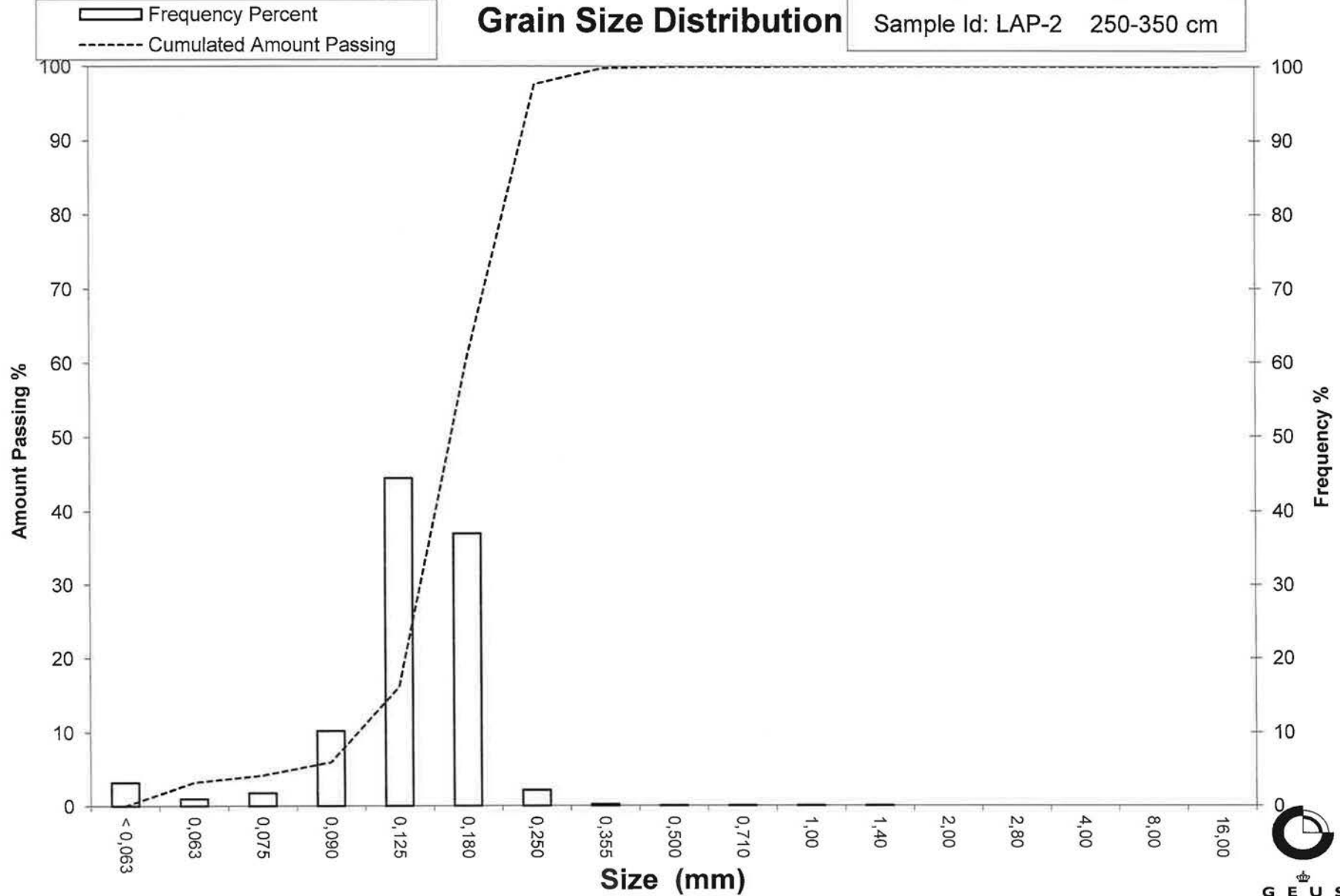
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-2 250-350 cm



Grain Size Distribution

Geotechnical

Sample Id: LAP-3 0-80 cm
Lab. Id: 14108
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 102,79 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,08	0,08	99,92
2,80	-1,49	0,11	0,11	99,82
2,00	-1,00	0,06	0,06	99,76
1,40	-0,49	0,08	0,08	99,68
1,00	0,00	0,26	0,25	99,43
0,710	0,49	0,38	0,37	99,06
0,500	1,00	2,37	2,31	96,75
0,355	1,49	8,21	7,99	88,76
0,250	2,00	25,51	24,82	63,95
0,180	2,47	41,66	40,53	23,42
0,125	3,00	20,82	20,25	3,16
0,090	3,47	2,21	2,15	1,01
0,075	3,74	0,25	0,24	0,77
0,063	3,99	0,12	0,12	0,65
< 0,063	> 3,99	0,67	0,65	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,65
Sand, fine (0,063 mm - 0,200 mm):	34,34
Sand, medium (0,2 mm - 0,6 mm):	62,85
Sand, coarse (0,6 mm - 2 mm):	1,91
Gravel (> 2 mm):	0,24
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,47	1,09
16%	84%	0,33	1,58
25%	75%	0,30	1,75
40%	60%	0,24	2,04
Median 50%	50%	0,23	2,15
75%	25%	0,18	2,45
84%	16%	0,16	2,65
90%	10%	0,14	2,80
95%	5%	0,13	2,94

Moments Statistics

Mean	2,12
Sorting	0,55
Skewness	-0,10
Kurtosis	1,08
Uniformity Coefficient	1,69

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

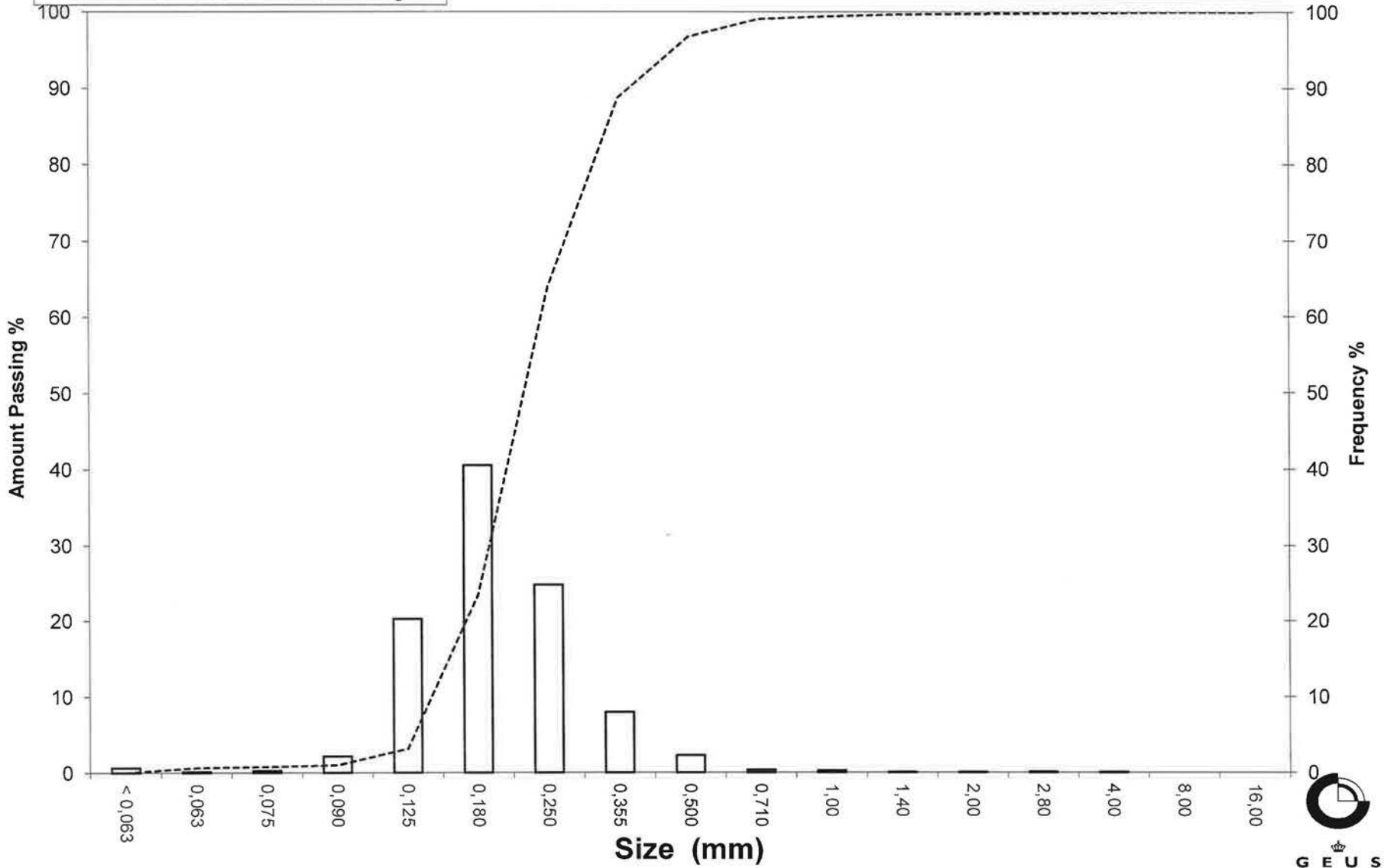
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-3 0-80 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: LAP-4 0-50 cm
Lab. Id: 14109
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 109,22 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,08	0,07	99,93
2,80	-1,49	0,00	0,00	99,93
2,00	-1,00	0,00	0,00	99,93
1,40	-0,49	0,08	0,07	99,85
1,00	0,00	0,21	0,19	99,66
0,710	0,49	1,06	0,97	98,69
0,500	1,00	11,42	10,46	88,23
0,355	1,49	34,70	31,77	56,46
0,250	2,00	42,50	38,91	17,55
0,180	2,47	15,40	14,10	3,45
0,125	3,00	2,65	2,43	1,03
0,090	3,47	0,42	0,38	0,64
0,075	3,74	0,06	0,05	0,59
0,063	3,99	0,02	0,02	0,57
< 0,063	> 3,99	0,62	0,57	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,57
Sand, fine (0,063 mm - 0,200 mm):	6,91
Sand, medium (0,2 mm - 0,6 mm):	85,73
Sand, coarse (0,6 mm - 2 mm):	6,71
Gravel (> 2 mm):	0,07
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,64	0,65
16%	84%	0,48	1,06
25%	75%	0,44	1,19
40%	60%	0,37	1,43
Median 50%	50%	0,34	1,57
75%	25%	0,27	1,89
84%	16%	0,24	2,05
90%	10%	0,21	2,23
95%	5%	0,19	2,41

Moments Statistics

Mean	1,56
Sorting	0,51
Skewness	-0,03
Kurtosis	1,03
Uniformity Coefficient	1,75

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

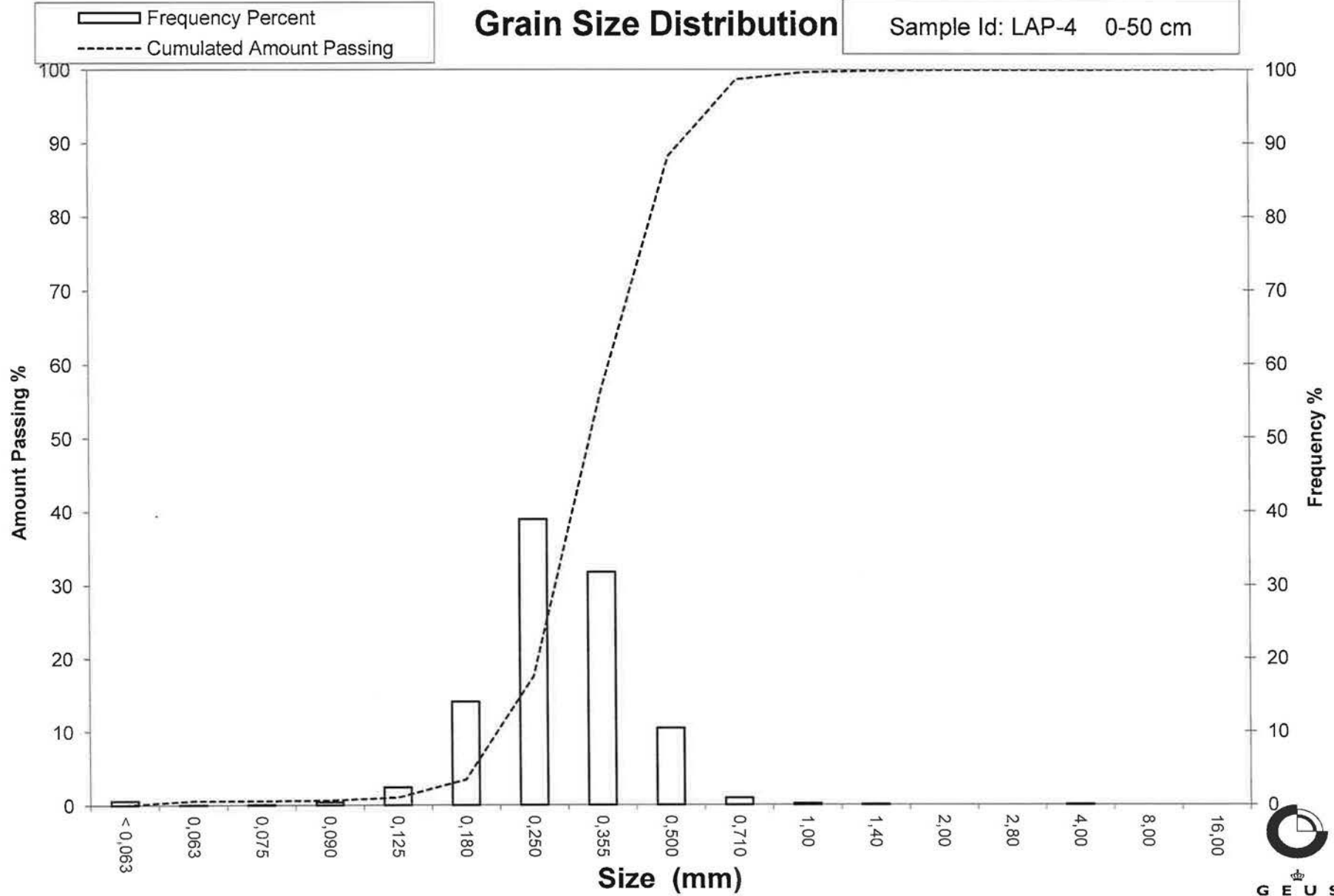
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-4 0-50 cm



Grain Size Distribution

Geotechnical

Sample Id: LAP-4 50-140 cm
Lab. Id: 14110
Submitter: Naturstyrelsen
Subject: Lappegrund kerne
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 122,27 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,12	0,10	99,90
2,80	-1,49	0,01	0,01	99,89
2,00	-1,00	0,04	0,03	99,86
1,40	-0,49	0,12	0,10	99,76
1,00	0,00	0,48	0,39	99,37
0,710	0,49	1,15	0,94	98,43
0,500	1,00	6,70	5,48	92,95
0,355	1,49	20,38	16,67	76,28
0,250	2,00	41,84	34,22	42,06
0,180	2,47	34,50	28,22	13,85
0,125	3,00	12,70	10,39	3,46
0,090	3,47	2,76	2,26	1,20
0,075	3,74	0,44	0,36	0,84
0,063	3,99	0,19	0,16	0,69
< 0,063	> 3,99	0,84	0,69	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,69
Sand, fine (0,063 mm - 0,200 mm):	21,22
Sand, medium (0,2 mm - 0,6 mm):	73,65
Sand, coarse (0,6 mm - 2 mm):	4,30
Gravel (> 2 mm):	0,14
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,58	0,79
16%	84%	0,42	1,24
25%	75%	0,35	1,51
40%	60%	0,31	1,71
Median 50%	50%	0,27	1,87
75%	25%	0,21	2,27
84%	16%	0,19	2,43
90%	10%	0,16	2,65
95%	5%	0,13	2,91

