

Horns Rev 3 Grab Samples September 2012

Sample description, grain size distribution,
water content and loss of ignition

Birger Larsen & Ingerlise Nørgaard

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Sample descriptions and analyses for Energinet.dk

Birger Larsen & Ingerlise Nørgaard

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Introduction

50 seabed samples have been analysed for the client: Energinet.dk by GEUS.

This report represents data analysis and sample description of seabed samples from the OWF HR3 area, in the Danish part of the North Sea.

Sample treatment

GEUS has carried out analyses on 50 grab sample sediments from Horns Rev3. When received the samples were registered with the following five categories:

- date
- locality
- laboratory number in succession
- client
- analysis requirements

Remaining analysis material is only kept for 14 days after reporting.

Analysis methods

Water content determination

The water content is determined in percentage of natural condition sample weight. The samples are dried at 105° C to constant weight. No salt correction is carried out.

The analyses are carried out according to DS 405.11 in part and DS 204 in part in Water and Environment.

Appendix 2

Loss on ignition determination

The organic content and the content of chemically-bonded water are determined with the loss on ignition analysis. The loss on ignition is determined in weight % of material dried at 105° C.

The analyses are carried out according to DS 405 in part and DS 204 in part.

Appendix 2

Grain size distribution

Sieve analysis:

The total sample is dried and washed through a 0,063 mm sieve. The resulting sediment is sieved through a sieve column from 16 mm to 0,063 mm with ½ phi intervals, which corresponds to 15 sieves. The method is adapted from to DS/EN 933-1, as there are more sieves than described in this standard.

Appendix 2

Sample descriptions

Description of samples (Appendix 1) are done by seniorgeologist Birger Larsen. GEUS.

Results

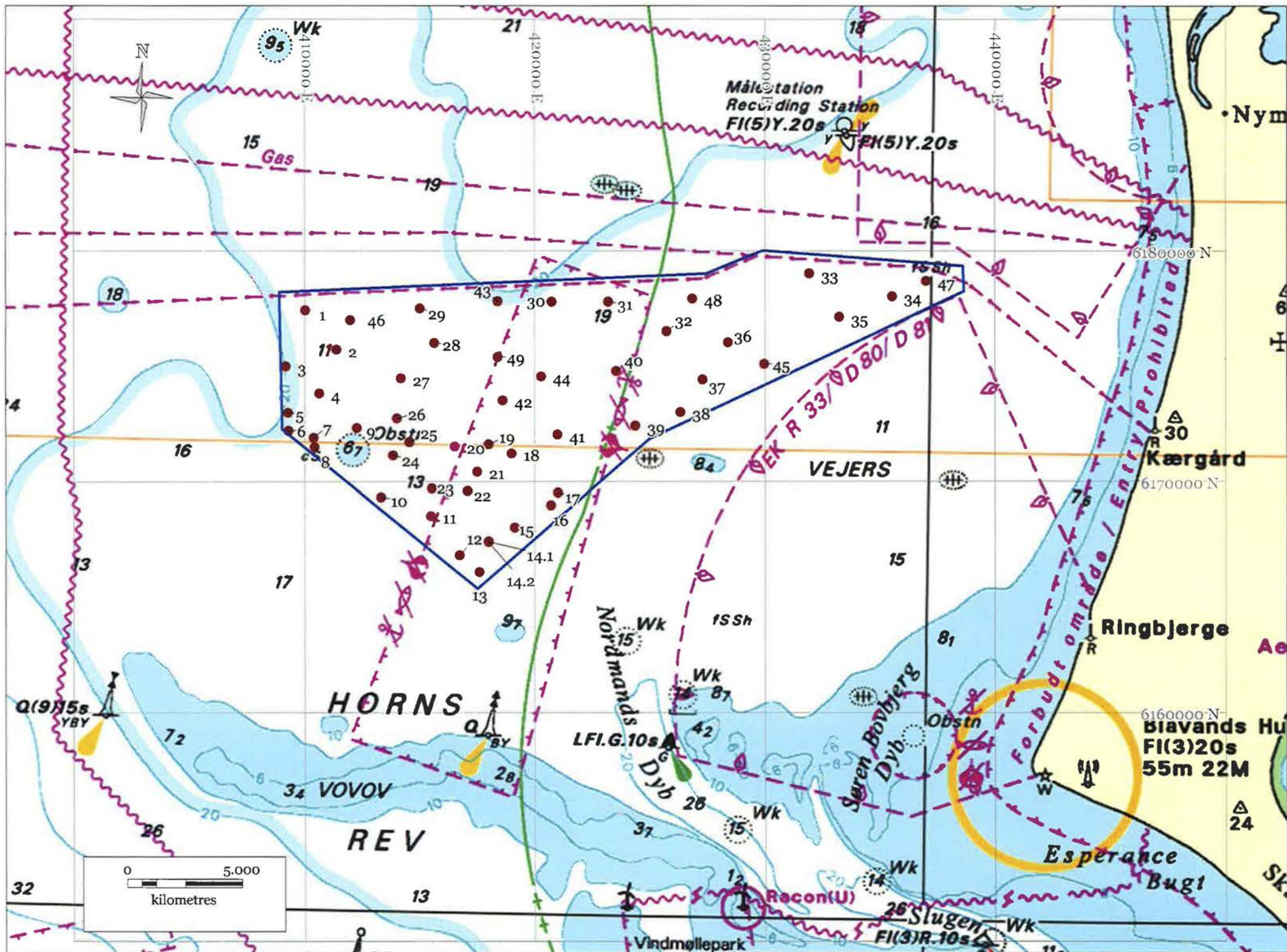
In Appendix 2 the water content and loss on ignition are listed. The percentage of water is also shown.

In Appendix 2 the grain size distribution for the sediment samples is shown. The grain size distribution shows the distribution of sand, silt and clay in the samples. If the samples do not comply with the DS/EN 933-1DS requirement that the size of the sediment samples is at least 200 gr., this is noted under Total Weight.

References

- Standarder for Vand & Miljø. DS Håndbogen 21.2. Dansk Standardiseringsråd, 1991.
- Dansk Standard DS 204. Tørstof og gløderest. Dansk Standardiseringsråd, Kbh.1980.
- SS/EN 933-1. Kornstørrelsesfordeling bestemt ved sigteanalyse. Dansk Standard. 2004.
- Dansk Standard DS 405.11. Vandindhold. Dansk Standardiseringsråd, Kbh.1978.

Appendix 1



HORNS REV 3 GRAB SAMPLES

Sample	GEUS LAB Nr	Easting	Northing								
AQHR3GS001	AQHR3GS001	410024	6177407	SAND,	coarse,w.medium	sl.gravelly	sorted	few mar.shells	ligh yellowish grey	Ma.	Recent
AQHR3GS002	AQHR3GS002	411379	6175712	SAND,	medium w. coarse,		well sorted		ligh yellowish grey	Ma.	Recent
AQHR3GS003	AQHR3GS003	409189	6174999	SAND,	fine,	w.medium sand	well sorted	few mar.shells	yellowish grey	Ma	Recent
AQHR3GS004	AQHR3GS004	410632	6173820	SAND,	coarse , w.medium	sl.gravelly	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS005	AQHR3GS005	409275	6172985	SAND,	coarse, w.fine gravel	w.fine sand	sorted		ligh yellowish grey	Ma	Recent
AQHR3GS006	AQHR3GS006	409291	6172182	SAND,	fine & medium	w.coarse silt	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS007	AQHR3GS007	410382	6171894	SAND,	coarse, w. medium	sl.gravelly	sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS008	AQHR3GS008	410430	6171491	SAND,	coarse,	w.medium sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS009	AQHR3GS009	412272	6172308	SAND,	medium,	w.coarse sand	well sorted		ligh yellowish grey	Ma	Recent
AQHR3GS010	AQHR3GS010	413325	6169307	SAND,	medium,	w.coarse sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS011	AQHR3GS011	415488	6168516	SAND,	medium		well sorted		ligh yellowish grey	Ma	Recent
AQHR3GS012	AQHR3GS012	416732	6166816	SAND,	medium,	w.coarse sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS013	AQHR3GS013	417601	6166100	SAND,	medium,	w.fine sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS014-1	AQHR3GS014 (1 st attemp)	418001	6167418	SAND,	medium,w.coarse	sl.gravelly	sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS014-2	AQHR3GS014 (2 nd attemp)	418008	6167402	SAND,	medium,w.coarse		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS015	AQHR3GS015	419137	6168015	SAND,	medium,w.coarse	sl.gravelly	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS016	AQHR3GS016	420709	6168978	SAND,	medium,w.coarse		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS017	AQHR3GS017	421004	6169501	SAND,	fine,	w.medium sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS018	AQHR3GS018	418989	6171201	SAND,	fine-medium,		well sorted	few mar.shells	yellowish grey	Ma	Recent
AQHR3GS019	AQHR3GS019	418002	6171590	SAND,	fine-medium,	w.coarse silt	well sorted	few mar.shells	yellowish grey	Ma	Recent
AQHR3GS020	AQHR3GS020	416531	6171505	SAND,	medium,		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS021	AQHR3GS021	417505	6170416	SAND,	medium,	w.corse sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS022	AQHR3GS022	417076	6169586	SAND,	medium,		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS023	AQHR3GS023	415518	6169697	SAND,	fine-medium,		well sorted		ligh yellowish grey	Ma	Recent
AQHR3GS024	AQHR3GS024	413843	6171117	SAND,	medium,	w.coarse sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS025	AQHR3GS025	414557	6171686	GRAVEL&	PEBBLES,(7 cm)	w.medium sand		many barnacles	yellowish grey	Ma	Recent
AQHR3GS026	AQHR3GS026	414018	6172733	SAND,	fine-medium,		well sorted		ligh yellowish grey	Ma	Recent
AQHR3GS027	AQHR3GS027	414177	6174466	SAND,	fine,		well sorted	few mar.shells	yellowish grey	Ma	Recent
AQHR3GS028	AQHR3GS028	415647	6176007	SAND,	fine-medium,	w.coarse silt	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS029	AQHR3GS029	415001	6177490	SAND,	medium,	w.fine sand	well sorted		ligh yellowish grey	Ma	Recent
AQHR3GS030	AQHR3GS030	420739	6177774	SAND,	coarse,	sl.gravelly	well sorted		ligh yellowish grey	Ma	?
AQHR3GS031	AQHR3GS031	423201	6177762	SAND,	medium,w.coarse	sl.gravelly	sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS032	AQHR3GS032	425725	6176507	SAND,	medium,	w.fine sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS033	AQHR3GS033	431930	6178994	SAND,	fine,	w.coarse silt	well sorted	few mar.shells	yellowish grey	Ma	Recent
AQHR3GS034	AQHR3GS034	435527	6178007	SAND,	fine and coarse SILT		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS035	AQHR3GS035	433231	6177117	SAND,	fine and coarse SILT		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS036	AQHR3GS036	428384	6176028	SILT,	w. fine sand		sorted	w.mar.shells	yellowish grey	Ma	Recent
AQHR3GS037	AQHR3GS037	427281	6174408	SAND,	medium,	w.fine sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS038	AQHR3GS038	426331	6172998	SAND,	fine,	w.coarse silt	well sorted	few mar.shells	yellowish grey	Ma	Recent

Sample	GEUS LAB Nr	Easting	Northing								
AQHR3GS039	AQHR3GS039	424359	6172398	SAND,	medium,	w.coarse sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS040	AQHR3GS040	423538	6174781	SAND,	fine,	w.coarse silt	well sorted	w. mar.shells	yellowish grey	Ma	Recent
AQHR3GS041	AQHR3GS041	420997	6172016	SAND,	fine-medium,	w.coarse silt	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS042	AQHR3GS042	418623	6173523	SAND,	fine-medium,	w.coarse silt	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS043	AQHR3GS043	418399	6177786	SAND,	fine,	w.medium sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS044	AQHR3GS044	420290	6174557	SAND,	fine,	w.medium sand	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS045	AQHR3GS045	429972	6175089	SILT,	w. fine sand		sorted	w.mar.shells	yellowish grey	Ma	Recent
AQHR3GS046	AQHR3GS046	411986	6176977	SAND,	medium,w.coarse	sl.gravelly(4 cm)	sorted	w.mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS047	AQHR3GS047	436995	6178674	SAND,	fine & coarse SILT		well sorted	w.mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS048	AQHR3GS048	426848	6177907	SAND,	medium,		well sorted	few mar.shells	ligh yellowish grey	Ma	Recent
AQHR3GS049	AQHR3GS049	418397	6175389	SAND,	fine,	w.coarse silt	well sorted	few mar.shells	ligh yellowish grey	Ma	Recent

Appendix 2

Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS001
Lab. Id: 120136
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 8 mm.



Total Weight 201,48 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	7,71	3,83	96,17
4,00	-2,00	3,15	1,56	94,61
2,80	-1,49	0,78	0,39	94,22
2,00	-1,00	0,52	0,26	93,96
1,40	-0,49	0,52	0,26	93,71
1,00	0,00	78,85	39,14	54,57
0,710	0,49	74,49	36,97	17,60
0,500	1,00	13,93	6,91	10,69
0,355	1,49	12,85	6,38	4,31
0,250	2,00	5,91	2,93	1,37
0,180	2,47	1,16	0,58	0,80
0,125	3,00	0,58	0,29	0,51
0,090	3,47	0,26	0,13	0,38
0,075	3,74	0,19	0,09	0,29
0,063	3,99	0,07	0,03	0,25
< 0,063	> 3,99	0,51	0,25	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,25
Sand, fine (0,063 mm - 0,200 mm):	0,71
Sand, medium (0,2 mm - 0,6 mm):	13,01
Sand, coarse (0,6 mm - 2 mm):	79,99
Gravel (> 2 mm):	6,04
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	5,00	-2,32
16%	84%	1,30	-0,38
25%	75%	1,21	-0,27
40%	60%	1,06	-0,08
Median 50%	50%	0,96	0,05
75%	25%	0,77	0,38
84%	16%	0,66	0,60
90%	10%	0,48	1,05
95%	5%	0,37	1,43

Moments Statistics

Mean	0,09
Sorting	0,81
Skewness	-0,08
Kurtosis	2,35
Uniformity Coefficient	2,18

The analysis is executed according to DS405.9
 DS/EN933-1 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)

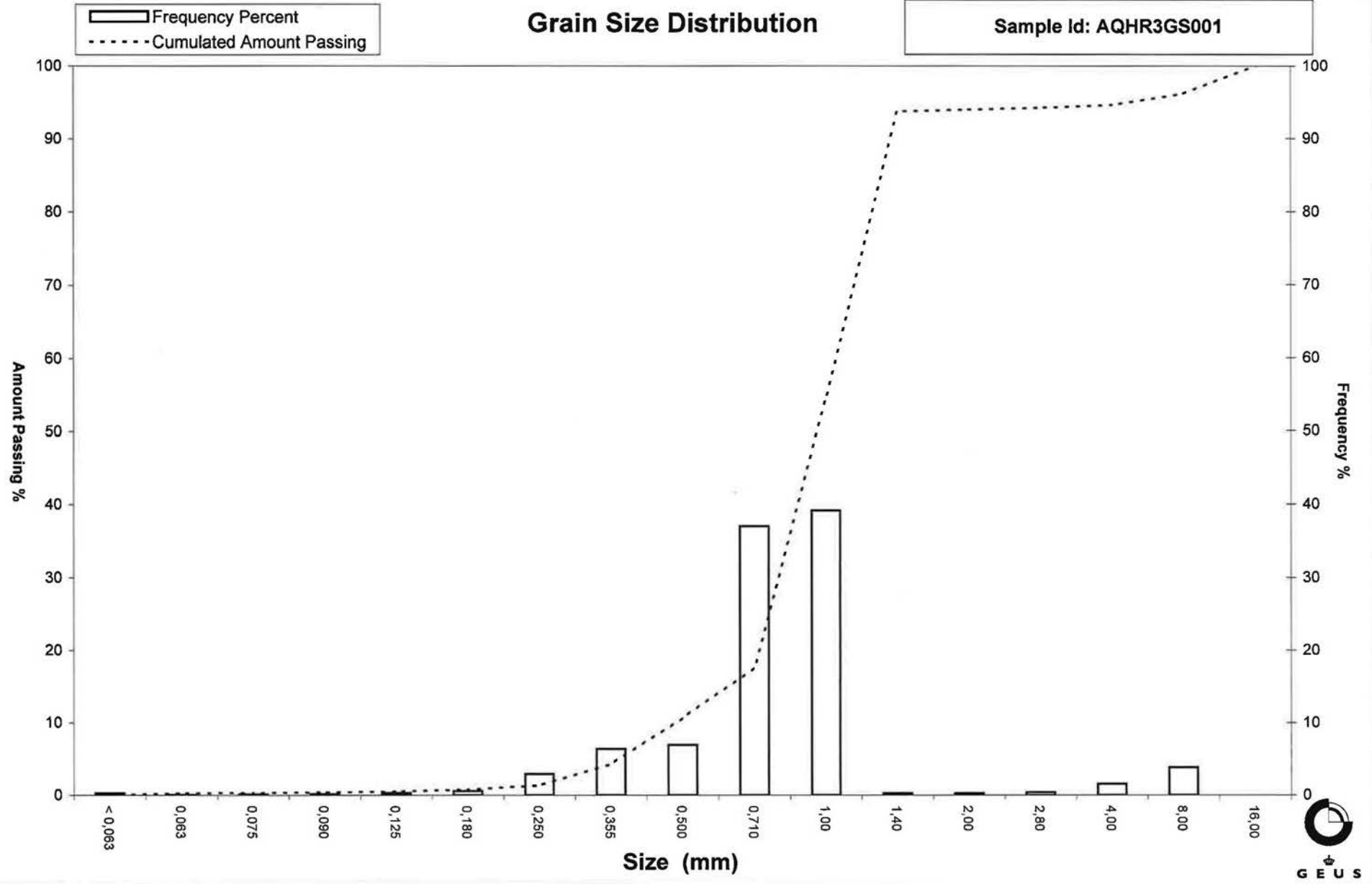
Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS001



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS002
Lab. Id: 120137
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 134,86 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	1,84	1,36	98,64
4,00	-2,00	0,25	0,19	98,45
2,80	-1,49	0,28	0,21	98,24
2,00	-1,00	0,31	0,23	98,01
1,40	-0,49	0,53	0,39	97,62
1,00	0,00	1,49	1,10	96,51
0,710	0,49	16,12	11,95	84,56
0,500	1,00	38,71	28,70	55,86
0,355	1,49	54,57	40,46	15,39
0,250	2,00	17,22	12,77	2,62
0,180	2,47	1,98	1,47	1,16
0,125	3,00	0,49	0,36	0,79
0,090	3,47	0,17	0,13	0,67
0,075	3,74	0,05	0,04	0,63
0,063	3,99	0,02	0,01	0,62
< 0,063	> 3,99	0,83	0,62	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,62
Sand, fine (0,063 mm - 0,200 mm):	0,96
Sand, medium (0,2 mm - 0,6 mm):	67,95
Sand, coarse (0,6 mm - 2 mm):	28,49
Gravel (> 2 mm):	1,99
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,96	0,05
16%	84%	0,71	0,50
25%	75%	0,64	0,64
40%	60%	0,53	0,92
Median 50%	50%	0,48	1,06
75%	25%	0,39	1,36
84%	16%	0,36	1,49
90%	10%	0,31	1,69
95%	5%	0,27	1,89

Moments Statistics

Mean	1,02
Sorting	0,52
Skewness	-0,12
Kurtosis	1,05
Uniformity Coefficient	1,71

The analysis is executed according to DS405.9
 DS/EN933-1 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)

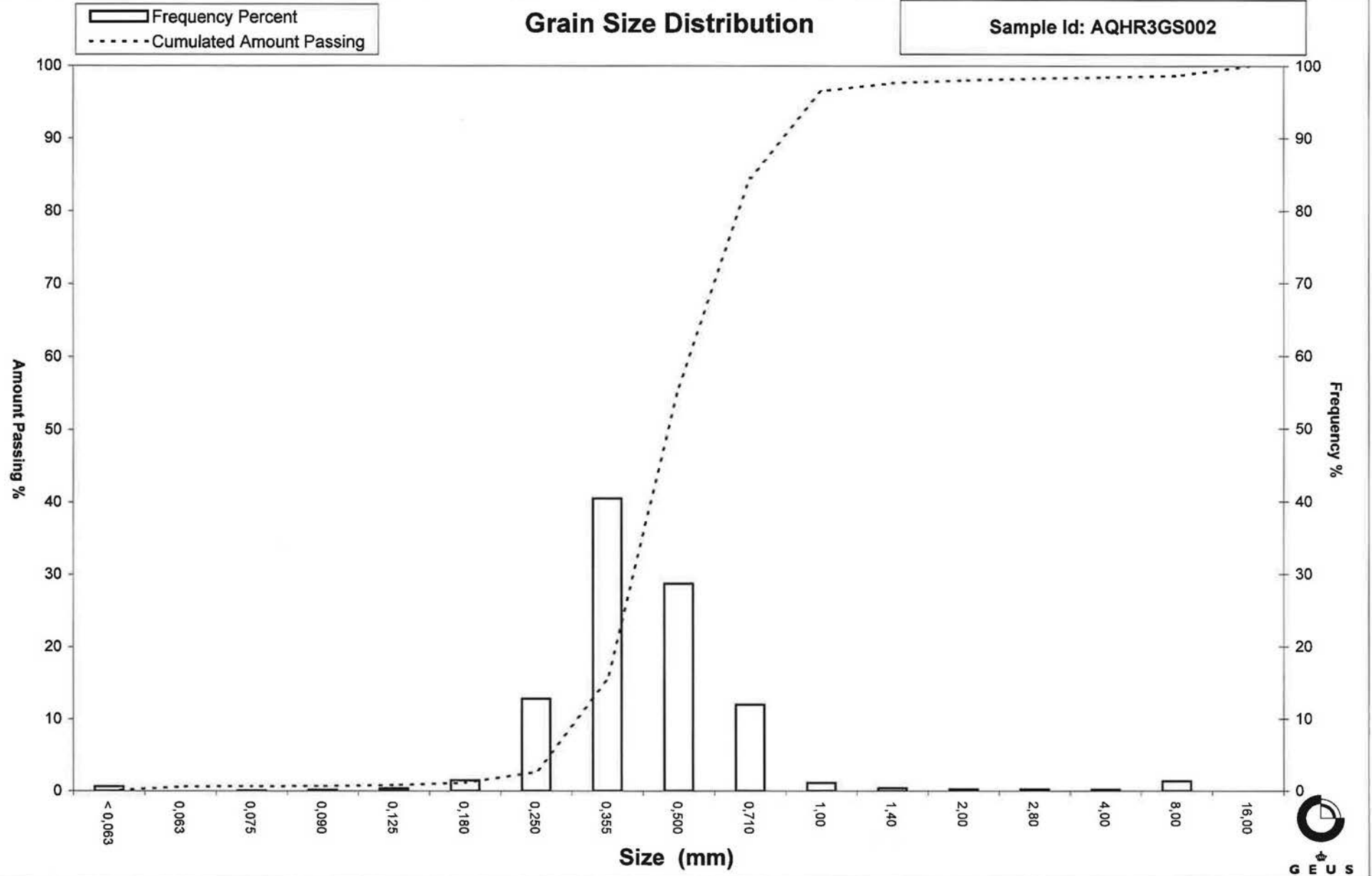
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS002



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS003
Lab. Id: 120138
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 109,06 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	0,16	0,15	99,85
2,80	-1,49	0,02	0,02	99,83
2,00	-1,00	0,03	0,03	99,81
1,40	-0,49	0,04	0,04	99,77
1,00	0,00	0,12	0,11	99,66
0,710	0,49	0,13	0,12	99,54
0,500	1,00	0,45	0,41	99,13
0,355	1,49	2,94	2,70	96,43
0,250	2,00	11,04	10,12	86,31
0,180	2,47	25,73	23,59	62,72
0,125	3,00	51,13	46,88	15,84
0,090	3,47	13,98	12,82	3,02
0,075	3,74	1,59	1,46	1,56
0,063	3,99	0,64	0,59	0,97
< 0,063	> 3,99	1,06	0,97	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,97
Sand, fine (0,063 mm - 0,200 mm):	68,49
Sand, medium (0,2 mm - 0,6 mm):	29,87
Sand, coarse (0,6 mm - 2 mm):	0,48
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%	0,34	1,56
16%	84%	0,24	2,04
25%	75%	0,22	2,21
40%	60%	0,18	2,50
Median 50%	50%	0,17	2,60
75%	25%	0,14	2,88
84%	16%	0,13	3,00
90%	10%	0,11	3,20
95%	5%	0,10	3,39

Moments Statistics

Mean	2,55
Sorting	0,52
Skewness	-0,15
Kurtosis	1,12
Uniformity Coefficient	1,62

The analysis is executed according to DS405.9
 DS/EN933-1 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)

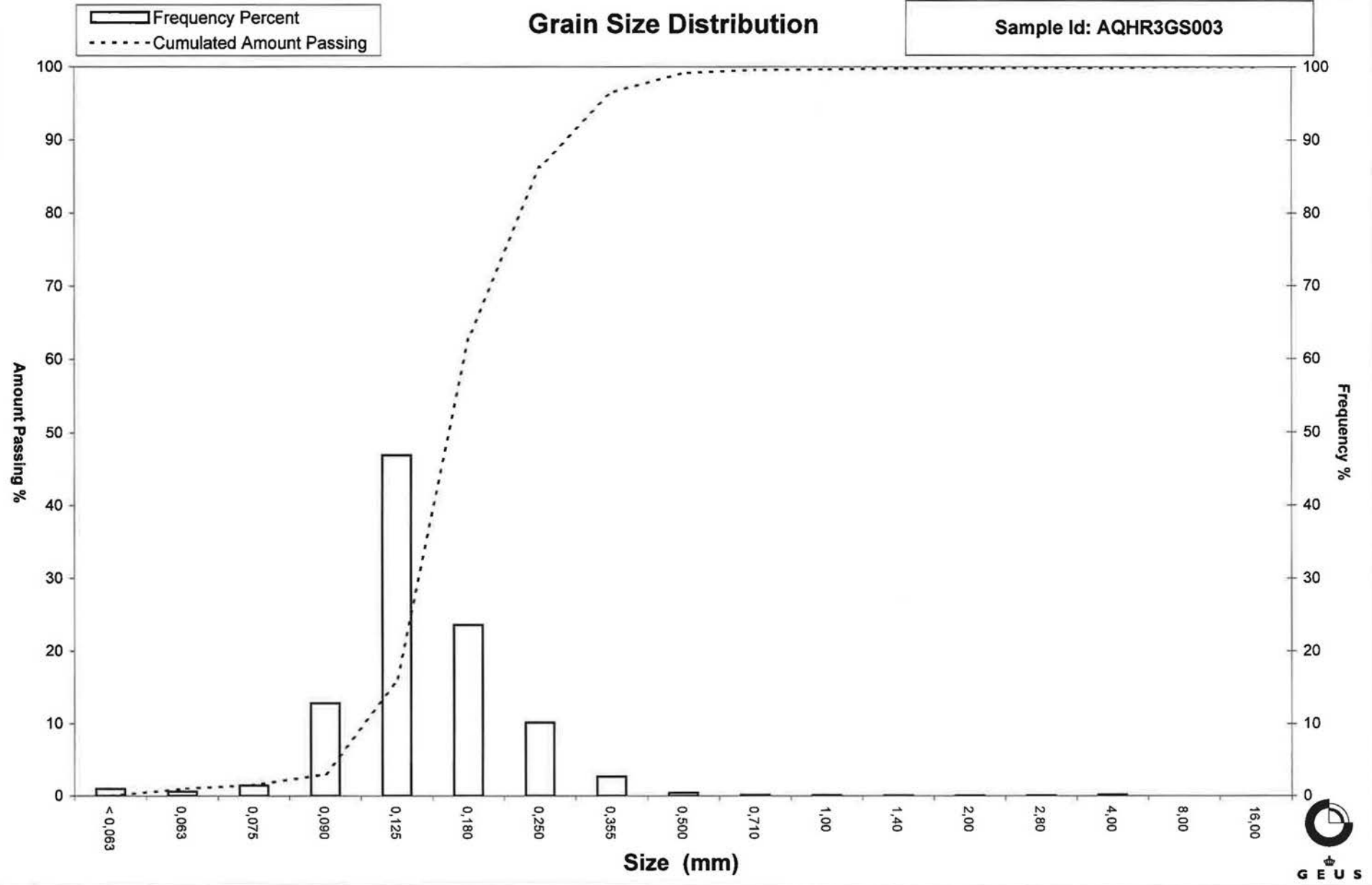
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS003



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS004
Lab. Id: 120139
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 108,99 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	0,36	0,33	99,67
2,00	-1,00	0,25	0,23	99,44
1,40	-0,49	0,77	0,71	98,73
1,00	0,00	10,66	9,78	88,95
0,710	0,49	57,37	52,64	36,32
0,500	1,00	21,09	19,35	16,96
0,355	1,49	11,03	10,12	6,84
0,250	2,00	5,02	4,61	2,24
0,180	2,47	1,04	0,95	1,28
0,125	3,00	0,45	0,41	0,87
0,090	3,47	0,34	0,31	0,56
0,075	3,74	0,12	0,11	0,45
0,063	3,99	0,06	0,06	0,39
< 0,063	> 3,99	0,43	0,39	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,39
Sand, fine (0,063 mm - 0,200 mm):	1,16
Sand, medium (0,2 mm - 0,6 mm):	24,62
Sand, coarse (0,6 mm - 2 mm):	73,26
Gravel (> 2 mm):	0,56
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,25	-0,32
16%	84%	0,97	0,04
25%	75%	0,92	0,12
40%	60%	0,84	0,25
Median 50%	50%	0,79	0,35
75%	25%	0,59	0,77
84%	16%	0,49	1,04
90%	10%	0,40	1,32
95%	5%	0,31	1,68

Moments Statistics

Mean	0,48
Sorting	0,55
Skewness	0,36
Kurtosis	1,25
Uniformity Coefficient	2,10

The analysis is executed according to DS405.9
 DS/EN933-1 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)

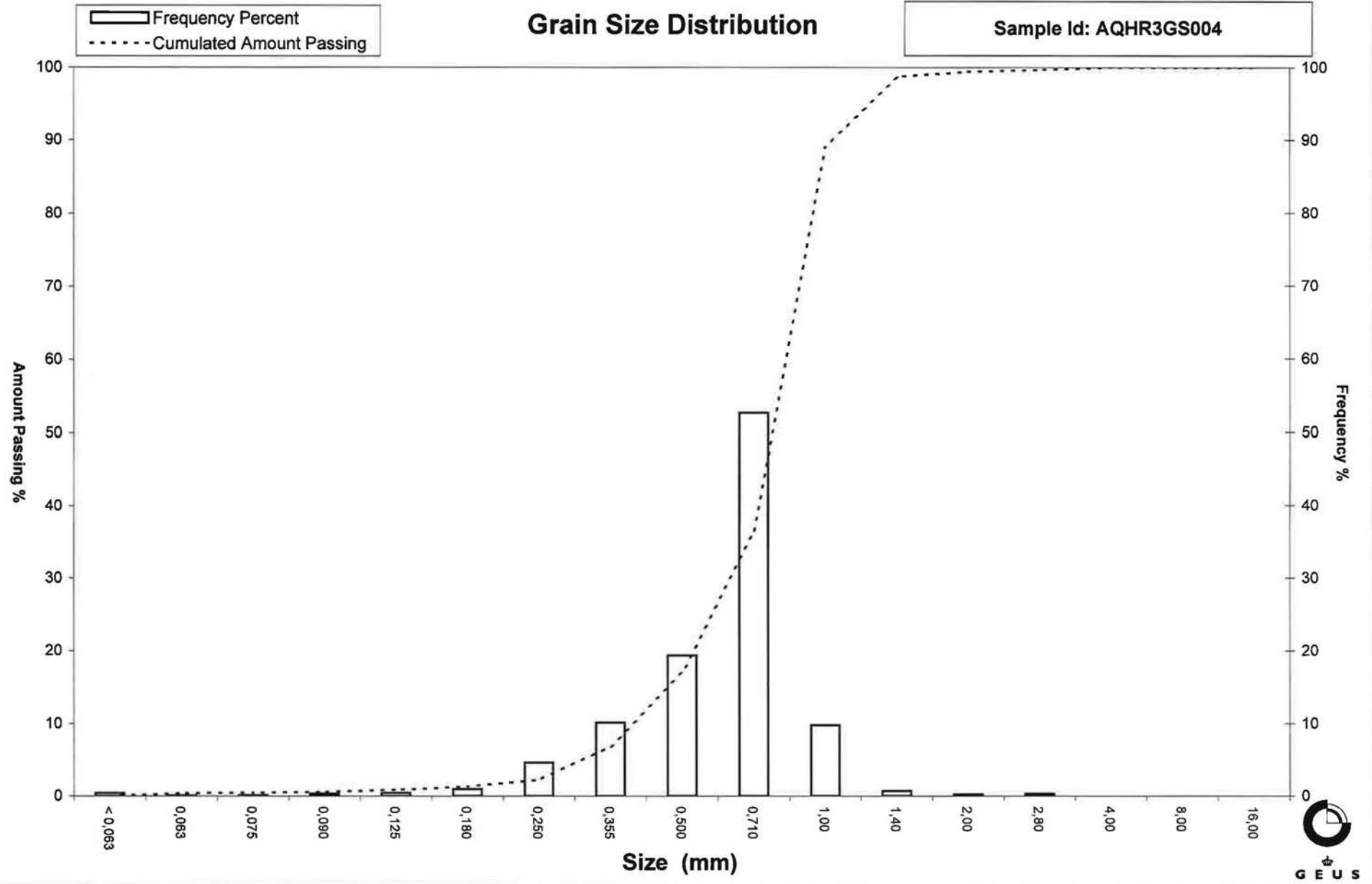
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS004



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS005
Lab. Id: 120140
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 8 mm.



