

GEOTECHNICAL REPORT

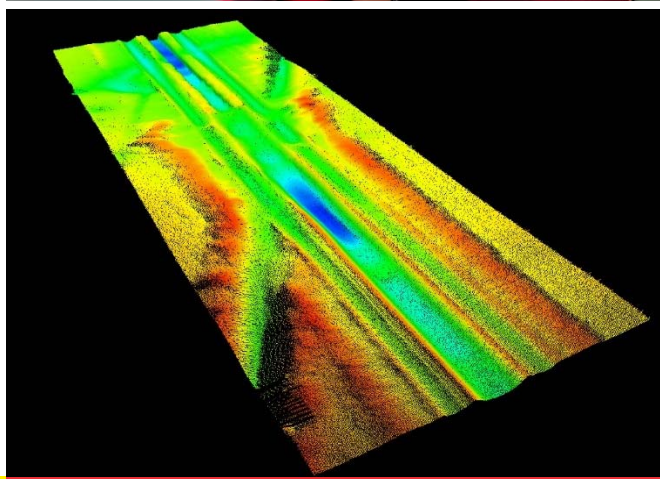
103783-ENN-MMT-SUR-REP-GEOTECH
REVISION A | FOR USE
APRIL 2022

ENERGINET

NORTH SEA OWF AND ENERGY ISLANDS

GEOPHYSICAL SURVEY FOR OFFSHORE
WIND FARMS AND ENERGY ISLAND

NORTH SEA
MAY-AUGUST 2021



REVISION HISTORY

REVISION	DATE	STATUS	CHECK	APPROVAL	CLIENT APPROVAL
A	12/04/2022	For Use	RC	DP	

REVISION LOG

DATE	SECTION	CHANGE

DOCUMENT CONTROL

RESPONSIBILITY	POSITION	NAME
Content	Principal Geologist	Rob Cooke
Content, Check	Project Report Coordinator	Darryl Pickworth
Approval	Project Manager	Karin Gunnesson

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GRAB SAMPLE RECORDS

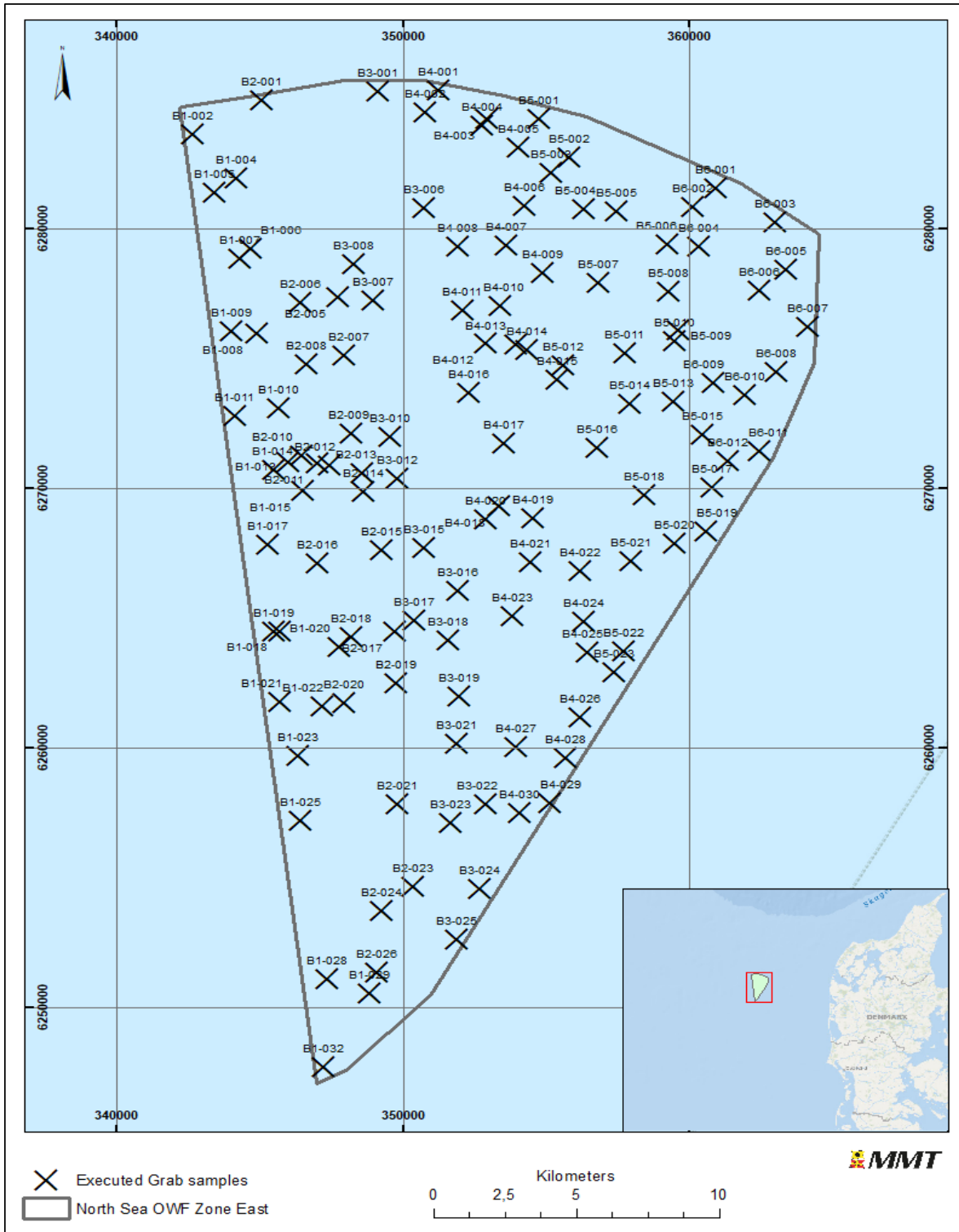
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Plot of Grab Sample Locations - All Blocks



MMT Project No. 103783



Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

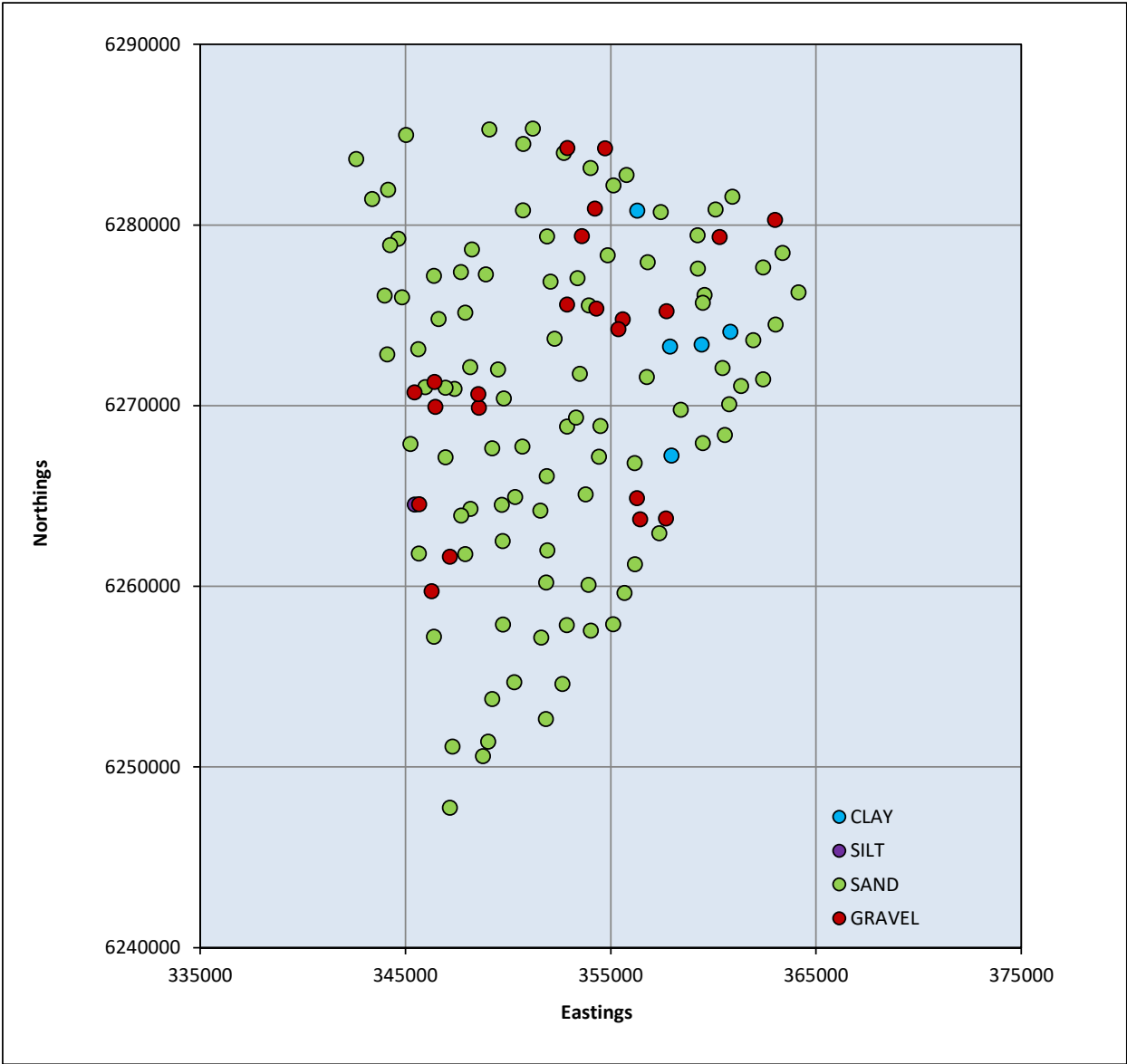
Carried out for

Energinet

Figure

LOC - All Blocks

Plot of Grab Sample Material Types - All Blocks



Client ENERGINET	Project North Sea OWF and Energy Islands Project No. 103783 Carried out for Energinet	Figure GEOL - All Blocks
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Key to Grab Sample Records



MMT Project No. 103783

Notes:

- 1 Soils are described in accordance with 'A guide to engineering geological soil description', Danish Geotechnical Society, dgf-Bulletin 1 (1995).
- 2 For fine soils, consistency determined during description is reported for those strata where undisturbed samples are available. Where the logger considers that the sample may not be representative of the condition in situ, for whatever reason, the reported consistency is given in brackets. The reliability of the sample is indicated by Probably or Possibly as appropriate. Hence (Probably firm) indicates the logger is reasonably confident of the assessment, but (Possibly firm) means less certainty. Where the samples available are too disturbed to allow a reasonable assessment of the in situ condition, no consistency is given.
- 3 Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs. However, because of their size in relation to the exploratory hole diameter, these records may not be fully representative of their size and/or frequency in the ground.
- 4 Samples shown on the logs are those taken during logging for laboratory testing and sample retention.
- 5 Indicative carbonate content tests carried out using 10% hydrochloric acid (HCl). Descriptors as below:
 - Non-calcareous - the addition of HCl produces no effervescence
 - Slightly calcareous - the addition of HCl produces weak or sporadic effervescence
 - Calcareous - the addition of HCl produces clear, but not sustained effervescence
 - Highly calcareous - the addition of HCl produces strong and sustained effervescence
- 6 Unless otherwise indicated, the black & white scale bar shown on the photographs of recovered material is 0.10m in length, with each separate block being 10mm in length.

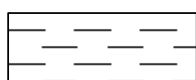
Client ENERGINET	Project North Sea OWF and Energy Islands Project No. 103783 Carried out for Energinet	Table GS Key
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Key to Grab Sample Records

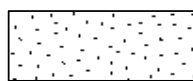


MMT Project No. 103783

Common strata legend symbols (*ags code in italics*):



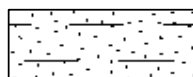
201 CLAY



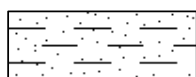
401 SAND



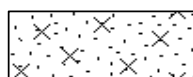
202 CLAY with silt



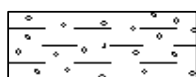
402 Clayey SAND



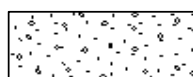
203 Sandy CLAY



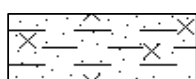
403 Silty SAND



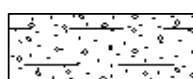
204 Gravelly CLAY



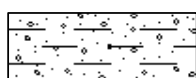
404 Gravelly SAND



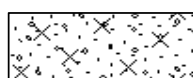
207 Silty sandy CLAY



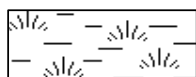
410 Clayey gravelly SAND



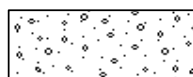
220 Sandy gravelly CLAY



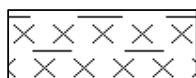
412 Silty gravelly SAND



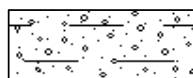
229 Organic CLAY



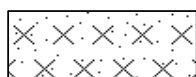
504 Sandy GRAVEL



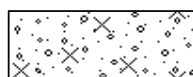
302 Clay/Silt



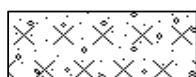
509 Clayey sandy GRAVEL



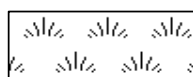
303 Sandy SILT



520 Silty sandy GRAVEL



310 Sandy gravelly SILT



601 PEAT

Sample type:

D Disturbed tub sample

Depositional Environment:

Ma Marine deposit
Mw Meltwater deposit
Gl Glacier deposit
Wd Wash down deposit

Age:

Re Recent
Pg Postglacial
Lg Late Glacial
Gl Glacial
Ig Interglacial
Te Tertiary

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

GS Key

Key to Grab Sample Records



MMT Project No. 103783

Colour codes after Norbury (2016) *Soil and Rock Description in Engineering Practice, 2nd Ed.*
(advocated in BS 5930:2015+A1:2020)



Client ENERGINET	Project North Sea OWF and Energy Islands Project No. 103783 Carried out for Energinet	Table GS Key
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GRAB SAMPLE RECORDS - BLOCK 1

DESCRIPTION	PAGES INCLUDED
BLOCK 1	
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Summary of Particle Size Distribution Tests – Block 1	1
Particle Size Distribution Results	23
Summary of Chemical Test Results – Block 1	1

Summary of Grab Samples - Block 1

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B1	783-GS-OWF-B1-002	2021-08-16	Franklin	342616	6283628	41		
B1	783-GS-OWF-B1-004	2021-08-16	Franklin	344172	6281928	37		
B1	783-GS-OWF-B1-005	2021-08-16	Franklin	343391	6281406	40		
B1	783-GS-OWF-B1-006	2021-08-13	Franklin	344663	6279214	29		
B1	783-GS-OWF-B1-007	2021-08-13	Franklin	344278	6278866	29		
B1	783-GS-OWF-B1-008	2021-08-15	Franklin	344855	6275980	31		
B1	783-GS-OWF-B1-009	2021-08-15	Franklin	344001	6276075	33		
B1	783-GS-OWF-B1-010	2021-08-16	Franklin	345649	6273098	36		
B1	783-GS-OWF-B1-011	2021-08-16	Franklin	344130	6272813	38		
B1	783-GS-OWF-B1-013	2021-08-15	Franklin	345984	6271006	42		
B1	783-GS-OWF-B1-014	2021-08-16	Franklin	345455	6270717	42		
B1	783-GS-OWF-B1-015	2021-08-16	Franklin	346472	6269917	43		
B1	783-GS-OWF-B1-017	2021-08-15	Franklin	345255	6267852	46		
B1	783-GS-OWF-B1-018	2021-08-15	Franklin	345690	6264516	35		
B1	783-GS-OWF-B1-019	2021-08-15	Franklin	345471	6264512	40		
B1	783-GS-OWF-B1-020	2021-08-15	Franklin	347734	6263903	28		
B1	783-GS-OWF-B1-021	2021-08-15	Franklin	345677	6261791	38		
B1	783-GS-OWF-B1-022	2021-08-15	Franklin	347181	6261619	29		

Client **ENERGINET**

Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 1**

Summary of Grab Samples - Block 1

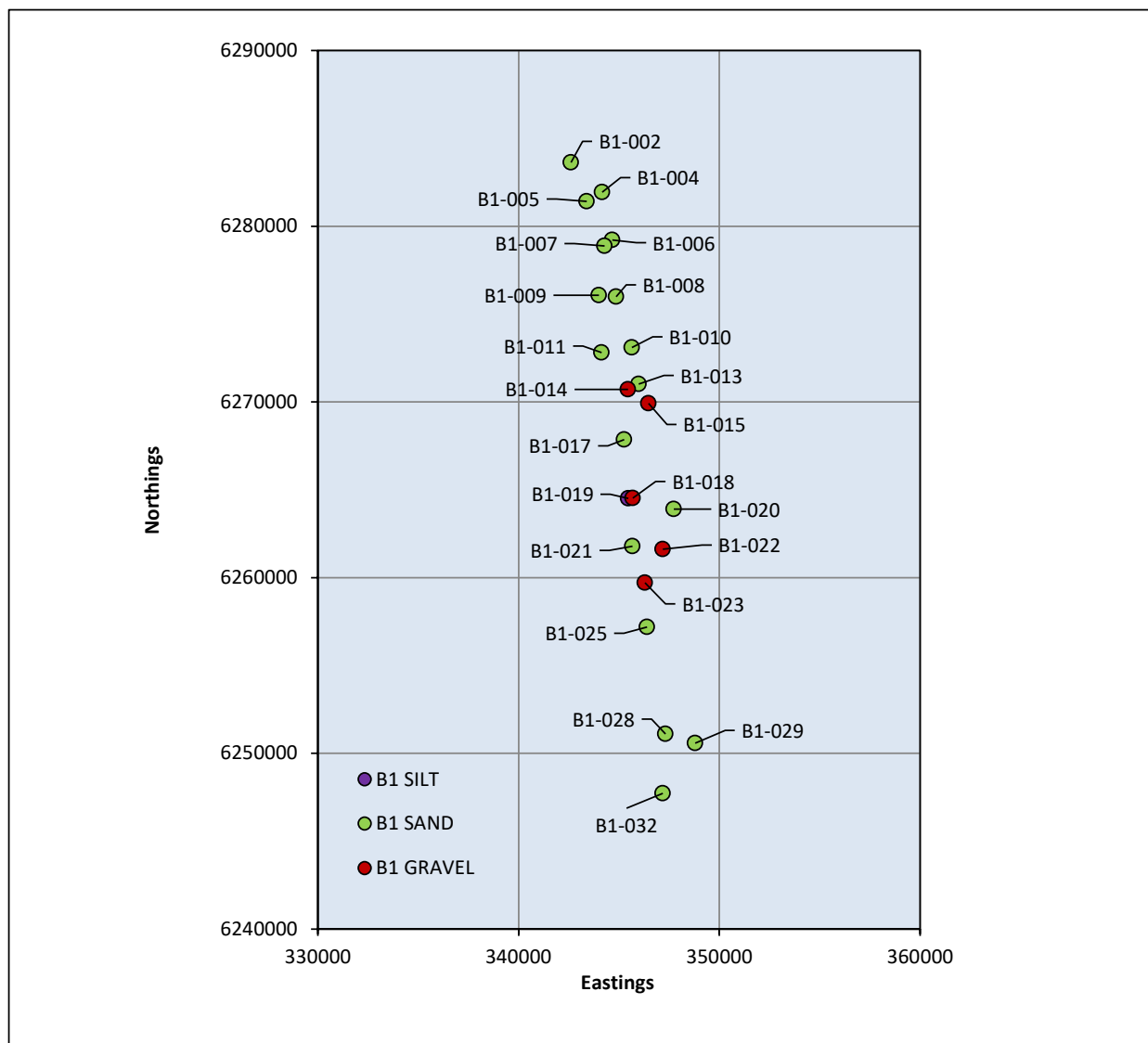
Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B1	783-GS-OWF-B1-023	2021-08-15	Franklin	346293	6259704	33		
B1	783-GS-OWF-B1-025	2021-08-16	Franklin	346407	6257192	38		
B1	783-GS-OWF-B1-028	2021-08-16	Franklin	347316	6251107	40		
B1	783-GS-OWF-B1-029	2021-08-16	Franklin	348795	6250583	41		
B1	783-GS-OWF-B1-032	2021-08-16	Franklin	347182	6247727	39		

Client **ENERGINET**

Project North Sea OWF and Energy Islands
 Project No. 103783
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Table
 GS - Block 1

Plot of Grab Sample Material Types - Block 1



Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Figure

GEOL - Block 1

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, gravelly, gravel is 60% subangular to subrounded fine to coarse of various lithologies and 40% subangular fine to medium shell fragments, rare intact shells up to 20mm in size, occasional fine to medium gravel size pockets of dark grey silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	10 %
Sand	86 %
Total fines	4 %
Silt	4 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-002	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 342616 N 6283628				
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B1	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B1-002	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, poorly sorted, silty, gravelly, gravel is 100% subangular to subrounded fine to coarse of various lithologies, rare fine to medium gravel size pockets of black silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	10 %
Sand	83 %
Total fines	7 %
Silt	7 %
Clay	

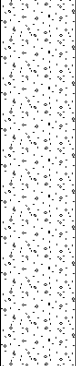
MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B1-004	Comments:
Vessel:	Franklin	Location Coordinates:	E 344172 N 6281928			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	37	Survey Route: B1	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B1-004

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, very gravelly, gravel is 50% subangular to subrounded fine of various lithologies and 50% subangular fine shell fragments, occasional medium gravel size pockets of black silty fine sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	15 %
Sand	82 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-005	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 343391 N 6281406		
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B1	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B1-005	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, well sorted, slightly gravelly, gravel is 100% fine subangular shell fragments, occasional fine to medium gravel size pockets of dark grey fine sand, light brown, slight organic odour, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 1 %
 Sand 99 %
 Total fines
 Silt
 Clay

Chemical Tests

Total Organic Matter 0.10 %
 Total Organic Carbon 0.10 %

MMT Project ID:	103783	Location Test Date:	13/08/2021	GS Location: 783-GS-OWF-B1-006	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 344663 N 6279214				
Client:	Energinet	Water Depth (m LAT):	29	Survey Route: B1	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B1-006	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% angular to subangular fine to medium of shell fragments and pieces, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	96 %
Total fines	2 %
Silt	2 %
Clay	

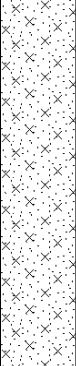
MMT Project ID:	103783	Location Test Date:	13/08/2021	GS Location: 783-GS-OWF-B1-007	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 344278 N 6278866		
Client:	Energinet	Water Depth (m LAT):	29	Survey Route: B1	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B1-007	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% fine to medium intact shells, occasional fine to medium gravel size pockets of dark grey silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	5 %
Sand	91 %
Total fines	4 %
Silt	4 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B1-008	Comments:		
Vessel:	Franklin	Location Coordinates:	E 344855 N 6275980			Equipment: Van der Veen grab sampler		
Client:	Energinet	Water Depth (m LAT):	31	Survey Route:	B1	Route KP:		
				GS Log Status:	FINAL	Checked By:	RC	783-GS-OWF-B1-008

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, rare subangular fine gravel size shell fragments, light greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel

Sand 98 %

Total fines 2 %

Silt 2 %

Clay

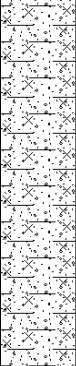
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B1-009	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 344001 N 6276075			
Client:	Energinet	Water Depth (m LAT):	33	Survey Route: B1	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B1-009

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, medium to coarse, unsorted, slightly silty, very gravelly, gravel is 90% subangular to rounded fine of sandstone, quartz and 10% subangular fine to medium shell fragments, rare intact shells up to 30mm in size, fine to medium gravel size pockets of dark grey silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	48 %
Sand	49 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-010	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 345649 N 6273098			
Client:	Energinet	Water Depth (m LAT):	36	Survey Route: B1	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B1-010

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, very gravelly, gravel is 70% subangular to subrounded fine to medium of various lithologies and 30% subangular fine to medium shell fragments, blackish grey, non-calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	36 %
Sand	48 %
Total fines	16 %
Silt	11 %
Clay	5 %

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-011	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 344130 N 6272813			
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B1	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B1-011

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, unsorted, slightly silty, very gravelly, gravel is 85% subangular to subrounded fine to coarse of various lithologies and 15% subangular fine shell fragments, 1 no. subrounded cobble of crystalline igneous rock with encrusting marine organisms, frequent medium gravel size pockets of black silty sand, greyish brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 29 % + 26 % cobbles
 Sand 43 %
 Total fines 2 %
 Silt 2 %
 Clay

Chemical Tests

Total Organic Matter 0.64 %
 Total Organic Carbon 0.37 %

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B1-013	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 345984 N 6271006				
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B1	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B1-013	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 95% subangular to subrounded fine to coarse of various lithologies, 5% angular medium to coarse shell fragments, silty, very sandy, sand is fine to coarse, 1 no. subangular cobble of coarse crystalline igneous rock, black and brown, slightly calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

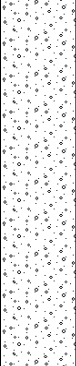
Laboratory Test Results:
Particle Size Distribution

Gravel 49 % + 28 % cobbles
 Sand 15 %
 Total fines 8 %
 Silt 8 %
 Clay

Chemical Tests

Total Organic Matter 1.00 %
 Total Organic Carbon 0.58 %

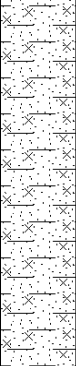
MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-014		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 345455 N 6270717				
Client:	Energinet	Water Depth (m LAT):	42	Survey Route:	B1	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
						783-GS-OWF-B1-014	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, medium to coarse, well sorted, 100% subangular to rounded, medium to coarse of various lithologies, slightly sandy, sand is fine to coarse, 2 no. subrounded cobbles of sandstone and granite with encrusting marine organisms, dark grey, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 100 %
 Sand
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B1-015	Comments:
Vessel:	Franklin	Location Coordinates:	E 346472 N 6269917			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B1	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B1-015

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, rare subangular fine gravel size shell fragments, 1 no. very thin worm 50mm in length, dark brownish grey, slight organic odour, calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	82 %
Total fines	18 %
Silt	12 %
Clay	6 %

Chemical Tests

Total Organic Matter	0.86 %
Total Organic Carbon	0.50 %

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B1-017	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 345255 N 6267852		
Client:	Energinet	Water Depth (m LAT):	46	Survey Route: B1 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B1-017

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 85% subrounded to rounded, fine to coarse of various lithologies and 15% subangular to subrounded fine to medium shell fragments, silty, very sandy, sand is fine to coarse, 1 no. subrounded cobble, occasional medium to coarse gravel size pockets of dark grey and brown silty fine sand, dark greyish brown, calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 65 %
 Sand 28 %
 Total fines 7 %
 Silt 7 %
 Clay

Chemical Tests

Total Organic Matter 0.78 %
 Total Organic Carbon 0.45 %

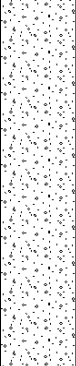
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B1-018	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 345690 N 6264516				
Client:	Energinet	Water Depth (m LAT):	35	Survey Route: B1	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B1-018	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SILT, fine to coarse, unsorted, very clayey, slightly sandy, sand is fine to medium, occasional fine gravel size pockets of orangish brown organic debris and rare dark grey silt, brownish grey, calcareous.		Wd	Pg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	5 %
Total fines	95 %
Silt	82 %
Clay	13 %

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B1-019	Comments:
Vessel:	Franklin	Location Coordinates:	E 345471 N 6264512			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B1	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B1-019

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, sorted, very gravelly, gravel is 50% subrounded fine to medium of various lithologies and 50% angular to subangular fine shell fragments, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 13 %
 Sand 87 %
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B1-020	Comments:
Vessel:	Franklin	Location Coordinates:	E 347734 N 6263903			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	28	Survey Route: B1	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B1-020

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly silty, very gravelly, gravel is 100% subrounded fine to coarse of various lithologies, 2 no. subrounded cobbles with partially encrusting marine organisms and plant material, dark brownish grey and orangish brown, slightly calcareous,.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	20 %	+ 68 % cobbles
Sand	10 %	
Total fines	2 %	
Silt	2 %	
Clay		

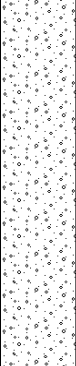
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B1-021	Comments:
Vessel:	Franklin	Location Coordinates:	E 345677 N 6261791			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B1	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B1-021

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to medium, unsorted, 95% subangular to rounded, fine to medium of various lithologies and 5% subangular fine to medium shell fragments, slightly silty, very sandy, sand is fine to coarse, orangish brown and grey, slightly calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	54 %
Sand	42 %
Total fines	4 %
Silt	4 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B1-022		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 347181 N 6261619				
Client:	Energinet	Water Depth (m LAT):	29	Survey Route:	B1	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
						783-GS-OWF-B1-022	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 90% subangular to rounded fine to coarse sandstone, quartz and chert and 10% angular to subrounded fine to medium shell fragments, very sandy, sand is fine to coarse, orangish brown, slightly calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 87 %
 Sand 13 %
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B1-023		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 346293 N 6259704				
Client:	Energinet	Water Depth (m LAT):	33	Survey Route:	B1	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
				783-GS-OWF-B1-023			

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, medium to coarse, unsorted, slightly silty, very gravelly, gravel is 80% subangular fine shell fragments and 20% subangular to subrounded fine of various lithologies, occasional fine to medium gravel size pockets of black silty fine to medium sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	46 %
Sand	50 %
Total fines	4 %
Silt	4 %
Clay	

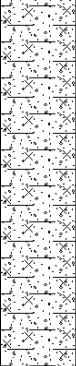
MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B1-025	Comments:
Vessel:	Franklin	Location Coordinates:	E 346407 N 6257192			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B1	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B1-025

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, slightly gravelly, gravel is 90% subangular to subrounded, fine of sandstone, quartz and 10% subangular fine shell fragments, occasional fine to medium gravel size pockets of dark grey silty fine sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 3 %
 Sand 93 %
 Total fines 4 %
 Silt 4 %
 Clay

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B1-028	Comments:
Vessel:	Franklin	Location Coordinates:	E 347316 N 6251107			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B1	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B1-028

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, unsorted, clayey, very silty, gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments, frequent medium to coarse gravel size pockets of grey and dark grey sandy clayey silt, rare intact shells up to 20mm in size, brownish grey, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	8 %
Sand	69 %
Total fines	23 %
Silt	14 %
Clay	9 %

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-029	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 348795 N 6250583		
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B1	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B1-029	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional medium gravel size pockets of dark grey silty fine sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	97 %
Total fines	2 %
Silt	2 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B1-032	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 347182 N 6247727		
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B1	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B1-032	

Summary of Particle Size Distribution Tests - Block 1



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		PSD		Sediment Fraction (%)					
		Top (m)	Base (m)	Sieve	Sed.	Clay	Silt	Total Fines	Sand	Gravel	Cobbles
B1	783-GS-OWF-B1-002	0.00	0.20	Yes	No		4	4	86	10	
B1	783-GS-OWF-B1-004	0.00	0.20	Yes	No		7	7	83	10	
B1	783-GS-OWF-B1-005	0.00	0.20	Yes	No		3	3	82	15	
B1	783-GS-OWF-B1-006	0.00	0.20	Yes	No				99	1	
B1	783-GS-OWF-B1-007	0.00	0.20	Yes	No		2	2	96	2	
B1	783-GS-OWF-B1-008	0.00	0.20	Yes	No		4	4	91	5	
B1	783-GS-OWF-B1-009	0.00	0.20	Yes	No		2	2	98		
B1	783-GS-OWF-B1-010	0.00	0.20	Yes	No		3	3	49	48	
B1	783-GS-OWF-B1-011	0.00	0.20	Yes	Yes	5	11	16	48	36	
B1	783-GS-OWF-B1-013	0.00	0.20	Yes	No		2	2	43	29	26
B1	783-GS-OWF-B1-014	0.00	0.20	Yes	No		8	8	15	49	28
B1	783-GS-OWF-B1-015	0.00	0.20	Yes	No					100	
B1	783-GS-OWF-B1-017	0.00	0.20	Yes	Yes	6	12	18	82		
B1	783-GS-OWF-B1-018	0.00	0.20	Yes	No		7	7	28	65	
B1	783-GS-OWF-B1-019	0.00	0.20	Yes	Yes	13	82	95	5		
B1	783-GS-OWF-B1-020	0.00	0.20	Yes	No				87	13	
B1	783-GS-OWF-B1-021	0.00	0.20	Yes	No		2	2	10	20	68
B1	783-GS-OWF-B1-022	0.00	0.20	Yes	No		4	4	42	54	
B1	783-GS-OWF-B1-023	0.00	0.20	Yes	No				13	87	
B1	783-GS-OWF-B1-025	0.00	0.20	Yes	No		4	4	50	46	
B1	783-GS-OWF-B1-028	0.00	0.20	Yes	No		4	4	93	3	
B1	783-GS-OWF-B1-029	0.00	0.20	Yes	Yes	9	14	23	69	8	
B1	783-GS-OWF-B1-032	0.00	0.20	Yes	No		2	2	97	1	

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

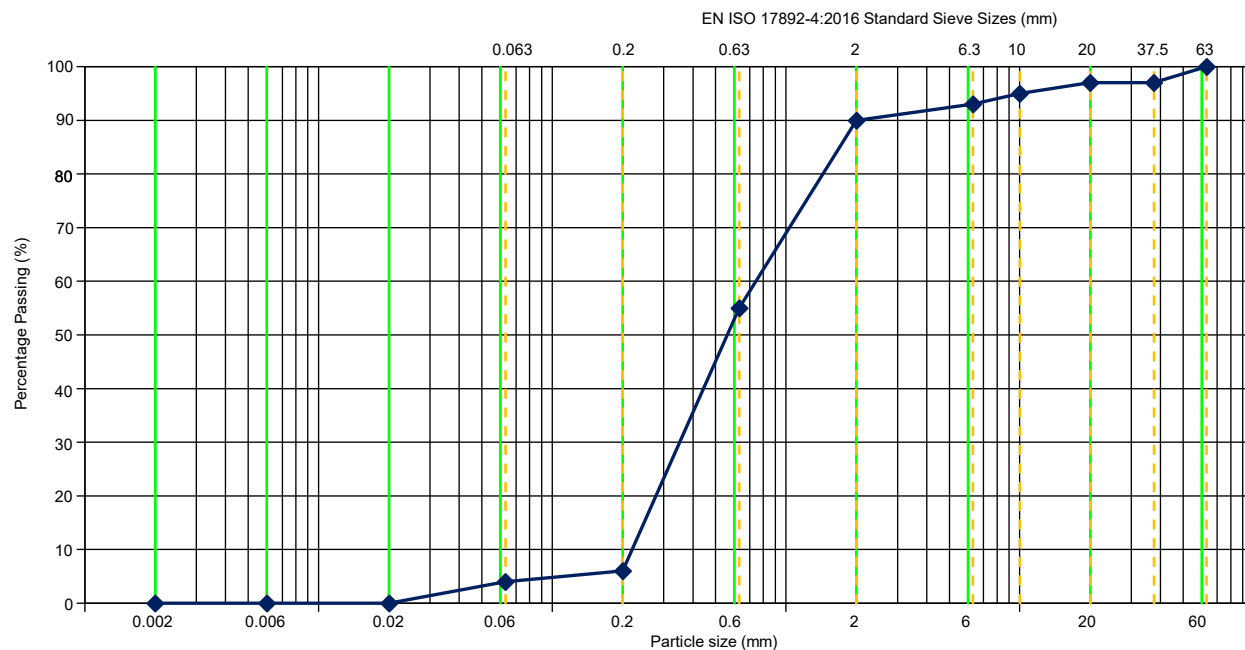
Carried out for

Energinet

Table

PSD - Block 1

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	97	0.006	-
20	97	0.002	-
10	95		
6.3	93		
2	90		
0.63	55		
0.2	6		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	10%
	Sand	86%
	Total Fines	4%
	Silt	4%
	Clay	0%

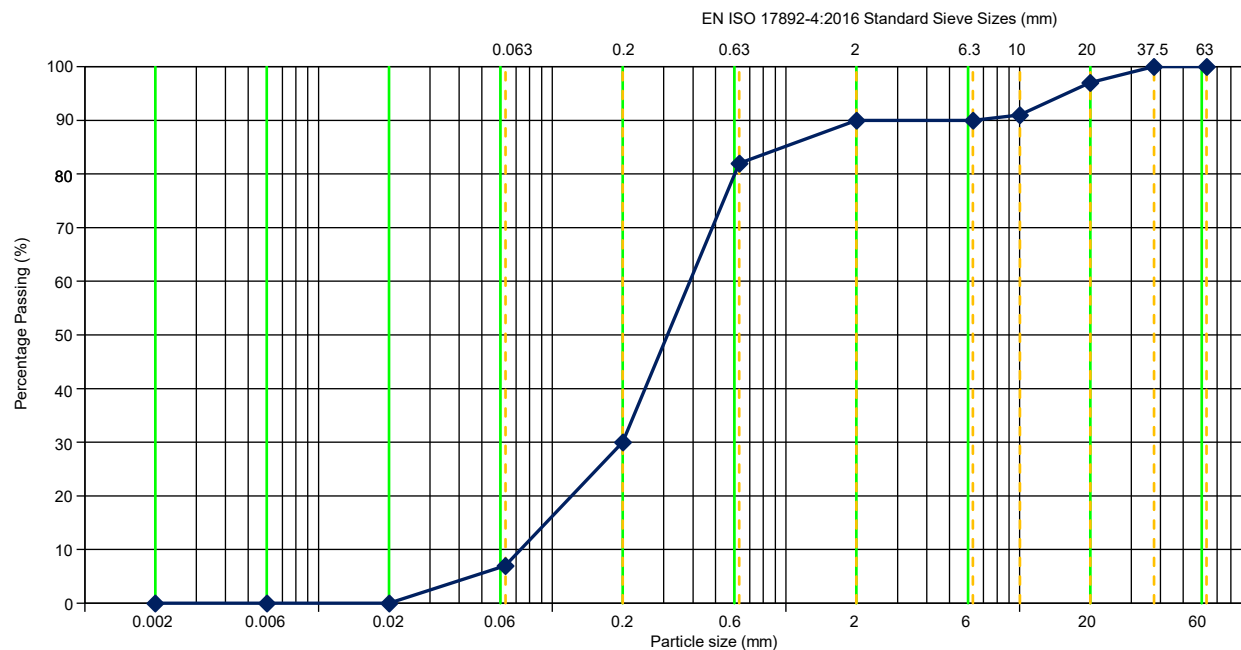
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-002	Comments Sample is a SAND, medium to coarse, sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	97	0.002	-
10	91		
6.3	90		
2	90		
0.63	82		
0.2	30		
0.063	7		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	10%
	Sand	83%
	Total Fines	7%
	Silt	7%
	Clay	0%

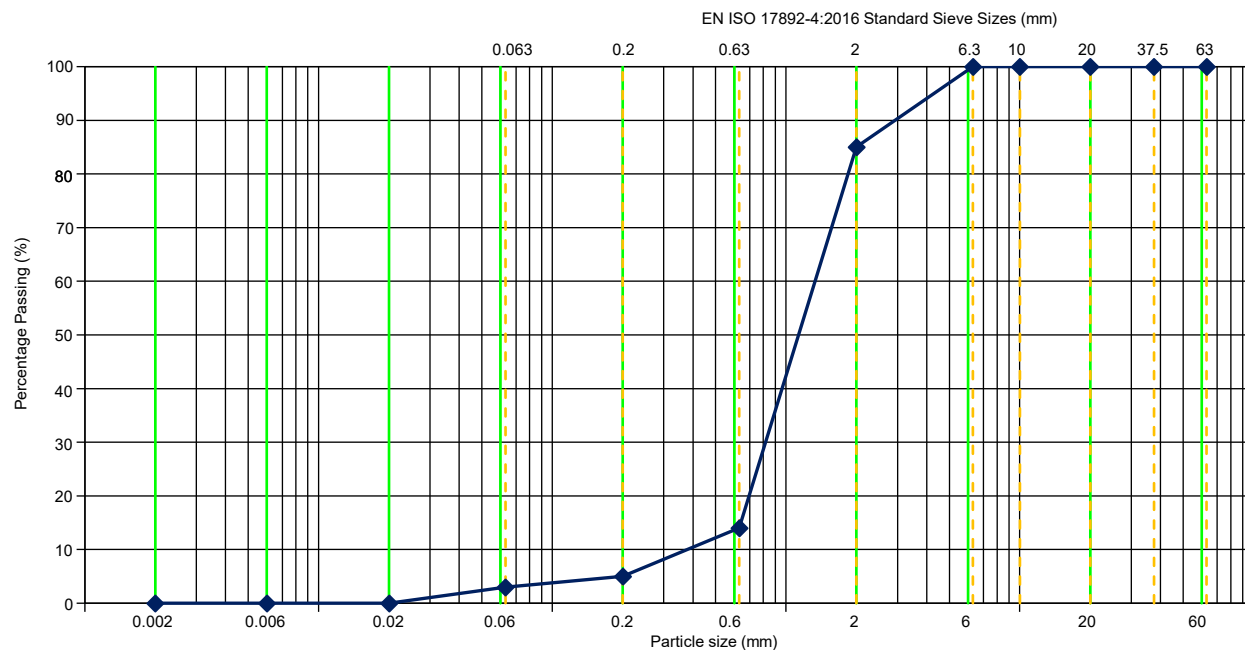
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	5.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-004	Comments Sample is a SAND, fine to medium, poorly sorted, silty, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	85		
0.63	14		
0.2	5		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	15%
	Sand	82%
	Total Fines	3%
	Silt	3%
	Clay	0%

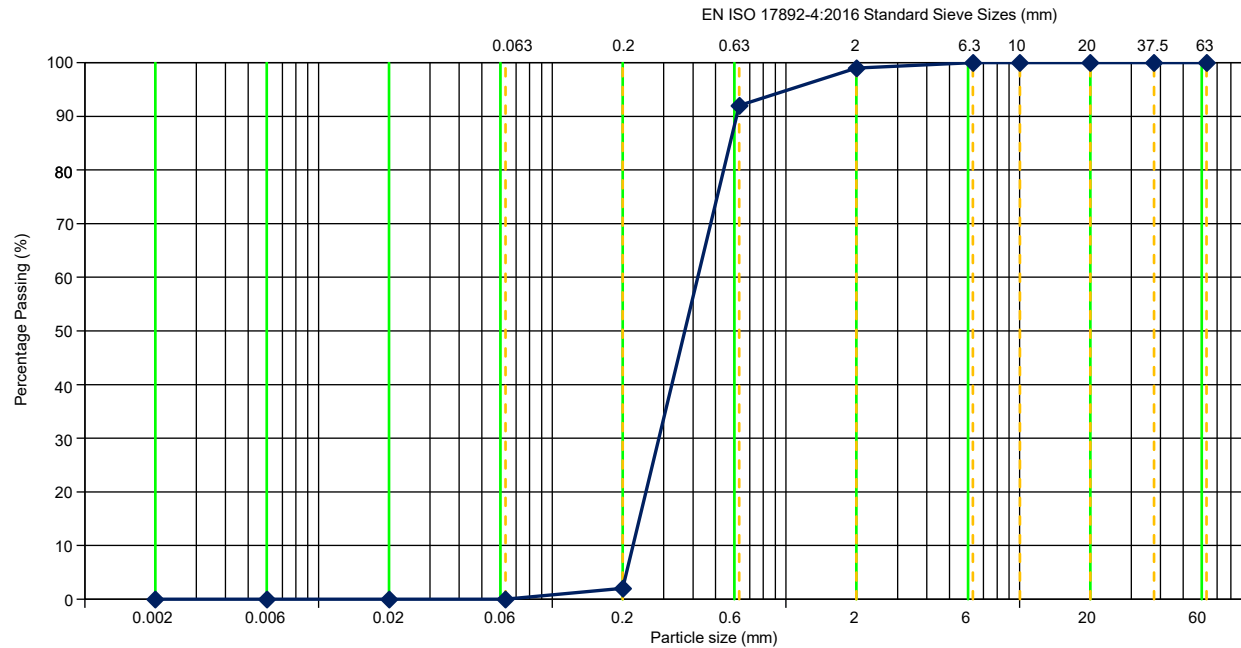
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-005	Comments Sample is a SAND, medium to coarse, sorted, slightly silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	92		
0.2	2		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	99%
	Silt	0%
	Clay	0%

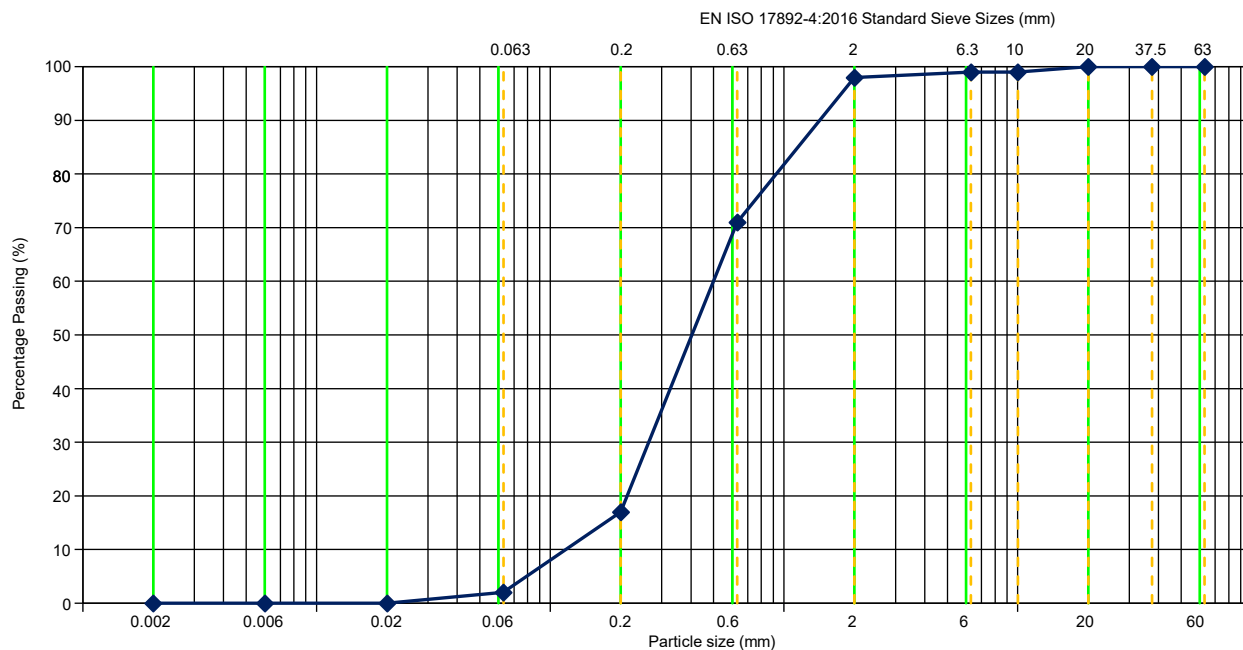
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-006	Comments Sample is a SAND, medium to coarse, well sorted, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	99		
6.3	99		
2	98		
0.63	71		
0.2	17		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	96%
	Total Fines	2%
	Silt	2%
	Clay	0%

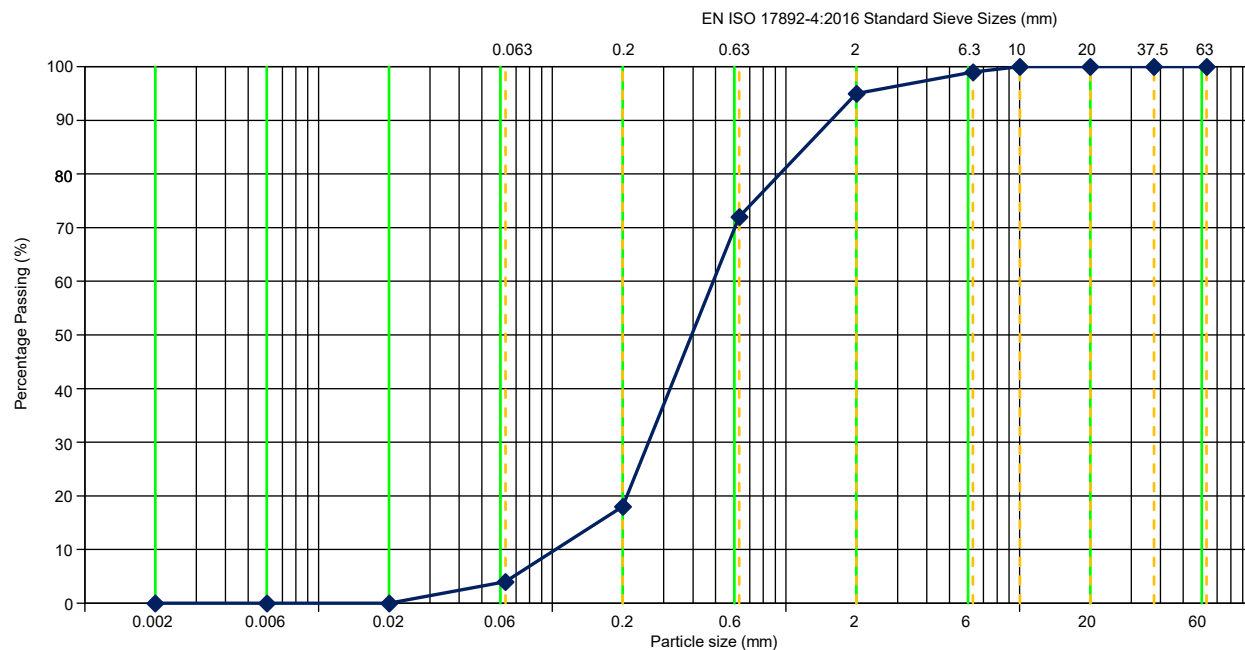
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-007	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	99		
2	95		
0.63	72		
0.2	18		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	5%
	Sand	91%
	Total Fines	4%
	Silt	4%
	Clay	0%

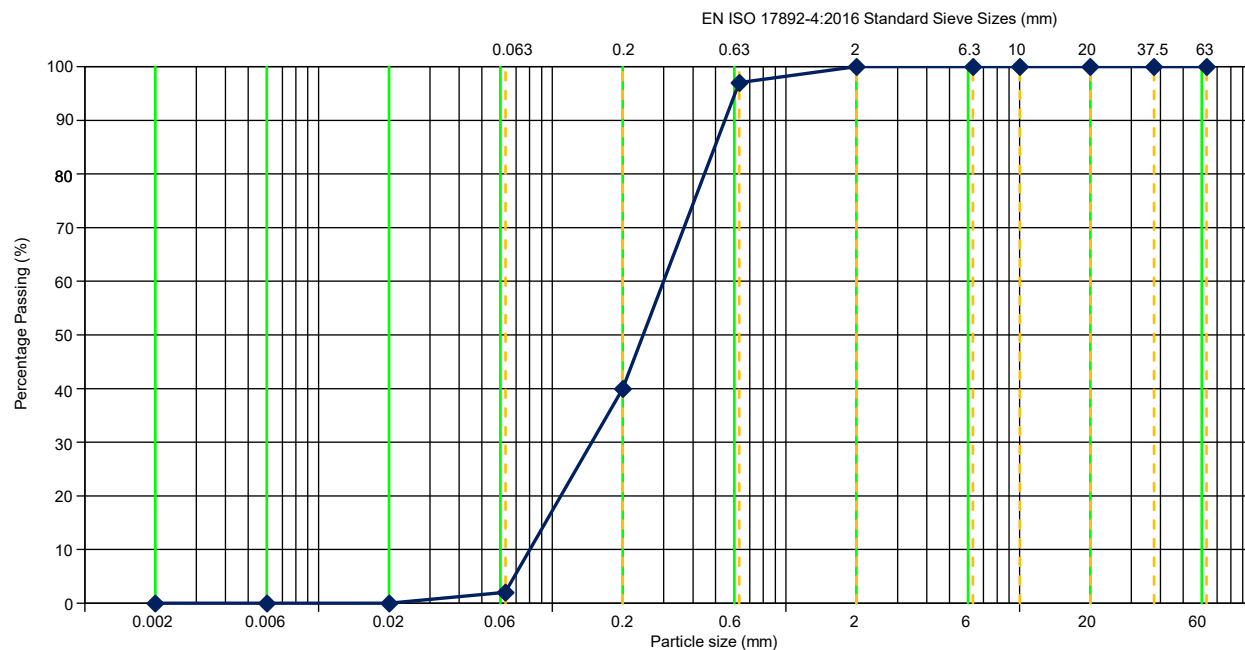
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-008	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	97		
0.2	40		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	98%
	Total Fines	2%
	Silt	2%
	Clay	0%

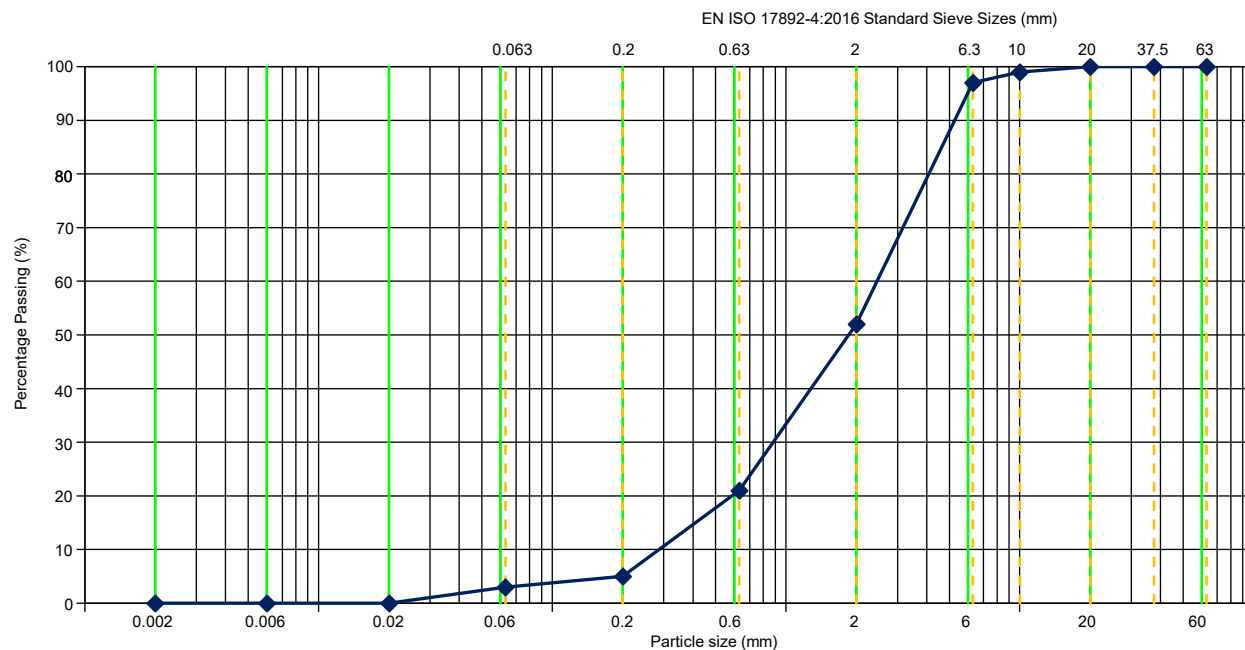
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-009	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	99		
6.3	97		
2	52		
0.63	21		
0.2	5		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	48%
	Sand	49%
	Total Fines	3%
	Silt	3%
	Clay	0%

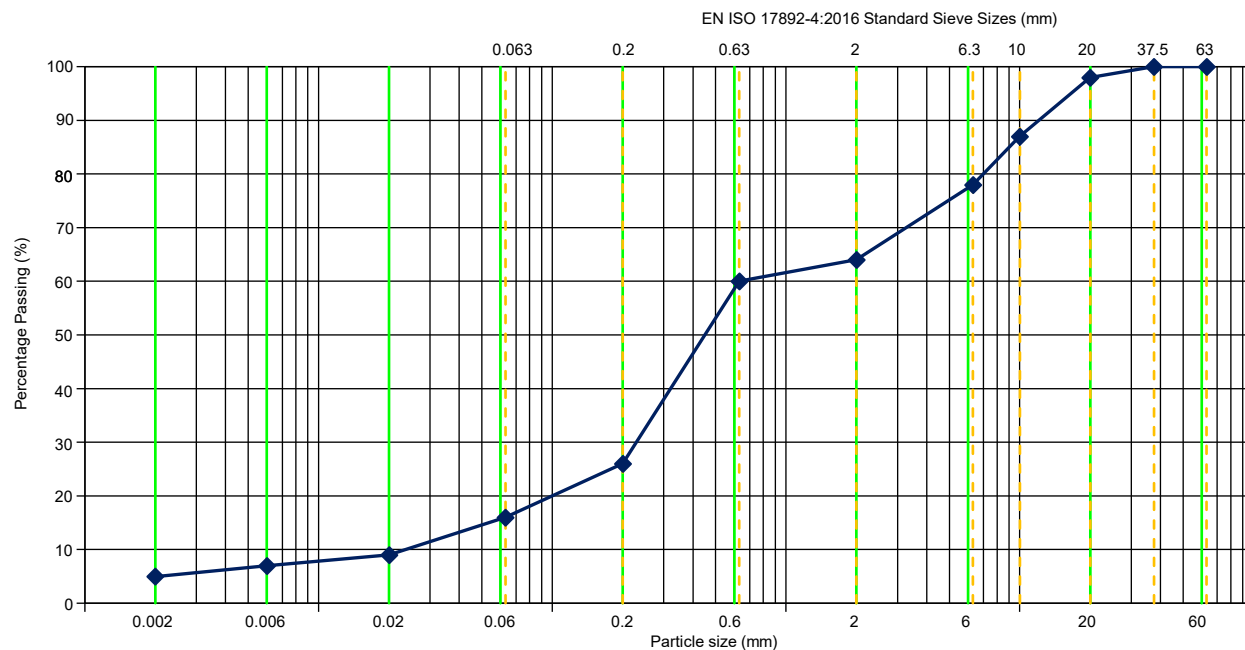
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	8.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-010	Comments Sample is a SAND, medium to coarse, unsorted, slightly silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	7
20	98	0.002	5
10	87		
6.3	78		
2	64		
0.63	60		
0.2	26		
0.063	16		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	36%
	Sand	48%
	Total Fines	16%
	Silt	11%
	Clay	5%

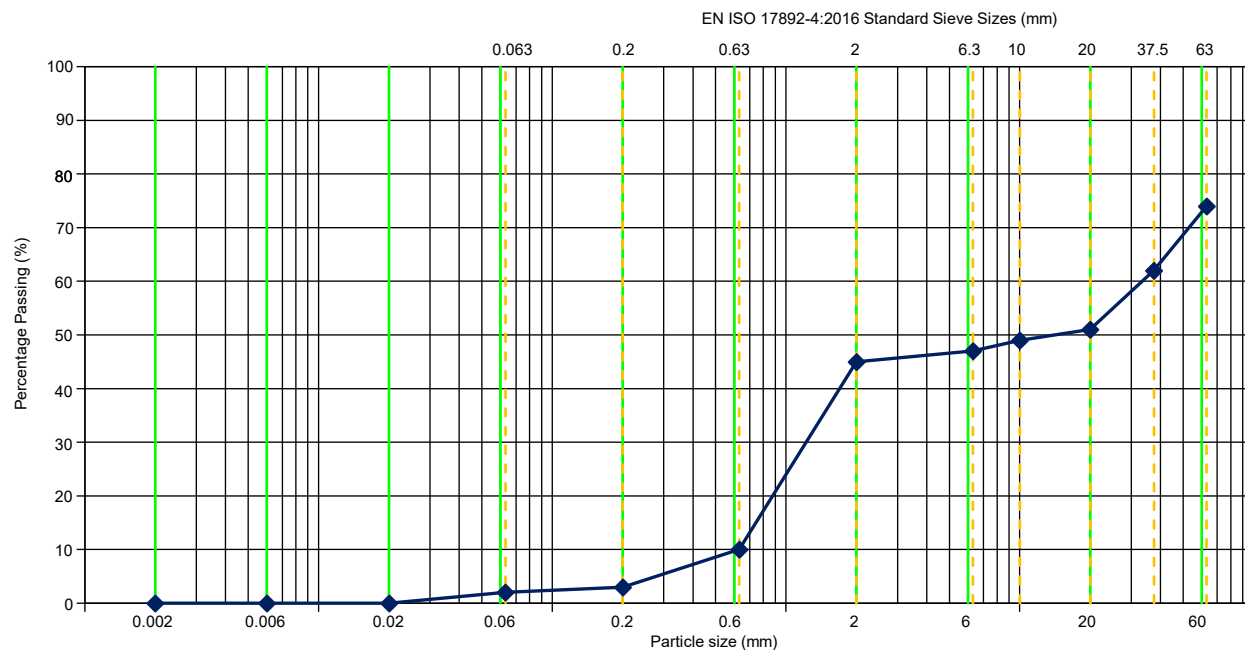
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	24.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	3.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-011	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, very silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	74	0.02	-
37.5	62	0.006	-
20	51	0.002	-
10	49		
6.3	47		
2	45		
0.63	10		
0.2	3		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	26%
	Gravel	29%
	Sand	43%
	Total Fines	2%
	Silt	2%
	Clay	0%