Moments Statistics

Mean	1,85
Sorting	0,62
Skewness	-0,03
Kurtosis	1,15
Uniformity Coefficient	1,91

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

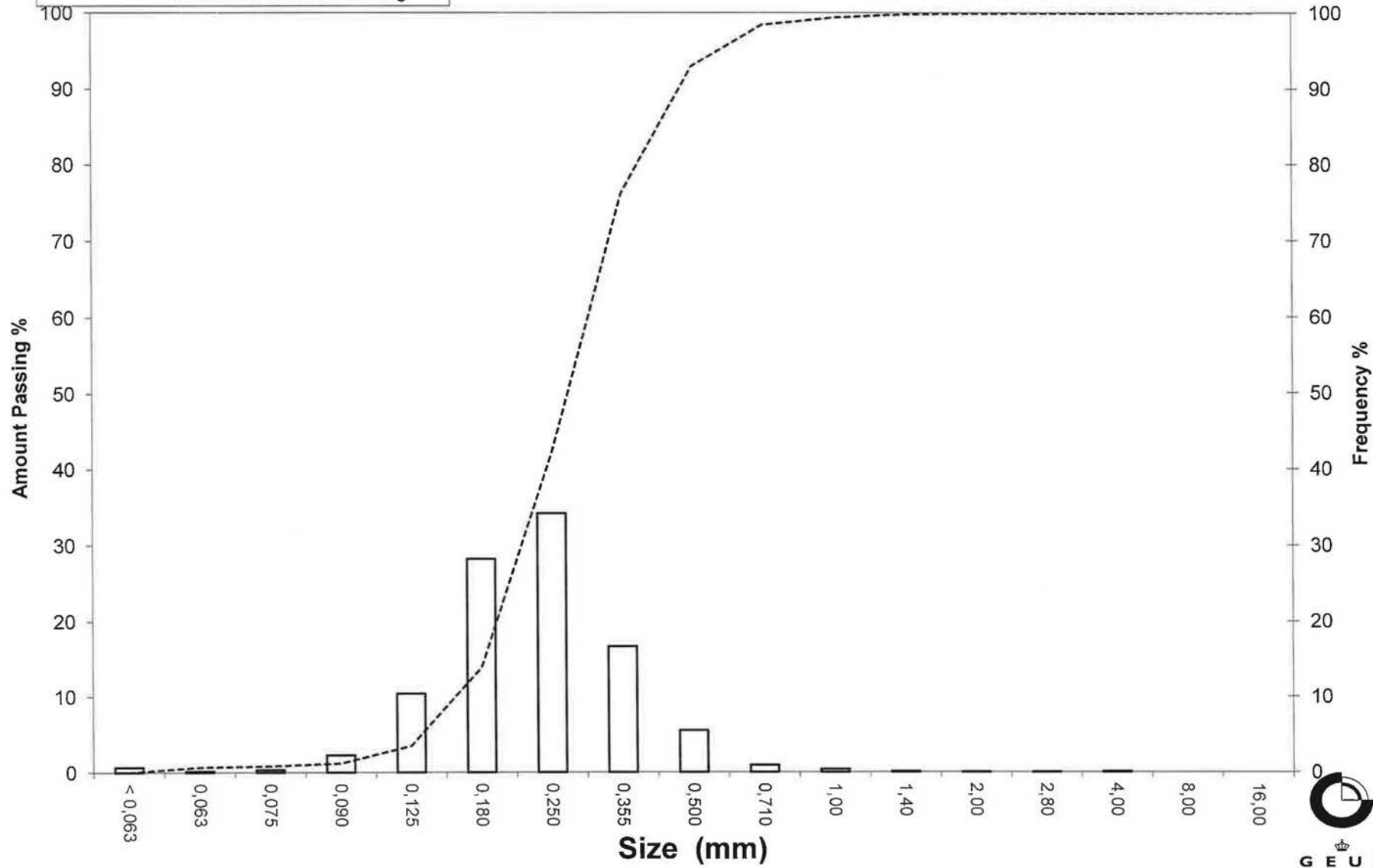
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: LAP-4 50-140 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: NF-2 140-250 cm
Lab. Id: 14111
Submitter: Naturstyrelsen
Subject: Nivå Flak
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 129,5 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	2,43	1,88	98,12
4,00	-2,00	0,21	0,16	97,96
2,80	-1,49	0,39	0,30	97,66
2,00	-1,00	0,50	0,39	97,27
1,40	-0,49	0,80	0,62	96,66
1,00	0,00	1,48	1,14	95,51
0,710	0,49	2,71	2,09	93,42
0,500	1,00	9,06	7,00	86,42
0,355	1,49	20,94	16,17	70,25
0,250	2,00	36,70	28,34	41,92
0,180	2,47	22,60	17,45	24,46
0,125	3,00	12,86	9,93	14,53
0,090	3,47	5,87	4,53	10,00
0,075	3,74	1,39	1,07	8,93
0,063	3,99	0,99	0,76	8,16
< 0,063	> 3,99	10,57	8,16	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	8,16
Sand, fine (0,063 mm - 0,200 mm):	21,29
Sand, medium (0,2 mm - 0,6 mm):	60,31
Sand, coarse (0,6 mm - 2 mm):	7,52
Gravel (> 2 mm):	2,73
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,93	0,11
16%	84%	0,48	1,06
25%	75%	0,40	1,33
40%	60%	0,32	1,66
Median 50%	50%	0,28	1,84
75%	25%	0,18	2,46
84%	16%	0,13	2,91
90%	10%	0,09	3,47
95%	5%	-----	-----

Moments Statistics

Mean	1,94
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	3,52

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

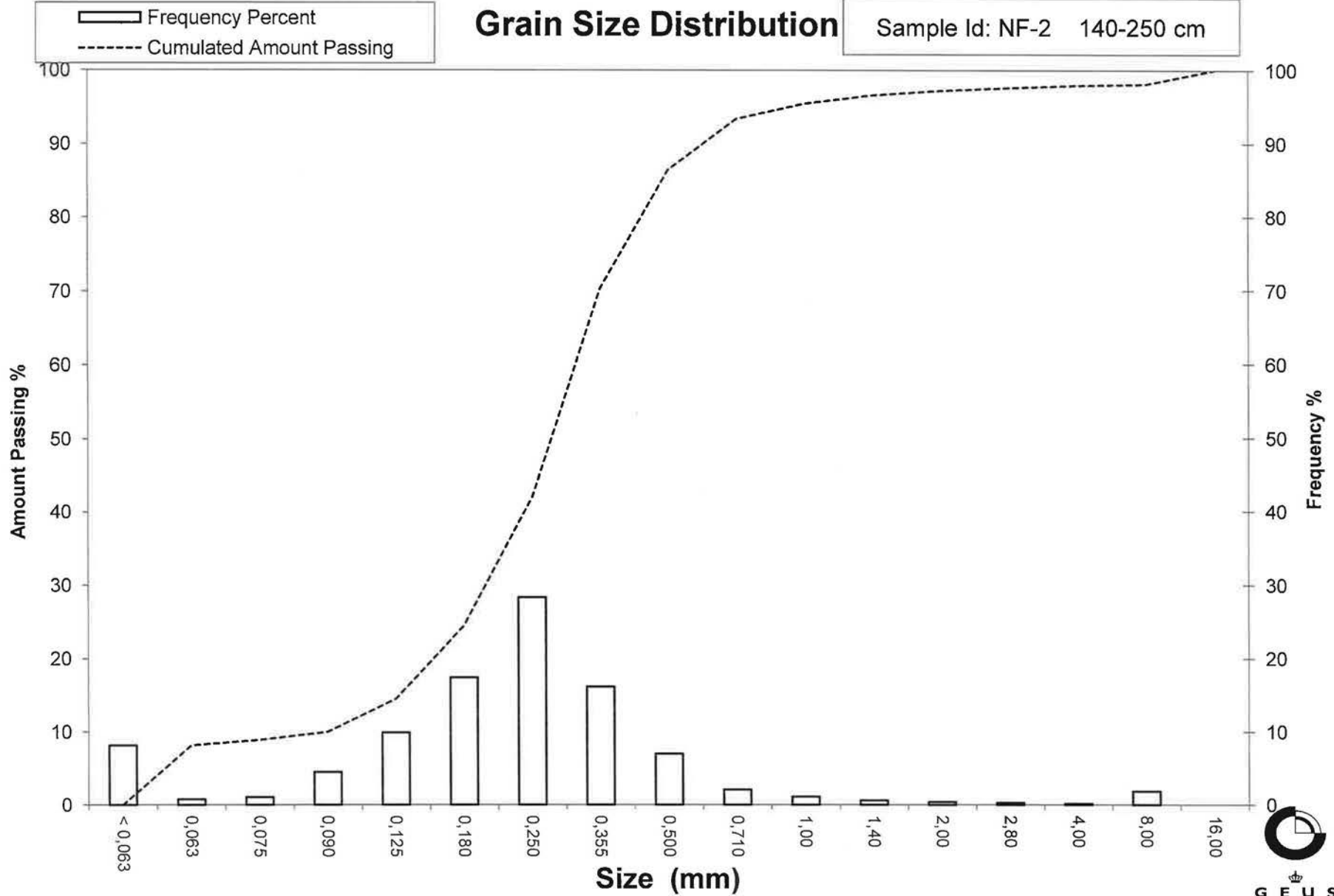
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: NF-2 140-250 cm



Grain Size Distribution

Geotechnical

Sample Id: NF-3 90-180 cm
Lab. Id: 14112
Submitter: Naturstyrelsen
Subject: Nivå Flak
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 136,3 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,66	0,48	99,52
4,00	-2,00	2,11	1,55	97,97
2,80	-1,49	4,62	3,39	94,58
2,00	-1,00	5,28	3,87	90,70
1,40	-0,49	7,25	5,32	85,39
1,00	0,00	9,04	6,63	78,75
0,710	0,49	8,20	6,02	72,74
0,500	1,00	12,97	9,52	63,22
0,355	1,49	24,76	18,17	45,06
0,250	2,00	36,36	26,68	18,38
0,180	2,47	16,64	12,21	6,17
0,125	3,00	4,83	3,54	2,63
0,090	3,47	1,04	0,76	1,86
0,075	3,74	0,27	0,20	1,67
0,063	3,99	0,19	0,14	1,53
< 0,063	> 3,99	2,08	1,53	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	1,53
Sand, fine (0,063 mm - 0,200 mm):	8,13
Sand, medium (0,2 mm - 0,6 mm):	58,09
Sand, coarse (0,6 mm - 2 mm):	22,95
Gravel (> 2 mm):	9,30
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	2,95	-1,56
16%	84%	1,32	-0,40
25%	75%	0,82	0,29
40%	60%	0,47	1,08
Median 50%	50%	0,39	1,34
75%	25%	0,28	1,86
84%	16%	0,24	2,08
90%	10%	0,20	2,31
95%	5%	0,16	2,63

Moments Statistics

Mean	1,01
Sorting	1,25
Skewness	-0,39
Kurtosis	1,09
Uniformity Coefficient	2,35

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

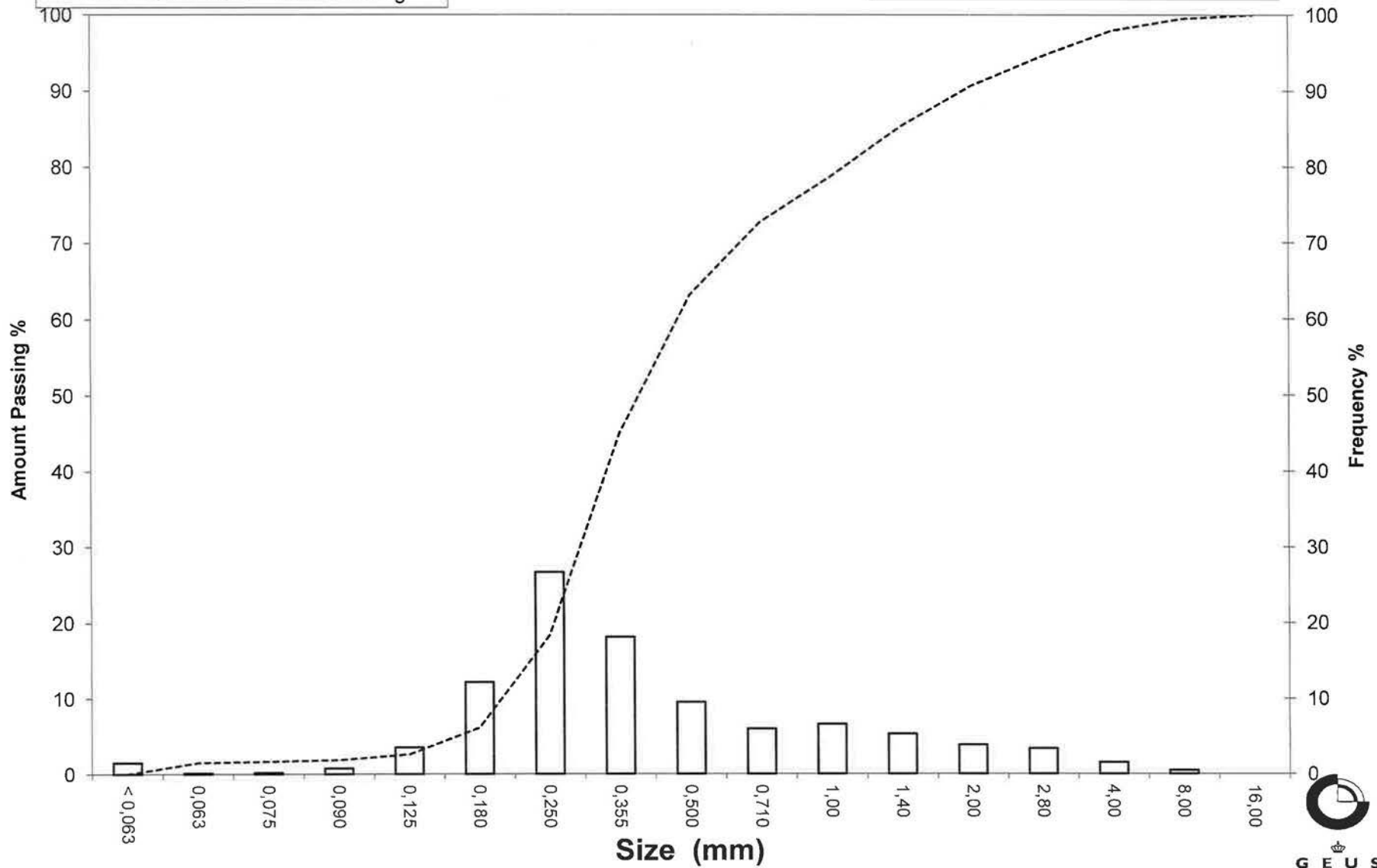
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: NF-3 90-180 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: NF-4 50-150 cm
Lab. Id: 14113
Submitter: Naturstyrelsen
Subject: Nivå Flak
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 8mm.



Total Weight 220,15 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	5,24	2,38	97,62
4,00	-2,00	14,13	6,42	91,20
2,80	-1,49	19,14	8,69	82,51
2,00	-1,00	21,65	9,83	72,67
1,40	-0,49	19,62	8,91	63,76
1,00	0,00	15,97	7,25	56,51
0,710	0,49	15,62	7,10	49,41
0,500	1,00	22,88	10,39	39,02
0,355	1,49	24,46	11,11	27,91
0,250	2,00	24,79	11,26	16,65
0,180	2,47	13,64	6,20	10,45
0,125	3,00	9,13	4,15	6,30
0,090	3,47	4,14	1,88	4,42
0,075	3,74	1,34	0,61	3,82
0,063	3,99	1,11	0,50	3,31
< 0,063	> 3,99	7,29	3,31	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	3,31
Sand, fine (0,063 mm - 0,200 mm):	8,91
Sand, medium (0,2 mm - 0,6 mm):	31,75
Sand, coarse (0,6 mm - 2 mm):	28,71
Gravel (> 2 mm):	27,33
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	6,37	-2,67
16%	84%	3,01	-1,59
25%	75%	2,19	-1,13
40%	60%	1,19	-0,25
Median 50%	50%	0,73	0,45
75%	25%	0,33	1,61
84%	16%	0,24	2,04
90%	10%	0,17	2,52
95%	5%	0,10	3,31