Total Weight 204,89 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	1,24	0,61	99,39
4,00	-2,00	3,57	1,74	97,65
2,80	-1,49	25,76	12,57	85,08
2,00	-1,00	70,88	34,59	50,49
1,40	-0,49	52,51	25,63	24,86
1,00	0,00	8,63	4,21	20,65
0,710	0,49	2,71	1,32	19,32
0,500	1,00	6,27	3,06	16,26
0,355	1,49	11,45	5,59	10,67
0,250	2,00	12,53	6,12	4,56
0,180	2,47	3,86	1,88	2,67
0,125	3,00	0,92	0,45	2,23
0,090	3,47	1,75	0,85	1,37
0,075	3,74	1,02	0,50	0,87
0,063	3,99	0,59	0,29	0,59
< 0,063	> 3,99	1,20	0,59	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,59
Sand, fine (0,063 mm - 0,200 mm):	2,63
Sand, medium (0,2 mm - 0,6 mm):	14,51
Sand, coarse (0,6 mm - 2 mm):	32,77
Gravel (> 2 mm):	49,51
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	3,75	-1,91
16%	84%	2,78	-1,47
25%	75%	2,57	-1,36
40%	60%	2,22	-1,15
Median 50%	50%	1,99	-0,99
75%	25%	1,40	-0,49
84%	16%	0,49	1,02
90%	10%	0,34	1,54
95%	5%	0,26	1,96

Moments Statistics

Mean	-0,48
Sorting	1,21
Skewness	0,57
Kurtosis	1,82
Uniformity Coefficient	6,46

The analysis is executed according to DS405.9
 DS/EN933-1 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)

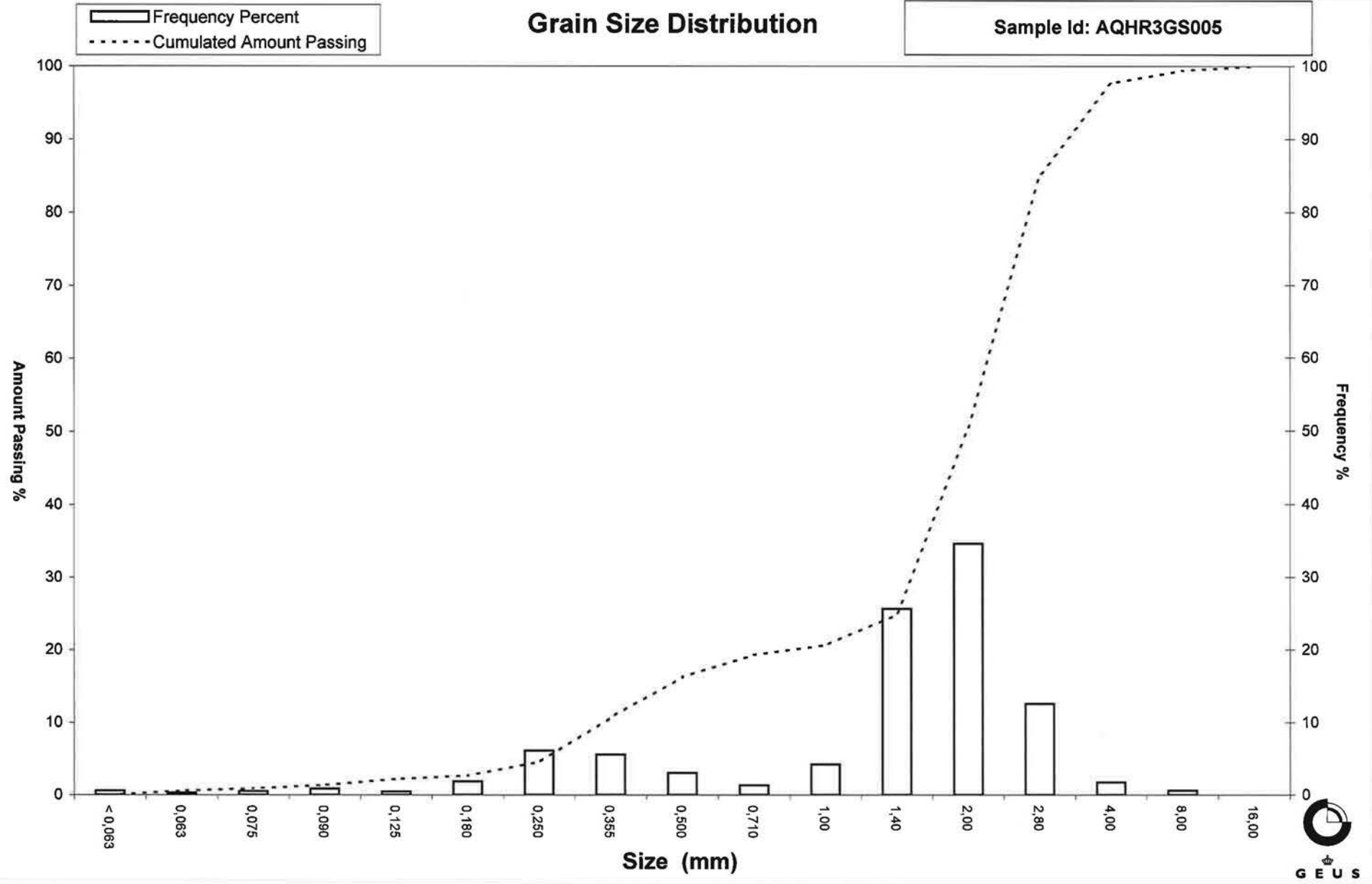
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS005



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS006
Lab. Id: 120141
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 104,49 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	0,00	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	0,08	0,08	99,92
1,40	-0,49	0,03	0,03	99,89
1,00	0,00	0,09	0,09	99,81
0,710	0,49	0,45	0,43	99,38
0,500	1,00	6,62	6,34	93,04
0,355	1,49	29,24	27,98	65,06
0,250	2,00	42,75	40,91	24,14
0,180	2,47	17,63	16,87	7,27
0,125	3,00	3,77	3,61	3,66
0,090	3,47	1,57	1,50	2,16
0,075	3,74	0,59	0,56	1,60
0,063	3,99	0,29	0,28	1,32
< 0,063	> 3,99	1,38	1,32	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,32
Sand, fine (0,063 mm - 0,200 mm):	10,77
Sand, medium (0,2 mm - 0,6 mm):	83,97
Sand, coarse (0,6 mm - 2 mm):	3,86
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%	0,56	0,82
16%	84%	0,45	1,14
25%	75%	0,41	1,30
40%	60%	0,34	1,55
Median 50%	50%	0,32	1,66
75%	25%	0,25	1,99
84%	16%	0,22	2,21
90%	10%	0,19	2,39
95%	5%	0,15	2,78

Moments Statistics

Mean	1,67
Sorting	0,56
Skewness	0,09
Kurtosis	1,17
Uniformity Coefficient	1,79

The analysis is executed according to DS405.9
 DS/EN933-1 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)

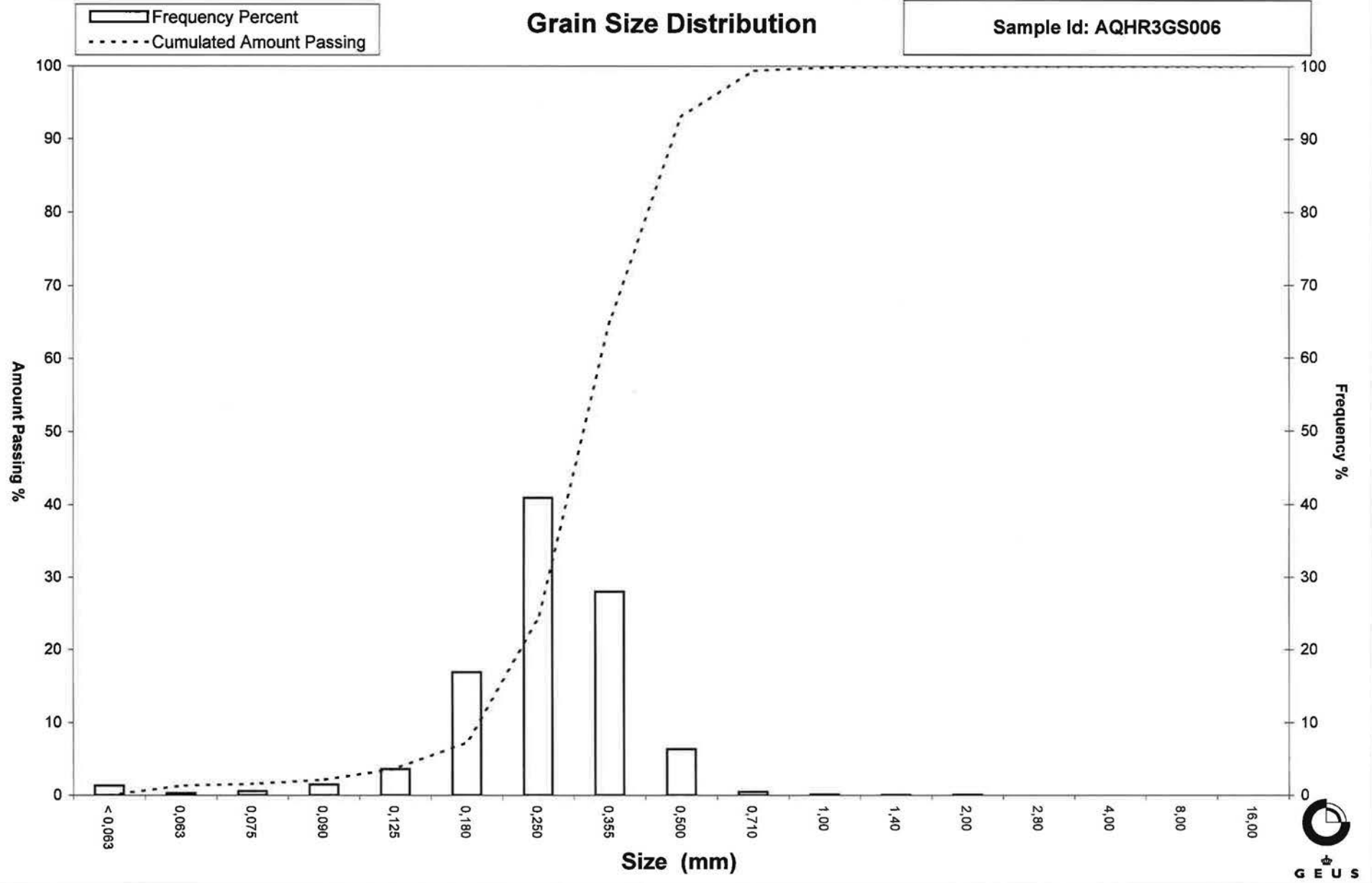
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS006



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS007
Lab. Id: 120142
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 8 mm.



Total Weight 209,82 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	1,32	0,63	99,37
4,00	-2,00	2,19	1,04	98,33
2,80	-1,49	0,90	0,43	97,90
2,00	-1,00	1,23	0,59	97,31
1,40	-0,49	2,15	1,02	96,29
1,00	0,00	72,57	34,59	61,70
0,710	0,49	88,89	42,36	19,34
0,500	1,00	14,26	6,80	12,54
0,355	1,49	12,00	5,72	6,82
0,250	2,00	7,41	3,53	3,29
0,180	2,47	2,91	1,39	1,90
0,125	3,00	1,12	0,53	1,37
0,090	3,47	0,84	0,40	0,97
0,075	3,74	0,43	0,20	0,76
0,063	3,99	0,22	0,10	0,66
< 0,063	> 3,99	1,38	0,66	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,66
Sand, fine (0,063 mm - 0,200 mm):	1,64
Sand, medium (0,2 mm - 0,6 mm):	13,48
Sand, coarse (0,6 mm - 2 mm):	81,54
Gravel (> 2 mm):	2,69
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,39	-0,47
16%	84%	1,26	-0,33
25%	75%	1,15	-0,21
40%	60%	0,99	0,02
Median 50%	50%	0,92	0,12
75%	25%	0,75	0,42
84%	16%	0,61	0,72
90%	10%	0,44	1,20
95%	5%	0,30	1,73

Moments Statistics

Mean	0,17
Sorting	0,60
Skewness	0,30
Kurtosis	1,45
Uniformity Coefficient	2,27

The analysis is executed according to DS405.9
 DS/EN933-1 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)

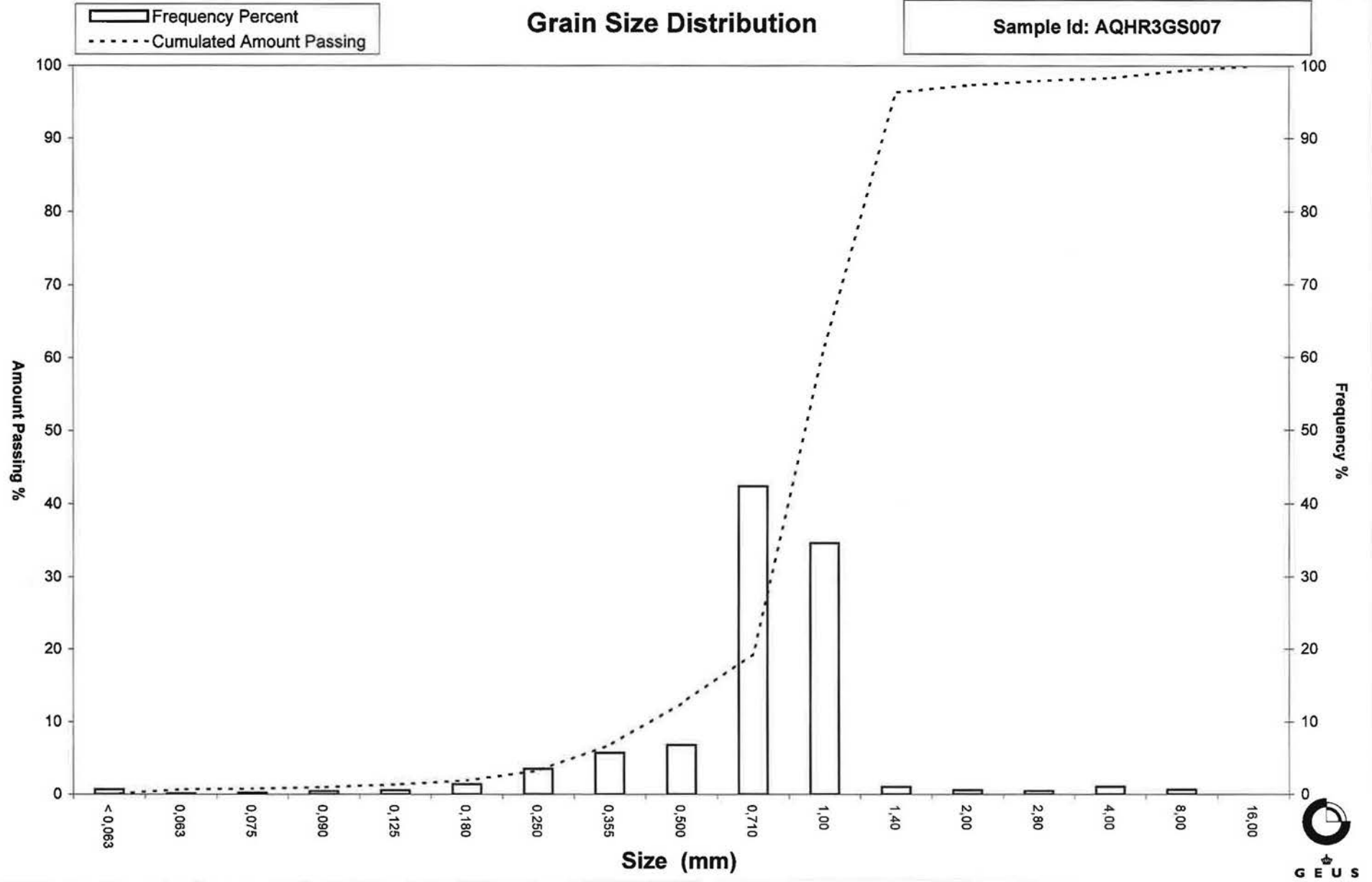
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS007



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS008
Lab. Id: 120143
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 130,83 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	0,95	0,73	99,27
2,80	-1,49	0,21	0,16	99,11
2,00	-1,00	0,68	0,52	98,59
1,40	-0,49	1,63	1,25	97,35
1,00	0,00	36,97	28,26	69,09
0,710	0,49	63,79	48,76	20,33
0,500	1,00	6,89	5,27	15,07
0,355	1,49	6,92	5,29	9,78
0,250	2,00	6,10	4,66	5,11
0,180	2,47	2,43	1,86	3,26
0,125	3,00	1,24	0,95	2,31
0,090	3,47	0,98	0,75	1,56
0,075	3,74	0,50	0,38	1,18
0,063	3,99	0,28	0,21	0,96
< 0,063	> 3,99	1,26	0,96	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,96
Sand, fine (0,063 mm - 0,200 mm):	2,82
Sand, medium (0,2 mm - 0,6 mm):	13,79
Sand, coarse (0,6 mm - 2 mm):	81,02
Gravel (> 2 mm):	1,41
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,37	-0,45
16%	84%	1,21	-0,28
25%	75%	1,08	-0,12
40%	60%	0,95	0,08
Median 50%	50%	0,89	0,17
75%	25%	0,74	0,44
84%	16%	0,54	0,90
90%	10%	0,36	1,47
95%	5%	0,25	2,02

Moments Statistics

Mean	0,26
Sorting	0,67
Skewness	0,36
Kurtosis	1,83
Uniformity Coefficient	2,62

The analysis is executed according to DS405.9
 DS/EN933-1 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)

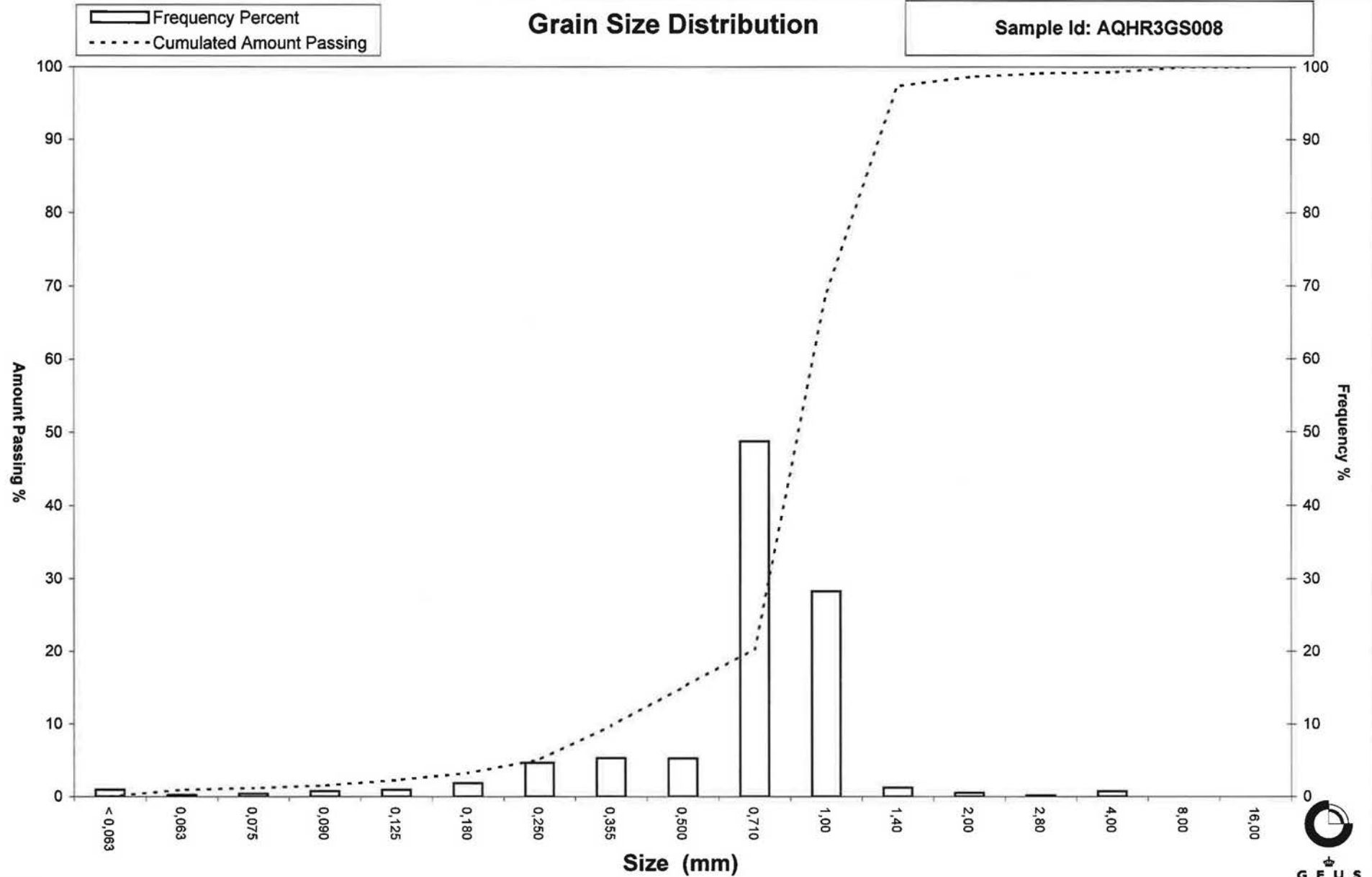
Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS008



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS009
Lab. Id: 120144
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 111,73 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	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,20	0,18	99,82
2,00	-1,00	0,13	0,12	99,70
1,40	-0,49	0,18	0,16	99,54
1,00	0,00	1,51	1,35	98,19
0,710	0,49	15,82	14,16	84,03
0,500	1,00	35,41	31,69	52,34
0,355	1,49	46,63	41,73	10,61
0,250	2,00	9,62	8,61	2,00
0,180	2,47	1,07	0,96	1,04
0,125	3,00	0,34	0,30	0,73
0,090	3,47	0,16	0,14	0,59
0,075	3,74	0,06	0,05	0,54
0,063	3,99	0,03	0,03	0,51
< 0,063	> 3,99	0,57	0,51	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,51
Sand, fine (0,063 mm - 0,200 mm):	0,80
Sand, medium (0,2 mm - 0,6 mm):	66,12
Sand, coarse (0,6 mm - 2 mm):	32,27
Gravel (> 2 mm):	0,30
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,93	0,10
16%	84%	0,71	0,49
25%	75%	0,65	0,62
40%	60%	0,55	0,86
Median 50%	50%	0,49	1,02
75%	25%	0,41	1,30
84%	16%	0,37	1,42
90%	10%	0,35	1,52
95%	5%	0,29	1,80

Moments Statistics

Mean	0,98
Sorting	0,49
Skewness	-0,11
Kurtosis	1,02
Uniformity Coefficient	1,58

The analysis is executed according to DS405.9
 DS/EN933-1 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)

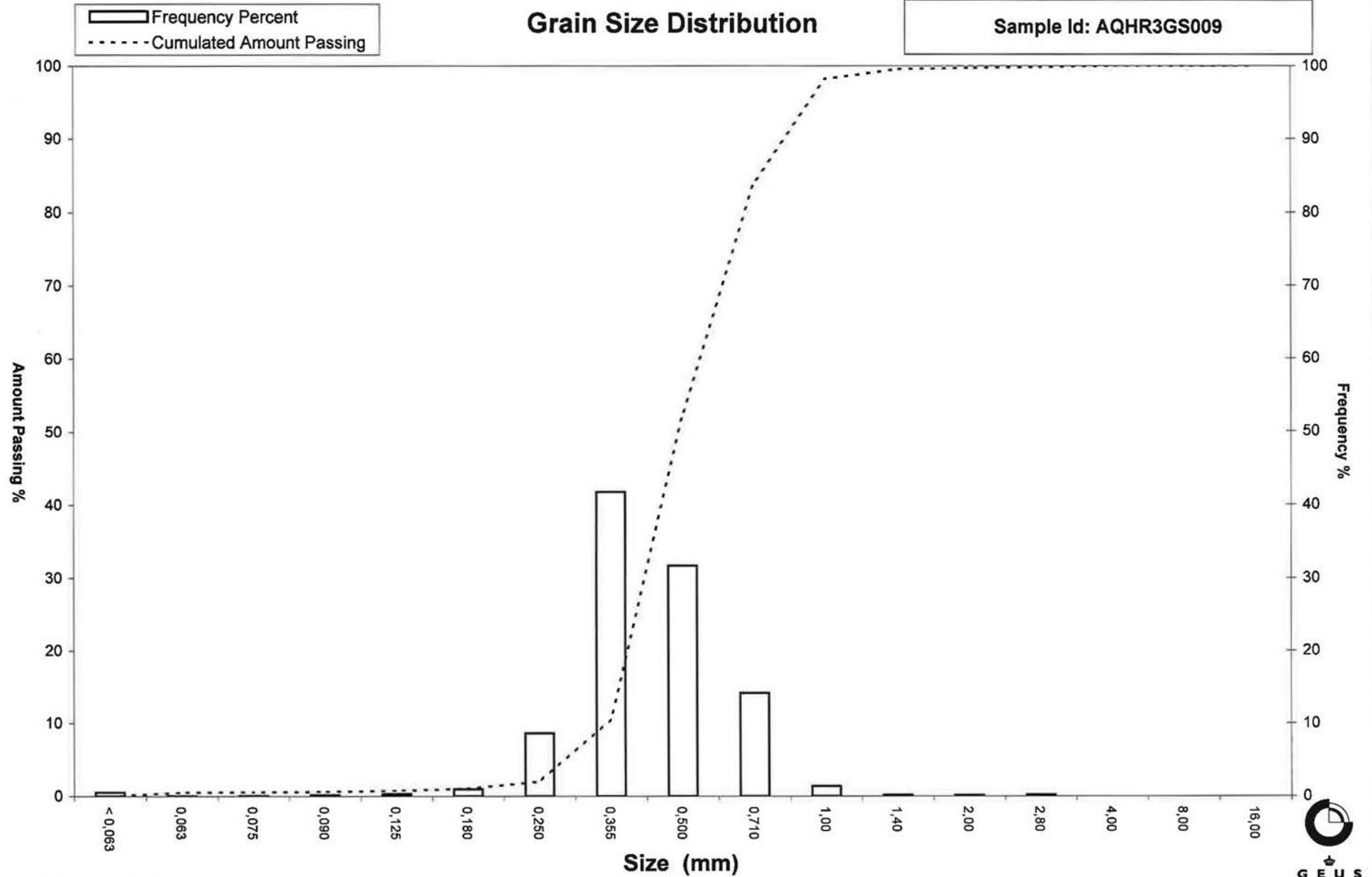
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS009



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS010
Lab. Id: 120145
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 102,35 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	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,15	0,15	99,85
2,00	-1,00	0,16	0,16	99,70
1,40	-0,49	0,27	0,26	99,43
1,00	0,00	1,44	1,41	98,03
0,710	0,49	15,73	15,37	82,66
0,500	1,00	31,82	31,09	51,57
0,355	1,49	42,02	41,06	10,51
0,250	2,00	8,79	8,59	1,92
0,180	2,47	0,92	0,90	1,03
0,125	3,00	0,36	0,35	0,67
0,090	3,47	0,24	0,23	0,44
0,075	3,74	0,11	0,11	0,33
0,063	3,99	0,02	0,02	0,31
< 0,063	> 3,99	0,32	0,31	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,31
Sand, fine (0,063 mm - 0,200 mm):	0,97
Sand, medium (0,2 mm - 0,6 mm):	65,09
Sand, coarse (0,6 mm - 2 mm):	33,32
Gravel (> 2 mm):	0,30
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,94	0,08
16%	84%	0,74	0,44
25%	75%	0,66	0,60
40%	60%	0,56	0,84
Median 50%	50%	0,49	1,02
75%	25%	0,41	1,30
84%	16%	0,37	1,42
90%	10%	0,35	1,52
95%	5%	0,29	1,80

Moments Statistics

Mean	0,96
Sorting	0,50
Skewness	-0,13
Kurtosis	1,01
Uniformity Coefficient	1,60

The analysis is executed according to DS405.9
 DS/EN933-1 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)

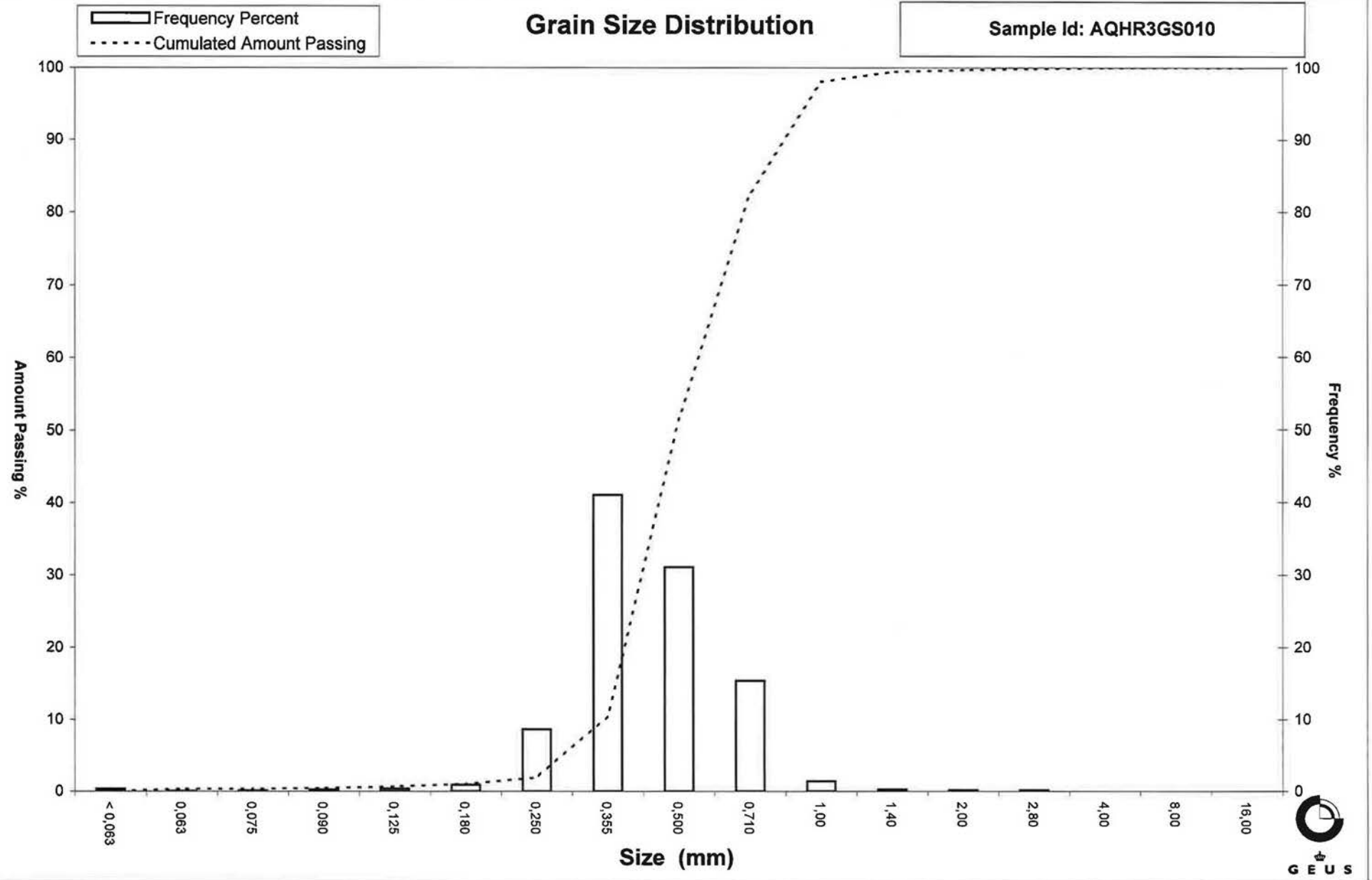
Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS010



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS011
Lab. Id: 120146
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 109,06 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	0,00	0,00	100,00
1,00	0,00	0,25	0,23	99,77
0,710	0,49	0,14	0,13	99,64
0,500	1,00	1,54	1,41	98,23
0,355	1,49	28,40	26,04	72,19
0,250	2,00	60,31	55,30	16,89
0,180	2,47	14,45	13,25	3,64
0,125	3,00	2,71	2,48	1,16
0,090	3,47	0,55	0,50	0,65
0,075	3,74	0,14	0,13	0,52
0,063	3,99	0,04	0,04	0,49
< 0,063	> 3,99	0,53	0,49	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,49
Sand, fine (0,063 mm - 0,200 mm):	6,94
Sand, medium (0,2 mm - 0,6 mm):	91,48
Sand, coarse (0,6 mm - 2 mm):	1,10
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%	0,48	1,05
16%	84%	0,42	1,25
25%	75%	0,37	1,43
40%	60%	0,33	1,59
Median 50%	50%	0,31	1,68
75%	25%	0,27	1,91
84%	16%	0,25	2,03
90%	10%	0,21	2,23
95%	5%	0,19	2,42

Moments Statistics

Mean	1,65
Sorting	0,40
Skewness	-0,01
Kurtosis	1,16
Uniformity Coefficient	1,55

The analysis is executed according to DS405.9
 DS/EN933-1 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)

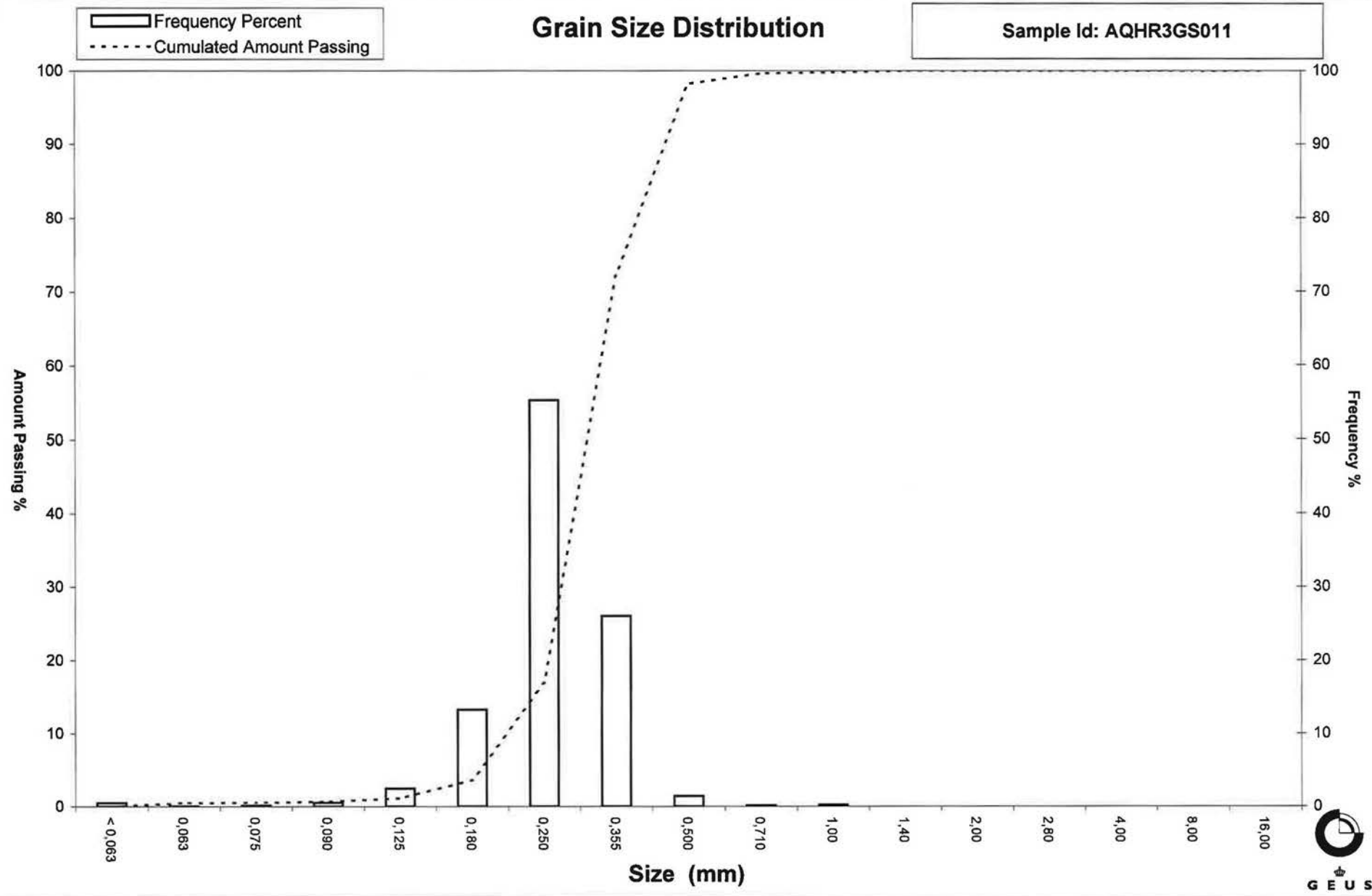
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS011