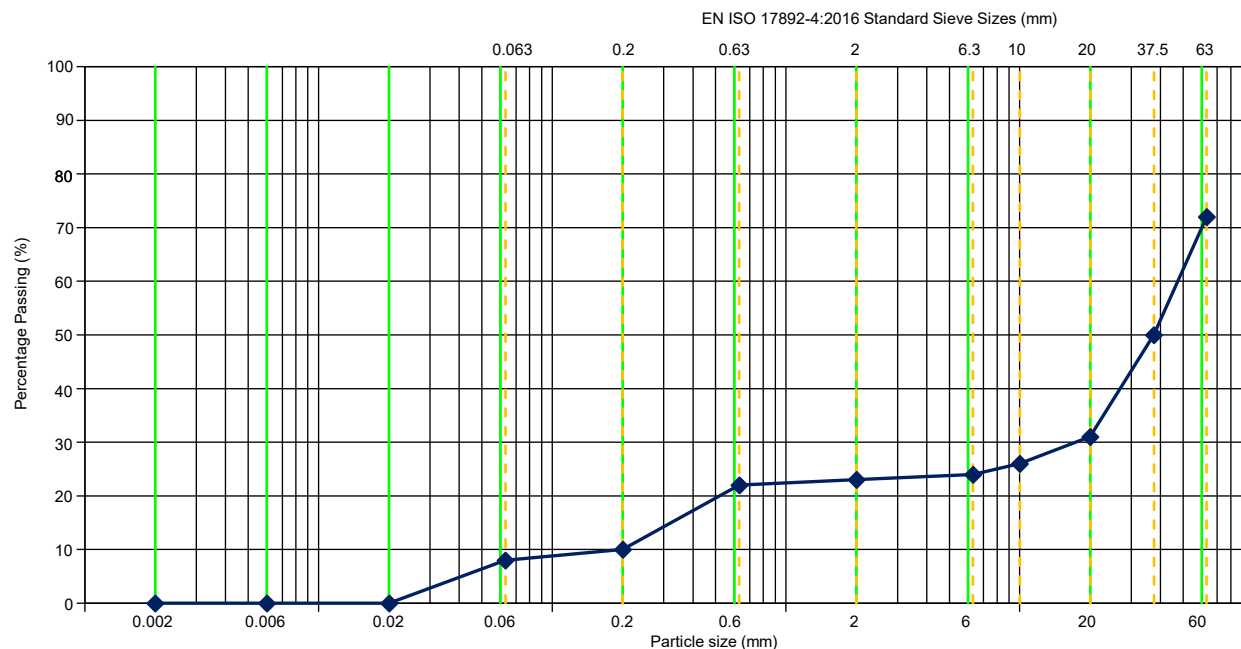
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	54.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-013	Comments Sample is a SAND, medium to coarse, unsorted, slightly silty, very gravelly with 1 no. cobble.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	72	0.02	-
37.5	50	0.006	-
20	31	0.002	-
10	26		
6.3	24		
2	23		
0.63	22		
0.2	10		
0.063	8		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	28%
	Gravel	49%
	Sand	15%
	Silt	8%
	Clay	0%

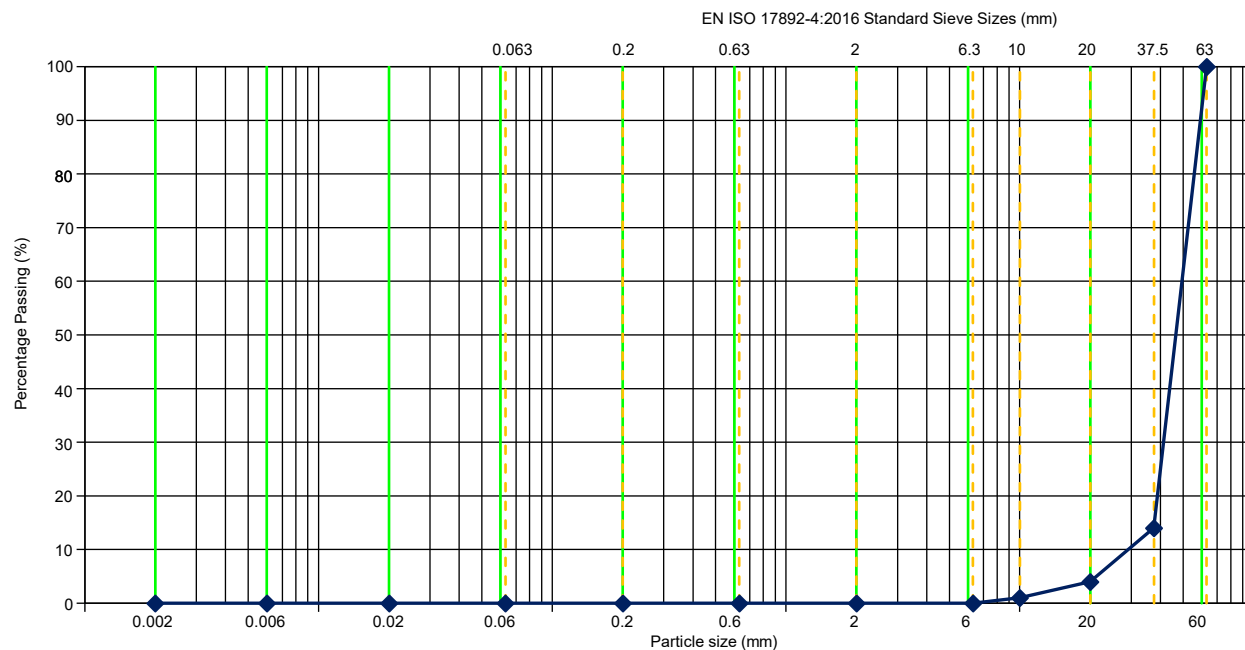
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	245.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	33.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-014	Comments Sample is a GRAVEL, fine to coarse, unsorted, silty, very sandy with 1 no. cobble.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	14	0.006	-
20	4	0.002	-
10	1		
6.3	0		
2	0		
0.63	0		
0.2	0		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	100%
	Sand	0%
	Total Fines	0%
	Silt	0%
	Clay	0%

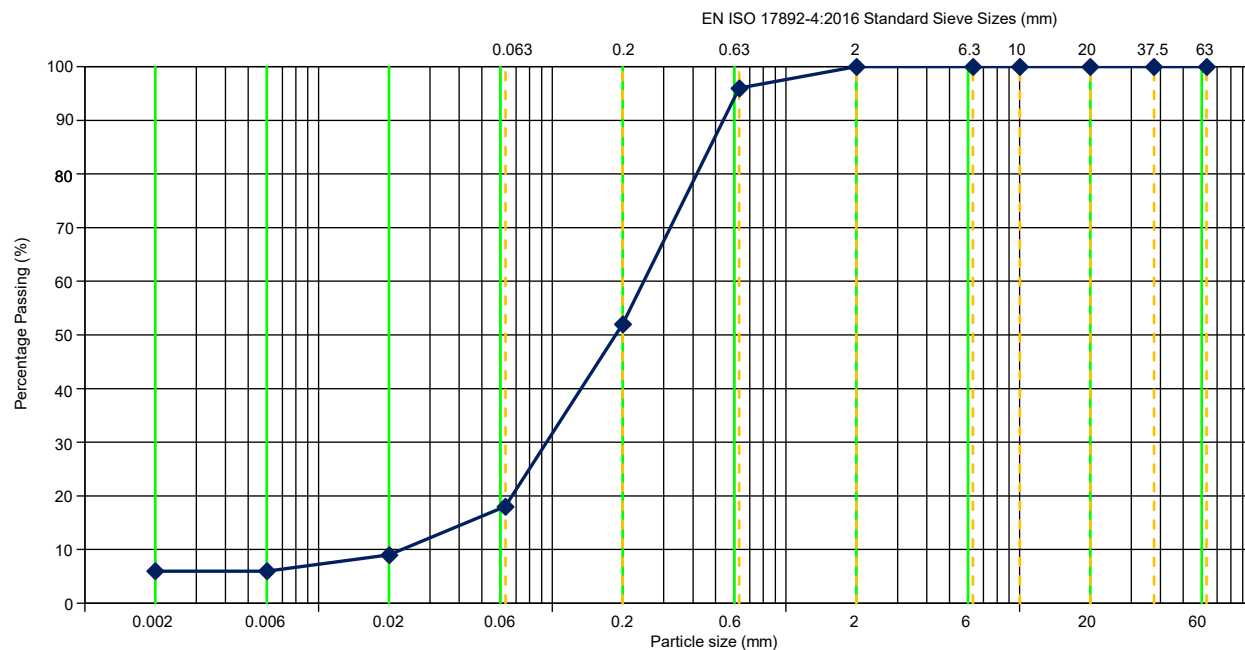
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu)	1.7
D60 / D10	
Coefficient of Curvature (Cc)	1.1
D30 ² / (D10 x D60)	

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-015	Comments Sample is a GRAVEL, medium to coarse, well sorted.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	6
20	100	0.002	6
10	100		
6.3	100		
2	100		
0.63	96		
0.2	52		
0.063	18		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	82%
	Total Fines	18%
	Silt	12%
	Clay	6%

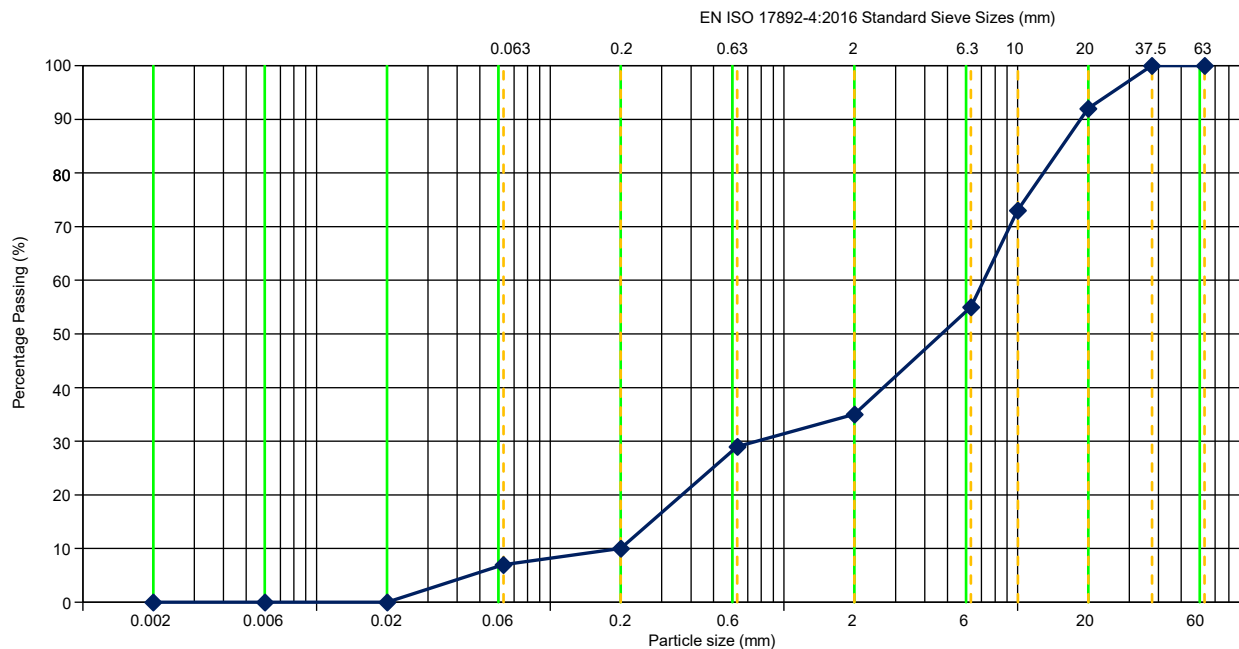
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	11.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-017	Comments Sample is a SAND, fine to medium, unsorted, clayey very silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	92	0.002	-
10	73		
6.3	55		
2	35		
0.63	29		
0.2	10		
0.063	7		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	65%
	Sand	28%
	Total Fines	7%
	Silt	7%
	Clay	0%

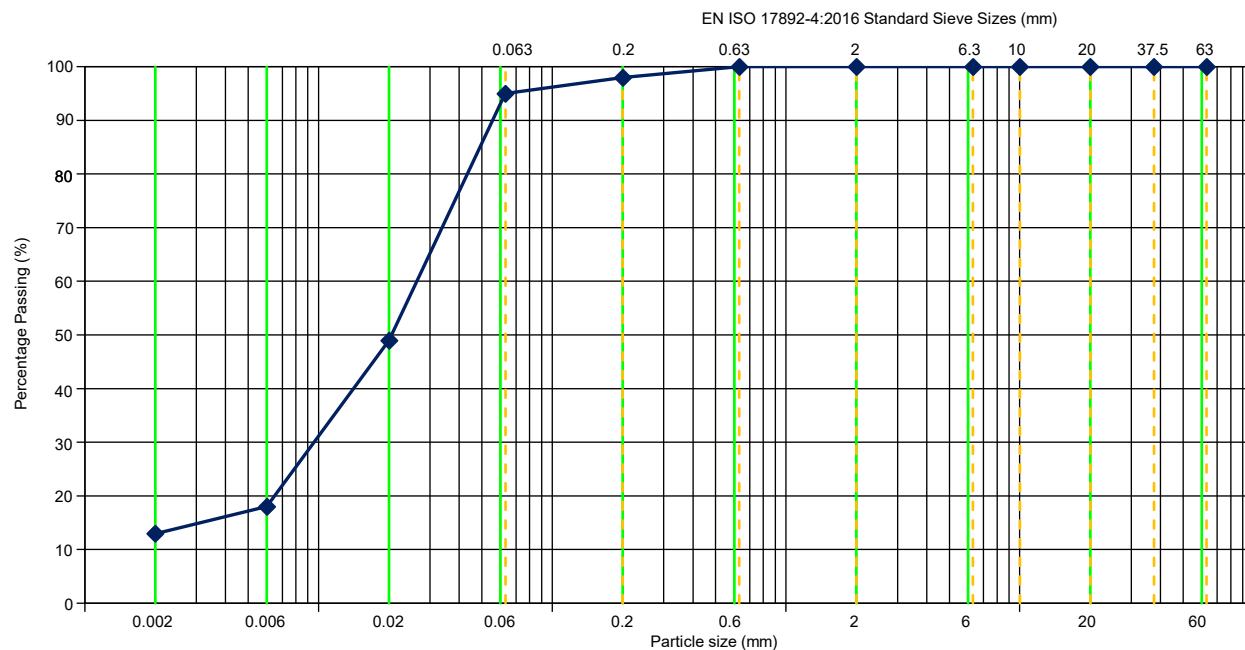
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	36.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.5

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-018	Comments Sample is a GRAVEL, fine to coarse, unsorted, silty, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	49
37.5	100	0.006	18
20	100	0.002	13
10	100		
6.3	100		
2	100		
0.63	100		
0.2	98		
0.063	95		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	5%
	Total Fines	95%
	Silt	82%
	Clay	13%

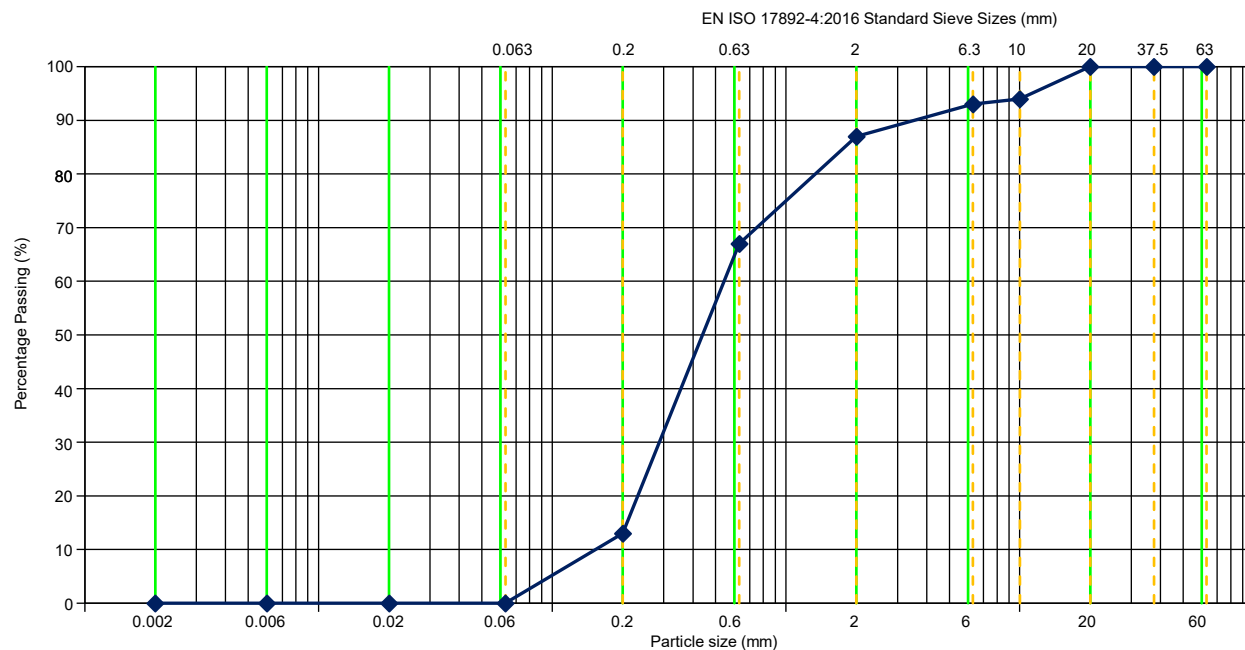
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	19.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-019	Comments Sample is a SILT, fine to coarse, unsorted, very clayey, slightly sandy.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	94		
6.3	93		
2	87		
0.63	67		
0.2	13		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	13%
	Sand	87%
	Total Fines	0%
	Silt	0%
	Clay	0%

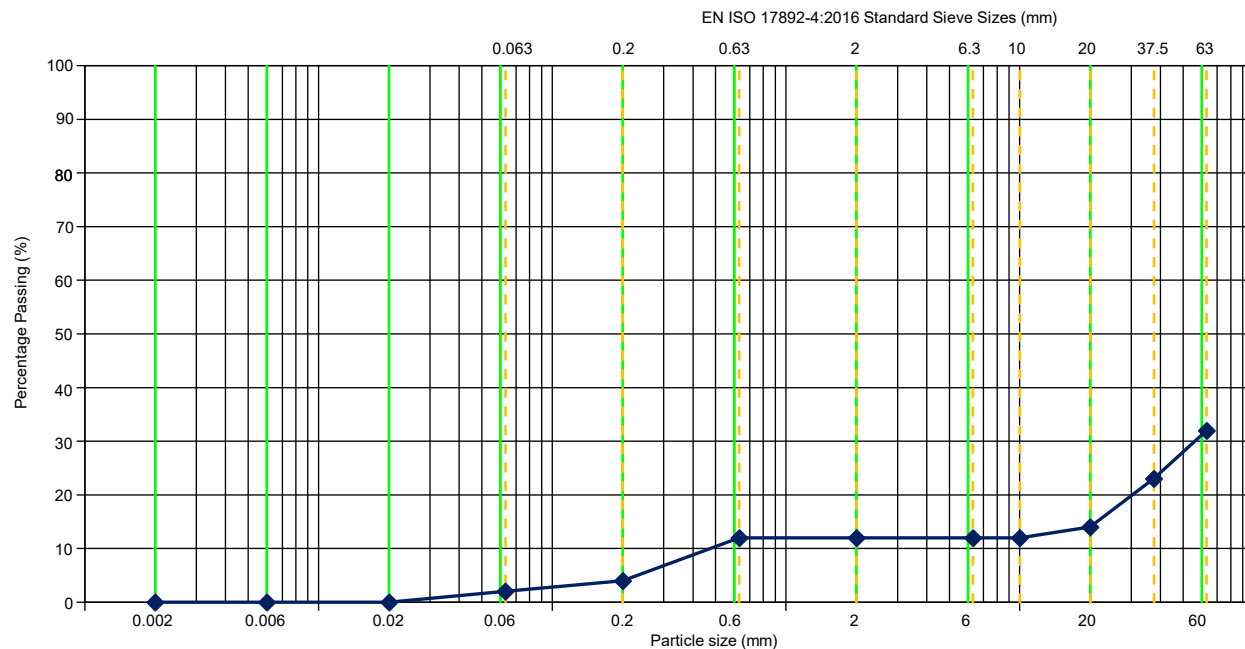
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-020	Comments Sample is a SAND, fine to coarse, sorted, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	32	0.02	-
37.5	23	0.006	-
20	14	0.002	-
10	12		
6.3	12		
2	12		
0.63	12		
0.2	4		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	68%
	Gravel	20%
	Sand	10%
	Total Fines	2%
	Silt	2%
	Clay	0%

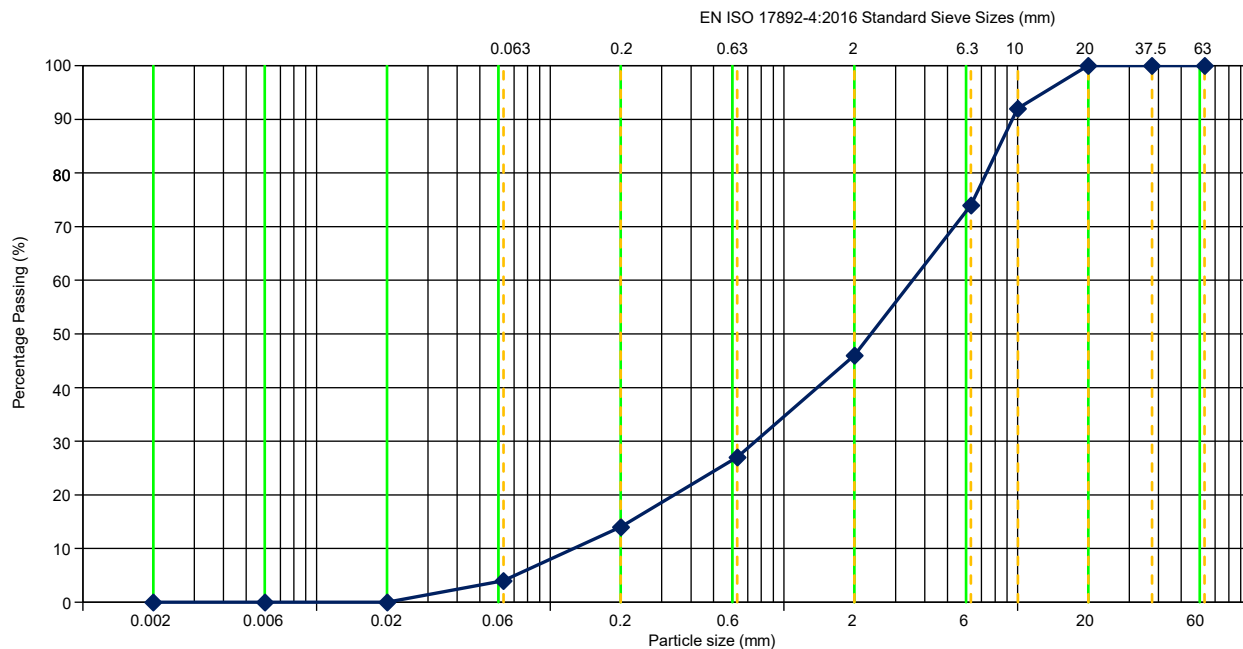
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	226.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	53.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-021	Comments Sample is a SAND, fine to medium, unsorted, slightly silty, very gravelly with 2 no. cobbles.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	92		
6.3	74		
2	46		
0.63	27		
0.2	14		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	54%
	Sand	42%
	Total Fines	4%
	Silt	4%
	Clay	0%

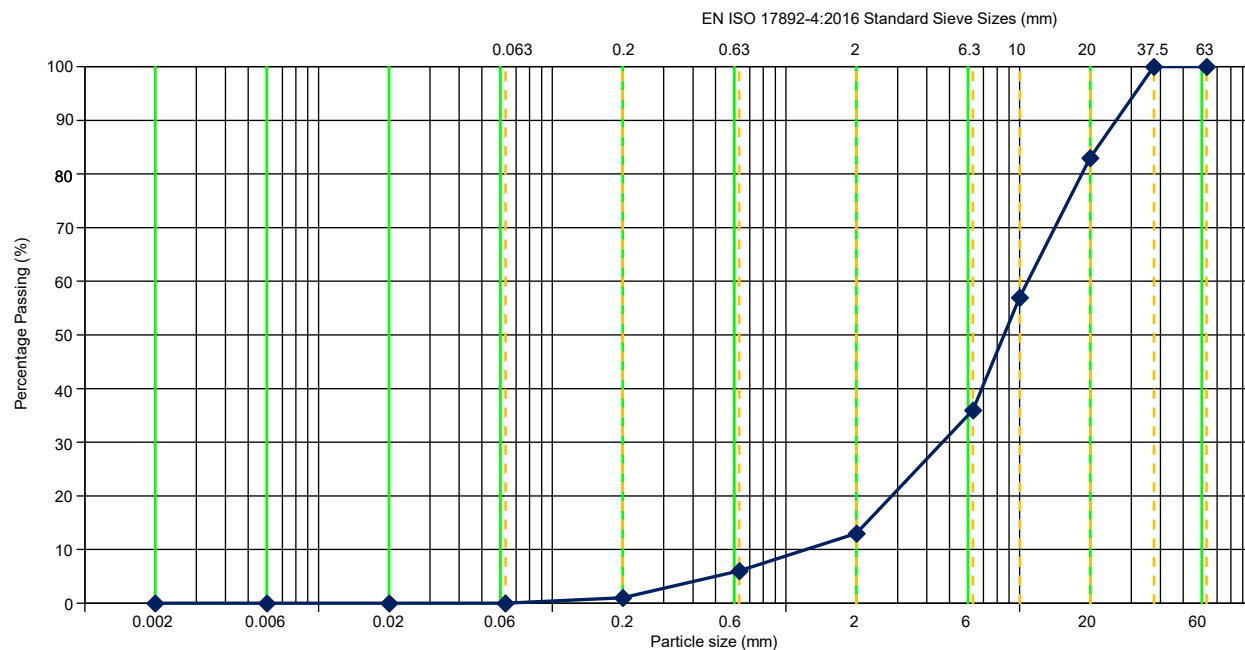
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	28.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-022	Comments Sample is a GRAVEL, fine to medium, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	83	0.002	-
10	57		
6.3	36		
2	13		
0.63	6		
0.2	1		
0.063	0		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	87%
	Sand	13%
	Total Fines	0%
	Silt	0%
	Clay	0%

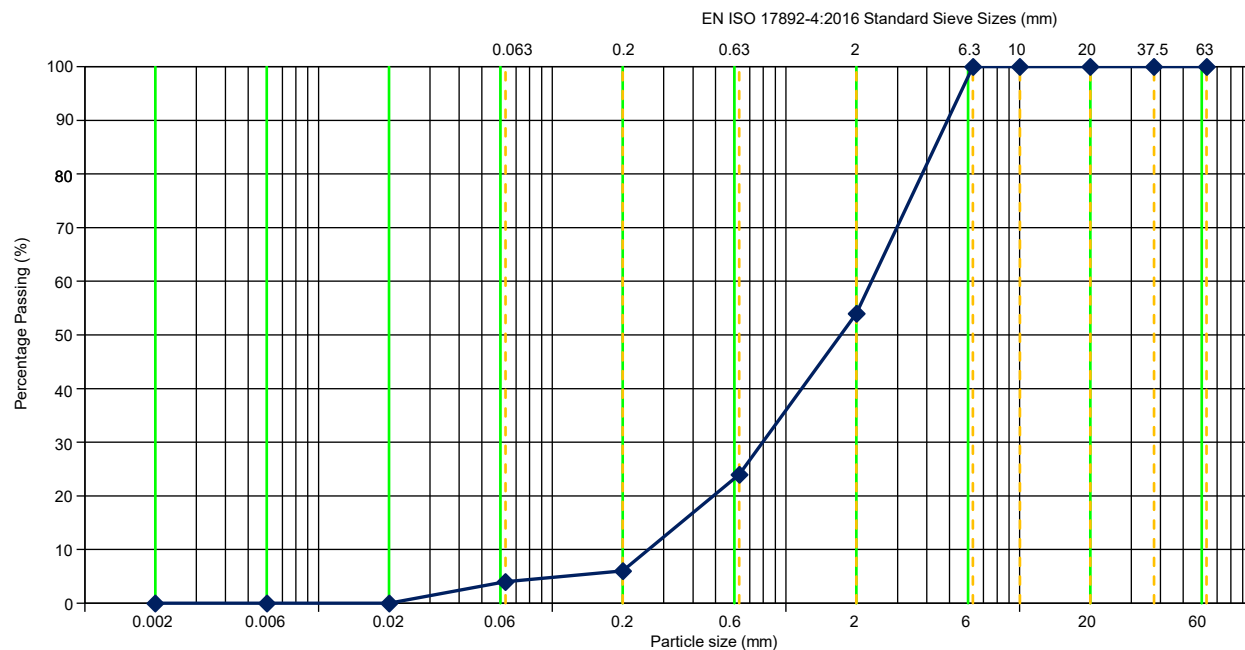
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	7.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B1-023	Comments Sample is a GRAVEL fine to coarse, unsorted, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	54		
0.63	24		
0.2	6		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	46%
	Sand	50%
	Total Fines	4%
	Silt	4%
	Clay	0%

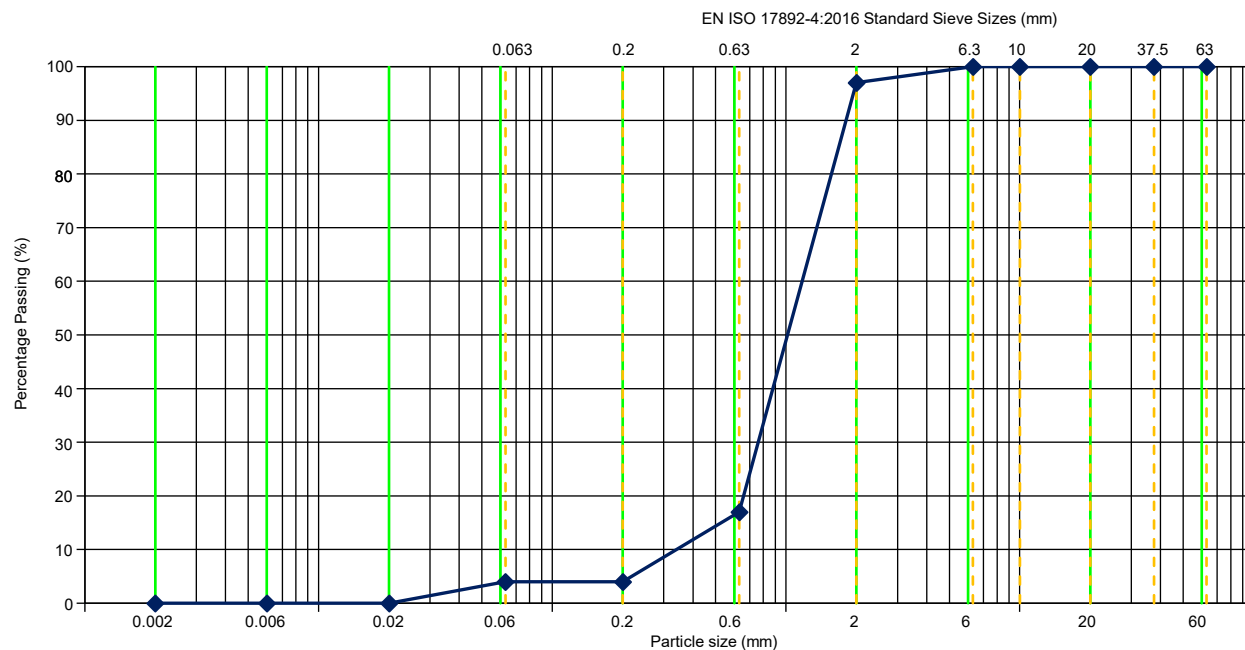
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	8.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-025	Comments Sample is a SAND, medium to coarse, unsorted, slightly silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	97		
0.63	17		
0.2	4		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	93%
	Silt	4%
	Clay	0%

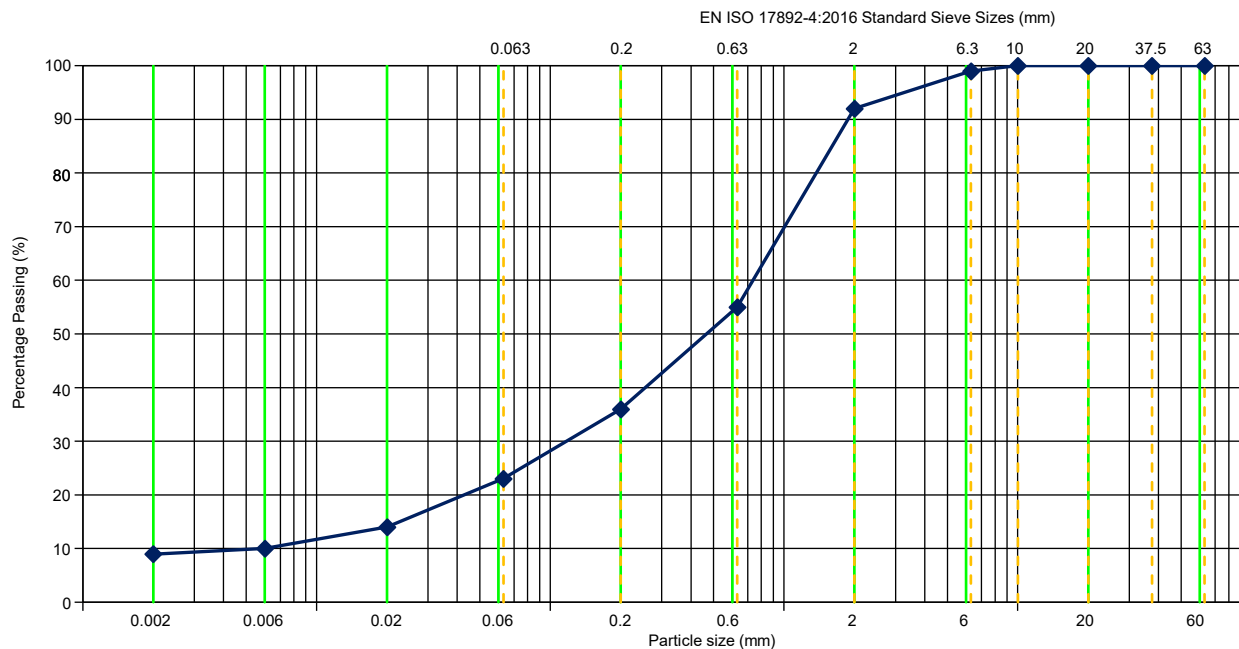
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-028	Comments Sample is a SAND, medium to coarse, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	14
37.5	100	0.006	10
20	100	0.002	9
10	100		
6.3	99		
2	92		
0.63	55		
0.2	36		
0.063	23		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	8%
	Sand	69%
	Total Fines	23%
	Silt	14%
	Clay	9%

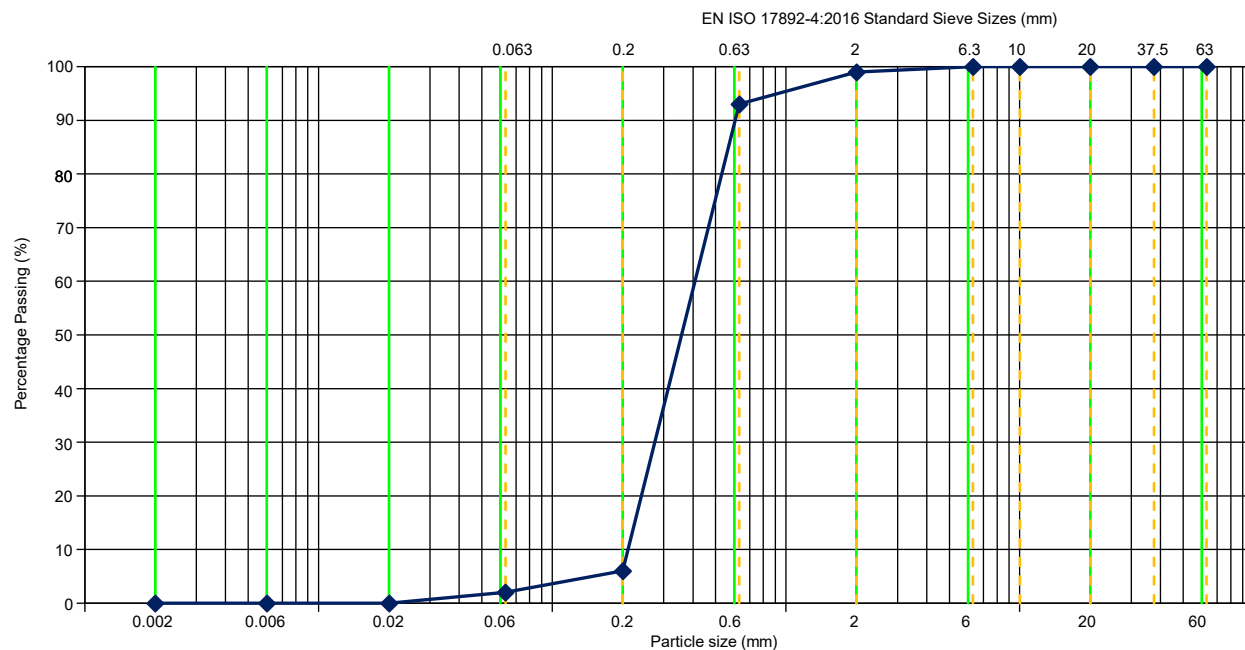
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	135.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	3.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-029	Comments Sample is a SAND, fine to coarse, unsorted, clayey, very silty, gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	93		
0.2	6		
0.063	2		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	97%
	Silt	2%
	Clay	0%

Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B1-032	Comments Sample is a SAND, medium, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Summary of Chemical Test Results - Block 1



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		Analyte	Organic Matter Content	Total Organic Carbon
		Top (m)	Base (m)			
				LOD	0.1	0.1
				Unit	% w/w	% w/w C
B1	783-GS-OWF-B1-006	0.00	0.20		<0.1	<0.1
B1	783-GS-OWF-B1-013	0.00	0.20		0.64	0.37
B1	783-GS-OWF-B1-014	0.00	0.20		1.00	0.58
B1	783-GS-OWF-B1-017	0.00	0.20		0.86	0.50
B1	783-GS-OWF-B1-018	0.00	0.20		0.78	0.45

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

CHEM - Block 1

GRAB SAMPLE RECORDS - BLOCK 2

DESCRIPTION	PAGES INCLUDED
BLOCK 2	
Summary of Grab Samples – Block 2	2
Plot of Grab Sample Material Types – Block 2	1
Grab Sample Logs	21
Summary of Particle Size Distribution Tests – Block 2	1
Particle Size Distribution Results	21
Summary of Chemical Test Results – Block 2	1

Summary of Grab Samples - Block 2

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B2	783-GS-OWF-B2-001	2021-08-16	Franklin	345054	6284962	39		
B2	783-GS-OWF-B2-005	2021-08-15	Franklin	347714	6277376	30		
B2	783-GS-OWF-B2-006	2021-08-13	Franklin	346400	6277161	30		
B2	783-GS-OWF-B2-007	2021-08-15	Franklin	347931	6275124	31		
B2	783-GS-OWF-B2-008	2021-08-13	Franklin	346631	6274766	32		
B2	783-GS-OWF-B2-009	2021-08-15	Franklin	348175	6272106	37		
B2	783-GS-OWF-B2-010	2021-08-16	Franklin	346438	6271287	42		
B2	783-GS-OWF-B2-011	2021-08-16	Franklin	346978	6270970	44		
B2	783-GS-OWF-B2-012	2021-08-15	Franklin	347410	6270908	43		
B2	783-GS-OWF-B2-013	2021-08-16	Franklin	348574	6270615	40		
B2	783-GS-OWF-B2-014	2021-08-16	Franklin	348599	6269862	39		
B2	783-GS-OWF-B2-015	2021-08-16	Franklin	349239	6267618	35		
B2	783-GS-OWF-B2-016	2021-08-15	Franklin	346973	6267120	37		
B2	783-GS-OWF-B2-017	2021-08-15	Franklin	349707	6264493	28		
B2	783-GS-OWF-B2-018	2021-08-15	Franklin	348183	6264270	28		
B2	783-GS-OWF-B2-019	2021-08-15	Franklin	349747	6262489	28		
B2	783-GS-OWF-B2-020	2021-08-16	Franklin	347937	6261763	29		
B2	783-GS-OWF-B2-021	2021-08-16	Franklin	349774	6257859	41		

Client **ENERGINET**

Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 2**

Summary of Grab Samples - Block 2

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B2	783-GS-OWF-B2-023	2021-08-16	Franklin	350321	6254675	40		
B2	783-GS-OWF-B2-024	2021-08-16	Franklin	349240	6253738	39		
B2	783-GS-OWF-B2-026	2021-08-16	Franklin	349047	6251387	40		

Client **ENERGINET**

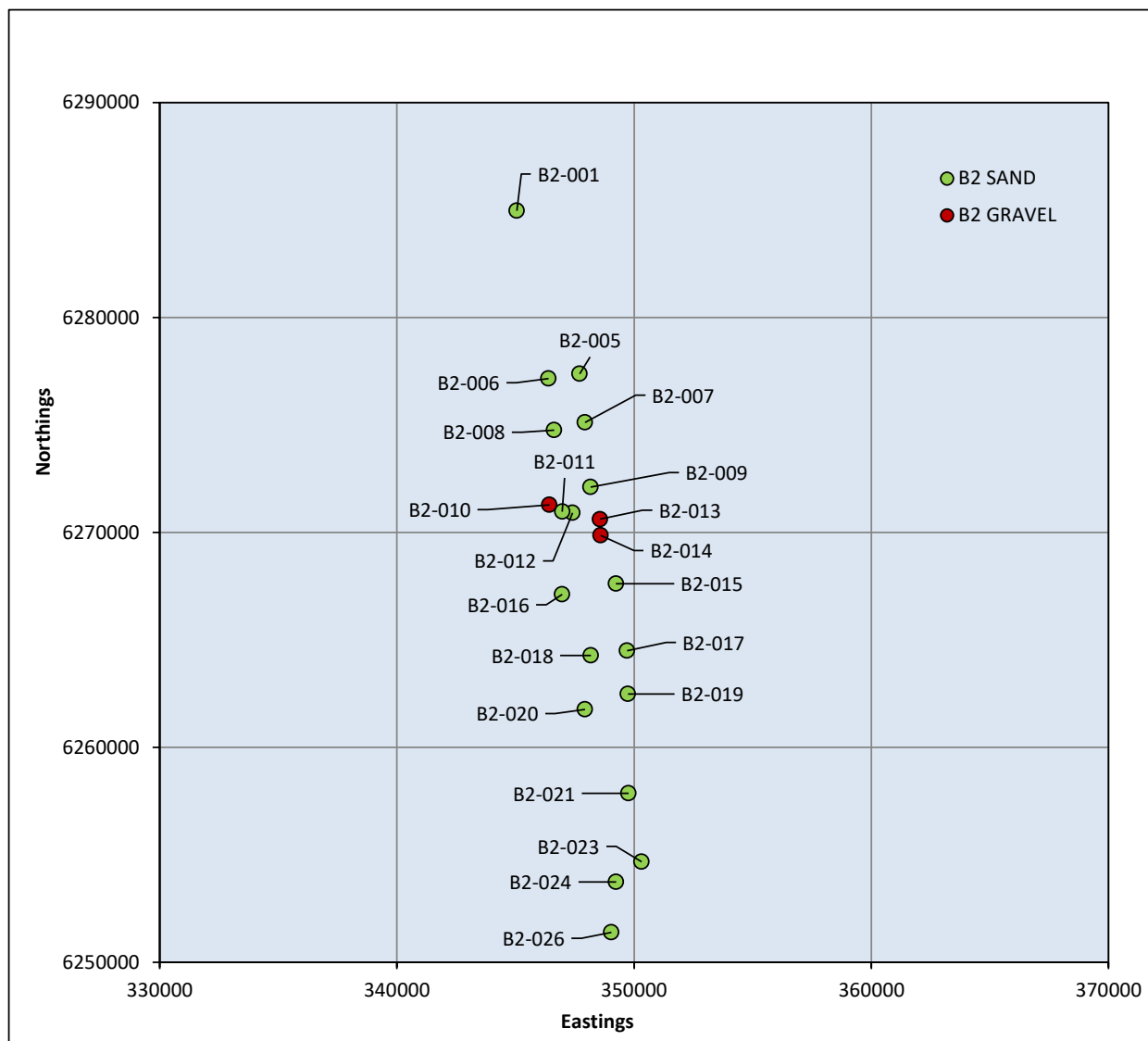
Project North Sea OWF and Energy Islands
 Project No. 103783
 Carried out for Energinet

Table
GS - Block 2

Plot of Grab Sample Material Types - Block 2



MMT Project No. 103783



Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

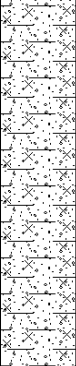
103783

Carried out for

Energinet

Figure

GEOL - Block 2

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, unsorted, clayey, silty, very gravelly, gravel is 50% subangular to subrounded fine to coarse of various lithologies and 50% subangular fine shell fragments, frequent fine to medium gravel size pockets of black sandy silt, dark greyish brown, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	27 %
Sand	58 %
Total fines	15 %
Silt	9 %
Clay	6 %

Chemical Tests

Total Organic Matter	1.59 %
Total Organic Carbon	0.92 %

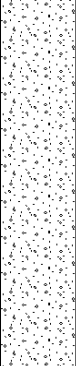
MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-001	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 345054 N 6284962		
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B2 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B2-001

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, rare fine gravel size pockets of dark grey silty fine sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	95 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B2-005	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 347714 N 6277376		
Client:	Energinet	Water Depth (m LAT):	30	Survey Route: B2	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B2-005	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly gravelly, gravel is 60% subangular to subrounded fine to medium of various lithologies and 40% subangular fine to medium shell fragments, occasional medium gravel size pockets of dark grey fine sand, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 4 %
 Sand 96 %
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	13/08/2021	GS Location:	783-GS-OWF-B2-006	Comments:
Vessel:	Franklin	Location Coordinates:	E 346400 N 6277161			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	30	Survey Route: B2	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B2-006

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, gravelly, gravel is 100% subangular fine to medium shell fragments, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	8 %
Sand	88 %
Total fines	4 %
Silt	4 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B2-007	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 347931 N 6275124		
Client:	Energinet	Water Depth (m LAT):	31	Survey Route: B2	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B2-007	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	97 %
Total fines	1 %
Silt	1 %
Clay	

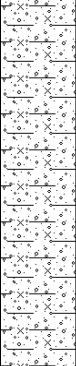
MMT Project ID:	103783	Location Test Date:	13/08/2021	GS Location:	783-GS-OWF-B2-008	Comments:
Vessel:	Franklin	Location Coordinates:	E 346631 N 6274766			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	32	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-008

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular to subrounded fine shell fragments, rare fine to medium gravel sized pockets of black silty fine sand, 3 no. extremely thin worms up to 50mm in length, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	96 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B2-009	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 348175 N 6272106		
Client:	Energinet	Water Depth (m LAT):	37	Survey Route: B2	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B2-009	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 95% subangular to subrounded fine to coarse of various lithologies and 5% subangular fine to medium shell fragments, clayey, very silty, very sandy, sand is fine to coarse, 2 no. subrounded cobbles, medium gravel size pockets of dark greyish black organic clayey silt, dark brownish grey, slightly calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	40 %	+ 14 % cobbles
Sand	27 %	
Total fines	19 %	
Silt	12 %	
Clay	7 %	

Chemical Tests

Total Organic Matter	1.24 %
Total Organic Carbon	0.72 %

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-010	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 346438 N 6271287		
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B2 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B2-010

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, silty, slightly gravelly, gravel is 90% subrounded fine of various lithologies and 10% subangular fine shell fragments, frequent fine to medium gravel size pockets of black silt, dark greyish black and brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

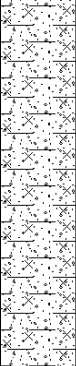
Laboratory Test Results:
Particle Size Distribution

Gravel 4 %
 Sand 90 %
 Total fines 6 %
 Silt 6 %
 Clay

Chemical Tests

Total Organic Matter 1.95 %
 Total Organic Carbon 1.13 %

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-011	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 346978 N 6270970				
Client:	Energinet	Water Depth (m LAT):	44	Survey Route: B2	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B2-011	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly, gravel is 100% subrounded fine to medium shell fragments and intact shells, frequent fine to medium gravel size pockets of black silt, dark grey, slight organic odour, slightly calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	65 %
Total fines	33 %
Silt	25 %
Clay	8 %

Chemical Tests

Total Organic Matter	1.40 %
Total Organic Carbon	0.81 %

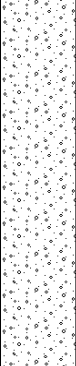
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B2-012	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 347410 N 6270908		
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B2 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B2-012

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to medium, unsorted, 95% subangular to subrounded fine to medium of various lithologies and 5% subangular fine shell fragments, slightly silty, very sandy, sand is medium to coarse, dark orangish grey brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	56 %
Sand	41 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-013	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 348574 N 6270615		
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B2	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B2-013	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, medium to coarse, unsorted, 95% subangular to subrounded fine to coarse of sandstone, quartzite, gneiss and other lithologies, 5% subangular fine to medium shell fragments, sandy, sand is fine to coarse, 5 no. subrounded cobbles with encrusting marine organisms, fine to medium gravel size pockets of dark greyish black fine to medium organic fine sand, greyish brown to brown, slightly calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 38 % + 53 % cobbles
 Sand 9 %
 Total fines
 Silt
 Clay

Chemical Tests

Total Organic Matter 0.93 %
 Total Organic Carbon 0.54 %

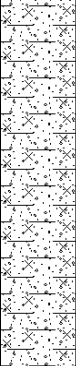
MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-014		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 348599 N 6269862				
Client:	Energinet	Water Depth (m LAT):	39	Survey Route:	B2	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
						783-GS-OWF-B2-014	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, rare fine gravel sized pockets of dark grey sandy silt, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	95 %
Total fines	4 %
Silt	4 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-015	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 349239 N 6267618			
Client:	Energinet	Water Depth (m LAT):	35	Survey Route: B2	Route KP:	
				GS Log Status:	FINAL	Checked By: RC
				783-GS-OWF-B2-015		

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, very silty, slightly gravelly, gravel is 100% subangular fine gravel size shell fragments, frequent medium to coarse gravel size subrounded pockets of brown thinly laminated clay, greyish brown, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	3 %
Sand	74 %
Total fines	23 %
Silt	19 %
Clay	4 %

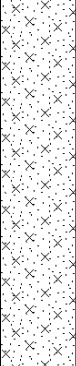
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B2-016	Comments:		
Vessel:	Franklin	Location Coordinates:	E 346973 N 6267120			Equipment: Van der Veen grab sampler		
Client:	Energinet	Water Depth (m LAT):	37	Survey Route:	B2	Route KP:		
				GS Log Status:	FINAL	Checked By:	RC	783-GS-OWF-B2-016

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, gravelly, gravel is 95% subangular to rounded fine of various lithologies and 5% subrounded fine to medium shell fragments, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	7 %
Sand	91 %
Total fines	2 %
Silt	2 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B2-017	Comments:
Vessel:	Franklin	Location Coordinates:	E 349707 N 6264493			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	28	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-017

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel

Sand 95 %

Total fines 5 %

Silt 5 %

Clay

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B2-018	Comments:
Vessel:	Franklin	Location Coordinates:	E 348183 N 6264270			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	28	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-018

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 80% subrounded fine of various lithologies and 20% subangular fine shell fragments, occasional fine to medium gravel size pockets of dark grey silty sand, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	97 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B2-019	Comments:
Vessel:	Franklin	Location Coordinates:	E 349747 N 6262489			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	28	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-019

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, unsorted, slightly silty, very gravelly, gravel is 70% subangular to subrounded fine shell fragments and 30% subangular to subrounded fine to medium of sandstone, frequent fine gravel size pockets of dark grey fine sand with strong organic odour, light yellowish brown, non-calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

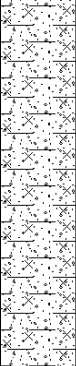
Laboratory Test Results:
Particle Size Distribution

Gravel 21 %
 Sand 76 %
 Total fines 3 %
 Silt 3 %
 Clay

Chemical Tests

Total Organic Matter 0.41 %
 Total Organic Carbon 0.24 %

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B2-020	Comments:
Vessel:	Franklin	Location Coordinates:	E 347937 N 6261763			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	29	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-020

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, silty, slightly gravelly, gravel is 100% subangular fine shell fragments, 1 no. intact echinoderm and 1 no. articulated mussel, frequent medium to coarse gravel size pockets of dark grey silty fine sand, dark brownish grey, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	85 %
Total fines	14 %
Silt	9 %
Clay	5 %

Chemical Tests

Total Organic Matter	0.10 %
Total Organic Carbon	0.10 %

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B2-021	Comments:
Vessel:	Franklin	Location Coordinates:	E 349774 N 6257859			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-021

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, rare fine to medium gravel size pockets of black silty fine sand, dark yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 1 %
 Sand 95 %
 Total fines 4 %
 Silt 4 %
 Clay

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B2-023	Comments:
Vessel:	Franklin	Location Coordinates:	E 350321 N 6254675			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-023

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional medium gravel size pockets of dark grey silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	95 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B2-024	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 349240 N 6253738		
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B2	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B2-024	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subrounded fine shell fragments and intact shells, occasional fine to medium gravel size pockets of dark grey silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 3 %
 Sand 93 %
 Total fines 4 %
 Silt 4 %
 Clay

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B2-026	Comments:
Vessel:	Franklin	Location Coordinates:	E 349047 N 6251387			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B2	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B2-026

Summary of Particle Size Distribution Tests - Block 2



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		PSD		Sediment Fraction (%)					
		Top (m)	Base (m)	Sieve	Sed.	Clay	Silt	Total Fines	Sand	Gravel	Cobbles
B2	783-GS-OWF-B2-001	0.00	0.20	Yes	Yes	6	9	15	58	27	
B2	783-GS-OWF-B2-005	0.00	0.20	Yes	No		3	3	95	2	
B2	783-GS-OWF-B2-006	0.00	0.20	Yes	No				96	4	
B2	783-GS-OWF-B2-007	0.00	0.20	Yes	No		4	4	88	8	
B2	783-GS-OWF-B2-008	0.00	0.20	Yes	No		1	1	97	2	
B2	783-GS-OWF-B2-009	0.00	0.20	Yes	No		3	3	96	1	
B2	783-GS-OWF-B2-010	0.00	0.20	Yes	Yes	7	12	19	27	40	14
B2	783-GS-OWF-B2-011	0.00	0.20	Yes	No		6	6	90	4	
B2	783-GS-OWF-B2-012	0.00	0.20	Yes	Yes	8	25	33	65	2	
B2	783-GS-OWF-B2-013	0.00	0.20	Yes	No		3	3	41	56	
B2	783-GS-OWF-B2-014	0.00	0.20	Yes	No				9	38	53
B2	783-GS-OWF-B2-015	0.00	0.20	Yes	No		4	4	95	1	
B2	783-GS-OWF-B2-016	0.00	0.20	Yes	Yes	4	19	23	74	3	
B2	783-GS-OWF-B2-017	0.00	0.20	Yes	No		2	2	91	7	
B2	783-GS-OWF-B2-018	0.00	0.20	Yes	Yes		5	5	95		
B2	783-GS-OWF-B2-019	0.00	0.20	Yes	No		1	1	97	2	
B2	783-GS-OWF-B2-020	0.00	0.20	Yes	No		3	3	76	21	
B2	783-GS-OWF-B2-021	0.00	0.20	Yes	Yes	5	9	14	85	1	
B2	783-GS-OWF-B2-023	0.00	0.20	Yes	No		4	4	95	1	
B2	783-GS-OWF-B2-024	0.00	0.20	Yes	No		3	3	95	2	
B2	783-GS-OWF-B2-026	0.00	0.20	Yes	No		4	4	93	3	

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

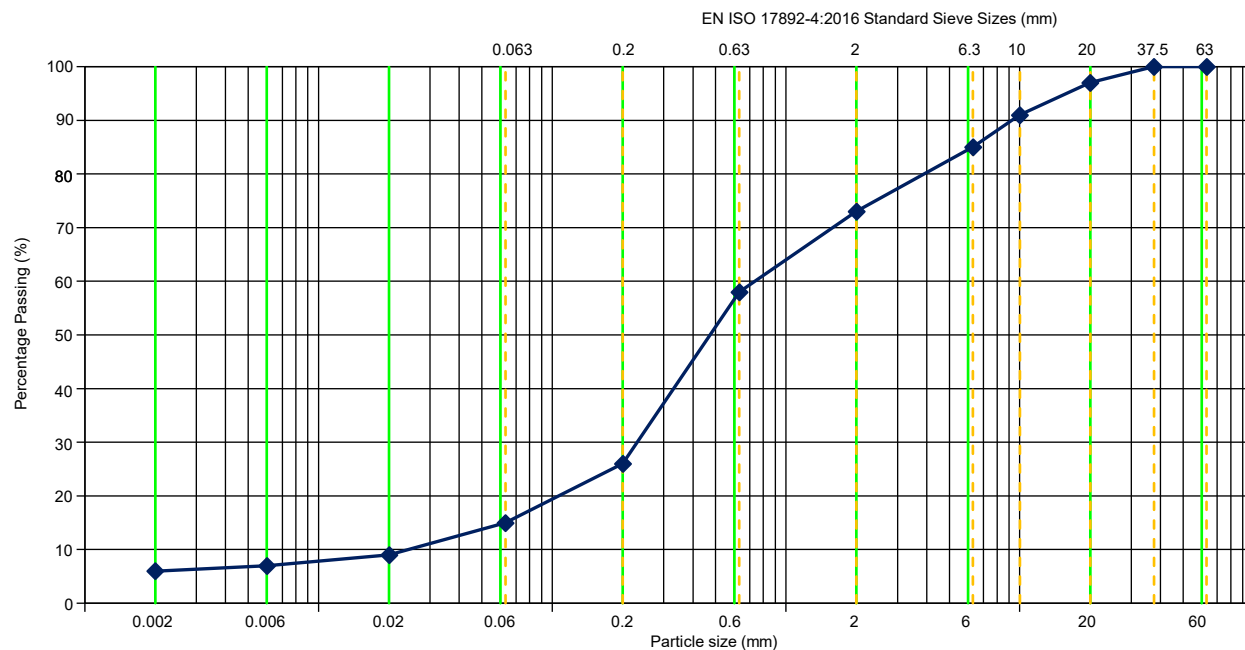
Carried out for

Energinet

Table

PSD - Block 2

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	7
20	97	0.002	6
10	91		
6.3	85		
2	73		
0.63	58		
0.2	26		
0.063	15		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	27%
	Sand	58%
	Total Fines	15%
	Silt	9%
	Clay	6%