Moments Statistics

Mean	0,30
Sorting	1,81
Skewness	-0,08
Kurtosis	0,90
Uniformity Coefficient	6,85

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

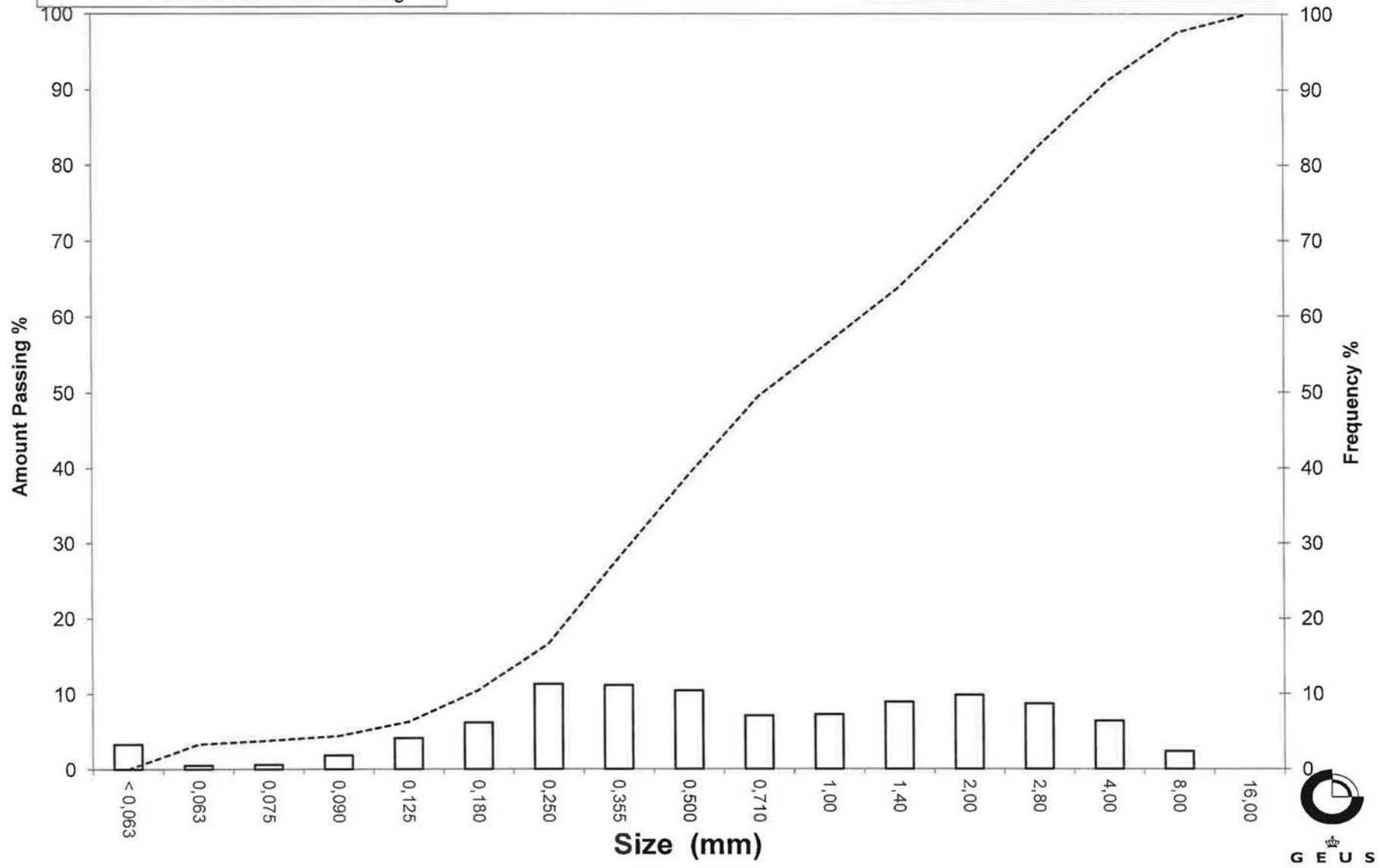
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: NF-4 50-150 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ORS-1 0-100 cm
Lab. Id: 14114
Submitter: Naturstyrelsen
Subject: Øresund Syd
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 122,6 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	5,25	4,28	95,72
8,00	-3,00	0,59	0,48	95,24
4,00	-2,00	5,86	4,78	90,46
2,80	-1,49	2,30	1,88	88,58
2,00	-1,00	2,73	2,23	86,35
1,40	-0,49	2,71	2,21	84,14
1,00	0,00	3,32	2,71	81,44
0,710	0,49	3,44	2,81	78,63
0,500	1,00	5,34	4,36	74,27
0,355	1,49	6,66	5,43	68,84
0,250	2,00	10,02	8,17	60,67
0,180	2,47	17,49	14,27	46,40
0,125	3,00	26,63	21,72	24,68
0,090	3,47	11,83	9,65	15,03
0,075	3,74	3,06	2,49	12,54
0,063	3,99	2,50	2,04	10,50
< 0,063	> 3,99	12,87	10,50	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	10,50
Sand, fine (0,063 mm - 0,200 mm):	39,98
Sand, medium (0,2 mm - 0,6 mm):	25,87
Sand, coarse (0,6 mm - 2 mm):	10,01
Gravel (> 2 mm):	13,65
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	7,80	-2,96
16%	84%	1,38	-0,46
25%	75%	0,54	0,90
40%	60%	0,25	2,02
Median 50%	50%	0,20	2,34
75%	25%	0,13	2,99
84%	16%	0,09	3,42
90%	10%	-----	-----
95%	5%	-----	-----

Moments Statistics

Mean	1,76
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	-----

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

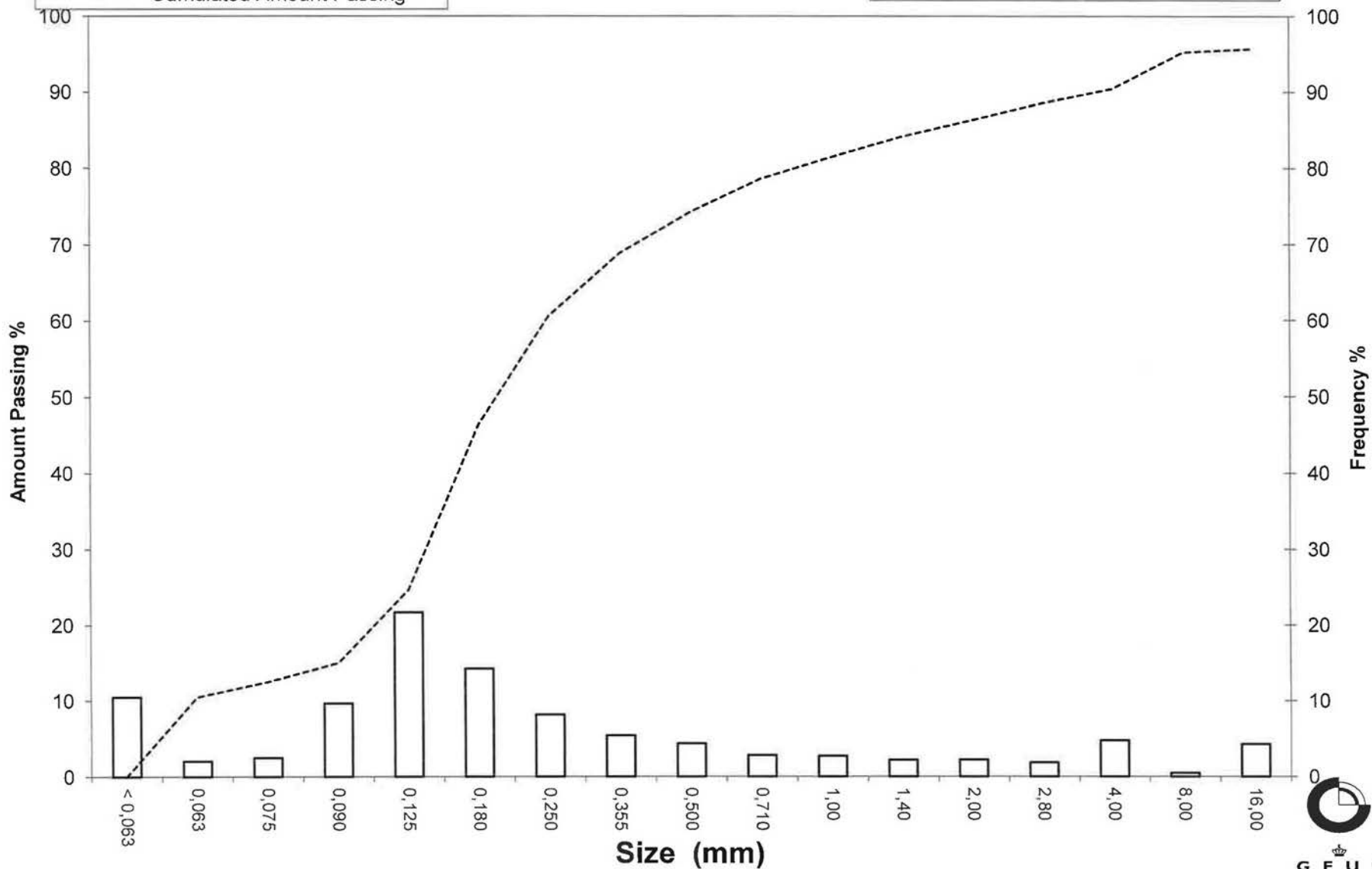
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ORS-1 0-100 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ORS-1 90-190 cm
Lab. Id: 14115
Submitter: Naturstyrelsen
Subject: Øresund Syd
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 116,69 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,02	0,02	99,98
1,40	-0,49	0,02	0,02	99,97
1,00	0,00	0,08	0,07	99,90
0,710	0,49	0,13	0,11	99,79
0,500	1,00	0,23	0,20	99,59
0,355	1,49	0,44	0,38	99,21
0,250	2,00	1,71	1,47	97,75
0,180	2,47	14,57	12,49	85,26
0,125	3,00	55,98	47,97	37,29
0,090	3,47	29,92	25,64	11,65
0,075	3,74	4,95	4,24	7,40
0,063	3,99	2,90	2,49	4,92
< 0,063	> 3,99	5,74	4,92	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	4,92
Sand, fine (0,063 mm - 0,200 mm):	83,91
Sand, medium (0,2 mm - 0,6 mm):	10,85
Sand, coarse (0,6 mm - 2 mm):	0,30
Gravel (> 2 mm):	0,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,23	2,09
16%	84%	0,18	2,49
25%	75%	0,17	2,57
40%	60%	0,15	2,73
Median 50%	50%	0,14	2,84
75%	25%	0,11	3,21
84%	16%	0,10	3,38
90%	10%	0,08	3,57
95%	5%	0,06	3,98

Moments Statistics

Mean	2,90
Sorting	0,51
Skewness	0,21
Kurtosis	1,22
Uniformity Coefficient	1,79

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

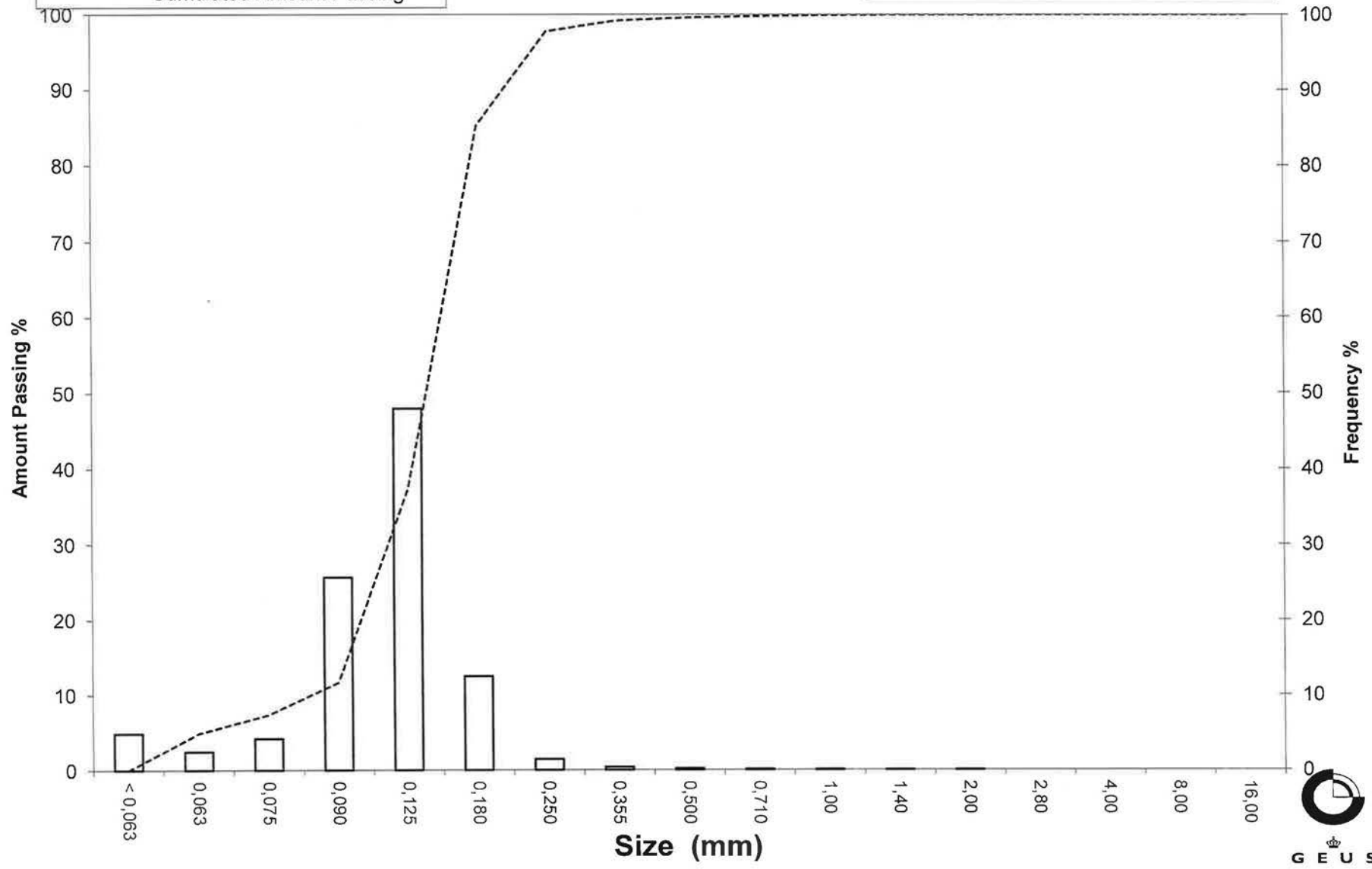
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ORS-1 90-190 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: OR-S-2 200-280 cm
Lab. Id: 14116
Submitter: Naturstyrelsen
Subject: Øresund Syd
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 8mm.



Total Weight 208,73 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	7,65	3,67	96,33
4,00	-2,00	19,26	9,23	87,11
2,80	-1,49	15,38	7,37	79,74
2,00	-1,00	16,20	7,76	71,98
1,40	-0,49	17,03	8,16	63,82
1,00	0,00	21,33	10,22	53,60
0,710	0,49	19,47	9,33	44,27
0,500	1,00	25,93	12,42	31,85
0,355	1,49	26,73	12,81	19,04
0,250	2,00	24,49	11,73	7,31
0,180	2,47	9,66	4,63	2,68
0,125	3,00	2,94	1,41	1,27
0,090	3,47	0,57	0,27	1,00
0,075	3,74	0,17	0,08	0,92
0,063	3,99	0,12	0,06	0,86
< 0,063	> 3,99	1,80	0,86	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,86
Sand, fine (0,063 mm - 0,200 mm):	3,14
Sand, medium (0,2 mm - 0,6 mm):	33,76
Sand, coarse (0,6 mm - 2 mm):	34,21
Gravel (> 2 mm):	28,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	7,42	-2,89
16%	84%	3,49	-1,80
25%	75%	2,31	-1,21
40%	60%	1,25	-0,32
Median 50%	50%	0,89	0,17
75%	25%	0,42	1,24
84%	16%	0,33	1,61
90%	10%	0,27	1,87
95%	5%	0,22	2,22

Moments Statistics

Mean	-0,01
Sorting	1,63
Skewness	-0,18
Kurtosis	0,85
Uniformity Coefficient	4,56

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

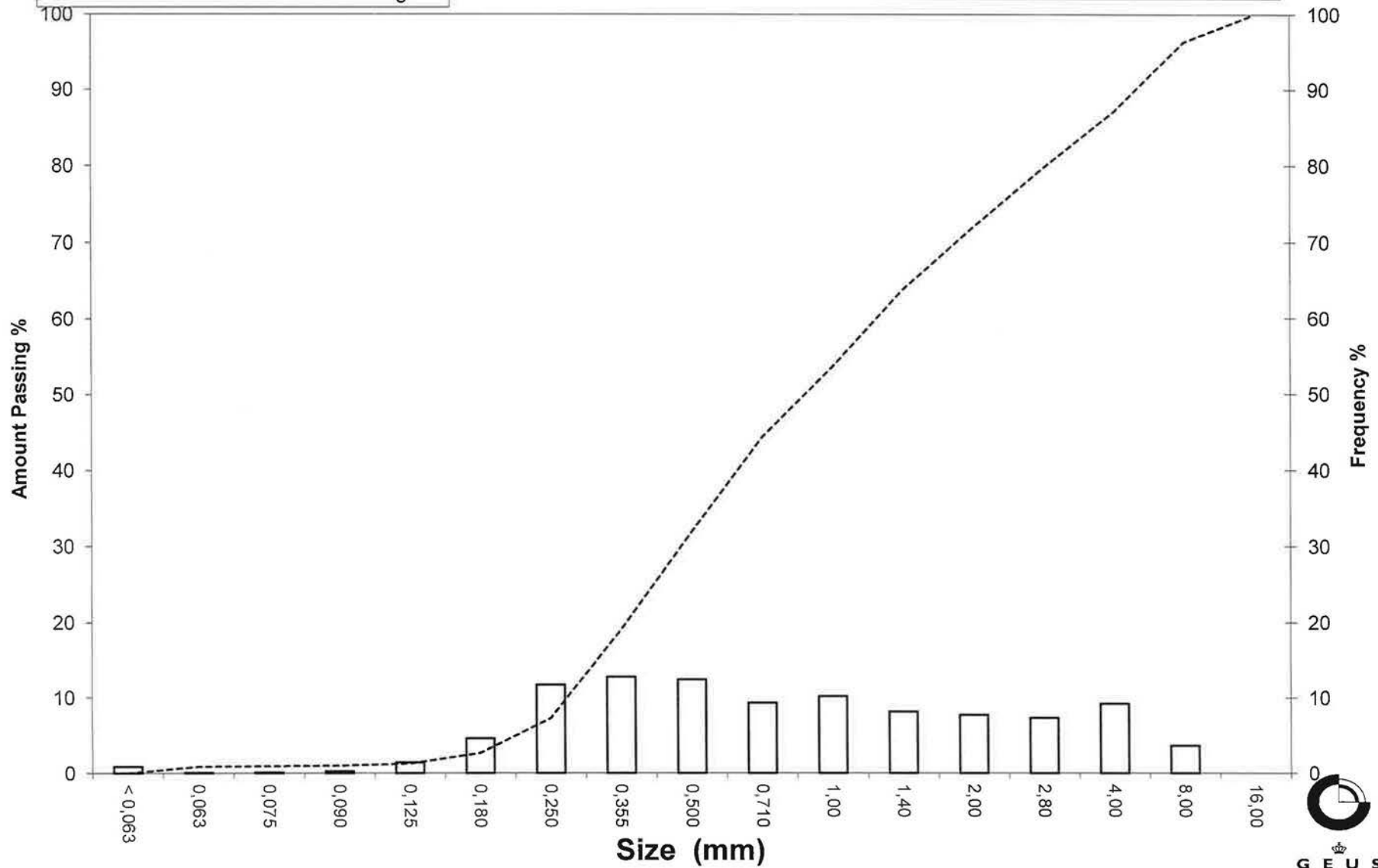
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: OR-S-2 200-280 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: OR--S4 0-200 cm
Lab. Id: 14117
Submitter: Naturstyrelsen
Subject: Øresund Syd
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 137,91 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	4,22	3,06	96,94
4,00	-2,00	5,68	4,12	92,82
2,80	-1,49	2,28	1,65	91,17
2,00	-1,00	2,17	1,57	89,59
1,40	-0,49	2,77	2,01	87,59
1,00	0,00	5,36	3,89	83,70
0,710	0,49	6,51	4,72	78,98
0,500	1,00	11,08	8,03	70,94
0,355	1,49	16,41	11,90	59,05
0,250	2,00	22,10	16,02	43,02
0,180	2,47	14,80	10,73	32,29
0,125	3,00	9,28	6,73	25,56
0,090	3,47	6,22	4,51	21,05
0,075	3,74	3,10	2,25	18,80
0,063	3,99	2,96	2,15	16,66
< 0,063	> 3,99	22,97	16,66	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	16,66
Sand, fine (0,063 mm - 0,200 mm)	18,70
Sand, medium (0,2 mm - 0,6 mm)	39,42
Sand, coarse (0,6 mm - 2 mm)	14,82
Gravel (> 2 mm)	10,41
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	6,12	-2,61
16%	84%	1,03	-0,04
25%	75%	0,61	0,72
40%	60%	0,37	1,45
Median 50%	50%	0,30	1,76
75%	25%	0,12	3,05
84%	16%	-----	-----
90%	10%	-----	-----
95%	5%	-----	-----