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS012
Lab. Id: 120147
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 106,56 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	0,09	0,08	99,92
2,00	-1,00	0,56	0,53	99,39
1,40	-0,49	2,82	2,65	96,74
1,00	0,00	6,70	6,29	90,46
0,710	0,49	13,88	13,03	77,43
0,500	1,00	23,95	22,48	54,95
0,355	1,49	26,01	24,41	30,55
0,250	2,00	25,10	23,55	6,99
0,180	2,47	6,04	5,67	1,32
0,125	3,00	0,62	0,58	0,74
0,090	3,47	0,16	0,15	0,59
0,075	3,74	0,02	0,02	0,57
0,063	3,99	0,01	0,01	0,56
< 0,063	> 3,99	0,60	0,56	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,56
Sand, fine (0,063 mm - 0,200 mm):	2,38
Sand, medium (0,2 mm - 0,6 mm):	62,71
Sand, coarse (0,6 mm - 2 mm):	33,73
Gravel (> 2 mm):	0,61
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,29	-0,37
16%	84%	0,86	0,22
25%	75%	0,69	0,54
40%	60%	0,55	0,87
Median 50%	50%	0,47	1,09
75%	25%	0,33	1,60
84%	16%	0,29	1,79
90%	10%	0,26	1,92
95%	5%	0,23	2,15

Moments Statistics

Mean	1,03
Sorting	0,77
Skewness	-0,13
Kurtosis	0,98
Uniformity Coefficient	2,08

The analysis is executed according to DS405.9
 DS/EN933-1 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)

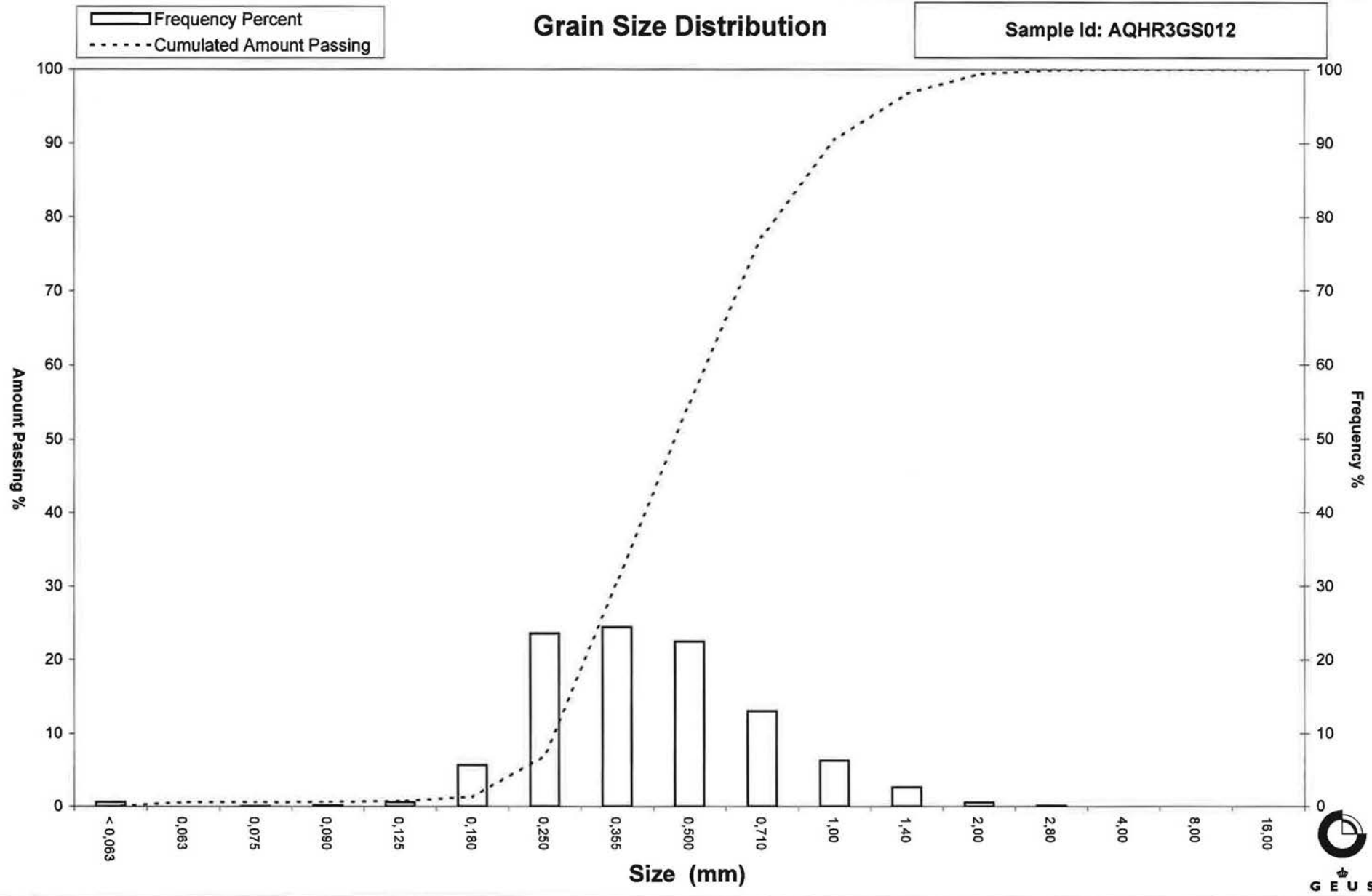
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS012



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS013
Lab. Id: 120148
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 105,03 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	0,22	0,21	99,77
0,710	0,49	0,68	0,65	99,12
0,500	1,00	2,97	2,83	96,30
0,355	1,49	14,31	13,62	82,67
0,250	2,00	58,25	55,46	27,21
0,180	2,47	24,46	23,29	3,92
0,125	3,00	2,64	2,51	1,41
0,090	3,47	0,57	0,54	0,87
0,075	3,74	0,14	0,13	0,73
0,063	3,99	0,05	0,05	0,69
< 0,063	> 3,99	0,72	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):	9,89
Sand, medium (0,2 mm - 0,6 mm):	87,07
Sand, coarse (0,6 mm - 2 mm):	2,36
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%	0,49	1,04
16%	84%	0,37	1,44
25%	75%	0,34	1,55
40%	60%	0,31	1,68
Median 50%	50%	0,29	1,77
75%	25%	0,24	2,04
84%	16%	0,22	2,21
90%	10%	0,20	2,33
95%	5%	0,18	2,45

Moments Statistics

Mean	1,81
Sorting	0,41
Skewness	0,05
Kurtosis	1,19
Uniformity Coefficient	1,57

The analysis is executed according to DS405.9
 DS/EN933-1 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)

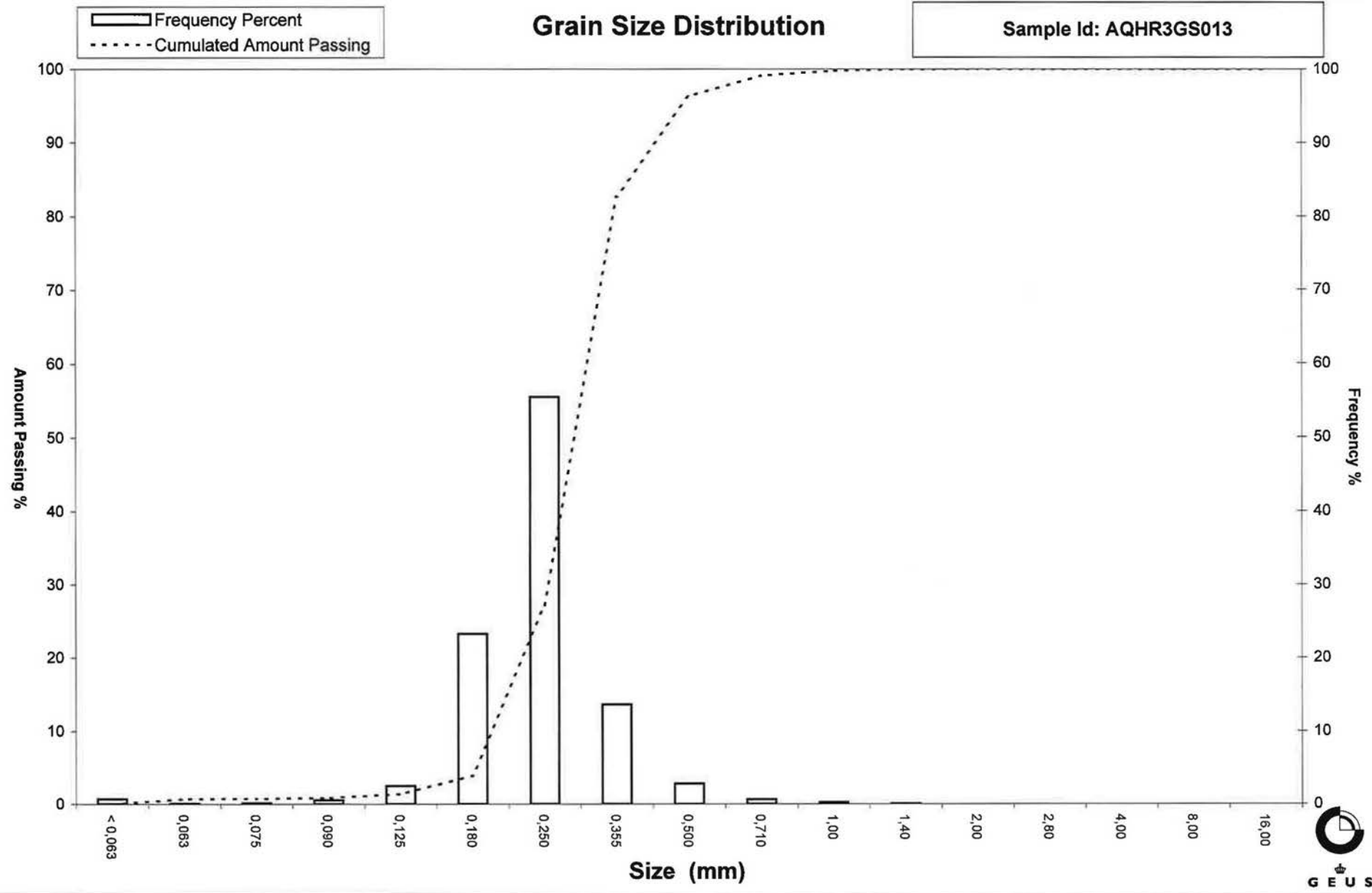
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS013



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS014 (1 st attempt)
Lab. Id: 120149
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 107,07 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	1,69	1,58	98,42
4,00	-2,00	1,06	0,99	97,43
2,80	-1,49	0,15	0,14	97,29
2,00	-1,00	0,18	0,17	97,12
1,40	-0,49	0,42	0,39	96,73
1,00	0,00	3,26	3,04	93,69
0,710	0,49	7,95	7,43	86,26
0,500	1,00	22,60	21,11	65,15
0,355	1,49	35,26	32,93	32,22
0,250	2,00	26,74	24,97	7,25
0,180	2,47	5,19	4,85	2,40
0,125	3,00	1,26	1,18	1,22
0,090	3,47	0,29	0,27	0,95
0,075	3,74	0,06	0,06	0,90
0,063	3,99	0,02	0,02	0,88
< 0,063	> 3,99	0,94	0,88	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,88
Sand, fine (0,063 mm - 0,200 mm):	2,91
Sand, medium (0,2 mm - 0,6 mm):	71,42
Sand, coarse (0,6 mm - 2 mm):	21,92
Gravel (> 2 mm):	2,88
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,17	-0,23
16%	84%	0,69	0,54
25%	75%	0,60	0,74
40%	60%	0,48	1,07
Median 50%	50%	0,43	1,21
75%	25%	0,32	1,62
84%	16%	0,29	1,80
90%	10%	0,26	1,93
95%	5%	0,22	2,20

Moments Statistics

Mean	1,18
Sorting	0,68
Skewness	-0,12
Kurtosis	1,13
Uniformity Coefficient	1,82

The analysis is executed according to DS405.9
 DS/EN933-1 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)

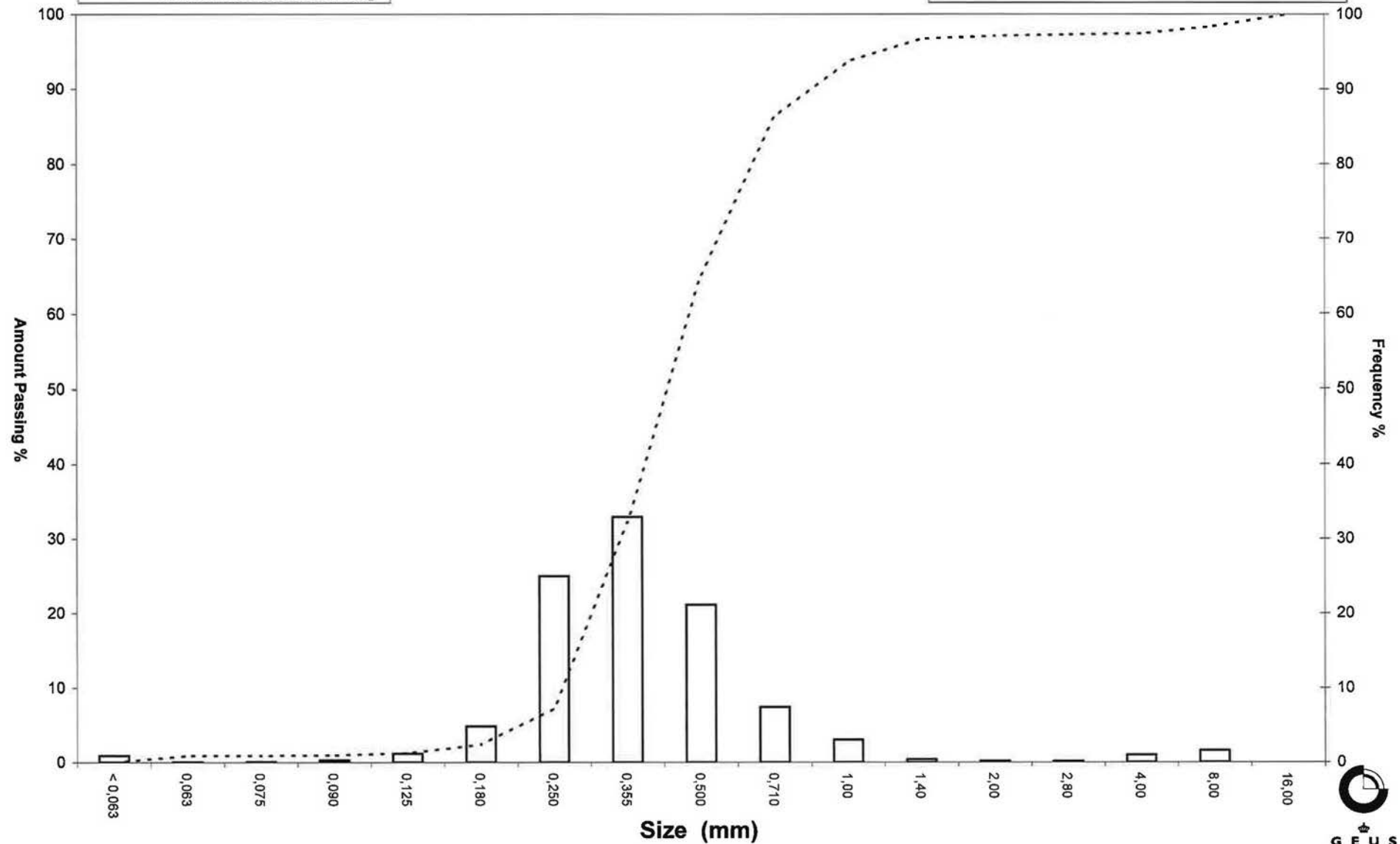
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS014 (1 st attempt)



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS014 (12 nd attempt)
Lab. Id: 120150
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 103,04 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	0,43	0,42	99,46
1,00	0,00	2,32	2,25	97,20
0,710	0,49	8,28	8,04	89,17
0,500	1,00	23,51	22,82	66,35
0,355	1,49	36,44	35,36	30,99
0,250	2,00	25,58	24,83	6,16
0,180	2,47	4,03	3,91	2,25
0,125	3,00	1,06	1,03	1,22
0,090	3,47	0,26	0,25	0,97
0,075	3,74	0,10	0,10	0,87
0,063	3,99	0,02	0,02	0,85
< 0,063	> 3,99	0,88	0,85	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,85
Sand, fine (0,063 mm - 0,200 mm):	2,51
Sand, medium (0,2 mm - 0,6 mm):	73,85
Sand, coarse (0,6 mm - 2 mm):	22,66
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%	0,92	0,12
16%	84%	0,66	0,59
25%	75%	0,58	0,79
40%	60%	0,47	1,08
Median 50%	50%	0,43	1,21
75%	25%	0,33	1,60
84%	16%	0,29	1,78
90%	10%	0,27	1,91
95%	5%	0,23	2,13

Moments Statistics

Mean	1,19
Sorting	0,60
Skewness	-0,06
Kurtosis	1,01
Uniformity Coefficient	1,78

The analysis is executed according to DS405.9
 DS/EN933-1 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)

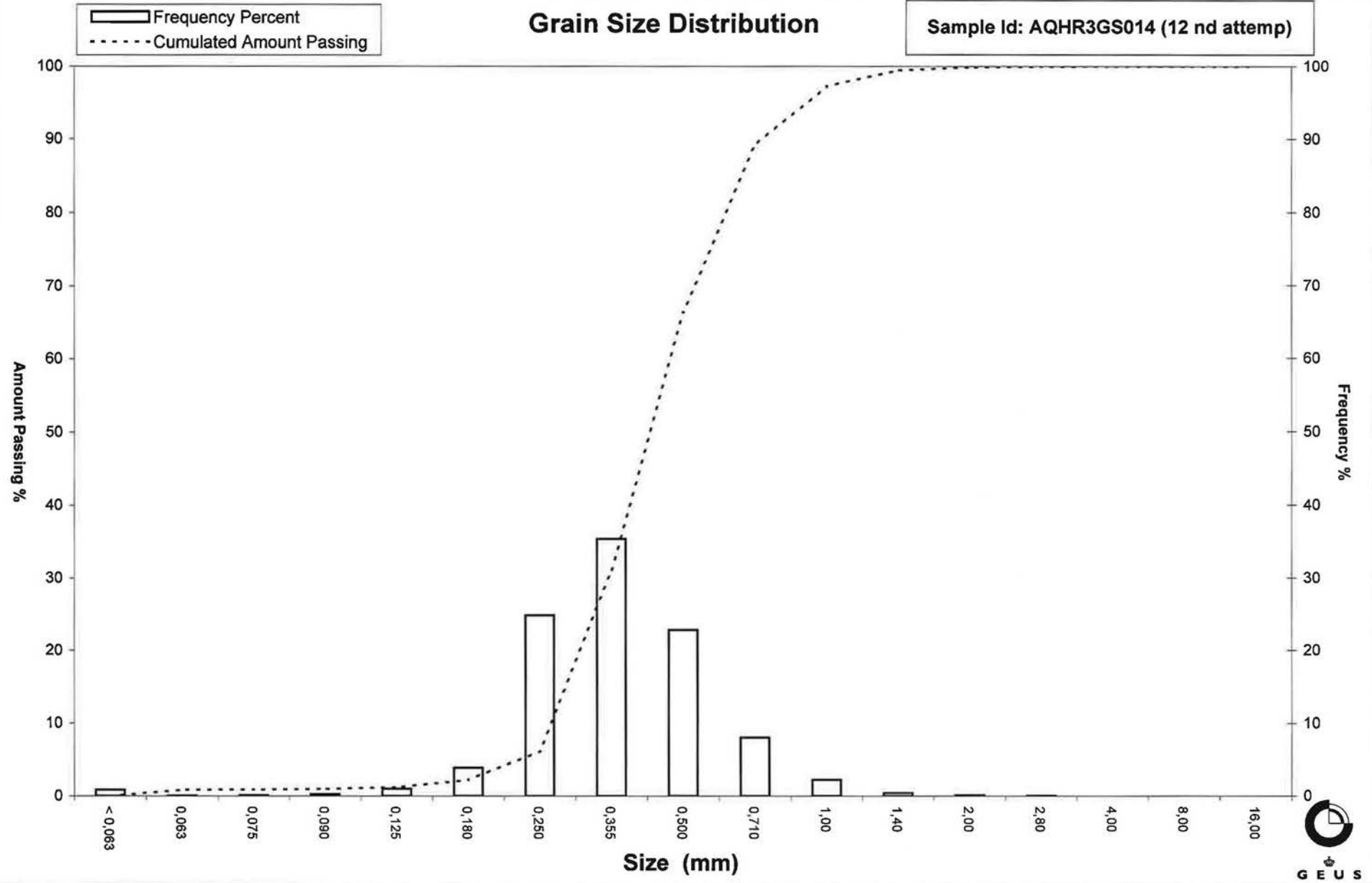
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS014 (12 nd attempt)



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS015
Lab. Id: 120151
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 116,46 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	0,49	0,42	99,58
2,80	-1,49	1,99	1,71	97,87
2,00	-1,00	1,90	1,63	96,24
1,40	-0,49	2,32	1,99	94,25
1,00	0,00	7,22	6,20	88,05
0,710	0,49	15,43	13,25	74,80
0,500	1,00	30,92	26,55	48,25
0,355	1,49	27,82	23,89	24,36
0,250	2,00	22,78	19,56	4,80
0,180	2,47	3,84	3,30	1,50
0,125	3,00	0,63	0,54	0,96
0,090	3,47	0,18	0,15	0,81
0,075	3,74	0,03	0,03	0,78
0,063	3,99	0,01	0,01	0,77
< 0,063	> 3,99	0,90	0,77	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,77
Sand, fine (0,063 mm - 0,200 mm):	1,67
Sand, medium (0,2 mm - 0,6 mm):	58,45
Sand, coarse (0,6 mm - 2 mm):	35,35
Gravel (> 2 mm):	3,76
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,63	-0,70
16%	84%	0,91	0,13
25%	75%	0,71	0,49
40%	60%	0,59	0,75
Median 50%	50%	0,51	0,96
75%	25%	0,36	1,48
84%	16%	0,31	1,69
90%	10%	0,28	1,85
95%	5%	0,25	1,99

Moments Statistics

Mean	0,93
Sorting	0,80
Skewness	-0,15
Kurtosis	1,11
Uniformity Coefficient	2,13

The analysis is executed according to DS405.9
 DS/EN933-1 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)

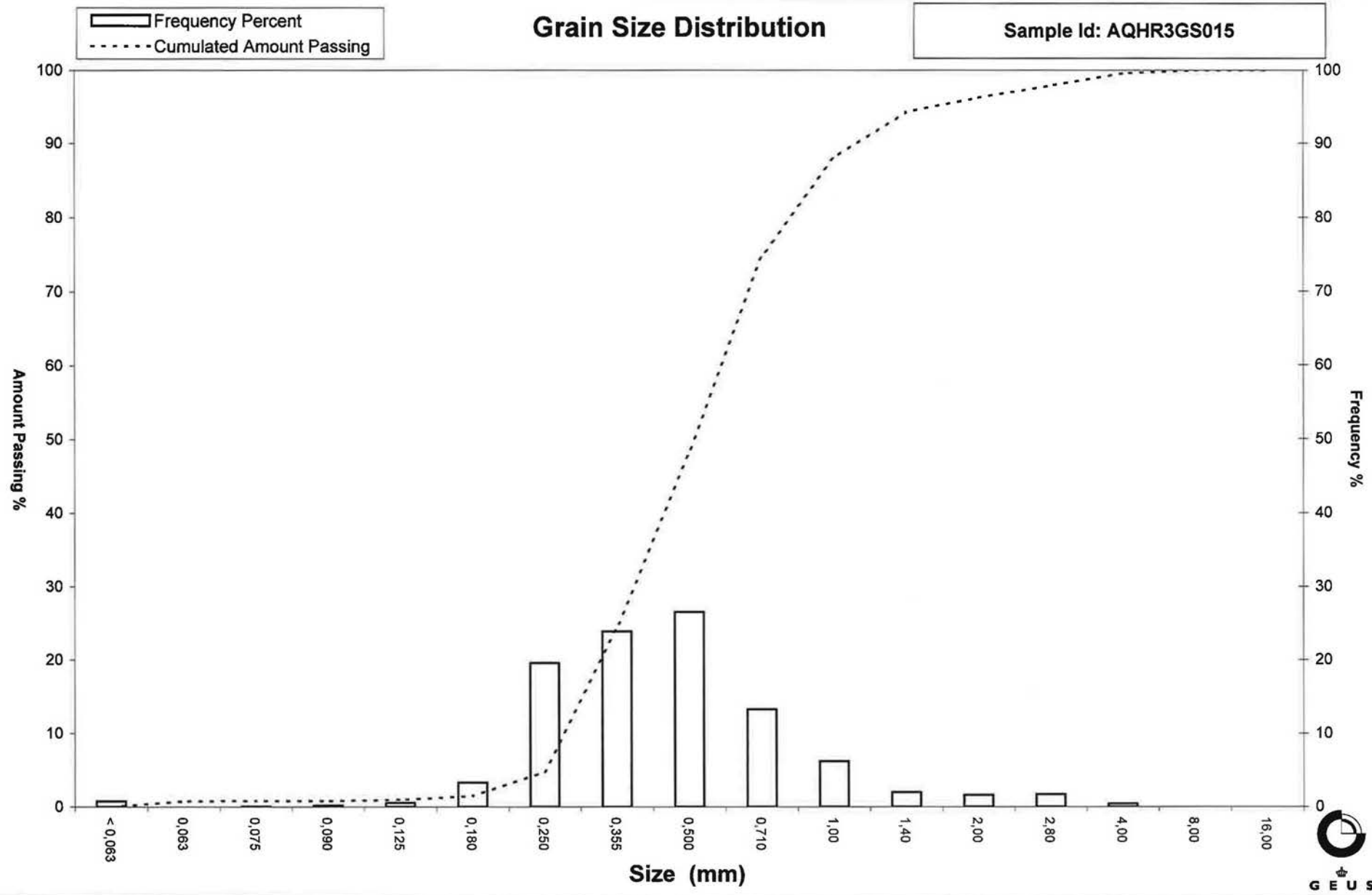
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS015



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS016
Lab. Id: 120152
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 109,44 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	0,09	0,08	99,92
2,00	-1,00	0,16	0,15	99,77
1,40	-0,49	0,69	0,63	99,14
1,00	0,00	2,94	2,69	96,45
0,710	0,49	9,12	8,33	88,12
0,500	1,00	26,62	24,32	63,80
0,355	1,49	38,01	34,73	29,07
0,250	2,00	25,09	22,93	6,14
0,180	2,47	4,51	4,12	2,02
0,125	3,00	1,21	1,11	0,91
0,090	3,47	0,19	0,17	0,74
0,075	3,74	0,02	0,02	0,72
0,063	3,99	0,01	0,01	0,71
< 0,063	> 3,99	0,78	0,71	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,71
Sand, fine (0,063 mm - 0,200 mm):	2,48
Sand, medium (0,2 mm - 0,6 mm):	72,18
Sand, coarse (0,6 mm - 2 mm):	24,39
Gravel (> 2 mm):	0,23
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,95	0,07
16%	84%	0,67	0,57
25%	75%	0,60	0,74
40%	60%	0,48	1,05
Median 50%	50%	0,44	1,18
75%	25%	0,34	1,57
84%	16%	0,30	1,76
90%	10%	0,27	1,90
95%	5%	0,23	2,12

Moments Statistics

Mean	1,17
Sorting	0,61
Skewness	-0,05
Kurtosis	1,01
Uniformity Coefficient	1,81

The analysis is executed according to DS405.9
 DS/EN933-1 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)

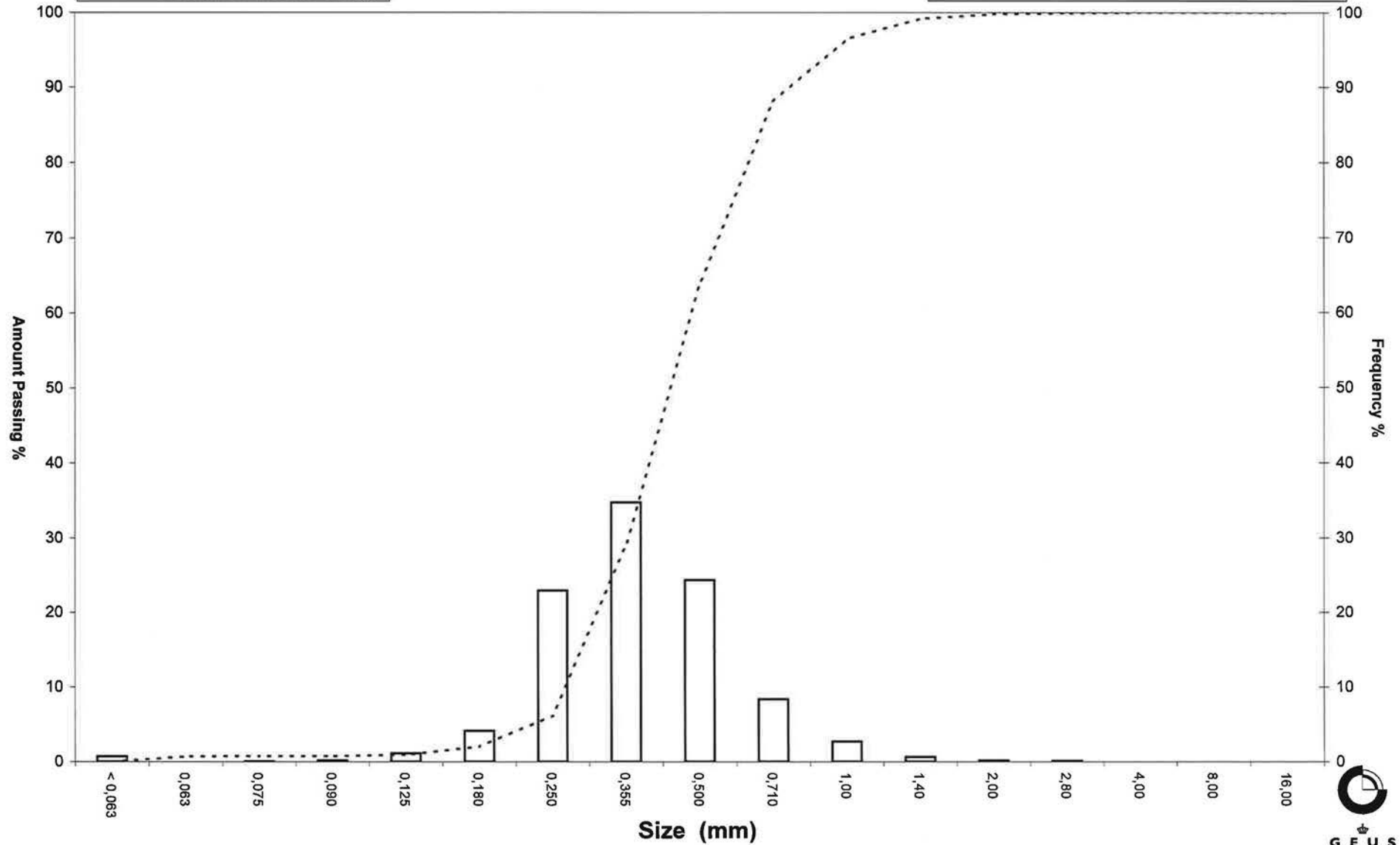
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS016



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS017
Lab. Id: 120153
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 105,06 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	0,06	0,06	99,94
1,00	0,00	0,24	0,23	99,71
0,710	0,49	0,82	0,78	98,93
0,500	1,00	4,41	4,20	94,74
0,355	1,49	17,26	16,43	78,31
0,250	2,00	41,48	39,48	38,83
0,180	2,47	33,35	31,74	7,08
0,125	3,00	6,42	6,11	0,97
0,090	3,47	0,38	0,36	0,61
0,075	3,74	0,04	0,04	0,57
0,063	3,99	0,01	0,01	0,56
< 0,063	> 3,99	0,59	0,56	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,56
Sand, fine (0,063 mm - 0,200 mm):	15,59
Sand, medium (0,2 mm - 0,6 mm):	80,58
Sand, coarse (0,6 mm - 2 mm):	3,26
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%	0,51	0,96
16%	84%	0,41	1,30
25%	75%	0,35	1,53
40%	60%	0,31	1,71
Median 50%	50%	0,28	1,84
75%	25%	0,22	2,19
84%	16%	0,20	2,32
90%	10%	0,19	2,42
95%	5%	0,16	2,63

Moments Statistics

Mean	1,82
Sorting	0,51
Skewness	-0,05
Kurtosis	1,04
Uniformity Coefficient	1,64

The analysis is executed according to DS405.9
 DS/EN933-1 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)