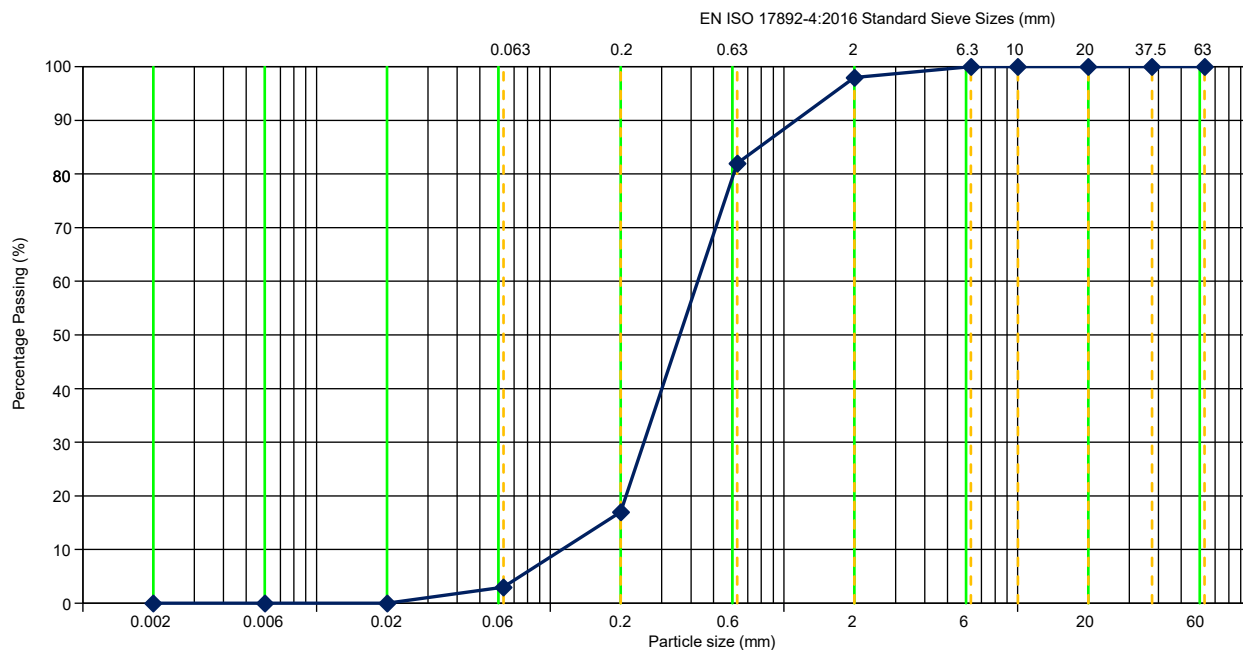
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	29.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-001	Comments Sample is a SAND, fine to coarse, unsorted, clayey, silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	82		
0.2	17		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	95%
	Total Fines	3%
	Silt	3%
	Clay	0%

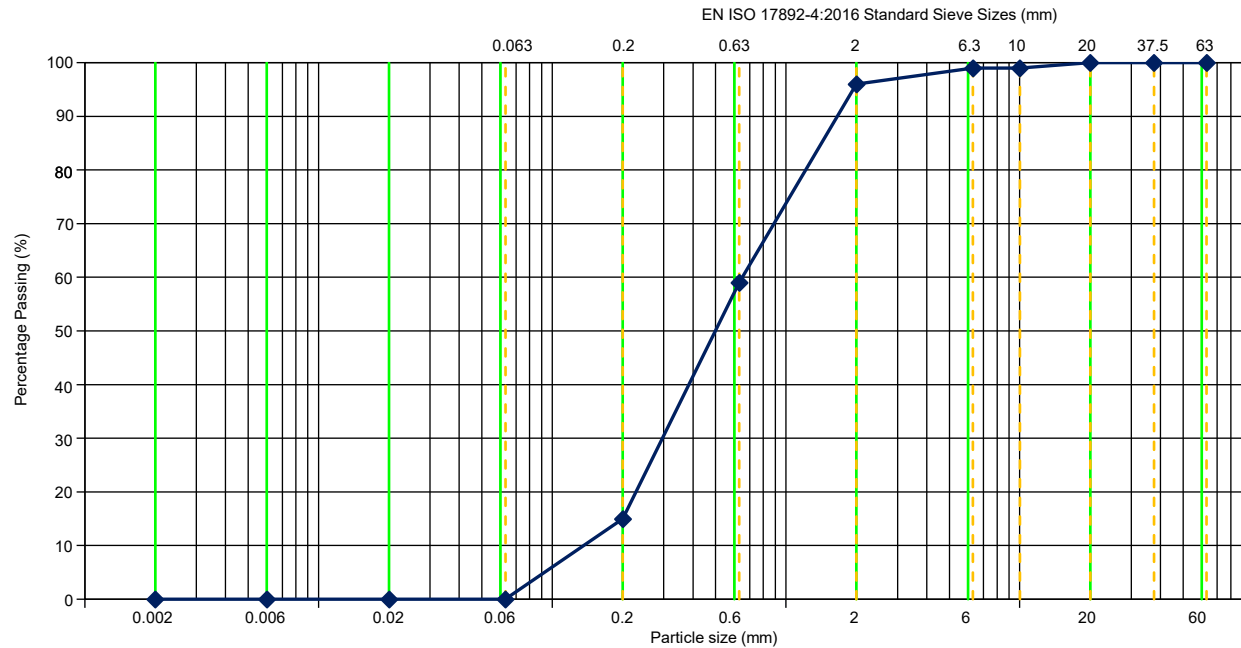
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-005	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	99		
6.3	99		
2	96		
0.63	59		
0.2	15		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	4%
	Sand	96%
	Silt	0%
	Clay	0%

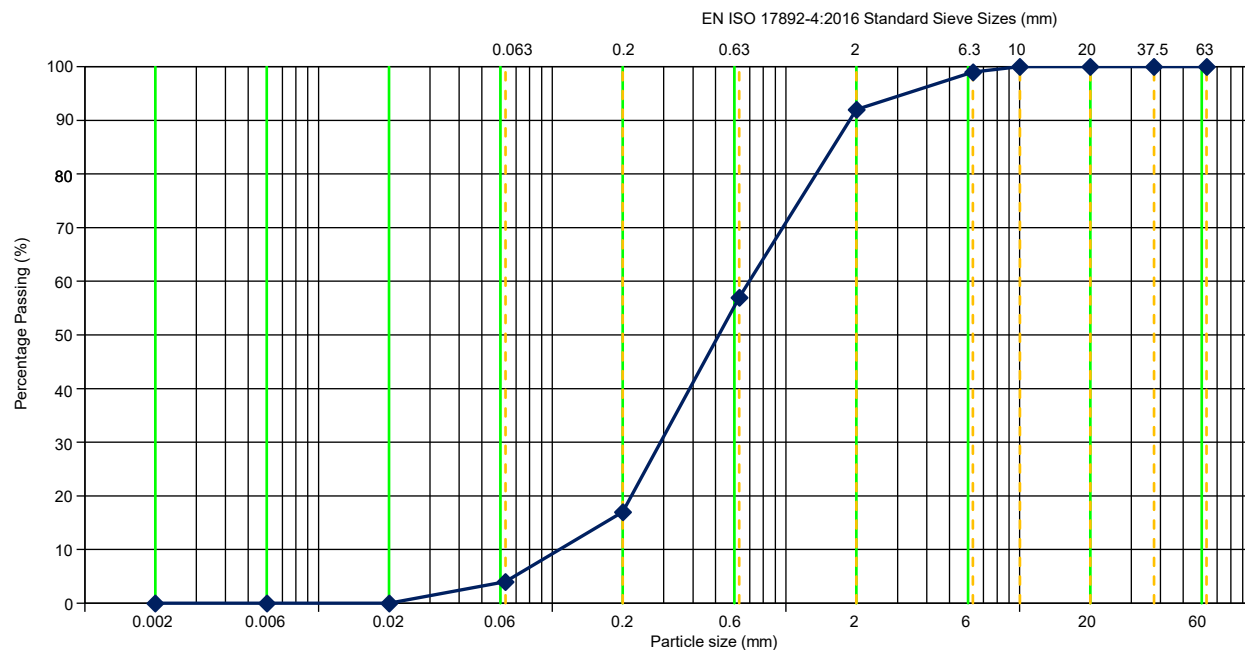
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-006	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	99		
2	92		
0.63	57		
0.2	17		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	8%
	Sand	88%
	Total Fines	4%
	Silt	4%
	Clay	0%

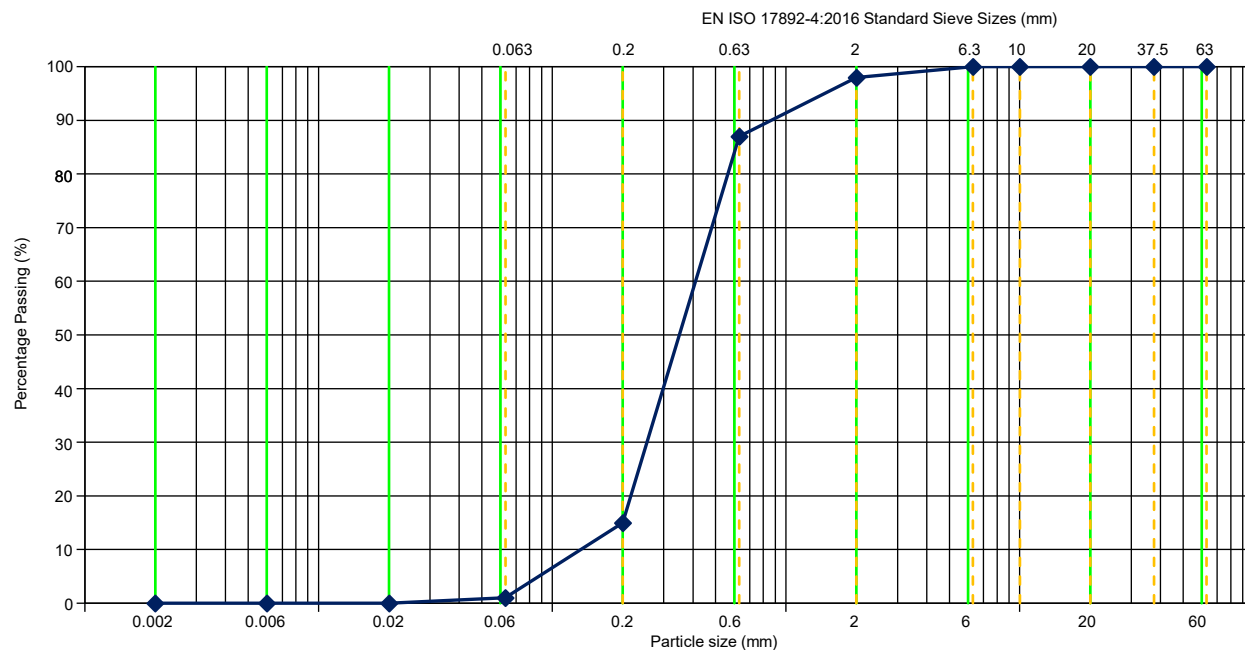
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	5.9
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-007	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	87		
0.2	15		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	97%
	Silt	1%
	Clay	0%

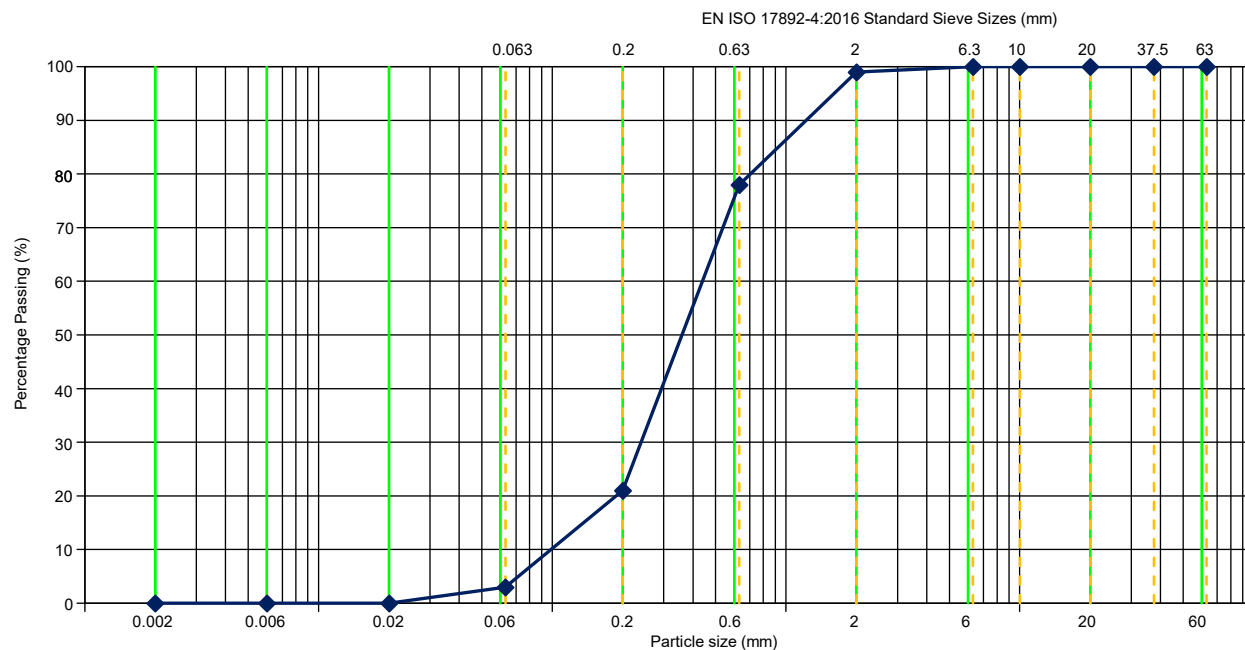
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-008	Comments Sample is a SAND, fine to coarse, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	78		
0.2	21		
0.063	3		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	96%
	Silt	3%
	Clay	0%

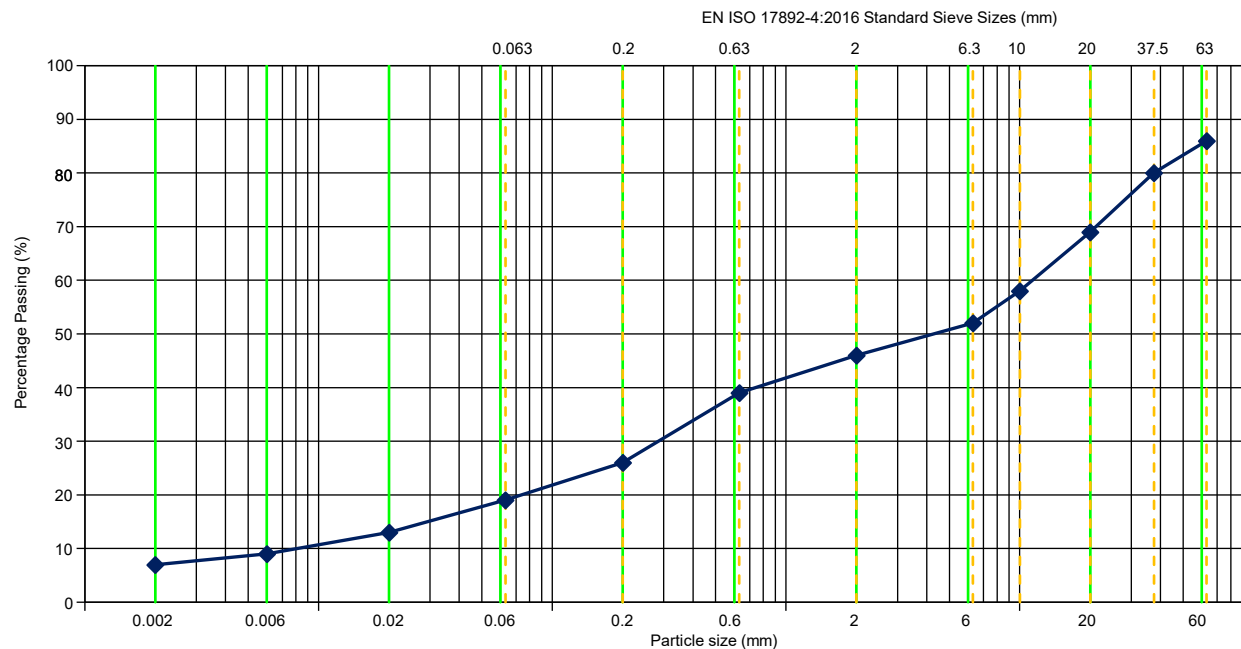
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-009	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	86	0.02	13
37.5	80	0.006	9
20	69	0.002	7
10	58		
6.3	52		
2	46		
0.63	39		
0.2	26		
0.063	19		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	14%
	Gravel	40%
	Sand	27%
	Total Fines	19%
	Silt	12%
	Clay	7%

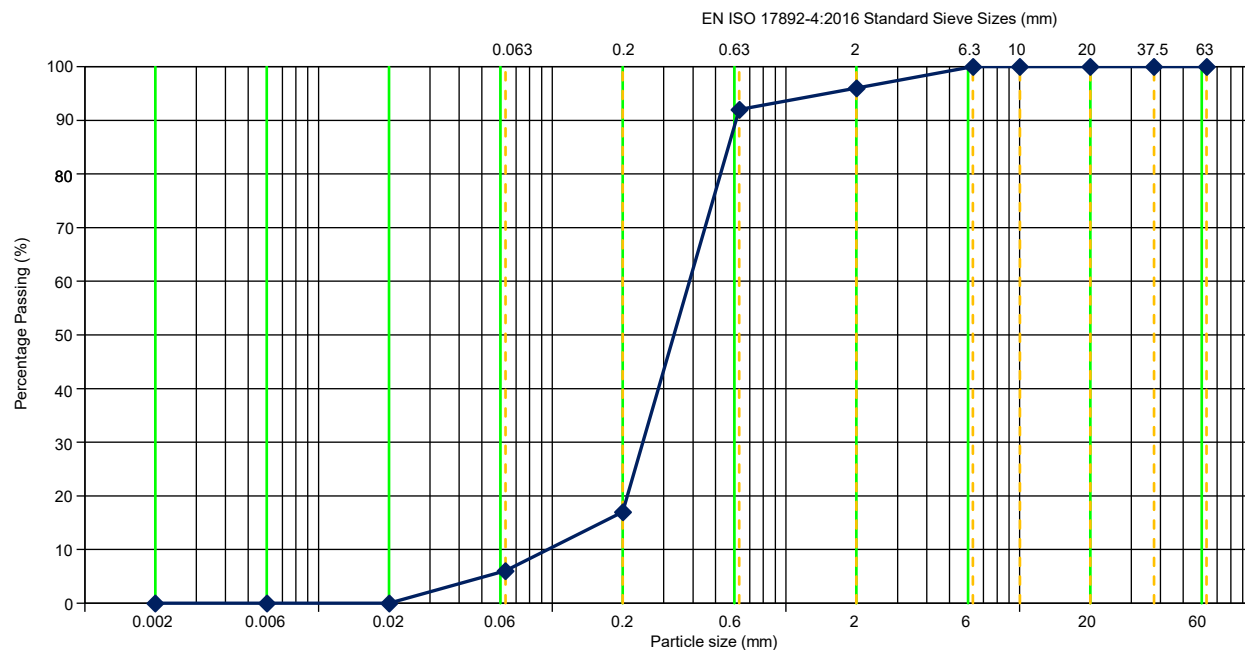
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	1244.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-010	Comments Sample is a GRAVEL, fine to coarse, unsorted, clayey, very silty, very sandy with 2 no. cobbles.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	96		
0.63	92		
0.2	17		
0.063	6		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	4%
	Sand	90%
	Silt	6%
	Clay	0%

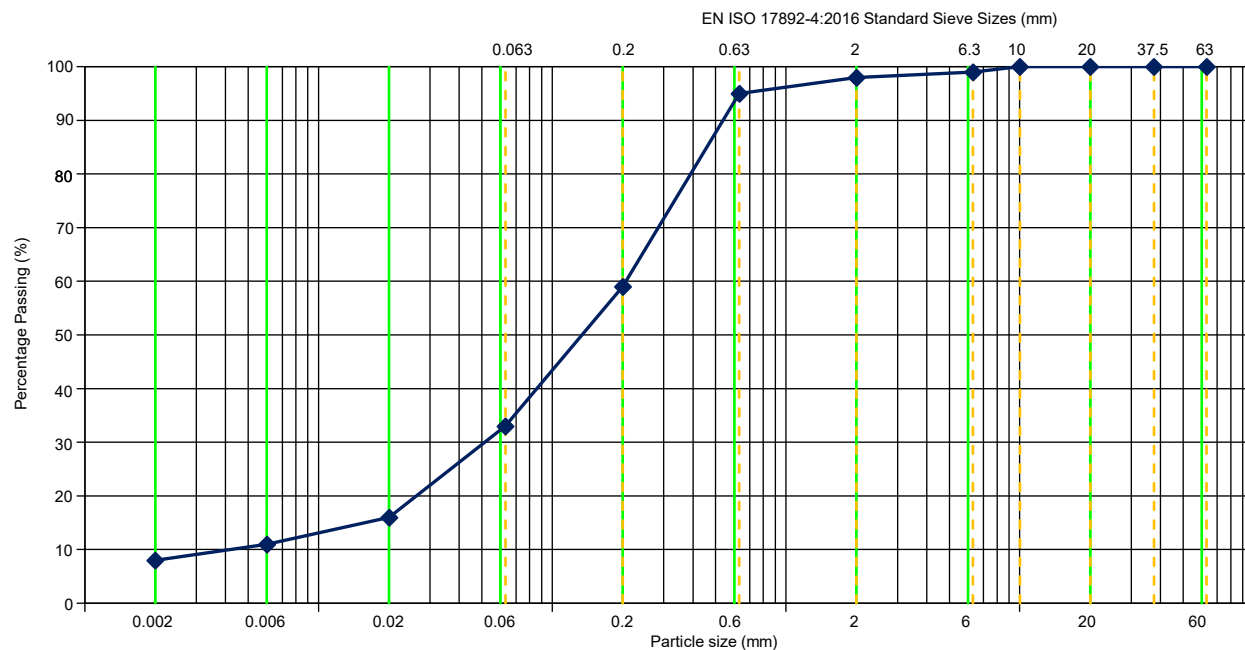
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.5

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-011	Comments Sample is a SAND, fine to medium, poorly sorted, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	16
37.5	100	0.006	11
20	100	0.002	8
10	100		
6.3	99		
2	98		
0.63	95		
0.2	59		
0.063	33		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	65%
	Total Fines	33%
	Silt	25%
	Clay	8%

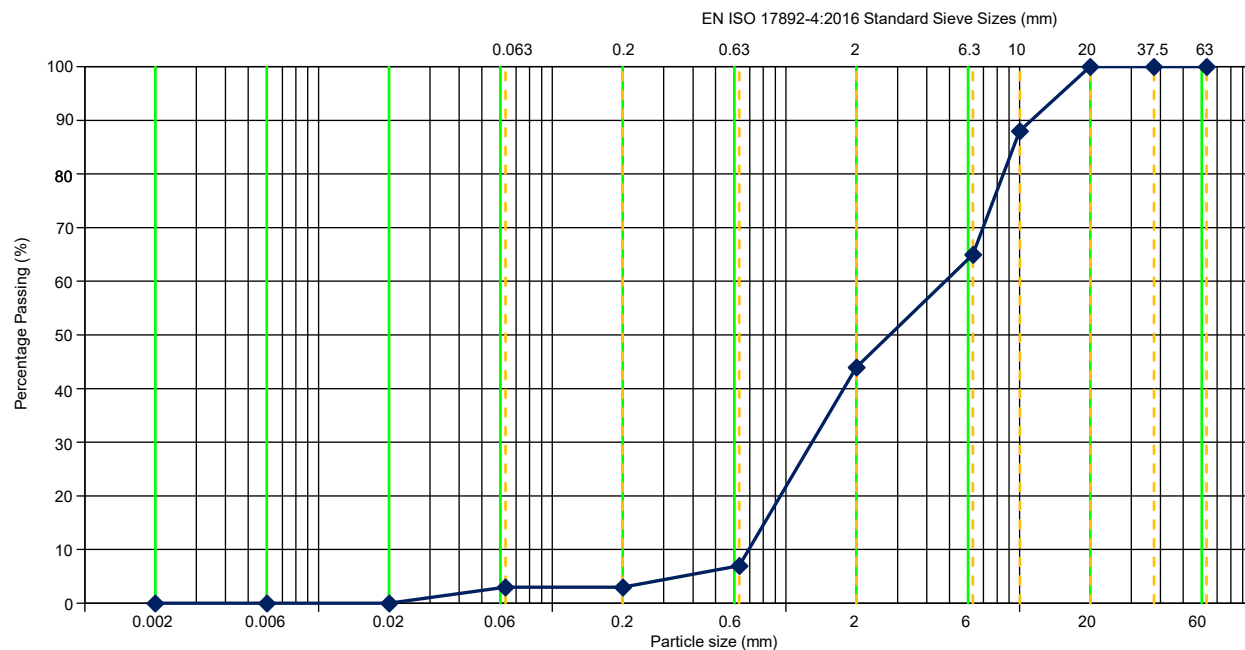
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	45.4
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	3.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-012	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	88		
6.3	65		
2	44		
0.63	7		
0.2	3		
0.063	3		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	56%
	Sand	41%
	Total Fines	3%
	Silt	3%
	Clay	0%

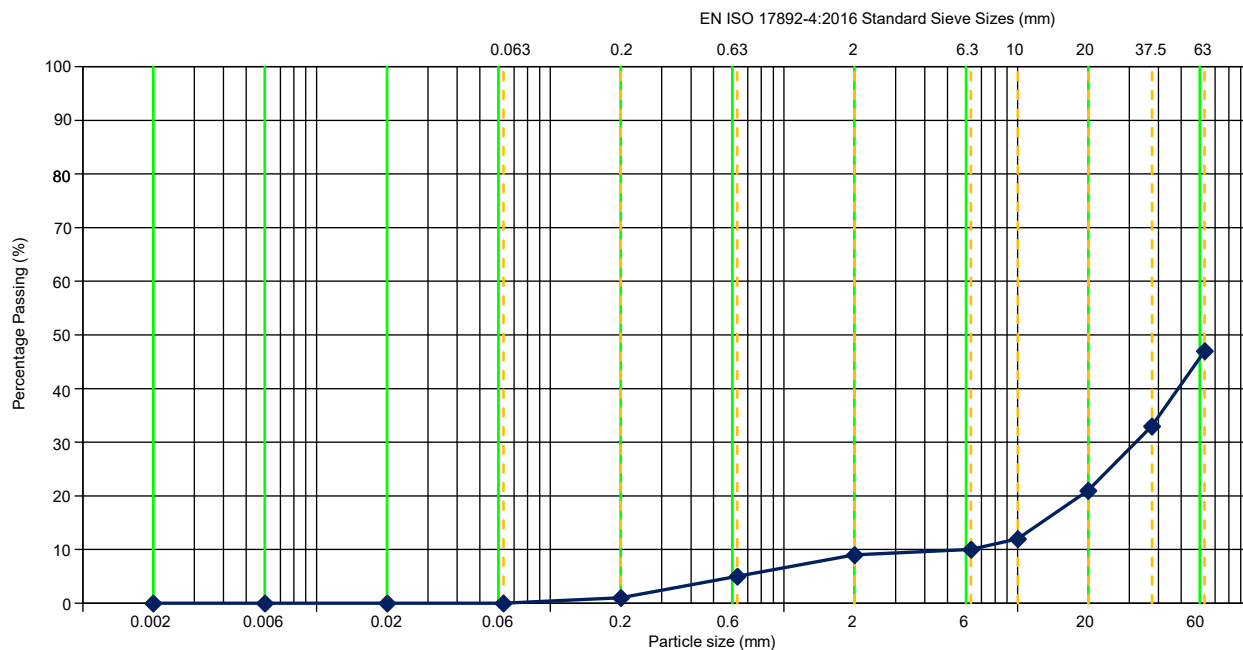
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu)	7.1
Coefficient of Curvature (Cc)	0.6
D ₃₀ ² / (D ₁₀ x D ₆₀)	

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-013	Comments	Sample is a GRAVEL, fine to medium, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	47	0.02	-
37.5	33	0.006	-
20	21	0.002	-
10	12		
6.3	10		
2	9		
0.63	5		
0.2	1		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	53%
	Gravel	38%
	Sand	9%
	Total Fines	0%
	Silt	0%
	Clay	0%

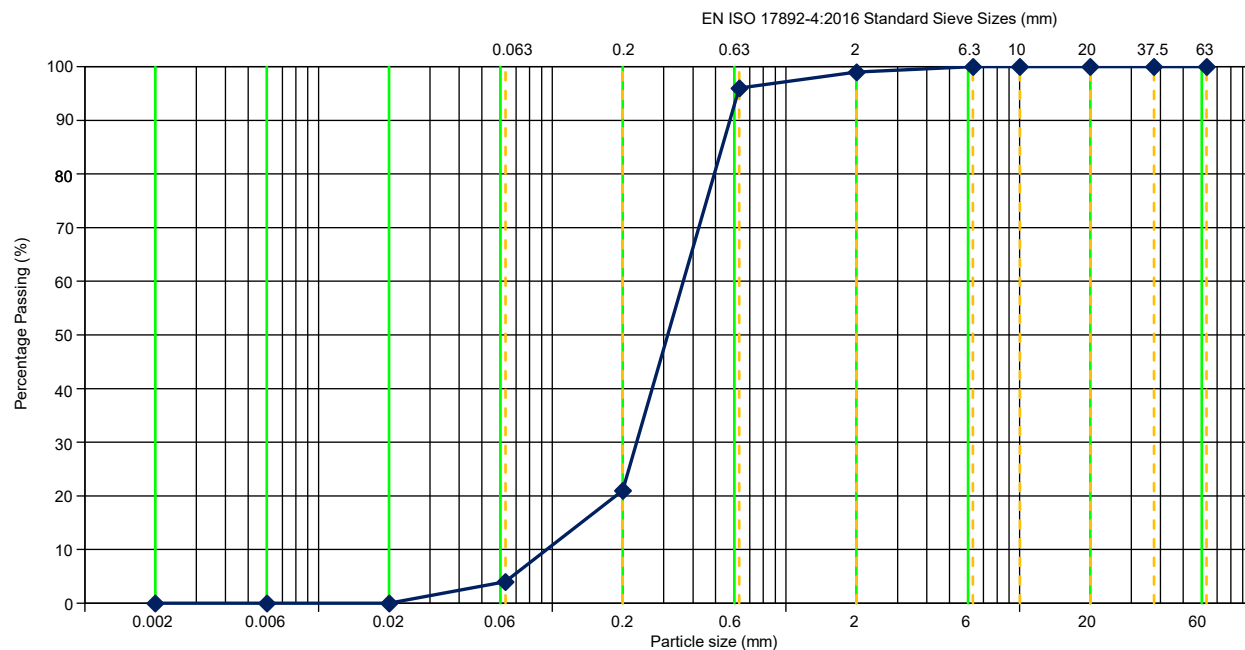
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	12.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-014	Comments Sample is a GRAVEL, medium to coarse, unsorted, sandy with 5 no. cobbles.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	96		
0.2	21		
0.063	4		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	95%
	Total Fines	4%
	Silt	4%
	Clay	0%

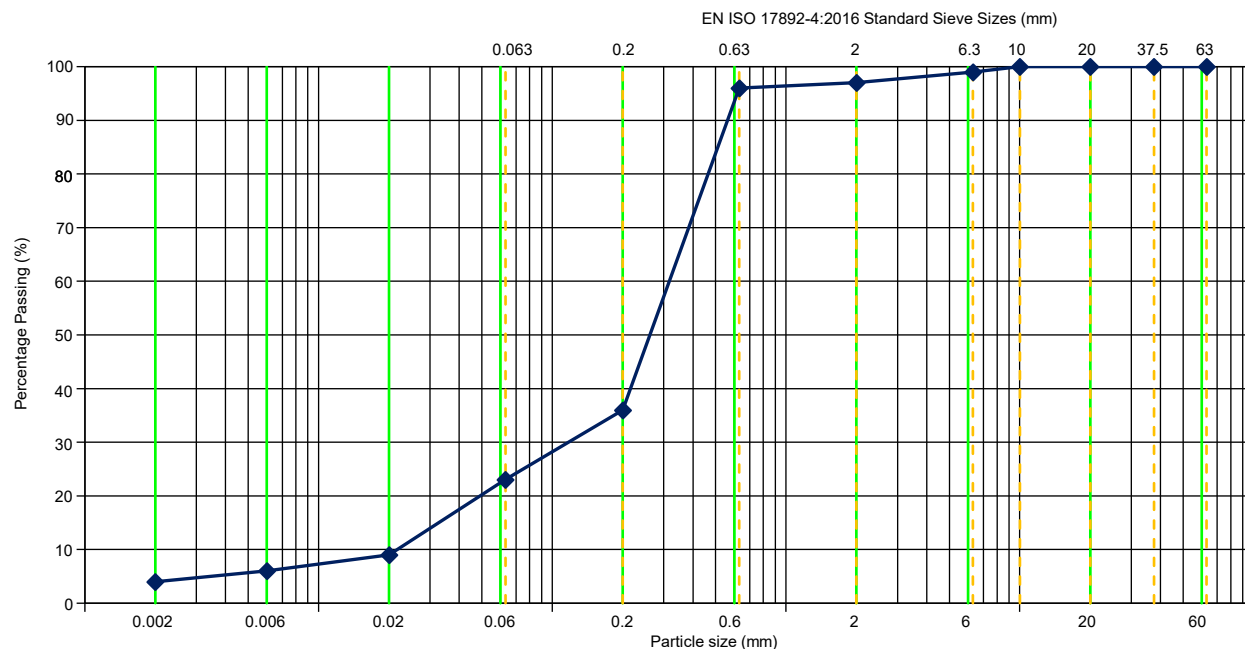
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-015	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	6
20	100	0.002	4
10	100		
6.3	99		
2	97		
0.63	96		
0.2	36		
0.063	23		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	74%
	Total Fines	23%
	Silt	19%
	Clay	4%

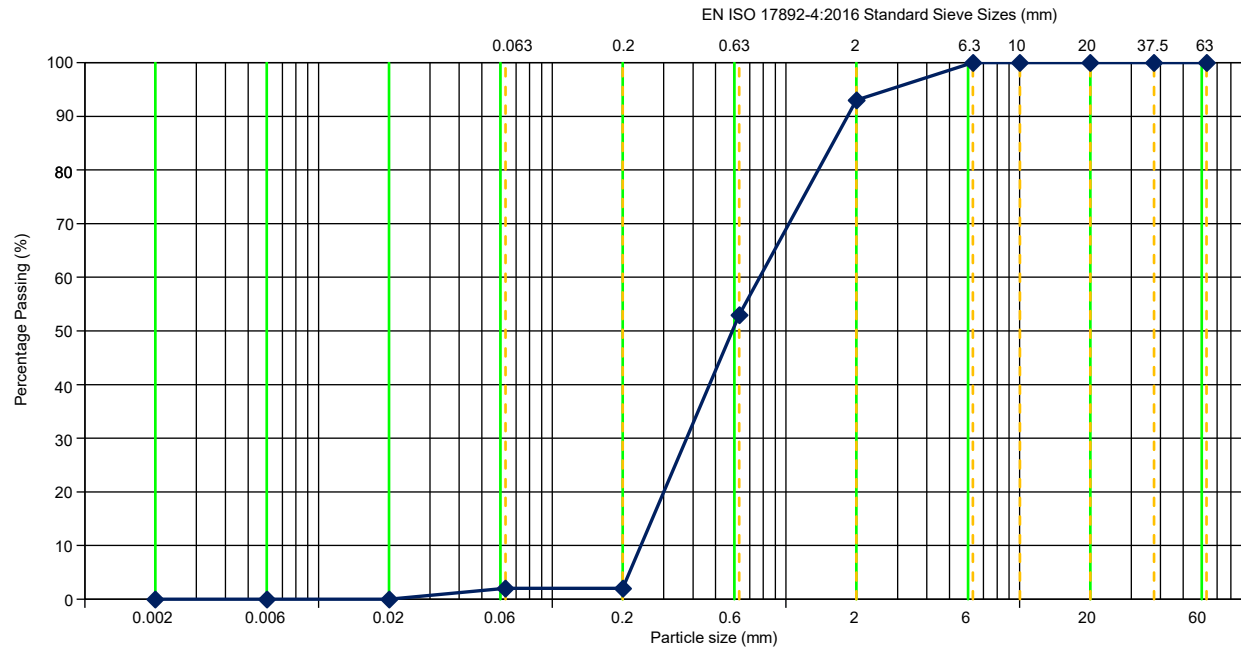
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	16.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-016	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	93		
0.63	53		
0.2	2		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	7%
	Sand	91%
	Silt	2%
	Clay	0%

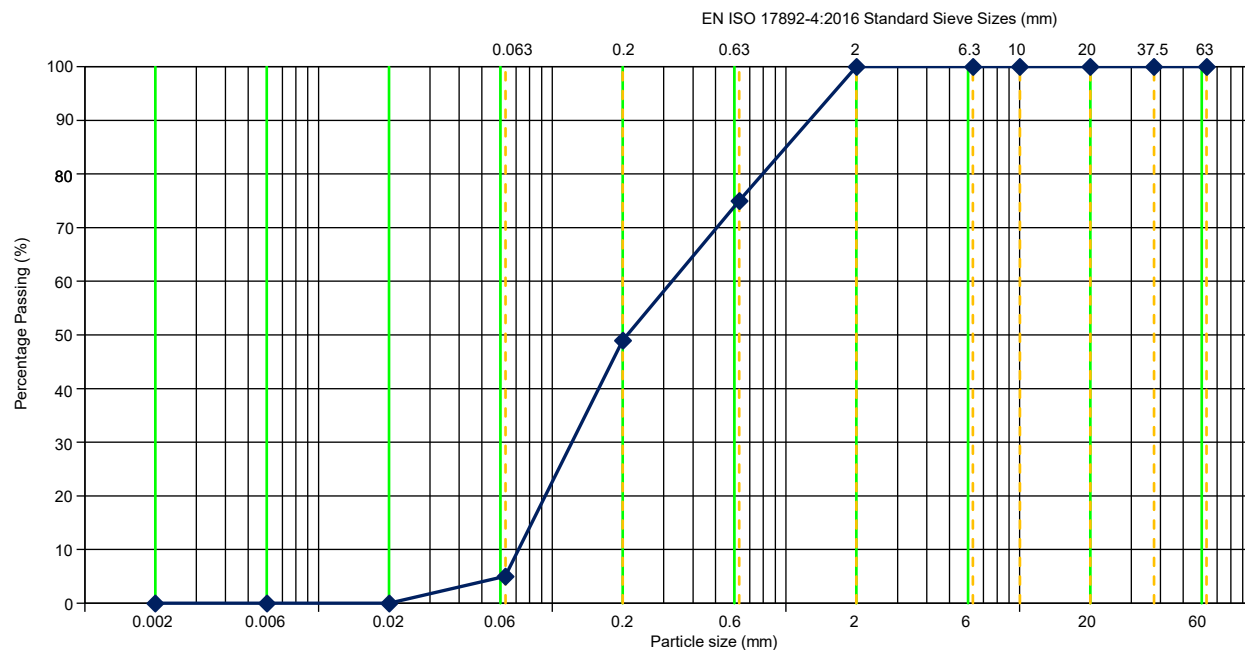
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-017	Comments Sample is a SAND, medium to coarse, sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	75		
0.2	49		
0.063	5		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	95%
	Silt	5%
	Clay	0%

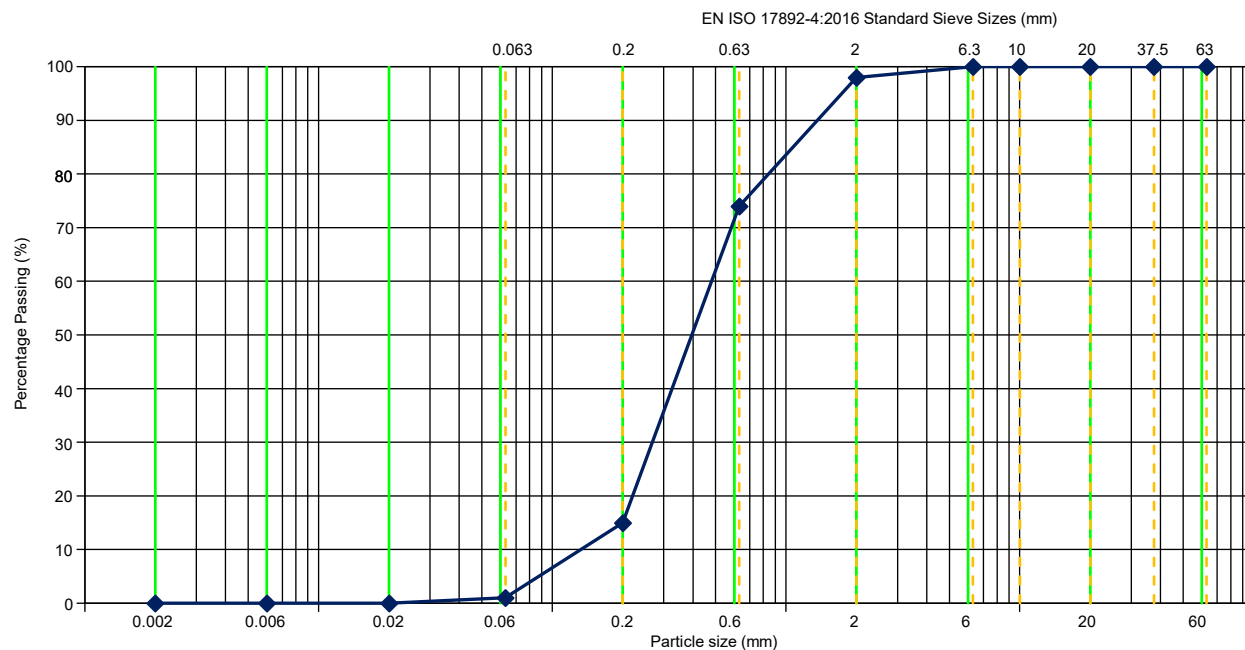
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-018	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	74		
0.2	15		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	97%
	Silt	1%
	Clay	0%

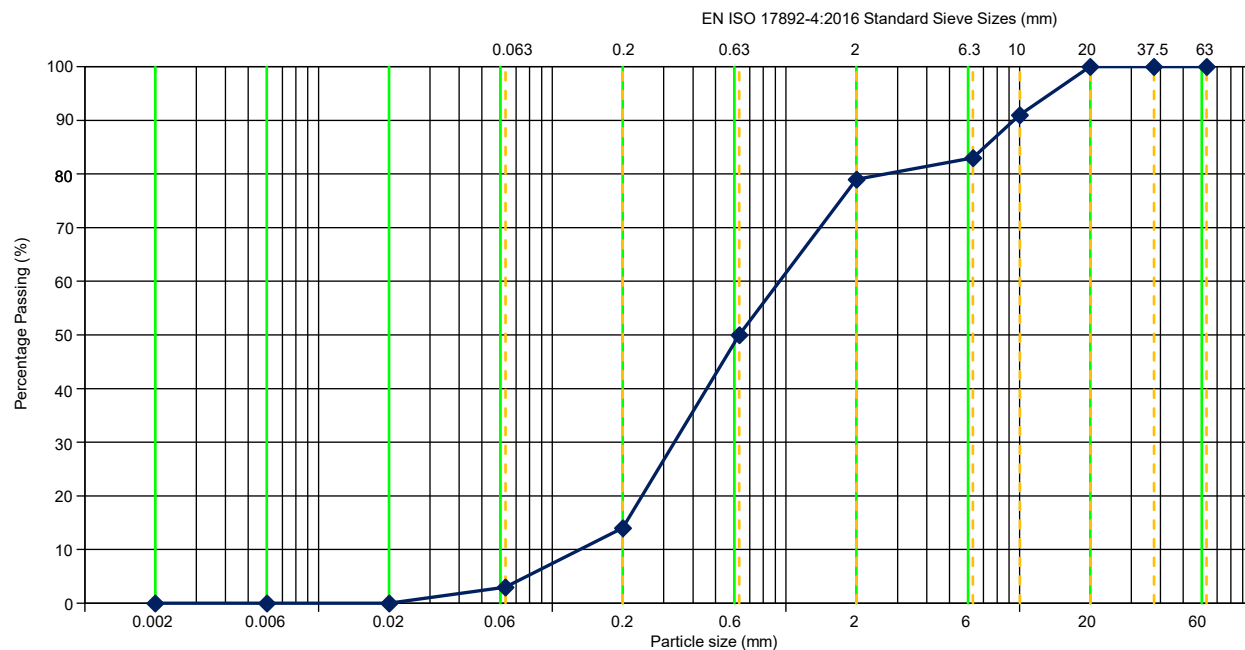
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B2-019	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	91		
6.3	83		
2	79		
0.63	50		
0.2	14		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	21%
	Sand	76%
	Total Fines	3%
	Silt	3%
	Clay	0%

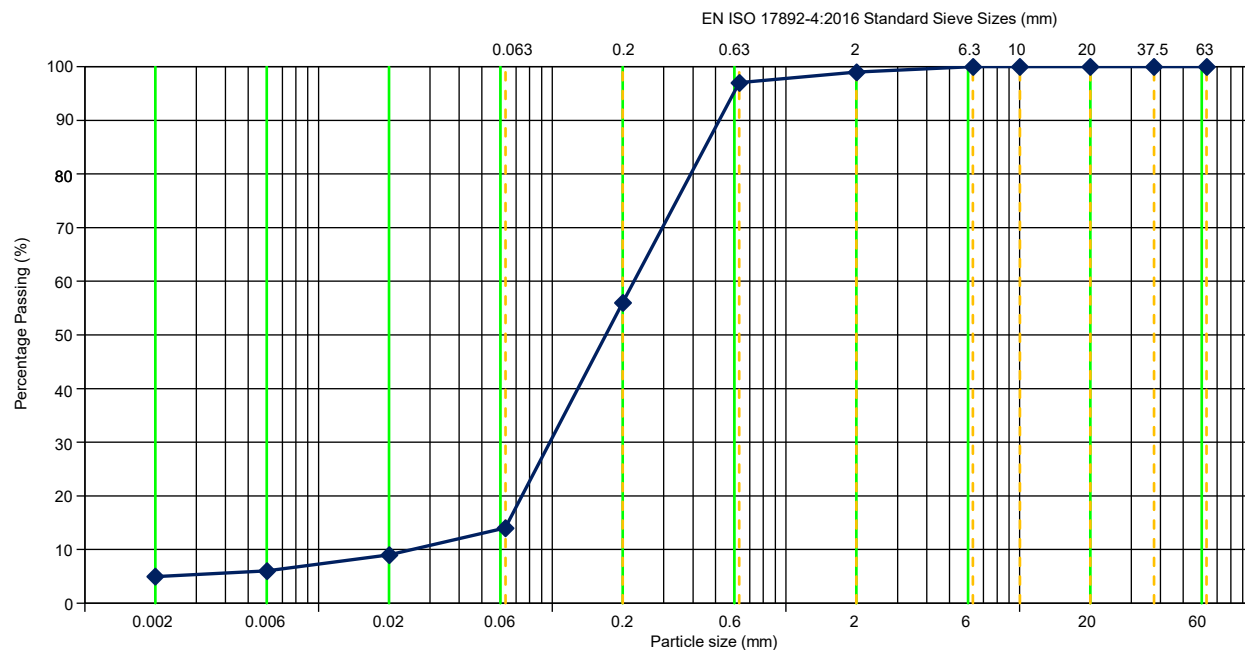
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	7.3
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	0.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-020	Comments Sample is a SAND, fine to coarse, unsorted, slightly silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	6
20	100	0.002	5
10	100		
6.3	100		
2	99		
0.63	97		
0.2	56		
0.063	14		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	85%
	Total Fines	14%
	Silt	9%
	Clay	5%

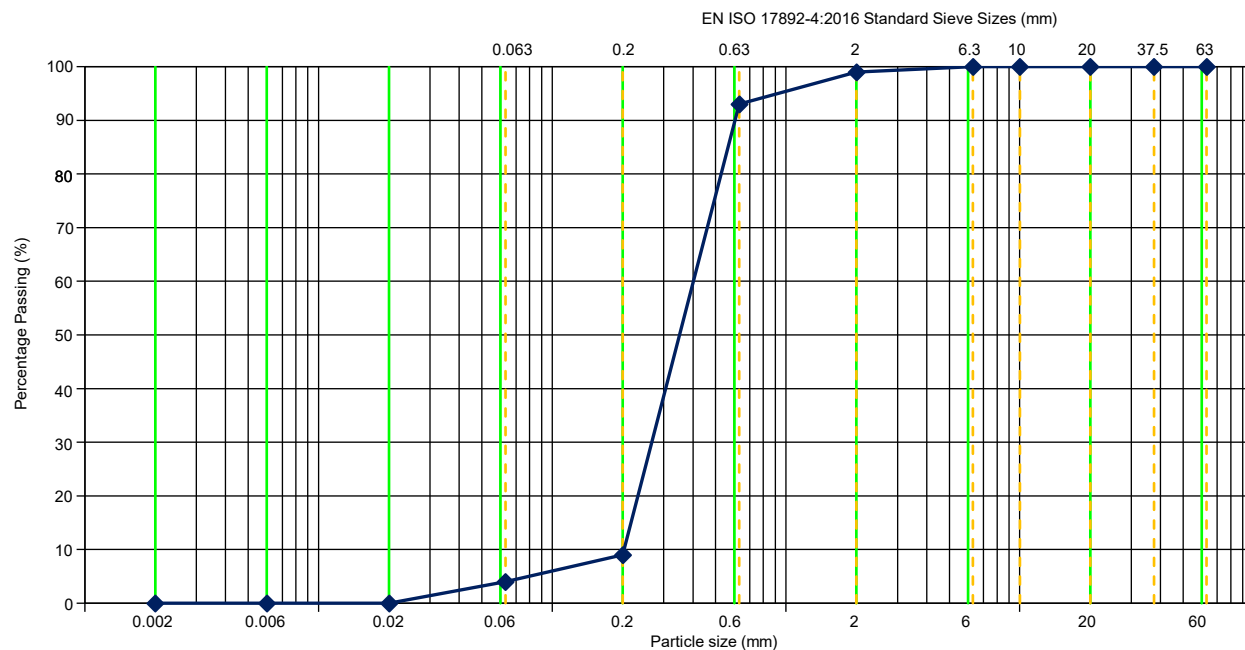
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	8.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-021	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	93		
0.2	9		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	95%
	Silt	4%
	Clay	0%

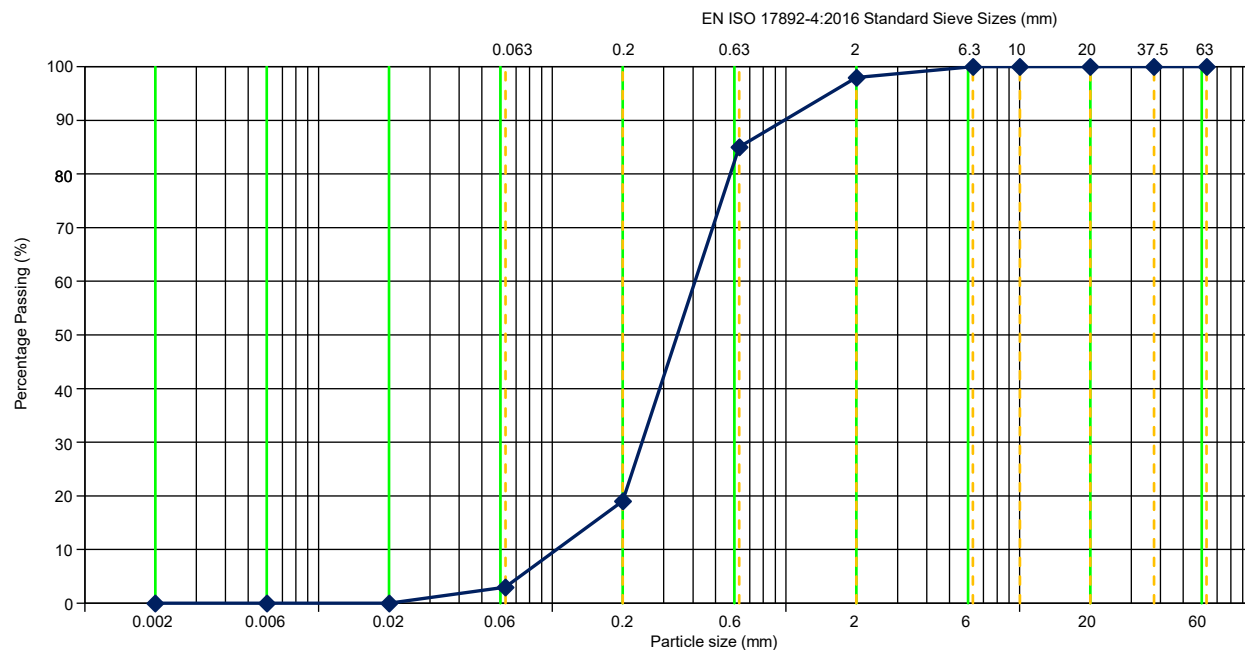
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-023	Comments Sample is a SAND, medium, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	85		
0.2	19		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	95%
	Total Fines	3%
	Silt	3%
	Clay	0%

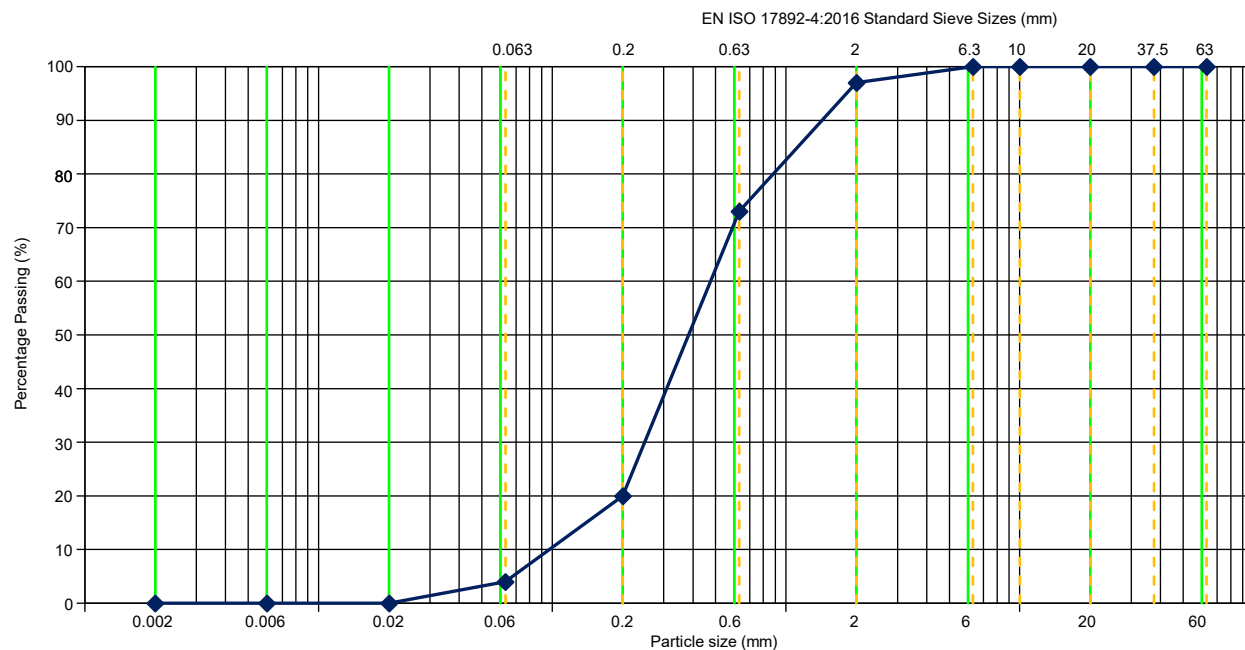
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-024	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	97		
0.63	73		
0.2	20		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	93%
	Total Fines	4%
	Silt	4%
	Clay	0%

Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B2-026	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Summary of Chemical Test Results - Block 2



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		Analyte	Organic Matter Content	Total Organic Carbon
		Top (m)	Base (m)			
				LOD	0.1	0.1
				Unit	% w/w	% w/w C
B2	783-GS-OWF-B2-001	0.00	0.20		1.59	0.92
B2	783-GS-OWF-B2-010	0.00	0.20		1.24	0.72
B2	783-GS-OWF-B2-011	0.00	0.20		1.95	1.13
B2	783-GS-OWF-B2-012	0.00	0.20		1.40	0.81
B2	783-GS-OWF-B2-014	0.00	0.20		0.93	0.54
B2	783-GS-OWF-B2-020	0.00	0.20		0.41	0.24
B2	783-GS-OWF-B2-021	0.00	0.20		<0.1	<0.1

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

CHEM - Block 2

GRAB SAMPLE RECORDS - BLOCK 3

DESCRIPTION	PAGES INCLUDED
BLOCK 3	
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Plot of Grab Sample Material Types – Block 3	1
Grab Sample Logs	16
Summary of Particle Size Distribution Tests – Block 3	1
Particle Size Distribution Results	16
Summary of Chemical Test Results – Block 3	1