Moments Statistics

Mean	0,86
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	-----

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

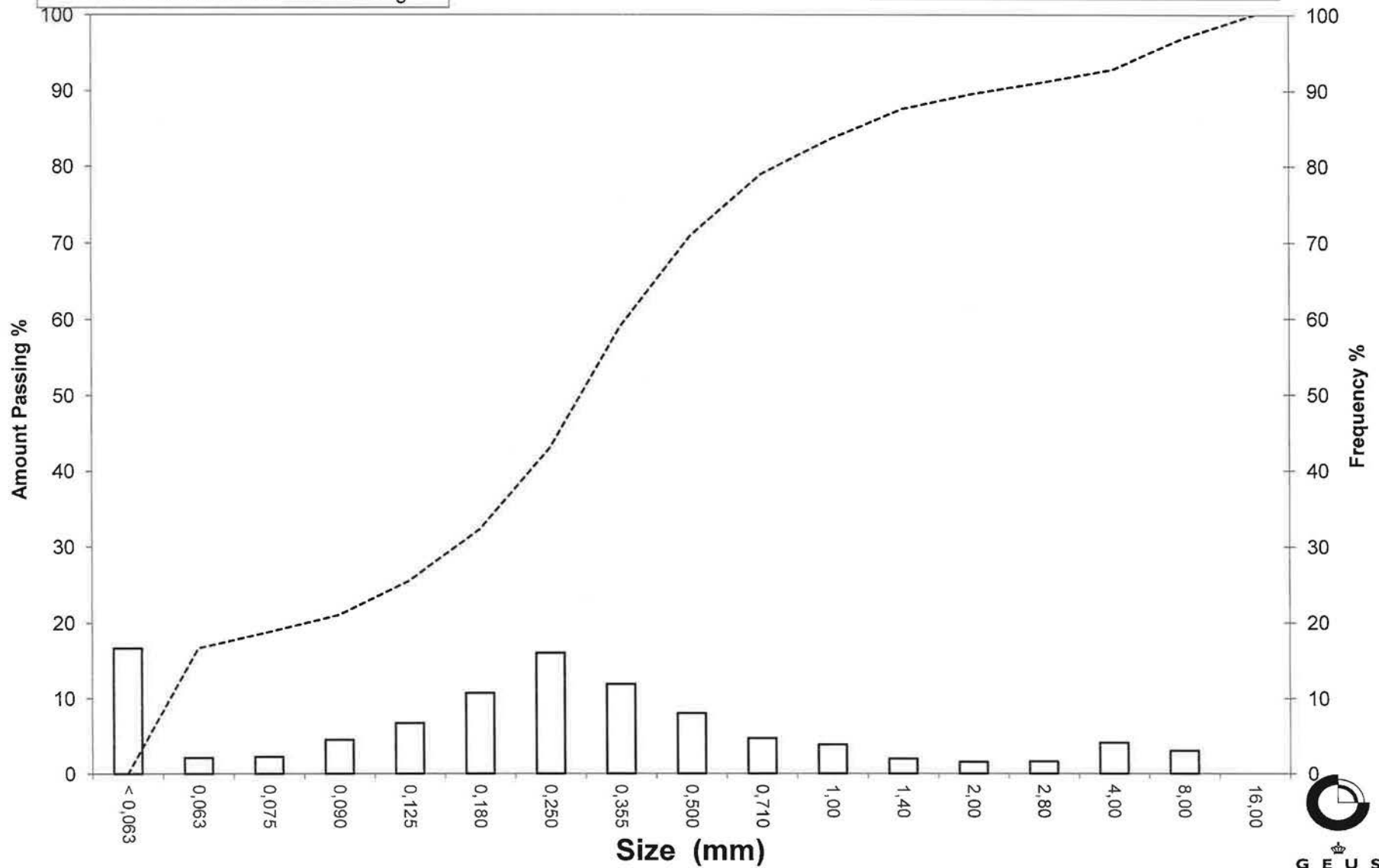
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: OR--S4 0-200 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: OR-S-13 0-100 cm
Lab. Id: 14118
Submitter: Naturstyrelsen
Subject: Øresund Syd
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 115,29 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	1,09	0,95	99,05
4,00	-2,00	1,34	1,16	97,89
2,80	-1,49	0,49	0,43	97,47
2,00	-1,00	0,85	0,74	96,73
1,40	-0,49	0,80	0,69	96,04
1,00	0,00	1,46	1,27	94,77
0,710	0,49	5,33	4,62	90,15
0,500	1,00	24,87	21,57	68,57
0,355	1,49	39,41	34,18	34,39
0,250	2,00	25,55	22,16	12,23
0,180	2,47	7,00	6,07	6,16
0,125	3,00	1,32	1,14	5,01
0,090	3,47	0,62	0,54	4,48
0,075	3,74	0,29	0,25	4,22
0,063	3,99	0,28	0,24	3,98
< 0,063	> 3,99	4,59	3,98	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	3,98
Sand, fine (0,063 mm - 0,200 mm):	3,91
Sand, medium (0,2 mm - 0,6 mm):	70,95
Sand, coarse (0,6 mm - 2 mm):	17,88
Gravel (> 2 mm):	3,27
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,07	-0,10
16%	84%	0,65	0,62
25%	75%	0,56	0,83
40%	60%	0,46	1,11
Median 50%	50%	0,42	1,25
75%	25%	0,31	1,69
84%	16%	0,27	1,90
90%	10%	0,22	2,16
95%	5%	0,12	3,01

Moments Statistics

Mean	1,26
Sorting	0,79
Skewness	0,08
Kurtosis	1,49
Uniformity Coefficient	2,07

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

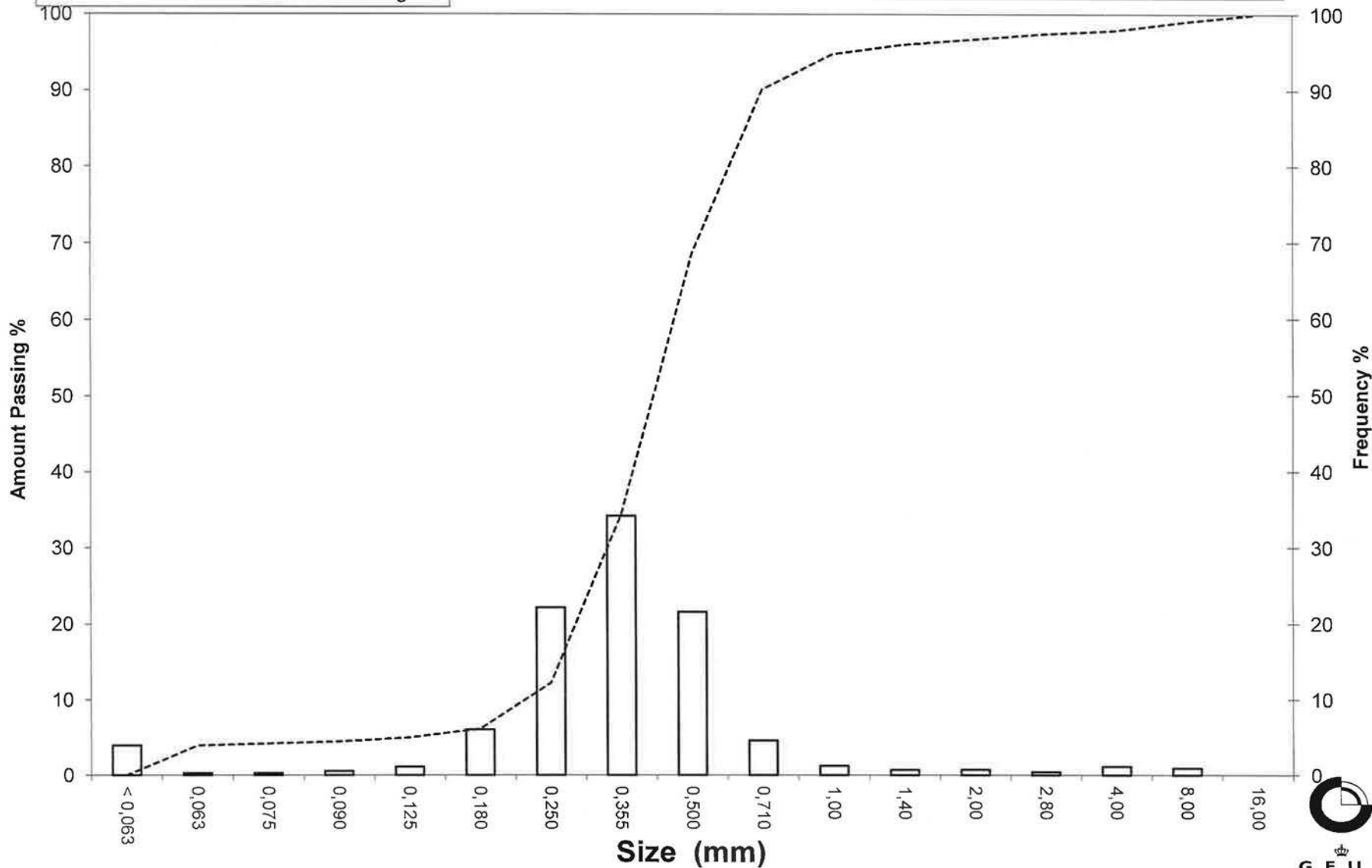
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: OR-S-13 0-100 cm

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: OR-S-20 0-18 cm
Lab. Id: 14119
Submitter: Naturstyrelsen
Subject: Øresund Syd
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 112,08 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,02	0,02	99,98
1,00	0,00	0,09	0,08	99,90
0,710	0,49	0,75	0,67	99,23
0,500	1,00	7,40	6,60	92,63
0,355	1,49	14,56	12,99	79,64
0,250	2,00	15,20	13,56	66,08
0,180	2,47	16,85	15,03	51,04
0,125	3,00	27,42	24,46	26,58
0,090	3,47	13,61	12,14	14,44
0,075	3,74	3,49	3,11	11,32
0,063	3,99	2,64	2,36	8,97
< 0,063	> 3,99	10,05	8,97	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	8,97
Sand, fine (0,063 mm - 0,200 mm):	46,37
Sand, medium (0,2 mm - 0,6 mm):	40,43
Sand, coarse (0,6 mm - 2 mm):	4,23
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,58	0,80
16%	84%	0,40	1,31
25%	75%	0,32	1,65
40%	60%	0,22	2,17
Median 50%	50%	0,18	2,49
75%	25%	0,12	3,05
84%	16%	0,09	3,40
90%	10%	0,07	3,87
95%	5%	-----	-----

Moments Statistics

Mean	2,40
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	3,25

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

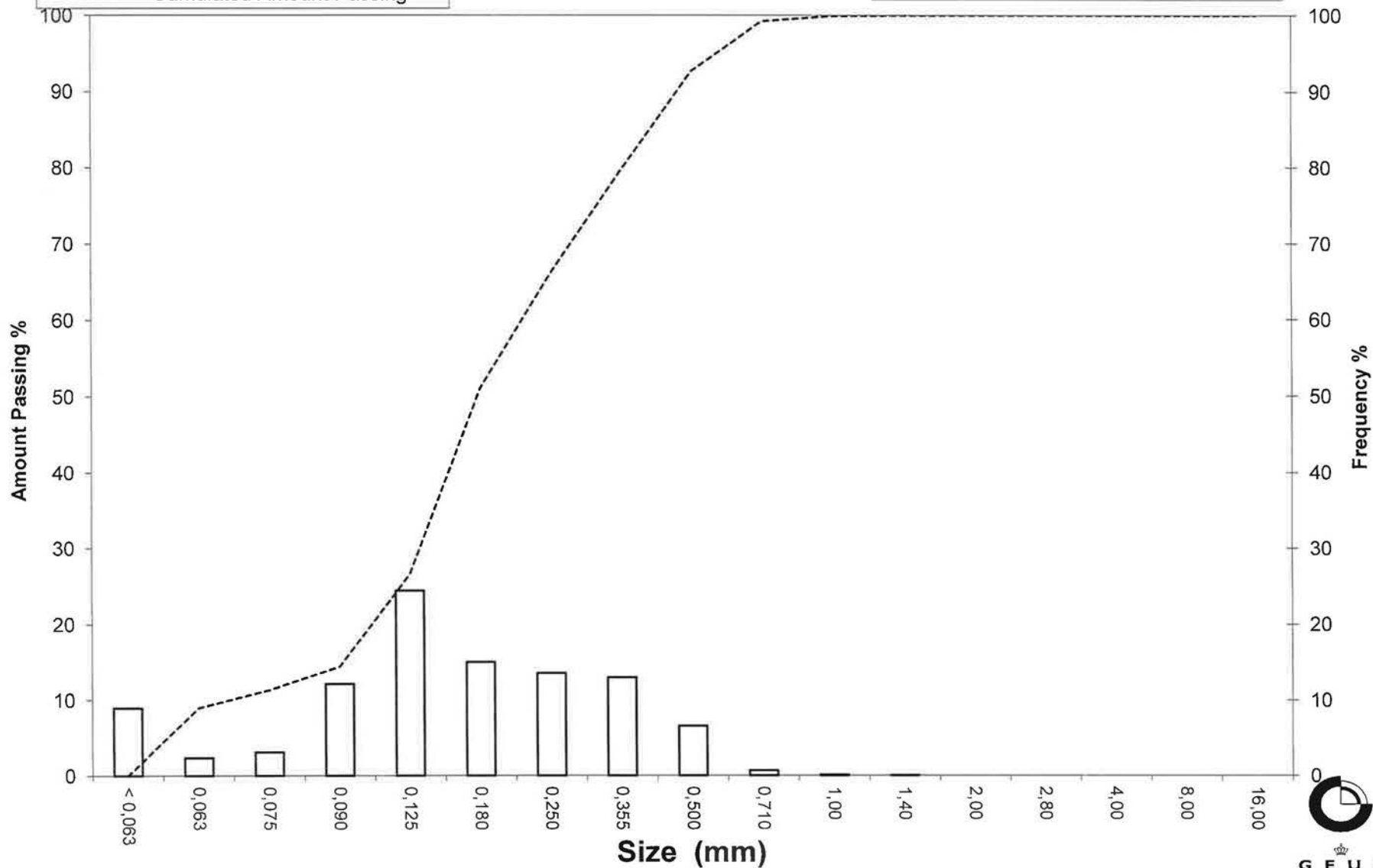
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: OR-S-20 0-18 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: SK-1 0-40 cm
Lab. Id: 14120
Submitter: Naturstyrelsen
Subject: Skovshoved
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 123,01 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	15,70	12,76	87,24
4,00	-2,00	3,11	2,53	84,71
2,80	-1,49	1,79	1,46	83,25
2,00	-1,00	2,47	2,01	81,25
1,40	-0,49	2,44	1,98	79,26
1,00	0,00	2,48	2,02	77,25
0,710	0,49	2,37	1,93	75,32
0,500	1,00	3,46	2,81	72,51
0,355	1,49	3,75	3,05	69,46
0,250	2,00	8,65	7,03	62,43
0,180	2,47	26,62	21,64	40,79
0,125	3,00	31,54	25,64	15,15
0,090	3,47	9,83	7,99	7,15
0,075	3,74	2,41	1,96	5,19
0,063	3,99	1,59	1,29	3,90
< 0,063	> 3,99	4,80	3,90	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,90
Sand, fine (0,063 mm - 0,200 mm):	43,07
Sand, medium (0,2 mm - 0,6 mm):	26,88
Sand, coarse (0,6 mm - 2 mm):	7,40
Gravel (> 2 mm):	18,75
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	12,87	-3,69
16%	84%	3,42	-1,77
25%	75%	0,69	0,54
40%	60%	0,24	2,05
Median 50%	50%	0,21	2,25
75%	25%	0,15	2,77
84%	16%	0,13	2,98
90%	10%	0,10	3,29
95%	5%	0,07	3,77