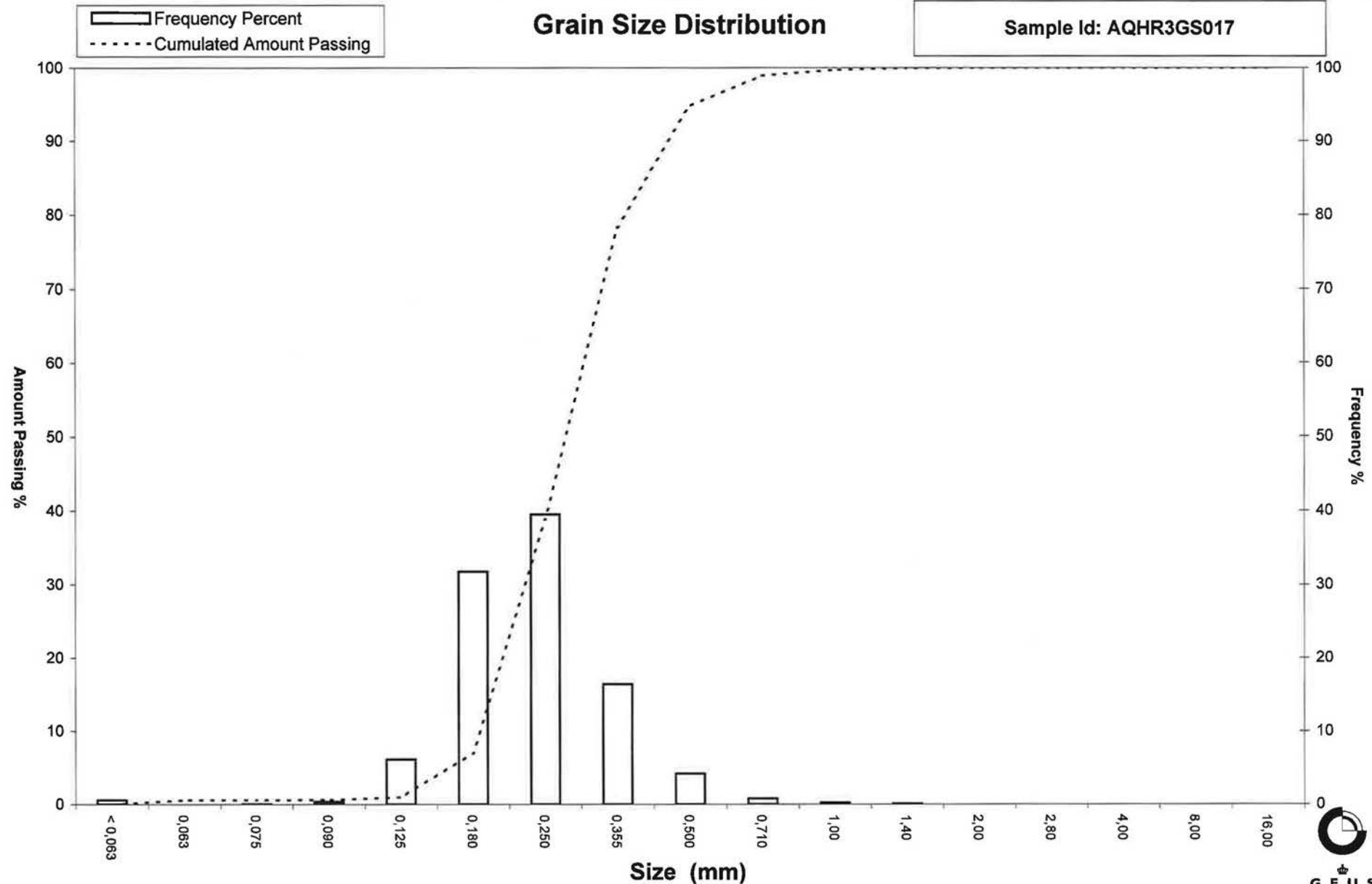
Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS017



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS018
Lab. Id: 120154
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 107,91 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	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	0,05	0,05	99,95
1,40	-0,49	0,03	0,03	99,93
1,00	0,00	0,07	0,06	99,86
0,710	0,49	0,16	0,15	99,71
0,500	1,00	0,62	0,57	99,14
0,355	1,49	5,39	4,99	94,14
0,250	2,00	20,02	18,55	75,59
0,180	2,47	31,49	29,18	46,41
0,125	3,00	39,45	36,56	9,85
0,090	3,47	7,62	7,06	2,79
0,075	3,74	1,12	1,04	1,75
0,063	3,99	0,43	0,40	1,35
< 0,063	> 3,99	1,46	1,35	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,35
Sand, fine (0,063 mm - 0,200 mm):	53,39
Sand, medium (0,2 mm - 0,6 mm):	44,67
Sand, coarse (0,6 mm - 2 mm):	0,54
Gravel (> 2 mm):	0,05
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,38	1,40
16%	84%	0,30	1,75
25%	75%	0,25	2,01
40%	60%	0,21	2,23
Median 50%	50%	0,19	2,41
75%	25%	0,15	2,76
84%	16%	0,13	2,90
90%	10%	0,13	3,00
95%	5%	0,10	3,31

Moments Statistics

Mean	2,35
Sorting	0,58
Skewness	-0,10
Kurtosis	1,04
Uniformity Coefficient	1,70

The analysis is executed according to DS405.9
 DS/EN933-1 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)

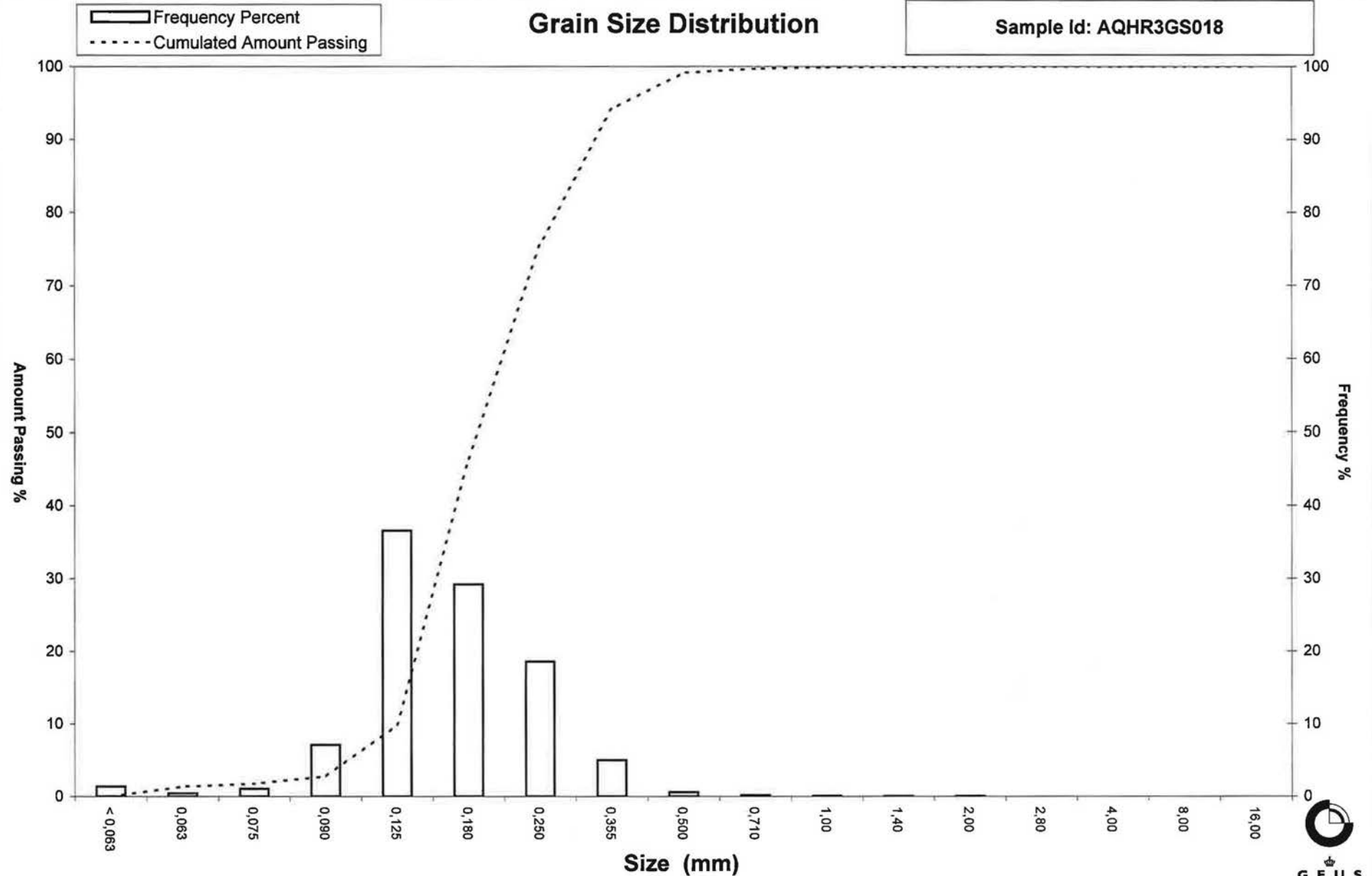
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS018



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS019
Lab. Id: 120155
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 101,83 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	0,07	0,07	99,93
1,40	-0,49	0,09	0,09	99,84
1,00	0,00	0,13	0,13	99,72
0,710	0,49	0,25	0,25	99,47
0,500	1,00	0,65	0,64	98,83
0,355	1,49	4,78	4,69	94,14
0,250	2,00	20,69	20,32	73,82
0,180	2,47	29,55	29,02	44,80
0,125	3,00	35,62	34,98	9,82
0,090	3,47	7,49	7,36	2,46
0,075	3,74	1,08	1,06	1,40
0,063	3,99	0,50	0,49	0,91
< 0,063	> 3,99	0,93	0,91	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,91
Sand, fine (0,063 mm - 0,200 mm):	52,18
Sand, medium (0,2 mm - 0,6 mm):	46,04
Sand, coarse (0,6 mm - 2 mm):	0,80
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%	0,38	1,39
16%	84%	0,30	1,72
25%	75%	0,26	1,97
40%	60%	0,22	2,21
Median 50%	50%	0,19	2,38
75%	25%	0,15	2,75
84%	16%	0,13	2,89
90%	10%	0,13	3,00
95%	5%	0,10	3,29

Moments Statistics

Mean	2,33
Sorting	0,58
Skewness	-0,08
Kurtosis	1,00
Uniformity Coefficient	1,73

The analysis is executed according to DS405.9
 DS/EN933-1 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)

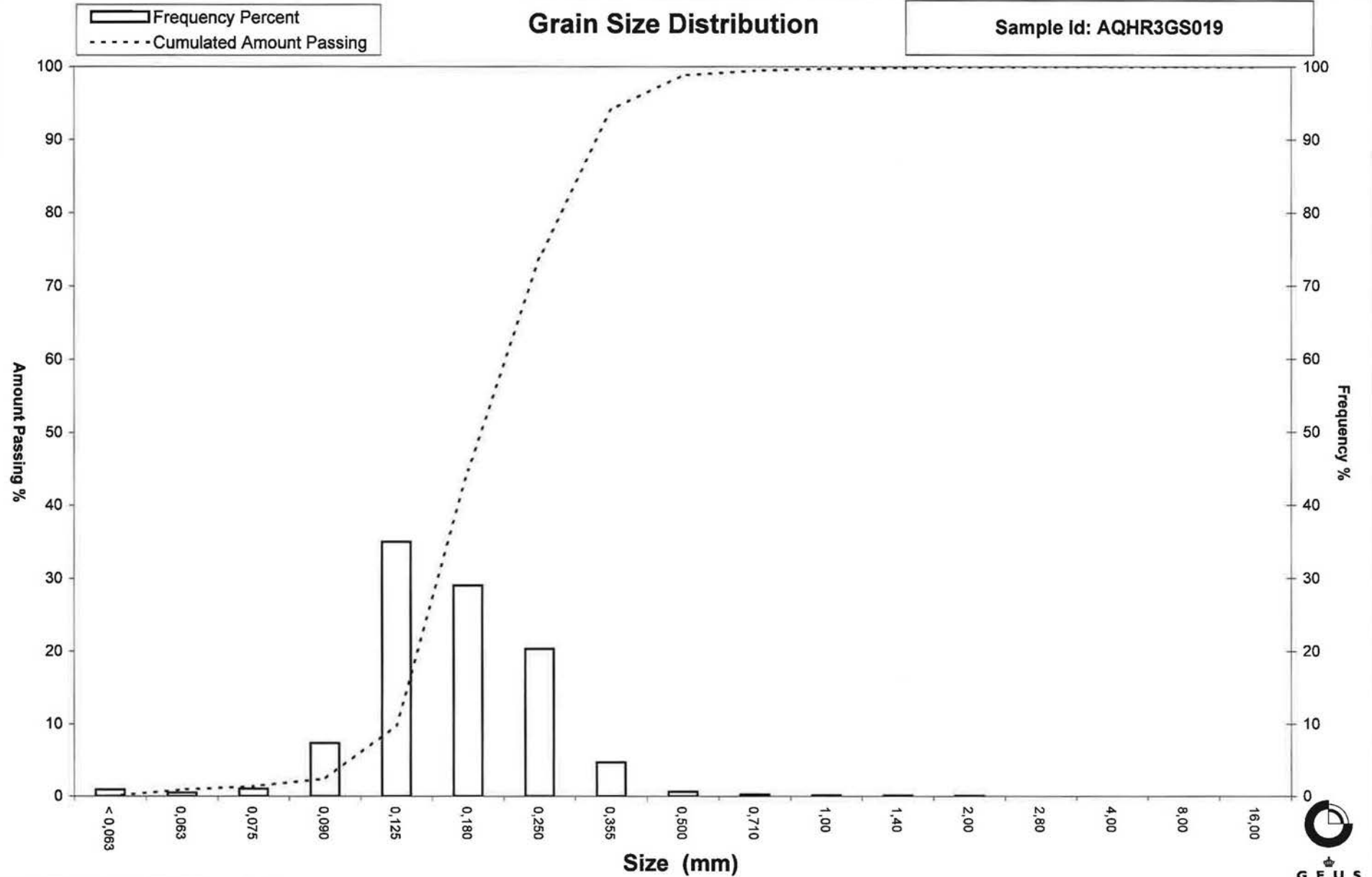
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS019



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS020
Lab. Id: 120156
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 101,33 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	0,32	0,32	99,68
2,00	-1,00	0,22	0,22	99,47
1,40	-0,49	0,39	0,38	99,08
1,00	0,00	1,73	1,71	97,37
0,710	0,49	4,35	4,29	93,08
0,500	1,00	10,61	10,47	82,61
0,355	1,49	25,77	25,43	57,18
0,250	2,00	38,68	38,17	19,01
0,180	2,47	12,18	12,02	6,99
0,125	3,00	3,41	3,37	3,62
0,090	3,47	1,79	1,77	1,86
0,075	3,74	0,51	0,50	1,35
0,063	3,99	0,20	0,20	1,15
< 0,063	> 3,99	1,17	1,15	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,15
Sand, fine (0,063 mm - 0,200 mm):	9,27
Sand, medium (0,2 mm - 0,6 mm):	77,18
Sand, coarse (0,6 mm - 2 mm):	11,87
Gravel (> 2 mm):	0,53
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,84	0,25
16%	84%	0,53	0,92
25%	75%	0,46	1,13
40%	60%	0,37	1,43
Median 50%	50%	0,34	1,58
75%	25%	0,27	1,91
84%	16%	0,23	2,10
90%	10%	0,20	2,34
95%	5%	0,15	2,76

Moments Statistics

Mean	1,53
Sorting	0,68
Skewness	-0,08
Kurtosis	1,32
Uniformity Coefficient	1,88

The analysis is executed according to DS405.9
 DS/EN933-1 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)

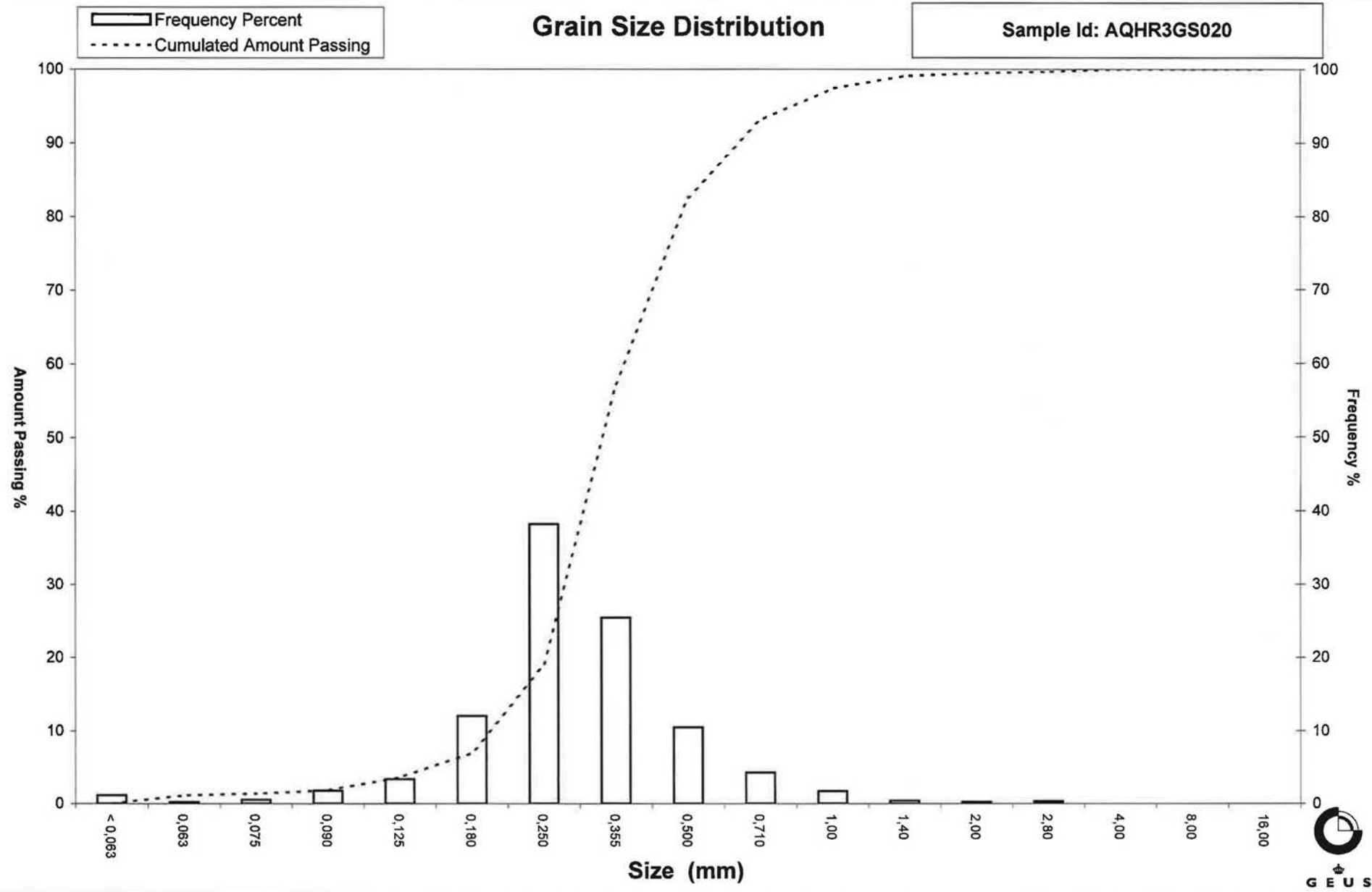
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS020



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS021
Lab. Id: 120157
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 8 mm.



Total Weight 201,23 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	3,71	1,84	98,16
4,00	-2,00	2,18	1,09	97,07
2,80	-1,49	2,23	1,11	95,96
2,00	-1,00	2,78	1,38	94,58
1,40	-0,49	4,15	2,06	92,52
1,00	0,00	9,39	4,67	87,85
0,710	0,49	22,80	11,33	76,52
0,500	1,00	40,27	20,01	56,51
0,355	1,49	51,11	25,40	31,11
0,250	2,00	41,76	20,75	10,36
0,180	2,47	12,42	6,17	4,19
0,125	3,00	4,57	2,27	1,91
0,090	3,47	1,54	0,77	1,15
0,075	3,74	0,28	0,14	1,01
0,063	3,99	0,11	0,05	0,95
< 0,063	> 3,99	1,92	0,95	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,95
Sand, fine (0,063 mm - 0,200 mm):	5,00
Sand, medium (0,2 mm - 0,6 mm):	60,09
Sand, coarse (0,6 mm - 2 mm):	28,54
Gravel (> 2 mm):	5,42
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	2,24	-1,17
16%	84%	0,90	0,15
25%	75%	0,69	0,53
40%	60%	0,54	0,90
Median 50%	50%	0,46	1,11
75%	25%	0,32	1,63
84%	16%	0,28	1,84
90%	10%	0,25	2,02
95%	5%	0,19	2,40

Moments Statistics

Mean	1,04
Sorting	0,96
Skewness	-0,21
Kurtosis	1,33
Uniformity Coefficient	2,18

The analysis is executed according to DS405.9
 DS/EN933-1 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)

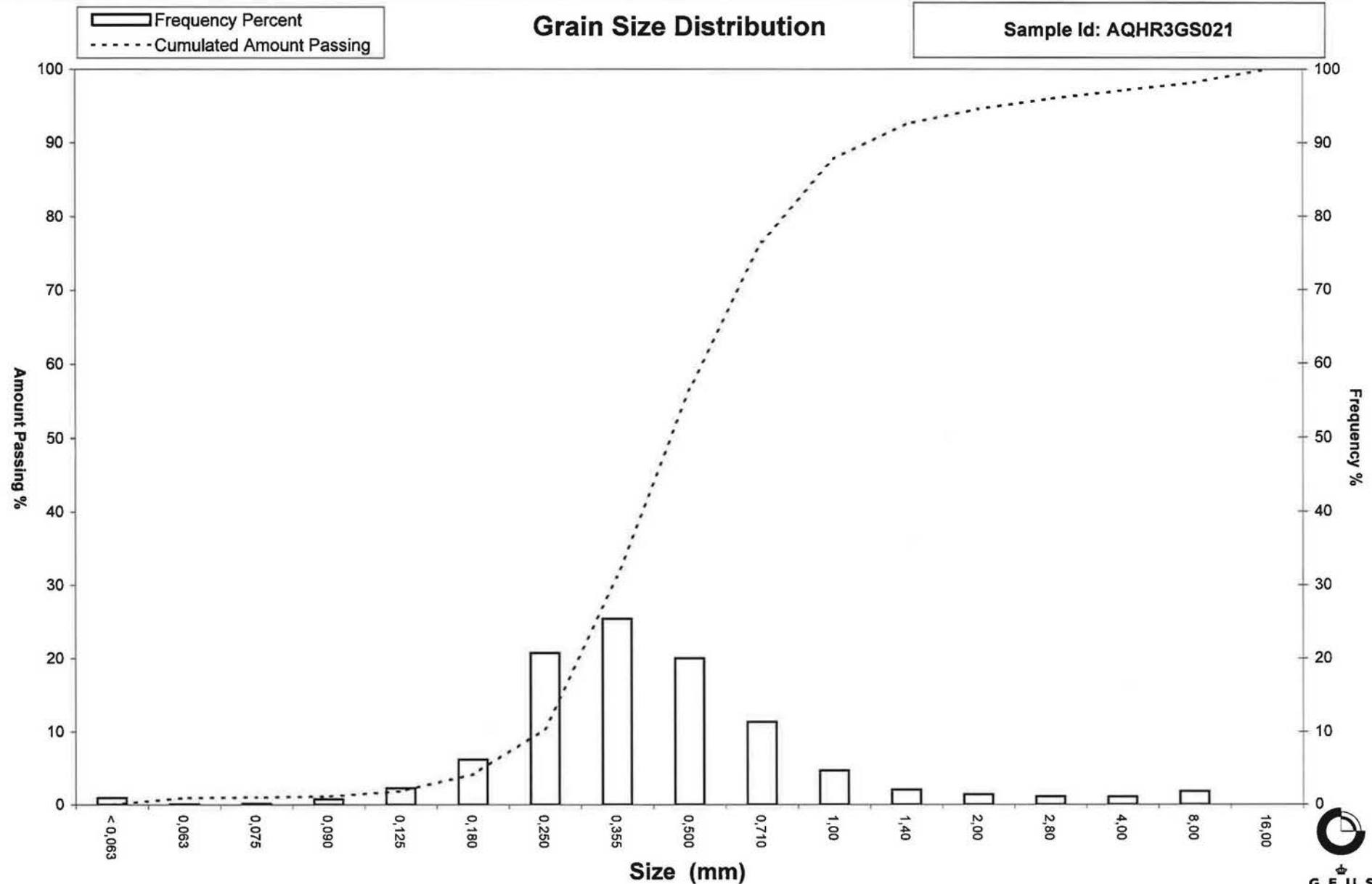
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS021



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS022
Lab. Id: 120158
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 110,35 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	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	0,08	0,07	99,93
1,40	-0,49	0,16	0,14	99,78
1,00	0,00	0,28	0,25	99,53
0,710	0,49	0,96	0,87	98,66
0,500	1,00	2,72	2,46	96,19
0,355	1,49	9,45	8,56	87,63
0,250	2,00	31,12	28,20	59,43
0,180	2,47	30,11	27,29	32,14
0,125	3,00	24,70	22,38	9,76
0,090	3,47	5,44	4,93	4,83
0,075	3,74	1,80	1,63	3,20
0,063	3,99	1,04	0,94	2,26
< 0,063	> 3,99	2,49	2,26	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	2,26
Sand, fine (0,063 mm - 0,200 mm):	37,68
Sand, medium (0,2 mm - 0,6 mm):	57,43
Sand, coarse (0,6 mm - 2 mm):	2,56
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%	0,48	1,06
16%	84%	0,34	1,55
25%	75%	0,31	1,70
40%	60%	0,25	1,99
Median 50%	50%	0,23	2,15
75%	25%	0,16	2,62
84%	16%	0,14	2,83
90%	10%	0,13	2,99
95%	5%	0,09	3,45

Moments Statistics

Mean	2,18
Sorting	0,68
Skewness	0,08
Kurtosis	1,06
Uniformity Coefficient	2,01

The analysis is executed according to DS405.9
 DS/EN933-1 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)

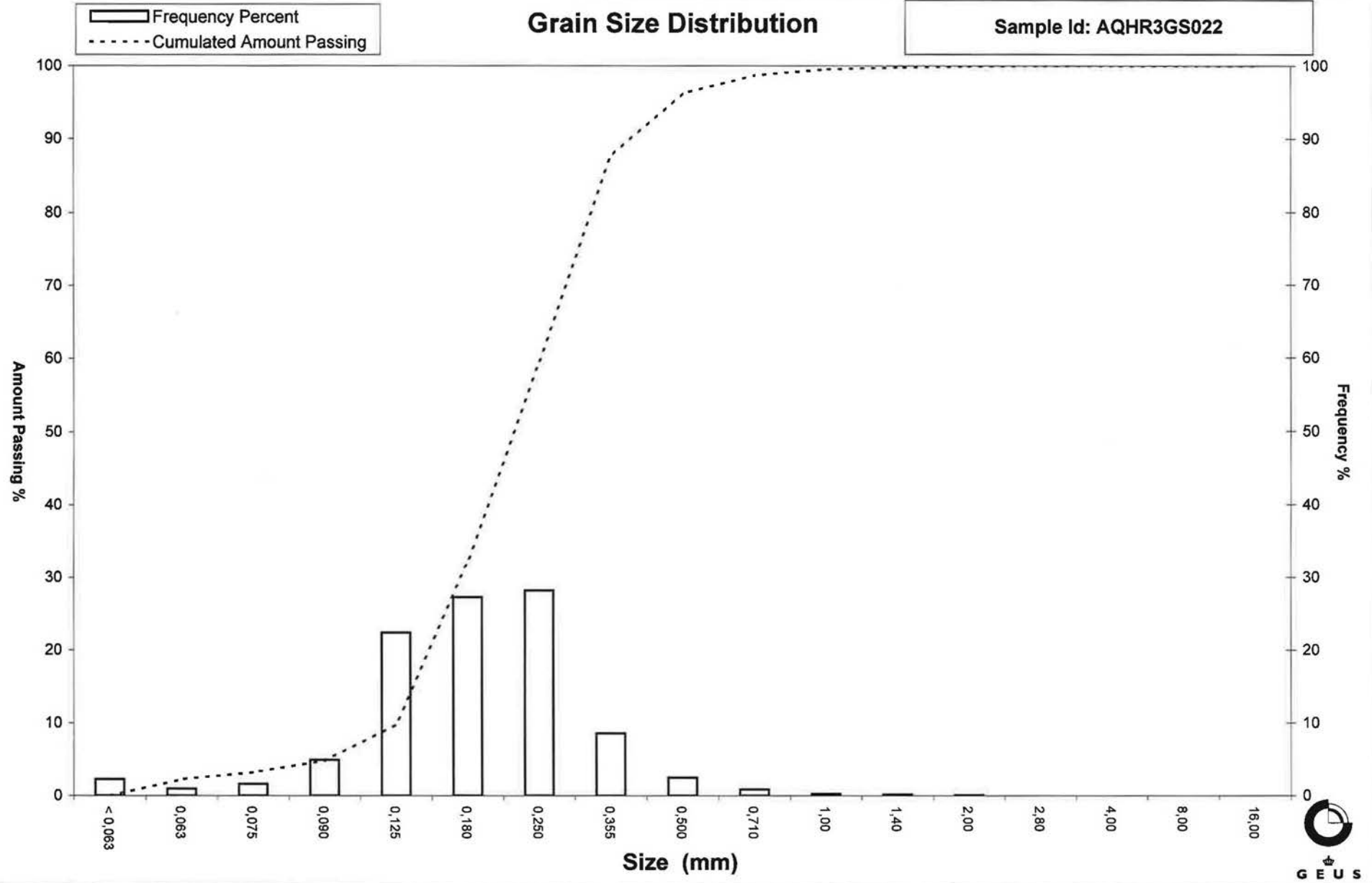
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS022



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS023
Lab. Id: 120158,67
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 101,43 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	0,00	0,00	100,00
2,80	-1,49	0,00	0,00	100,00
2,00	-1,00	0,04	0,04	99,96
1,40	-0,49	0,17	0,17	99,79
1,00	0,00	0,54	0,53	99,26
0,710	0,49	1,94	1,91	97,35
0,500	1,00	7,47	7,36	89,98
0,355	1,49	35,09	34,60	55,39
0,250	2,00	39,55	38,99	16,40
0,180	2,47	10,51	10,36	6,03
0,125	3,00	3,91	3,85	2,18
0,090	3,47	1,29	1,27	0,91
0,075	3,74	0,36	0,35	0,55
0,063	3,99	0,14	0,14	0,41
< 0,063	> 3,99	0,42	0,41	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,41
Sand, fine (0,063 mm - 0,200 mm):	8,58
Sand, medium (0,2 mm - 0,6 mm):	84,50
Sand, coarse (0,6 mm - 2 mm):	6,47
Gravel (> 2 mm):	0,04
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,64	0,64
16%	84%	0,47	1,07
25%	75%	0,44	1,19
40%	60%	0,37	1,42
Median 50%	50%	0,34	1,55
75%	25%	0,27	1,87
84%	16%	0,25	2,02
90%	10%	0,21	2,27
95%	5%	0,17	2,60

Moments Statistics

Mean	1,55
Sorting	0,53
Skewness	0,02
Kurtosis	1,18
Uniformity Coefficient	1,81

The analysis is executed according to DS405.9
 DS/EN933-1 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)

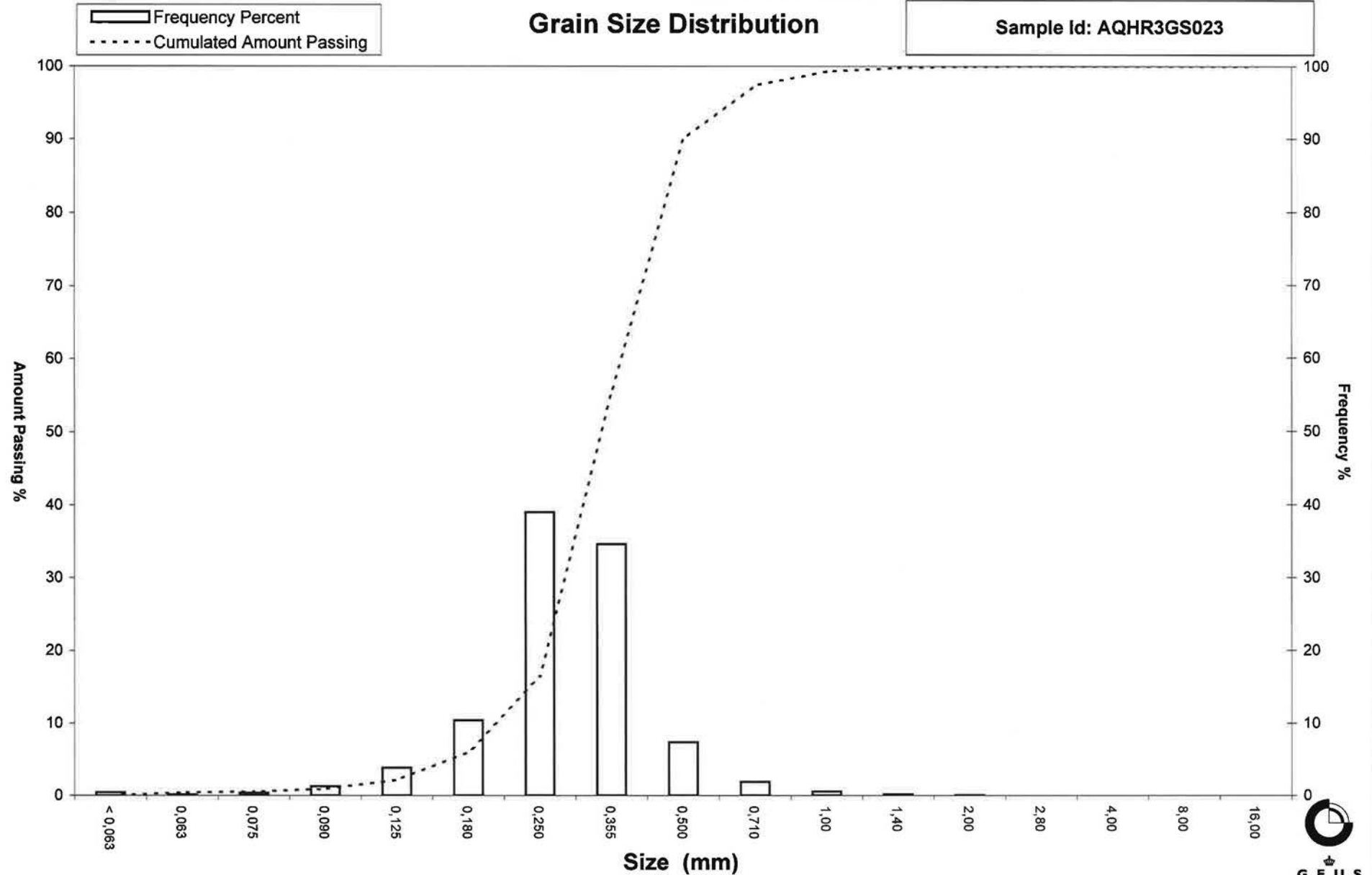
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS023