Summary of Grab Samples - Block 3

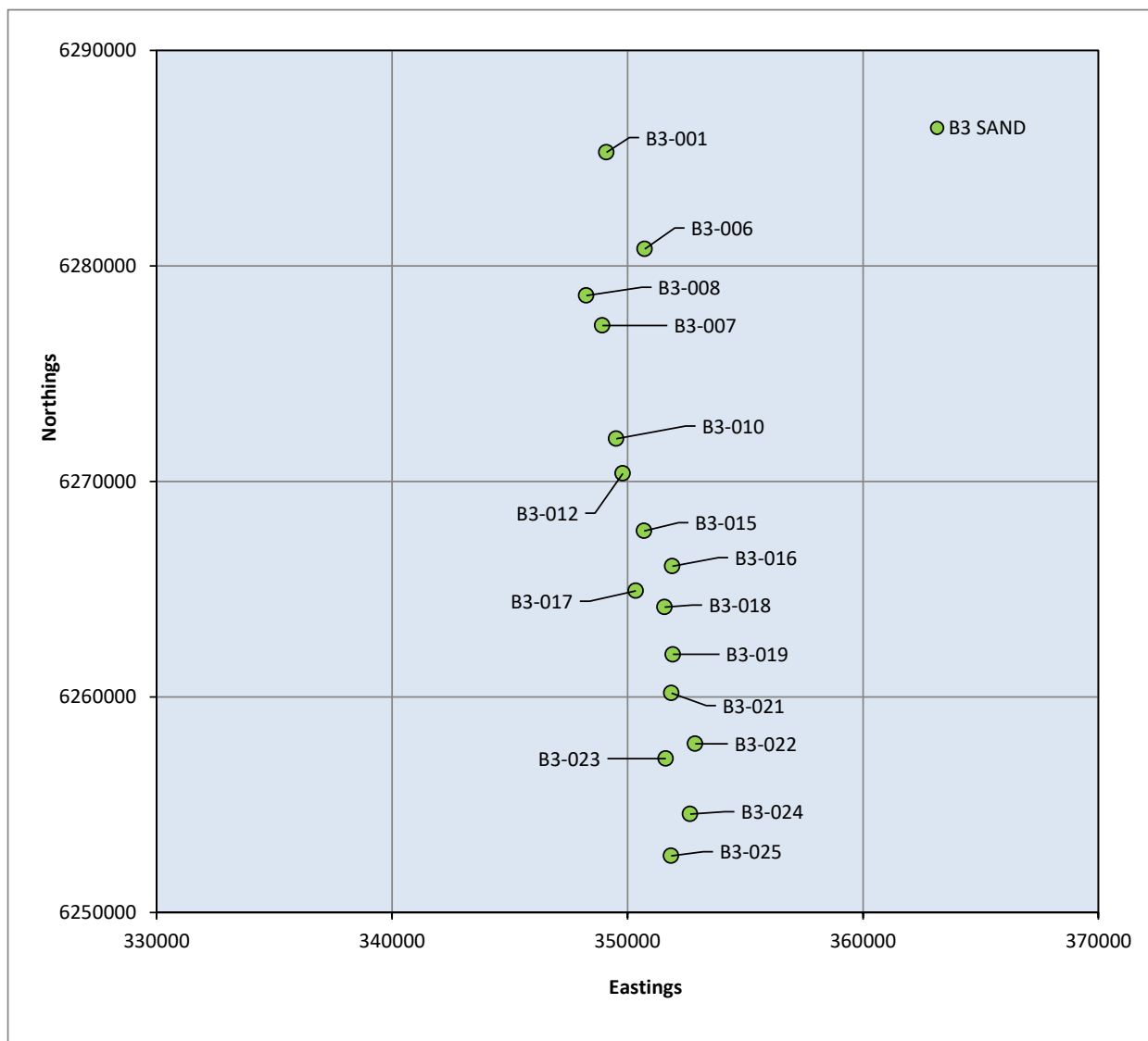
Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B3	783-GS-OWF-B3-001	2021-08-16	Franklin	349106	6285271	39		
B3	783-GS-OWF-B3-006	2021-08-15	Franklin	350736	6280783	41		
B3	783-GS-OWF-B3-007	2021-08-15	Franklin	348933	6277236	35		
B3	783-GS-OWF-B3-008	2021-08-15	Franklin	348261	6278621	37		
B3	783-GS-OWF-B3-010	2021-08-15	Franklin	349529	6271983	37		
B3	783-GS-OWF-B3-012	2021-08-16	Franklin	349805	6270372	35		
B3	783-GS-OWF-B3-015	2021-08-15	Franklin	350709	6267707	35		
B3	783-GS-OWF-B3-016	2021-08-15	Franklin	351905	6266072	32		
B3	783-GS-OWF-B3-017	2021-08-15	Franklin	350358	6264928	27		
B3	783-GS-OWF-B3-018	2021-08-16	Franklin	351584	6264167	28		
B3	783-GS-OWF-B3-019	2021-08-15	Franklin	351928	6261977	30		
B3	783-GS-OWF-B3-021	2021-08-07	Franklin	351875	6260186	37		
B3	783-GS-OWF-B3-022	2021-08-07	Franklin	352883	6257835	43		
B3	783-GS-OWF-B3-023	2021-08-07	Franklin	351634	6257139	42		
B3	783-GS-OWF-B3-024	2021-08-07	Franklin	352664	6254578	41		
B3	783-GS-OWF-B3-025	2021-08-07	Franklin	351853	6252637	42		

Client **ENERGINET**

Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 3**

Plot of Grab Sample Material Types - Block 3



Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Figure

GEOL - Block 3

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 100% angular fine shell fragments, dark brownish grey, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	95 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location:	783-GS-OWF-B3-001	Comments:
Vessel:	Franklin	Location Coordinates:	E 349106 N 6285271			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B3	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B3-001

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, dark grey, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	5 %
Sand	92 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B3-006	Comments:
Vessel:	Franklin	Location Coordinates:	E 350736 N 6280783			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B3	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B3-006

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	96 %
Total fines	2 %
Silt	2 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B3-007	Comments:
Vessel:	Franklin	Location Coordinates:	E 348933 N 6277236			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	35	Survey Route: B3	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B3-007

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, dark grey, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	95 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location:	783-GS-OWF-B3-008	Comments:
Vessel:	Franklin	Location Coordinates:	E 348261 N 6278621			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	37	Survey Route: B3	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B3-008

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine to medium shell fragments, 2 no. extremely thin worms, up to 40mm in length, brownish grey, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	5 %
Sand	92 %
Total fines	3 %
Silt	3 %
Clay	

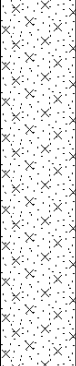
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B3-010	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 349529 N 6271983		
Client:	Energinet	Water Depth (m LAT):	37	Survey Route: B3	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B3-010	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional medium to coarse gravel size pockets of black and dark grey silty fine sand, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	95 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B3-012	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 349805 N 6270372		
Client:	Energinet	Water Depth (m LAT):	35	Survey Route: B3	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B3-012	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, frequent fine to medium gravel size pockets of black silty fine sand, brownish grey, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel

Sand 99 %

Total fines 1 %

Silt 1 %

Clay

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B3-015		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 350709 N 6267707				
Client:	Energinet	Water Depth (m LAT):	35	Survey Route:	B3	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
				783-GS-OWF-B3-015			

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, fine to medium gravel size pockets of dark grey and black silty fine sand, light greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	97 %
Total fines	2 %
Silt	2 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B3-016	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 351905 N 6266072		
Client:	Energinet	Water Depth (m LAT):	32	Survey Route: B3	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B3-016	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, gravelly, gravel is 100% subangular to subrounded fine of various lithologies, rare angular fine gravel size shell fragments, occasional fine to medium gravel size pockets of dark grey silty sand, light greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	6 %
Sand	93 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B3-017	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 350358 N 6264928				
Client:	Energinet	Water Depth (m LAT):	27	Survey Route: B3	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B3-017	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, gravelly, gravel is 95% subangular fine of sandstone and quartz and 5% subangular fine shell fragments, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 7 %
 Sand 90 %
 Total fines 3 %
 Silt 3 %
 Clay

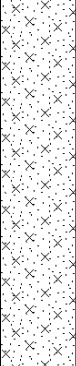
MMT Project ID:	103783	Location Test Date:	16/08/2021	GS Location: 783-GS-OWF-B3-018		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 351584 N 6264167				
Client:	Energinet	Water Depth (m LAT):	28	Survey Route:	B3	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
				783-GS-OWF-B3-018			

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, sorted, slightly silty, gravelly, gravel is 100% subangular to subrounded fine to medium of various lithologies, rare medium gravel size pockets of dark grey silty fine sand, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	3 %
Sand	96 %
Total fines	1 %
Silt	1 %
Clay	

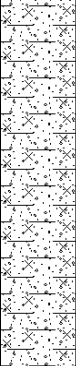
MMT Project ID:	103783	Location Test Date:	15/08/2021	GS Location: 783-GS-OWF-B3-019	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 351928 N 6261977		
Client:	Energinet	Water Depth (m LAT):	30	Survey Route: B3 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B3-019

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium, sorted, slightly silty, rare subangular fine gravel size shell fragments, rare fine to medium gravel size pockets of dark grey silty sand, light brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	99 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location:	783-GS-OWF-B3-021	Comments:
Vessel:	Franklin	Location Coordinates:	E 351875 N 6260186			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	37	Survey Route: B3	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B3-021

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly, gravel is 100% subangular to subrounded fine shell fragments, occasional medium gravel size pockets of black sandy silt, dark greyish brown, calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	76 %
Total fines	23 %
Silt	17 %
Clay	6 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B3-022	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 352883 N 6257835		
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B3	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B3-022	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, sorted, silty, slightly gravelly, gravel is 100% subangular fine shell fragments and marine debris, blackish dark grey, strong organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D	
	End of grab sample					

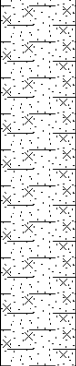
Laboratory Test Results:
Particle Size Distribution

Gravel 1 %
 Sand 91 %
 Total fines 8 %
 Silt 8 %
 Clay

Chemical Tests

Total Organic Matter 0.97 %
 Total Organic Carbon 0.56 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B3-023	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 351634 N 6257139		
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B3	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B3-023	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, frequent fine to medium gravel size pockets of black sandy silt, black and brownish grey, slight organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D	
	End of grab sample					

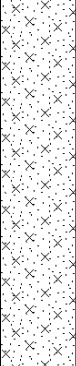
Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	83 %
Total fines	17 %
Silt	11 %
Clay	6 %

Chemical Tests

Total Organic Matter	0.97 %
Total Organic Carbon	0.56 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B3-024	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 352664 N 6254578		
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B3 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B3-024

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, rare angular fine gravel size shell fragments, frequent fine to medium gravel size pockets of silty fine sand, blackish grey, organic odour, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 96 %
 Total fines 4 %
 Silt 4 %
 Clay

Chemical Tests

Total Organic Matter 0.33 %
 Total Organic Carbon 0.19 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B3-025	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 351853 N 6252637				
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B3	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B3-025	

Summary of Particle Size Distribution Tests - Block 3



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		PSD		Sediment Fraction (%)					
		Top (m)	Base (m)	Sieve	Sed.	Clay	Silt	Total Fines	Sand	Gravel	Cobbles
B3	783-GS-OWF-B3-001	0.00	0.20	Yes	No		3	3	95	2	
B3	783-GS-OWF-B3-006	0.00	0.20	Yes	No		3	3	92	5	
B3	783-GS-OWF-B3-007	0.00	0.20	Yes	No		2	2	96	2	
B3	783-GS-OWF-B3-008	0.00	0.20	Yes	No		3	3	95	2	
B3	783-GS-OWF-B3-010	0.00	0.20	Yes	No		3	3	92	5	
B3	783-GS-OWF-B3-012	0.00	0.20	Yes	No		3	3	95	2	
B3	783-GS-OWF-B3-015	0.00	0.20	Yes	No		1	1	99		
B3	783-GS-OWF-B3-016	0.00	0.20	Yes	No		2	2	97	1	
B3	783-GS-OWF-B3-017	0.00	0.20	Yes	No		1	1	93	6	
B3	783-GS-OWF-B3-018	0.00	0.20	Yes	No		3	3	90	7	
B3	783-GS-OWF-B3-019	0.00	0.20	Yes	No		1	1	96	3	
B3	783-GS-OWF-B3-021	0.00	0.20	Yes	No		1	1	99		
B3	783-GS-OWF-B3-022	0.00	0.20	Yes	Yes	6	17	23	76	1	
B3	783-GS-OWF-B3-023	0.00	0.20	Yes	No		8	8	91	1	
B3	783-GS-OWF-B3-024	0.00	0.20	Yes	Yes	6	11	17	83		
B3	783-GS-OWF-B3-025	0.00	0.20	Yes	No		4	4	96		

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

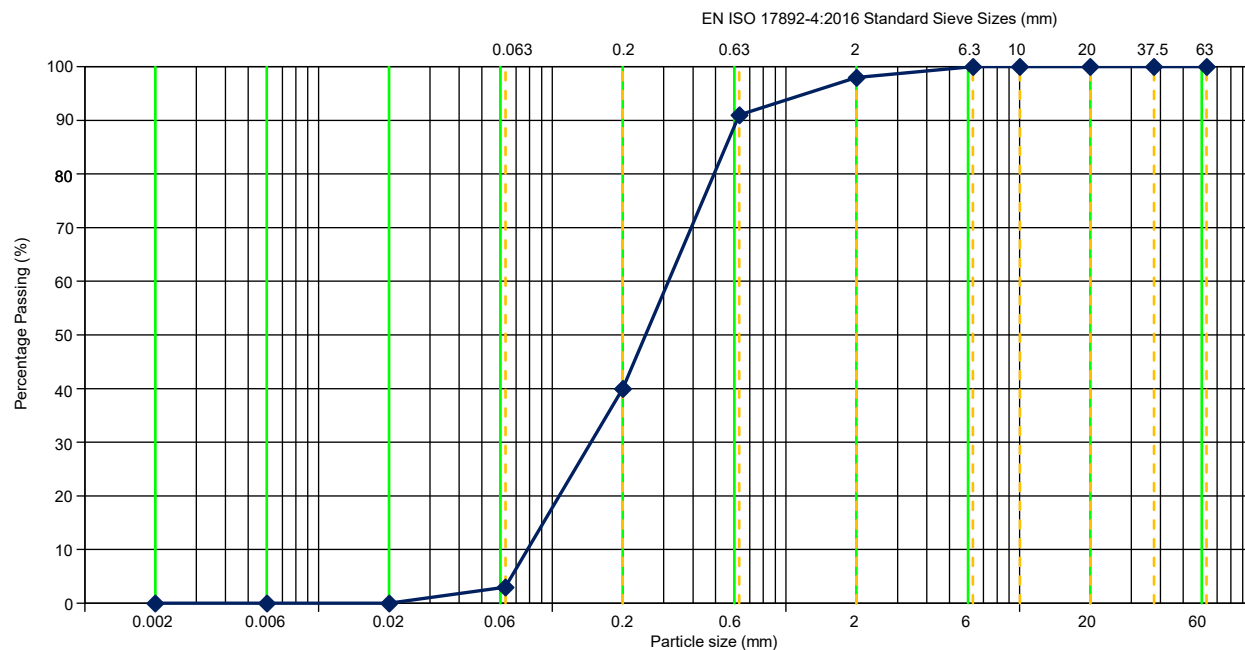
Carried out for

Energinet

Table

PSD - Block 3

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	91		
0.2	40		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	95%
	Total Fines	3%
	Silt	3%
	Clay	0%

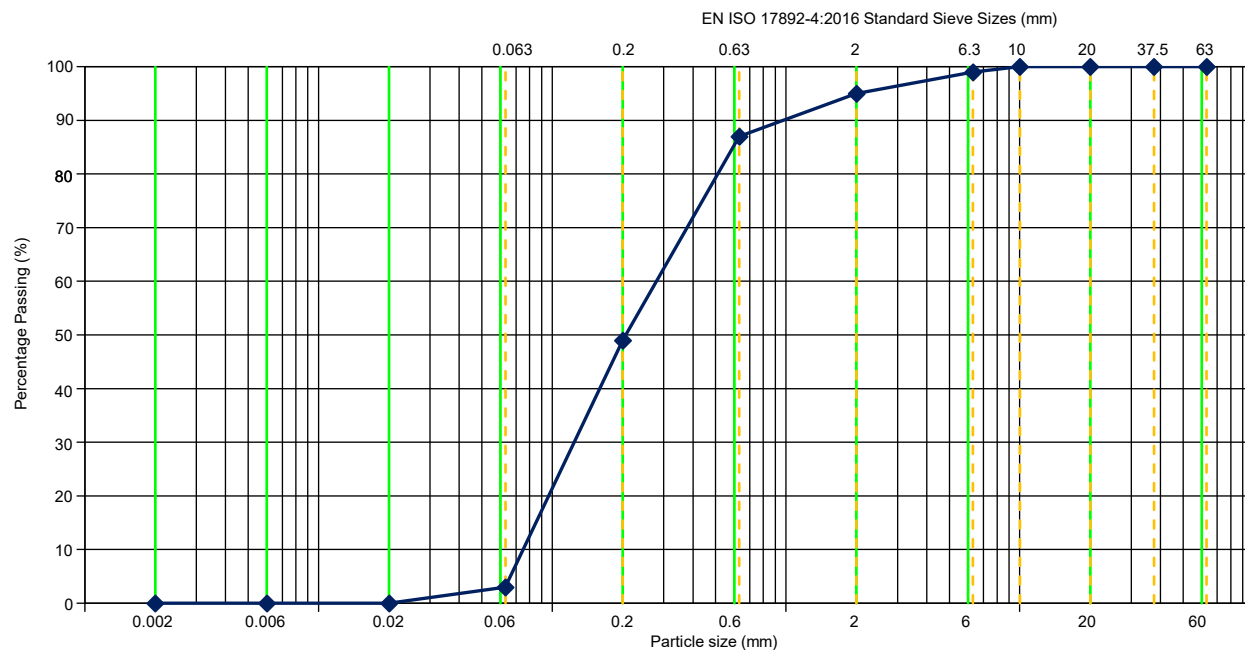
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-001	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	99		
2	95		
0.63	87		
0.2	49		
0.063	3		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	5%
	Sand	92%
	Total Fines	3%
	Silt	3%
	Clay	0%

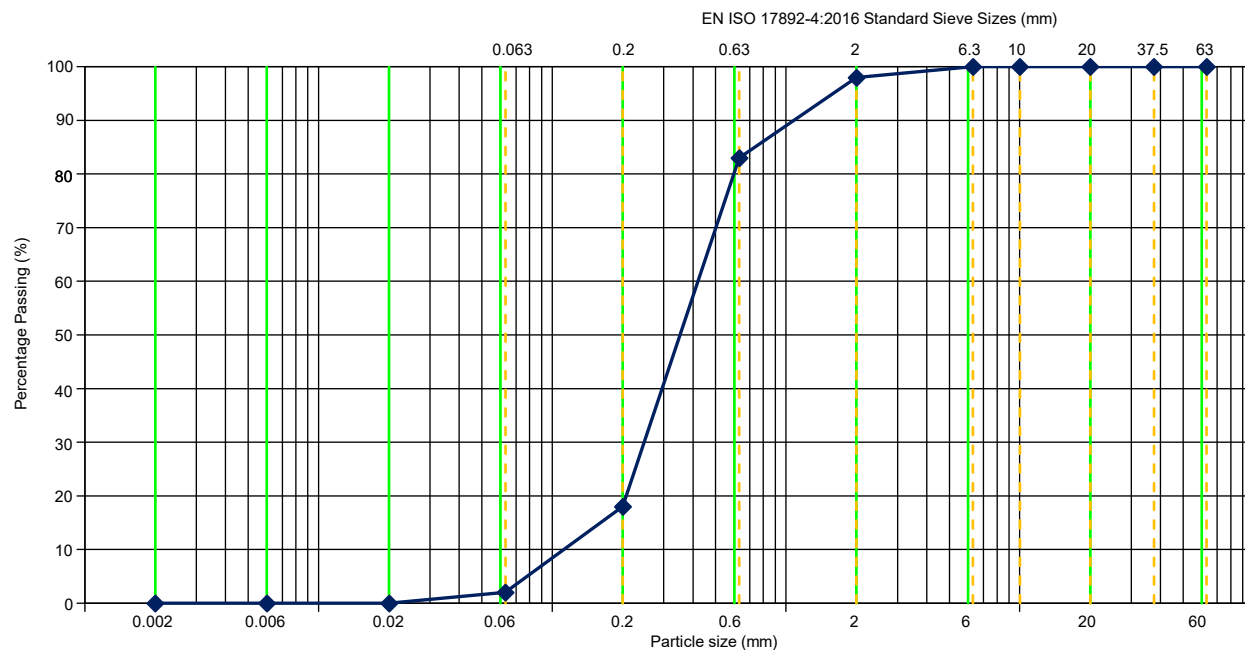
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	3.9
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-006	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	83		
0.2	18		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	96%
	Silt	2%
	Clay	0%

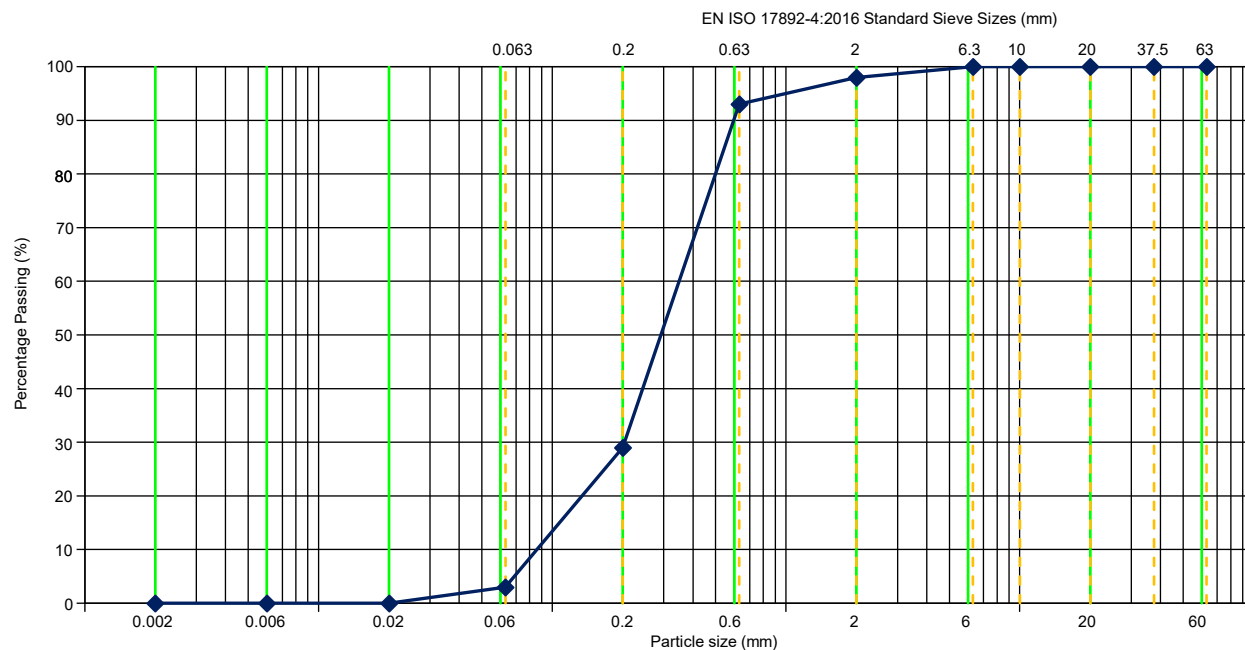
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-007	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	93		
0.2	29		
0.063	3		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	95%
	Total Fines	3%
	Silt	3%
	Clay	0%

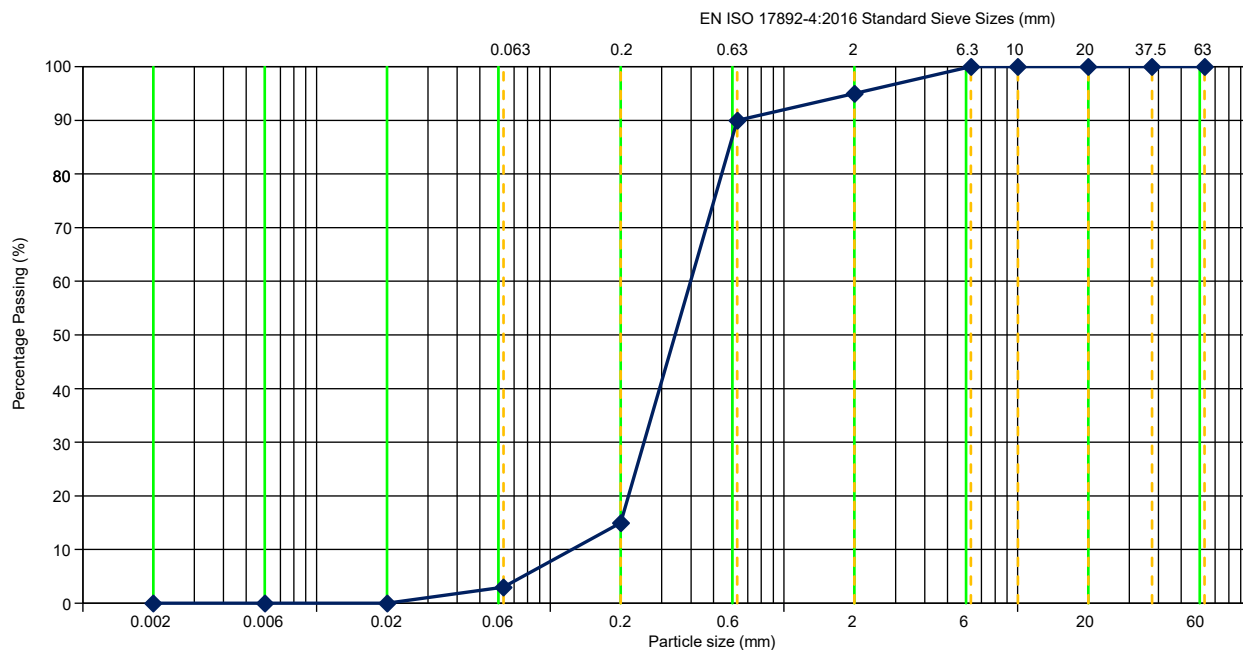
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-008	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	95		
0.63	90		
0.2	15		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	5%
	Sand	92%
	Silt	3%
	Clay	0%

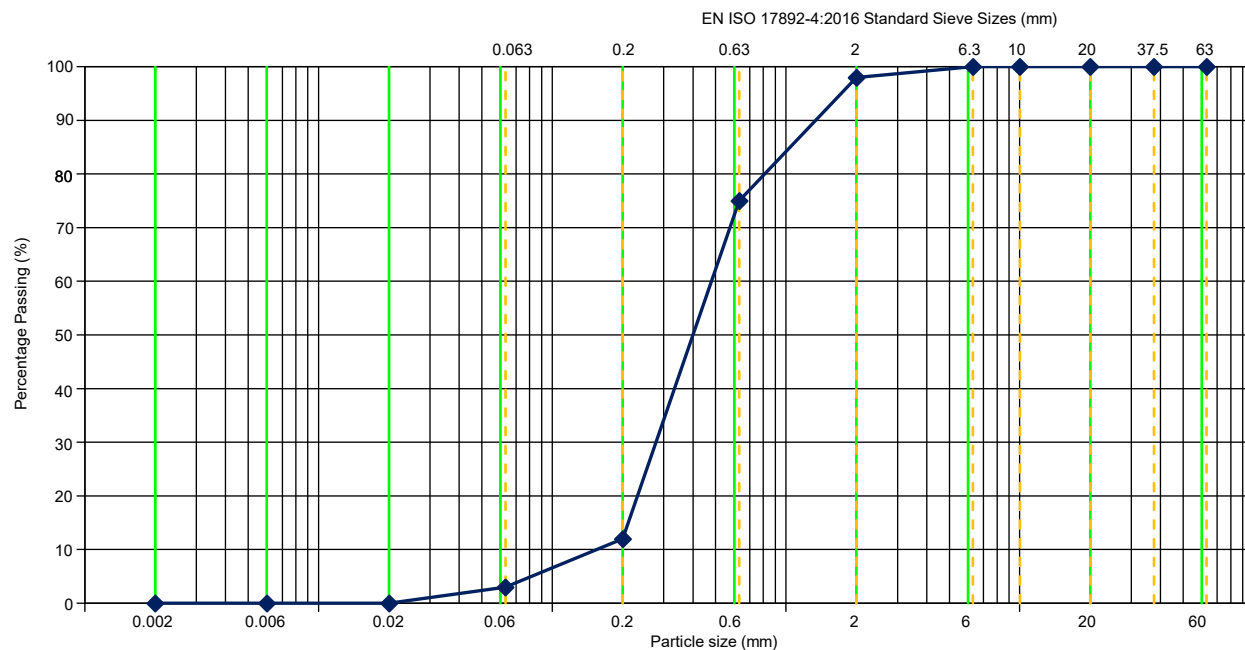
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-010	Comments Sample is a SAND, fine to medium, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	75		
0.2	12		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	95%
	Silt	3%
	Clay	0%

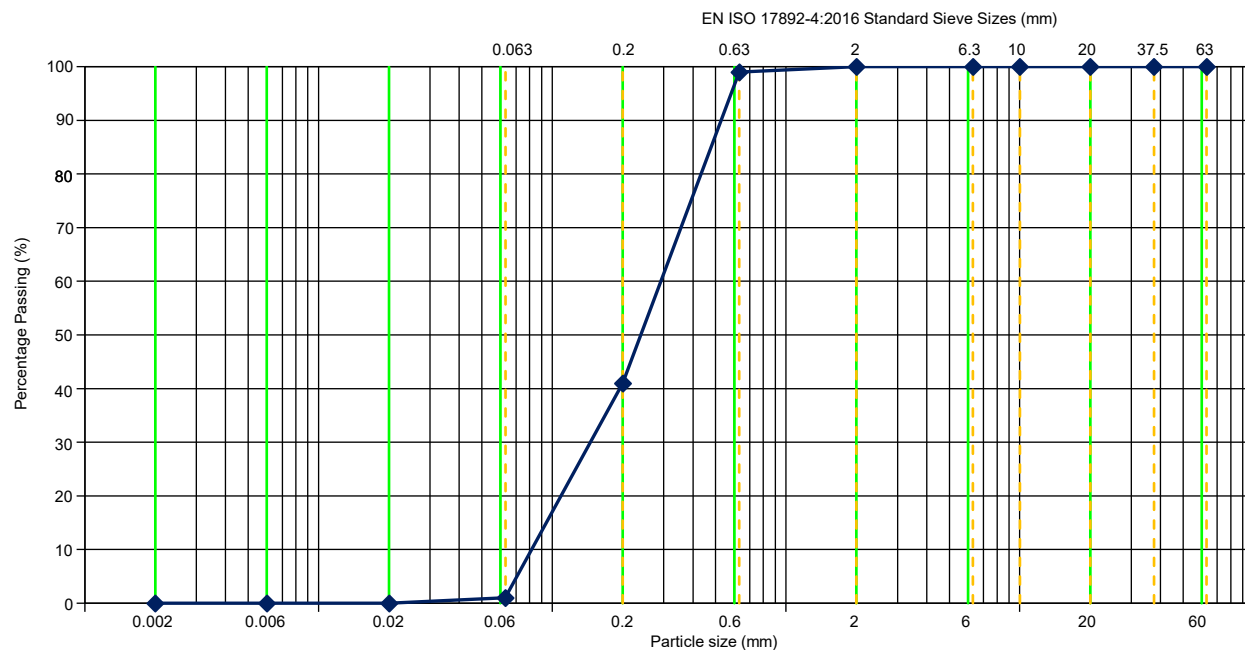
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-012	Comments Sample is a SAND, fine to coarse, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	99		
0.2	41		
0.063	1		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	99%
	Silt	1%
	Clay	0%

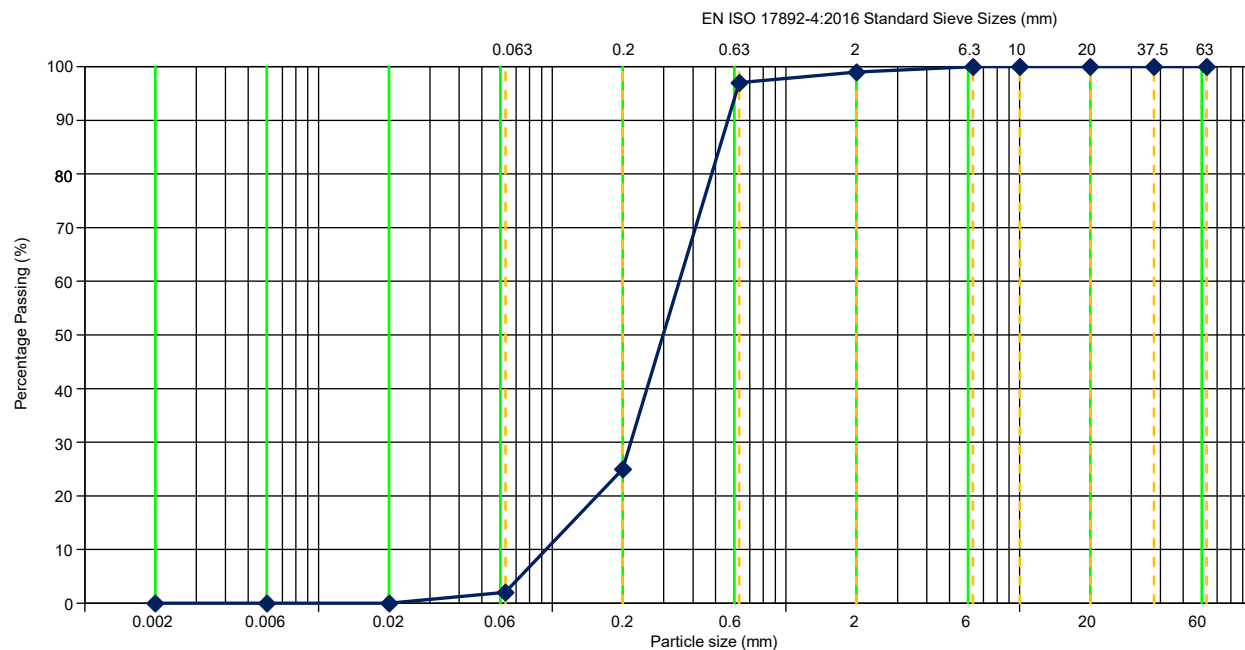
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-015	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	97		
0.2	25		
0.063	2		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	97%
	Total Fines	2%
	Silt	2%
	Clay	0%

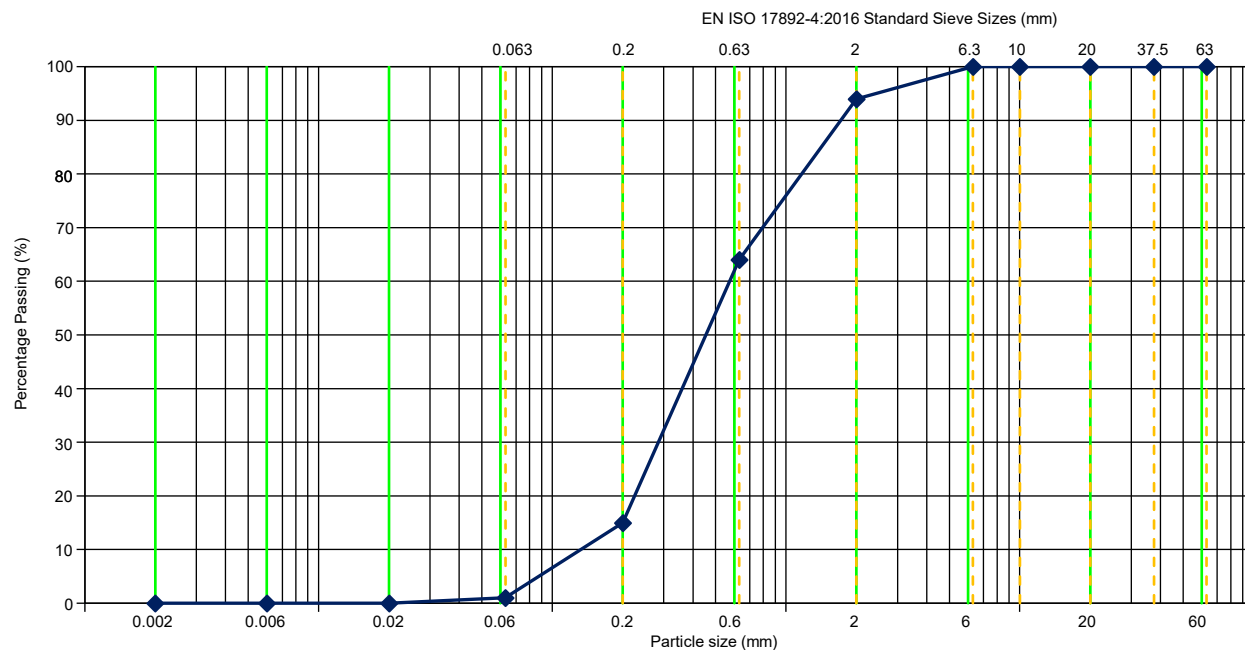
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-016	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	94		
0.63	64		
0.2	15		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	6%
	Sand	93%
	Silt	1%
	Clay	0%

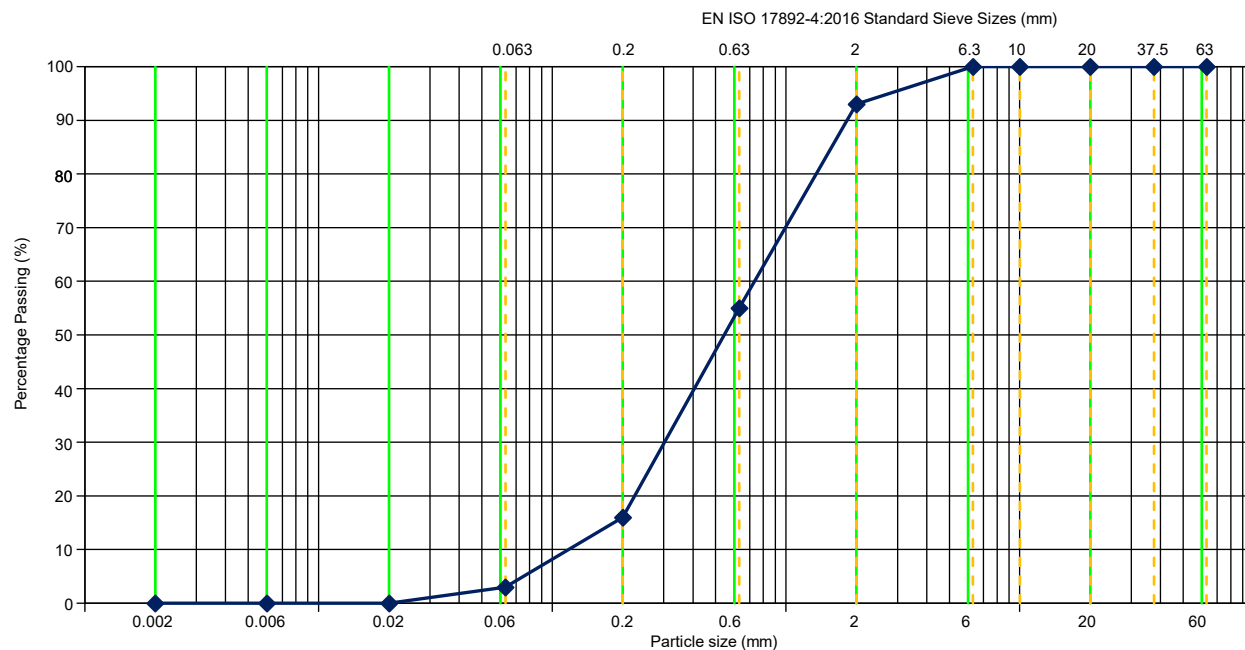
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B3-017	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	93		
0.63	55		
0.2	16		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	7%
	Sand	90%
	Silt	3%
	Clay	0%

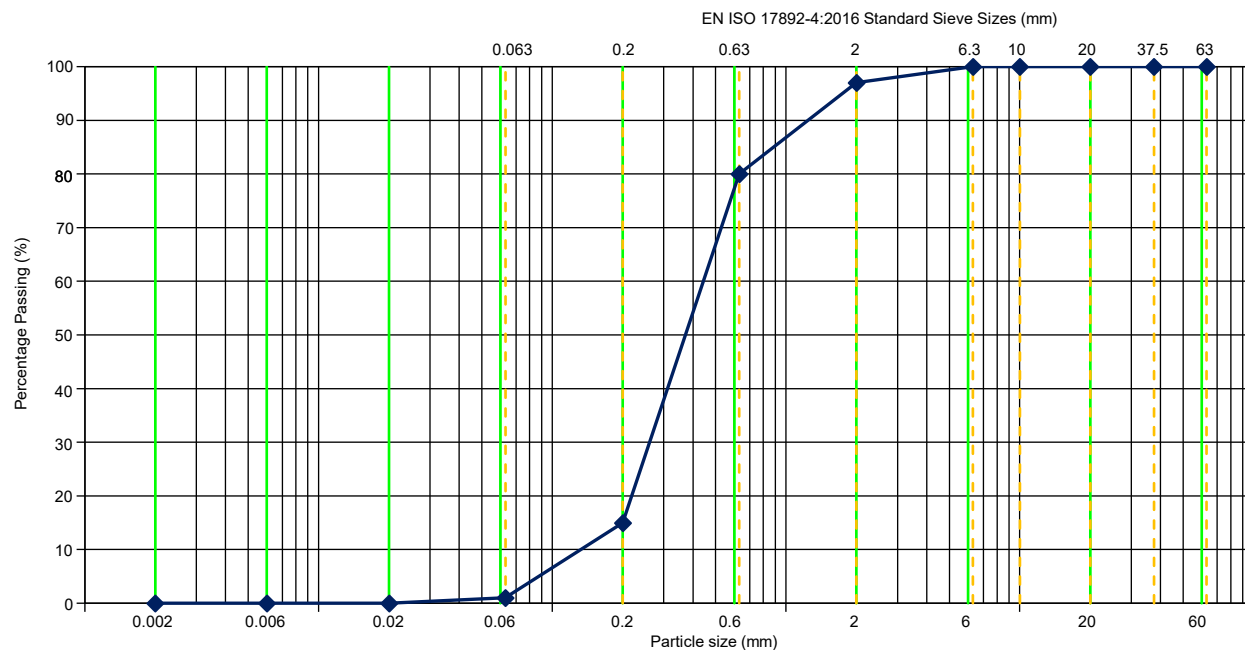
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	5.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B3-018	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	97		
0.63	80		
0.2	15		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	96%
	Silt	1%
	Clay	0%

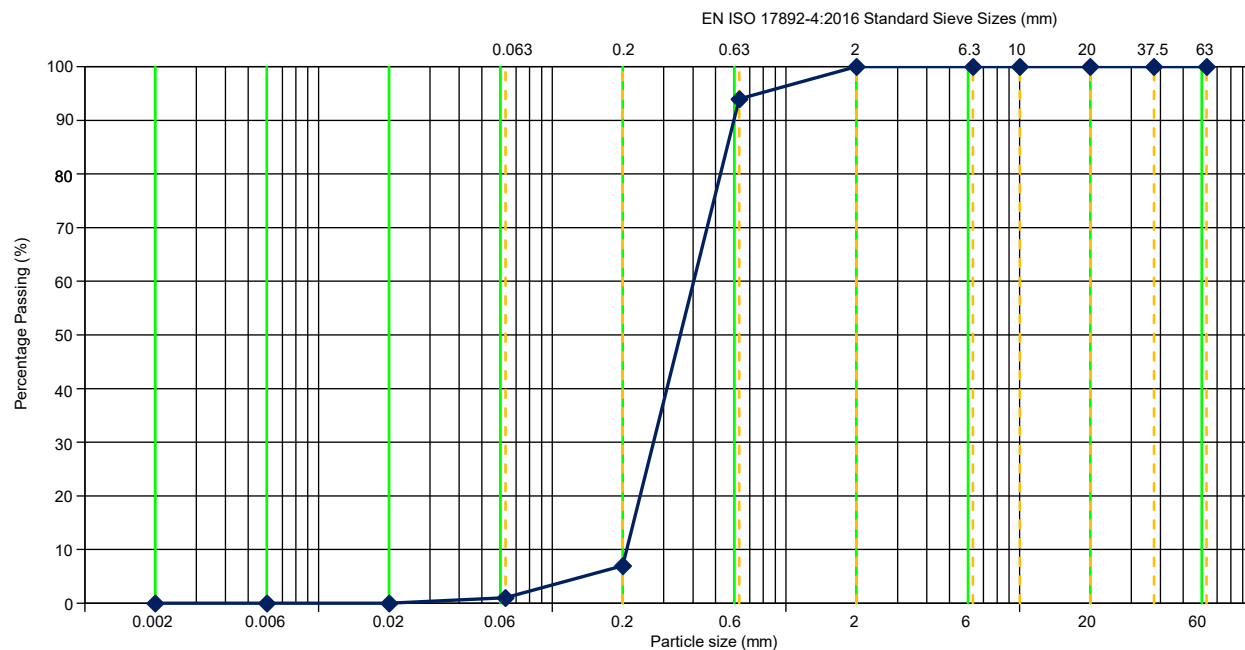
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B3-019	Comments	Sample is a SAND, fine to coarse, sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	94		
0.2	7		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	99%
	Silt	1%
	Clay	0%

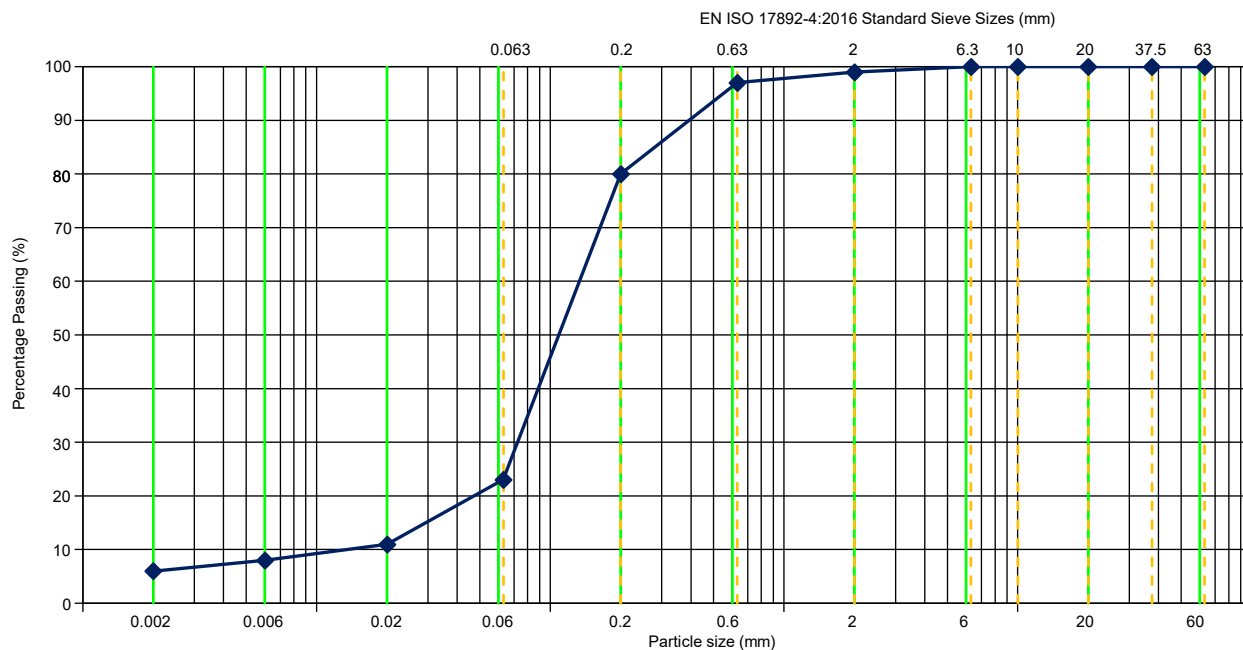
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B3-021	Comments Sample is a SAND, medium, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	11
37.5	100	0.006	8
20	100	0.002	6
10	100		
6.3	100		
2	99		
0.63	97		
0.2	80		
0.063	23		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	76%
	Total Fines	23%
	Silt	17%
	Clay	6%

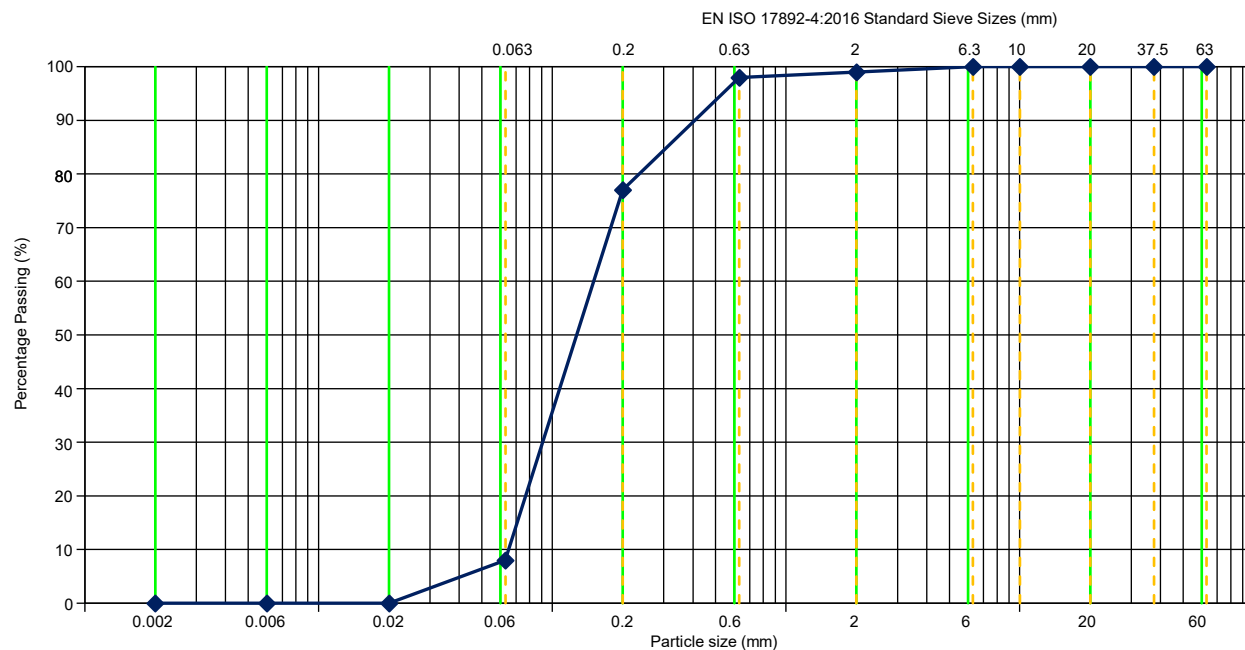
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	9.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-022	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	98		
0.2	77		
0.063	8		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	91%
	Total Fines	8%
	Silt	8%
	Clay	0%

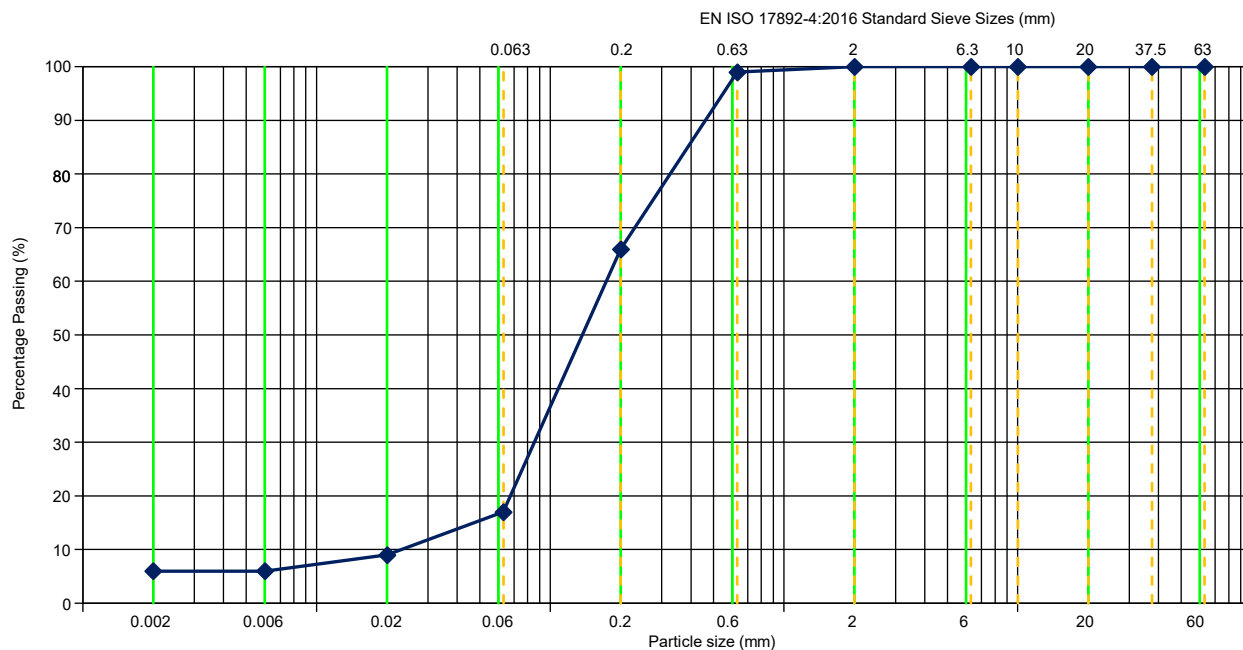
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B3-023	Comments Sample is a SAND, fine to medium, sorted, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	6
20	100	0.002	6
10	100		
6.3	100		
2	100		
0.63	99		
0.2	66		
0.063	17		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	83%
	Total Fines	17%
	Silt	11%
	Clay	6%

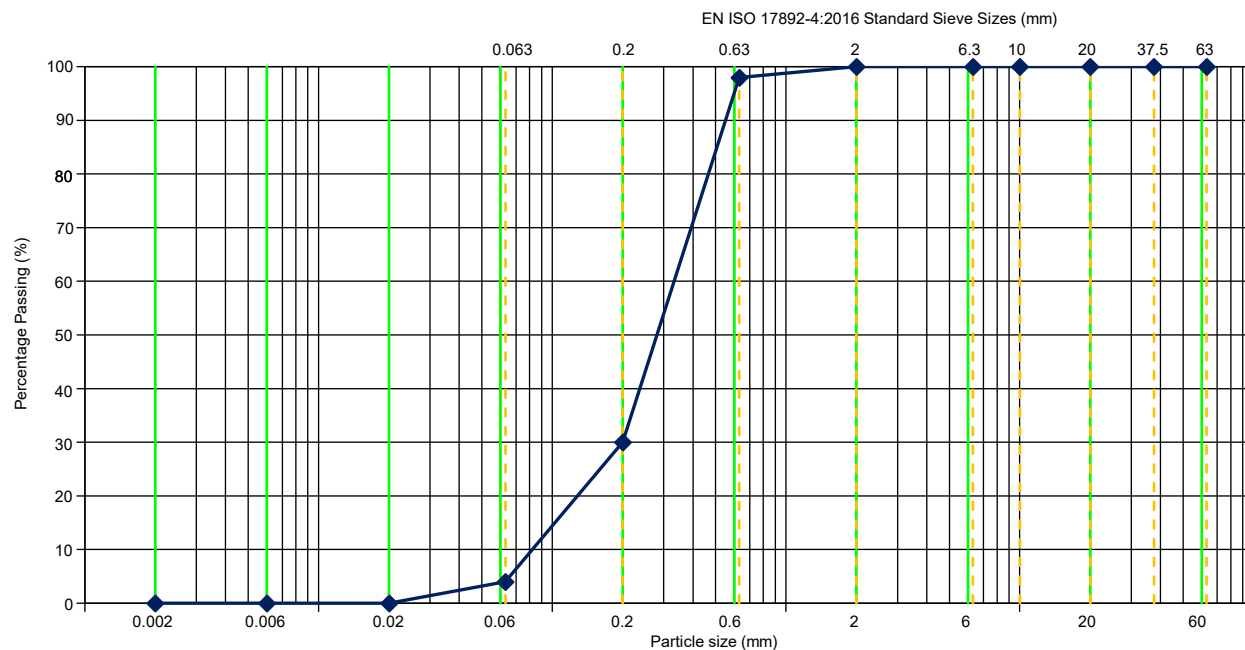
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	7.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B3-024	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	98		
0.2	30		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	96%
	Silt	4%
	Clay	0%

Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B3-025	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Summary of Chemical Test Results - Block 3



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		Analyte	Organic Matter Content	Total Organic Carbon
		Top (m)	Base (m)			
				LOD	0.1	0.1
				Unit	% w/w	% w/w C
B3	783-GS-OWF-B3-023	0.00	0.20		0.97	0.56
B3	783-GS-OWF-B3-024	0.00	0.20		0.97	0.56
B3	783-GS-OWF-B3-025	0.00	0.20		0.33	0.19

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

CHEM - Block 3

GRAB SAMPLE RECORDS - BLOCK 4

DESCRIPTION	PAGES INCLUDED
BLOCK 4	
Summary of Grab Samples – Block 4	2
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Grab Sample Logs	30
Summary of Particle Size Distribution Tests – Block 4	1
Particle Size Distribution Results	30
Summary of Chemical Test Results – Block 4	1

Summary of Grab Samples - Block 4

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B4	783-GS-OWF-B4-001	2021-07-31	Franklin	351220	6285312	39		
B4	783-GS-OWF-B4-002	2021-07-31	Franklin	350763	6284464	39		
B4	783-GS-OWF-B4-003	2021-07-31	Franklin	352909	6284234	41		
B4	783-GS-OWF-B4-004	2021-07-31	Franklin	352732	6283957	42		
B4	783-GS-OWF-B4-005	2021-07-31	Franklin	354038	6283133	41		
B4	783-GS-OWF-B4-006	2021-07-31	Franklin	354253	6280889	40		
B4	783-GS-OWF-B4-007	2021-07-31	Franklin	353604	6279367	41		
B4	783-GS-OWF-B4-008	2021-07-31	Franklin	351912	6279337	41		
B4	783-GS-OWF-B4-009	2021-07-31	Franklin	354863	6278308	40		
B4	783-GS-OWF-B4-010	2021-07-31	Franklin	353402	6277034	40		
B4	783-GS-OWF-B4-011	2021-07-31	Franklin	352088	6276841	40		
B4	783-GS-OWF-B4-012	2021-07-31	Franklin	352885	6275582	39		
B4	783-GS-OWF-B4-013	2021-07-31	Franklin	353946	6275528	39		
B4	783-GS-OWF-B4-014	2021-07-31	Franklin	354321	6275354	39		
B4	783-GS-OWF-B4-015	2021-07-31	Franklin	355387	6274206	39		
B4	783-GS-OWF-B4-016	2021-07-31	Franklin	352278	6273677	38		
B4	783-GS-OWF-B4-017	2021-07-31	Franklin	353512	6271733	40		
B4	783-GS-OWF-B4-018	2021-07-31	Franklin	353330	6269311	38		

Client **ENERGINET**

Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 4**

Summary of Grab Samples - Block 4

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B4	783-GS-OWF-B4-019	2021-07-31	Franklin	354515	6268850	41		
B4	783-GS-OWF-B4-020	2021-07-31	Franklin	352895	6268813	34		
B4	783-GS-OWF-B4-021	2021-07-31	Franklin	354444	6267154	41		
B4	783-GS-OWF-B4-022	2021-07-31	Franklin	356184	6266805	41		
B4	783-GS-OWF-B4-023	2021-07-31	Franklin	353795	6265070	40		
B4	783-GS-OWF-B4-024	2021-07-31	Franklin	356292	6264863	43		
B4	783-GS-OWF-B4-025	2021-08-07	Franklin	356443	6263692	43		
B4	783-GS-OWF-B4-026	2021-08-07	Franklin	356195	6261207	43		
B4	783-GS-OWF-B4-027	2021-08-07	Franklin	353940	6260067	42		
B4	783-GS-OWF-B4-028	2021-08-07	Franklin	355692	6259617	44		
B4	783-GS-OWF-B4-029	2021-08-07	Franklin	355137	6257878	44		
B4	783-GS-OWF-B4-030	2021-08-07	Franklin	354053	6257525	45		