Moments Statistics

Mean	1,15
Sorting	2,32
Skewness	-0,64
Kurtosis	1,37
Uniformity Coefficient	2,36

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

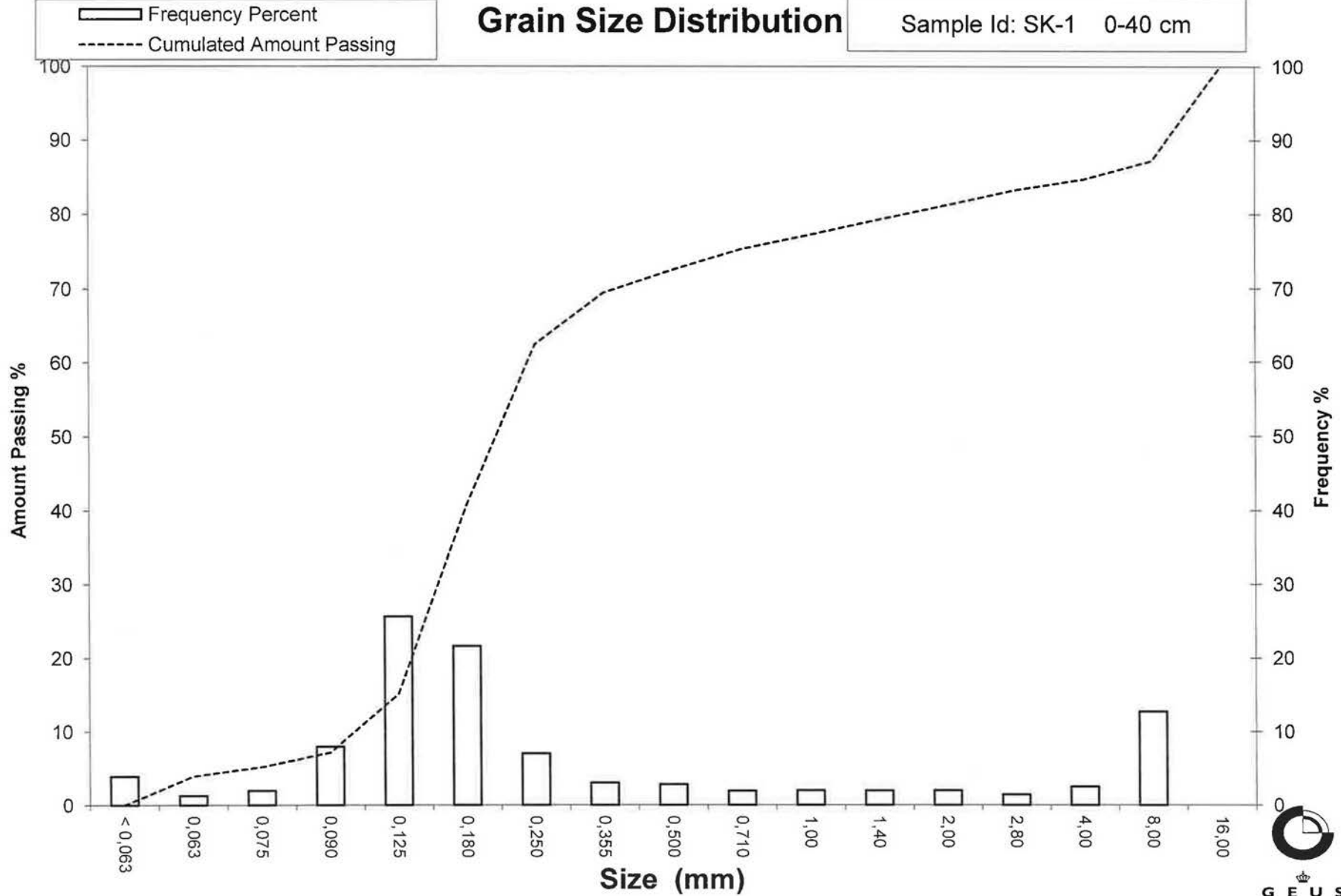
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: SK-1 0-40 cm



Grain Size Distribution

Geotechnical

Sample Id: SK-2 0-40 cm
Lab. Id: 14121
Submitter: Naturstyrelsen
Subject: Skovshoved
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 121,94 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	1,95	1,60	98,40
2,80	-1,49	0,27	0,22	98,18
2,00	-1,00	0,38	0,31	97,87
1,40	-0,49	1,06	0,87	97,00
1,00	0,00	3,36	2,76	94,24
0,710	0,49	6,95	5,70	88,54
0,500	1,00	17,10	14,02	74,52
0,355	1,49	30,40	24,93	49,59
0,250	2,00	40,36	33,10	16,49
0,180	2,47	13,55	11,11	5,38
0,125	3,00	4,32	3,54	1,84
0,090	3,47	0,94	0,77	1,07
0,075	3,74	0,17	0,14	0,93
0,063	3,99	0,12	0,10	0,83
< 0,063	> 3,99	1,01	0,83	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,83
Sand, fine (0,063 mm - 0,200 mm):	7,73
Sand, medium (0,2 mm - 0,6 mm):	72,64
Sand, coarse (0,6 mm - 2 mm):	16,67
Gravel (> 2 mm):	2,13
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,11	-0,15
16%	84%	0,64	0,64
25%	75%	0,51	0,98
40%	60%	0,42	1,27
Median 50%	50%	0,36	1,48
75%	25%	0,28	1,85
84%	16%	0,25	2,02
90%	10%	0,21	2,26
95%	5%	0,17	2,52

Moments Statistics

Mean	1,38
Sorting	0,75
Skewness	-0,22
Kurtosis	1,26
Uniformity Coefficient	1,99

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

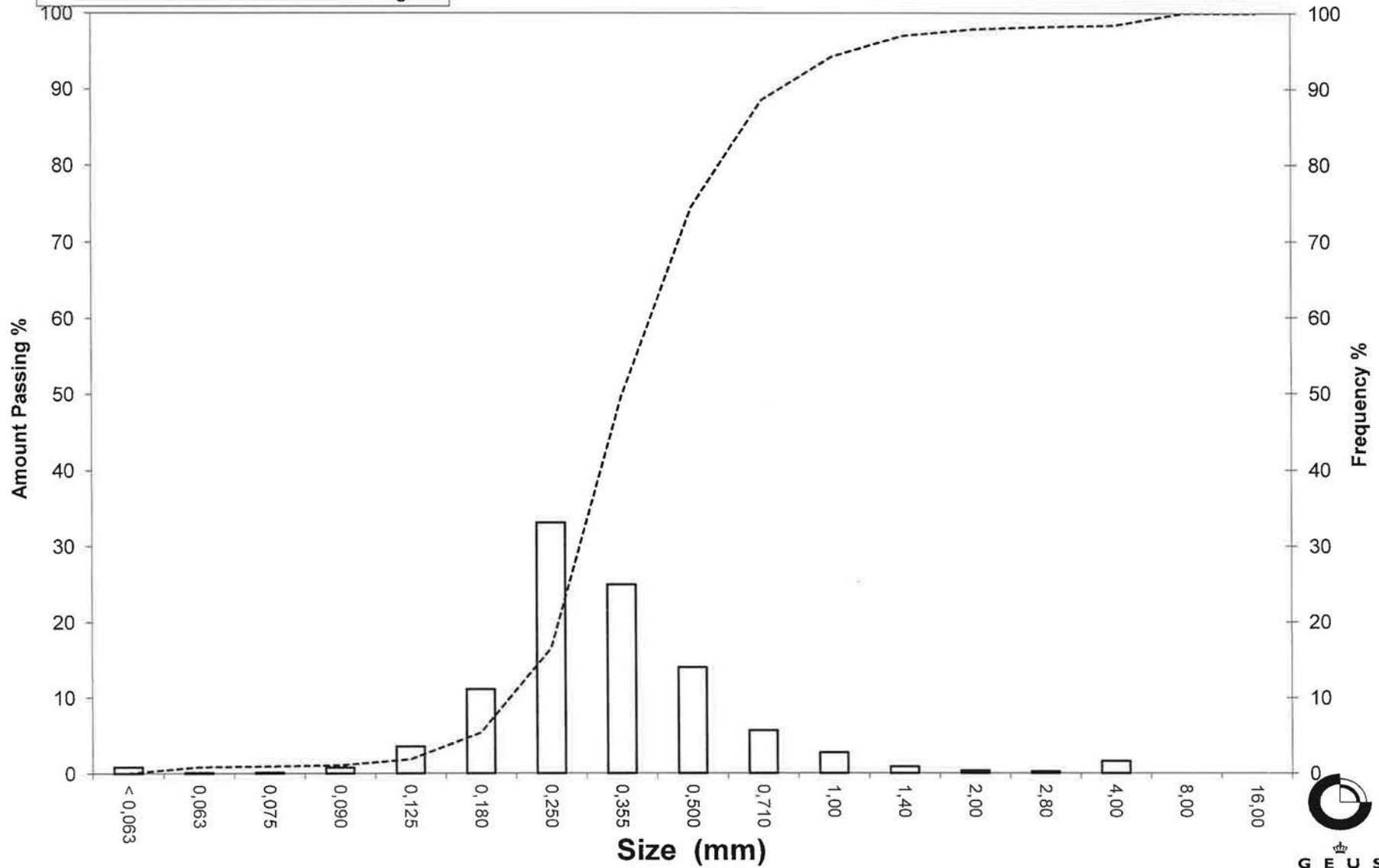
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: SK-2 0-40 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: SK-3 180-300 cm
Lab. Id: 14122
Submitter: Naturstyrelsen
Subject: Skovshoved
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 16mm.



Total Weight 2537,16 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	1029,79	40,59	59,41
8,00	-3,00	414,19	16,32	43,09
4,00	-2,00	278,87	10,99	32,10
2,80	-1,49	77,48	3,05	29,04
2,00	-1,00	102,40	4,04	25,01
1,40	-0,49	105,12	4,14	20,86
1,00	0,00	115,66	4,56	16,30
0,710	0,49	110,22	4,34	11,96
0,500	1,00	90,45	3,57	8,39
0,355	1,49	48,43	1,91	6,49
0,250	2,00	36,38	1,43	5,05
0,180	2,47	24,29	0,96	4,09
0,125	3,00	22,20	0,87	3,22
0,090	3,47	13,02	0,51	2,71
0,075	3,74	4,81	0,19	2,52
0,063	3,99	4,23	0,17	2,35
< 0,063	> 3,99	59,62	2,35	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	2,35
Sand, fine (0,063 mm - 0,200 mm):	2,02
Sand, medium (0,2 mm - 0,6 mm):	5,72
Sand, coarse (0,6 mm - 2 mm):	14,91
Gravel (> 2 mm):	74,99
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	-----	-----
16%	84%	-----	-----
25%	75%	-----	-----
40%	60%	-----	-----
Median 50%	50%	11,39	-3,51
75%	25%	2,00	-1,00
84%	16%	0,98	0,03
90%	10%	0,59	0,75
95%	5%	0,25	2,02

Moments Statistics

Mean	-1,74
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	-----

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

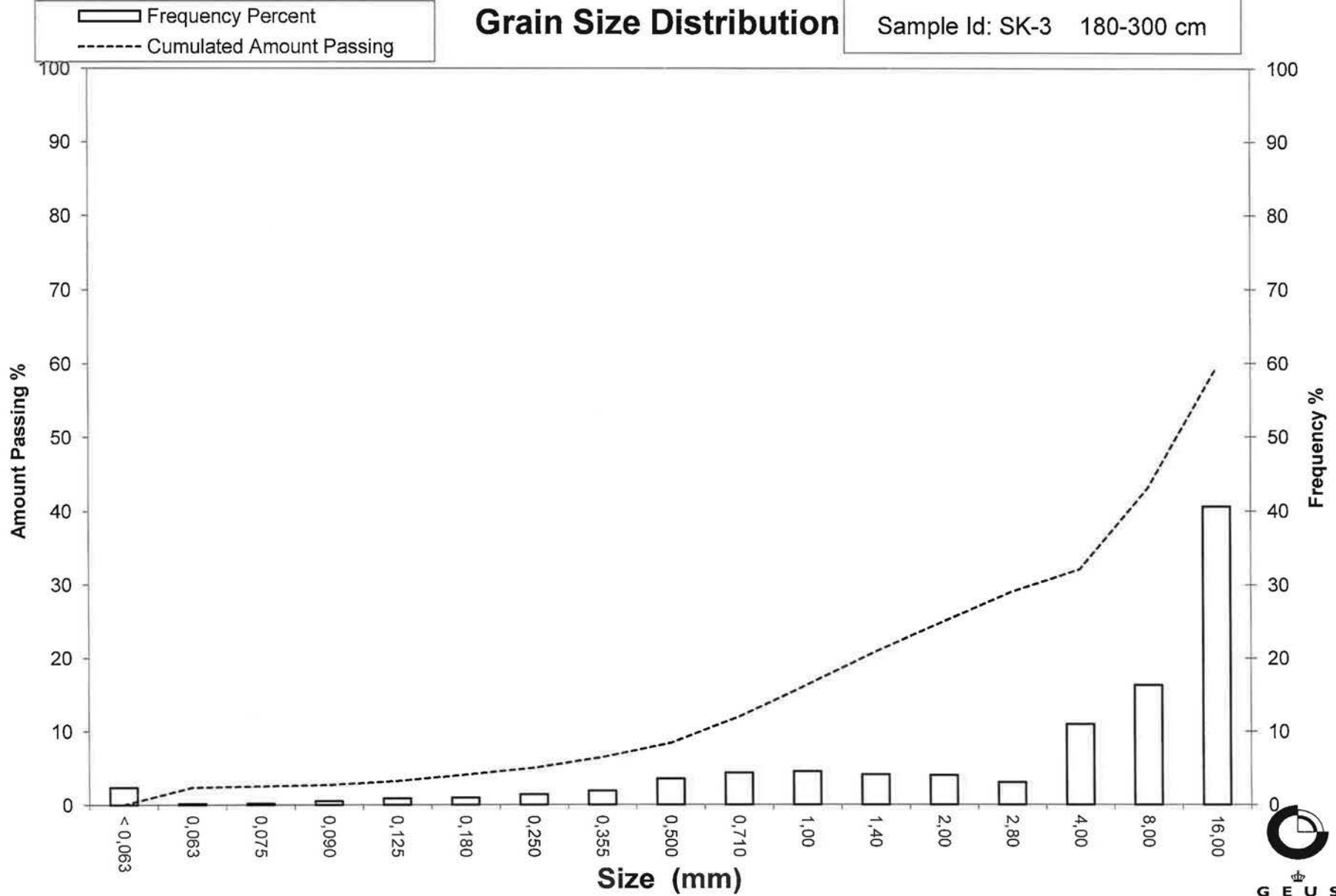
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: SK-3 180-300 cm



Grain Size Distribution

Geotechnical

Sample Id: SK-3 0-70 cm
Lab. Id: 14123
Submitter: Naturstyrelsen
Subject: Skovshoved
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 117,95 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,39	0,33	99,67
2,80	-1,49	0,24	0,20	99,47
2,00	-1,00	0,47	0,40	99,07
1,40	-0,49	0,51	0,43	98,64
1,00	0,00	0,96	0,81	97,82
0,710	0,49	1,04	0,88	96,94
0,500	1,00	1,86	1,58	95,36
0,355	1,49	3,10	2,63	92,73
0,250	2,00	8,38	7,10	85,63
0,180	2,47	31,07	26,34	59,29
0,125	3,00	43,60	36,96	22,32
0,090	3,47	13,95	11,83	10,50
0,075	3,74	3,15	2,67	7,83
0,063	3,99	2,22	1,88	5,94
< 0,063	> 3,99	7,01	5,94	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	5,94
Sand, fine (0,063 mm - 0,200 mm)	60,87
Sand, medium (0,2 mm - 0,6 mm)	29,30
Sand, coarse (0,6 mm - 2 mm)	2,95
Gravel (> 2 mm)	0,93
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,48	1,06
16%	84%	0,25	2,03
25%	75%	0,22	2,17
40%	60%	0,18	2,46
Median 50%	50%	0,17	2,59
75%	25%	0,13	2,95
84%	16%	0,11	3,23
90%	10%	0,09	3,52
95%	5%	-----	-----