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS024
Lab. Id: 120160
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 112,63 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	0,44	0,39	99,61
2,80	-1,49	0,07	0,06	99,55
2,00	-1,00	0,48	0,43	99,12
1,40	-0,49	0,34	0,30	98,82
1,00	0,00	1,43	1,27	97,55
0,710	0,49	12,16	10,80	86,75
0,500	1,00	27,99	24,85	61,90
0,355	1,49	35,16	31,22	30,68
0,250	2,00	31,23	27,73	2,96
0,180	2,47	1,88	1,67	1,29
0,125	3,00	0,46	0,41	0,88
0,090	3,47	0,21	0,19	0,69
0,075	3,74	0,04	0,04	0,66
0,063	3,99	0,01	0,01	0,65
< 0,063	> 3,99	0,73	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):	1,12
Sand, medium (0,2 mm - 0,6 mm):	71,97
Sand, coarse (0,6 mm - 2 mm):	25,39
Gravel (> 2 mm):	0,88
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,93	0,10
16%	84%	0,69	0,54
25%	75%	0,61	0,71
40%	60%	0,49	1,03
Median 50%	50%	0,44	1,17
75%	25%	0,33	1,58
84%	16%	0,30	1,74
90%	10%	0,28	1,85
95%	5%	0,26	1,96

Moments Statistics

Mean	1,15
Sorting	0,58
Skewness	-0,10
Kurtosis	0,87
Uniformity Coefficient	1,78

The analysis is executed according to DS405.9
 DS/EN933-1 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)

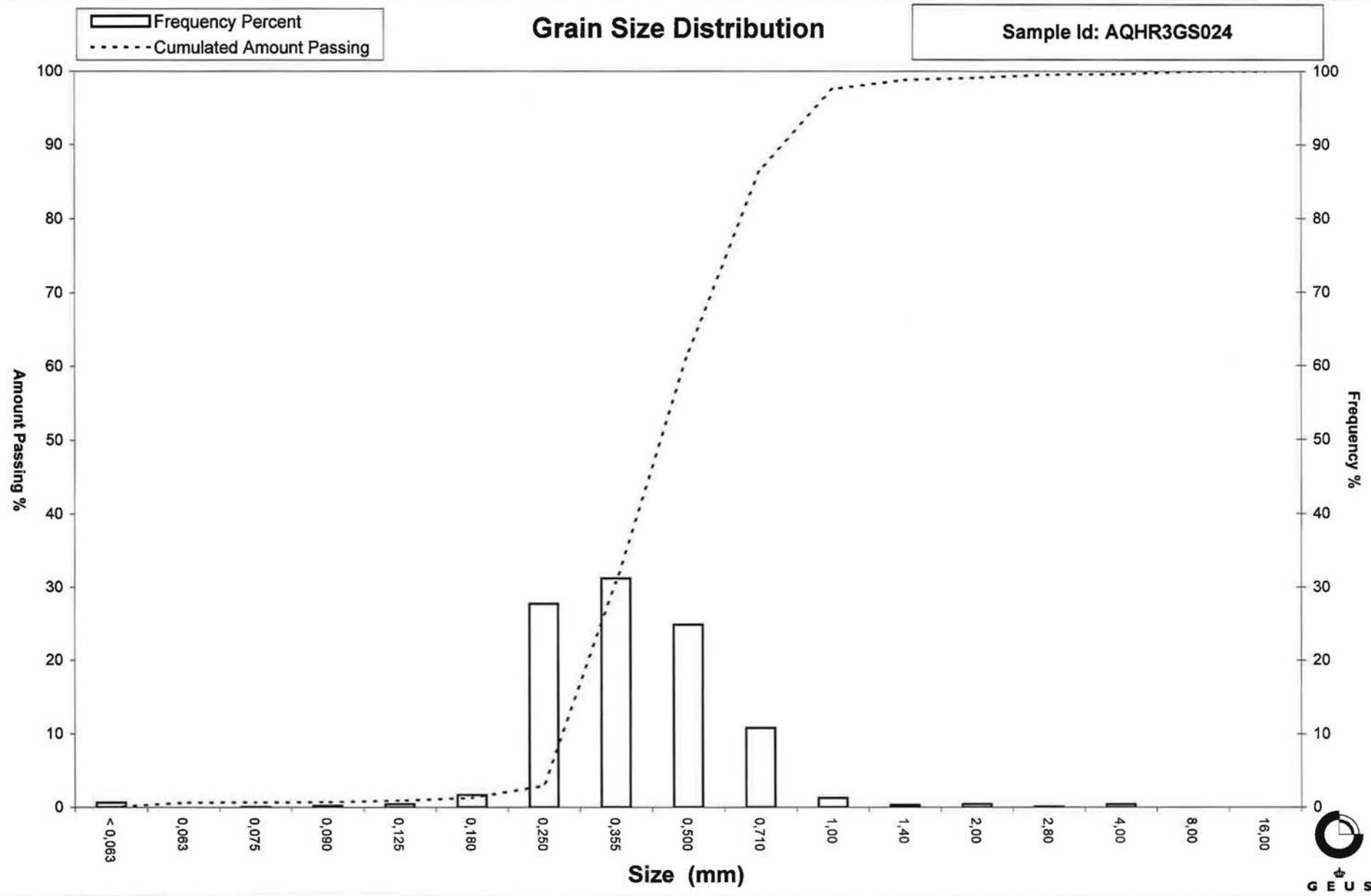
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS024



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS025
Lab. Id: 120161,33
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 16mm. 354 g > 32 mm tillagt 16 mm



Total Weight 2125,05 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
mm	Φ	g	%	%
16,00	-4,00	324,95	15,29	84,71
8,00	-3,00	493,46	23,22	61,49
4,00	-2,00	347,25	16,34	45,15
2,80	-1,49	231,63	10,90	34,25
2,00	-1,00	59,03	2,78	31,47
1,40	-0,49	24,89	1,17	30,30
1,00	0,00	9,35	0,44	29,86
0,710	0,49	9,87	0,46	29,39
0,500	1,00	38,81	1,83	27,57
0,355	1,49	82,53	3,88	23,68
0,250	2,00	102,43	4,82	18,86
0,180	2,47	184,50	8,68	10,18
0,125	3,00	71,89	3,38	6,80
0,090	3,47	79,48	3,74	3,06
0,075	3,74	44,24	2,08	0,98
0,063	3,99	11,68	0,55	0,43
< 0,063	> 3,99	9,05	0,43	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,43
Sand, fine (0,063 mm - 0,200 mm):	12,24
Sand, medium (0,2 mm - 0,6 mm):	15,78
Sand, coarse (0,6 mm - 2 mm):	3,03
Gravel (> 2 mm):	68,53
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	-----	-----
16%	84%	15,76	-3,98
25%	75%	12,66	-3,66
40%	60%	7,64	-2,93
Median 50%	50%	5,19	-2,38
75%	25%	0,40	1,31
84%	16%	0,23	2,14
90%	10%	0,18	2,50
95%	5%	0,11	3,21

Moments Statistics

Mean	-1,40
Sorting	-----
Skewness	-----
Kurtosis	-----
Uniformity Coefficient	43,13

The analysis is executed according to DS405.9
 DS/EN933-1 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)

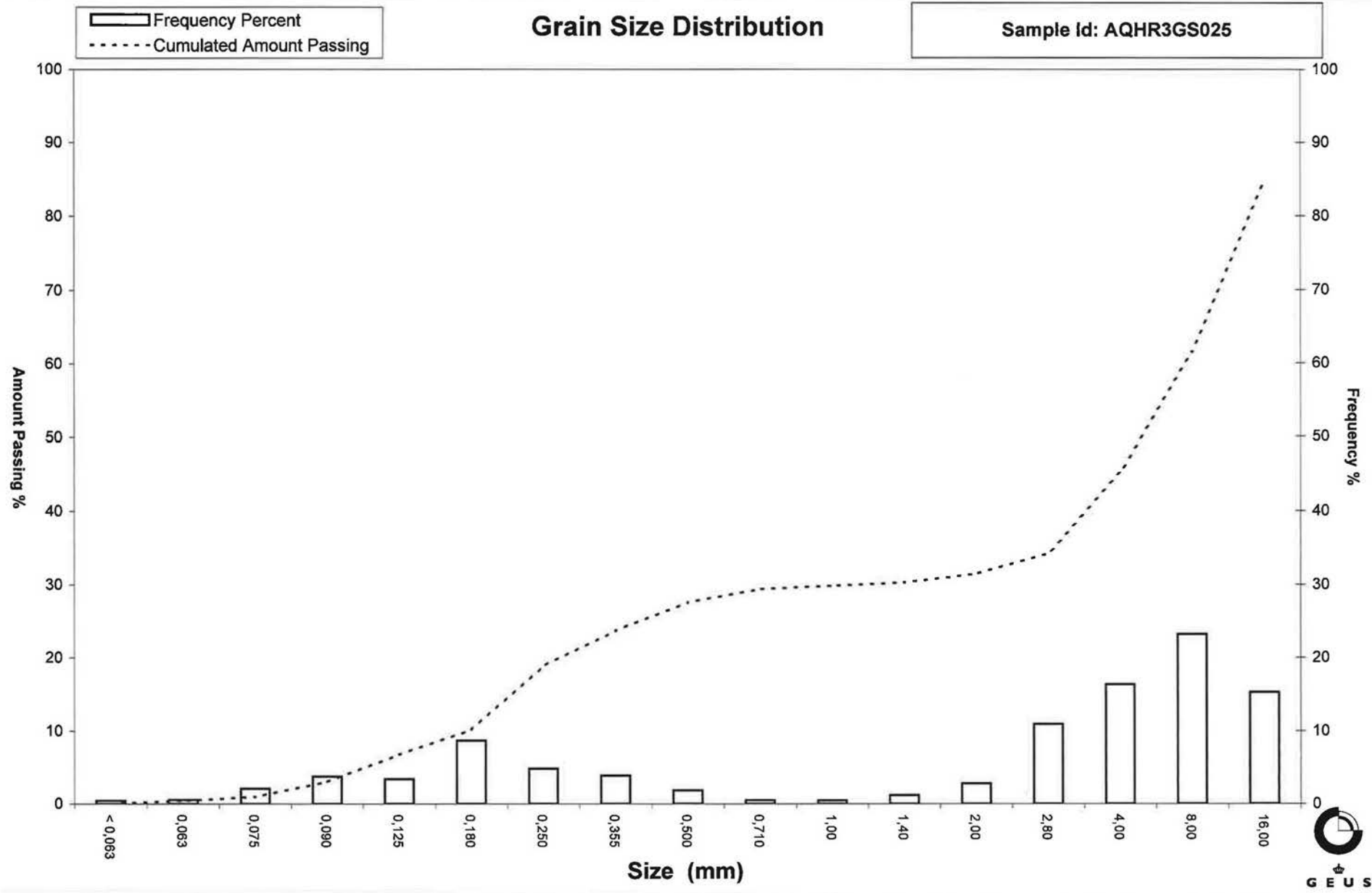
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS025



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS026
Lab. Id: 120162
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 108,89 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	0,00	0,00	100,00
1,00	0,00	0,01	0,01	99,99
0,710	0,49	0,06	0,06	99,94
0,500	1,00	1,41	1,29	98,64
0,355	1,49	16,55	15,20	83,44
0,250	2,00	64,44	59,18	24,26
0,180	2,47	21,59	19,83	4,44
0,125	3,00	3,42	3,14	1,29
0,090	3,47	0,63	0,58	0,72
0,075	3,74	0,18	0,17	0,55
0,063	3,99	0,04	0,04	0,51
< 0,063	> 3,99	0,56	0,51	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,51
Sand, fine (0,063 mm - 0,200 mm):	9,59
Sand, medium (0,2 mm - 0,6 mm):	89,16
Sand, coarse (0,6 mm - 2 mm):	0,74
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%	0,47	1,10
16%	84%	0,36	1,47
25%	75%	0,34	1,56
40%	60%	0,31	1,67
Median 50%	50%	0,30	1,76
75%	25%	0,25	1,99
84%	16%	0,22	2,18
90%	10%	0,20	2,32
95%	5%	0,18	2,46

Moments Statistics

Mean	1,80
Sorting	0,38
Skewness	0,11
Kurtosis	1,27
Uniformity Coefficient	1,57

The analysis is executed according to DS405.9
 DS/EN933-1 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)

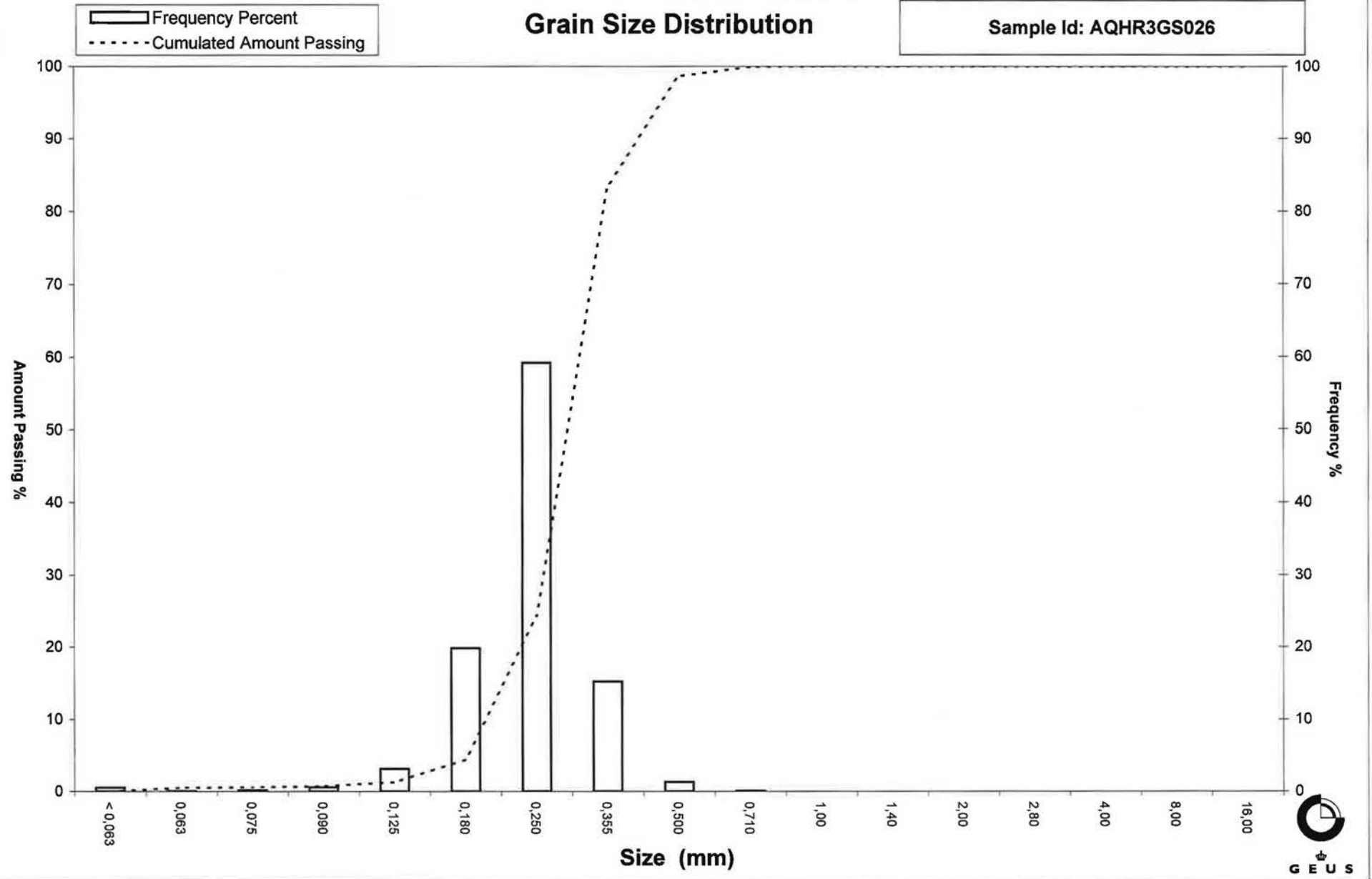
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS026



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS027
Lab. Id: 120163
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 111,13 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	0,00	0,00	100,00
1,00	0,00	0,08	0,07	99,93
0,710	0,49	0,25	0,22	99,70
0,500	1,00	2,81	2,53	97,17
0,355	1,49	13,44	12,09	85,08
0,250	2,00	44,99	40,48	44,60
0,180	2,47	36,33	32,69	11,90
0,125	3,00	8,79	7,91	4,00
0,090	3,47	2,01	1,81	2,19
0,075	3,74	0,69	0,62	1,57
0,063	3,99	0,31	0,28	1,29
< 0,063	> 3,99	1,43	1,29	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,29
Sand, fine (0,063 mm - 0,200 mm):	19,96
Sand, medium (0,2 mm - 0,6 mm):	77,13
Sand, coarse (0,6 mm - 2 mm):	1,62
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%	0,47	1,08
16%	84%	0,35	1,51
25%	75%	0,33	1,60
40%	60%	0,29	1,79
Median 50%	50%	0,26	1,92
75%	25%	0,21	2,27
84%	16%	0,19	2,41
90%	10%	0,17	2,58
95%	5%	0,13	2,92

Moments Statistics

Mean	1,94
Sorting	0,50
Skewness	0,08
Kurtosis	1,14
Uniformity Coefficient	1,74

The analysis is executed according to DS405.9
 DS/EN933-1 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)

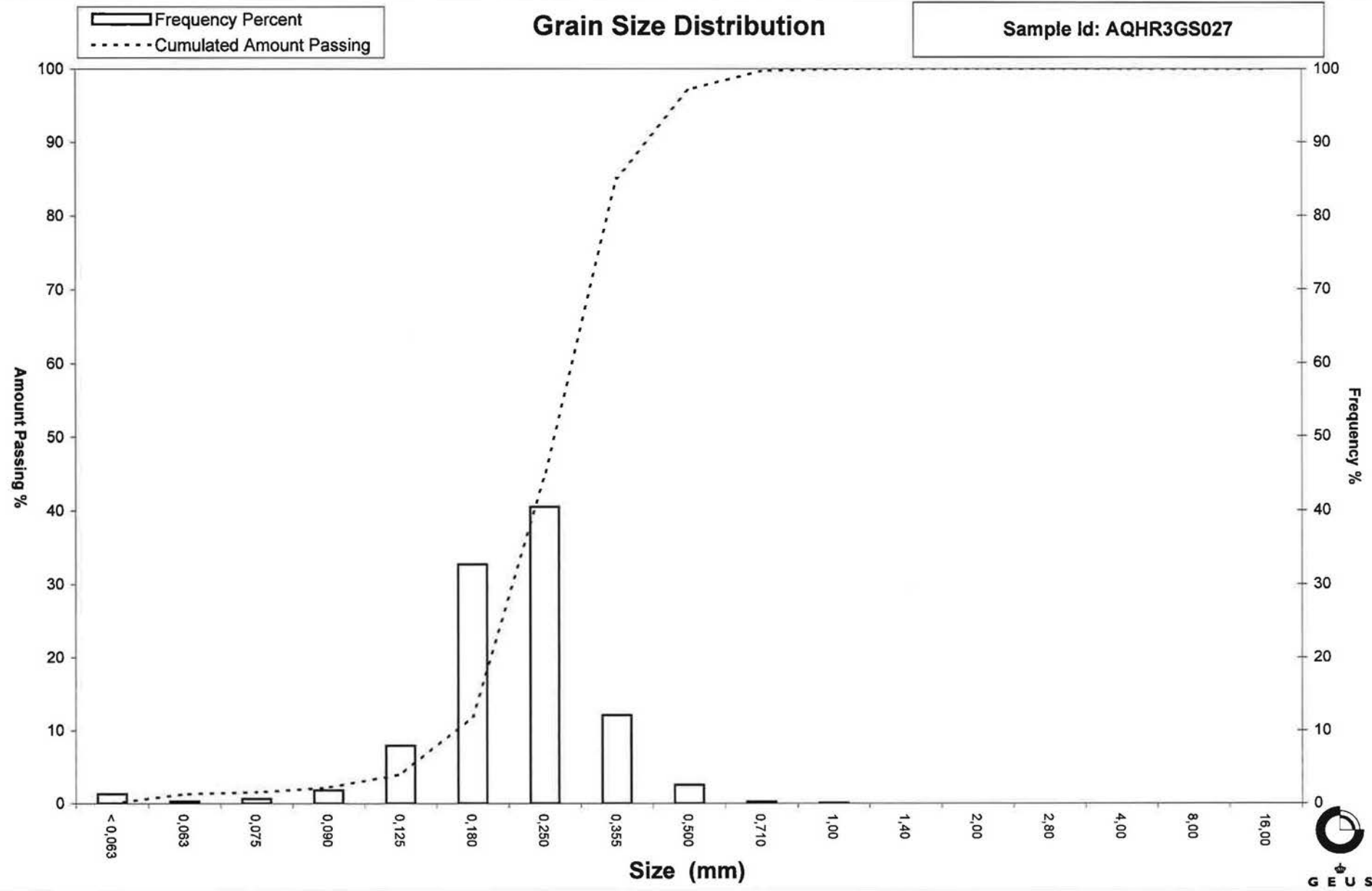
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS027



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS028
Lab. Id: 120164
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 103,95 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	0,00	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	0,05	0,05	99,95
1,00	0,00	0,04	0,04	99,91
0,710	0,49	0,18	0,17	99,74
0,500	1,00	0,93	0,89	98,85
0,355	1,49	5,97	5,74	93,10
0,250	2,00	22,62	21,76	71,34
0,180	2,47	30,45	29,29	42,05
0,125	3,00	32,49	31,26	10,79
0,090	3,47	8,06	7,75	3,04
0,075	3,74	0,98	0,94	2,10
0,063	3,99	0,26	0,25	1,85
< 0,063	> 3,99	1,92	1,85	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,85
Sand, fine (0,063 mm - 0,200 mm):	48,57
Sand, medium (0,2 mm - 0,6 mm):	48,85
Sand, coarse (0,6 mm - 2 mm):	0,73
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%	0,40	1,31
16%	84%	0,31	1,68
25%	75%	0,27	1,90
40%	60%	0,22	2,17
Median 50%	50%	0,20	2,33
75%	25%	0,15	2,74
84%	16%	0,13	2,90
90%	10%	0,12	3,04
95%	5%	0,10	3,34

Moments Statistics

Mean	2,30
Sorting	0,61
Skewness	-0,03
Kurtosis	0,99
Uniformity Coefficient	1,84

The analysis is executed according to DS405.9
 DS/EN933-1 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)

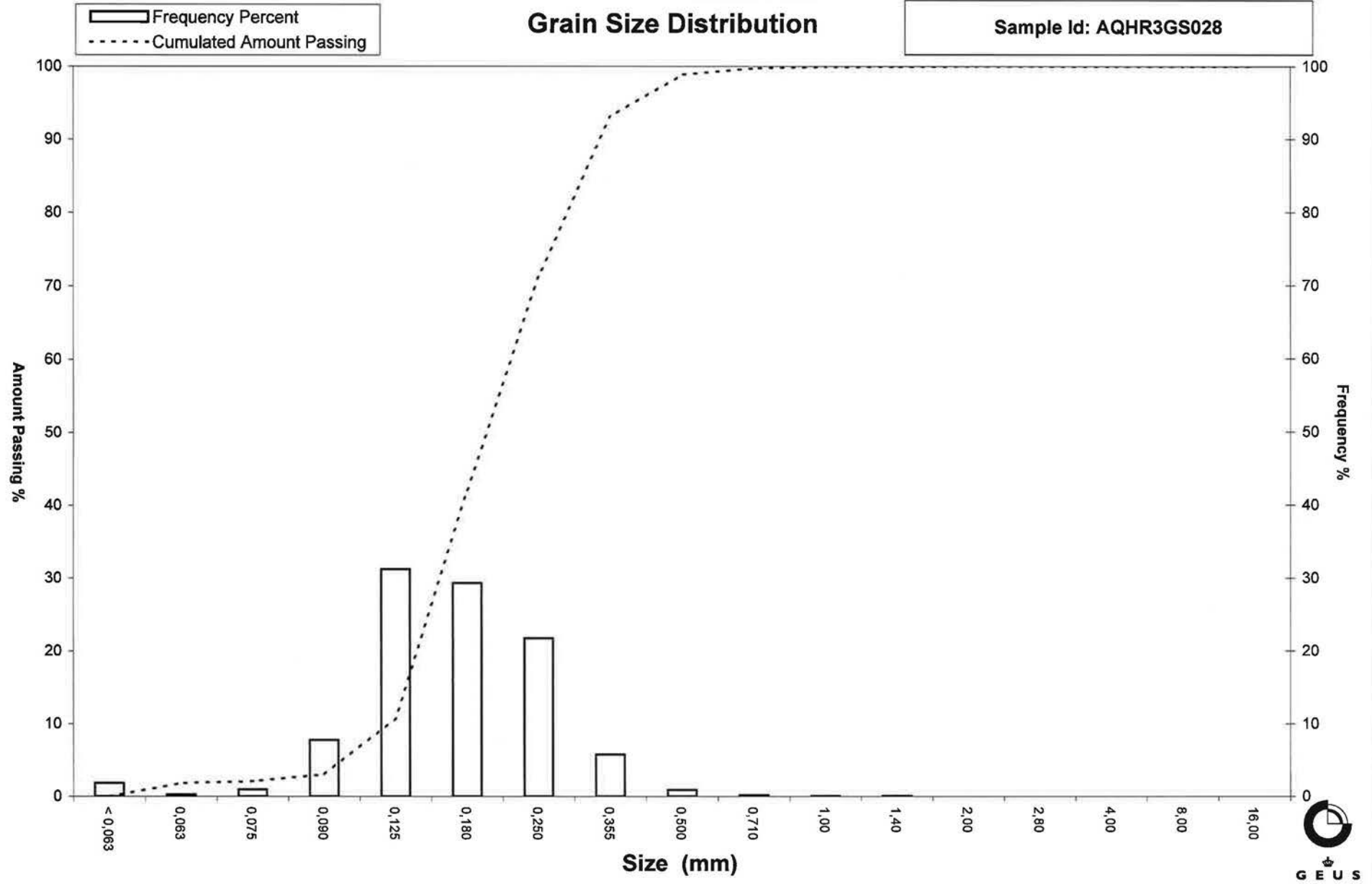
Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS028



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS029
Lab. Id: 120165
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 106,67 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	0,00	0,00	100,00
1,00	0,00	0,02	0,02	99,98
0,710	0,49	0,31	0,29	99,69
0,500	1,00	2,07	1,94	97,75
0,355	1,49	8,06	7,56	90,19
0,250	2,00	31,92	29,92	60,27
0,180	2,47	48,25	45,23	15,04
0,125	3,00	12,91	12,10	2,93
0,090	3,47	2,23	2,09	0,84
0,075	3,74	0,30	0,28	0,56
0,063	3,99	0,08	0,07	0,49
< 0,063	> 3,99	0,52	0,49	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,49
Sand, fine (0,063 mm - 0,200 mm):	27,47
Sand, medium (0,2 mm - 0,6 mm):	70,71
Sand, coarse (0,6 mm - 2 mm):	1,33
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%	0,45	1,16
16%	84%	0,33	1,59
25%	75%	0,30	1,73
40%	60%	0,25	2,00
Median 50%	50%	0,23	2,09
75%	25%	0,20	2,36
84%	16%	0,18	2,46
90%	10%	0,16	2,67
95%	5%	0,13	2,90

Moments Statistics

Mean	2,05
Sorting	0,48
Skewness	-0,12
Kurtosis	1,13
Uniformity Coefficient	1,59

The analysis is executed according to DS405.9
 DS/EN933-1 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)

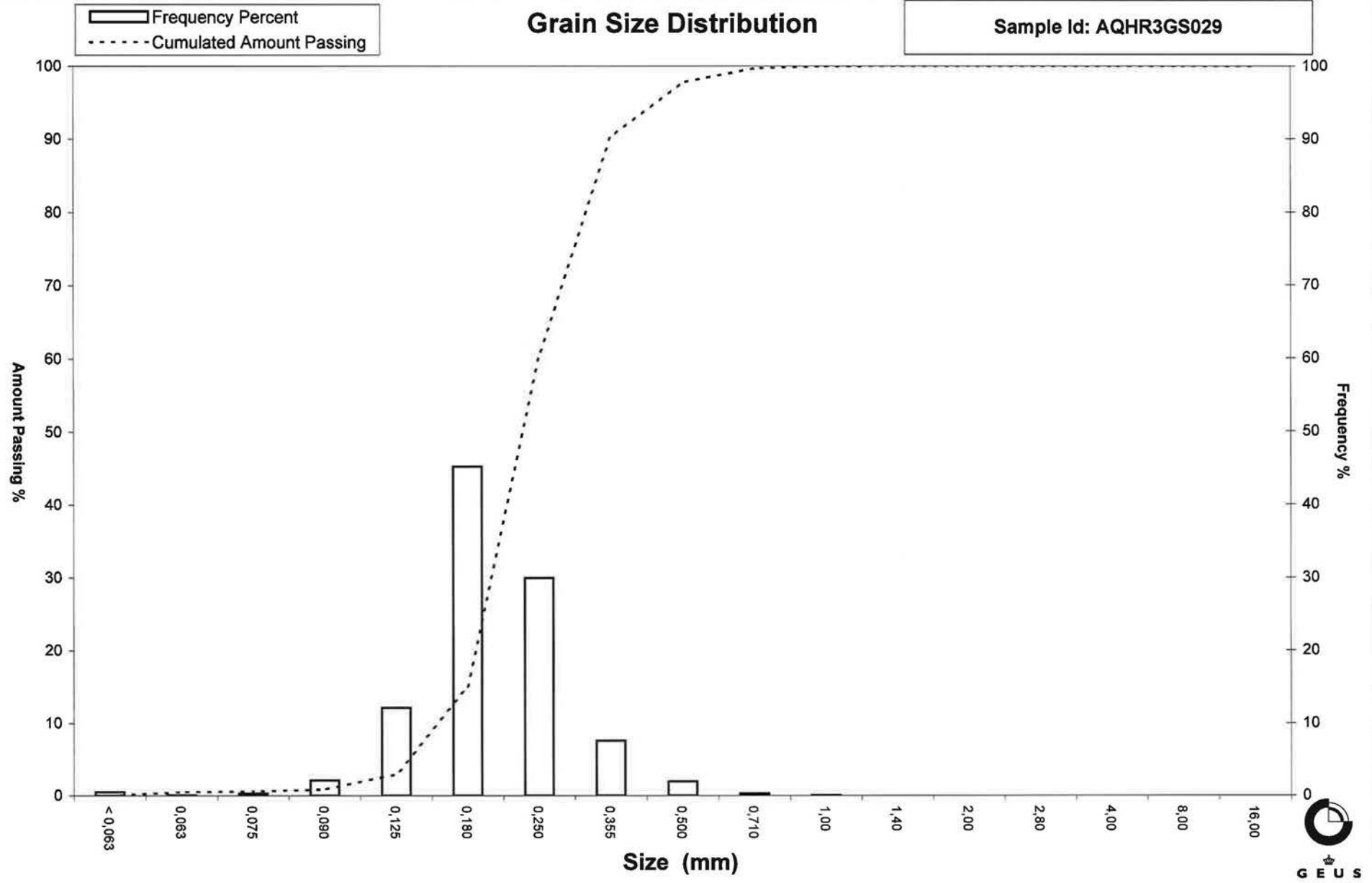
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS029



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS030
Lab. Id: 120166
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 8 mm.