Client **ENERGINET**

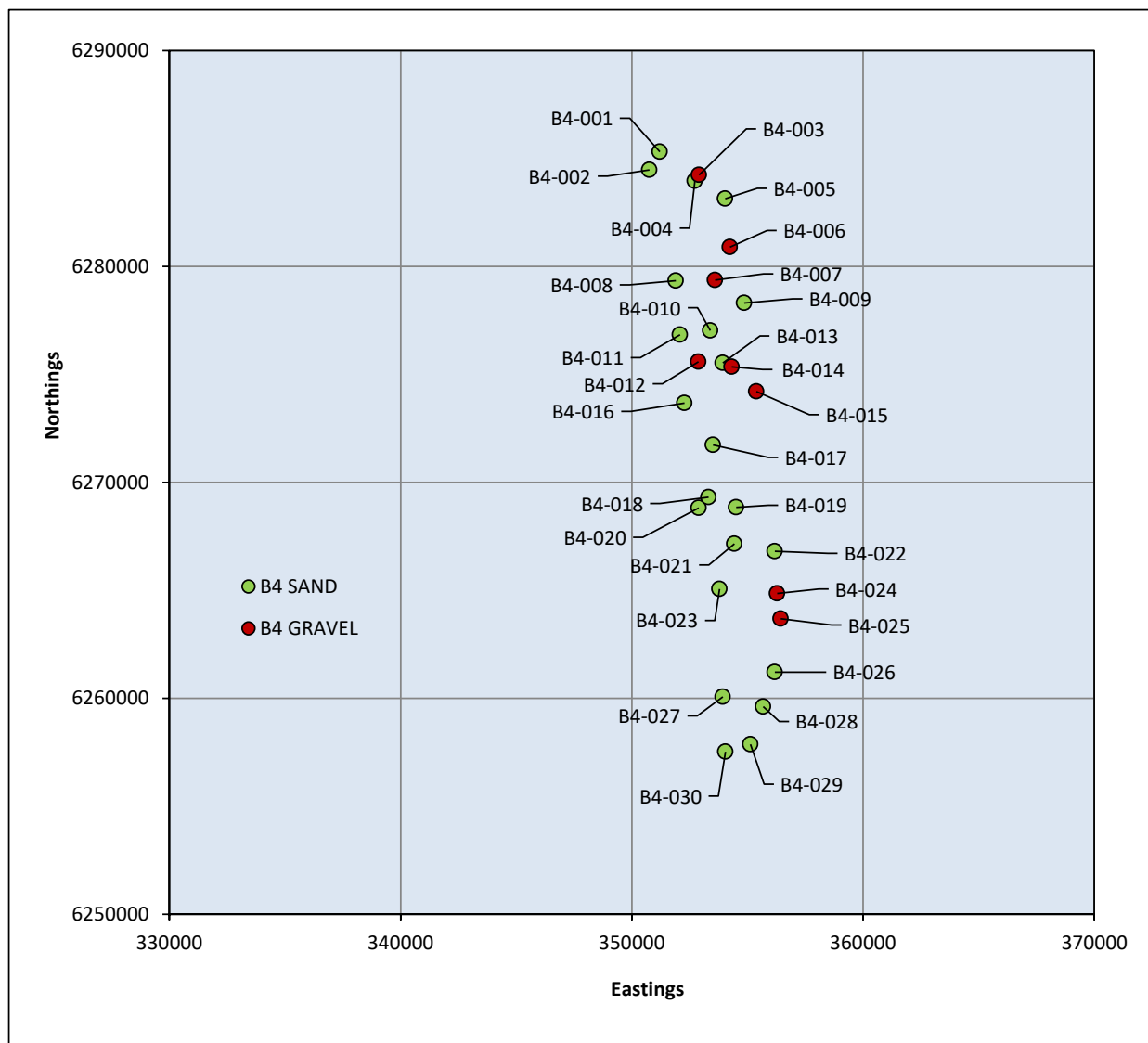
Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 4**

Plot of Grab Sample Material Types - Block 4



MMT Project No. 103783



Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Figure

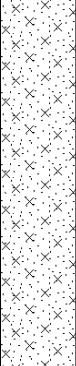
GEOL - Block 4

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine to medium shell fragments, occasional fine to medium gravel size pockets of black silty, fine to medium sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	3 %
Sand	96 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-001	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 351220 N 6285312		
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B4	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B4-001	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, rare subangular fine shell fragments and intact shells, up to 15mm in size, rare fine to medium gravel size pockets of dark grey and black silty fine sand, 1 no. extremely thin worm, 40mm in length, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	98 %
Total fines	2 %
Silt	2 %
Clay	

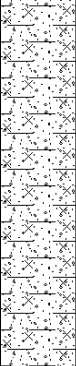
MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-002	Comments:
Vessel:	Franklin	Location Coordinates:	E 350763 N 6284464			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-002

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 85% subangular to subrounded fine to coarse of various lithologies and 15% angular to subangular fine shell fragments, slightly silty, very sandy, sand is medium to coarse, orangish brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	50 %
Sand	48 %
Total fines	2 %
Silt	2 %
Clay	

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-003	Comments:
Vessel:	Franklin	Location Coordinates:	E 352909 N 6284234			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-003

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly, gravel is 100% subangular fine shell fragments, medium gravel size pockets of orangish brown medium to coarse sand, organic odour, dark greyish black, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

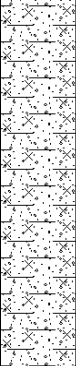
Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	71 %
Total fines	27 %
Silt	18 %
Clay	9 %

Chemical Tests

Total Organic Matter	1.28 %
Total Organic Carbon	0.74 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-004	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 352732 N 6283957		
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B4 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-004

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly, gravel is 100% subangular fine shell fragments, greyish black and orangish brown, slight organic odour, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	82 %
Total fines	16 %
Silt	14 %
Clay	2 %

Chemical Tests

Total Organic Matter	1.00 %
Total Organic Carbon	0.58 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-005	Comments:
Vessel:	Franklin	Location Coordinates:	E 354038 N 6283133			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-005

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to medium, unsorted, 95% subangular to rounded fine to medium of various lithologies and 5% subangular fine shell fragments, slightly silty, very sandy, sand is medium to coarse, dark orangish brown and greyish black, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 75 %
 Sand 24 %
 Total fines 1 %
 Silt 1 %
 Clay

Chemical Tests

Total Organic Matter 0.29 %
 Total Organic Carbon 0.17 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-006	Comments:
Vessel:	Franklin	Location Coordinates:	E 354253 N 6280889			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-006

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, medium to coarse, sorted, 100% subangular to subrounded fine to coarse of various lithologies, slightly silty, slightly sandy, sand is medium to coarse, 1 no. subangular cobble of gneiss with partial encrusting marine organisms, grey and brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	63 %	+ 34 % cobbles
Sand	2 %	
Total fines	1 %	
Silt	1 %	
Clay		

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-007	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 353604 N 6279367				
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B4-007	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, sorted, slightly silty, slightly gravelly, gravel is subangular to subrounded fine to medium shell fragments and intact shells, medium gravel size pockets of grey, fine to medium sand, dark greyish black, organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 2 %
 Sand 94 %
 Total fines 4 %
 Silt 4 %
 Clay

Chemical Tests

Total Organic Matter 0.71 %
 Total Organic Carbon 0.41 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-008	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 351912 N 6279337		
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B4-008	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 60% angular to rounded fine to coarse of various lithologies and 40% subangular fine to medium shell fragments, occasional fine to medium gravel size pockets of fibrous organic matter, dark brownish grey, organic odour, slightly calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 9 %
 Sand 83 %
 Total fines 8 %
 Silt 8 %
 Clay

Chemical Tests

Total Organic Matter 0.33 %
 Total Organic Carbon 0.19 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-009	Comments:
Vessel:	Franklin	Location Coordinates:	E 354863 N 6278308			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B4	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-009

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, unsorted, silty, very gravelly, gravel is 100% subangular to subrounded fine to coarse of various lithologies, 1 no. subrounded cobble, occasional fine to medium gravel size pockets of black silty fine sand, dark brownish grey, non-calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

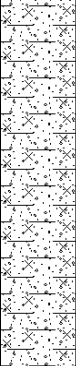
Laboratory Test Results:
Particle Size Distribution

Gravel 33 % + 17 % cobbles
 Sand 43 %
 Total fines 7 %
 Silt 7 %
 Clay

Chemical Tests

Total Organic Matter 0.98 %
 Total Organic Carbon 0.57 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-010	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 353402 N 6277034			
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B4	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-010

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly clayey, silty, slightly gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments, dark brownish grey, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

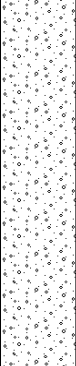
Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	86 %
Total fines	12 %
Silt	8 %
Clay	4 %

Chemical Tests

Total Organic Matter	0.67 %
Total Organic Carbon	0.39 %

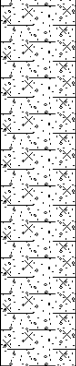
MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-011	Comments:
Vessel:	Franklin	Location Coordinates:	E 352088 N 6276841			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-011

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	GRAVEL, medium to coarse, poorly sorted, 95% subangular to subrounded medium to coarse of various lithologies with partial encrusting marine organisms and 5% subangular fine to medium shell fragments, slightly sandy, sand is fine to coarse, 2 no. subrounded cobbles, grey, brown and black, non-calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 68 % + 31 % cobbles
 Sand 1 %
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-012	Comments:
Vessel:	Franklin	Location Coordinates:	E 352885 N 6275582			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B4	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-012

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly clayey, very silty, slightly gravelly, gravel is 50% subangular to subrounded fine to medium of various lithologies and 50% subangular fine to medium shell fragments, 1 no. intact echinoderm, 40mm in size, dark brownish grey, slight organic odour, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	3 %
Sand	82 %
Total fines	15 %
Silt	11 %
Clay	4 %

Chemical Tests

Total Organic Matter	0.38 %
Total Organic Carbon	0.22 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-013	Comments:	Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 353946 N 6275528				
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B4-013			

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 95% subangular to subrounded fine to coarse of various lithologies and 5% of subangular fine shell fragments, slightly silty, very sandy, sand is fine to coarse, fine to medium gravel size pockets of black sandy silt, dark brownish grey, strong organic odour, non-calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

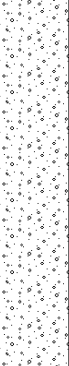
Laboratory Test Results:
Particle Size Distribution

Gravel 74 %
 Sand 22 %
 Total fines 4 %
 Silt 4 %
 Clay

Chemical Tests

Total Organic Matter 0.41 %
 Total Organic Carbon 0.24 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-014	Comments:
Vessel:	Franklin	Location Coordinates:	E 354321 N 6275354			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B4	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-014

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, medium to coarse, sorted, 100% subangular to subrounded medium to coarse of various lithologies with partial encrusting marine organisms, slightly sandy, sand is medium to coarse, sand is black with organic odour, 1 no. subangular cobble with encrusting marine organisms, greyish brown and black, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

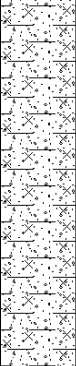
Laboratory Test Results:
Particle Size Distribution

Gravel 32 % + 67 % cobbles
 Sand 1 %
 Total fines
 Silt
 Clay

Chemical Tests

Total Organic Matter 1.00 %
 Total Organic Carbon 0.58 %

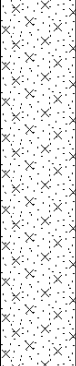
MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-015	Comments:
Vessel:	Franklin	Location Coordinates:	E 355387 N 6274206			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	39	Survey Route: B4	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-015

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, unsorted, slightly clayey, very silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional fine to medium gravel size pockets of black silty sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	82 %
Total fines	17 %
Silt	13 %
Clay	4 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-016	Comments:
Vessel:	Franklin	Location Coordinates:	E 352278 N 6273677			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-016

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, rare subangular fine gravel size shell fragments, 2 no. extremely thin worms up to 30mm in length, dark brownish grey, slight organic odour, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

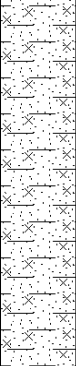
Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 96 %
 Total fines 4 %
 Silt 4 %
 Clay

Chemical Tests

Total Organic Matter 0.29 %
 Total Organic Carbon 0.17 %

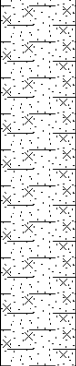
MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-017	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 353512 N 6271733				
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B4-017	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, very silty, rare fine to medium gravel size pockets of dark grey silty sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	85 %
Total fines	15 %
Silt	12 %
Clay	3 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-018	Comments:
Vessel:	Franklin	Location Coordinates:	E 353330 N 6269311			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-018

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly clayey, very silty, rare subangular fine gravel size shell fragments and organic marine debris, dark grey and black, strong organic odour, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

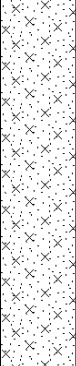
Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	86 %
Total fines	13 %
Silt	11 %
Clay	2 %

Chemical Tests

Total Organic Matter	0.62 %
Total Organic Carbon	0.36 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-019	Comments:
Vessel:	Franklin	Location Coordinates:	E 354515 N 6268850			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-019

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, rare subangular to subrounded fine to medium gravel size shell fragments and intact shells, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel

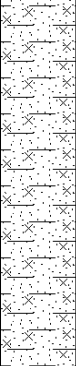
Sand 98 %

Total fines 2 %

Silt 2 %

Clay

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-020	Comments:
Vessel:	Franklin	Location Coordinates:	E 352895 N 6268813			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	34	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-020

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly clayey, very silty, rare subangular fine gravel size shell fragments, fibrous organic matter and rare tubular marine debris up to 30mm in length, dark brownish grey, organic odour, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

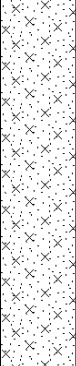
Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 86 %
 Total fines 14 %
 Silt 11 %
 Clay 3 %

Chemical Tests

Total Organic Matter 0.67 %
 Total Organic Carbon 0.39 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-021	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 354444 N 6267154				
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B4-021	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, frequent fine to medium gravel size pockets of black fine sand, rare fine to medium gravel size shell fragments, orangish brown and grey, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 96 %
 Total fines 4 %
 Silt 4 %
 Clay

Chemical Tests

Total Organic Matter 0.24 %
 Total Organic Carbon 0.14 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-022	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 356184 N 6266805			
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B4	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-022

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, gravelly, gravel is 100% subangular fine shell fragments, rare fibrous organic matter, dark brownish grey and black, organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

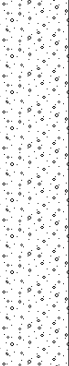
Laboratory Test Results:
Particle Size Distribution

Gravel 8 %
 Sand 90 %
 Total fines 2 %
 Silt 2 %
 Clay

Chemical Tests

Total Organic Matter 0.43 %
 Total Organic Carbon 0.25 %

MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location: 783-GS-OWF-B4-023	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 353795 N 6265070				
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B4-023	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 95% subangular to rounded fine to coarse of various lithologies and 5% subangular fine to medium shell fragments, very sandy, sand is fine to coarse, occasional fine to medium gravel size pockets of dark grey silty sand, dark brownish grey, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 63 %
 Sand 37 %
 Total fines
 Silt
 Clay

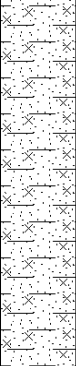
MMT Project ID:	103783	Location Test Date:	31/07/2021	GS Location:	783-GS-OWF-B4-024	Comments:
Vessel:	Franklin	Location Coordinates:	E 356292 N 6264863			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-024

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 90% subangular to rounded fine to coarse of various lithologies and 10% subangular fine to medium shell fragments, silty, very sandy, sand is fine to coarse, dark brownish grey, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	56 %
Sand	38 %
Total fines	6 %
Silt	6 %
Clay	

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B4-025	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 356443 N 6263692				
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B4-025	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, silty, 1 no. intact echinoderm, 35mm in size, frequent fine to medium gravel size pockets of black clayey silt, dark brownish grey, slight organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	85 %
Total fines	15 %
Silt	10 %
Clay	5 %

Chemical Tests

Total Organic Matter	0.97 %
Total Organic Carbon	0.56 %

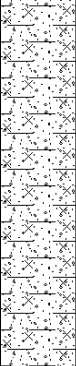
MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B4-026	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 356195 N 6261207		
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B4 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-026

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional fine to medium gravel size pockets of black sandy silt, 1 no. thin worm 40mm in length, greyish brown, locally orange brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	3 %
Sand	96 %
Total fines	1 %
Silt	1 %
Clay	

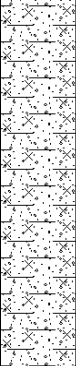
MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B4-027		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 353940 N 6260067				
Client:	Energinet	Water Depth (m LAT):	42	Survey Route:	B4	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
						783-GS-OWF-B4-027	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, unsorted, slightly clayey, very silty, slightly gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments and intact shells, occasional medium gravel size pockets of grey silty clay with black organic silt, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	84 %
Total fines	14 %
Silt	11 %
Clay	3 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location:	783-GS-OWF-B4-028	Comments:
Vessel:	Franklin	Location Coordinates:	E 355692 N 6259617			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	44	Survey Route: B4	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B4-028

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, unsorted, clayey, very silty, gravelly, gravel is 100% subangular to subrounded fine to coarse shell fragments and intact shells, dark brownish grey, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

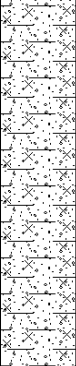
Laboratory Test Results:
Particle Size Distribution

Gravel	9 %
Sand	71 %
Total fines	20 %
Silt	14 %
Clay	6 %

Chemical Tests

Total Organic Matter	1.36 %
Total Organic Carbon	0.79 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B4-029	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 355137 N 6257878		
Client:	Energinet	Water Depth (m LAT):	44	Survey Route: B4 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B4-029

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional fine to medium gravel size pockets of black sandy silt, dark greyish brown, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	70 %
Total fines	29 %
Silt	22 %
Clay	7 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B4-030	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 354053 N 6257525				
Client:	Energinet	Water Depth (m LAT):	45	Survey Route: B4	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B4-030	

Summary of Particle Size Distribution Tests - Block 4



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		PSD		Sediment Fraction (%)					
		Top (m)	Base (m)	Sieve	Sed.	Clay	Silt	Total Fines	Sand	Gravel	Cobbles
B4	783-GS-OWF-B4-001	0.00	0.20	Yes	No		1	1	96	3	
B4	783-GS-OWF-B4-002	0.00	0.20	Yes	No		2	2	98		
B4	783-GS-OWF-B4-003	0.00	0.20	Yes	No		2	2	48	50	
B4	783-GS-OWF-B4-004	0.00	0.20	Yes	Yes	9	18	27	71	2	
B4	783-GS-OWF-B4-005	0.00	0.20	Yes	Yes	2	14	16	82	2	
B4	783-GS-OWF-B4-006	0.00	0.20	Yes	No		1	1	24	75	
B4	783-GS-OWF-B4-007	0.00	0.20	Yes	No		1	1	2	63	34
B4	783-GS-OWF-B4-008	0.00	0.20	Yes	No		4	4	94	2	
B4	783-GS-OWF-B4-009	0.00	0.20	Yes	No		8	8	83	9	
B4	783-GS-OWF-B4-010	0.00	0.20	Yes	No		7	7	43	33	17
B4	783-GS-OWF-B4-011	0.00	0.20	Yes	Yes	4	8	12	86	2	
B4	783-GS-OWF-B4-012	0.00	0.20	Yes	No				1	68	31
B4	783-GS-OWF-B4-013	0.00	0.20	Yes	Yes	4	11	15	82	3	
B4	783-GS-OWF-B4-014	0.00	0.20	Yes	No		4	4	22	74	
B4	783-GS-OWF-B4-015	0.00	0.20	Yes	No				1	32	67
B4	783-GS-OWF-B4-016	0.00	0.20	Yes	Yes	4	13	17	82	1	
B4	783-GS-OWF-B4-017	0.00	0.20	Yes	No		4	4	96		
B4	783-GS-OWF-B4-018	0.00	0.20	Yes	Yes	3	12	15	85		
B4	783-GS-OWF-B4-019	0.00	0.20	Yes	Yes	2	11	13	86	1	
B4	783-GS-OWF-B4-020	0.00	0.20	Yes	No		2	2	98		
B4	783-GS-OWF-B4-021	0.00	0.20	Yes	Yes	3	11	14	86		
B4	783-GS-OWF-B4-022	0.00	0.20	Yes	No		4	4	96		
B4	783-GS-OWF-B4-023	0.00	0.20	Yes	No		2	2	90	8	
B4	783-GS-OWF-B4-024	0.00	0.20	Yes	No				37	63	
B4	783-GS-OWF-B4-025	0.00	0.20	Yes	No		6	6	38	56	
B4	783-GS-OWF-B4-026	0.00	0.20	Yes	Yes	5	10	15	85		
B4	783-GS-OWF-B4-027	0.00	0.20	Yes	No		1	1	96	3	
B4	783-GS-OWF-B4-028	0.00	0.20	Yes	Yes	3	11	14	84	2	
B4	783-GS-OWF-B4-029	0.00	0.2	Yes	Yes	6	14	20	71	9	
B4	783-GS-OWF-B4-030	0.00	0.2	Yes	Yes	7	22	29	70	1	

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

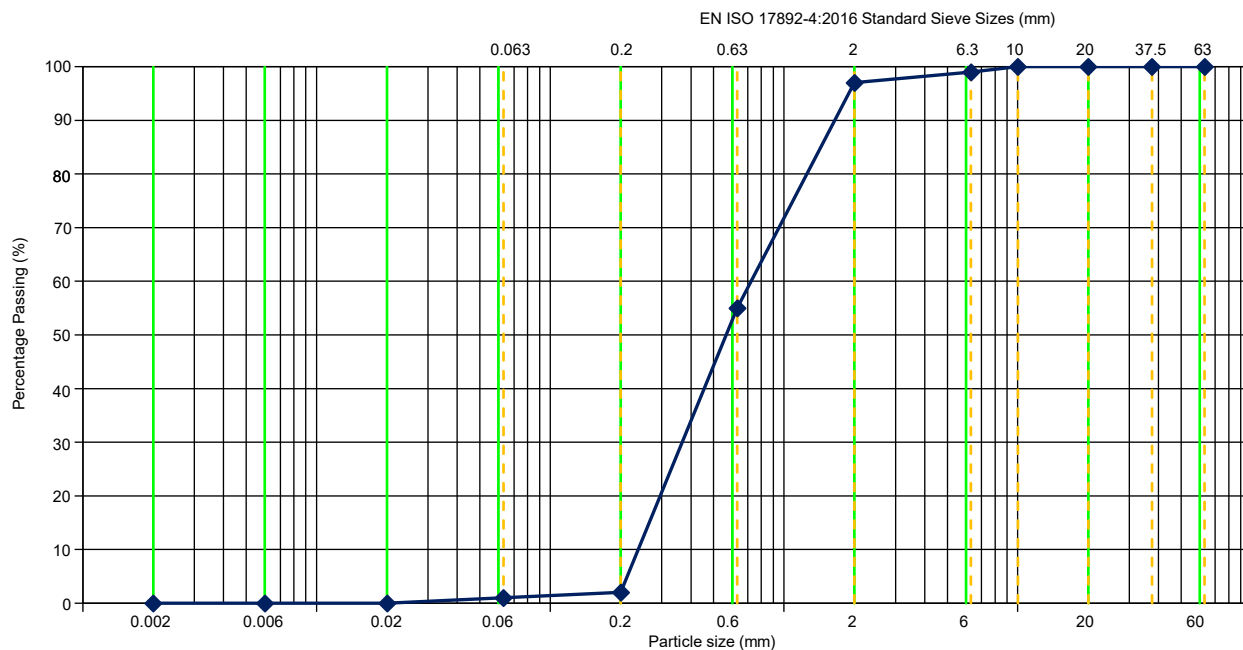
Carried out for

Energinet

Table

PSD - Block 4

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	99		
2	97		
0.63	55		
0.2	2		
0.063	1		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	96%
	Total Fines	1%
	Silt	1%
	Clay	0%

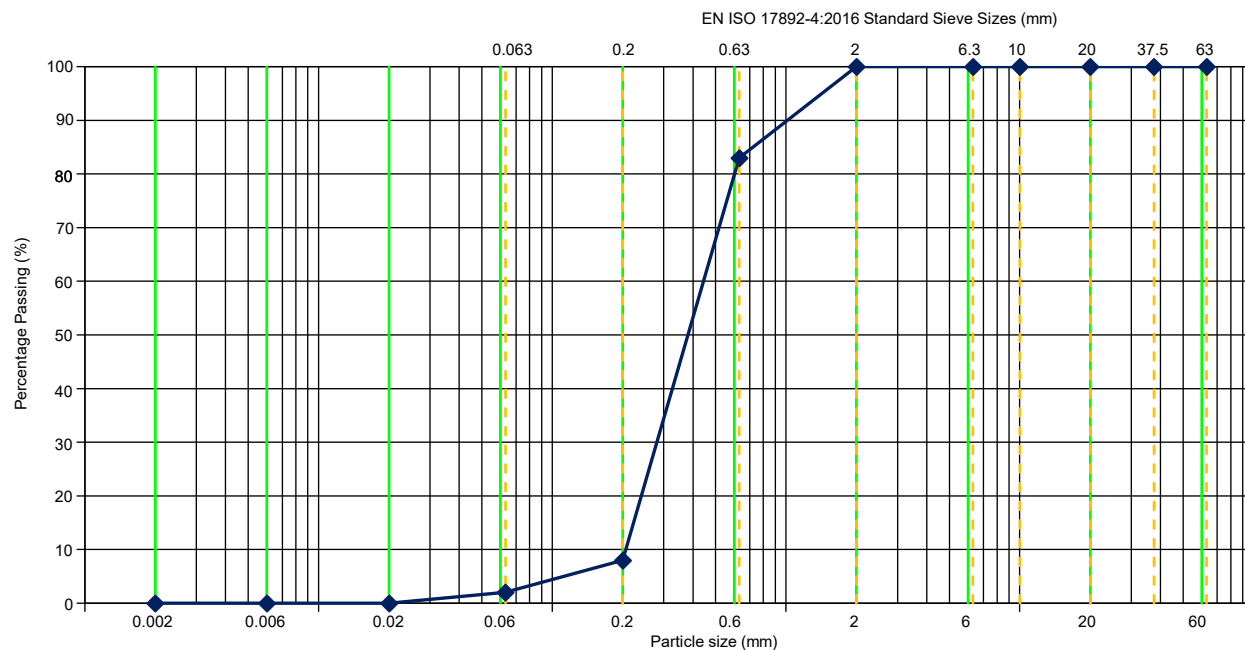
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-001	Comments Sample is a SAND, medium to coarse, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	83		
0.2	8		
0.063	2		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	98%
	Silt	2%
	Clay	0%

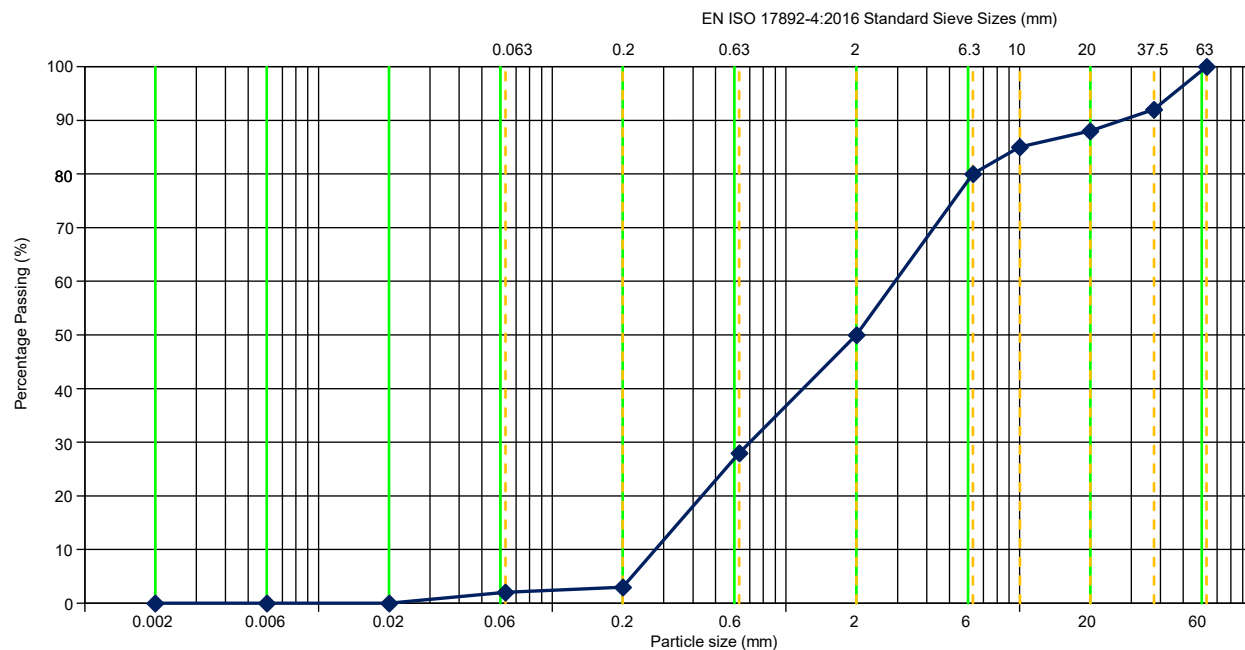
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-002	Comments	Sample is a SAND, medium to coarse, sorted, slightly silty.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	92	0.006	-
20	88	0.002	-
10	85		
6.3	80		
2	50		
0.63	28		
0.2	3		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	50%
	Sand	48%
	Total Fines	2%
	Silt	2%
	Clay	0%

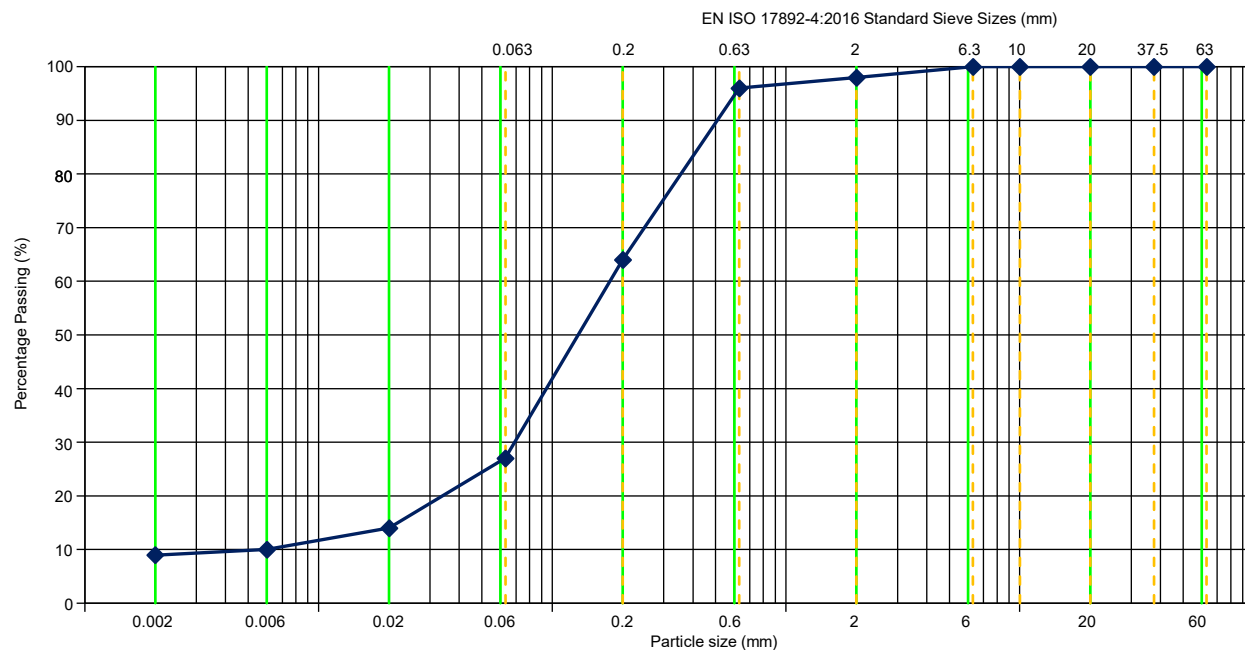
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	10.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.5

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-003	Comments Sample is a GRAVEL, fine to coarse, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	14
37.5	100	0.006	10
20	100	0.002	9
10	100		
6.3	100		
2	98		
0.63	96		
0.2	64		
0.063	27		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	71%
	Total Fines	27%
	Silt	18%
	Clay	9%

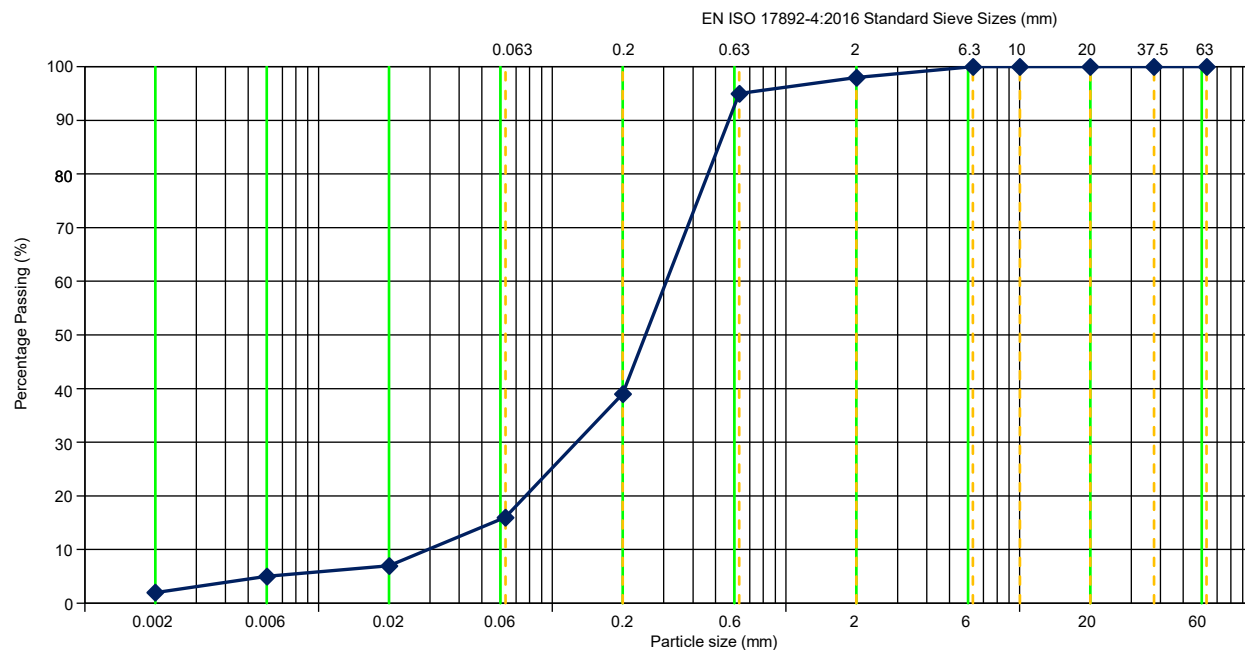
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	30.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	4.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-004	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	7
37.5	100	0.006	5
20	100	0.002	2
10	100		
6.3	100		
2	98		
0.63	95		
0.2	39		
0.063	16		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	82%
	Total Fines	16%
	Silt	14%
	Clay	2%

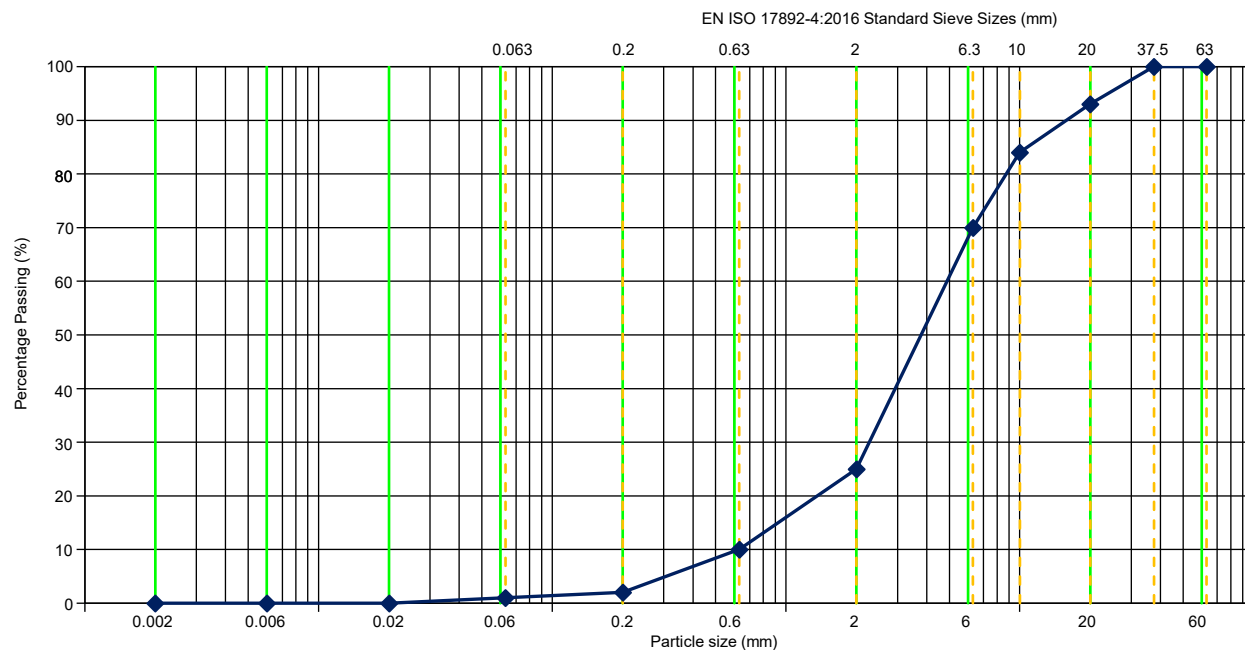
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	10.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-005	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	93	0.002	-
10	84		
6.3	70		
2	25		
0.63	10		
0.2	2		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	75%
	Sand	24%
	Total Fines	1%
	Silt	1%
	Clay	0%

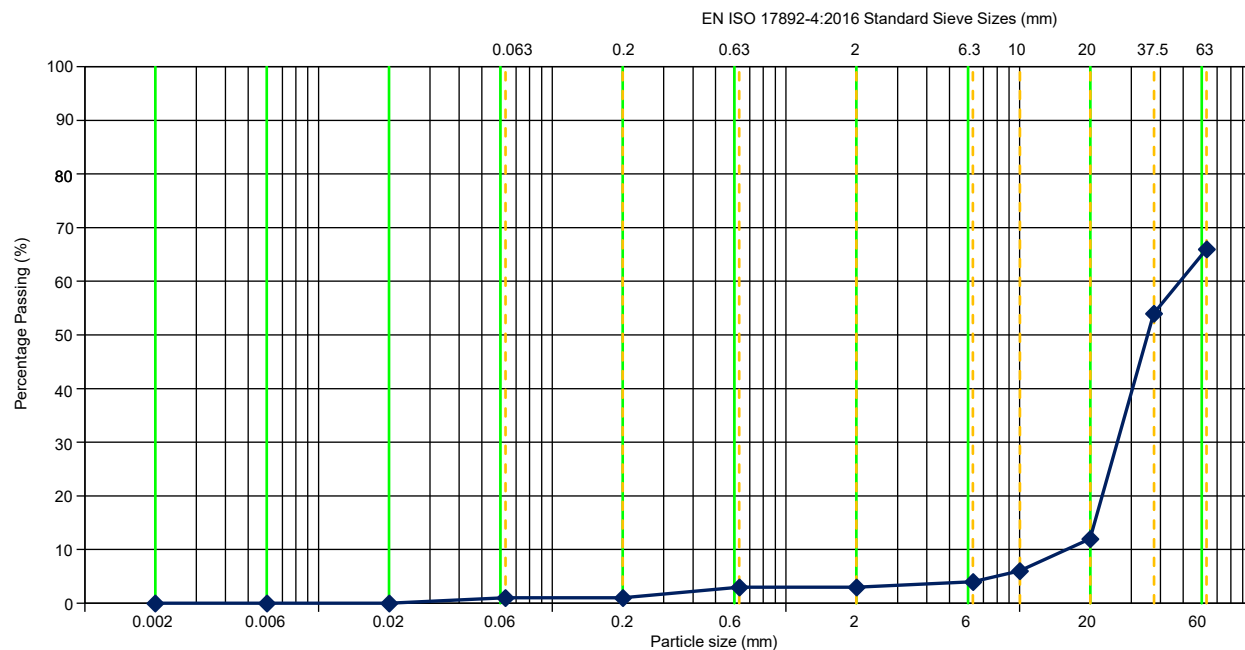
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	8.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-006	Comments Sample is a GRAVEL, fine to medium, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	66	0.02	-
37.5	54	0.006	-
20	12	0.002	-
10	6		
6.3	4		
2	3		
0.63	3		
0.2	1		
0.063	1		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	34%
	Gravel	63%
	Sand	2%
	Total Fines	1%
	Silt	1%
	Clay	0%

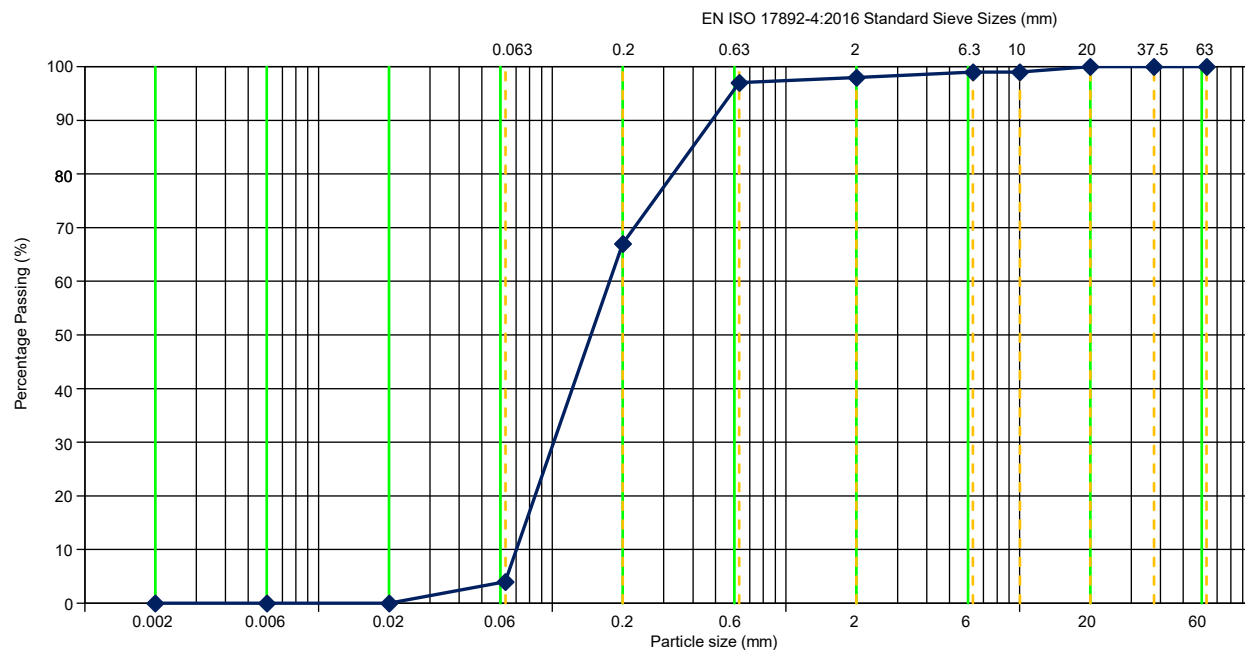
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-007	Comments Sample is a GRAVEL, medium to coarse, sorted, slightly silty, slightly sandy with 1 no. cobble.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	99		
6.3	99		
2	98		
0.63	97		
0.2	67		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	94%
	Silt	4%
	Clay	0%

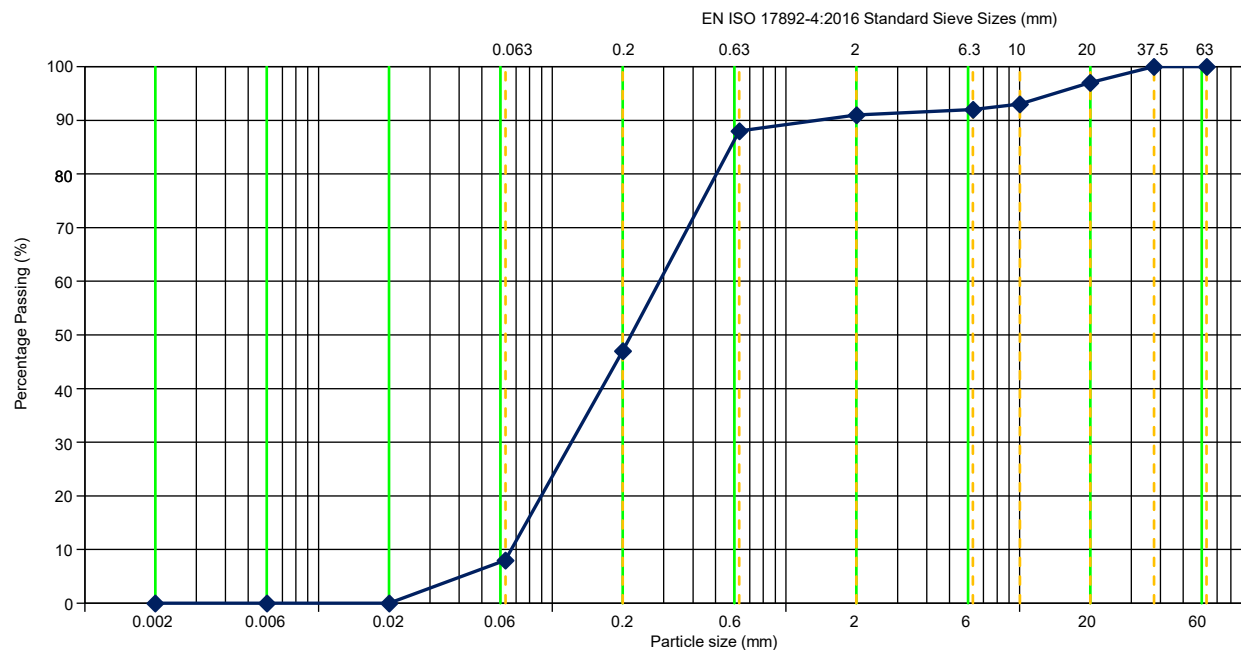
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-008	Comments Sample is a SAND, fine to medium, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	97	0.002	-
10	93		
6.3	92		
2	91		
0.63	88		
0.2	47		
0.063	8		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	9%
	Sand	83%
	Silt	8%
	Clay	0%

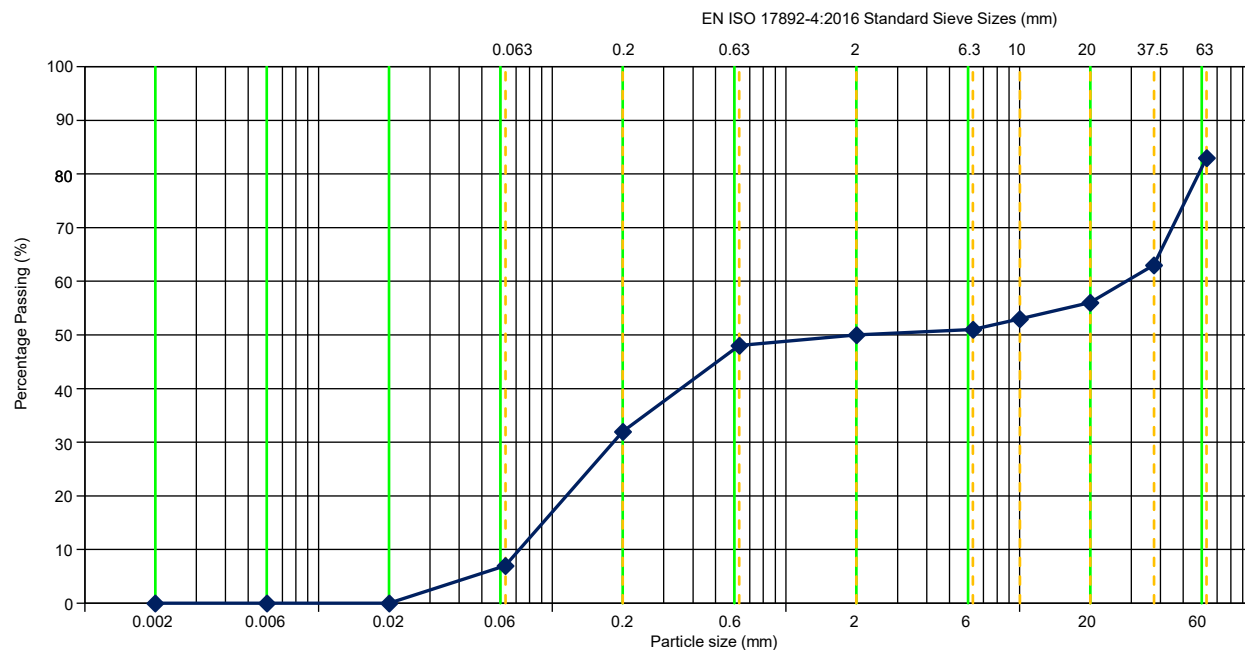
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-009	Comments Sample is a SAND, fine to medium, poorly sorted, silty, gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	83	0.02	-
37.5	63	0.006	-
20	56	0.002	-
10	53		
6.3	51		
2	50		
0.63	48		
0.2	32		
0.063	7		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	17%
	Gravel	33%
	Sand	43%
	Total Fines	7%
	Silt	7%
	Clay	0%

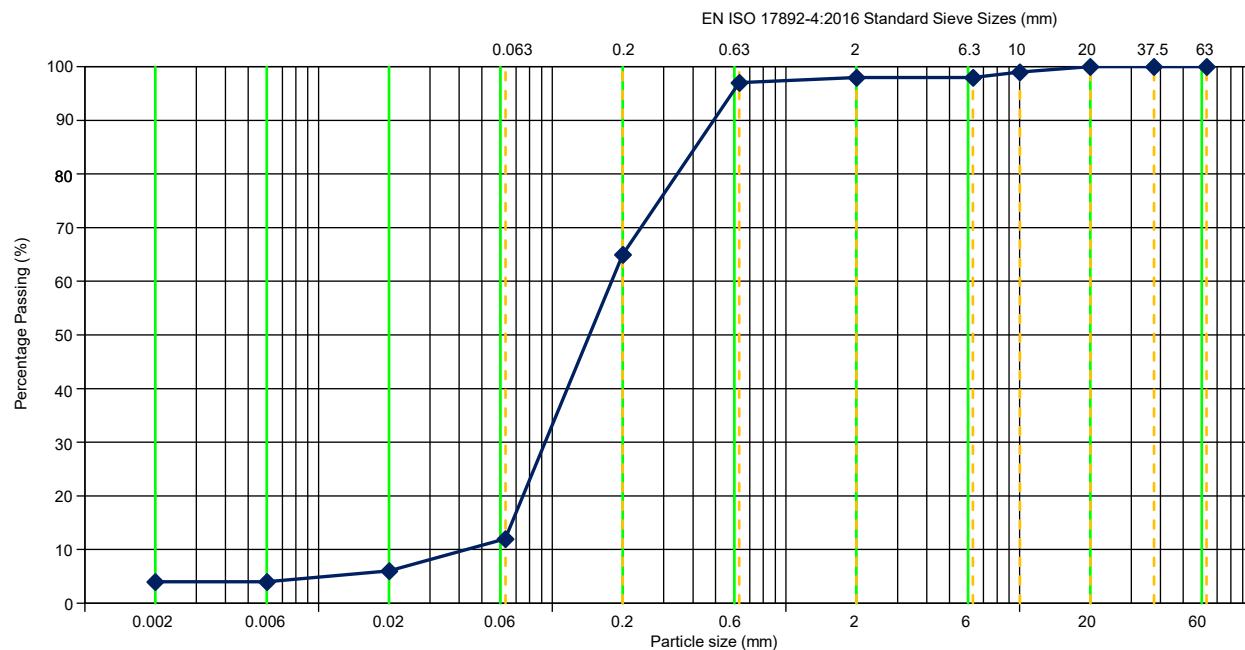
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	377.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-010	Comments Sample is a SAND, fine to medium, unsorted, silty, very gravelly with 1 no. cobble.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	6
37.5	100	0.006	4
20	100	0.002	4
10	99		
6.3	98		
2	98		
0.63	97		
0.2	65		
0.063	12		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	86%
	Total Fines	12%
	Silt	8%
	Clay	4%

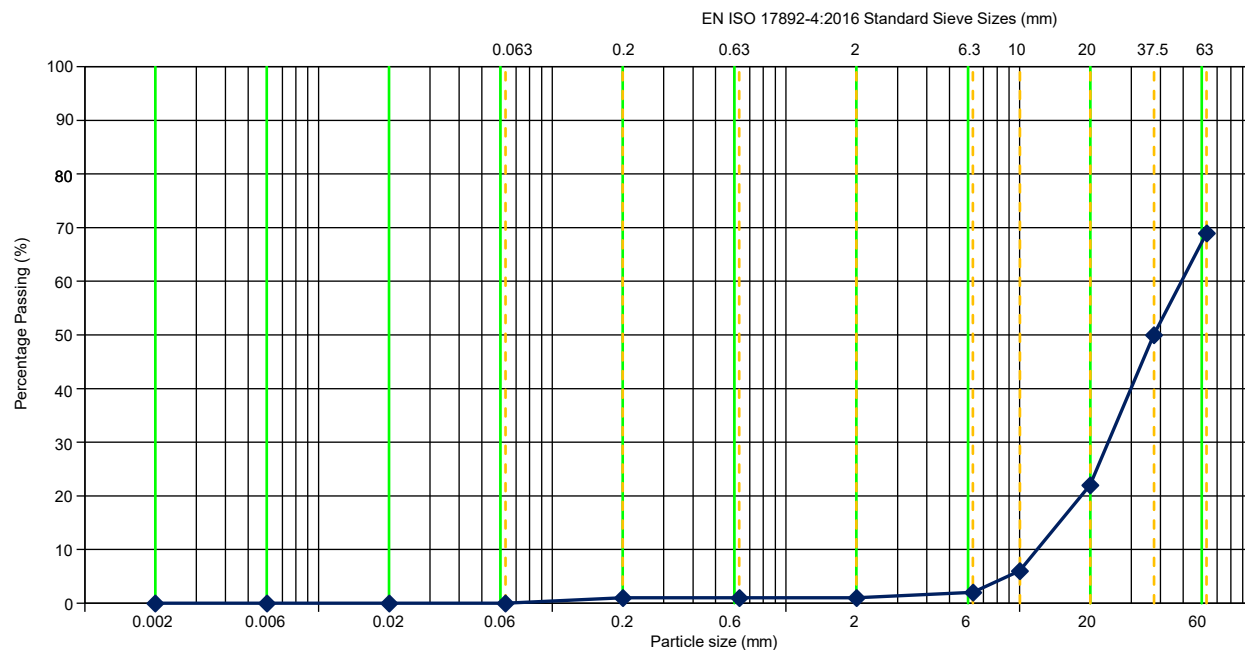
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	3.8
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-011	Comments Sample is a SAND, fine to medium, poorly sorted, slightly clayey, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	69	0.02	-
37.5	50	0.006	-
20	22	0.002	-
10	6		
6.3	2		
2	1		
0.63	1		
0.2	1		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	31%
	Gravel	68%
	Sand	1%
	Total Fines	0%
	Silt	0%
	Clay	0%

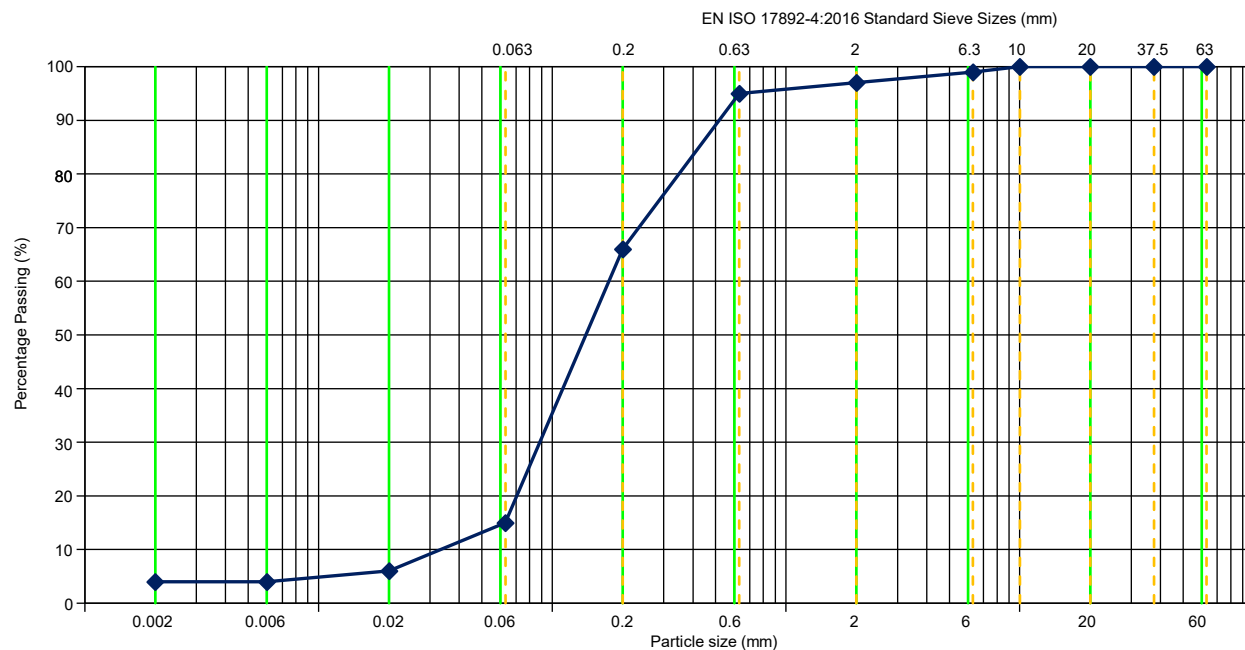
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-012	Comments Sample is a GRAVEL, medium to coarse, poorly sorted, slightly sandy with 2 no. cobbles.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	6
37.5	100	0.006	4
20	100	0.002	4
10	100		
6.3	99		
2	97		
0.63	95		
0.2	66		
0.063	15		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	82%
	Total Fines	15%
	Silt	11%
	Clay	4%

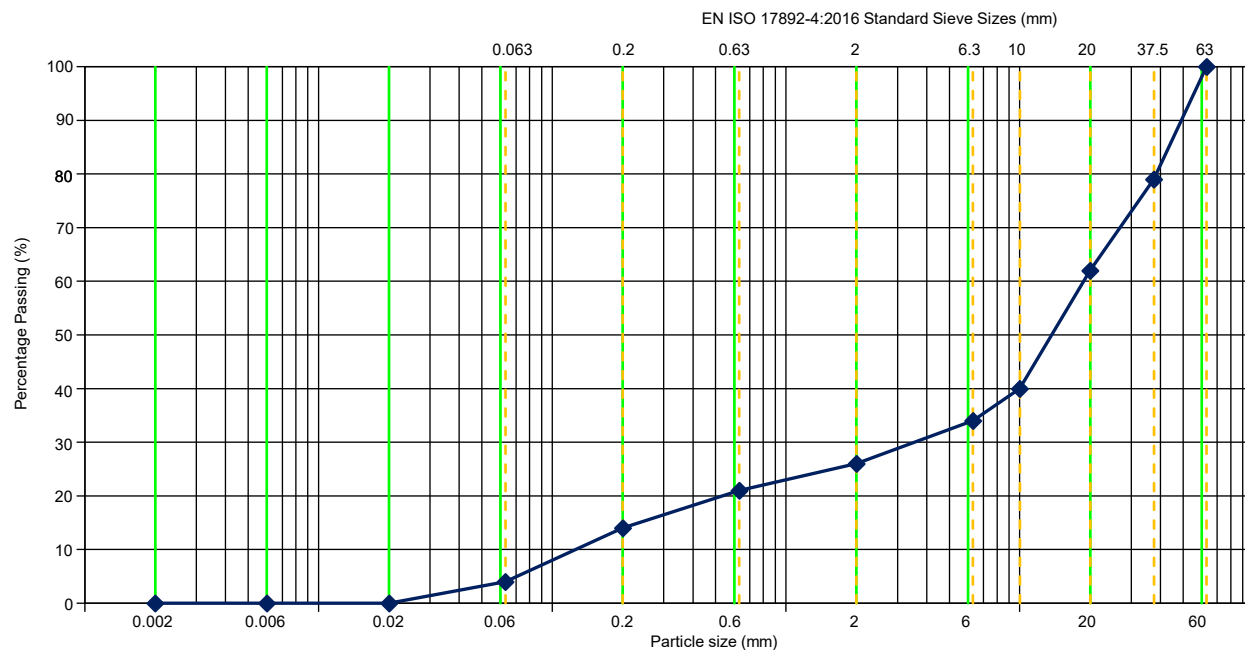
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.5