Moments Statistics

Mean	2,62
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	2,09

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

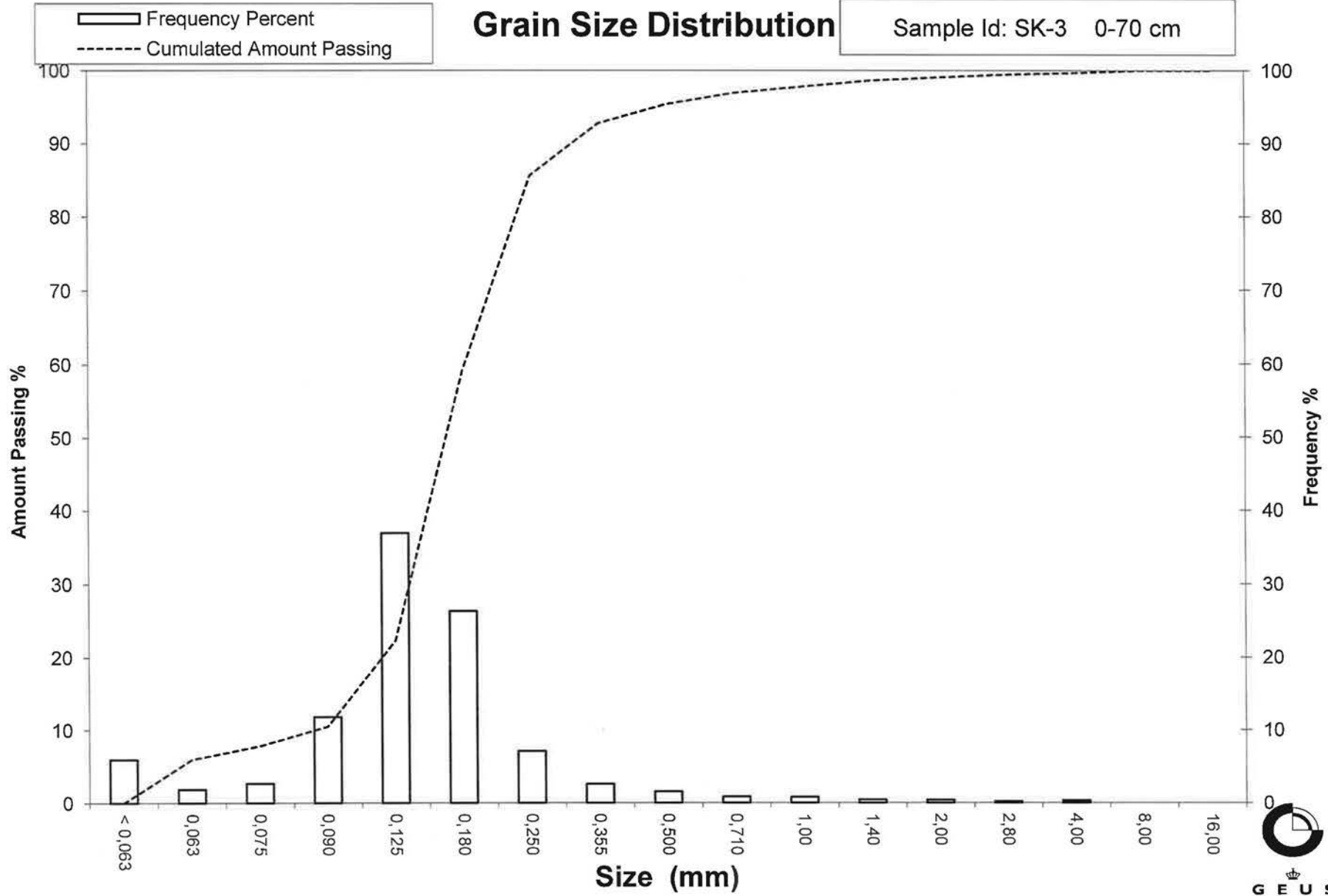
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Øster Voldgade 10 1350 København K
 Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: SK-3 0-70 cm



Grain Size Distribution

Geotechnical

Sample Id: ØN-1 0-70 cm
Lab. Id: 14124
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 8mm.



Total Weight 199,78 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	2,40	1,20	98,80
4,00	-2,00	9,31	4,66	94,14
2,80	-1,49	8,75	4,38	89,76
2,00	-1,00	9,93	4,97	84,79
1,40	-0,49	13,99	7,00	77,79
1,00	0,00	22,08	11,05	66,73
0,710	0,49	27,68	13,86	52,88
0,500	1,00	50,69	25,37	27,51
0,355	1,49	40,09	20,07	7,44
0,250	2,00	10,97	5,49	1,95
0,180	2,47	2,19	1,10	0,85
0,125	3,00	0,75	0,38	0,48
0,090	3,47	0,22	0,11	0,37
0,075	3,74	0,00	0,00	0,37
0,063	3,99	0,00	0,00	0,37
< 0,063	> 3,99	0,73	0,37	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,37
Sand, fine (0,063 mm - 0,200 mm):	0,80
Sand, medium (0,2 mm - 0,6 mm):	38,42
Sand, coarse (0,6 mm - 2 mm):	45,20
Gravel (> 2 mm):	15,21
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	4,74	-2,24
16%	84%	1,93	-0,95
25%	75%	1,30	-0,38
40%	60%	0,86	0,22
Median 50%	50%	0,69	0,54
75%	25%	0,48	1,05
84%	16%	0,42	1,26
90%	10%	0,37	1,42
95%	5%	0,31	1,70

Moments Statistics

Mean	0,29
Sorting	1,15
Skewness	-0,38
Kurtosis	1,13
Uniformity Coefficient	2,30

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

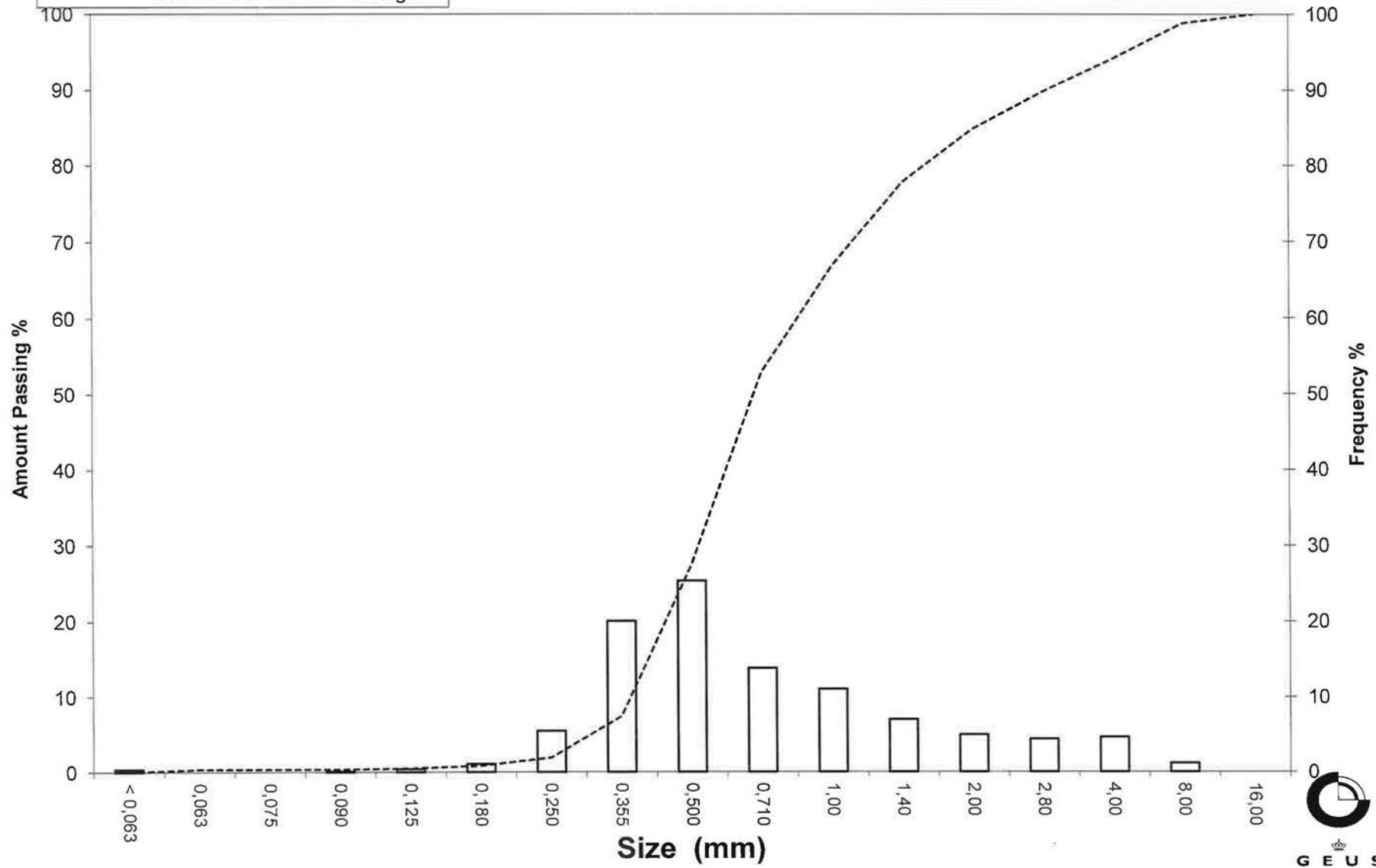
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-1 0-70 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ØN-1 100-150 cm
Lab. Id: 14125
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 129,63 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,55	0,42	99,58
2,00	-1,00	0,56	0,43	99,14
1,40	-0,49	0,66	0,51	98,63
1,00	0,00	2,57	1,98	96,65
0,710	0,49	5,52	4,26	92,39
0,500	1,00	22,54	17,39	75,01
0,355	1,49	45,40	35,02	39,98
0,250	2,00	32,95	25,42	14,56
0,180	2,47	14,86	11,46	3,10
0,125	3,00	3,40	2,62	0,48
0,090	3,47	0,16	0,12	0,35
0,075	3,74	0,01	0,01	0,35
0,063	3,99	0,01	0,01	0,34
< 0,063	> 3,99	0,44	0,34	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,34
Sand, fine (0,063 mm - 0,200 mm):	6,04
Sand, medium (0,2 mm - 0,6 mm):	76,91
Sand, coarse (0,6 mm - 2 mm):	15,86
Gravel (> 2 mm):	0,86
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,89	0,17
16%	84%	0,61	0,72
25%	75%	0,50	1,00
40%	60%	0,44	1,19
Median 50%	50%	0,40	1,33
75%	25%	0,29	1,77
84%	16%	0,26	1,97
90%	10%	0,22	2,17
95%	5%	0,19	2,38

Moments Statistics

Mean	1,34
Sorting	0,65
Skewness	-0,02
Kurtosis	1,18
Uniformity Coefficient	1,97

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

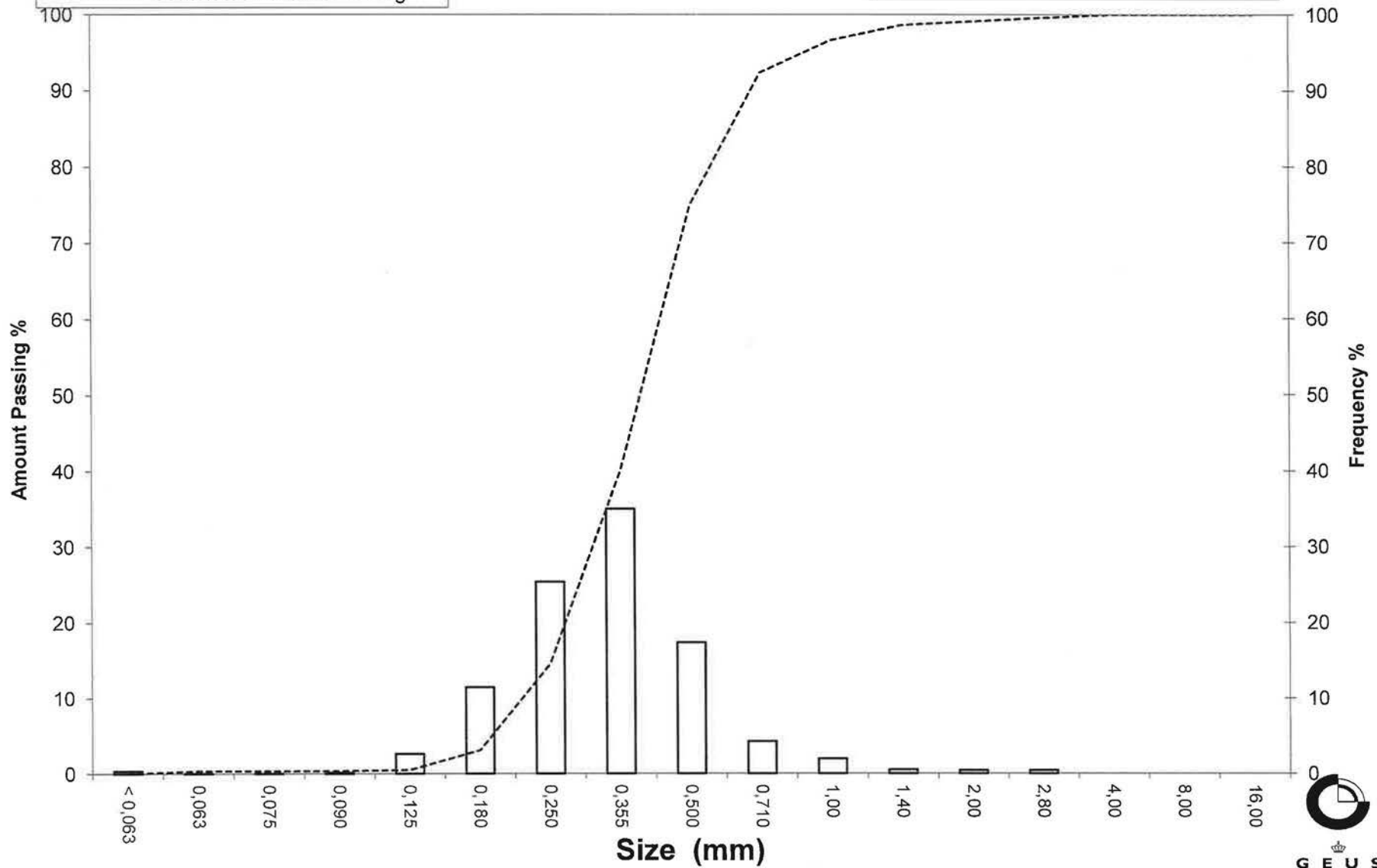
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-1 100-150 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ØN-1 200-400 cm
Lab. Id: 14126
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 133,82 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,10	0,07	99,93
2,00	-1,00	0,16	0,12	99,81
1,40	-0,49	0,45	0,34	99,47
1,00	0,00	0,89	0,67	98,80
0,710	0,49	2,21	1,65	97,15
0,500	1,00	19,48	14,56	82,60
0,355	1,49	56,63	42,32	40,28
0,250	2,00	42,21	31,54	8,74
0,180	2,47	8,86	6,62	2,11
0,125	3,00	2,14	1,60	0,52
0,090	3,47	0,23	0,17	0,34
0,075	3,74	0,01	0,01	0,34
0,063	3,99	0,01	0,01	0,33
< 0,063	> 3,99	0,44	0,33	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,33
Sand, fine (0,063 mm - 0,200 mm):	3,68
Sand, medium (0,2 mm - 0,6 mm):	85,52
Sand, coarse (0,6 mm - 2 mm):	10,28
Gravel (> 2 mm):	0,19
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,68	0,56
16%	84%	0,52	0,94
25%	75%	0,47	1,08
40%	60%	0,42	1,24
Median 50%	50%	0,39	1,36
75%	25%	0,30	1,72
84%	16%	0,27	1,87
90%	10%	0,25	1,98
95%	5%	0,21	2,25

Moments Statistics

Mean	1,39
Sorting	0,49
Skewness	0,07
Kurtosis	1,08
Uniformity Coefficient	1,66

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

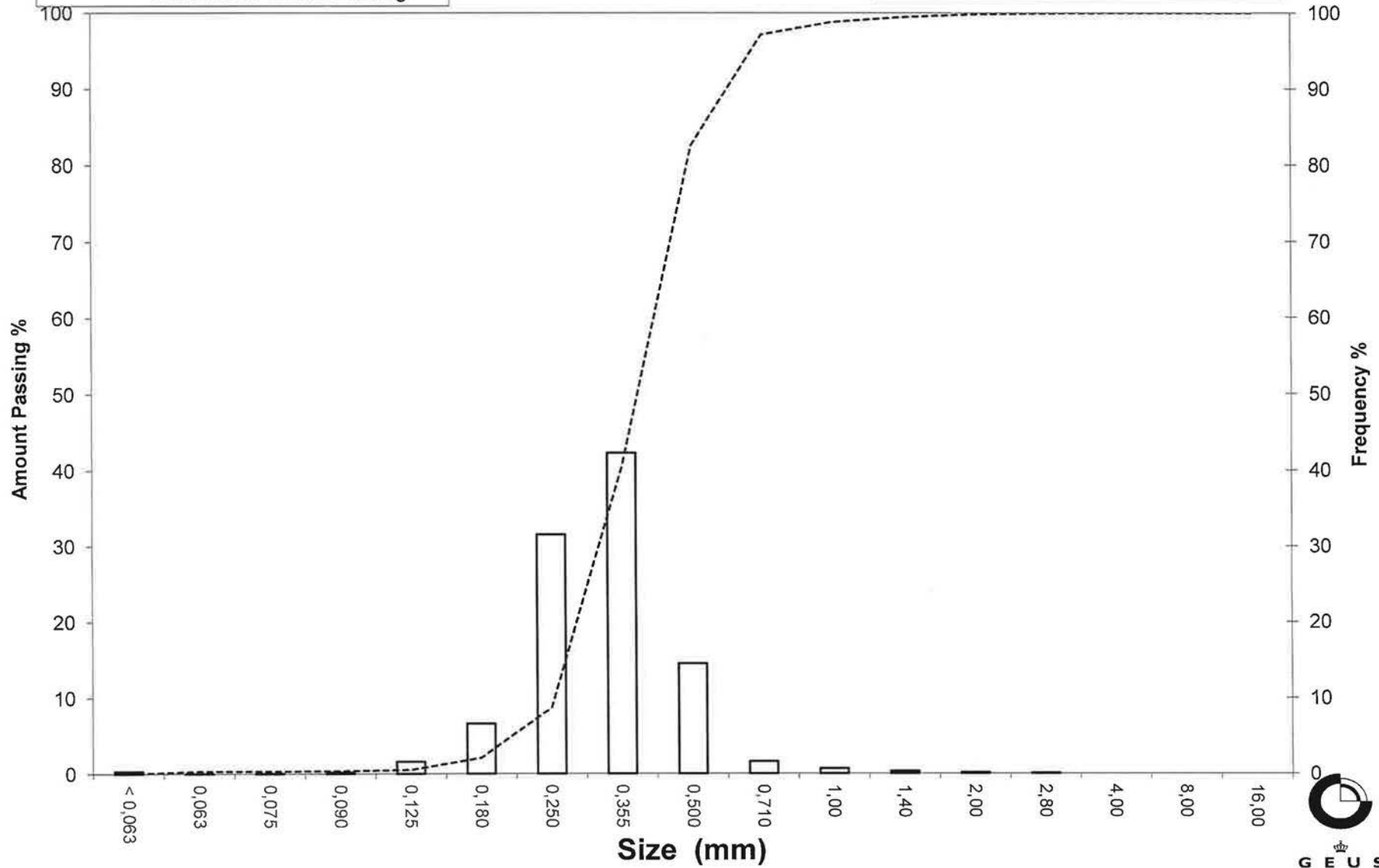
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-1 200-400 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ØN-2 0-20 cm
Lab. Id: 14127
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 162,49 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,93	0,57	99,43
4,00	-2,00	2,07	1,27	98,15
2,80	-1,49	2,60	1,60	96,55
2,00	-1,00	3,19	1,96	94,59
1,40	-0,49	3,30	2,03	92,56
1,00	0,00	6,16	3,79	88,77
0,710	0,49	7,92	4,87	83,89
0,500	1,00	21,58	13,28	70,61
0,355	1,49	38,25	23,54	47,07
0,250	2,00	48,65	29,94	17,13
0,180	2,47	23,38	14,39	2,74
0,125	3,00	3,29	2,02	0,72
0,090	3,47	0,32	0,20	0,52
0,075	3,74	0,05	0,03	0,49
0,063	3,99	0,02	0,01	0,48
< 0,063	> 3,99	0,78	0,48	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,48
Sand, fine (0,063 mm - 0,200 mm):	6,38
Sand, medium (0,2 mm - 0,6 mm):	70,08
Sand, coarse (0,6 mm - 2 mm):	17,65
Gravel (> 2 mm):	5,41
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	2,17	-1,12
16%	84%	0,72	0,48
25%	75%	0,57	0,81
40%	60%	0,43	1,20
Median 50%	50%	0,37	1,42
75%	25%	0,28	1,85
84%	16%	0,24	2,03
90%	10%	0,22	2,22
95%	5%	0,19	2,39