GEUS

Total Weight 207,07 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	0,71	0,34	99,66
2,80	-1,49	0,66	0,32	99,34
2,00	-1,00	14,40	6,95	92,38
1,40	-0,49	116,47	56,25	36,14
1,00	0,00	34,23	16,53	19,61
0,710	0,49	7,96	3,84	15,76
0,500	1,00	9,69	4,68	11,08
0,355	1,49	10,11	4,88	6,20
0,250	2,00	7,17	3,46	2,74
0,180	2,47	2,43	1,17	1,56
0,125	3,00	0,98	0,47	1,09
0,090	3,47	0,93	0,45	0,64
0,075	3,74	0,32	0,15	0,49
0,063	3,99	0,02	0,01	0,48
< 0,063	> 3,99	0,99	0,48	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,48
Sand, fine (0,063 mm - 0,200 mm):	1,42
Sand, medium (0,2 mm - 0,6 mm):	11,41
Sand, coarse (0,6 mm - 2 mm):	79,07
Gravel (> 2 mm):	7,62
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	2,30	-1,20
16%	84%	1,91	-0,93
25%	75%	1,81	-0,86
40%	60%	1,65	-0,73
Median 50%	50%	1,55	-0,63
75%	25%	1,13	-0,18
84%	16%	0,73	0,46
90%	10%	0,47	1,10
95%	5%	0,32	1,65

Moments Statistics

Mean	-0,37
Sorting	0,78
Skewness	0,58
Kurtosis	1,71
Uniformity Coefficient	3,54

The analysis is executed according to DS405.9
 DS/EN933-1 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)

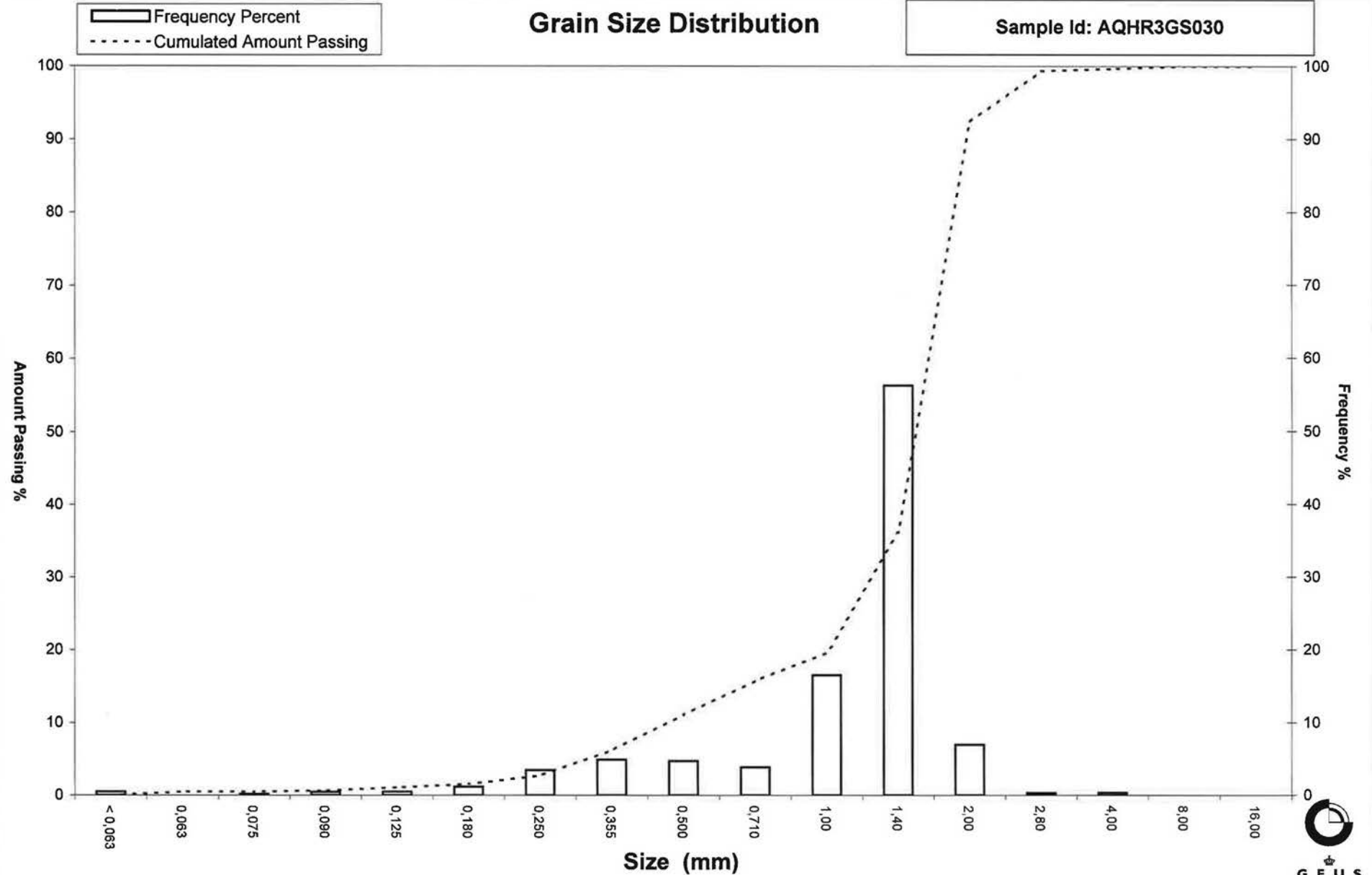
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS030



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS031
Lab. Id: 120167
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 117,69 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	1,75	1,49	98,51
2,80	-1,49	0,26	0,22	98,29
2,00	-1,00	0,42	0,36	97,94
1,40	-0,49	0,79	0,67	97,26
1,00	0,00	1,57	1,33	95,93
0,710	0,49	7,18	6,10	89,83
0,500	1,00	37,45	31,82	58,01
0,355	1,49	40,78	34,65	23,36
0,250	2,00	15,12	12,85	10,51
0,180	2,47	5,56	4,72	5,79
0,125	3,00	3,14	2,67	3,12
0,090	3,47	1,59	1,35	1,77
0,075	3,74	0,33	0,28	1,49
0,063	3,99	0,14	0,12	1,37
< 0,063	> 3,99	1,61	1,37	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,37
Sand, fine (0,063 mm - 0,200 mm):	5,77
Sand, medium (0,2 mm - 0,6 mm):	66,02
Sand, coarse (0,6 mm - 2 mm):	24,77
Gravel (> 2 mm):	2,06
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,96	0,07
16%	84%	0,67	0,57
25%	75%	0,61	0,71
40%	60%	0,51	0,96
Median 50%	50%	0,47	1,10
75%	25%	0,36	1,47
84%	16%	0,29	1,76
90%	10%	0,24	2,04
95%	5%	0,16	2,61

Moments Statistics

Mean	1,15
Sorting	0,68
Skewness	0,15
Kurtosis	1,38
Uniformity Coefficient	2,12

The analysis is executed according to DS405.9
 DS/EN933-1 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)

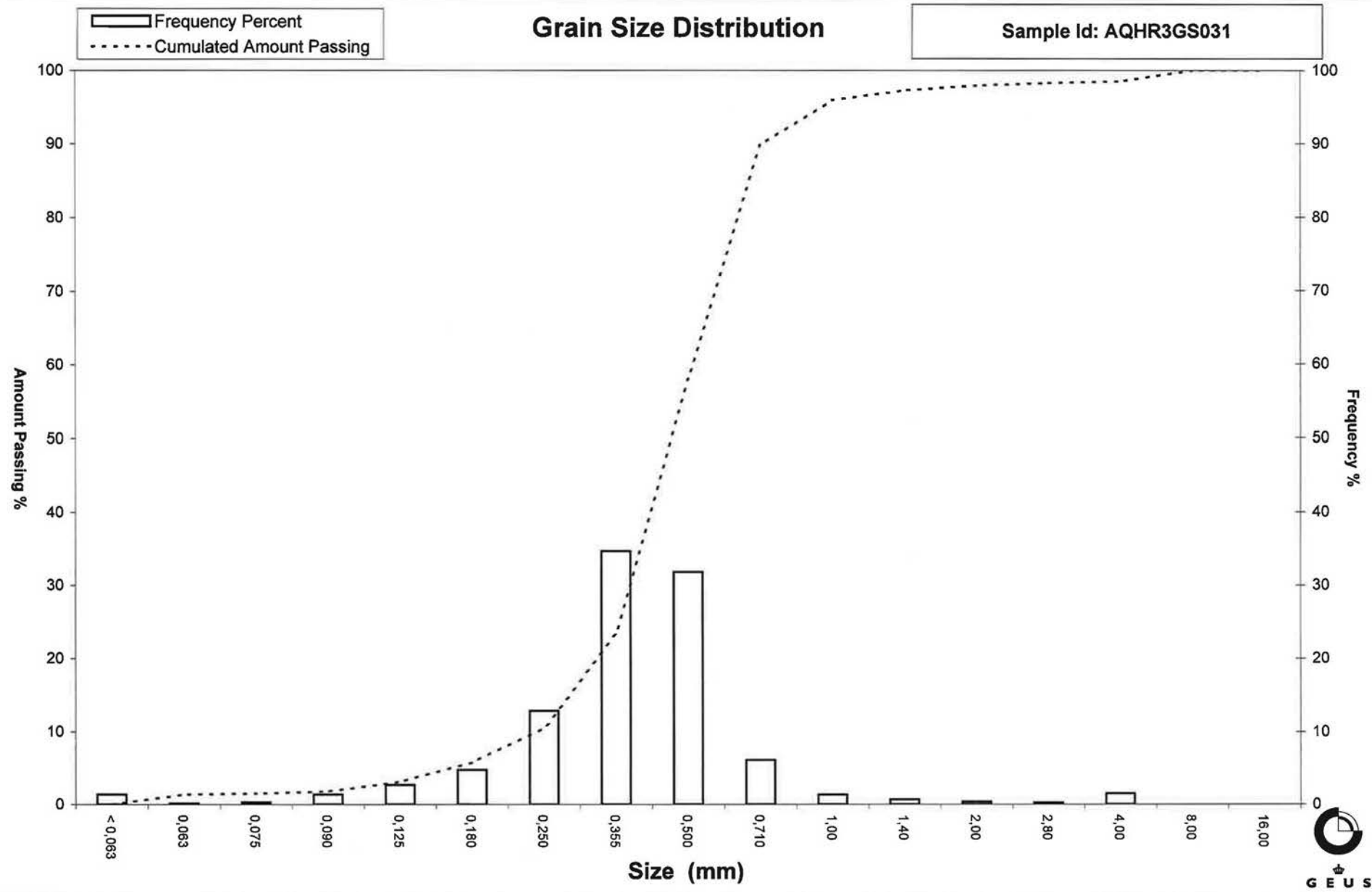
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS031



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS032
Lab. Id: 120168
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 101,8 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	0,03	0,03	99,97
1,40	-0,49	0,02	0,02	99,95
1,00	0,00	0,11	0,11	99,84
0,710	0,49	0,95	0,93	98,91
0,500	1,00	5,57	5,47	93,44
0,355	1,49	21,68	21,30	72,14
0,250	2,00	41,33	40,60	31,54
0,180	2,47	20,55	20,19	11,36
0,125	3,00	8,08	7,94	3,42
0,090	3,47	2,21	2,17	1,25
0,075	3,74	0,20	0,20	1,05
0,063	3,99	0,08	0,08	0,97
< 0,063	> 3,99	0,99	0,97	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,97
Sand, fine (0,063 mm - 0,200 mm):	16,15
Sand, medium (0,2 mm - 0,6 mm):	78,92
Sand, coarse (0,6 mm - 2 mm):	3,93
Gravel (> 2 mm):	0,03
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,56	0,84
16%	84%	0,44	1,20
25%	75%	0,37	1,42
40%	60%	0,32	1,63
Median 50%	50%	0,30	1,75
75%	25%	0,23	2,14
84%	16%	0,20	2,35
90%	10%	0,17	2,55
95%	5%	0,14	2,88

Moments Statistics

Mean	1,77
Sorting	0,60
Skewness	0,08
Kurtosis	1,16
Uniformity Coefficient	1,90

The analysis is executed according to DS405.9
 DS/EN933-1 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)

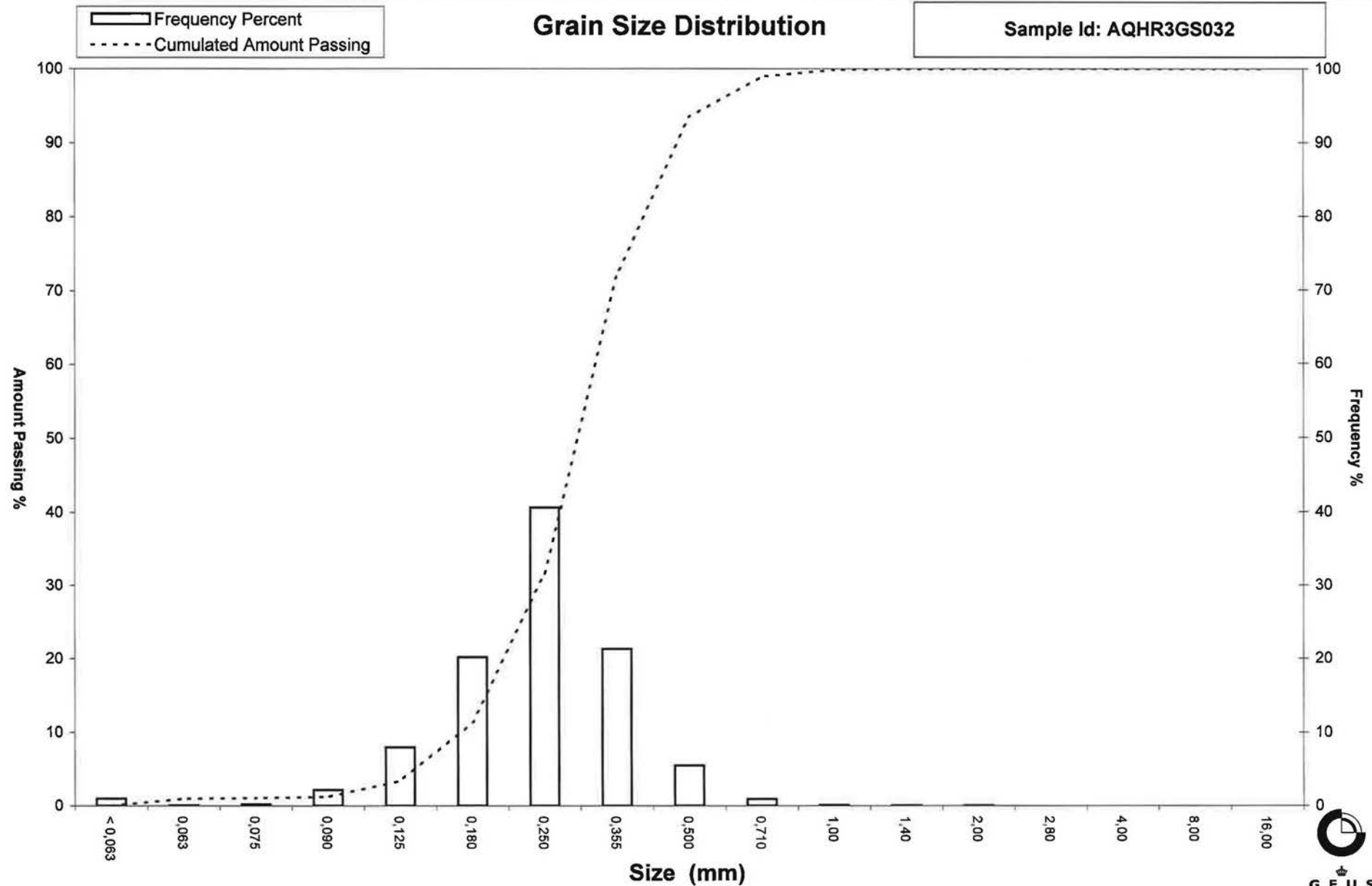
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS032



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS033
Lab. Id: 120169
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 107,16 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	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	0,15	0,14	99,85
1,00	0,00	0,05	0,05	99,80
0,710	0,49	0,08	0,07	99,73
0,500	1,00	0,13	0,12	99,61
0,355	1,49	1,09	1,02	98,59
0,250	2,00	1,36	1,27	97,32
0,180	2,47	9,07	8,46	88,86
0,125	3,00	48,32	45,09	43,77
0,090	3,47	40,52	37,81	5,95
0,075	3,74	3,38	3,15	2,80
0,063	3,99	1,04	0,97	1,83
< 0,063	> 3,99	1,96	1,83	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,83
Sand, fine (0,063 mm - 0,200 mm):	89,45
Sand, medium (0,2 mm - 0,6 mm):	8,39
Sand, coarse (0,6 mm - 2 mm):	0,32
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	2,12
16%	84%	0,17	2,52
25%	75%	0,16	2,62
40%	60%	0,14	2,79
Median 50%	50%	0,13	2,91
75%	25%	0,11	3,22
84%	16%	0,10	3,33
90%	10%	0,09	3,42
95%	5%	0,09	3,55

Moments Statistics

Mean	2,92
Sorting	0,42
Skewness	-0,04
Kurtosis	0,98
Uniformity Coefficient	1,54

The analysis is executed according to DS405.9
 DS/EN933-1 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)

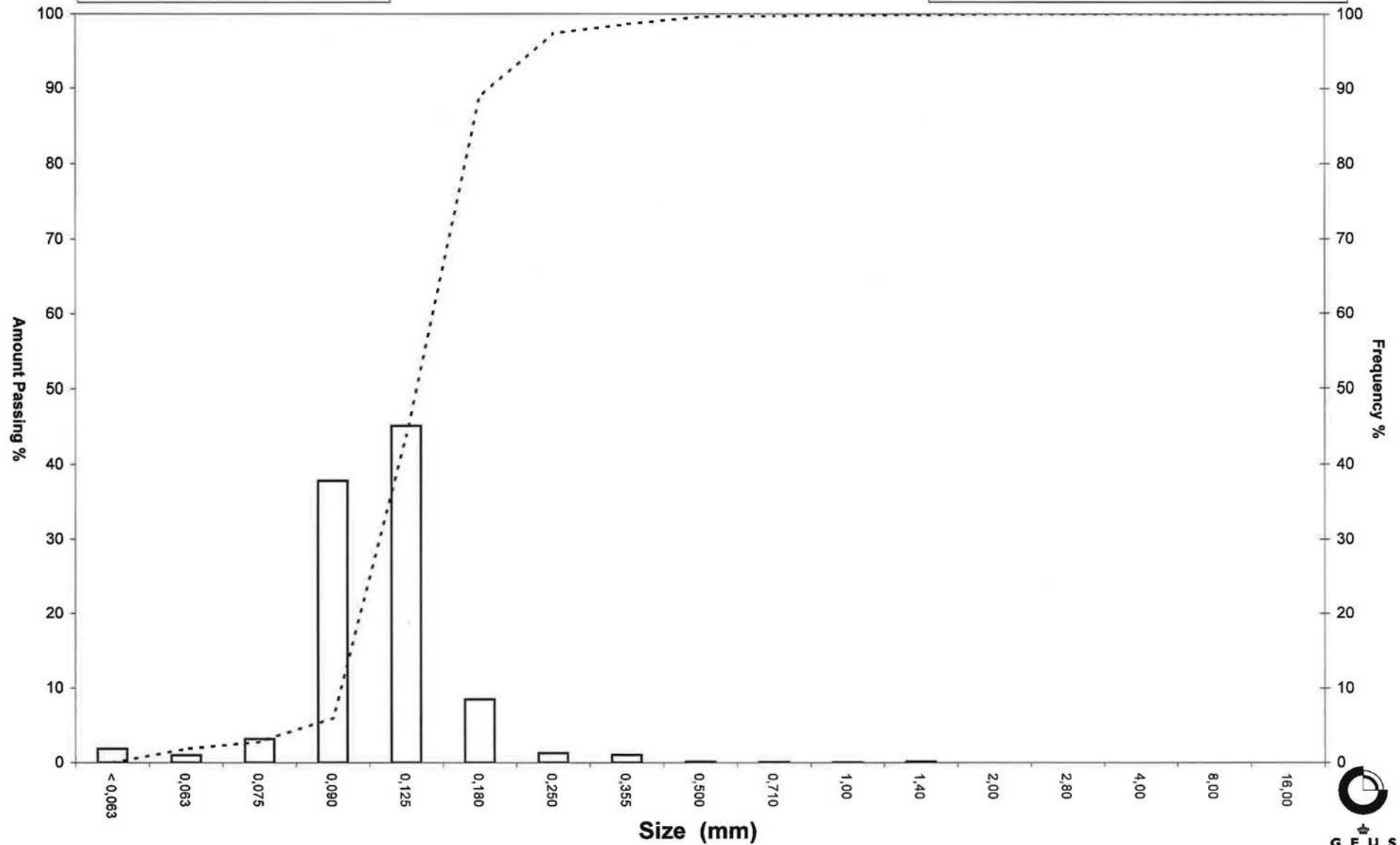
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS033



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS034
Lab. Id: 120170
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



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	0,05	0,05	99,95
1,00	0,00	0,09	0,08	99,87
0,710	0,49	0,09	0,08	99,79
0,500	1,00	0,17	0,15	99,64
0,355	1,49	0,51	0,46	99,18
0,250	2,00	2,31	2,08	97,10
0,180	2,47	5,78	5,21	91,89
0,125	3,00	42,95	38,71	53,17
0,090	3,47	50,04	45,11	8,07
0,075	3,74	4,54	4,09	3,98
0,063	3,99	1,39	1,25	2,72
< 0,063	> 3,99	3,02	2,72	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	2,72
Sand, fine (0,063 mm - 0,200 mm):	90,65
Sand, medium (0,2 mm - 0,6 mm):	6,34
Sand, coarse (0,6 mm - 2 mm):	0,29
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%	0,22	2,17
16%	84%	0,17	2,57
25%	75%	0,16	2,68
40%	60%	0,13	2,89
Median 50%	50%	0,12	3,03
75%	25%	0,10	3,28
84%	16%	0,10	3,38
90%	10%	0,09	3,45
95%	5%	0,08	3,67

Moments Statistics

Mean	2,99
Sorting	0,43
Skewness	-0,14
Kurtosis	1,03
Uniformity Coefficient	1,47

The analysis is executed according to DS405.9
 DS/EN933-1 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)

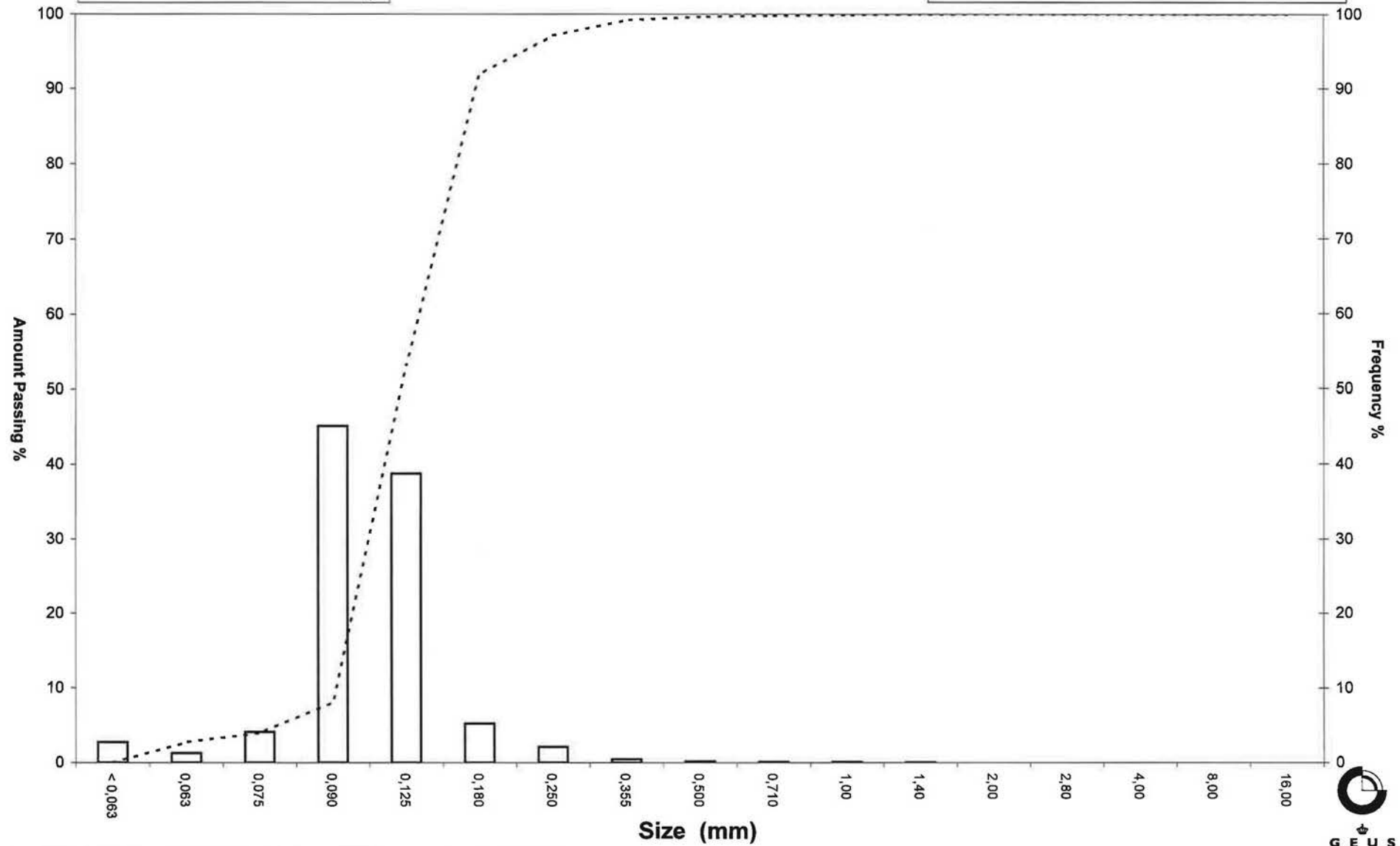
Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS034

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS035
Lab. Id: 120171
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 108,53 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	0,93	0,86	99,14
2,80	-1,49	0,21	0,19	98,95
2,00	-1,00	0,27	0,25	98,70
1,40	-0,49	0,31	0,29	98,42
1,00	0,00	0,24	0,22	98,19
0,710	0,49	0,17	0,16	98,04
0,500	1,00	0,23	0,21	97,83
0,355	1,49	1,32	1,22	96,61
0,250	2,00	4,57	4,21	92,40
0,180	2,47	5,82	5,36	87,04
0,125	3,00	43,21	39,81	47,22
0,090	3,47	43,56	40,14	7,09
0,075	3,74	3,79	3,49	3,59
0,063	3,99	1,09	1,00	2,59
< 0,063	> 3,99	2,81	2,59	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	2,59
Sand, fine (0,063 mm - 0,200 mm):	85,98
Sand, medium (0,2 mm - 0,6 mm):	9,36
Sand, coarse (0,6 mm - 2 mm):	0,77
Gravel (> 2 mm):	1,30
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,31	1,67
16%	84%	0,18	2,51
25%	75%	0,16	2,61
40%	60%	0,14	2,81
Median 50%	50%	0,13	2,96
75%	25%	0,11	3,24
84%	16%	0,10	3,35
90%	10%	0,09	3,43
95%	5%	0,08	3,63

Moments Statistics

Mean	2,94
Sorting	0,51
Skewness	-0,19
Kurtosis	1,28
Uniformity Coefficient	1,54

The analysis is executed according to DS405.9
 DS/EN933-1 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)

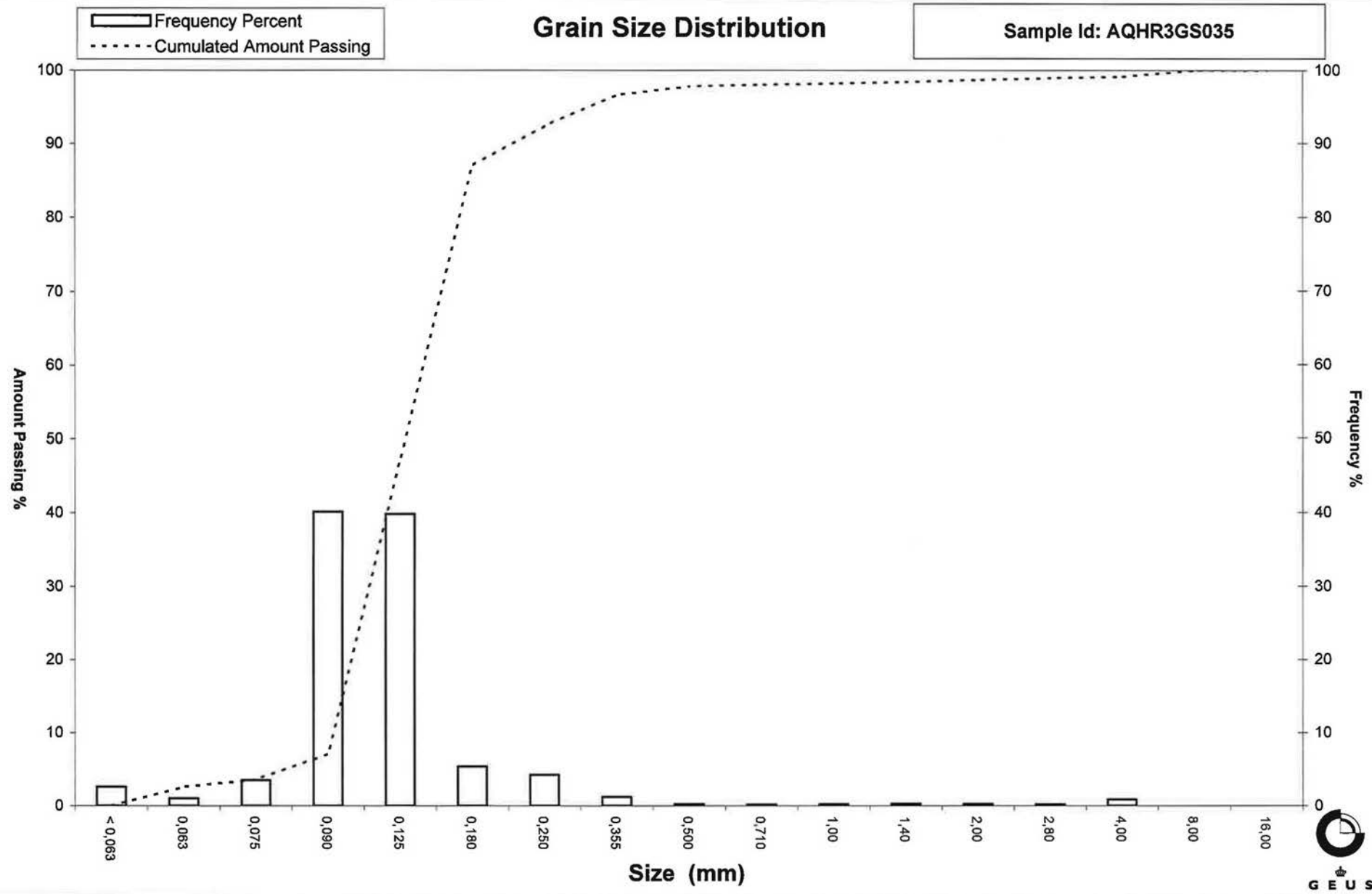
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS035



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS036
Lab. Id: 120172
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 100,79 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	0,00	0,00	100,00
2,80	-1,49	0,05	0,05	99,95
2,00	-1,00	0,03	0,03	99,92
1,40	-0,49	0,05	0,05	99,87
1,00	0,00	0,04	0,04	99,83
0,710	0,49	0,20	0,20	99,63
0,500	1,00	2,73	2,71	96,92
0,355	1,49	17,32	17,18	79,74
0,250	2,00	44,72	44,37	35,37
0,180	2,47	14,83	14,71	20,66
0,125	3,00	7,15	7,09	13,56
0,090	3,47	6,94	6,89	6,68
0,075	3,74	1,78	1,77	4,91
0,063	3,99	1,02	1,01	3,90
< 0,063	> 3,99	3,93	3,90	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,90
Sand, fine (0,063 mm - 0,200 mm):	20,96
Sand, medium (0,2 mm - 0,6 mm):	73,35
Sand, coarse (0,6 mm - 2 mm):	1,71
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%	0,48	1,05
16%	84%	0,39	1,35
25%	75%	0,34	1,54
40%	60%	0,31	1,70
Median 50%	50%	0,28	1,81
75%	25%	0,20	2,32
84%	16%	0,14	2,80
90%	10%	0,11	3,23
95%	5%	0,08	3,72

Moments Statistics

Mean	1,99
Sorting	0,77
Skewness	0,40
Kurtosis	1,41
Uniformity Coefficient	2,88

The analysis is executed according to DS405.9
 DS/EN933-1 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)

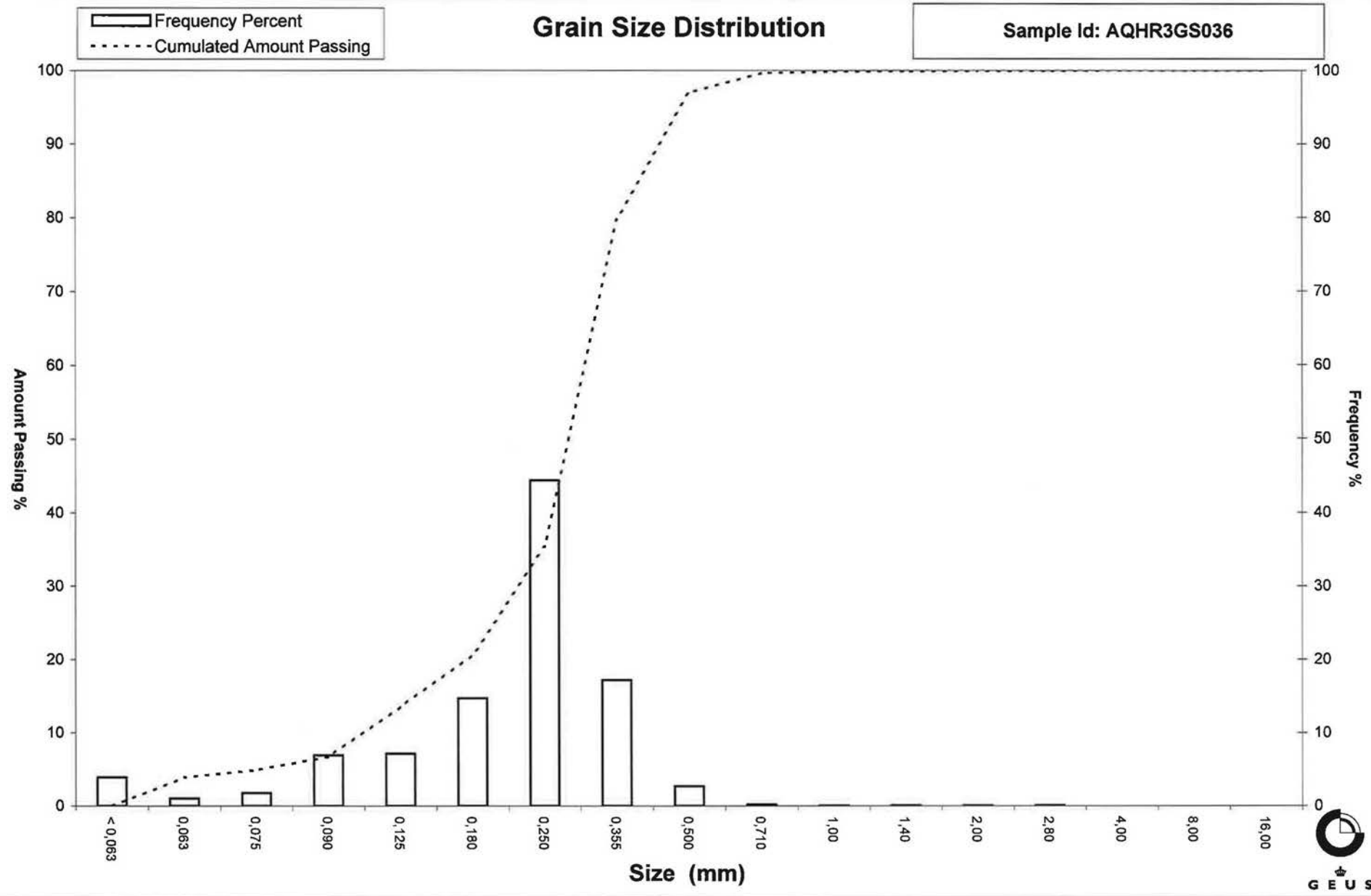
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS036



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS037
Lab. Id: 120173
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 109,7 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	0,03	0,03	99,97
2,00	-1,00	0,05	0,05	99,93
1,40	-0,49	0,09	0,08	99,85
1,00	0,00	0,21	0,19	99,65
0,710	0,49	2,10	1,91	97,74
0,500	1,00	24,03	21,91	75,83
0,355	1,49	49,88	45,47	30,36
0,250	2,00	20,09	18,31	12,05
0,180	2,47	5,34	4,87	7,18
0,125	3,00	5,24	4,78	2,41
0,090	3,47	1,93	1,76	0,65
0,075	3,74	0,16	0,15	0,50
0,063	3,99	0,08	0,07	0,43
< 0,063	> 3,99	0,47	0,43	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,43
Sand, fine (0,063 mm - 0,200 mm):	8,15
Sand, medium (0,2 mm - 0,6 mm):	77,69
Sand, coarse (0,6 mm - 2 mm):	13,66
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%	0,68	0,55
16%	84%	0,58	0,79
25%	75%	0,50	1,01
40%	60%	0,45	1,15
Median 50%	50%	0,42	1,26
75%	25%	0,32	1,62
84%	16%	0,27	1,87
90%	10%	0,22	2,18
95%	5%	0,15	2,69

Moments Statistics

Mean	1,31
Sorting	0,60
Skewness	0,24
Kurtosis	1,42
Uniformity Coefficient	2,04

The analysis is executed according to DS405.9
 DS/EN933-1 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)