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-013	Comments Sample is a SAND, fine to medium, poorly sorted, slightly clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	79	0.006	-
20	62	0.002	-
10	40		
6.3	34		
2	26		
0.63	21		
0.2	14		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	74%
	Sand	22%
	Total Fines	4%
	Silt	4%
	Clay	0%

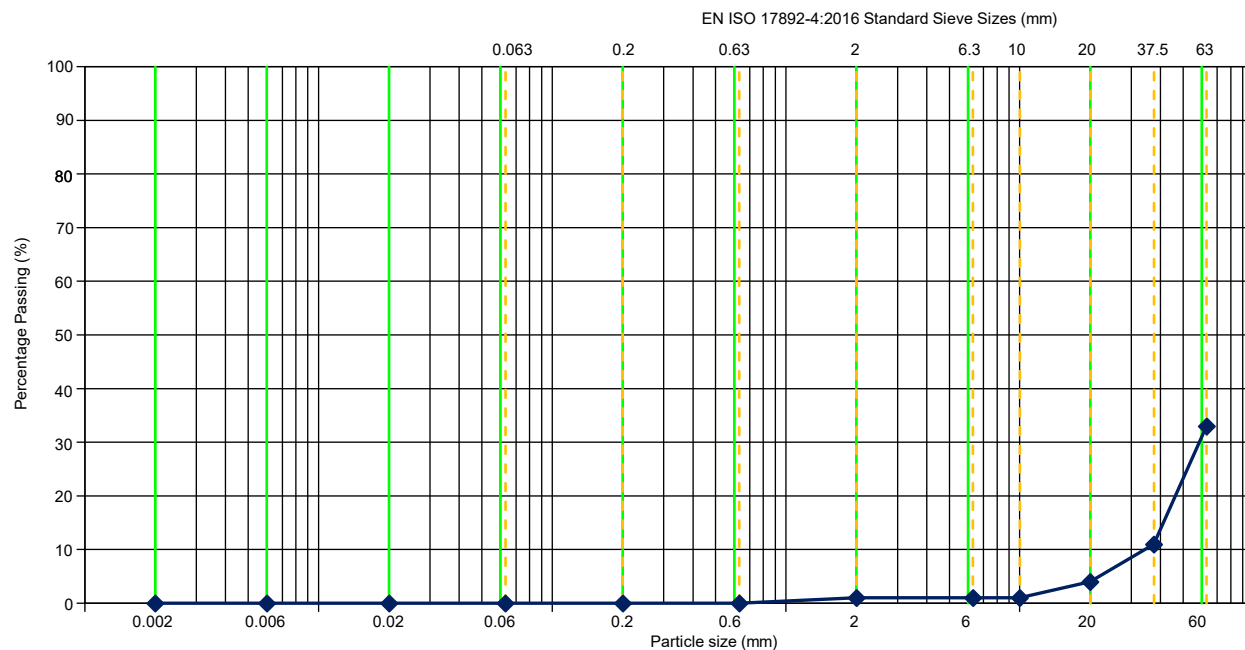
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	131.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	6.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-014	Comments Sample is a GRAVEL, fine to coarse, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	33	0.02	-
37.5	11	0.006	-
20	4	0.002	-
10	1		
6.3	1		
2	1		
0.63	0		
0.2	0		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	67%
	Gravel	32%
	Sand	1%
	Total Fines	0%
	Silt	0%
	Clay	0%

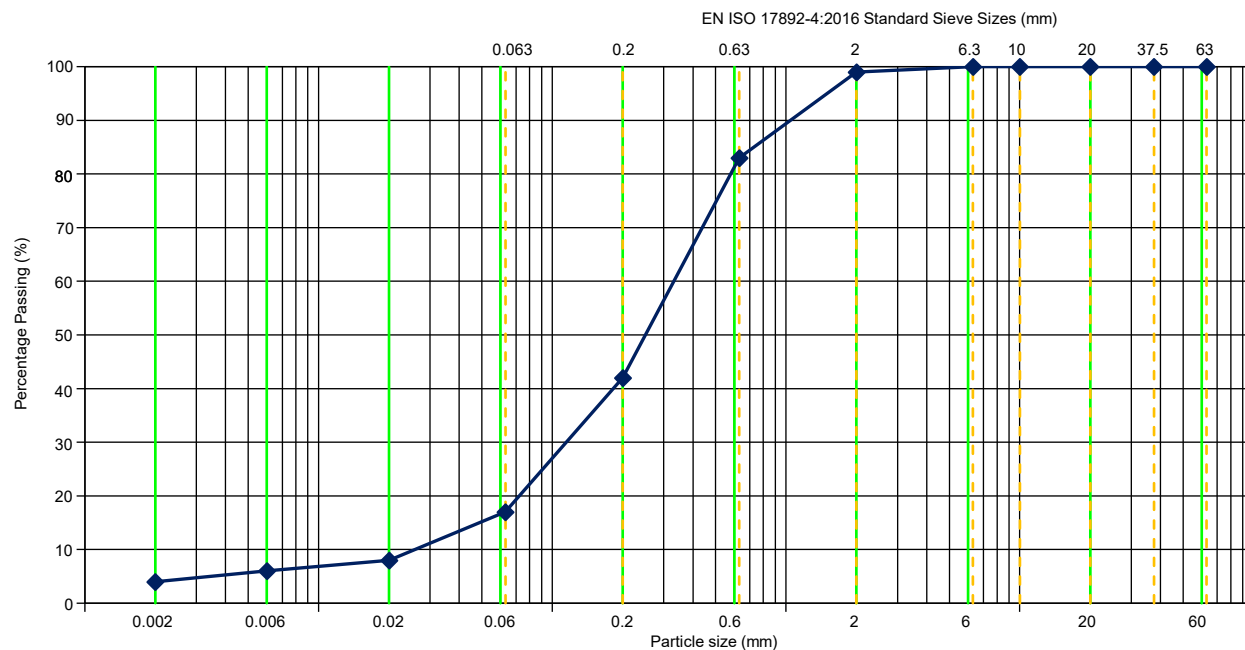
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu)	3.3
D60 / D10	
Coefficient of Curvature (Cc)	0.9
D30 ² / (D10 x D60)	

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-015	Comments	Sample is a GRAVEL, medium to coarse, sorted, slightly sandy with 1 no. cobble.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	8
37.5	100	0.006	6
20	100	0.002	4
10	100		
6.3	100		
2	99		
0.63	83		
0.2	42		
0.063	17		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	82%
	Total Fines	17%
	Silt	13%
	Clay	4%

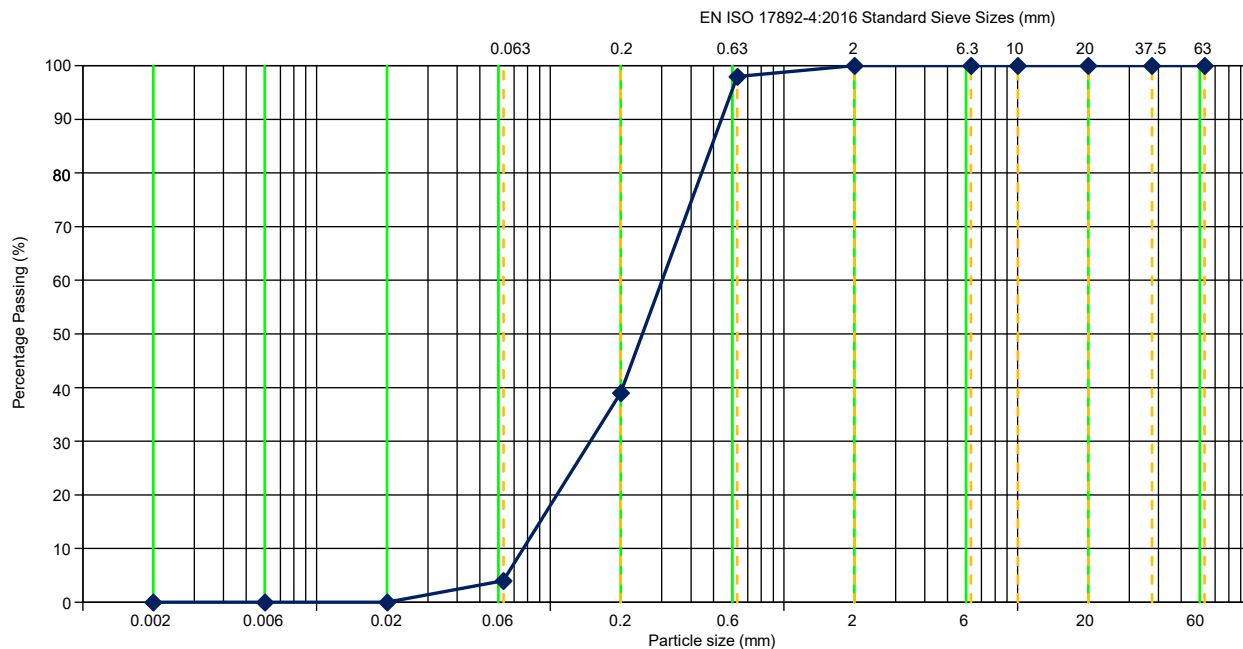
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	13.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.6

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-016	Comments Sample is a SAND, fine to coarse, unsorted, slightly clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	98		
0.2	39		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	96%
	Silt	4%
	Clay	0%

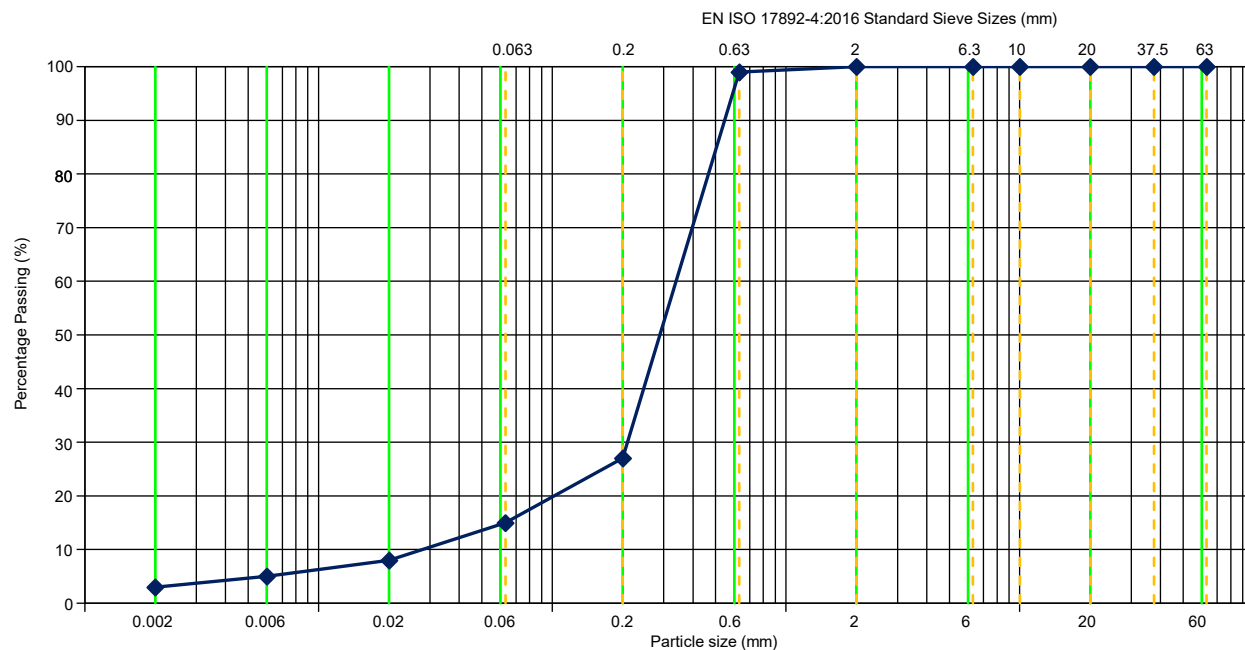
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-017	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	8
37.5	100	0.006	5
20	100	0.002	3
10	100		
6.3	100		
2	100		
0.63	99		
0.2	27		
0.063	15		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	85%
	Total Fines	15%
	Silt	12%
	Clay	3%

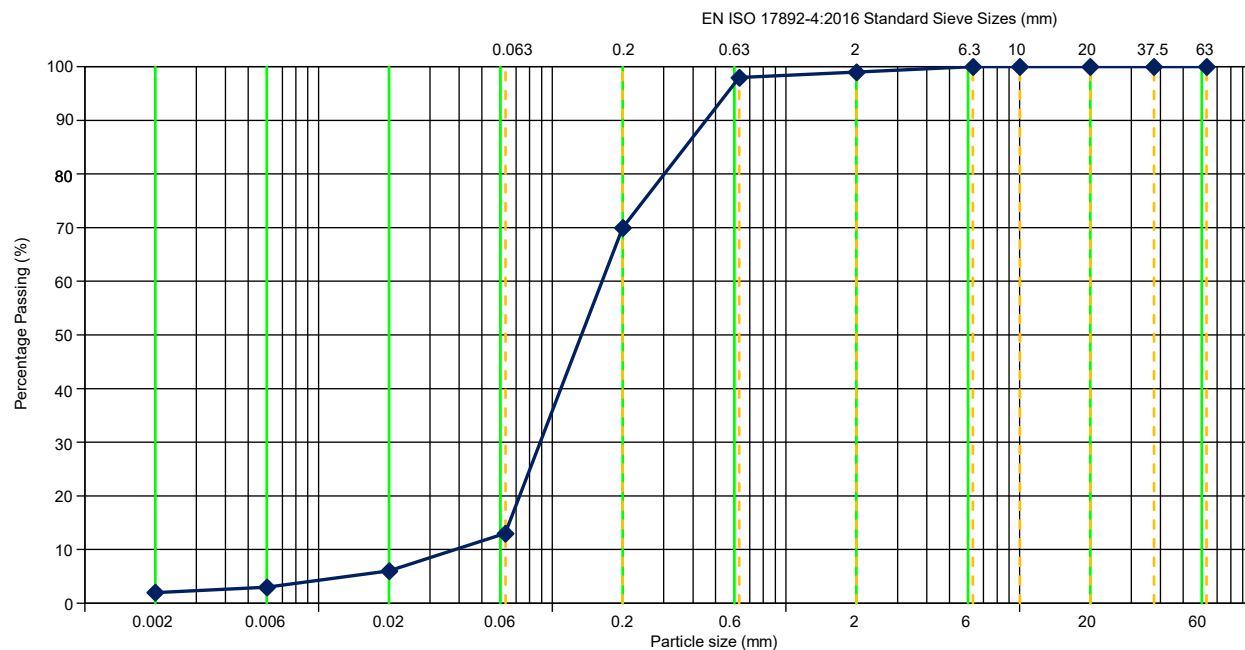
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	12.3
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	3.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-018	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, very silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	6
37.5	100	0.006	3
20	100	0.002	2
10	100		
6.3	100		
2	99		
0.63	98		
0.2	70		
0.063	13		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	86%
	Total Fines	13%
	Silt	11%
	Clay	2%

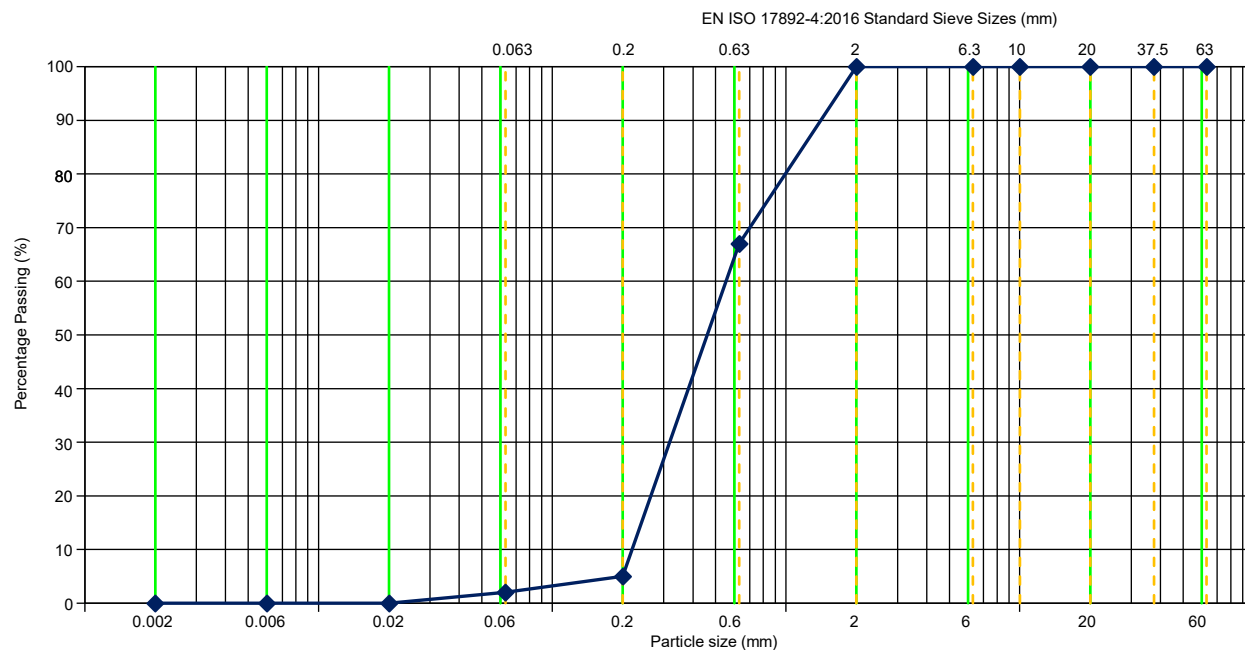
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.4

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-019	Comments Sample is a SAND, fine to medium, poorly sorted, slightly clayey, very silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	67		
0.2	5		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	98%
	Silt	2%
	Clay	0%

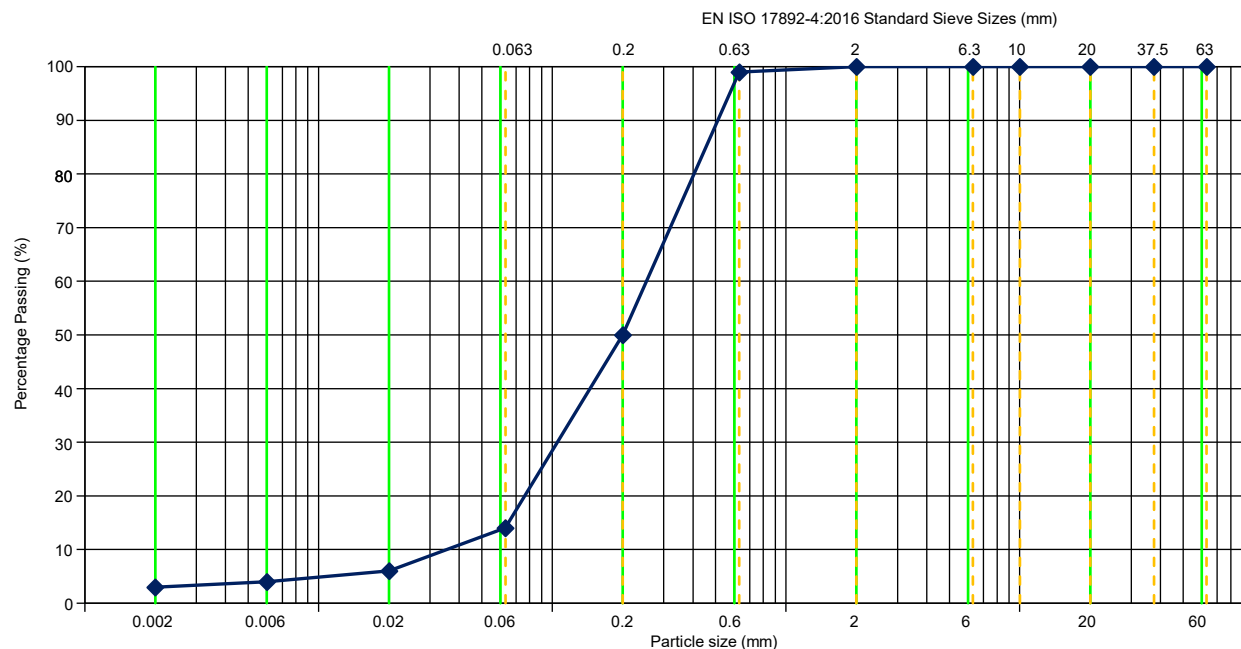
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	2.5
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-020	Comments Sample is a SAND, medium to coarse, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	6
37.5	100	0.006	4
20	100	0.002	3
10	100		
6.3	100		
2	100		
0.63	99		
0.2	50		
0.063	14		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	86%
	Total Fines	14%
	Silt	11%
	Clay	3%

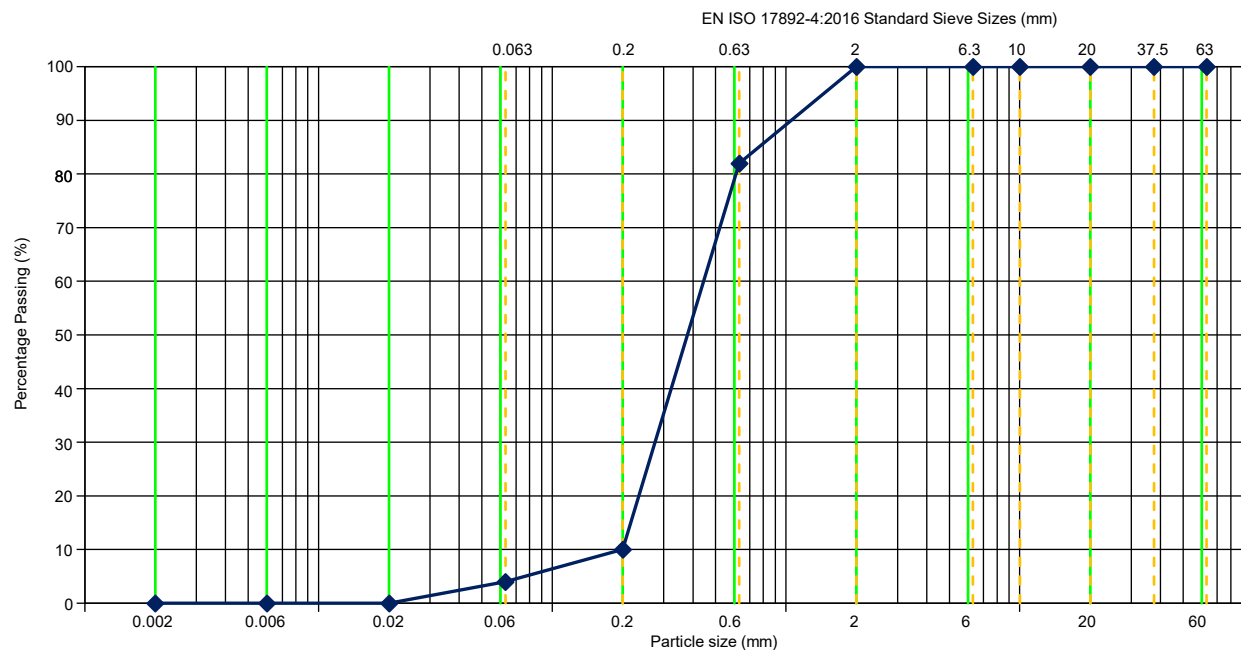
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	6.9
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-021	Comments Sample is a SAND, fine to medium, poorly sorted, slightly clayey, very silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	82		
0.2	10		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	96%
	Silt	4%
	Clay	0%

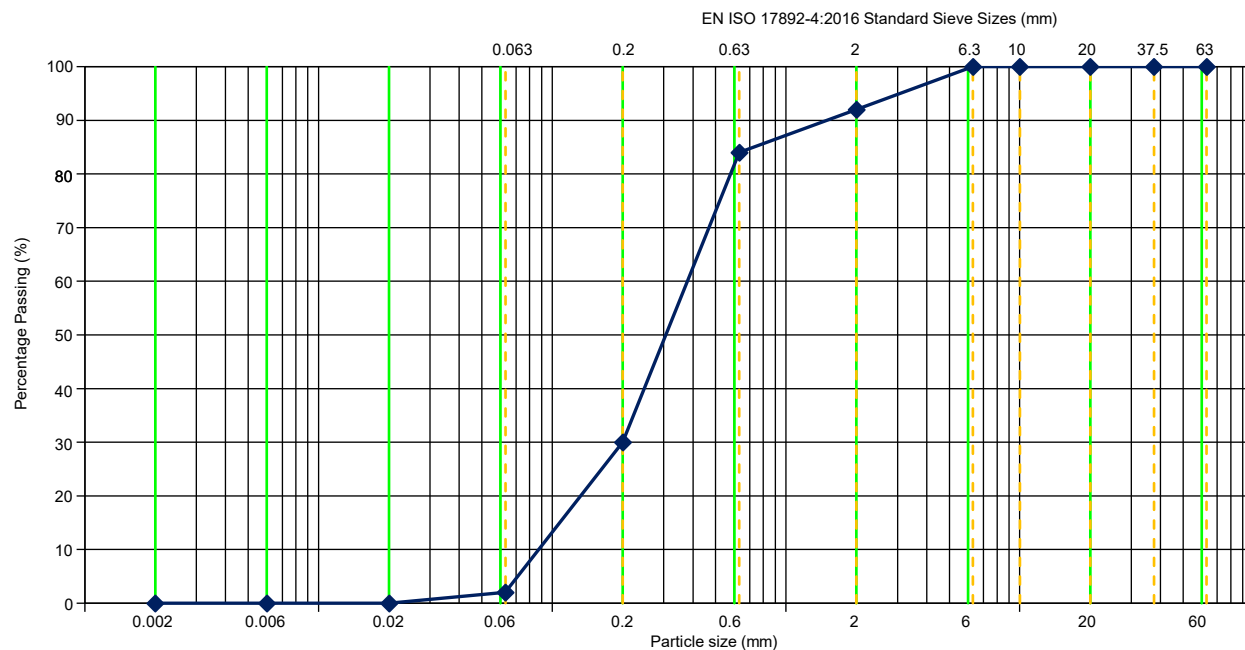
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-022	Comments Sample is a SAND, medium to coarse, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	92		
0.63	84		
0.2	30		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	8%
	Sand	90%
	Total Fines	2%
	Silt	2%
	Clay	0%

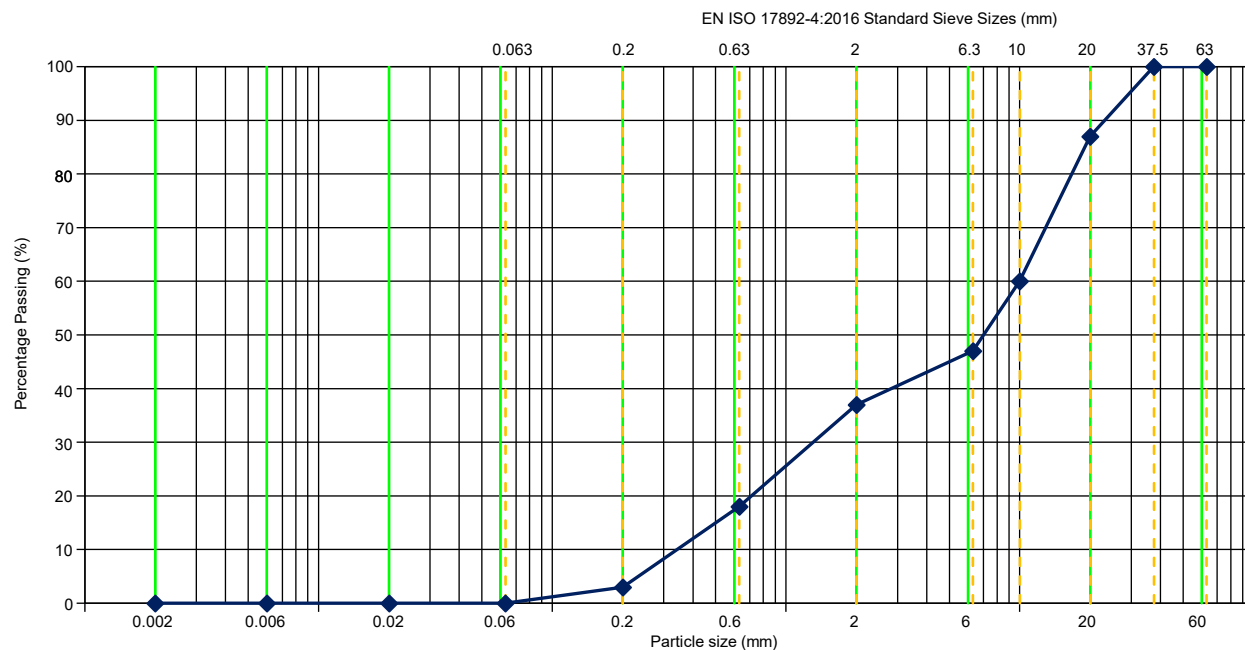
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-023	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	87	0.002	-
10	60		
6.3	47		
2	37		
0.63	18		
0.2	3		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	63%
	Sand	37%
	Total Fines	0%
	Silt	0%
	Clay	0%

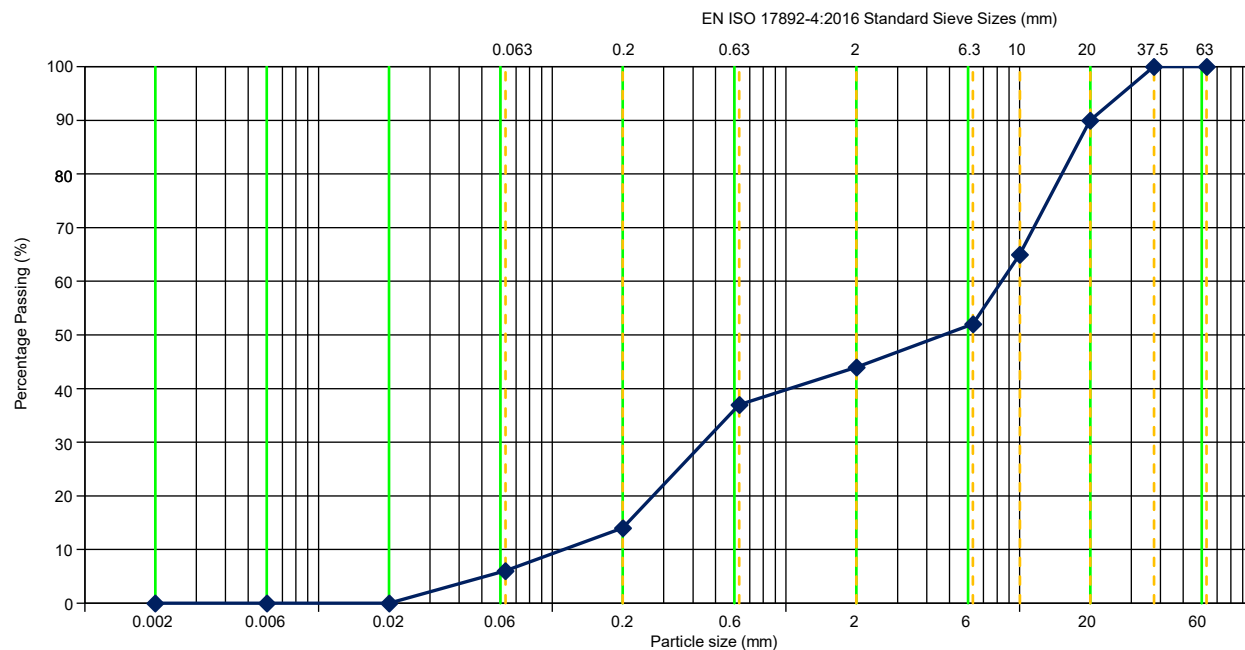
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	25.0
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	0.6

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-024	Comments Sample is a GRAVEL, fine to coarse, unsorted, very sandy.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	90	0.002	-
10	65		
6.3	52		
2	44		
0.63	37		
0.2	14		
0.063	6		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	56%
	Sand	38%
	Total Fines	6%
	Silt	6%
	Clay	0%

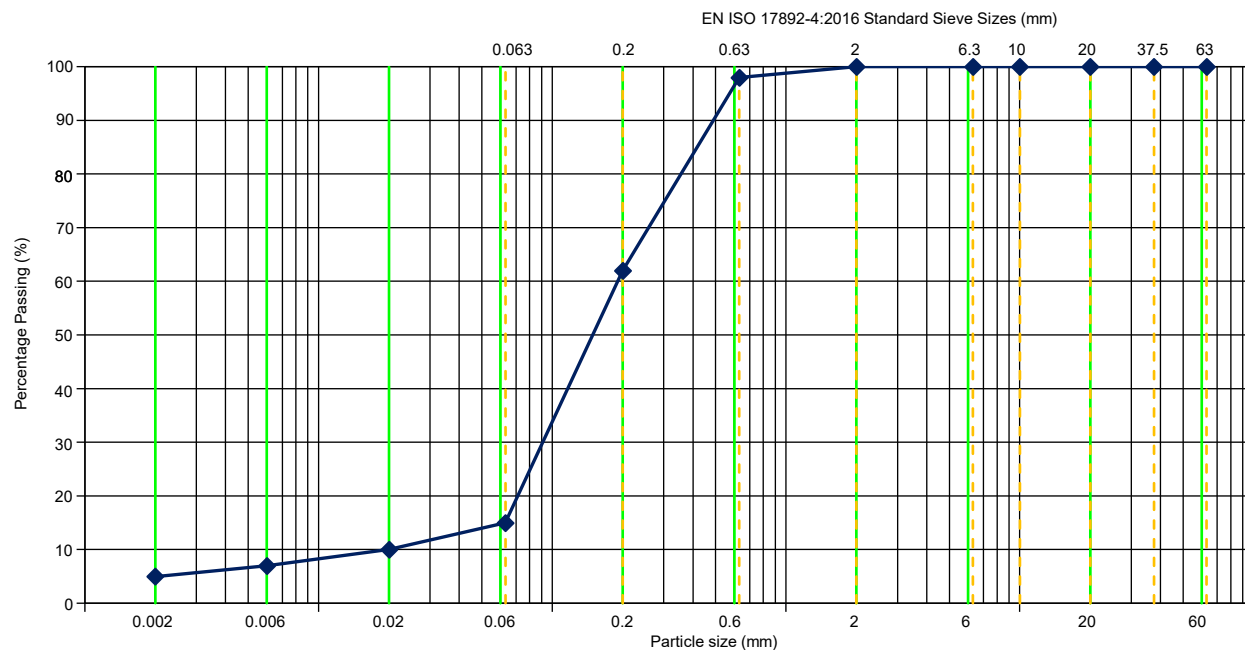
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	65.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-025	Comments Sample is a GRAVEL, fine to coarse, unsorted, silty, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	10
37.5	100	0.006	7
20	100	0.002	5
10	100		
6.3	100		
2	100		
0.63	98		
0.2	62		
0.063	15		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	85%
	Total Fines	15%
	Silt	10%
	Clay	5%

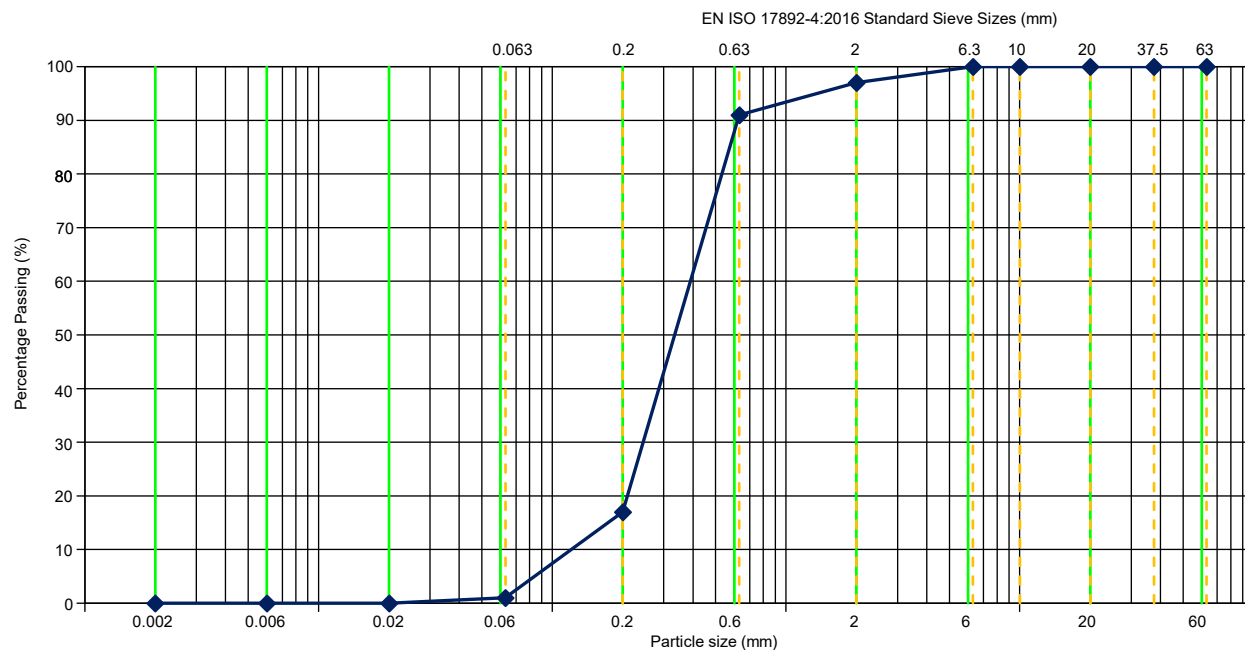
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	9.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-026	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	97		
0.63	91		
0.2	17		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	3%
	Sand	96%
	Silt	1%
	Clay	0%

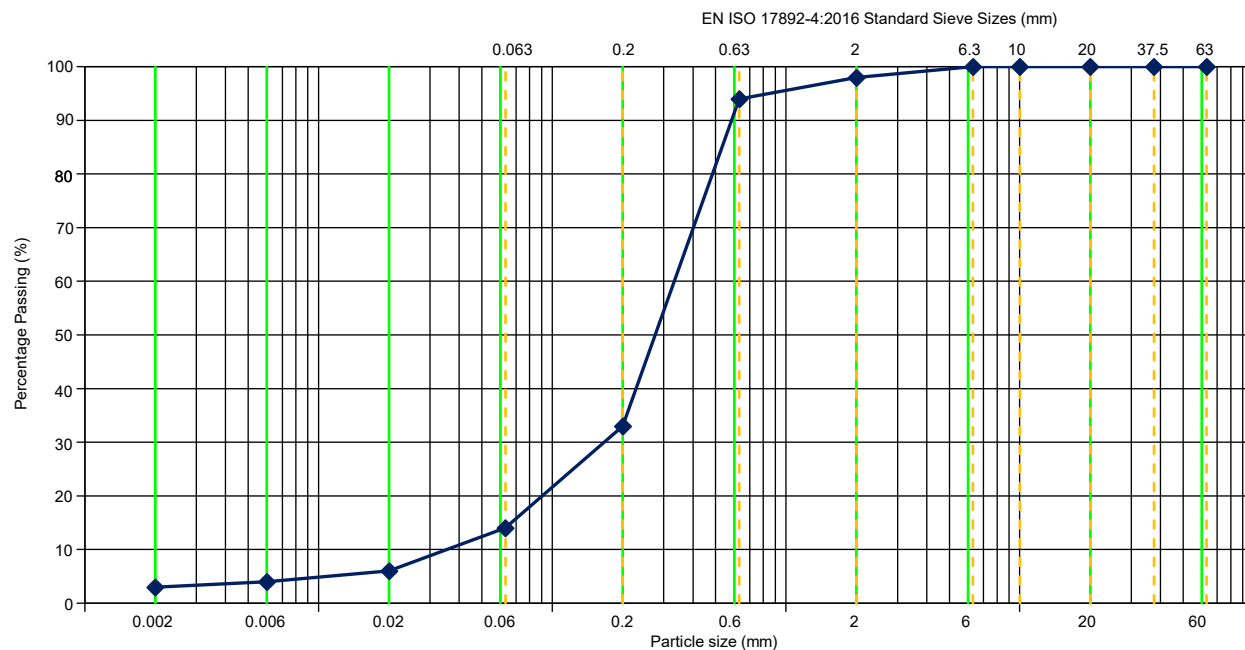
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-027	Comments Sample is a SAND, fine to coarse, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	6
37.5	100	0.006	4
20	100	0.002	3
10	100		
6.3	100		
2	98		
0.63	94		
0.2	33		
0.063	14		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	84%
	Total Fines	14%
	Silt	11%
	Clay	3%

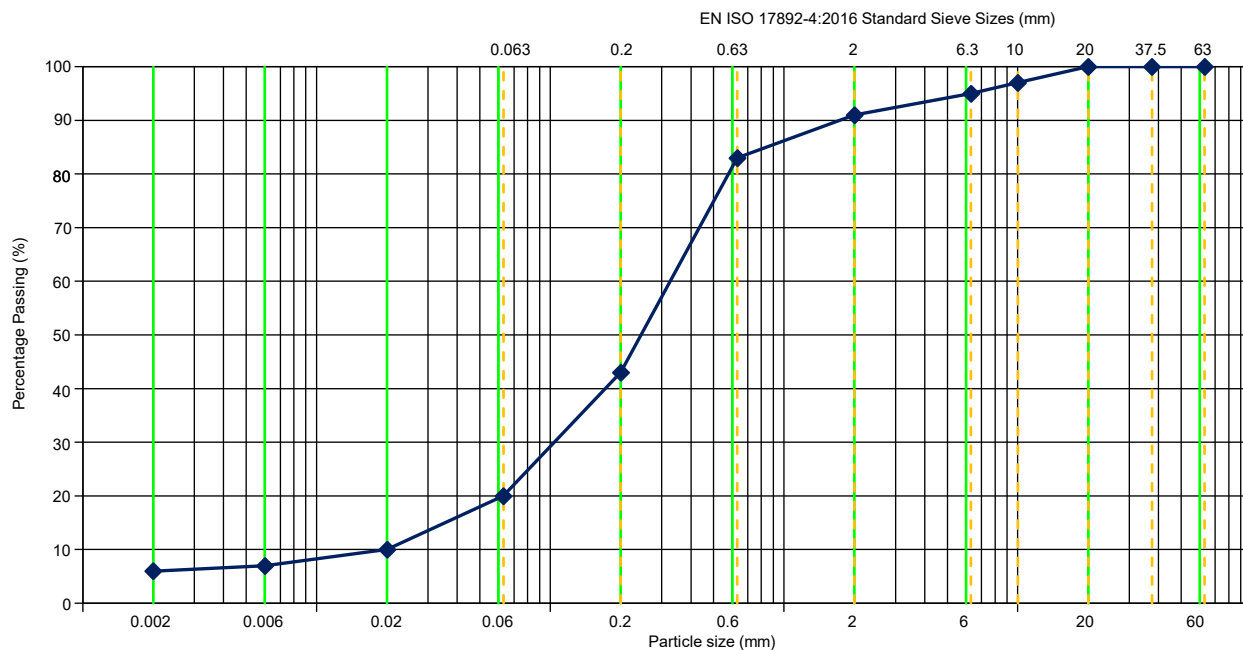
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	9.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-028	Comments Sample is a SAND, fine to coarse, unsorted, slightly clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	10
37.5	100	0.006	7
20	100	0.002	6
10	97		
6.3	95		
2	91		
0.63	83		
0.2	43		
0.063	20		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	9%
	Sand	71%
	Total Fines	20%
	Silt	14%
	Clay	6%

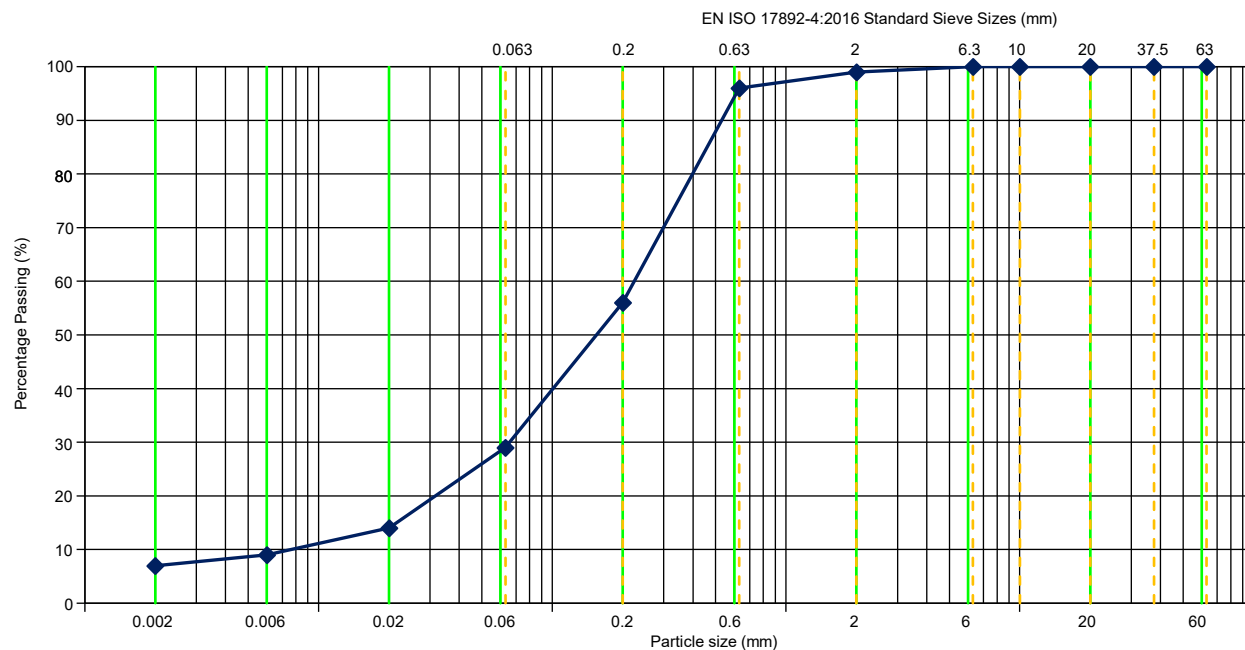
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	19.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B4-029	Comments Sample is a SAND, fine to coarse, unsorted, clayey, very silty, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	14
37.5	100	0.006	9
20	100	0.002	7
10	100		
6.3	100		
2	99		
0.63	96		
0.2	56		
0.063	29		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	70%
	Total Fines	29%
	Silt	22%
	Clay	7%

Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	27.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B4-030	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Summary of Chemical Test Results - Block 4



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		Analyte	Organic Matter Content	Total Organic Carbon
		Top (m)	Base (m)			
				LOD	0.1	0.1
				Unit	% w/w	% w/w C
B4	783-GS-OWF-B4-004	0.00	0.20		1.28	0.74
B4	783-GS-OWF-B4-005	0.00	0.20		1.00	0.58
B4	783-GS-OWF-B4-006	0.00	0.20		0.29	0.17
B4	783-GS-OWF-B4-008	0.00	0.20		0.71	0.41
B4	783-GS-OWF-B4-009	0.00	0.20		0.33	0.19
B4	783-GS-OWF-B4-010	0.00	0.20		0.98	0.57
B4	783-GS-OWF-B4-011	0.00	0.20		0.67	0.39
B4	783-GS-OWF-B4-013	0.00	0.20		0.38	0.22
B4	783-GS-OWF-B4-014	0.00	0.20		0.41	0.24
B4	783-GS-OWF-B4-015	0.00	0.20		1.00	0.58
B4	783-GS-OWF-B4-017	0.00	0.20		0.29	0.17
B4	783-GS-OWF-B4-019	0.00	0.20		0.62	0.36
B4	783-GS-OWF-B4-021	0.00	0.20		0.67	0.39
B4	783-GS-OWF-B4-022	0.00	0.20		0.24	0.14
B4	783-GS-OWF-B4-023	0.00	0.20		0.43	0.25
B4	783-GS-OWF-B4-026	0.00	0.20		0.97	0.56
B4	783-GS-OWF-B4-029	0.00	0.20		1.36	0.79

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

CHEM - Block 4

GRAB SAMPLE RECORDS - BLOCK 5

DESCRIPTION	PAGES INCLUDED
BLOCK 5	
Summary of Grab Samples – Block 5	2
Plot of Grab Sample Material Types – Block 5	1
Grab Sample Logs	23
Summary of Particle Size Distribution Tests – Block 5	1
Particle Size Distribution Results	23
Summary of Chemical Test Results – Block 5	1

Summary of Grab Samples - Block 5

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B5	783-GS-OWF-B5-001	2021-07-30	Franklin	354746	6284222	40		
B5	783-GS-OWF-B5-002	2021-07-30	Franklin	355781	6282744	40		
B5	783-GS-OWF-B5-003	2021-07-30	Franklin	355149	6282161	40		
B5	783-GS-OWF-B5-004	2021-07-30	Franklin	356313	6280777	42		
B5	783-GS-OWF-B5-005	2021-07-30	Franklin	357454	6280692	40		
B5	783-GS-OWF-B5-006	2021-07-29	Franklin	359242	6279411	40		
B5	783-GS-OWF-B5-007	2021-07-30	Franklin	356817	6277918	40		
B5	783-GS-OWF-B5-008	2021-07-29	Franklin	359263	6277571	40		
B5	783-GS-OWF-B5-009	2021-07-29	Franklin	359590	6276105	42		
B5	783-GS-OWF-B5-010	2021-07-29	Franklin	359502	6275670	42		
B5	783-GS-OWF-B5-011	2021-07-30	Franklin	357730	6275205	40		
B5	783-GS-OWF-B5-012	2021-07-30	Franklin	355597	6274751	38		
B5	783-GS-OWF-B5-013	2021-07-29	Franklin	359446	6273366	45		
B5	783-GS-OWF-B5-014	2021-07-29	Franklin	357906	6273242	44		
B5	783-GS-OWF-B5-015	2021-07-29	Franklin	360460	6272056	45		
B5	783-GS-OWF-B5-016	2021-07-29	Franklin	356780	6271569	43		
B5	783-GS-OWF-B5-017	2021-07-30	Franklin	360782	6270059	38		
B5	783-GS-OWF-B5-018	2021-07-30	Franklin	358424	6269753	43		

Client **ENERGINET**

Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 5**

Summary of Grab Samples - Block 5

Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B5	783-GS-OWF-B5-019	2021-07-30	Franklin	360573	6268359	42		
B5	783-GS-OWF-B5-020	2021-07-30	Franklin	359503	6267902	41		
B5	783-GS-OWF-B5-021	2021-07-30	Franklin	357971	6267213	43		
B5	783-GS-OWF-B5-022	2021-07-30	Franklin	357707	6263733	40		
B5	783-GS-OWF-B5-023	2021-07-30	Franklin	357386	6262920	43		

Client **ENERGINET**

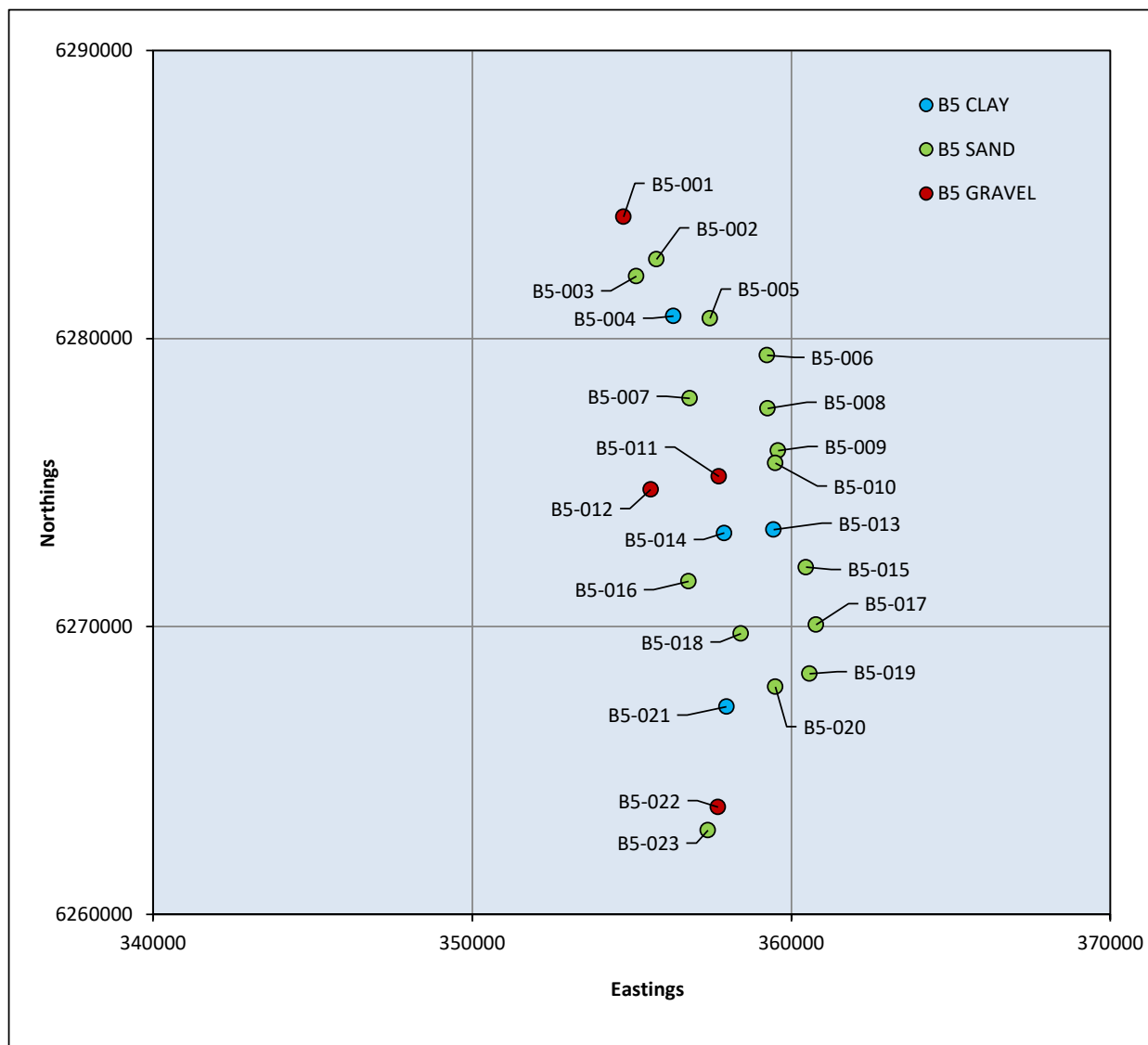
Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 5**

Plot of Grab Sample Material Types - Block 5



MMT Project No. 103783



Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Figure

GEOL - Block 5

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 95% subangular to subrounded fine to coarse of various lithologies and 5% subangular fine shell fragments, slightly silty, very sandy, sand is fine to coarse, rare fine to medium gravel size pockets of black silty fine sand, 1 no. subrounded cobble, grey and orangish brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	63 %	+ 16 % cobbles
Sand	18 %	
Total fines	3 %	
Silt	3 %	
Clay		

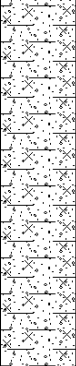
MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location: 783-GS-OWF-B5-001	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 354746 N 6284222				
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL	Checked By: RC
						783-GS-OWF-B5-001	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, poorly sorted, slightly silty, very gravelly, gravel is 90% subangular to subrounded, fine to medium of various lithologies and 5% subangular fine shell fragments, occasional fine to medium gravel size pockets of black silty sand, orangish brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	31 %
Sand	67 %
Total fines	2 %
Silt	2 %
Clay	

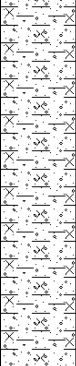
MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-002	Comments:
Vessel:	Franklin	Location Coordinates:	E 355781 N 6282744			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-002

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, silty, slightly gravelly, gravel is 100% subangular fine shell fragments and intact shells up to 20mm in size, occasional fine to medium gravel size pockets of black silty sand, yellowish brown, non-calcareous		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	86 %
Total fines	13 %
Silt	9 %
Clay	4 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-003	Comments:
Vessel:	Franklin	Location Coordinates:	E 355149 N 6282161			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-003

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	CLAY, unsorted, silty, very sandy, sand is fine to coarse, gravelly, gravel is 70% subangular to subrounded fine of various lithologies and 30% subangular fine shell fragments, greyish black, slightly calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

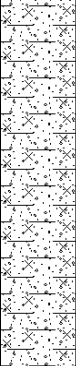
Laboratory Test Results:
Particle Size Distribution

Gravel	25 %
Sand	38 %
Total fines	37 %
Silt	21 %
Clay	16 %

Chemical Tests

Total Organic Matter	1.57 %
Total Organic Carbon	0.91 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-004	Comments:
Vessel:	Franklin	Location Coordinates:	E 356313 N 6280777			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-004

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly clayey, silty, slightly gravelly, gravel is 100% subangular fine shell fragments, fine to medium gravel size pockets of dark grey and black silty fine sand, brownish grey, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

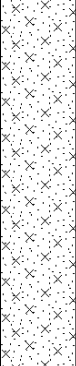
Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	87 %
Total fines	12 %
Silt	9 %
Clay	3 %

Chemical Tests

Total Organic Matter	0.21 %
Total Organic Carbon	0.12 %

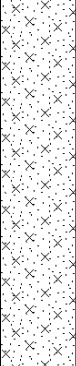
MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-005	Comments:
Vessel:	Franklin	Location Coordinates:	E 357454 N 6280692			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-005

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, rare subangular to subrounded fine to medium gravel size shell fragments, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	97 %
Total fines	3 %
Silt	3 %
Clay	

MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-006	Comments:
Vessel:	Franklin	Location Coordinates:	E 359242 N 6279411			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-006

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, sorted, slightly silty, frequent fine to medium gravel size pockets of black silty fine sand, 1 no. articulated bivalve, 15mm in size and 1 no. very thin worm, 70mm in length, dark brownish grey, organic odour, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

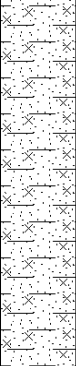
Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 95 %
 Total fines 5 %
 Silt 5 %
 Clay

Chemical Tests

Total Organic Matter 0.34 %
 Total Organic Carbon 0.20 %

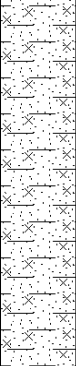
MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location: 783-GS-OWF-B5-007	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 356817 N 6277918		
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B5-007

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, very silty, rare subangular fine to medium gravel size shell fragments, occasional fine to medium gravel size pockets of dark grey silty fine sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	79 %
Total fines	21 %
Silt	17 %
Clay	4 %

MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location: 783-GS-OWF-B5-008	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 359263 N 6277571		
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B5-008	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, silty, rare subangular fine gravel size fragments, dark greyish black, slight organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

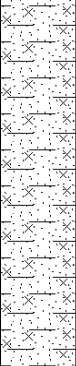
Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 87 %
 Total fines 13 %
 Silt 10 %
 Clay 3 %

Chemical Tests

Total Organic Matter 0.60 %
 Total Organic Carbon 0.35 %

MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-009	Comments:
Vessel:	Franklin	Location Coordinates:	E 359590 N 6276105			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-009

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly clayey, silty, occasional fine to medium gravel size pockets of dark grey and black silty fine sand, rare subangular fine gravel size shell fragments, greyish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel

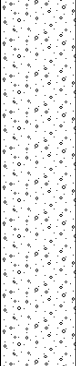
Sand 88 %

Total fines 12 %

Silt 10 %

Clay 2 %

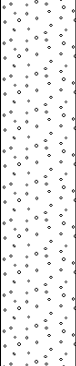
MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-010	Comments:
Vessel:	Franklin	Location Coordinates:	E 359502 N 6275670			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-010

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	GRAVEL, medium to coarse, sorted, 90% subangular to subrounded fine to coarse of sandstone, gneiss, chert and other lithologies and 10% subangular fine to coarse shell fragments, slightly sandy, sand is medium to coarse, 2 no. subrounded cobbles of gneiss and sandstone with partial encrusting marine organisms, orange brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel 75 % + 22 % cobbles
 Sand 3 %
 Total fines
 Silt
 Clay