Moments Statistics

Mean	1,31
Sorting	0,92
Skewness	-0,33
Kurtosis	1,39
Uniformity Coefficient	2,02

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

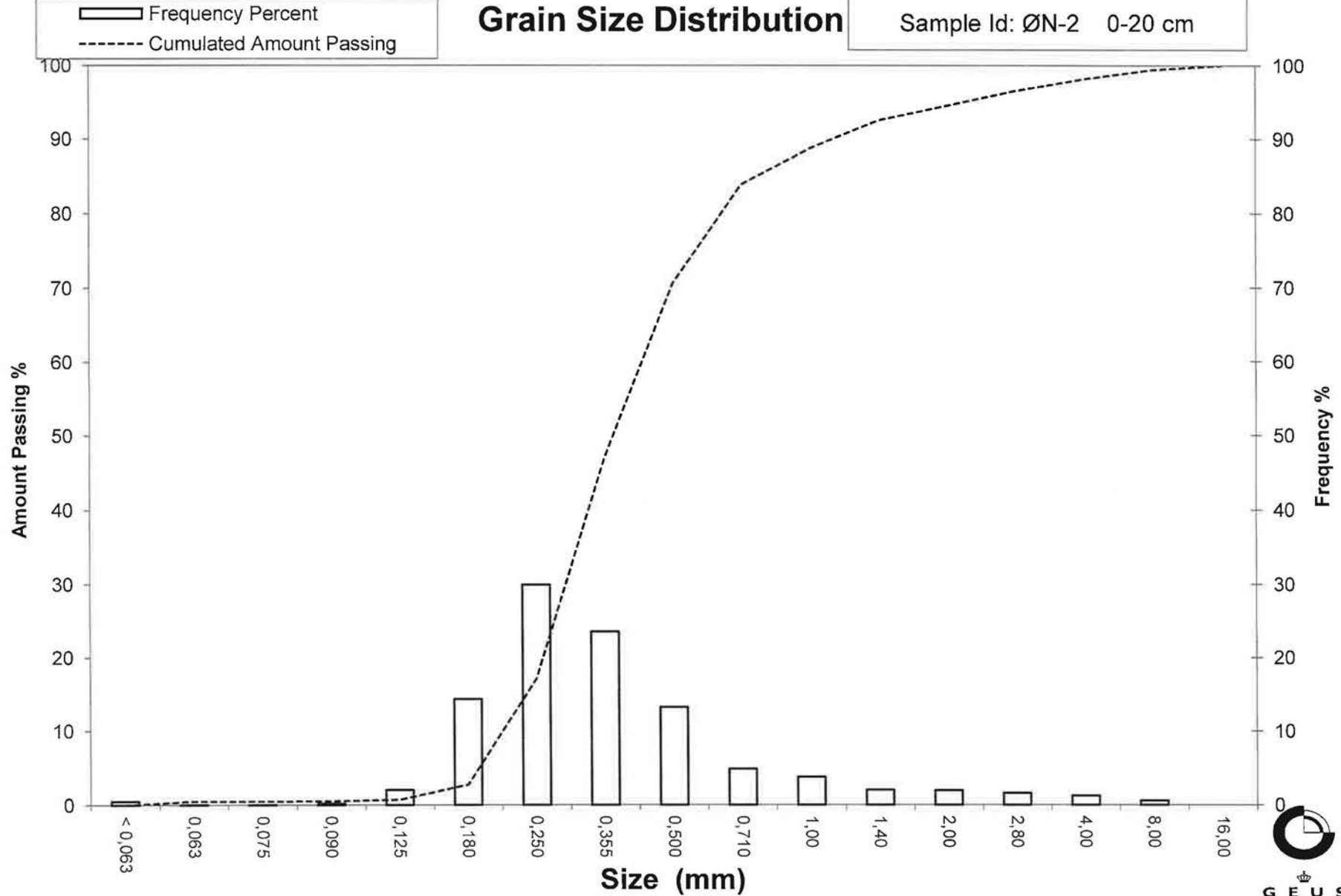
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-2 0-20 cm



Grain Size Distribution

Geotechnical

Sample Id: ØN-2 100-200 cm
Lab. Id: 14128
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmqvist
Remarks: For mat. < 2mm.



Total Weight 114,2 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,07	0,06	99,94
2,80	-1,49	0,00	0,00	99,94
2,00	-1,00	0,04	0,04	99,90
1,40	-0,49	0,04	0,04	99,87
1,00	0,00	0,19	0,17	99,70
0,710	0,49	1,30	1,14	98,56
0,500	1,00	17,49	15,32	83,25
0,355	1,49	49,65	43,48	39,77
0,250	2,00	27,71	24,26	15,51
0,180	2,47	13,14	11,51	4,00
0,125	3,00	3,60	3,15	0,85
0,090	3,47	0,39	0,34	0,51
0,075	3,74	0,03	0,03	0,48
0,063	3,99	0,01	0,01	0,47
< 0,063	> 3,99	0,54	0,47	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,47
Sand, fine (0,063 mm - 0,200 mm):	6,82
Sand, medium (0,2 mm - 0,6 mm):	83,25
Sand, coarse (0,6 mm - 2 mm):	9,36
Gravel (> 2 mm):	0,10
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,66	0,60
16%	84%	0,51	0,97
25%	75%	0,47	1,08
40%	60%	0,42	1,24
Median 50%	50%	0,39	1,36
75%	25%	0,29	1,78
84%	16%	0,25	1,99
90%	10%	0,22	2,21
95%	5%	0,19	2,43

Moments Statistics

Mean	1,44
Sorting	0,53
Skewness	0,20
Kurtosis	1,07
Uniformity Coefficient	1,95

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

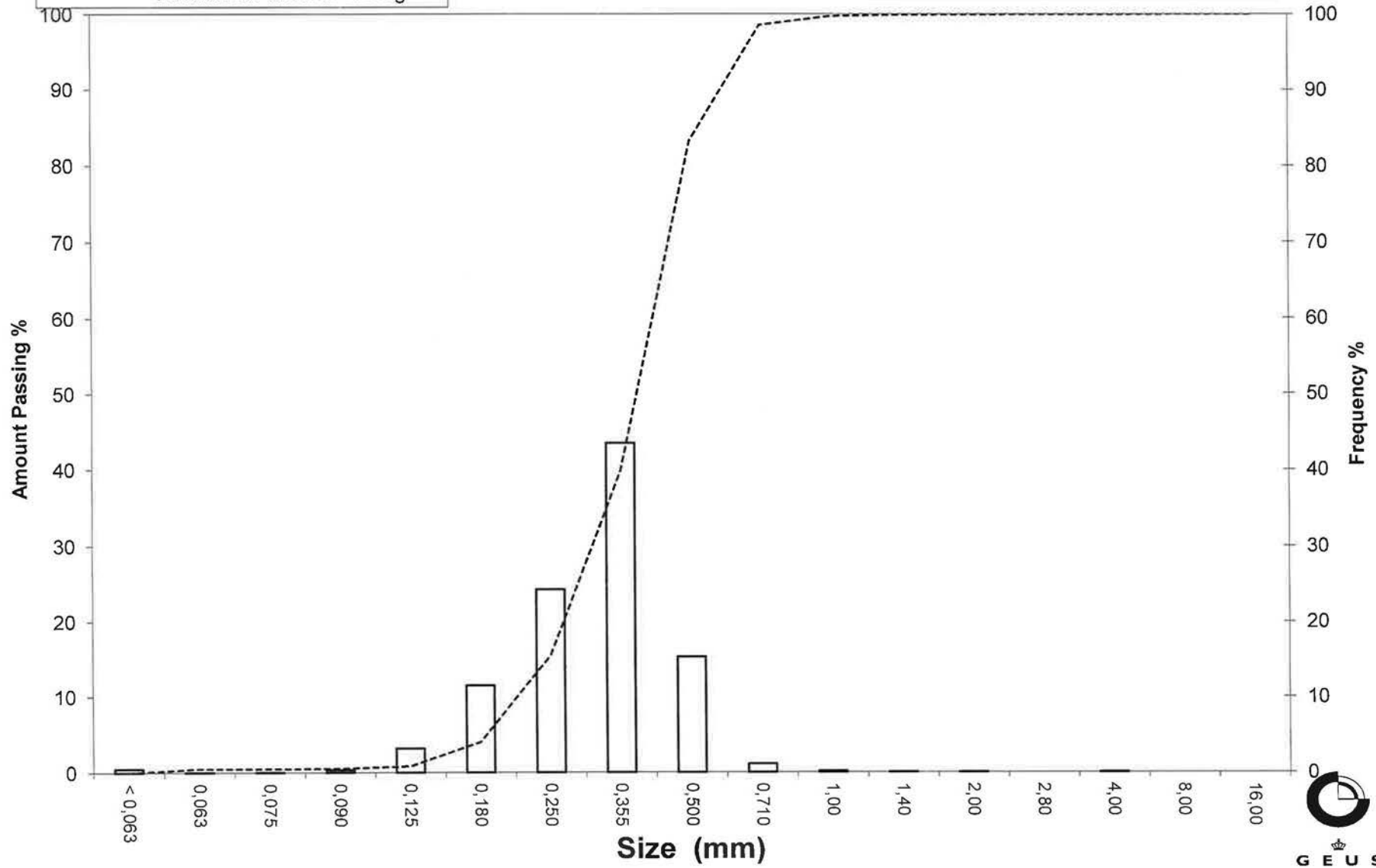
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-2 100-200 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ØN-2 300-400 cm
Lab. Id: 14129
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 121,06 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,01	0,01	99,99
1,40	-0,49	0,01	0,01	99,98
1,00	0,00	0,07	0,06	99,93
0,710	0,49	0,10	0,08	99,84
0,500	1,00	0,28	0,23	99,61
0,355	1,49	0,88	0,73	98,88
0,250	2,00	1,45	1,20	97,69
0,180	2,47	12,72	10,51	87,18
0,125	3,00	77,68	64,17	23,01
0,090	3,47	21,71	17,93	5,08
0,075	3,74	2,02	1,67	3,41
0,063	3,99	0,88	0,73	2,68
< 0,063	> 3,99	3,25	2,68	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	2,68
Sand, fine (0,063 mm - 0,200 mm):	87,50
Sand, medium (0,2 mm - 0,6 mm):	9,54
Sand, coarse (0,6 mm - 2 mm):	0,27
Gravel (> 2 mm):	0,01
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,23	2,11
16%	84%	0,18	2,50
25%	75%	0,17	2,56
40%	60%	0,16	2,67
Median 50%	50%	0,15	2,76
75%	25%	0,13	2,98
84%	16%	0,11	3,17
90%	10%	0,10	3,33
95%	5%	0,09	3,49

Moments Statistics

Mean	2,81
Sorting	0,38
Skewness	0,14
Kurtosis	1,34
Uniformity Coefficient	1,57

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

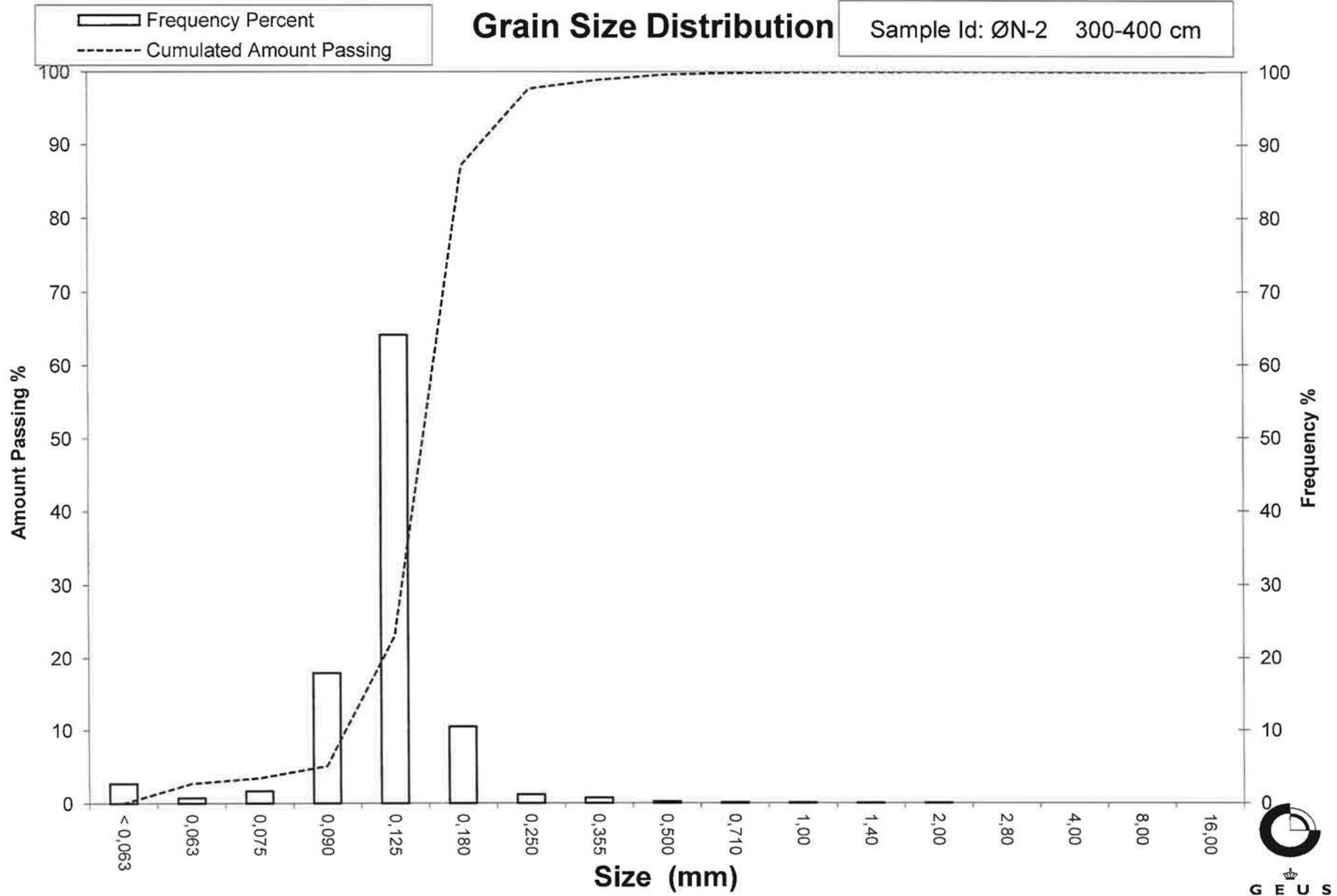
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-2 300-400 cm