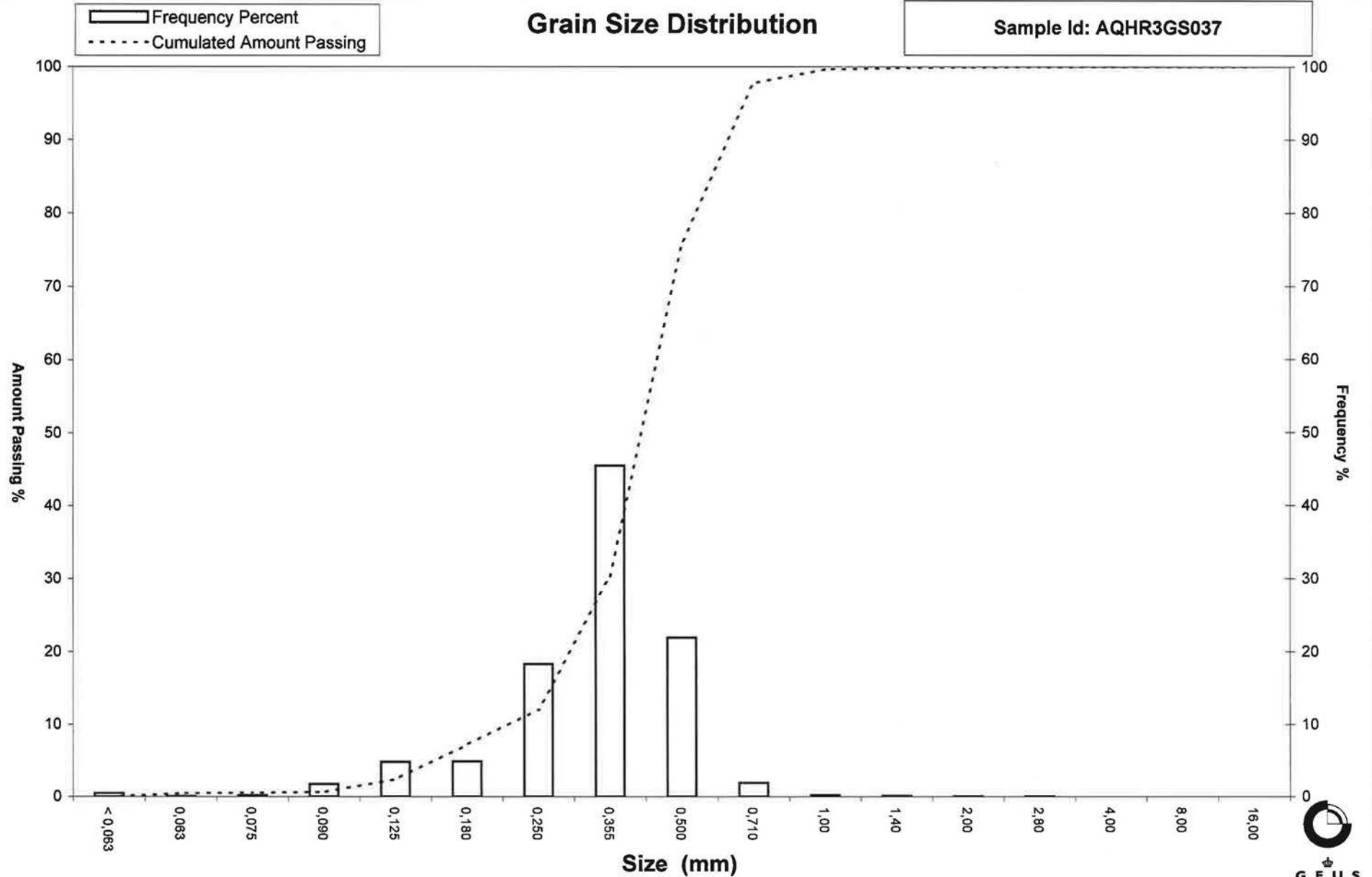
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS037



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS038
Lab. Id: 120174
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 105,01 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	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	0,03	0,03	99,95
1,00	0,00	0,13	0,12	99,83
0,710	0,49	0,44	0,42	99,41
0,500	1,00	1,82	1,73	97,68
0,355	1,49	3,32	3,16	94,51
0,250	2,00	6,15	5,86	88,66
0,180	2,47	26,63	25,36	63,30
0,125	3,00	59,70	56,85	6,45
0,090	3,47	5,47	5,21	1,24
0,075	3,74	0,36	0,34	0,90
0,063	3,99	0,14	0,13	0,76
< 0,063	> 3,99	0,80	0,76	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,76
Sand, fine (0,063 mm - 0,200 mm):	69,78
Sand, medium (0,2 mm - 0,6 mm):	27,96
Sand, coarse (0,6 mm - 2 mm):	1,48
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%	0,38	1,41
16%	84%	0,24	2,08
25%	75%	0,21	2,24
40%	60%	0,18	2,50
Median 50%	50%	0,17	2,58
75%	25%	0,14	2,81
84%	16%	0,13	2,90
90%	10%	0,13	2,96
95%	5%	0,12	3,12

Moments Statistics

Mean	2,52
Sorting	0,46
Skewness	-0,30
Kurtosis	1,23
Uniformity Coefficient	1,38

The analysis is executed according to DS405.9
 DS/EN933-1 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)

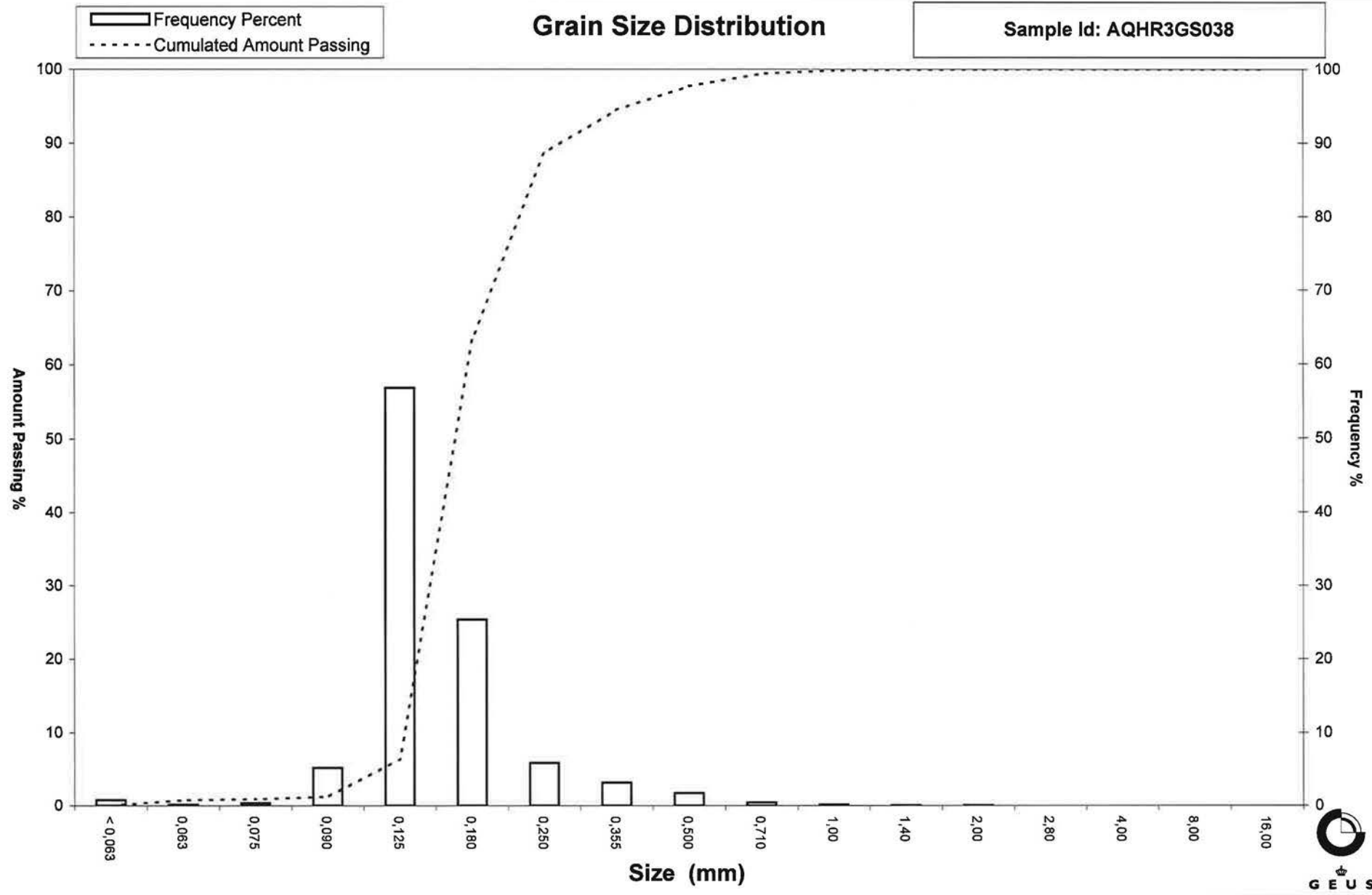
Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS038



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS039
Lab. Id: 120175
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 106,93 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	0,10	0,09	99,91
2,00	-1,00	0,21	0,20	99,71
1,40	-0,49	0,71	0,66	99,05
1,00	0,00	6,89	6,44	92,60
0,710	0,49	9,54	8,92	83,68
0,500	1,00	32,06	29,98	53,70
0,355	1,49	29,62	27,70	26,00
0,250	2,00	14,31	13,38	12,62
0,180	2,47	7,07	6,61	6,00
0,125	3,00	4,98	4,66	1,35
0,090	3,47	0,64	0,60	0,75
0,075	3,74	0,12	0,11	0,64
0,063	3,99	0,07	0,07	0,57
< 0,063	> 3,99	0,61	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):	7,32
Sand, medium (0,2 mm - 0,6 mm):	60,08
Sand, coarse (0,6 mm - 2 mm):	31,73
Gravel (> 2 mm):	0,29
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,15	-0,20
16%	84%	0,72	0,47
25%	75%	0,65	0,62
40%	60%	0,54	0,88
Median 50%	50%	0,48	1,06
75%	25%	0,35	1,53
84%	16%	0,28	1,85
90%	10%	0,22	2,17
95%	5%	0,17	2,57

Moments Statistics

Mean	1,13
Sorting	0,77
Skewness	0,12
Kurtosis	1,26
Uniformity Coefficient	2,45

The analysis is executed according to DS405.9
 DS/EN933-1 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)

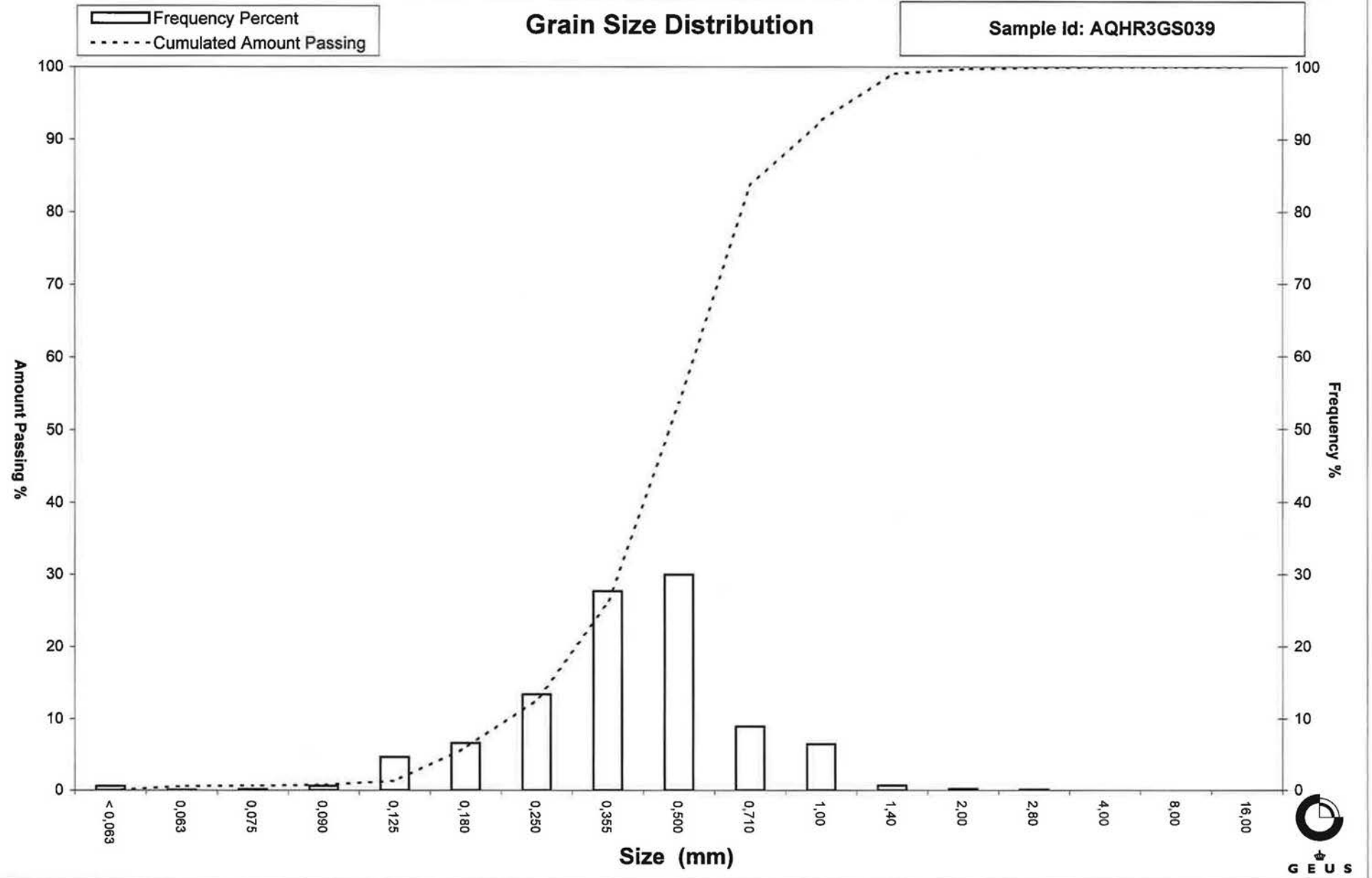
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS039



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS040
Lab. Id: 120176
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 100,8 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	0,11	0,11	99,84
0,710	0,49	0,18	0,18	99,66
0,500	1,00	0,75	0,74	98,91
0,355	1,49	2,68	2,66	96,25
0,250	2,00	7,69	7,63	88,63
0,180	2,47	19,80	19,64	68,98
0,125	3,00	49,80	49,40	19,58
0,090	3,47	13,93	13,82	5,76
0,075	3,74	1,72	1,71	4,05
0,063	3,99	0,72	0,71	3,34
< 0,063	> 3,99	3,36	3,34	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,34
Sand, fine (0,063 mm - 0,200 mm):	71,26
Sand, medium (0,2 mm - 0,6 mm):	24,67
Sand, coarse (0,6 mm - 2 mm):	0,73
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	1,57
16%	84%	0,23	2,10
25%	75%	0,20	2,31
40%	60%	0,17	2,56
Median 50%	50%	0,16	2,65
75%	25%	0,13	2,93
84%	16%	0,12	3,11
90%	10%	0,10	3,31
95%	5%	0,08	3,58

Moments Statistics

Mean	2,62
Sorting	0,56
Skewness	-0,09
Kurtosis	1,33
Uniformity Coefficient	1,69

The analysis is executed according to DS405.9
 DS/EN933-1 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)

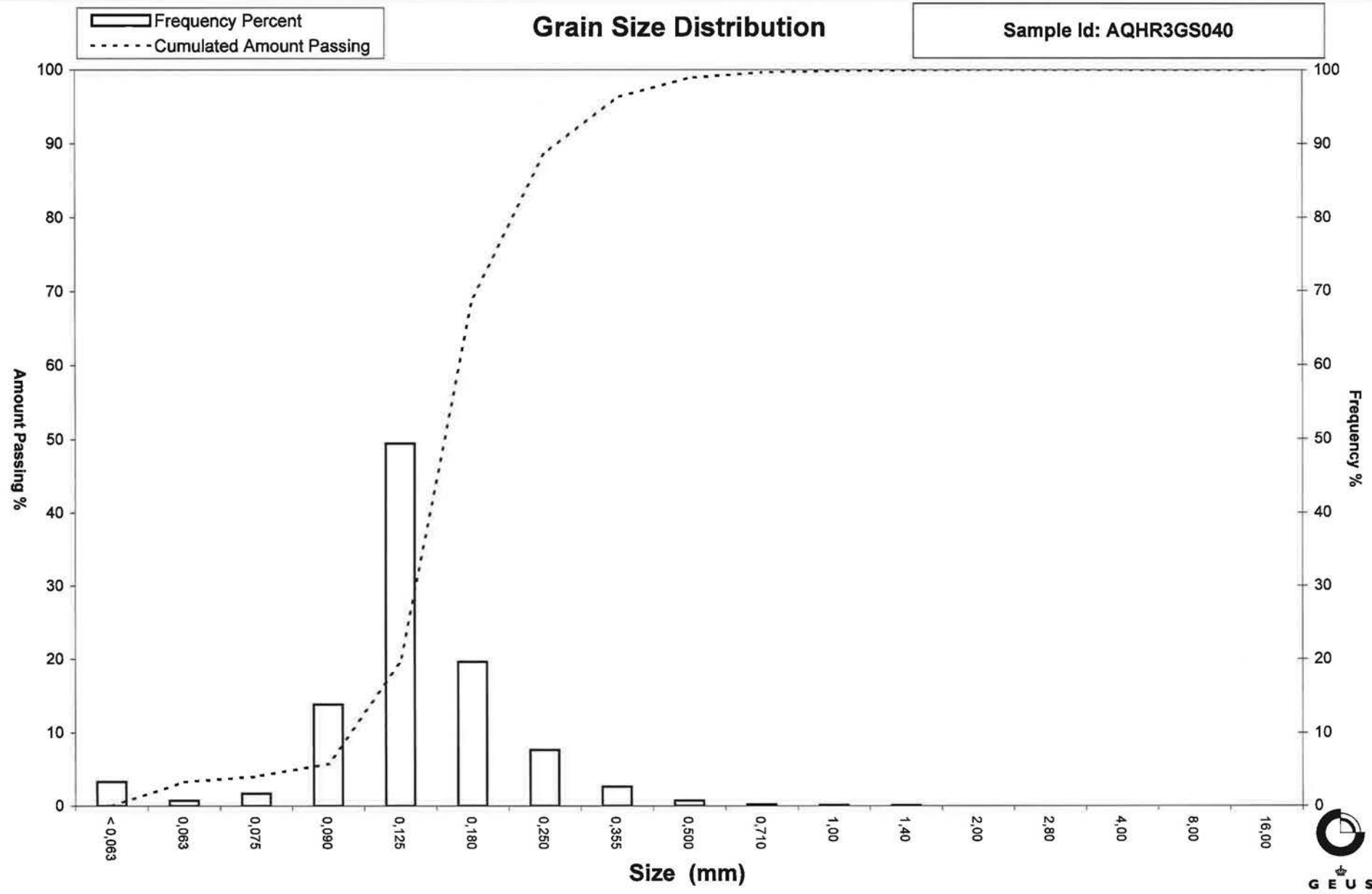
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS040



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS041
Lab. Id: 120177
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 108,61 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	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	0,03	0,03	99,97
1,40	-0,49	0,04	0,04	99,94
1,00	0,00	0,12	0,11	99,83
0,710	0,49	0,35	0,32	99,50
0,500	1,00	1,58	1,45	98,05
0,355	1,49	6,93	6,38	91,67
0,250	2,00	22,89	21,08	70,59
0,180	2,47	43,18	39,76	30,84
0,125	3,00	28,09	25,86	4,97
0,090	3,47	3,71	3,42	1,56
0,075	3,74	0,55	0,51	1,05
0,063	3,99	0,20	0,18	0,87
< 0,063	> 3,99	0,94	0,87	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,87
Sand, fine (0,063 mm - 0,200 mm):	41,33
Sand, medium (0,2 mm - 0,6 mm):	56,55
Sand, coarse (0,6 mm - 2 mm):	1,23
Gravel (> 2 mm):	0,03
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,43	1,22
16%	84%	0,32	1,66
25%	75%	0,27	1,88
40%	60%	0,23	2,11
Median 50%	50%	0,21	2,23
75%	25%	0,17	2,58
84%	16%	0,15	2,75
90%	10%	0,14	2,88
95%	5%	0,13	3,00

Moments Statistics

Mean	2,21
Sorting	0,54
Skewness	-0,09
Kurtosis	1,05
Uniformity Coefficient	1,70

The analysis is executed according to DS405.9
 DS/EN933-1 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)

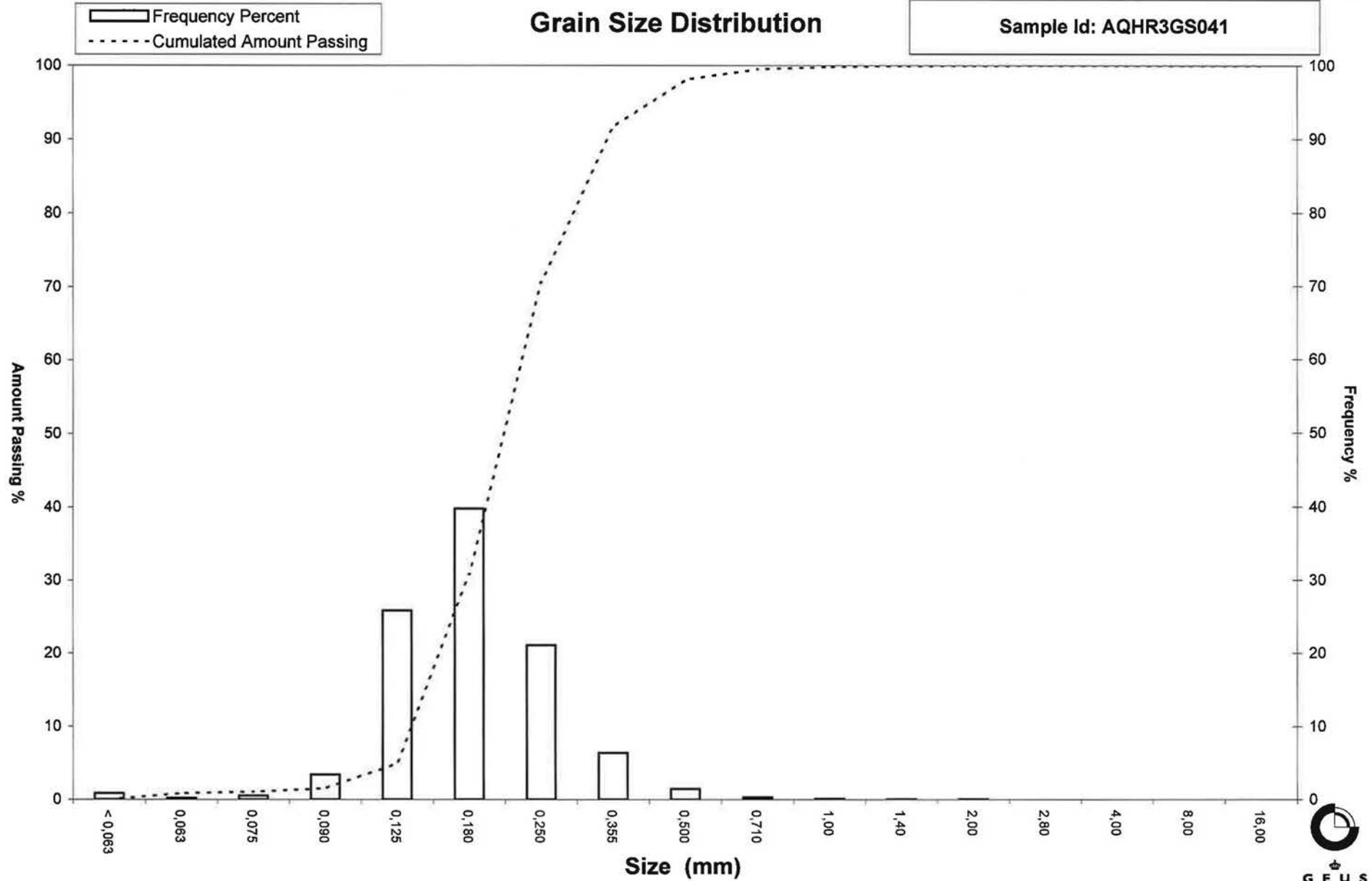
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS041



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS042
Lab. Id: 120178
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 102,38 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	0,00	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	0,08	0,08	99,90
1,00	0,00	0,21	0,21	99,70
0,710	0,49	0,34	0,33	99,37
0,500	1,00	0,77	0,75	98,61
0,355	1,49	4,36	4,26	94,35
0,250	2,00	20,44	19,96	74,39
0,180	2,47	36,36	35,51	38,87
0,125	3,00	29,01	28,34	10,54
0,090	3,47	7,47	7,30	3,24
0,075	3,74	1,40	1,37	1,88
0,063	3,99	0,64	0,63	1,25
< 0,063	> 3,99	1,28	1,25	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,25
Sand, fine (0,063 mm - 0,200 mm):	47,77
Sand, medium (0,2 mm - 0,6 mm):	49,95
Sand, coarse (0,6 mm - 2 mm):	1,01
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%	0,38	1,41
16%	84%	0,30	1,73
25%	75%	0,25	1,98
40%	60%	0,22	2,17
Median 50%	50%	0,20	2,31
75%	25%	0,15	2,71
84%	16%	0,14	2,88
90%	10%	0,12	3,03
95%	5%	0,10	3,34

Moments Statistics

Mean	2,31
Sorting	0,58
Skewness	0,04
Kurtosis	1,09
Uniformity Coefficient	1,81

The analysis is executed according to DS405.9
 DS/EN933-1 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)

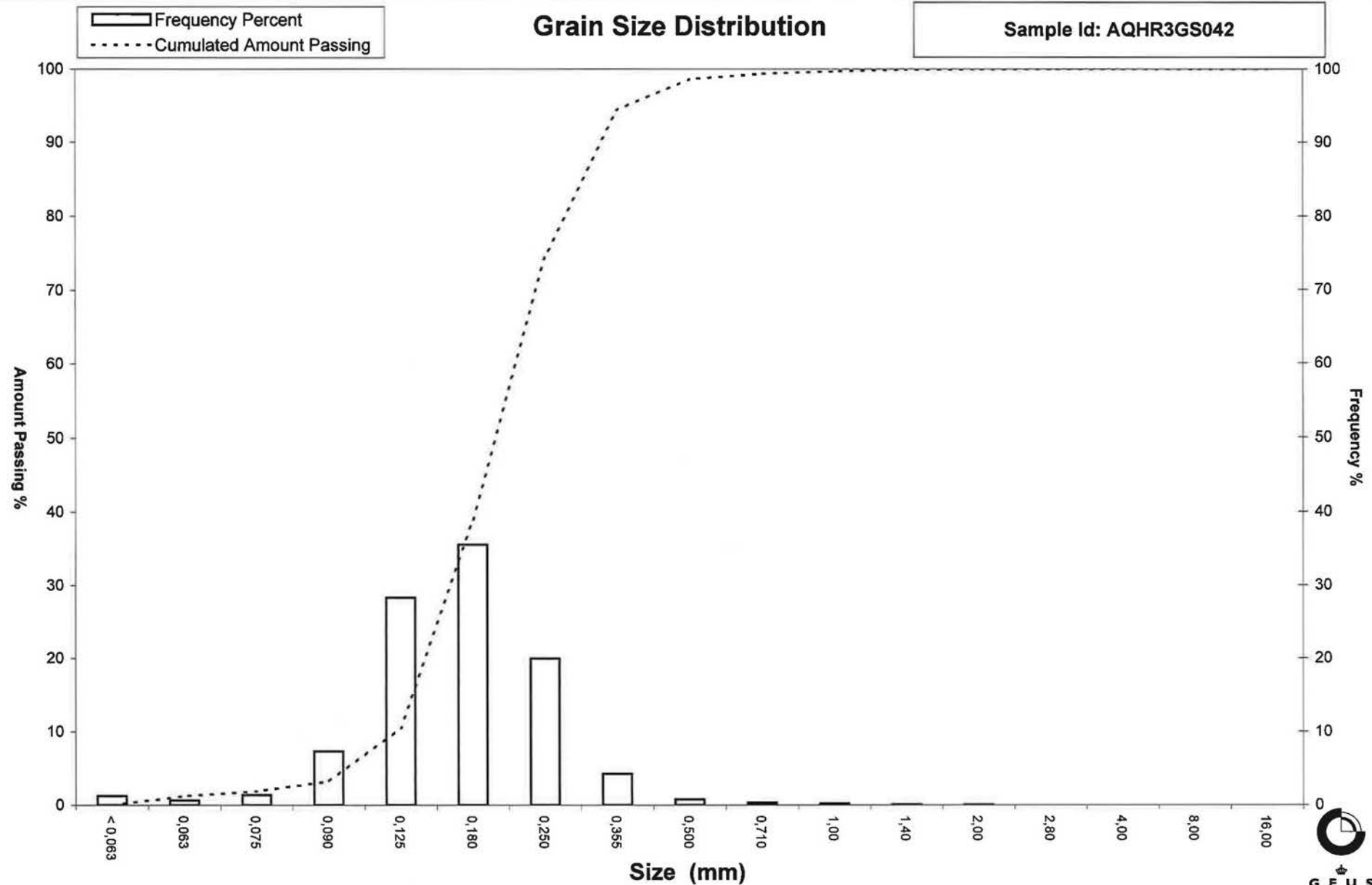
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS042



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS043
Lab. Id: 120179
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 109,05 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	0,03	0,03	99,97
1,40	-0,49	0,05	0,05	99,93
1,00	0,00	0,13	0,12	99,81
0,710	0,49	0,17	0,16	99,65
0,500	1,00	0,32	0,29	99,36
0,355	1,49	2,84	2,60	96,75
0,250	2,00	12,28	11,26	85,49
0,180	2,47	29,15	26,73	58,76
0,125	3,00	42,92	39,36	19,40
0,090	3,47	15,67	14,37	5,03
0,075	3,74	2,30	2,11	2,93
0,063	3,99	0,90	0,83	2,10
< 0,063	> 3,99	2,29	2,10	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	2,10
Sand, fine (0,063 mm - 0,200 mm):	64,30
Sand, medium (0,2 mm - 0,6 mm):	33,10
Sand, coarse (0,6 mm - 2 mm):	0,47
Gravel (> 2 mm):	0,03
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%	0,25	2,02
25%	75%	0,22	2,17
40%	60%	0,18	2,45
Median 50%	50%	0,17	2,58
75%	25%	0,13	2,91
84%	16%	0,12	3,10
90%	10%	0,10	3,29
95%	5%	0,09	3,48

Moments Statistics

Mean	2,57
Sorting	0,56
Skewness	-0,04
Kurtosis	1,05
Uniformity Coefficient	1,79

The analysis is executed according to DS405.9
 DS/EN933-1 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)

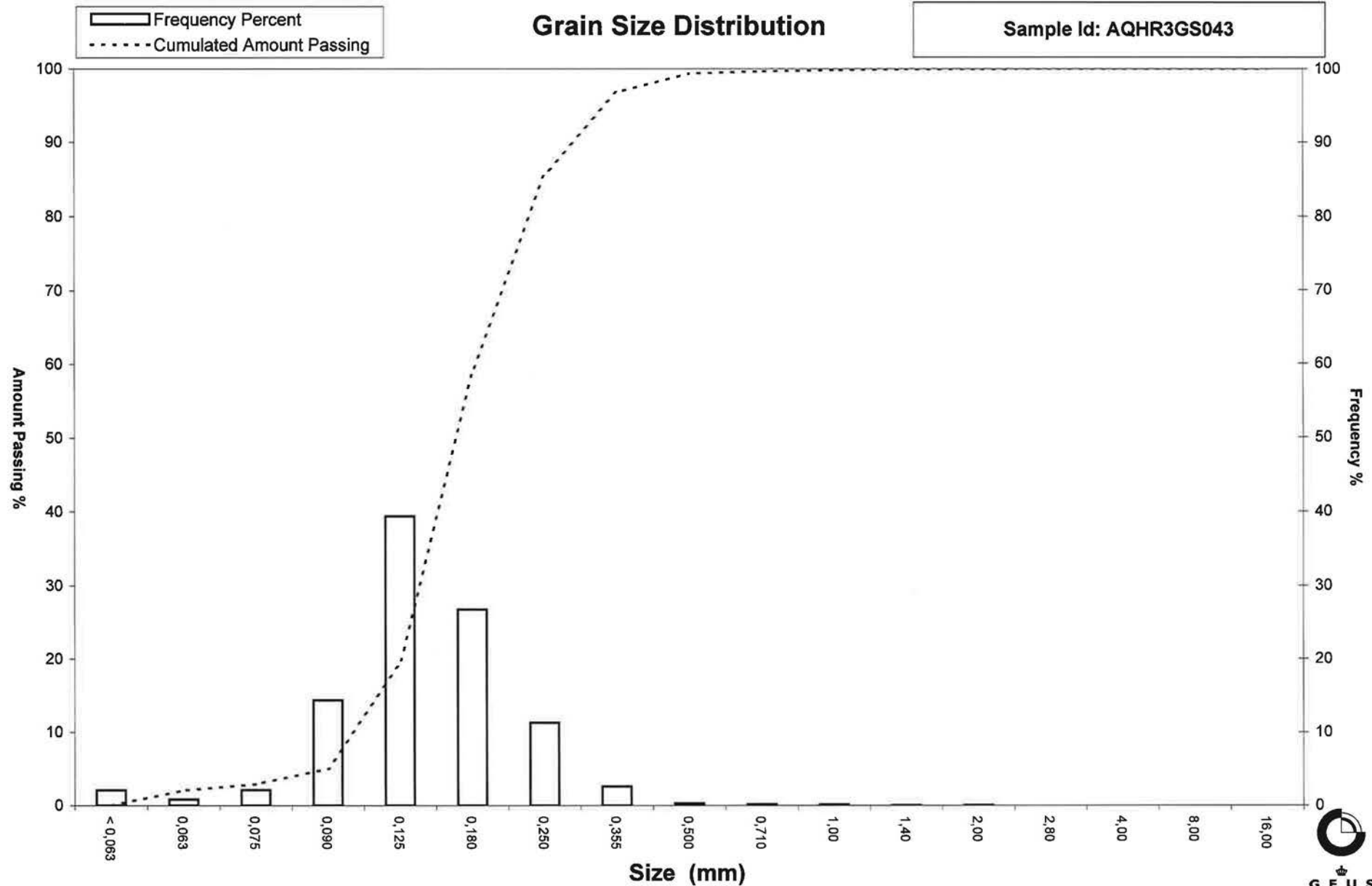
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS043