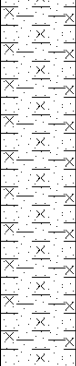
MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-011	Comments:
Vessel:	Franklin	Location Coordinates:	E 357730 N 6275205			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-011

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, medium to coarse, poorly sorted, 100% subangular to rounded medium to coarse of various lithologies with partial encrusting marine organisms, 2 no. subangular cobbles with encrusting marine organisms and plants, dark grey orangish brown and brown, strong fish odour, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 29 % + 71 % cobbles
 Sand
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location: 783-GS-OWF-B5-012		Comments:	
Vessel:	Franklin	Location Coordinates:	E 355597 N 6274751			Equipment: Van der Veen grab sampler	
Client:	Energinet	Water Depth (m LAT):	38	Survey Route:	B5	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
						783-GS-OWF-B5-012	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	CLAY, unsorted, silty, very sandy, sand is fine to medium, rare subangular fine gravel size shell fragments, dark brownish grey, non-calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

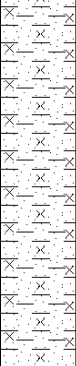
Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	61 %
Total fines	39 %
Silt	23 %
Clay	16 %

Chemical Tests

Total Organic Matter	1.38 %
Total Organic Carbon	0.80 %

MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-013	Comments:
Vessel:	Franklin	Location Coordinates:	E 359446 N 6273366			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	45	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-013

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	CLAY, unsorted, silty, very sandy, sand is fine to medium, occasional fine to medium gravel size pockets of black sandy silt, rare pseudo-fibrous marine debris up to 10mm in size, dark brownish grey, calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	
Sand	64 %
Total fines	36 %
Silt	21 %
Clay	15 %

Chemical Tests

Total Organic Matter	1.14 %
Total Organic Carbon	0.66 %

MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-014	Comments:
Vessel:	Franklin	Location Coordinates:	E 357906 N 6273242			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	44	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-014

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine to coarse gravel size shell fragments and intact shells, occasional medium to coarse gravel size pockets of greyish brown silty fine sand, 1 no. starfish 50mm in size, orangish grey brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	4 %
Sand	92 %
Total fines	4 %
Silt	4 %
Clay	

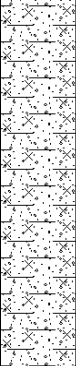
MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-015	Comments:
Vessel:	Franklin	Location Coordinates:	E 360460 N 6272056			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	45	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-015

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, unsorted, slightly silty, very gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments and intact shells, rare fine gravel size pockets of black fine sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	41 %
Sand	57 %
Total fines	2 %
Silt	2 %
Clay	

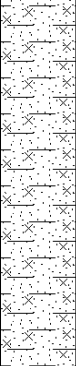
MMT Project ID:	103783	Location Test Date:	29/07/2021	GS Location:	783-GS-OWF-B5-016	Comments:
Vessel:	Franklin	Location Coordinates:	E 356780 N 6271569			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-016

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, unsorted, slightly clayey, silty, slightly gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel	5 %
Sand	83 %
Total fines	12 %
Silt	8 %
Clay	4 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-017	Comments:
Vessel:	Franklin	Location Coordinates:	E 360782 N 6270059			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-017

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, slightly clayey, very silty, rare subangular fine gravel size shell fragments, rare fibrous organic matter, 1 no. echinoderm 40mm in size, dark grey and black, strong organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

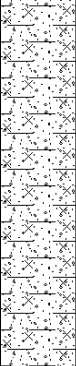
Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 83 %
 Total fines 17 %
 Silt 13 %
 Clay 4 %

Chemical Tests

Total Organic Matter 0.34 %
 Total Organic Carbon 0.20 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location: 783-GS-OWF-B5-018	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 358424 N 6269753				
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B5	Route KP:	GS Log Status: FINAL	Checked By: RC 783-GS-OWF-B5-018

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly clayey, very silty, slightly gravelly, gravel is 100% subangular fine shell fragments, dark orangish brown, silt and clay is dark grey, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

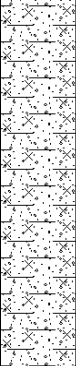
Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	79 %
Total fines	20 %
Silt	16 %
Clay	4 %

Chemical Tests

Total Organic Matter	0.67 %
Total Organic Carbon	0.39 %

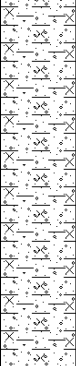
MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-019	Comments:
Vessel:	Franklin	Location Coordinates:	E 360573 N 6268359			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-019

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, unsorted, clayey, very silty, gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments and intact shells, rare fine gravel size pockets of dark grey silty sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	6 %
Sand	75 %
Total fines	19 %
Silt	13 %
Clay	6 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-020	Comments:
Vessel:	Franklin	Location Coordinates:	E 359503 N 6267902			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-020

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	CLAY, unsorted, silty, very sandy, sand is fine to coarse, slightly gravelly, gravel is 100% subangular fine shell fragments, dark grey, sand is orangish brown, slight organic odour, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	8 %
Sand	49 %
Total fines	43 %
Silt	25 %
Clay	18 %

Chemical Tests

Total Organic Matter	2.10 %
Total Organic Carbon	1.22 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-021	Comments:
Vessel:	Franklin	Location Coordinates:	E 357971 N 6267213			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-021

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to coarse, unsorted, 50% subangular to subrounded fine to coarse of various lithologies and 50% subangular to subrounded fine to coarse shell fragments and intact shells, slightly silty, very sandy, sand is fine to coarse, strong organic odour, dark greyish black, slightly calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

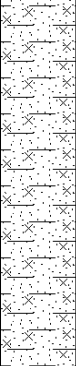
Laboratory Test Results:
Particle Size Distribution

Gravel 64 %
 Sand 31 %
 Total fines 5 %
 Silt 5 %
 Clay

Chemical Tests

Total Organic Matter 1.40 %
 Total Organic Carbon 0.81 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location:	783-GS-OWF-B5-022	Comments:
Vessel:	Franklin	Location Coordinates:	E 357707 N 6263733			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	40	Survey Route: B5	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B5-022

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, unsorted, clayey, very silty, occasional very thin marine plant debris and worms up to 60mm in length, dark brownish grey, slightly calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel
 Sand 76 %
 Total fines 24 %
 Silt 17 %
 Clay 7 %

Chemical Tests

Total Organic Matter 1.14 %
 Total Organic Carbon 0.66 %

MMT Project ID:	103783	Location Test Date:	30/07/2021	GS Location: 783-GS-OWF-B5-023	Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 357386 N 6262920			
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B5	Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B5-023

Summary of Particle Size Distribution Tests - Block 5



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		PSD		Sediment Fraction (%)					
		Top (m)	Base (m)	Sieve	Sed.	Clay	Silt	Total Fines	Sand	Gravel	Cobbles
B5	783-GS-OWF-B5-001	0.00	0.20	Yes	No		3	3	18	63	16
B5	783-GS-OWF-B5-002	0.00	0.20	Yes	No		2	2	67	31	
B5	783-GS-OWF-B5-003	0.00	0.20	Yes	Yes	4	9	13	86	1	
B5	783-GS-OWF-B5-004	0.00	0.20	Yes	Yes	16	21	37	38	25	
B5	783-GS-OWF-B5-005	0.00	0.20	Yes	Yes	3	9	12	87	1	
B5	783-GS-OWF-B5-006	0.00	0.20	Yes	No		3	3	97		
B5	783-GS-OWF-B5-007	0.00	0.20	Yes	No		5	5	95		
B5	783-GS-OWF-B5-008	0.00	0.20	Yes	Yes	4	17	21	79		
B5	783-GS-OWF-B5-009	0.00	0.20	Yes	Yes	3	10	13	87		
B5	783-GS-OWF-B5-010	0.00	0.20	Yes	Yes	2	10	12	88		
B5	783-GS-OWF-B5-011	0.00	0.20	Yes	No				3	75	22
B5	783-GS-OWF-B5-012	0.00	0.20	Yes	No					29	71
B5	783-GS-OWF-B5-013	0.00	0.20	Yes	Yes	16	23	39	61		
B5	783-GS-OWF-B5-014	0.00	0.20	Yes	Yes	15	21	36	64		
B5	783-GS-OWF-B5-015	0.00	0.20	Yes	No		4	4	92	4	
B5	783-GS-OWF-B5-016	0.00	0.20	Yes	No		2	2	57	41	
B5	783-GS-OWF-B5-017	0.00	0.20	Yes	Yes	4	8	12	83	5	
B5	783-GS-OWF-B5-018	0.00	0.20	Yes	Yes	4	13	17	83		
B5	783-GS-OWF-B5-019	0.00	0.20	Yes	Yes	4	16	20	79	1	
B5	783-GS-OWF-B5-020	0.00	0.20	Yes	Yes	6	13	19	75	6	
B5	783-GS-OWF-B5-021	0.00	0.20	Yes	Yes	18	25	43	49	8	
B5	783-GS-OWF-B5-022	0.00	0.20	Yes	No		5	5	31	64	
B5	783-GS-OWF-B5-023	0.00	0.20	Yes	Yes	7	17	24	76		

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

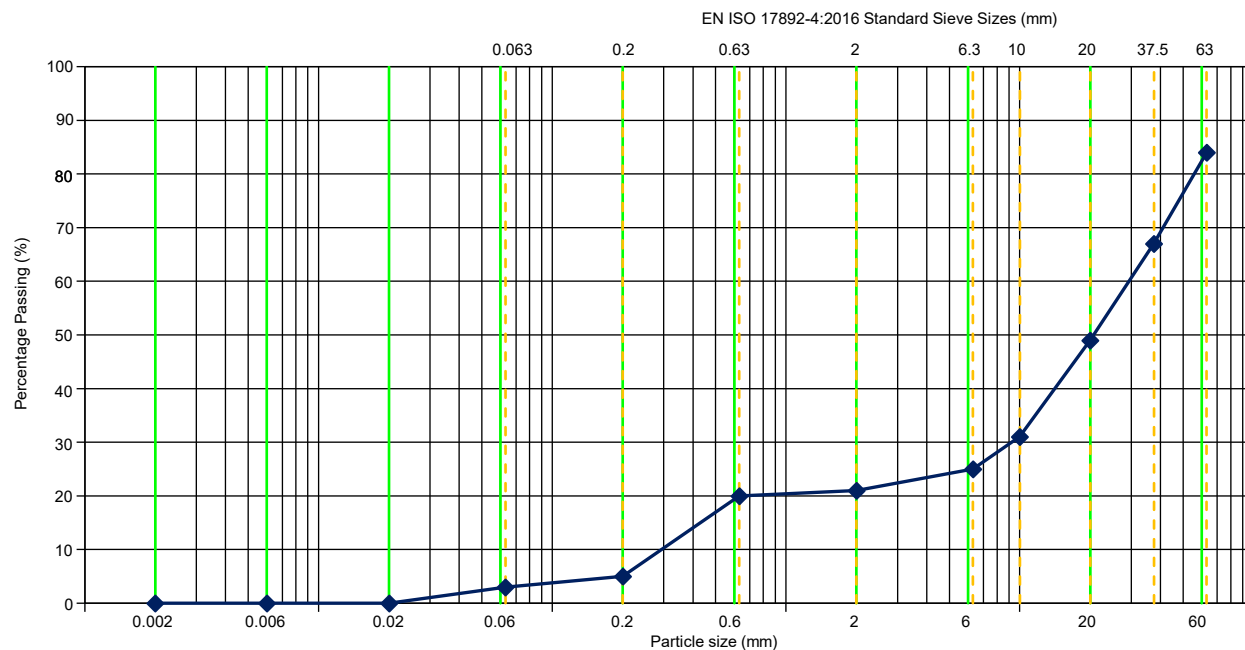
Carried out for

Energinet

Table

PSD - Block 5

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	84	0.02	-
37.5	67	0.006	-
20	49	0.002	-
10	31		
6.3	25		
2	21		
0.63	20		
0.2	5		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	16%
	Gravel	63%
	Sand	18%
	Total Fines	3%
	Silt	3%
	Clay	0%

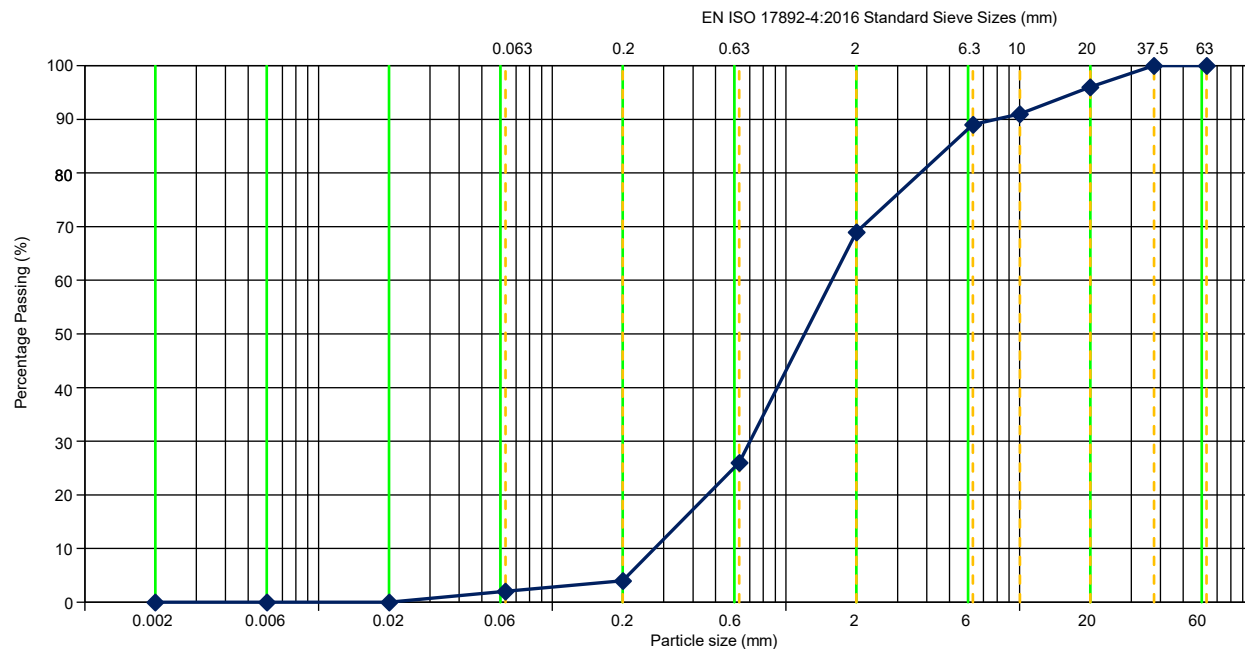
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	89.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	8.4

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-001	Comments Sample is a GRAVEL, fine to coarse, unsorted, slightly silty, very sandy with 1 no. cobble.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	96	0.002	-
10	91		
6.3	89		
2	69		
0.63	26		
0.2	4		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	31%
	Sand	67%
	Total Fines	2%
	Silt	2%
	Clay	0%

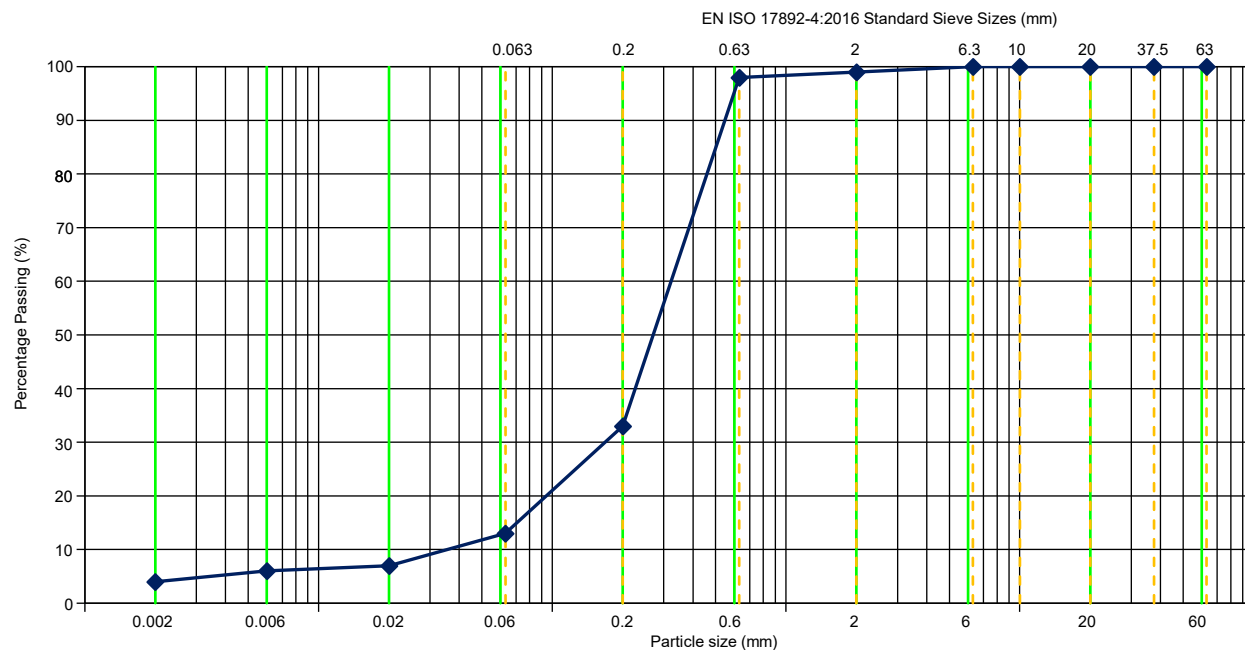
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	5.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-002	Comments Sample is a SAND, medium to coarse, poorly sorted, slightly silty, very gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	7
37.5	100	0.006	6
20	100	0.002	4
10	100		
6.3	100		
2	99		
0.63	98		
0.2	33		
0.063	13		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	86%
	Total Fines	13%
	Silt	9%
	Clay	4%

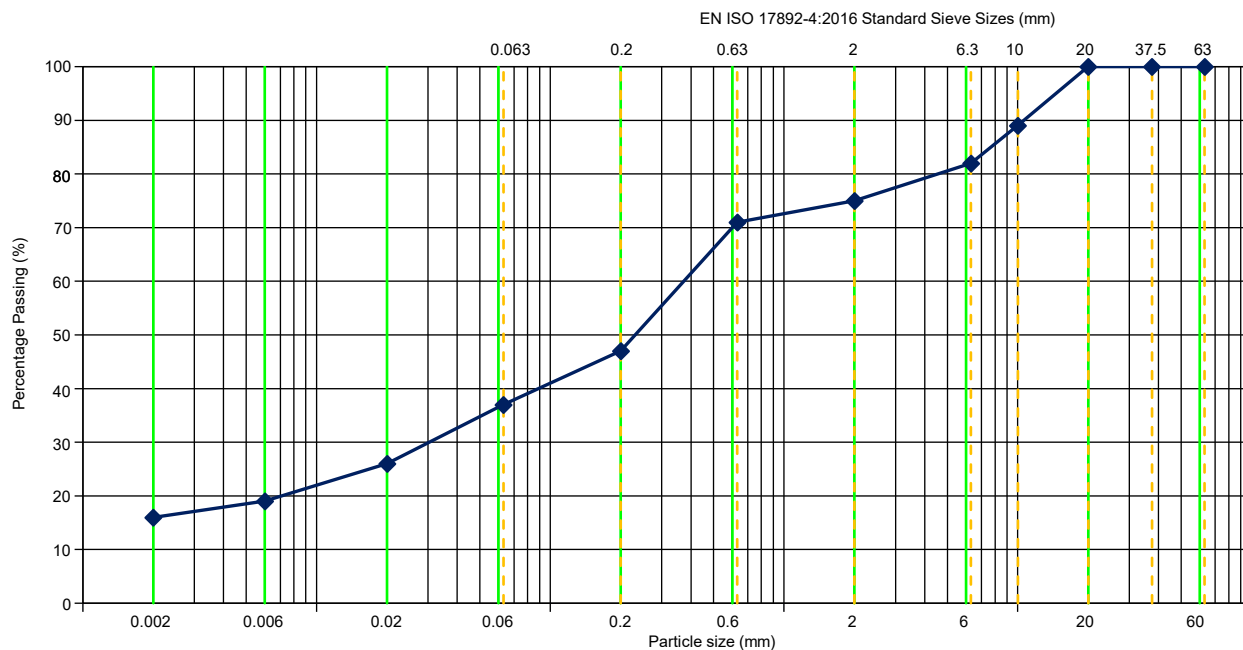
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	9.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-003	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	26
37.5	100	0.006	19
20	100	0.002	16
10	89		
6.3	82		
2	75		
0.63	71		
0.2	47		
0.063	37		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	25%
	Sand	38%
	Total Fines	37%
	Silt	21%
	Clay	16%

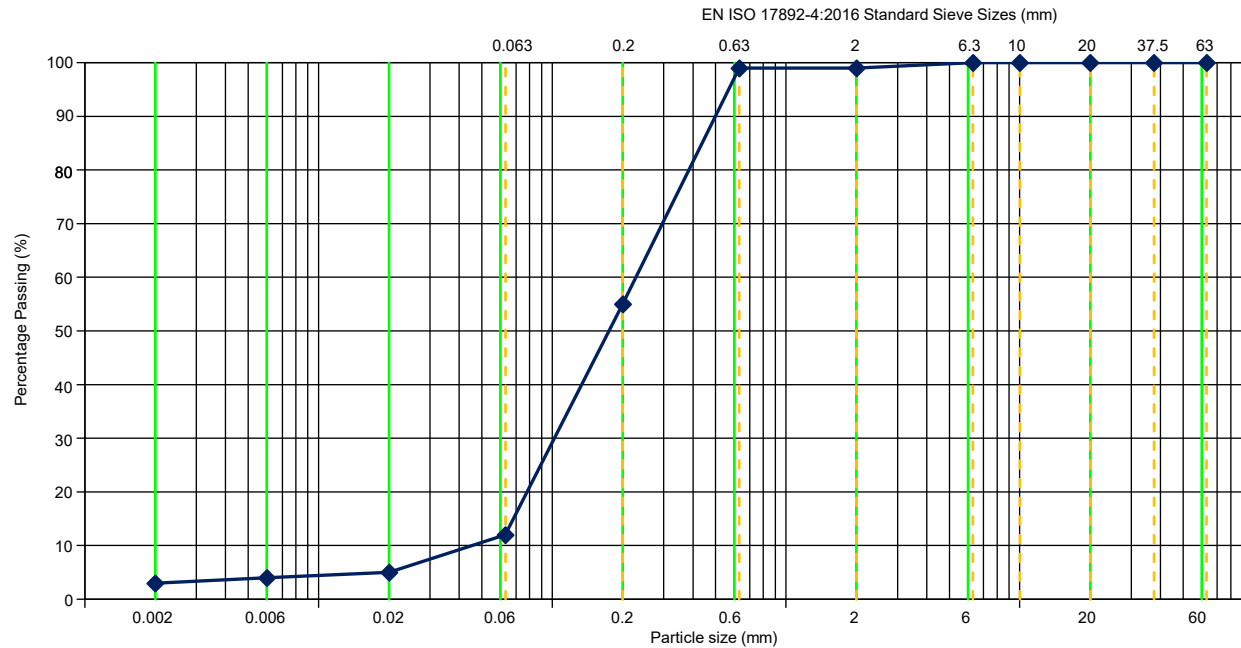
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	346.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-004	Comments Sample is a CLAY, unsorted, silty, very sandy, gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	5
37.5	100	0.006	4
20	100	0.002	3
10	100		
6.3	100		
2	99		
0.63	99		
0.2	55		
0.063	12		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	87%
	Total Fines	12%
	Silt	9%
	Clay	3%

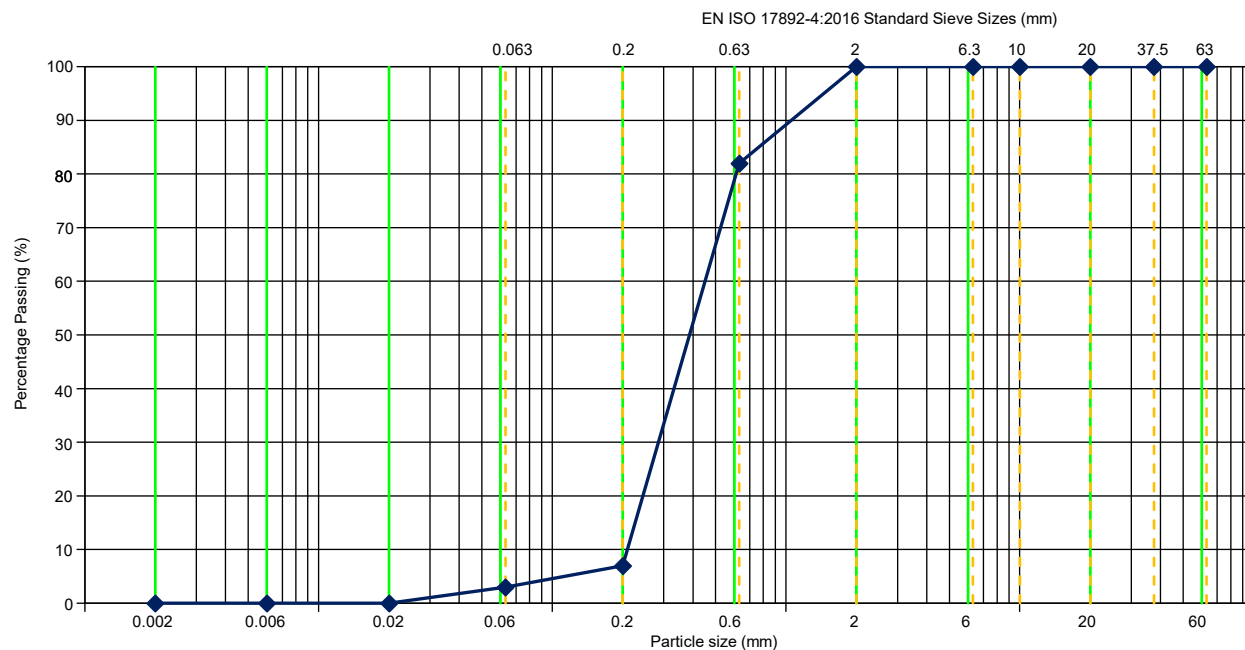
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	4.9
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-005	Comments Sample is a SAND, fine to medium, poorly sorted, slightly clayey, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	82		
0.2	7		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	97%
	Silt	3%
	Clay	0%

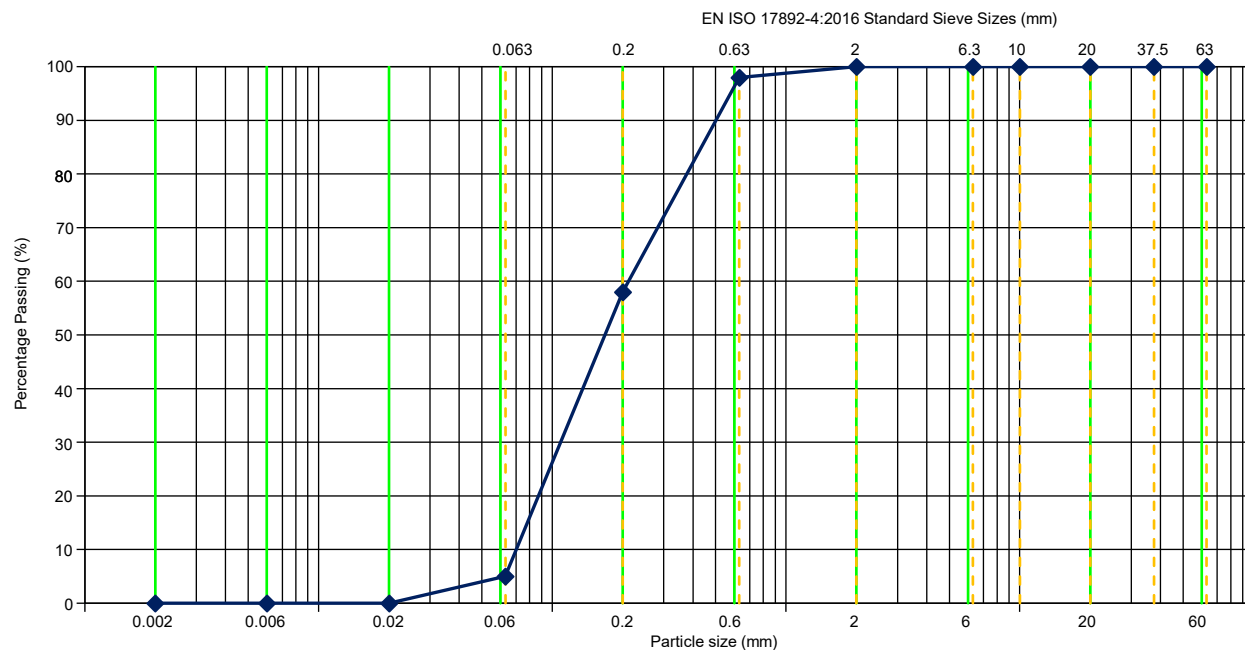
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-006	Comments Sample is a SAND, medium to coarse, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	98		
0.2	58		
0.063	5		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	95%
	Silt	5%
	Clay	0%

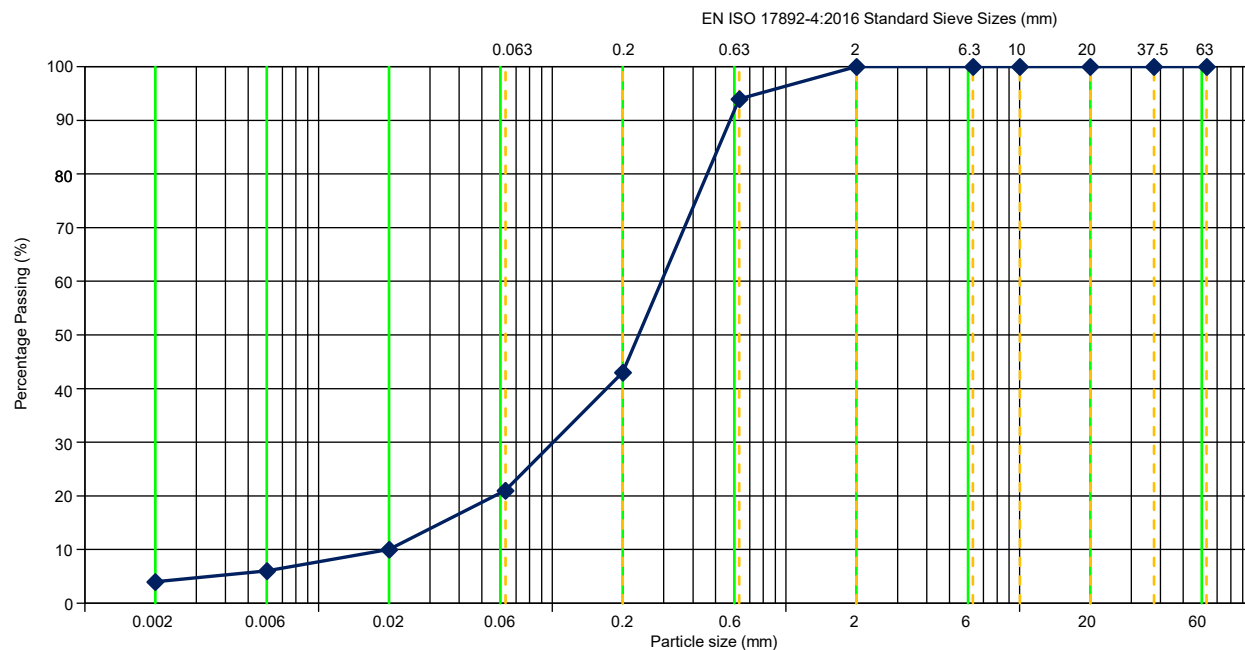
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-007	Comments Sample is a SAND, fine to medium, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	10
37.5	100	0.006	6
20	100	0.002	4
10	100		
6.3	100		
2	100		
0.63	94		
0.2	43		
0.063	21		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	79%
	Total Fines	21%
	Silt	17%
	Clay	4%

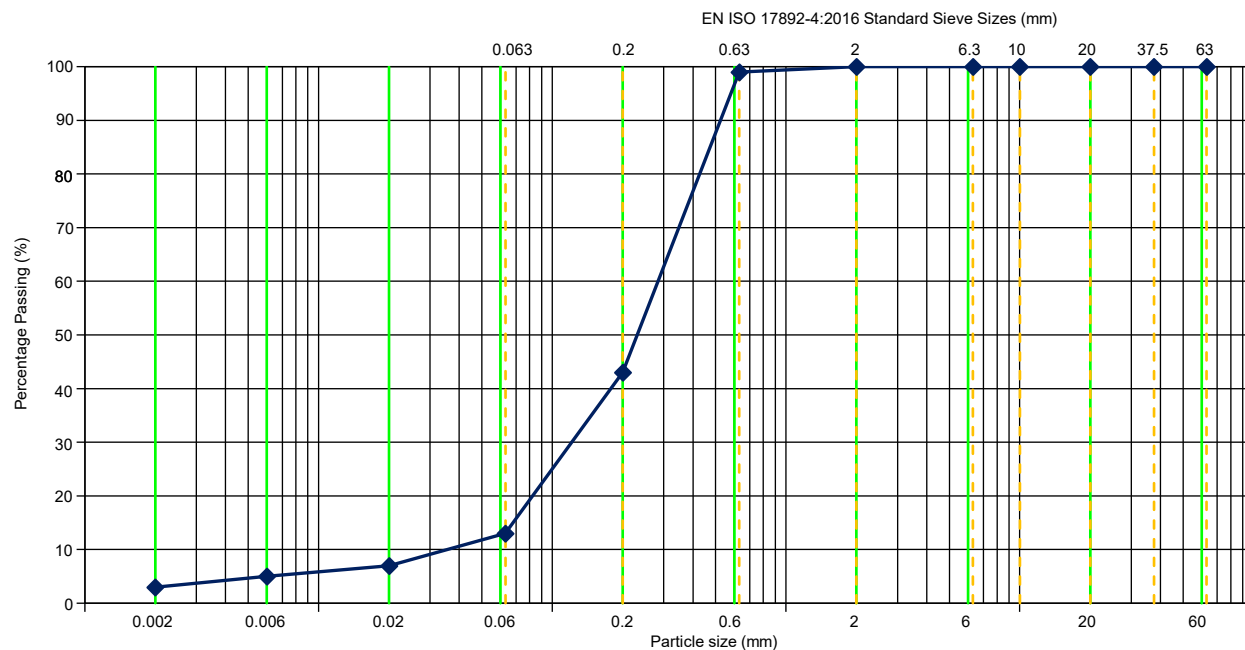
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	17.2
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	2.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-008	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, very silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	7
37.5	100	0.006	5
20	100	0.002	3
10	100		
6.3	100		
2	100		
0.63	99		
0.2	43		
0.063	13		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	87%
	Total Fines	13%
	Silt	10%
	Clay	3%

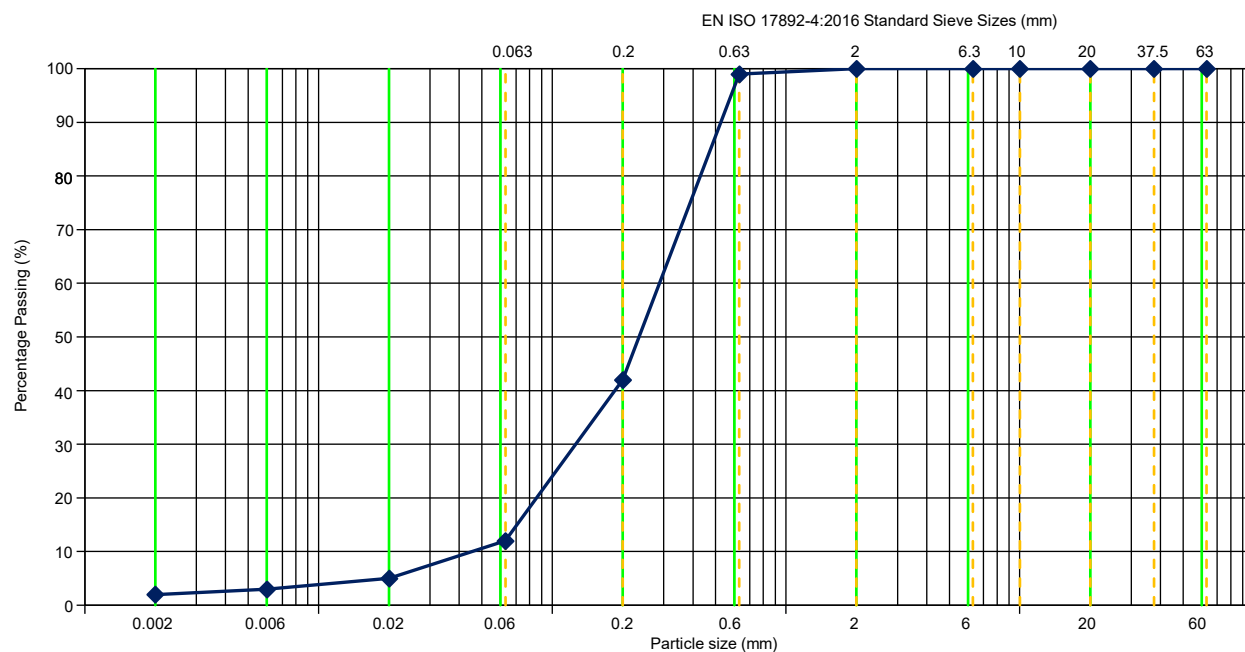
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	8.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.4

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-009	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, silty.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	5
37.5	100	0.006	3
20	100	0.002	2
10	100		
6.3	100		
2	100		
0.63	99		
0.2	42		
0.063	12		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	88%
	Total Fines	12%
	Silt	10%
	Clay	2%

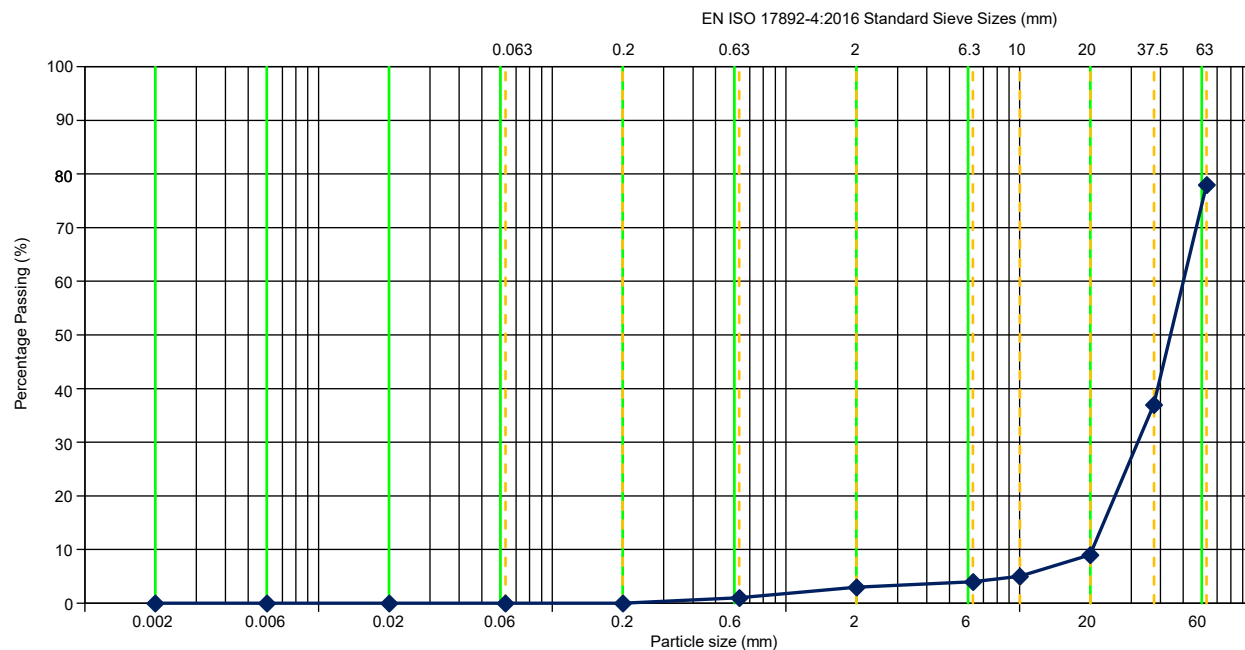
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	6.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-010	Comments Sample is a SAND, fine to medium, poorly sorted, slightly clayey, silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	78	0.02	-
37.5	37	0.006	-
20	9	0.002	-
10	5		
6.3	4		
2	3		
0.63	1		
0.2	0		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	22%
	Gravel	75%
	Sand	3%
	Total Fines	0%
	Silt	0%
	Clay	0%

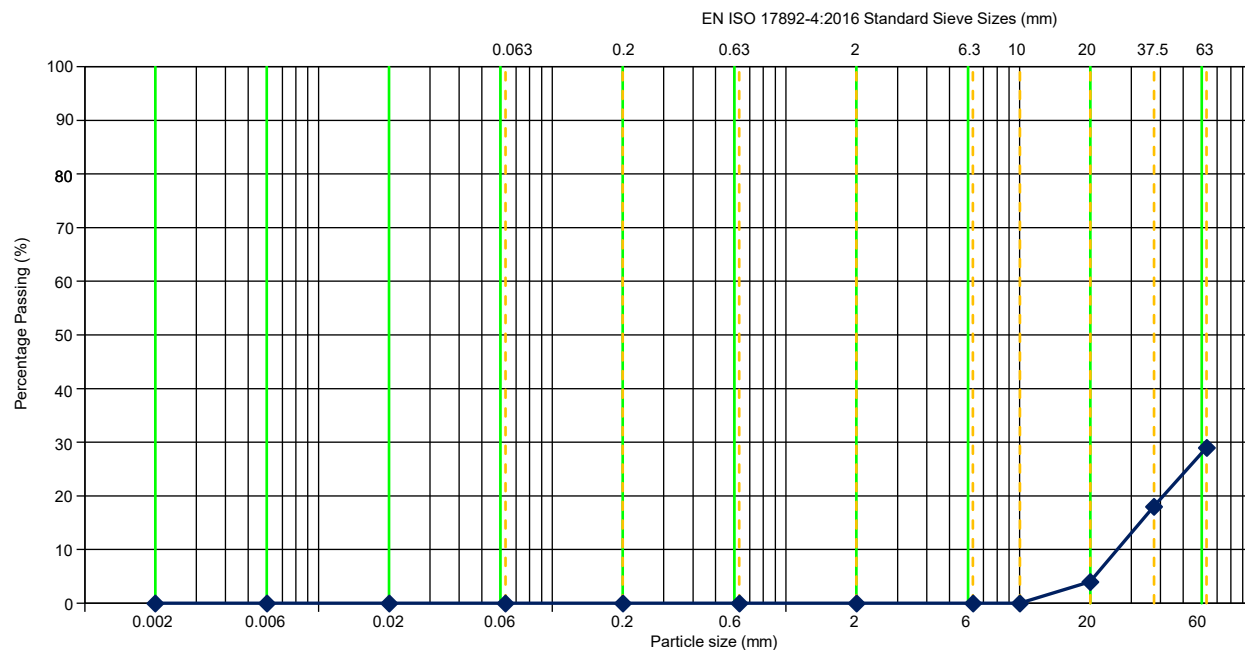
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-011	Comments Sample is a GRAVEL, medium to coarse, sorted, slightly sandy with 2 no. cobbles.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
63	29	0.02	-
37.5	18	0.006	-
20	4	0.002	-
10	0		
6.3	0		
2	0		
0.63	0		
0.2	0		
0.063	0		

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	71%
	Gravel	29%
	Sand	0%
	Total Fines	0%
	Silt	0%
	Clay	0%

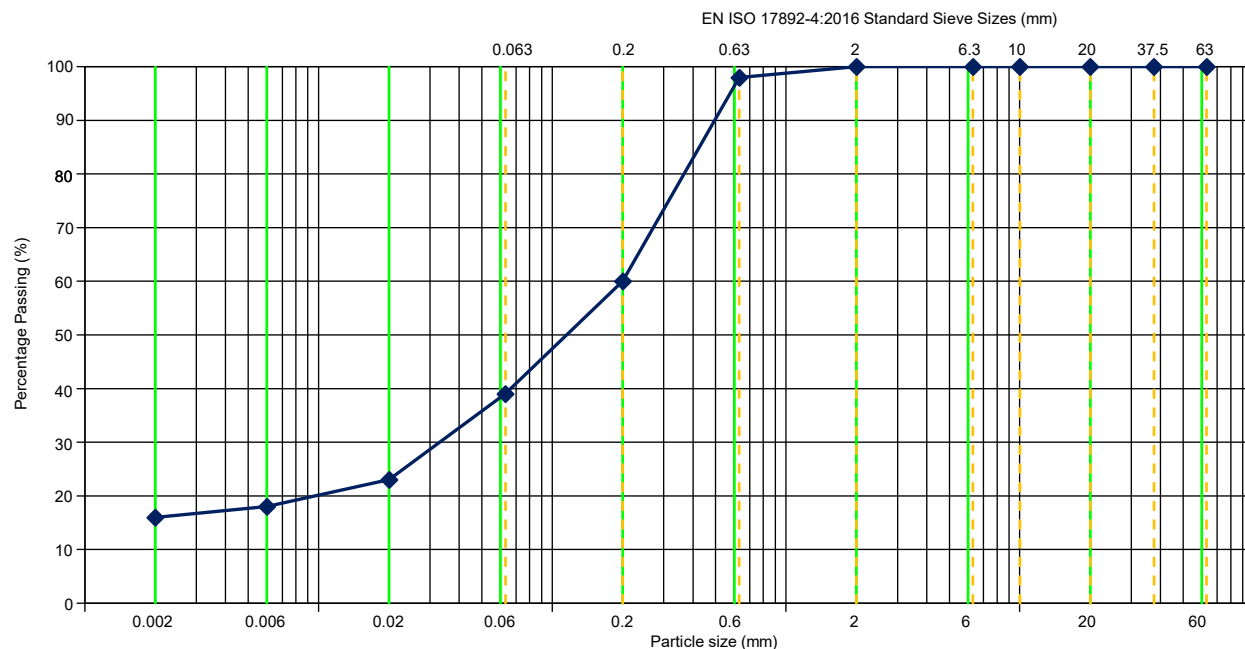
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu)	4.7
D60 / D10	
Coefficient of Curvature (Cc)	1.2
D30 ² / (D10 x D60)	

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-012	Comments	Sample is a GRAVEL, medium to coarse, poorly sorted, with 2 no. cobbles.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	23
37.5	100	0.006	18
20	100	0.002	16
10	100		
6.3	100		
2	100		
0.63	98		
0.2	60		
0.063	39		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	61%
	Total Fines	39%
	Silt	23%
	Clay	16%

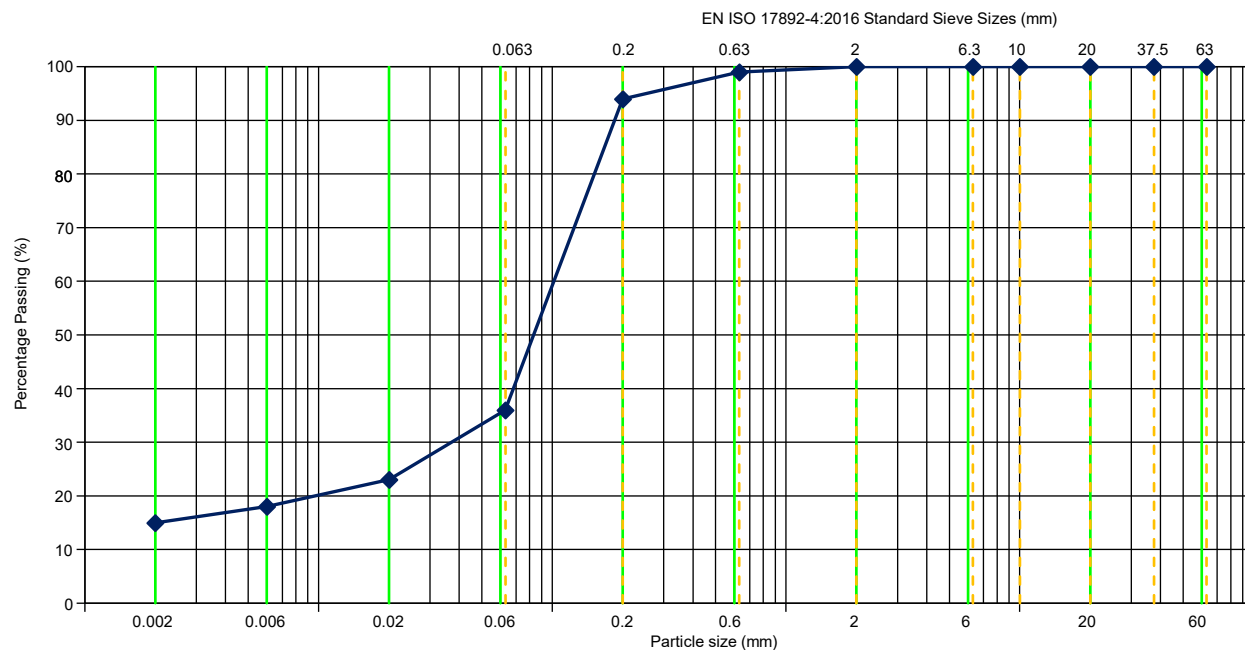
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	160.0
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	6.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-013	Comments Sample is a CLAY, unsorted, silty, very sandy.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	23
37.5	100	0.006	18
20	100	0.002	15
10	100		
6.3	100		
2	100		
0.63	99		
0.2	94		
0.063	36		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	64%
	Total Fines	36%
	Silt	21%
	Clay	15%

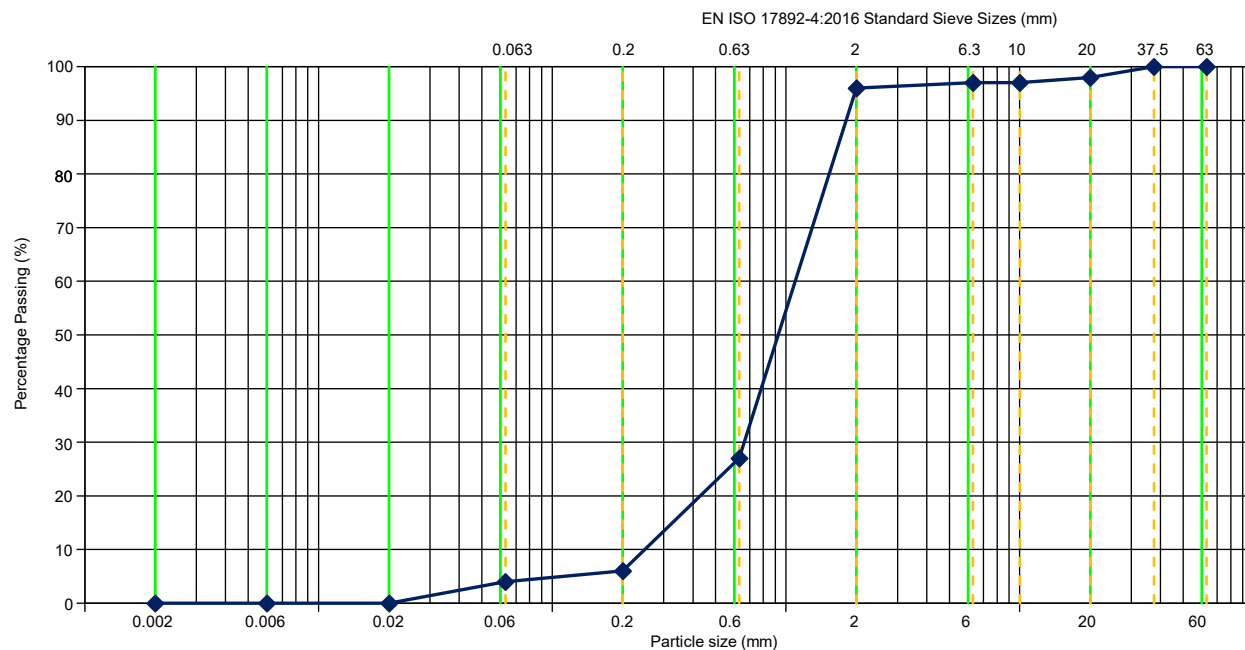
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	89.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	11.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-014	Comments Sample is a CLAY, unsorted, silty, very sandy.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	98	0.002	-
10	97		
6.3	97		
2	96		
0.63	27		
0.2	6		
0.063	4		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	4%
	Sand	92%
	Silt	4%
	Clay	0%

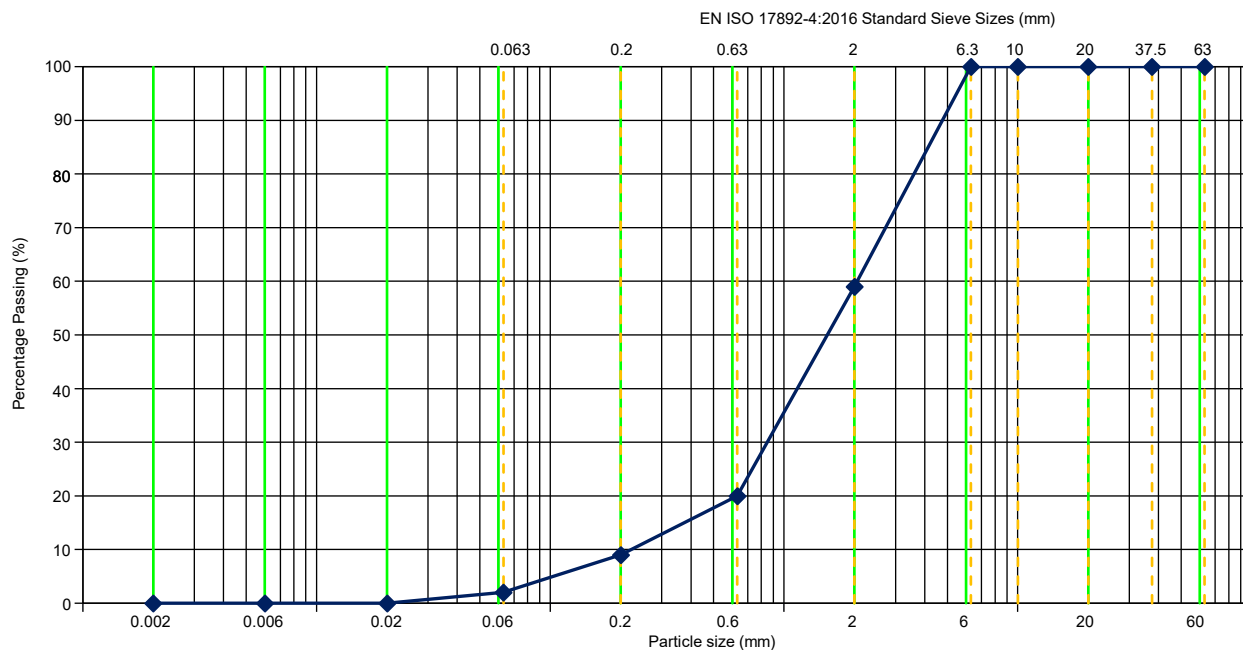
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D ₆₀ / D ₁₀	4.6
Coefficient of Curvature (Cc) D ₃₀ ² / (D ₁₀ x D ₆₀)	1.3

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-015	Comments Sample is a SAND, medium to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	59		
0.63	20		
0.2	9		
0.063	2		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	41%
	Sand	57%
	Total Fines	2%
	Silt	2%
	Clay	0%

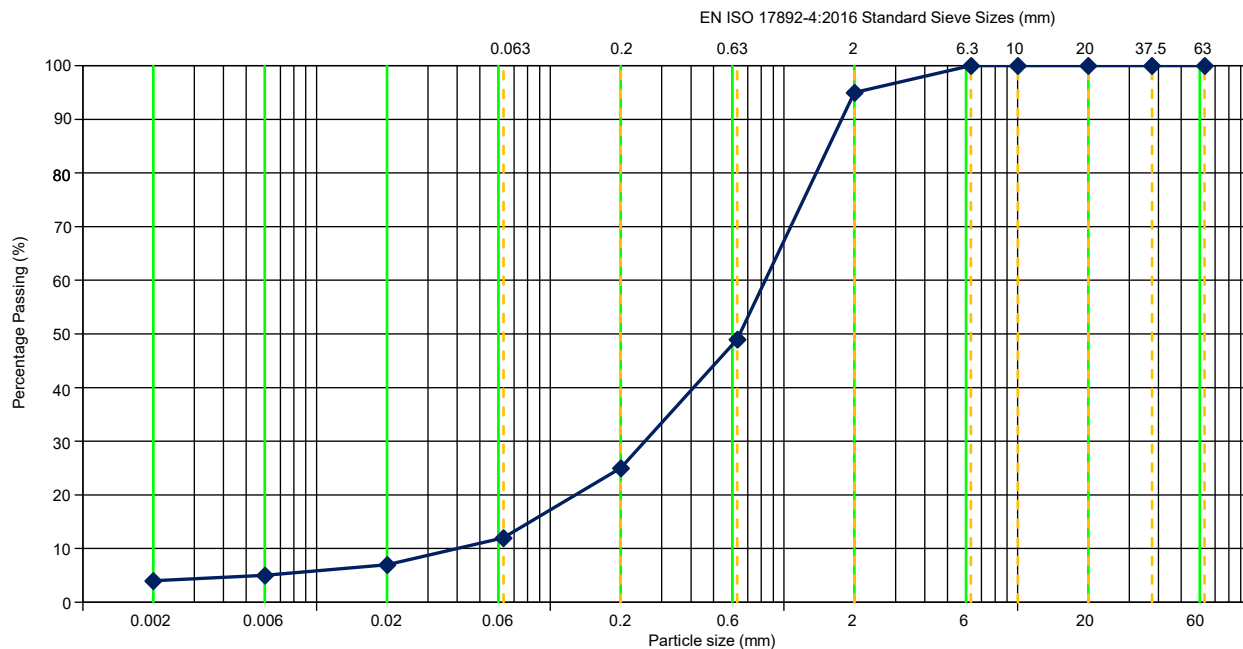
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	8.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-016	Comments Sample is a SAND, fine to coarse, unsorted, slightly silty, very gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	7
37.5	100	0.006	5
20	100	0.002	4
10	100		
6.3	100		
2	95		
0.63	49		
0.2	25		
0.063	12		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	5%
	Sand	83%
	Total Fines	12%
	Silt	8%
	Clay	4%