Grain Size Distribution

Geotechnical

Sample Id: ØN-3 0-40 cm
Lab. Id: 14130
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 115,89 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,00	0,00	100,00
1,40	-0,49	0,11	0,09	99,91
1,00	0,00	0,29	0,25	99,65
0,710	0,49	1,86	1,60	98,05
0,500	1,00	17,61	15,20	82,85
0,355	1,49	29,41	25,38	57,48
0,250	2,00	31,58	27,25	30,23
0,180	2,47	26,95	23,25	6,97
0,125	3,00	6,88	5,94	1,04
0,090	3,47	0,59	0,51	0,53
0,075	3,74	0,08	0,07	0,46
0,063	3,99	0,02	0,02	0,44
< 0,063	> 3,99	0,51	0,44	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,44
Sand, fine (0,063 mm - 0,200 mm):	13,18
Sand, medium (0,2 mm - 0,6 mm):	76,47
Sand, coarse (0,6 mm - 2 mm):	9,91
Gravel (> 2 mm):	0,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,67	0,58
16%	84%	0,52	0,96
25%	75%	0,46	1,14
40%	60%	0,37	1,44
Median 50%	50%	0,33	1,62
75%	25%	0,23	2,09
84%	16%	0,21	2,27
90%	10%	0,19	2,40
95%	5%	0,16	2,63

Moments Statistics

Mean	1,61
Sorting	0,64
Skewness	-0,01
Kurtosis	0,88
Uniformity Coefficient	1,95

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

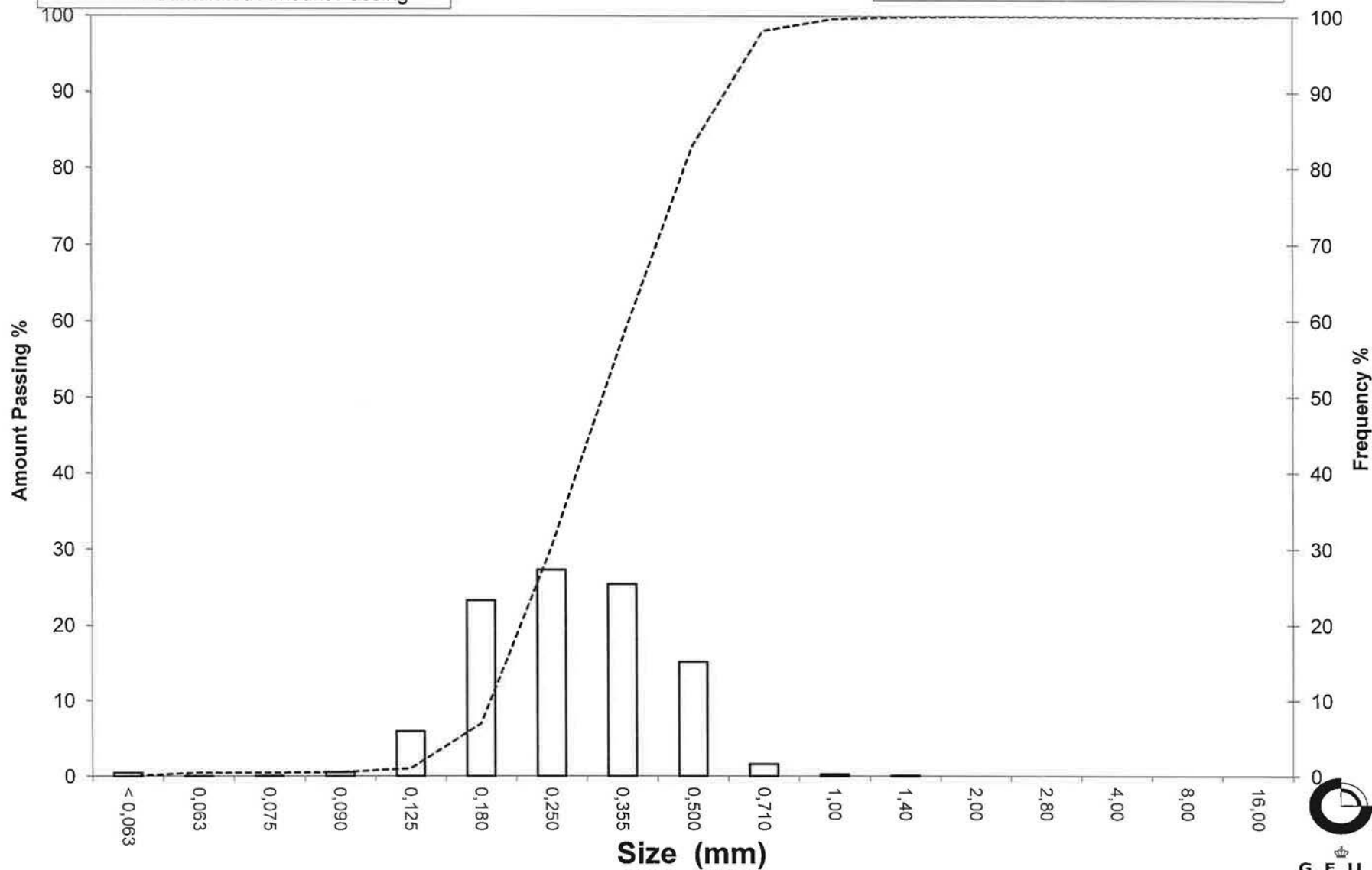
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-3 0-40 cm

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: ØN-3 50-120 cm
Lab. Id: 14131
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 131,36 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,01	0,01	99,99
1,40	-0,49	0,14	0,11	99,89
1,00	0,00	0,40	0,30	99,58
0,710	0,49	1,22	0,93	98,65
0,500	1,00	8,99	6,84	91,81
0,355	1,49	18,79	14,30	77,50
0,250	2,00	36,28	27,62	49,89
0,180	2,47	46,49	35,39	14,49
0,125	3,00	16,69	12,71	1,79
0,090	3,47	1,23	0,94	0,85
0,075	3,74	0,12	0,09	0,76
0,063	3,99	0,05	0,04	0,72
< 0,063	> 3,99	0,95	0,72	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,72
Sand, fine (0,063 mm - 0,200 mm):	23,88
Sand, medium (0,2 mm - 0,6 mm):	70,46
Sand, coarse (0,6 mm - 2 mm):	4,92
Gravel (> 2 mm):	0,01
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,60	0,74
16%	84%	0,42	1,25
25%	75%	0,35	1,53
40%	60%	0,29	1,79
Median 50%	50%	0,25	2,00
75%	25%	0,20	2,32
84%	16%	0,18	2,45
90%	10%	0,16	2,64
95%	5%	0,14	2,85

Moments Statistics

Mean	1,90
Sorting	0,62
Skewness	-0,22
Kurtosis	1,10
Uniformity Coefficient	1,80

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

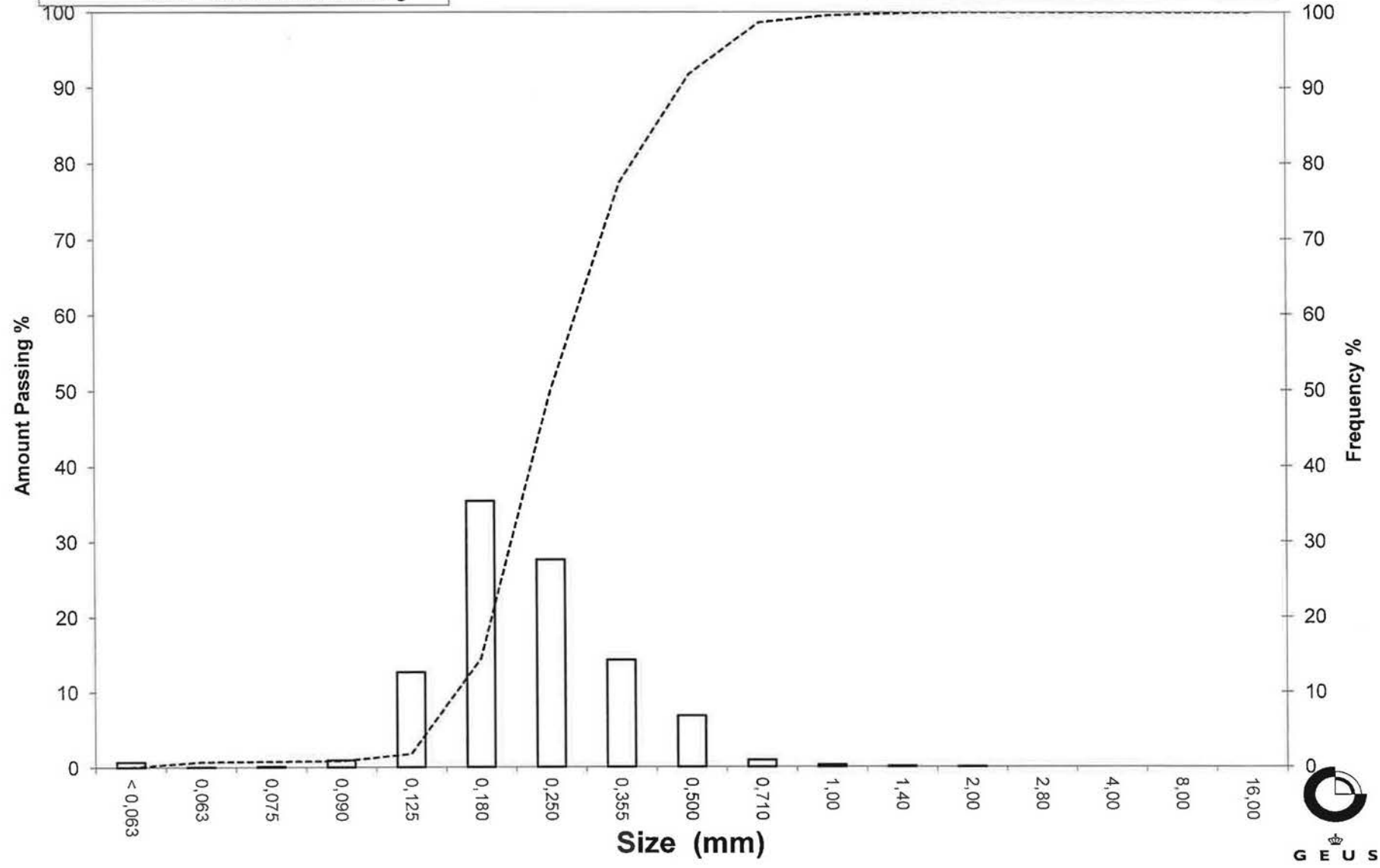
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-3 50-120 cm

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: ØN-3 150-240 cm
Lab. Id: 14132
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 128,74 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,05	0,04	99,96
2,00	-1,00	0,05	0,04	99,92
1,40	-0,49	0,08	0,06	99,86
1,00	0,00	0,19	0,15	99,71
0,710	0,49	0,29	0,23	99,49
0,500	1,00	0,77	0,60	98,89
0,355	1,49	3,78	2,94	95,95
0,250	2,00	27,31	21,21	74,74
0,180	2,47	67,82	52,68	22,06
0,125	3,00	25,58	19,87	2,19
0,090	3,47	1,44	1,12	1,07
0,075	3,74	0,14	0,11	0,96
0,063	3,99	0,10	0,08	0,89
< 0,063	> 3,99	1,14	0,89	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,89
Sand, fine (0,063 mm - 0,200 mm):	36,23
Sand, medium (0,2 mm - 0,6 mm):	62,06
Sand, coarse (0,6 mm - 2 mm):	0,75
Gravel (> 2 mm):	0,08
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,35	1,51
16%	84%	0,30	1,76
25%	75%	0,25	1,99
40%	60%	0,23	2,12
Median 50%	50%	0,22	2,20
75%	25%	0,18	2,44
84%	16%	0,16	2,62
90%	10%	0,15	2,77
95%	5%	0,13	2,91

Moments Statistics

Mean	2,19
Sorting	0,43
Skewness	-0,01
Kurtosis	1,27
Uniformity Coefficient	1,57

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

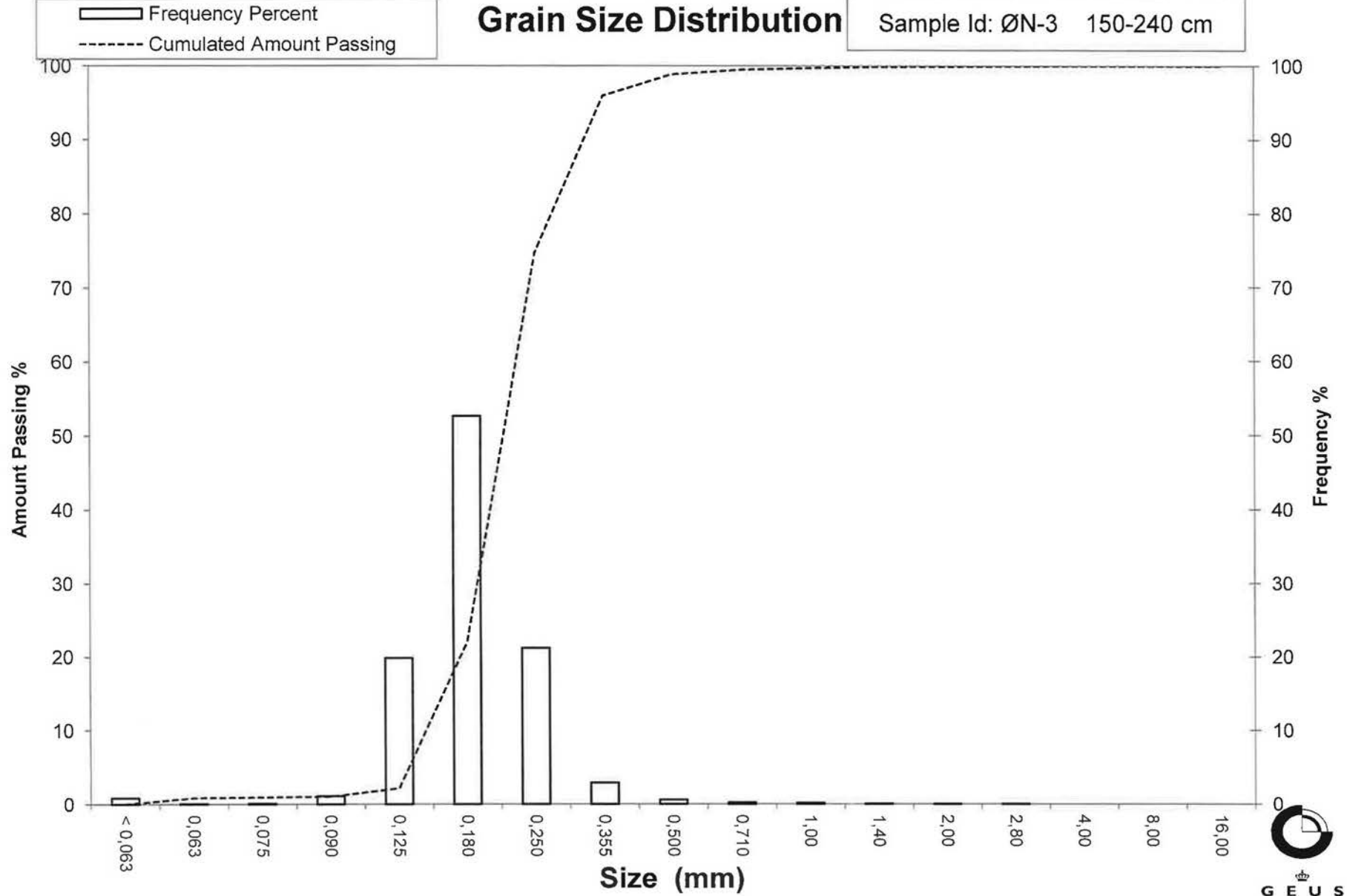
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-3 150-240 cm



Grain Size Distribution

Geotechnical

Sample Id: ØN-4 0-200 cm
Lab. Id: 14133
Submitter: Naturstyrelsen
Subject: Øresund Nord
Date: Sember/oktober 2014
Executed: I. Nørgaard & M. Elmquist
Remarks: For mat. < 2mm.



Total Weight 134,43 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,00	0,00	100,00
4,00	-2,00	1,06	0,79	99,21
2,80	-1,49	0,67	0,50	98,71
2,00	-1,00	0,96	0,71	98,00
1,40	-0,49	1,89	1,41	96,59
1,00	0,00	3,48	2,59	94,00
0,710	0,49	10,16	7,56	86,45
0,500	1,00	35,02	26,05	60,40
0,355	1,49	44,90	33,40	27,00
0,250	2,00	28,71	21,36	5,64
0,180	2,47	5,30	3,94	1,70
0,125	3,00	0,76	0,57	1,13
0,090	3,47	0,44	0,33	0,80
0,075	3,74	0,16	0,12	0,68
0,063	3,99	0,08	0,06	0,62
< 0,063	> 3,99	0,84	0,62	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,62
Sand, fine (0,063 mm - 0,200 mm):	2,20
Sand, medium (0,2 mm - 0,6 mm):	69,98
Sand, coarse (0,6 mm - 2 mm):	25,20
Gravel (> 2 mm):	2,00
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,15	-0,21
16%	84%	0,69	0,53
25%	75%	0,62	0,69
40%	60%	0,50	1,00
Median 50%	50%	0,45	1,14
75%	25%	0,35	1,53
84%	16%	0,30	1,73
90%	10%	0,27	1,88
95%	5%	0,24	2,07

Moments Statistics

Mean	1,13
Sorting	0,64
Skewness	-0,09
Kurtosis	1,11
Uniformity Coefficient	1,84

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: ØN-4 0-200 cm

Frequency Percent
Cumulated Amount Passing