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS044
Lab. Id: 120180
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 105,38 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	0,00	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	0,10	0,09	99,91
1,40	-0,49	0,05	0,05	99,86
1,00	0,00	0,03	0,03	99,83
0,710	0,49	0,30	0,28	99,54
0,500	1,00	0,99	0,94	98,61
0,355	1,49	3,54	3,36	95,25
0,250	2,00	13,15	12,48	82,77
0,180	2,47	32,61	30,95	51,82
0,125	3,00	42,41	40,24	11,58
0,090	3,47	9,69	9,20	2,38
0,075	3,74	0,99	0,94	1,44
0,063	3,99	0,32	0,30	1,14
< 0,063	> 3,99	1,20	1,14	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,14
Sand, fine (0,063 mm - 0,200 mm):	59,52
Sand, medium (0,2 mm - 0,6 mm):	38,39
Sand, coarse (0,6 mm - 2 mm):	0,85
Gravel (> 2 mm):	0,09
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,35	1,50
16%	84%	0,26	1,94
25%	75%	0,23	2,11
40%	60%	0,20	2,33
Median 50%	50%	0,18	2,49
75%	25%	0,14	2,80
84%	16%	0,13	2,93
90%	10%	0,12	3,07
95%	5%	0,10	3,32

Moments Statistics

Mean	2,46
Sorting	0,52
Skewness	-0,10
Kurtosis	1,07
Uniformity Coefficient	1,67

The analysis is executed according to DS405.9
 DS/EN933-1 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)

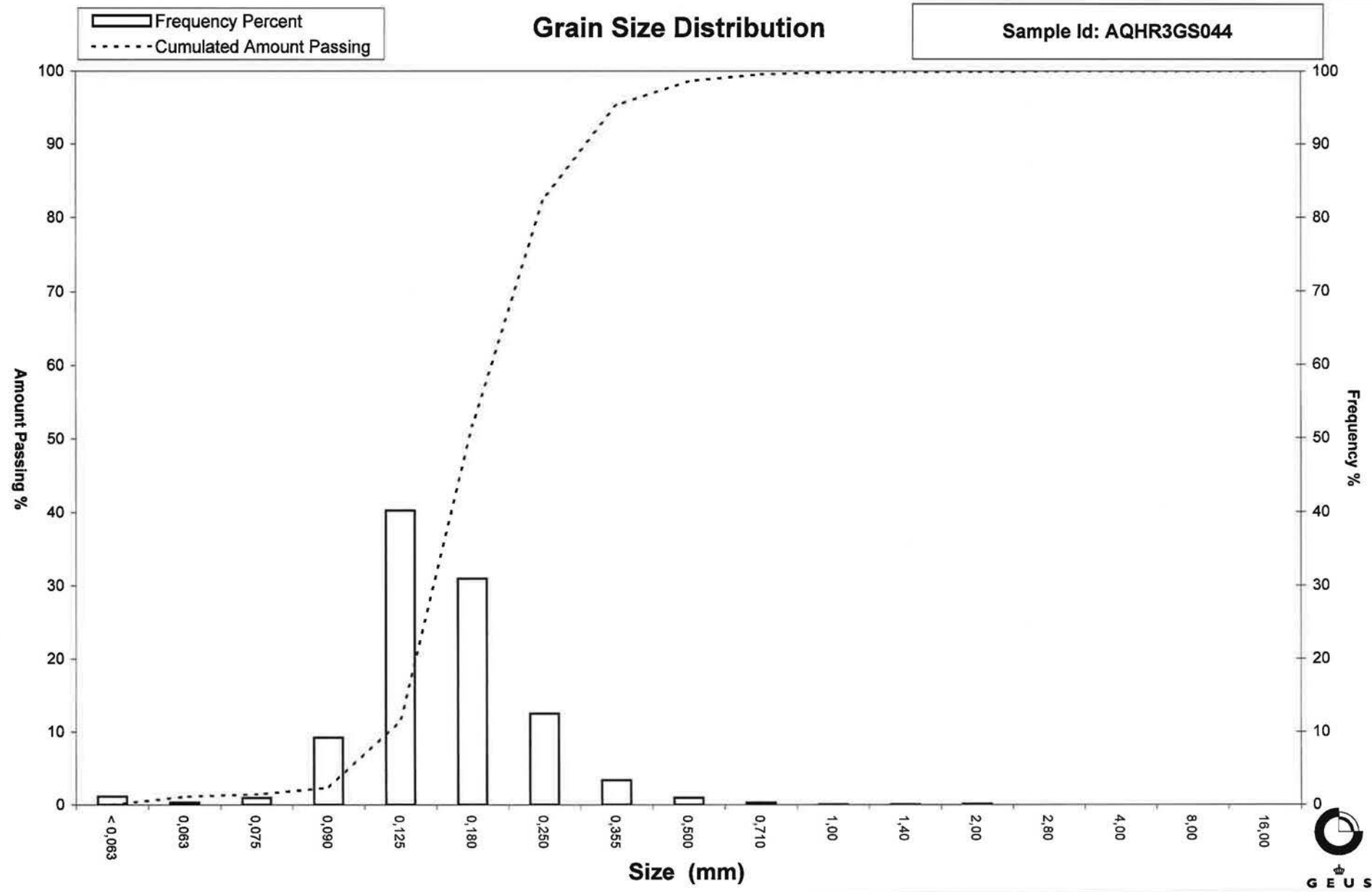
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS044



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS045
Lab. Id: 120180,67
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 101,56 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	0,07	0,07	99,93
1,40	-0,49	0,05	0,05	99,88
1,00	0,00	0,06	0,06	99,82
0,710	0,49	0,12	0,12	99,70
0,500	1,00	0,57	0,56	99,14
0,355	1,49	4,87	4,80	94,35
0,250	2,00	12,18	11,99	82,36
0,180	2,47	15,05	14,82	67,54
0,125	3,00	40,24	39,62	27,91
0,090	3,47	21,29	20,96	6,95
0,075	3,74	2,43	2,39	4,56
0,063	3,99	1,04	1,02	3,53
< 0,063	> 3,99	3,59	3,53	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	3,53
Sand, fine (0,063 mm - 0,200 mm):	68,24
Sand, medium (0,2 mm - 0,6 mm):	27,64
Sand, coarse (0,6 mm - 2 mm):	0,52
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%	0,37	1,42
16%	84%	0,26	1,92
25%	75%	0,22	2,22
40%	60%	0,17	2,56
Median 50%	50%	0,16	2,68
75%	25%	0,12	3,06
84%	16%	0,11	3,25
90%	10%	0,10	3,39
95%	5%	0,08	3,68

Moments Statistics

Mean	2,62
Sorting	0,68
Skewness	-0,13
Kurtosis	1,10
Uniformity Coefficient	1,78

The analysis is executed according to DS405.9
 DS/EN933-1 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)

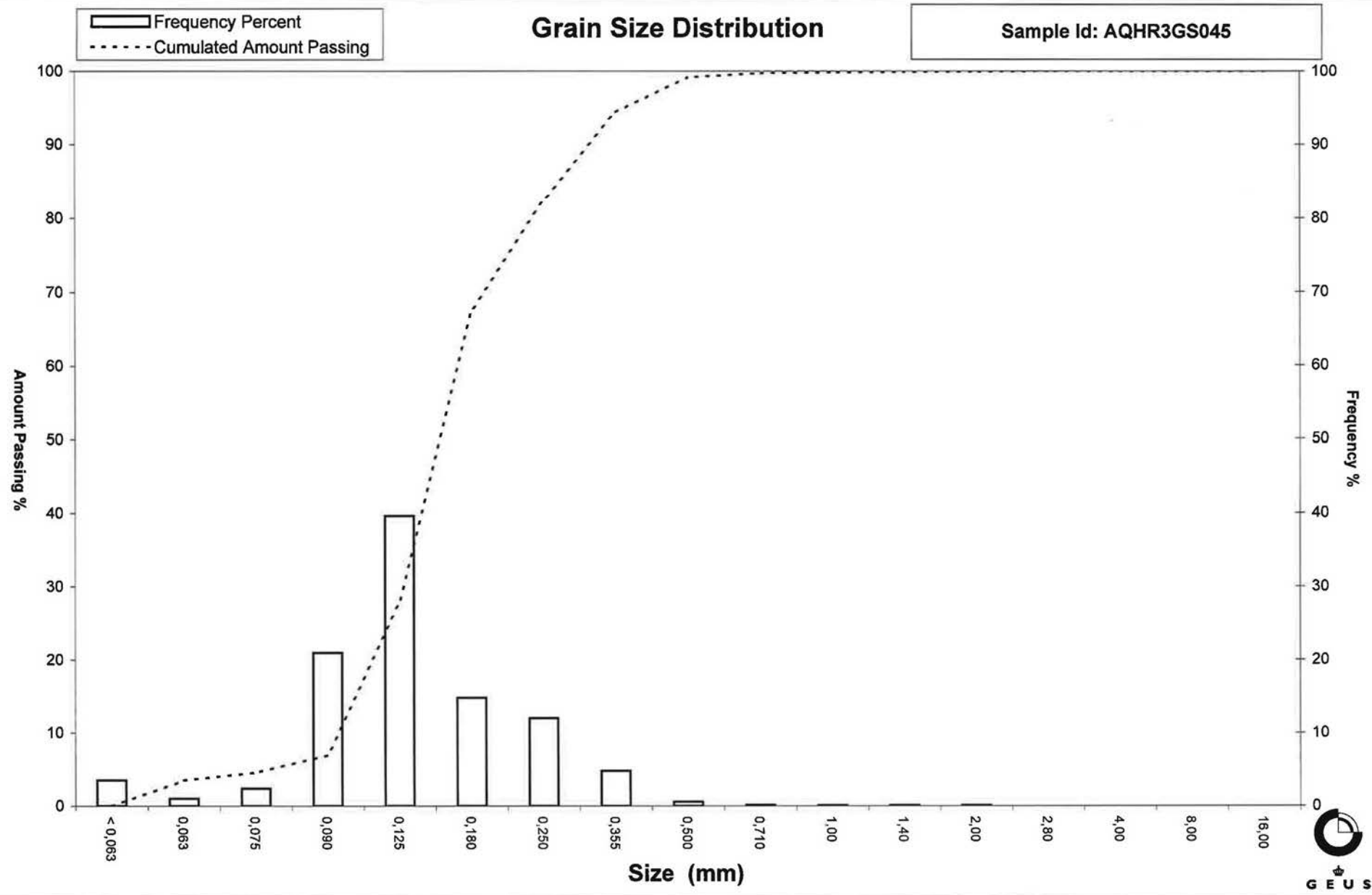
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS045



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS046
Lab. Id: 120182
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 8 mm.



Total Weight 203,56 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	2,92	1,44	98,56
4,00	-2,00	2,96	1,45	97,11
2,80	-1,49	1,37	0,67	96,44
2,00	-1,00	0,92	0,45	95,98
1,40	-0,49	1,08	0,53	95,46
1,00	0,00	4,20	2,06	93,39
0,710	0,49	24,06	11,82	81,57
0,500	1,00	42,93	21,09	60,48
0,355	1,49	62,03	30,47	30,01
0,250	2,00	51,70	25,40	4,61
0,180	2,47	6,08	2,99	1,63
0,125	3,00	1,48	0,73	0,90
0,090	3,47	0,46	0,23	0,67
0,075	3,74	0,09	0,05	0,63
0,063	3,99	0,05	0,02	0,60
< 0,063	> 3,99	1,23	0,60	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,60
Sand, fine (0,063 mm - 0,200 mm):	1,87
Sand, medium (0,2 mm - 0,6 mm):	68,05
Sand, coarse (0,6 mm - 2 mm):	25,46
Gravel (> 2 mm):	4,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,31	-0,39
16%	84%	0,77	0,38
25%	75%	0,64	0,63
40%	60%	0,50	1,01
Median 50%	50%	0,45	1,15
75%	25%	0,33	1,58
84%	16%	0,30	1,75
90%	10%	0,27	1,88
95%	5%	0,25	1,99

Moments Statistics

Mean	1,09
Sorting	0,70
Skewness	-0,21
Kurtosis	1,03
Uniformity Coefficient	1,83

The analysis is executed according to DS405.9
 DS/EN933-1 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)

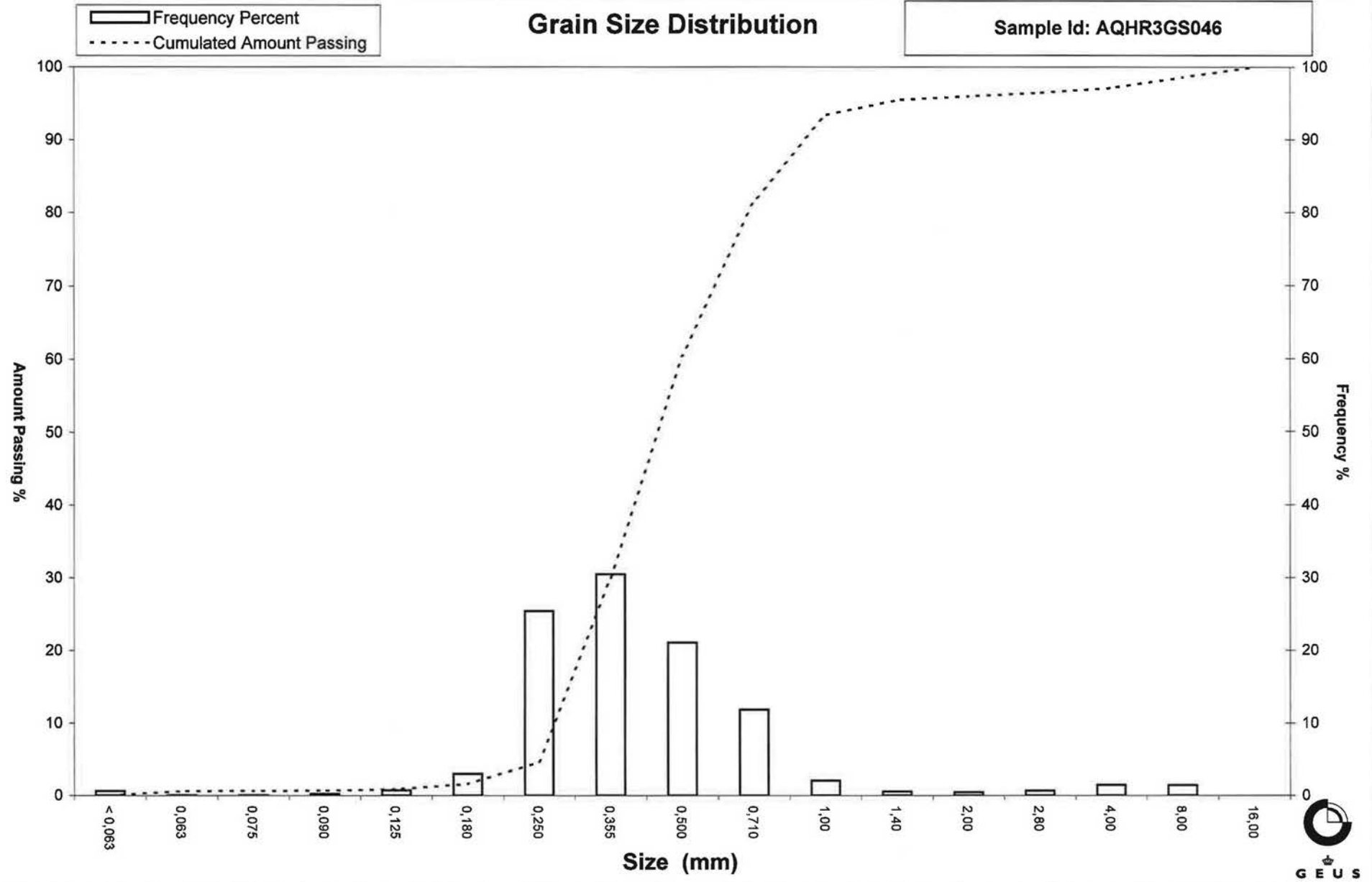
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS046



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS047
Lab. Id: 120183
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 107,01 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	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,02	0,02	99,98
2,00	-1,00	0,02	0,02	99,96
1,40	-0,49	0,03	0,03	99,93
1,00	0,00	0,08	0,07	99,86
0,710	0,49	0,05	0,05	99,81
0,500	1,00	0,11	0,10	99,71
0,355	1,49	0,64	0,60	99,11
0,250	2,00	4,01	3,75	95,36
0,180	2,47	12,57	11,75	83,62
0,125	3,00	49,25	46,02	37,59
0,090	3,47	35,66	33,32	4,27
0,075	3,74	2,07	1,93	2,34
0,063	3,99	0,73	0,68	1,65
< 0,063	> 3,99	1,77	1,65	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	1,65
Sand, fine (0,063 mm - 0,200 mm):	85,32
Sand, medium (0,2 mm - 0,6 mm):	12,78
Sand, coarse (0,6 mm - 2 mm):	0,20
Gravel (> 2 mm):	0,04
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,25	2,01
16%	84%	0,18	2,46
25%	75%	0,17	2,56
40%	60%	0,15	2,72
Median 50%	50%	0,14	2,84
75%	25%	0,11	3,16
84%	16%	0,10	3,29
90%	10%	0,10	3,38
95%	5%	0,09	3,46

Moments Statistics

Mean	2,86
Sorting	0,43
Skewness	-0,03
Kurtosis	0,99
Uniformity Coefficient	1,58

The analysis is executed according to DS405.9
 DS/EN933-1 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)

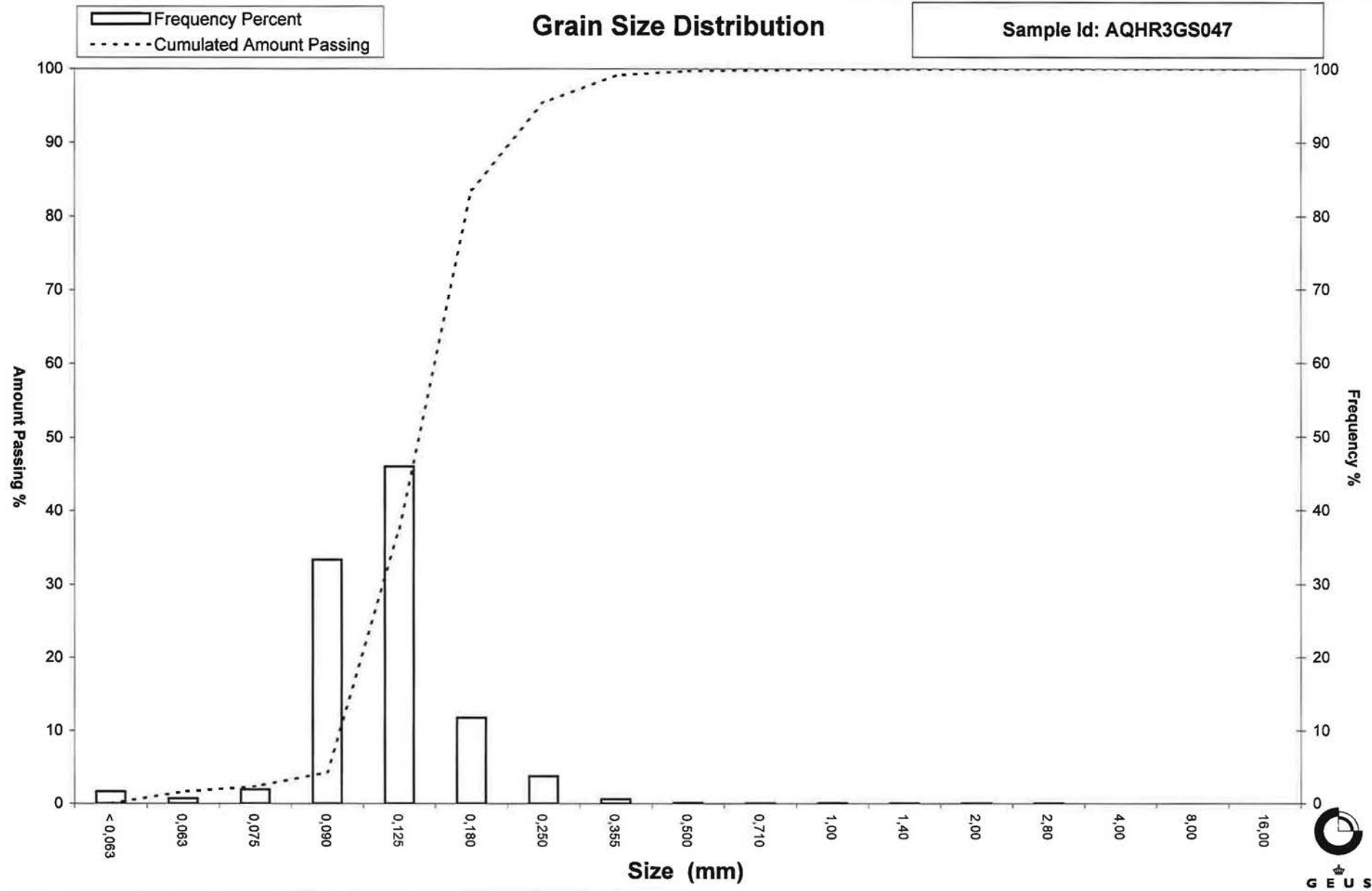
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS047



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS048
Lab. Id: 120184
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 105,67 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	0,00	0,00	100,00
1,00	0,00	0,00	0,00	100,00
0,710	0,49	0,08	0,08	99,92
0,500	1,00	2,63	2,49	97,44
0,355	1,49	25,04	23,70	73,74
0,250	2,00	49,62	46,96	26,78
0,180	2,47	19,06	18,04	8,74
0,125	3,00	6,15	5,82	2,92
0,090	3,47	1,94	1,84	1,09
0,075	3,74	0,21	0,20	0,89
0,063	3,99	0,06	0,06	0,83
< 0,063	> 3,99	0,88	0,83	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,83
Sand, fine (0,063 mm - 0,200 mm):	13,06
Sand, medium (0,2 mm - 0,6 mm):	84,72
Sand, coarse (0,6 mm - 2 mm):	1,38
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%	0,49	1,04
16%	84%	0,42	1,26
25%	75%	0,36	1,46
40%	60%	0,32	1,62
Median 50%	50%	0,30	1,73
75%	25%	0,24	2,04
84%	16%	0,21	2,26
90%	10%	0,18	2,44
95%	5%	0,14	2,79

Moments Statistics

Mean	1,75
Sorting	0,52
Skewness	0,14
Kurtosis	1,24
Uniformity Coefficient	1,75

The analysis is executed according to DS405.9
 DS/EN933-1 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)

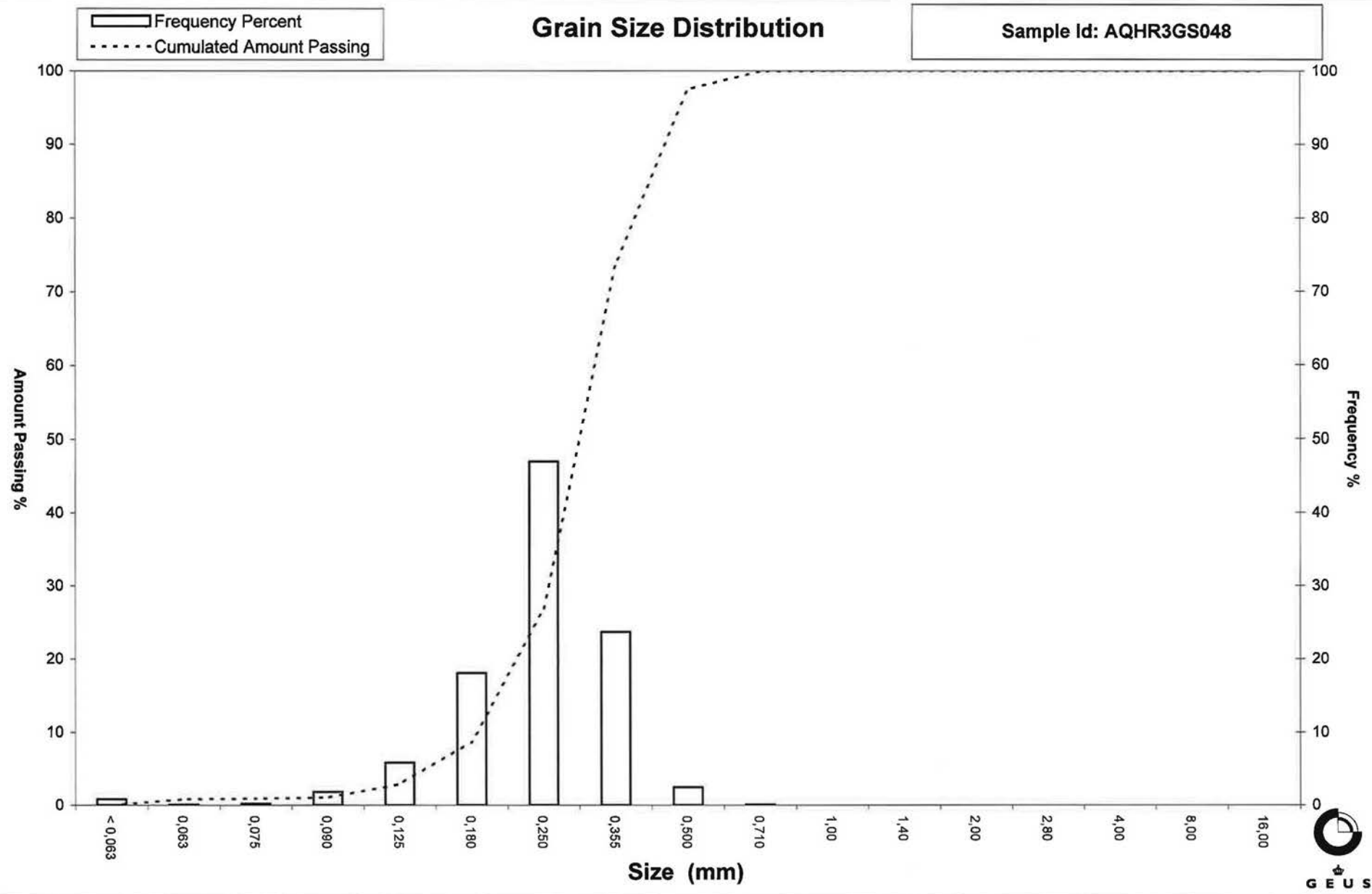
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS048



Grain Size Distribution

Geotechnical

Sample Id: AQHR3GS049
Lab. Id: 120185
Submitter: Energinet.dk
Subject: Horns Rev 3 Grab Samples
Date: September 2012
Executed: Ingerlise Nørgaard
Remarks: For mat. < 2 mm.



Total Weight 103,5 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	0,00	0,00	100,00
4,00	-2,00	0,00	0,00	100,00
2,80	-1,49	0,20	0,19	99,81
2,00	-1,00	0,05	0,05	99,76
1,40	-0,49	0,04	0,04	99,72
1,00	0,00	0,05	0,05	99,67
0,710	0,49	0,13	0,13	99,55
0,500	1,00	0,52	0,50	99,04
0,355	1,49	2,85	2,75	96,29
0,250	2,00	10,63	10,27	86,02
0,180	2,47	23,76	22,96	63,06
0,125	3,00	43,77	42,29	20,77
0,090	3,47	16,35	15,80	4,98
0,075	3,74	2,21	2,14	2,84
0,063	3,99	0,81	0,78	2,06
< 0,063	> 3,99	2,13	2,06	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	2,06
Sand, fine (0,063 mm - 0,200 mm):	67,56
Sand, medium (0,2 mm - 0,6 mm):	29,66
Sand, coarse (0,6 mm - 2 mm):	0,48
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%	0,34	1,55
16%	84%	0,24	2,04
25%	75%	0,22	2,21
40%	60%	0,18	2,51
Median 50%	50%	0,16	2,62
75%	25%	0,13	2,94
84%	16%	0,11	3,13
90%	10%	0,10	3,31
95%	5%	0,09	3,47

Moments Statistics

Mean	2,59
Sorting	0,56
Skewness	-0,09
Kurtosis	1,08
Uniformity Coefficient	1,74

The analysis is executed according to DS405.9
 DS/EN933-1 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)

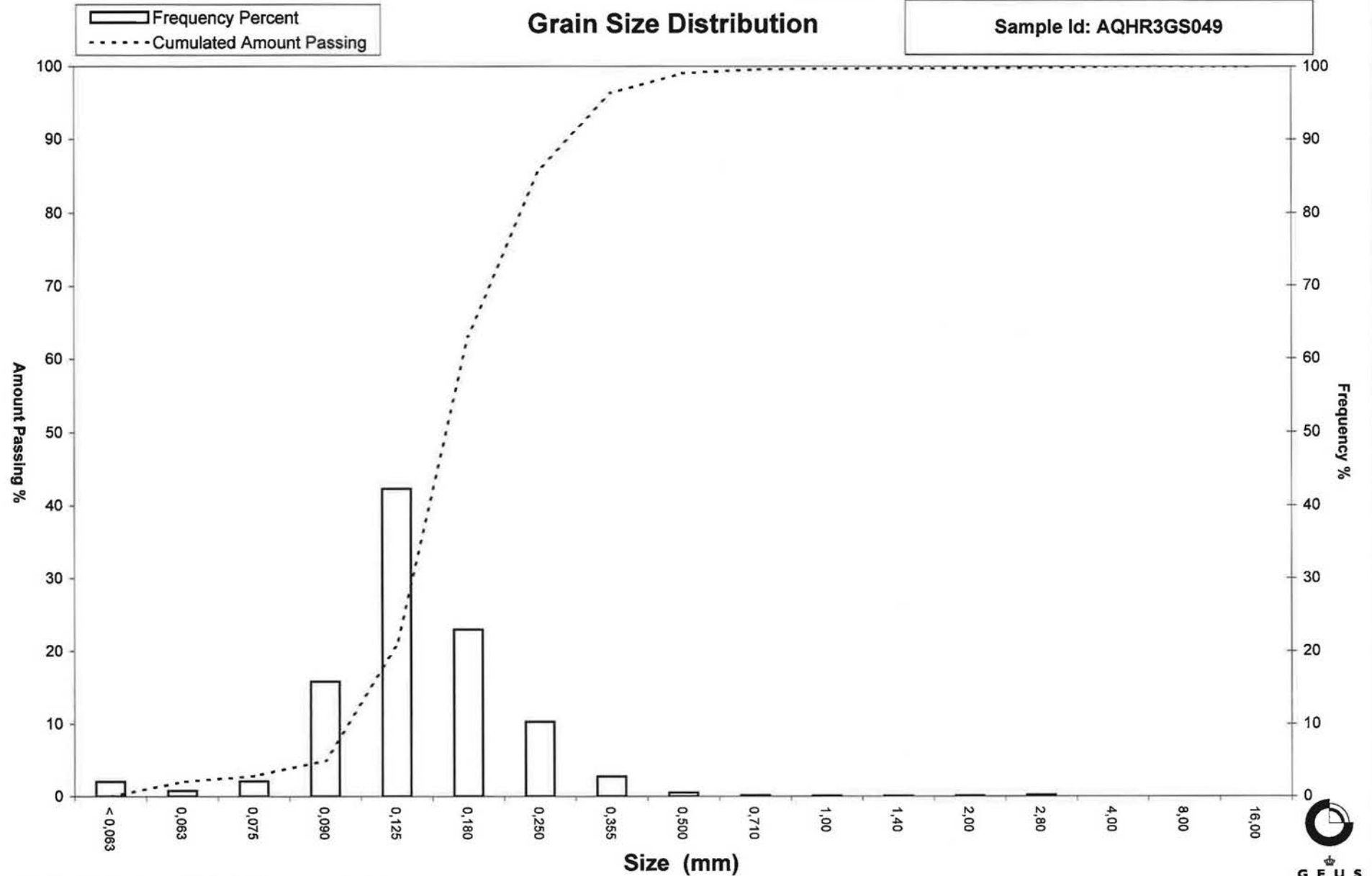
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
 "Amount in sieve". Uniformity coefficient is based on
 "Amount passing".

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Grain Size Distribution

Sample Id: AQHR3GS049



Energinet Sept.2012
Glødetab DS 204
Vandindhold DS 405.11

Lab nr.	Prøve	Glødetab i %	Vandindhold i %
120136	AQHR3GS001	1,31	17,05
120137	AQHR3GS002	0,81	17,75
120138	AQHR3GS003	0,68	19,75
120139	AQHR3GS004	0,57	17,96
120140	AQHR3GS005	0,82	13,92
120141	AQHR3GS006	0,55	19,17
120142	AQHR3GS007	0,88	14,00
120143	AQHR3GS008	0,72	16,00
120144	AQHR3GS009	0,46	16,79
120145	AQHR3GS010	0,34	16,88
120146	AQHR3GS011	0,39	18,00
120147	AQHR3GS012	0,40	16,91
120148	AQHR3GS013	0,43	18,46
120149	AQHR3GS014 (1 st attemp)	0,49	16,64
120150	AQHR3GS014 (2 nd attemp)	0,39	17,02
120151	AQHR3GS015	0,42	16,52
120152	AQHR3GS016	0,31	18,07
120153	AQHR3GS017	0,38	17,55
120154	AQHR3GS018	0,74	18,90
120155	AQHR3GS019	0,54	19,46
120156	AQHR3GS020	0,30	17,45
120157	AQHR3GS021	0,34	16,30
120158	AQHR3GS022	0,76	19,49
120159	AQHR3GS023	0,37	18,24
120160	AQHR3GS024	0,40	16,56
120161	AQHR3GS025	1,09	8,35
120162	AQHR3GS026	0,67	19,82
120163	AQHR3GS027	0,67	20,80
120164	AQHR3GS028	0,96	18,69
120165	AQHR3GS029	0,82	19,15
120166	AQHR3GS030	0,78	10,68
120167	AQHR3GS031	0,88	17,80
120168	AQHR3GS032	0,61	18,15
120169	AQHR3GS033	1,17	21,49
120170	AQHR3GS034	1,16	23,04
120171	AQHR3GS035	1,33	23,69
120172	AQHR3GS036	1,13	22,80
120173	AQHR3GS037	0,54	16,37
120174	AQHR3GS038	0,75	20,32
120175	AQHR3GS039	0,54	16,85
120176	AQHR3GS040	1,52	21,12
120177	AQHR3GS041	0,49	18,90
120178	AQHR3GS042	0,74	19,17
120179	AQHR3GS043	0,89	19,29
120180	AQHR3GS044	0,68	18,72
120181	AQHR3GS045	1,23	22,00
120182	AQHR3GS046	0,60	15,33
120183	AQHR3GS047	1,10	20,96
120184	AQHR3GS048	0,61	17,68
120185	AQHR3GS049	1,29	18,50