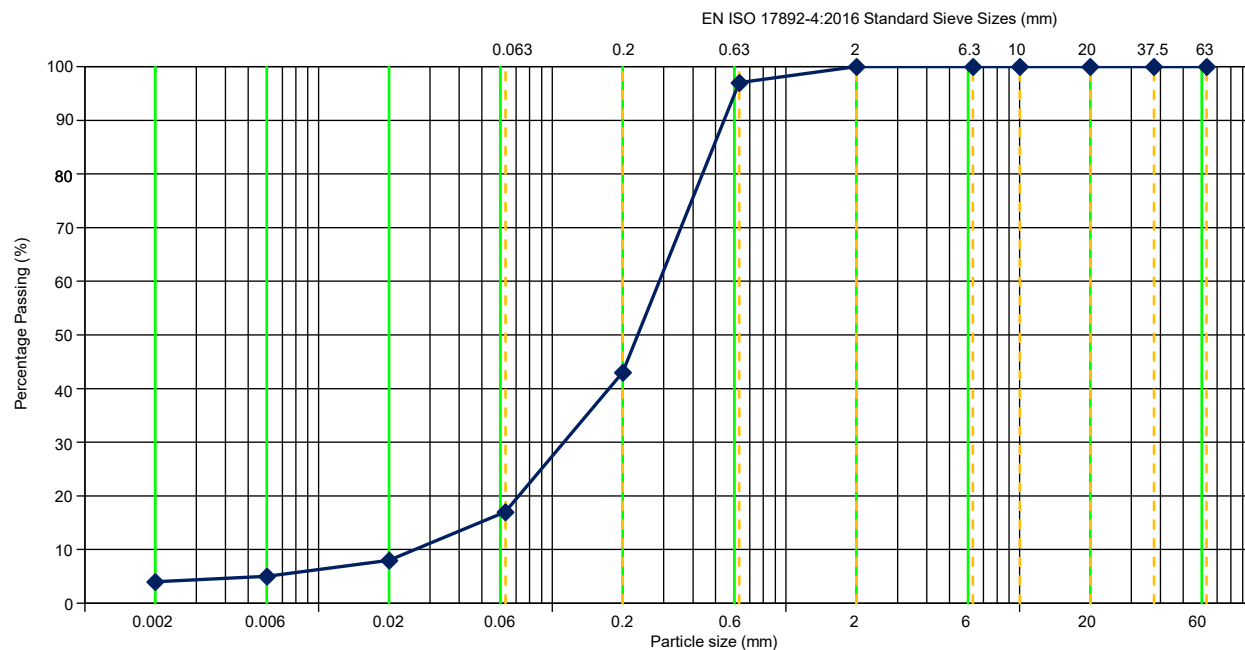
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	20.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.9

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-017	Comments Sample is a SAND, fine to coarse, unsorted, slightly clayey, silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	8
37.5	100	0.006	5
20	100	0.002	4
10	100		
6.3	100		
2	100		
0.63	97		
0.2	43		
0.063	17		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	83%
	Total Fines	17%
	Silt	13%
	Clay	4%

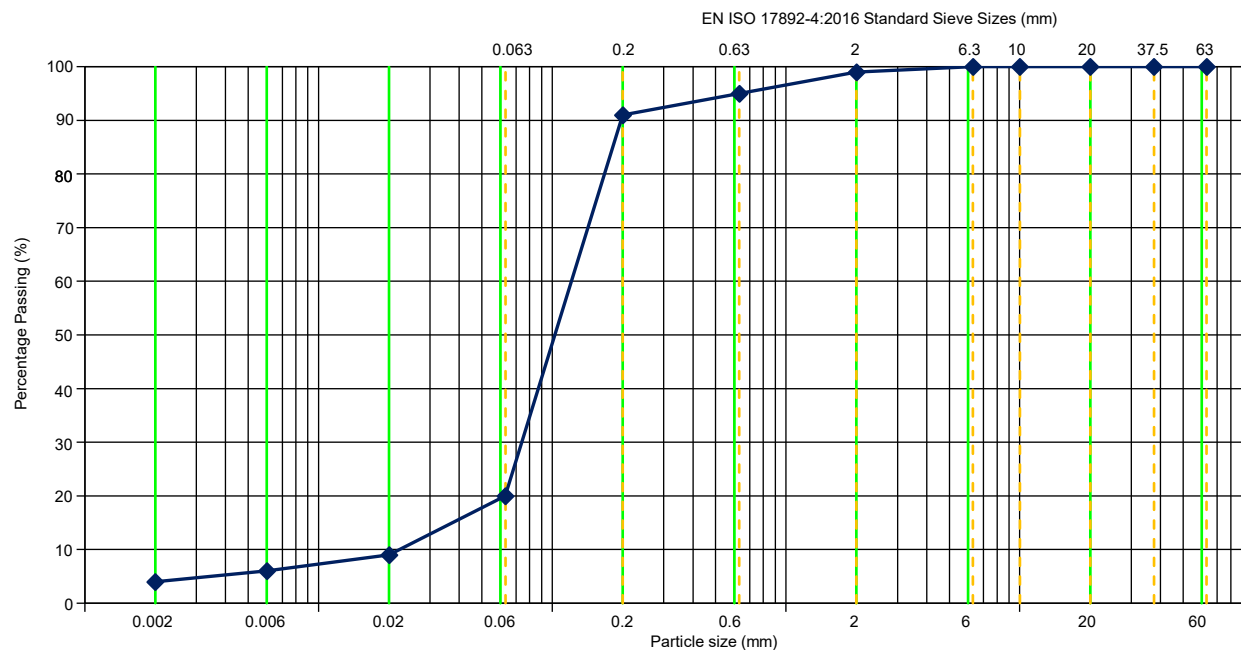
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	11.3
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-018	Comments Sample is a SAND, fine to medium, unsorted, slightly clayey, very silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	9
37.5	100	0.006	6
20	100	0.002	4
10	100		
6.3	100		
2	99		
0.63	95		
0.2	91		
0.063	20		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	79%
	Total Fines	20%
	Silt	16%
	Clay	4%

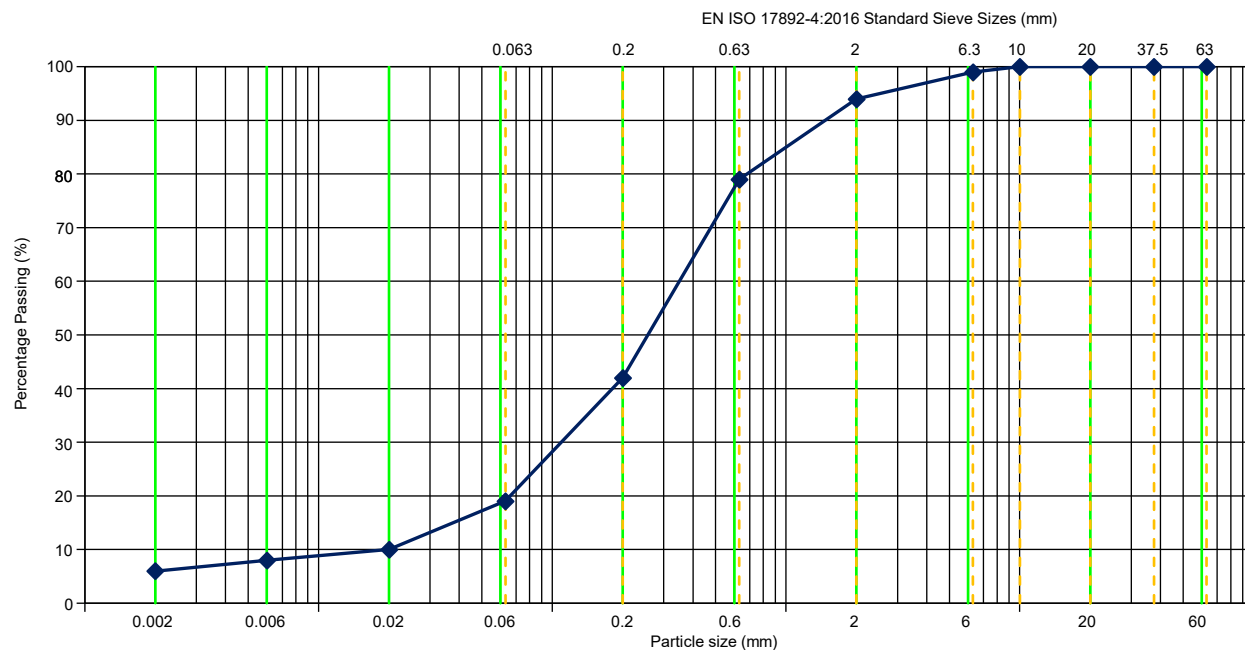
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	5.9
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-019	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly clayey, very silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	10
37.5	100	0.006	8
20	100	0.002	6
10	100		
6.3	99		
2	94		
0.63	79		
0.2	42		
0.063	19		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	6%
	Sand	75%
	Total Fines	19%
	Silt	13%
	Clay	6%

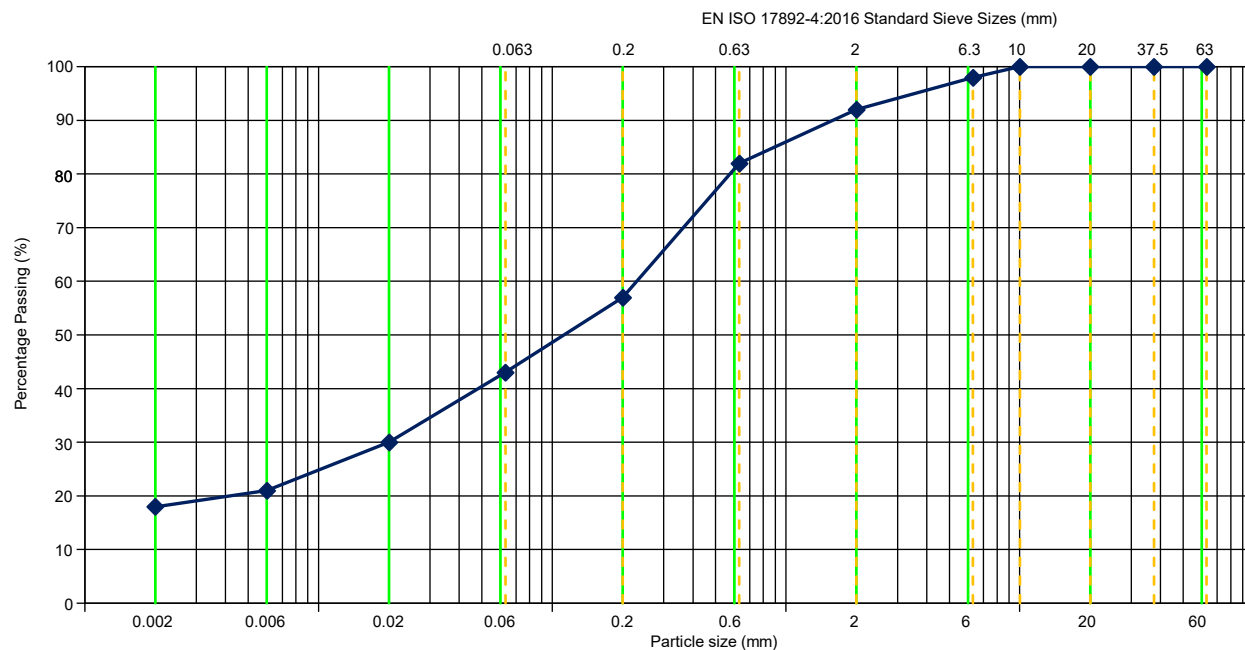
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	20.5
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location 783-GS-OWF-B5-020	Comments Sample is a SAND, fine to coarse, unsorted, clayey, very silty, gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	30
37.5	100	0.006	21
20	100	0.002	18
10	100		
6.3	98		
2	92		
0.63	82		
0.2	57		
0.063	43		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	8%
	Sand	49%
	Total Fines	43%
	Silt	25%
	Clay	18%

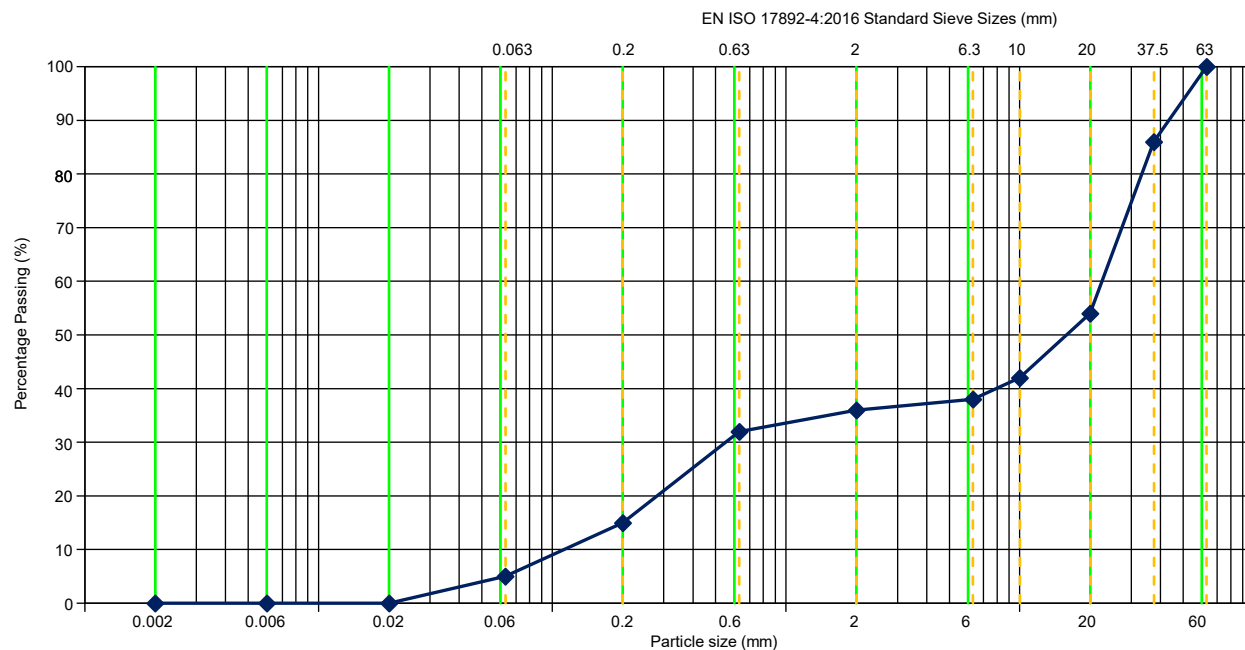
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	226.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.4

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-021	Comments Sample is a CLAY, unsorted, silty, very sandy, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	86	0.006	-
20	54	0.002	-
10	42		
6.3	38		
2	36		
0.63	32		
0.2	15		
0.063	5		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	64%
	Sand	31%
	Total Fines	5%
	Silt	5%
	Clay	0%

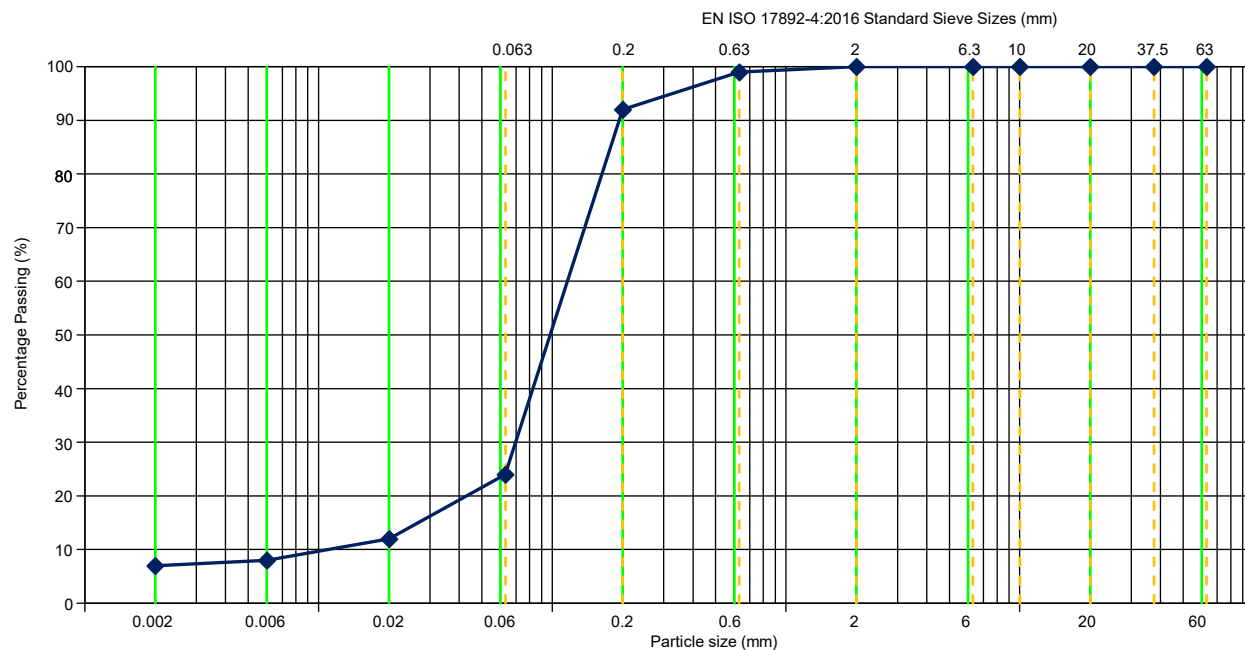
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu)	177.0
D60 / D10	
Coefficient of Curvature (Cc)	0.1
D30 ² / (D10 x D60)	

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-022	Comments	Sample is a GRAVEL, medium to coarse, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	12
37.5	100	0.006	8
20	100	0.002	7
10	100		
6.3	100		
2	100		
0.63	99		
0.2	92		
0.063	24		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	76%
	Total Fines	24%
	Silt	17%
	Clay	7%

Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	10.4
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	3.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B5-023	Comments Sample is a SAND, fine to medium, unsorted, clayey, very silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Summary of Chemical Test Results - Block 5



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		Analyte	Organic Matter Content	Total Organic Carbon
		Top (m)	Base (m)			
				LOD	0.1	0.1
				Unit	% w/w	% w/w C
B5	783-GS-OWF-B5-004	0.00	0.20		1.57	0.91
B5	783-GS-OWF-B5-005	0.00	0.20		0.21	0.12
B5	783-GS-OWF-B5-007	0.00	0.20		0.34	0.20
B5	783-GS-OWF-B5-009	0.00	0.20		0.60	0.35
B5	783-GS-OWF-B5-013	0.00	0.20		1.38	0.80
B5	783-GS-OWF-B5-014	0.00	0.20		1.14	0.66
B5	783-GS-OWF-B5-018	0.00	0.20		0.34	0.20
B5	783-GS-OWF-B5-019	0.00	0.20		0.67	0.39
B5	783-GS-OWF-B5-021	0.00	0.20		2.10	1.22
B5	783-GS-OWF-B5-022	0.00	0.20		1.40	0.81
B5	783-GS-OWF-B5-023	0.00	0.20		1.14	0.66

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

CHEM - Block 5

GRAB SAMPLE RECORDS - BLOCK 6

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Grab Sample Logs	12
Summary of Particle Size Distribution Tests – Block 6	1
Particle Size Distribution Results	12
Summary of Chemical Test Results – Block 6	1

Summary of Grab Samples - Block 6

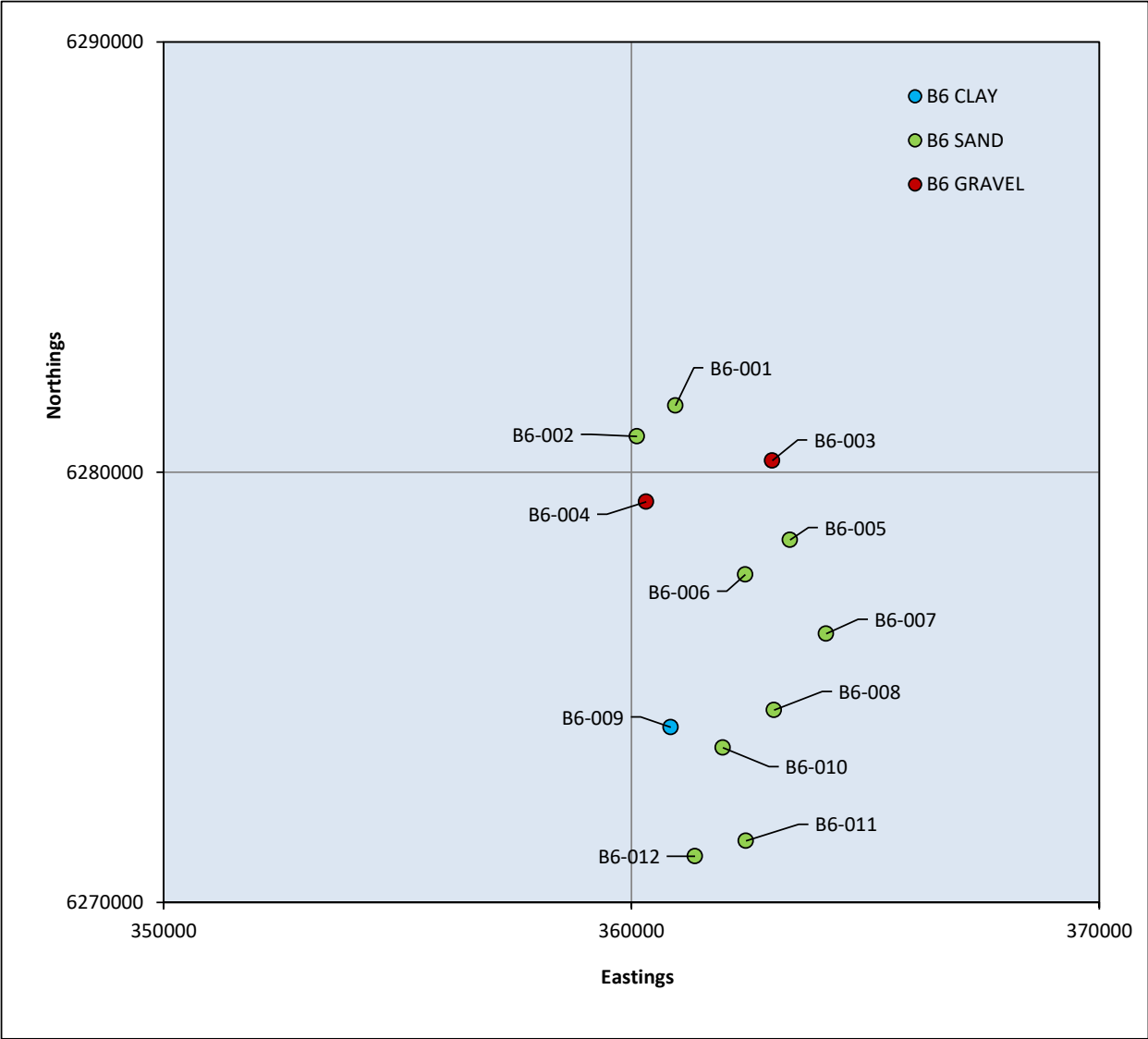
Survey Area	Grab Sample ID	Date	Vessel	Eastings	Northings	Water Depth	KP	Remarks
				(m)				
B6	783-GS-OWF-B6-001	2021-08-07	Franklin	360942	6281550	41		
B6	783-GS-OWF-B6-002	2021-08-07	Franklin	360119	6280835	41		
B6	783-GS-OWF-B6-003	2021-08-07	Franklin	363013	6280267	41		
B6	783-GS-OWF-B6-004	2021-08-07	Franklin	360315	6279313	43		
B6	783-GS-OWF-B6-005	2021-08-07	Franklin	363389	6278424	42		
B6	783-GS-OWF-B6-006	2021-08-07	Franklin	362433	6277623	41		
B6	783-GS-OWF-B6-007	2021-08-07	Franklin	364159	6276246	41		
B6	783-GS-OWF-B6-008	2021-08-06	Franklin	363046	6274470	41		
B6	783-GS-OWF-B6-009	2021-08-06	Franklin	360840	6274071	45		
B6	783-GS-OWF-B6-010	2021-08-06	Franklin	361957	6273599	40		
B6	783-GS-OWF-B6-011	2021-08-07	Franklin	362445	6271433	37		
B6	783-GS-OWF-B6-012	2021-08-07	Franklin	361360	6271074	38		

Client **ENERGINET**

Project **North Sea OWF and Energy Islands**
 Project No. **103783**
 Carried out for **Energinet**

Table **GS - Block 6**

Plot of Grab Sample Material Types - Block 6



Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular to subrounded fine shell fragments and intact articulated bivalves, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	98 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location:	783-GS-OWF-B6-001	Comments:
Vessel:	Franklin	Location Coordinates:	E 360942 N 6281550			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B6	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B6-001

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments and echinoderm pieces, dark grey, organic odour, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 1 %
 Sand 98 %
 Total fines 1 %
 Silt 1 %
 Clay

Chemical Tests

Total Organic Matter 0.41 %
 Total Organic Carbon 0.24 %

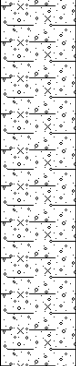
MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B6-002	Comments: Equipment: Van der Veen grab sampler		
Vessel:	Franklin	Location Coordinates:	E 360119 N 6280835				
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B6	Route KP:	GS Log Status: FINAL	Checked By: RC 783-GS-OWF-B6-002

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to medium, unsorted, 95% subangular to rounded fine to medium of various lithologies and 5% subangular fine to medium shell fragments, slightly silty, very sandy, sand is fine to coarse, dark grey and orangish brown, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	74 %
Sand	25 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B6-003	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 363013 N 6280267		
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B6	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B6-003	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	GRAVEL, fine to medium, unsorted, gravel is 100% subangular to rounded fine to medium of various lithologies, slightly clayey, very silty, very sandy, sand is fine to coarse, slight organic odour, dark grey, non-calcareous.		Mw	Lg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

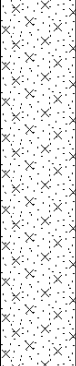
Laboratory Test Results:
Particle Size Distribution

Gravel	60 %
Sand	25 %
Total fines	15 %
Silt	11 %
Clay	4 %

Chemical Tests

Total Organic Matter	1.05 %
Total Organic Carbon	0.61 %

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B6-004	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 360315 N 6279313		
Client:	Energinet	Water Depth (m LAT):	43	Survey Route: B6 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B6-004

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material
0.00 (0.20)	SAND, fine to medium, sorted, slightly silty, rare subangular fine gravel size shell fragments, occasional fine gravel size pockets of dark grey and black very silty sand, yellowish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D	
	End of grab sample					

Laboratory Test Results:
Particle Size Distribution

Gravel

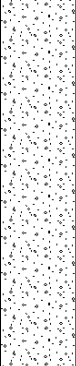
Sand 99 %

Total fines 1 %

Silt 1 %

Clay

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location:	783-GS-OWF-B6-005	Comments:
Vessel:	Franklin	Location Coordinates:	E 363389 N 6278424			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	42	Survey Route: B6	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B6-005

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly gravelly, gravel is 100% subrounded fine shell fragments, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 1 %
 Sand 99 %
 Total fines
 Silt
 Clay

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location:	783-GS-OWF-B6-006	Comments:
Vessel:	Franklin	Location Coordinates:	E 362433 N 6277623			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B6	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B6-006

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular fine shell fragments, occasional fine to medium gravel size pockets of black sand, greenish grey, slight organic odour, non-calcareous.		Wd	Pg	0.00 - 0.20 D		0.00
	End of grab sample						0.50

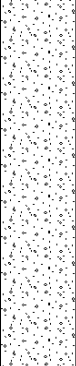
Laboratory Test Results:
Particle Size Distribution

Gravel 1 %
 Sand 96 %
 Total fines 3 %
 Silt 3 %
 Clay

Chemical Tests

Total Organic Matter 0.47 %
 Total Organic Carbon 0.27 %

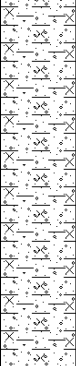
MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B6-007	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 364159 N 6276246		
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B6 Route KP:	GS Log Status: FINAL Checked By: RC 783-GS-OWF-B6-007

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to medium, sorted, slightly gravelly, gravel is 100% subangular to subrounded fine shell fragments and intact shells, occasional fine gravel size pockets of black sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	1 %
Sand	99 %
Total fines	0 %
Silt	0 %
Clay	

MMT Project ID:	103783	Location Test Date:	06/08/2021	GS Location:	783-GS-OWF-B6-008	Comments:
Vessel:	Franklin	Location Coordinates:	E 363046 N 6274470			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	41	Survey Route: B6	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B6-008

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	CLAY, unsorted, very silty, very sandy, sand is fine to medium, slightly gravelly, gravel is 100% subangular to subrounded fine to coarse shell fragments, dark greyish brown and black, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	6 %
Sand	50 %
Total fines	44 %
Silt	26 %
Clay	18 %

Chemical Tests

Total Organic Matter	2.64 %
Total Organic Carbon	1.53 %

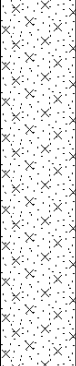
MMT Project ID:	103783	Location Test Date:	06/08/2021	GS Location: 783-GS-OWF-B6-009	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 360840 N 6274071		
Client:	Energinet	Water Depth (m LAT):	45	Survey Route: B6	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B6-009	

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly, gravel is 100% subangular to subrounded fine to medium shell fragments and intact shells, occasional fine to medium gravel size pockets of black sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel 2 %
 Sand 97 %
 Total fines 1 %
 Silt 1 %
 Clay

MMT Project ID:	103783	Location Test Date:	06/08/2021	GS Location: 783-GS-OWF-B6-010		Comments: Equipment: Van der Veen grab sampler	
Vessel:	Franklin	Location Coordinates:	E 361957 N 6273599				
Client:	Energinet	Water Depth (m LAT):	40	Survey Route:	B6	Route KP:	
				GS Log Status:	FINAL	Checked By:	RC
				783-GS-OWF-B6-010			

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, rare subangular to subrounded fine gravel size shell fragments, occasional fine gravel size pockets of black sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel

Sand 99 %

Total fines 1 %

Silt 1 %

Clay

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location:	783-GS-OWF-B6-011	Comments:
Vessel:	Franklin	Location Coordinates:	E 362445 N 6271433			Equipment: Van der Veen grab sampler
Client:	Energinet	Water Depth (m LAT):	37	Survey Route: B6	Route KP:	GS Log Status: FINAL
						Checked By: RC
						783-GS-OWF-B6-011

Depth (m) (Thickness)	Sediment Description	Legend	Depositional Environment	Age	Sample & Type (m)	Recovered Material	
0.00 (0.20)	SAND, medium to coarse, sorted, slightly silty, slightly gravelly, gravel is 100% subangular to subrounded fine shell fragments and intact articulated bivalves, occasional fine to medium gravel size pockets of black sand, orangish brown, non-calcareous.		Ma	Re	0.00 - 0.20 D		0.00
	End of grab sample						0.50

Laboratory Test Results:
Particle Size Distribution

Gravel	2 %
Sand	97 %
Total fines	1 %
Silt	1 %
Clay	

MMT Project ID:	103783	Location Test Date:	07/08/2021	GS Location: 783-GS-OWF-B6-012	Comments: Equipment: Van der Veen grab sampler
Vessel:	Franklin	Location Coordinates:	E 361360 N 6271074		
Client:	Energinet	Water Depth (m LAT):	38	Survey Route: B6	Route KP:
				GS Log Status: FINAL	Checked By: RC
				783-GS-OWF-B6-012	

Summary of Particle Size Distribution Tests - Block 6



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		PSD		Sediment Fraction (%)					
		Top (m)	Base (m)	Sieve	Sed.	Clay	Silt	Total Fines	Sand	Gravel	Cobbles
B6	783-GS-OWF-B6-001	0.00	0.20	Yes	No		1	1	98	1	
B6	783-GS-OWF-B6-002	0.00	0.20	Yes	No		1	1	98	1	
B6	783-GS-OWF-B6-003	0.00	0.20	Yes	No		1	1	25	74	
B6	783-GS-OWF-B6-004	0.00	0.20	Yes	Yes	4	11	15	25	60	
B6	783-GS-OWF-B6-005	0.00	0.20	Yes	No		1	1	99		
B6	783-GS-OWF-B6-006	0.00	0.20	Yes	No				99	1	
B6	783-GS-OWF-B6-007	0.00	0.20	Yes	No		3	3	96	1	
B6	783-GS-OWF-B6-008	0.00	0.20	Yes	No				99	1	
B6	783-GS-OWF-B6-009	0.00	0.20	Yes	Yes	18	26	44	50	6	
B6	783-GS-OWF-B6-010	0.00	0.20	Yes	No		1	1	97	2	
B6	783-GS-OWF-B6-011	0.00	0.20	Yes	No		1	1	99		
B6	783-GS-OWF-B6-012	0.00	0.20	Yes	No		1	1	97	2	

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

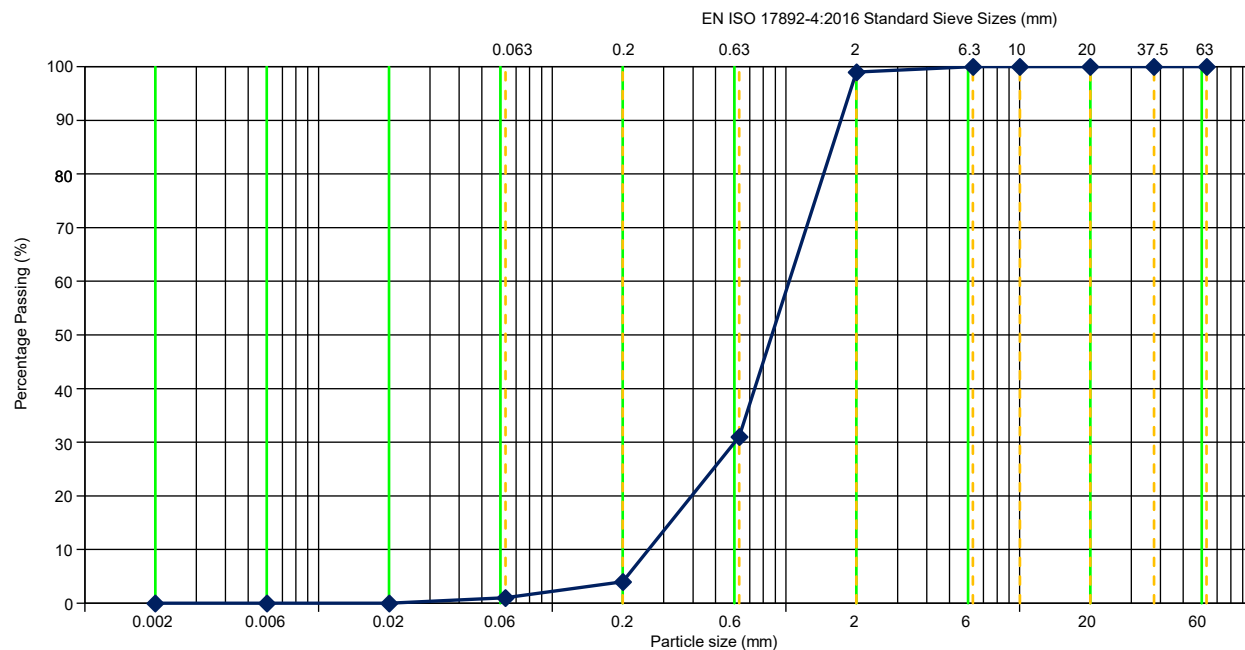
Carried out for

Energinet

Table

PSD - Block 6

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	31		
0.2	4		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	98%
	Silt	1%
	Clay	0%

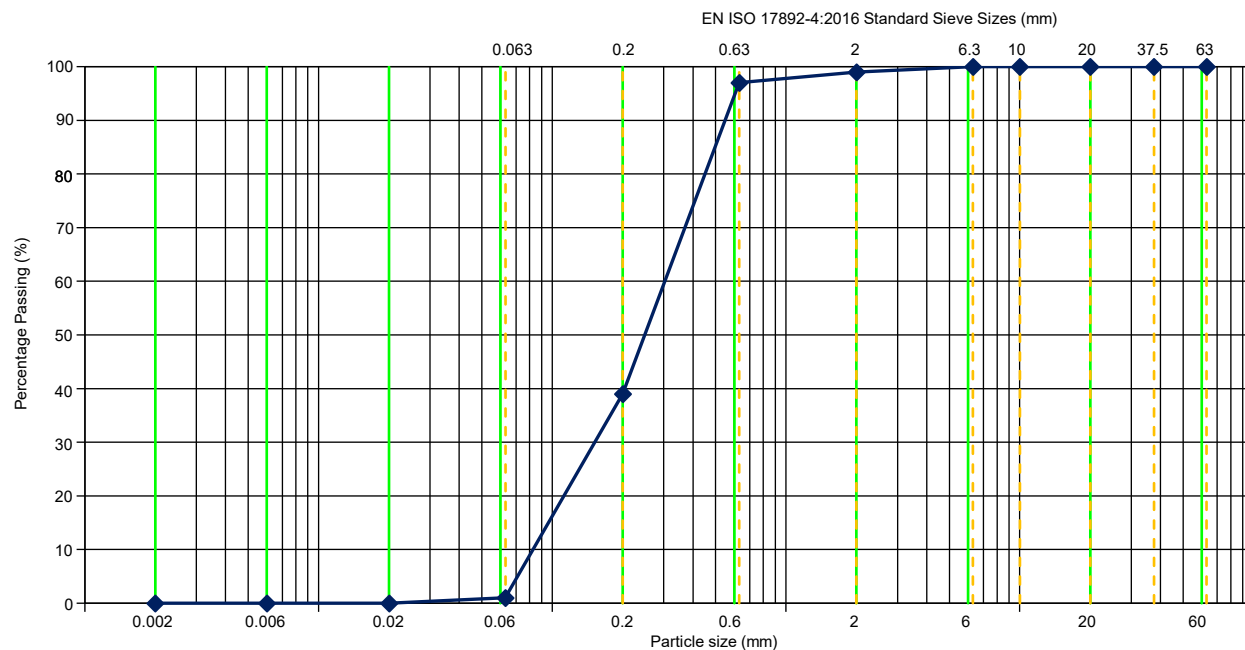
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B6-001	Comments Sample is a SAND, medium to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	97		
0.2	39		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	98%
	Silt	1%
	Clay	0%

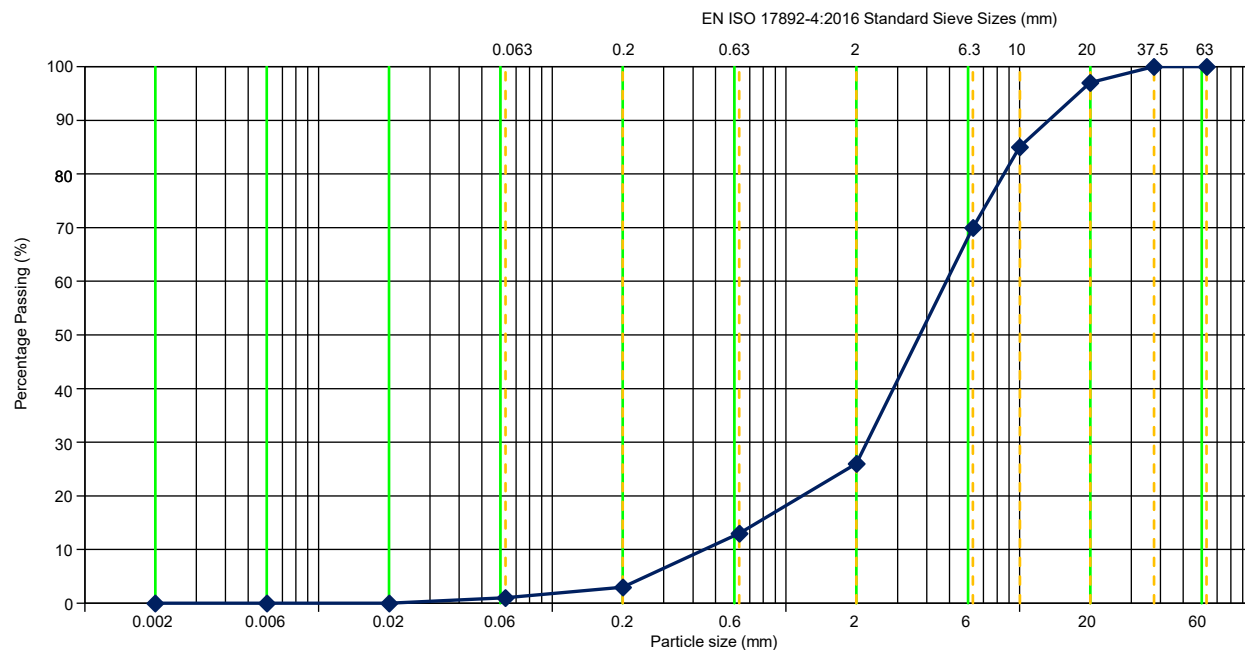
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	0.8

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B6-002	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	97	0.002	-
10	85		
6.3	70		
2	26		
0.63	13		
0.2	3		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	74%
	Sand	25%
	Total Fines	1%
	Silt	1%
	Clay	0%

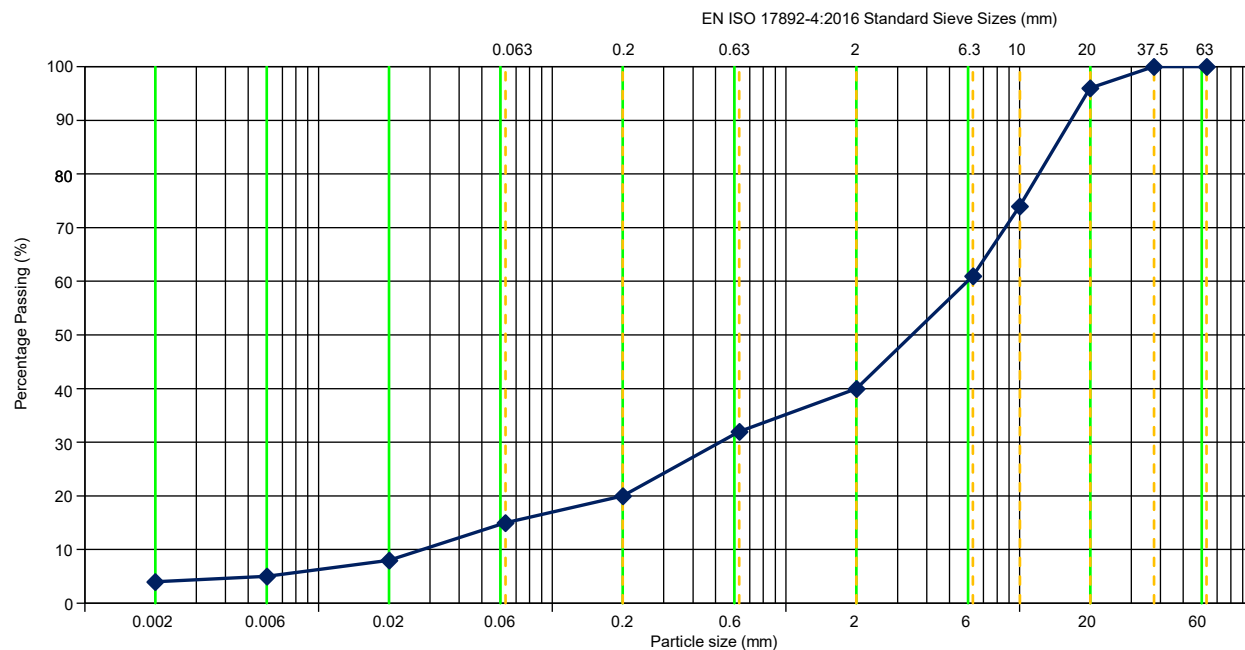
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	10.6
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	2.1

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-003	Comments Sample is a GRAVEL, fine to medium, unsorted, slightly silty, very sandy.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	8
37.5	100	0.006	5
20	96	0.002	4
10	74		
6.3	61		
2	40		
0.63	32		
0.2	20		
0.063	15		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	60%
	Sand	25%
	Total Fines	15%
	Silt	11%
	Clay	4%

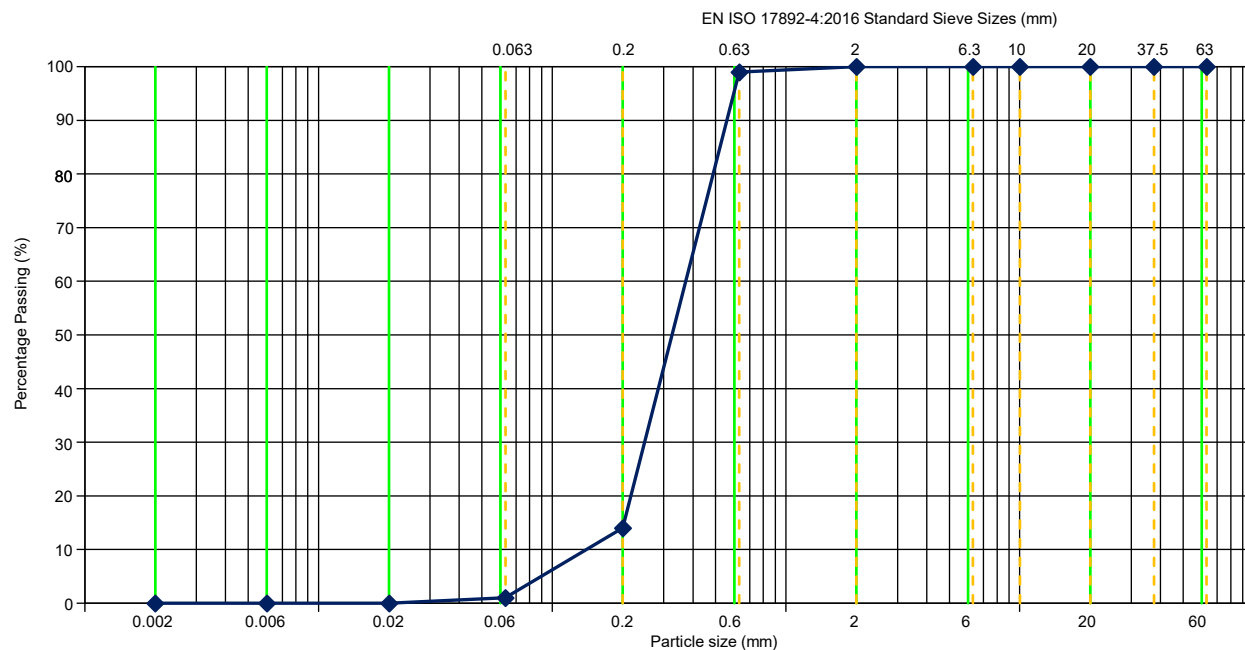
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	188.8
Coefficient of Curvature (Cc) $D_{30}^2 / (D_{10} \times D_{60})$	1.6

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-004	Comments	Sample is a GRAVEL, fine to medium, unsorted, slightly clayey, very silty, very sandy.
Project	North Sea OWF and Energy Islands				
Client	Energinet				

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	99		
0.2	14		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	99%
	Silt	1%
	Clay	0%

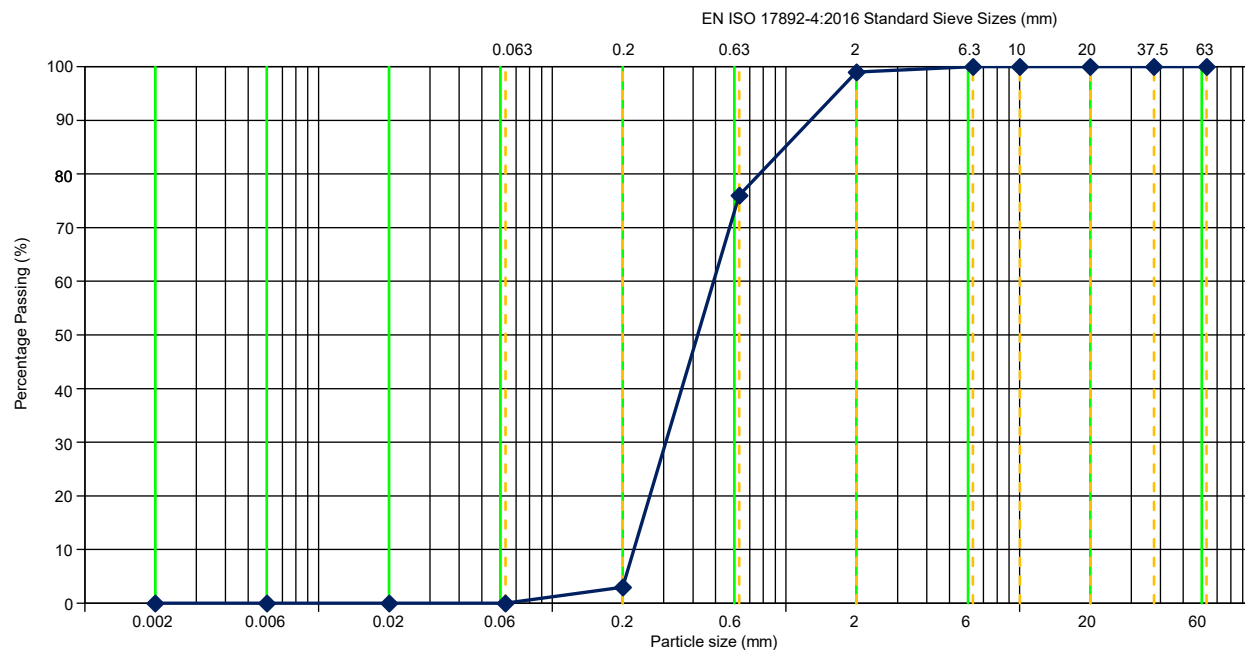
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-005	Comments Sample is a SAND, fine to medium, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	76		
0.2	3		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	99%
	Silt	0%
	Clay	0%

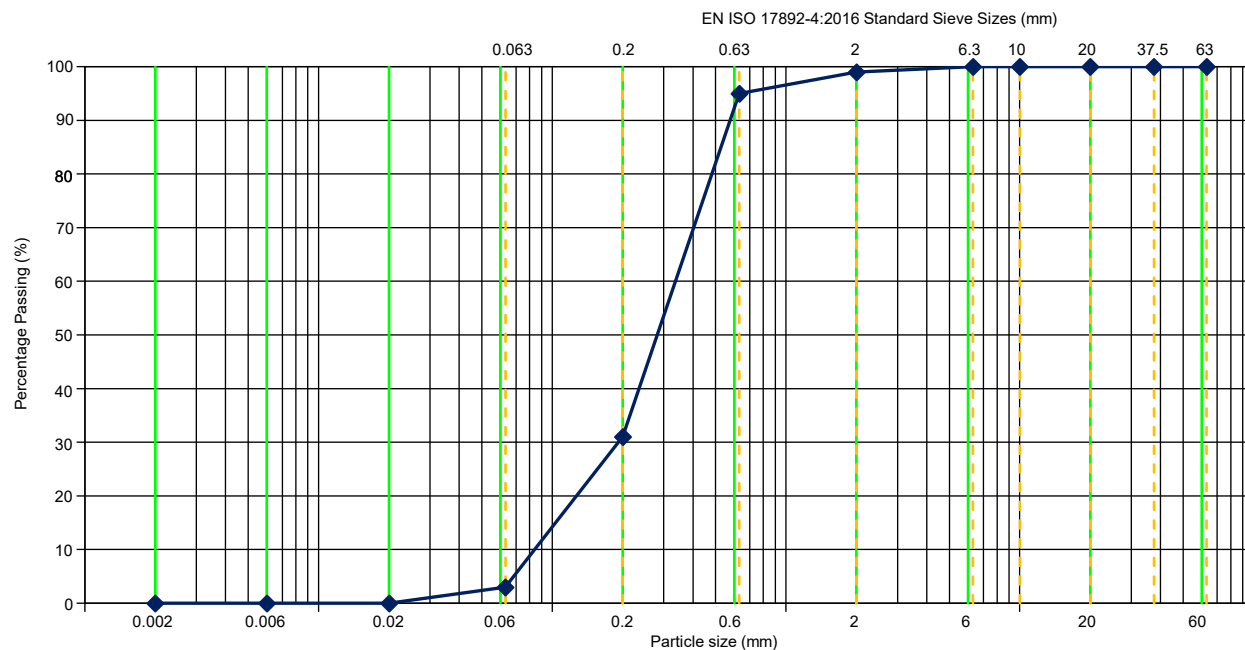
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B6-006	Comments Sample is a SAND, medium to coarse, sorted, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	95		
0.2	31		
0.063	3		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	96%
	Silt	3%
	Clay	0%

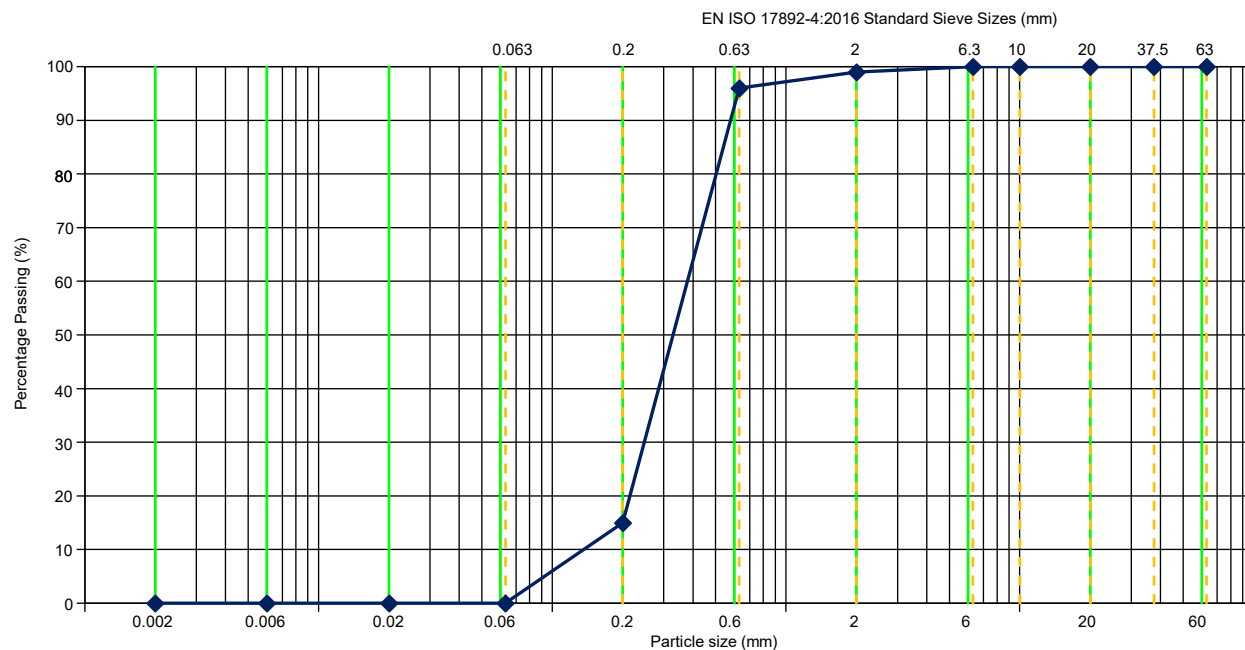
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	4.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B6-007	Comments Sample is a SAND, fine to medium, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	99		
0.63	96		
0.2	15		
0.063	0		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	1%
	Sand	99%
	Silt	0%
	Clay	0%

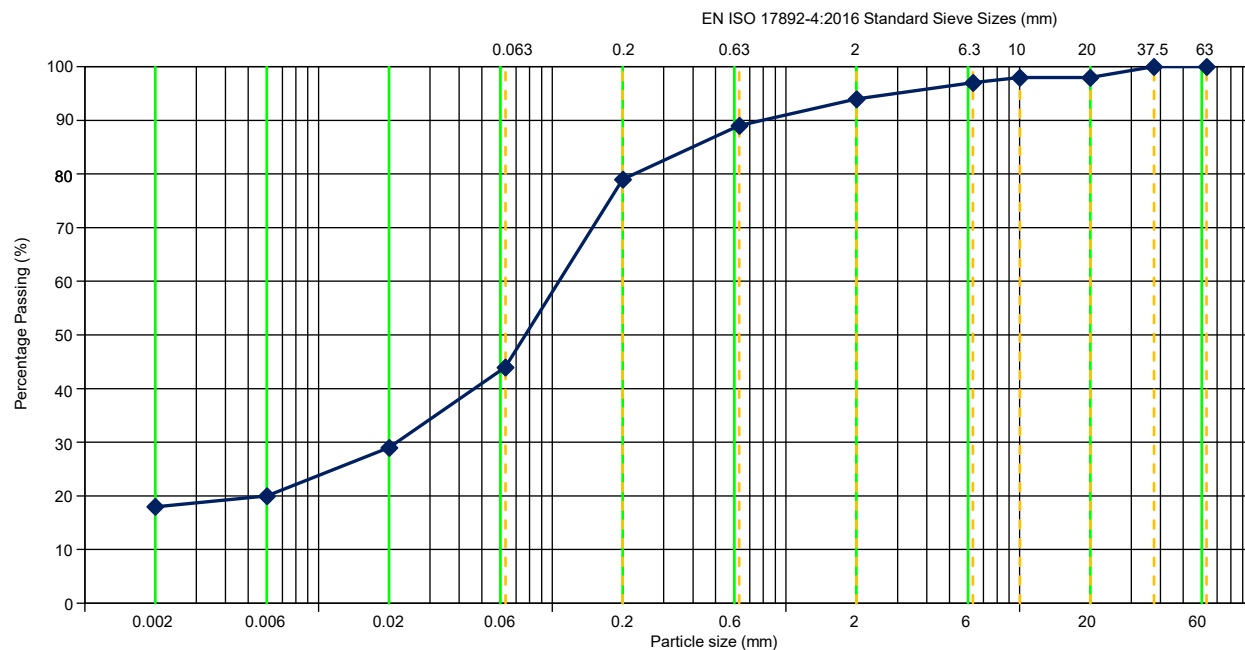
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.8
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-008	Comments Sample is a SAND, fine to medium, sorted, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	29
37.5	100	0.006	20
20	98	0.002	18
10	98		
6.3	97		
2	94		
0.63	89		
0.2	79		
0.063	44		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	6%
	Sand	50%
	Total Fines	44%
	Silt	26%
	Clay	18%

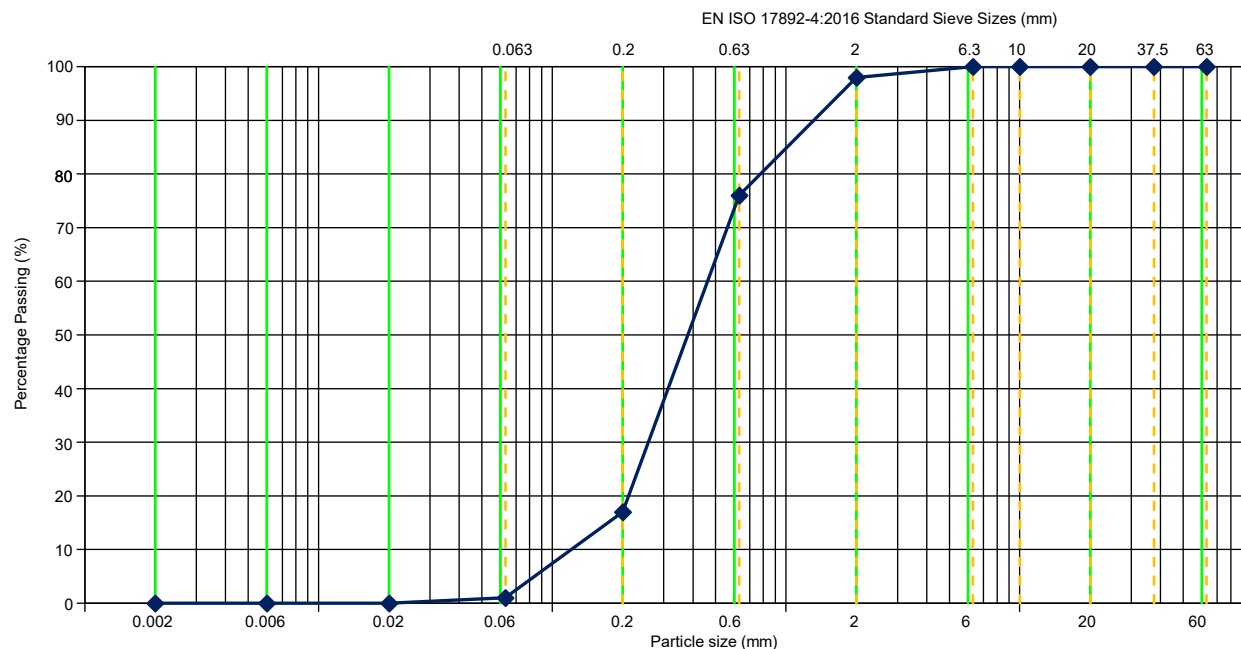
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	113.1
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	3.7

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet
	Sedimentation	5.4 pipette

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-009	Comments Sample is a CLAY, unsorted, very silty, very sandy, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	76		
0.2	17		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	97%
	Silt	1%
	Clay	0%

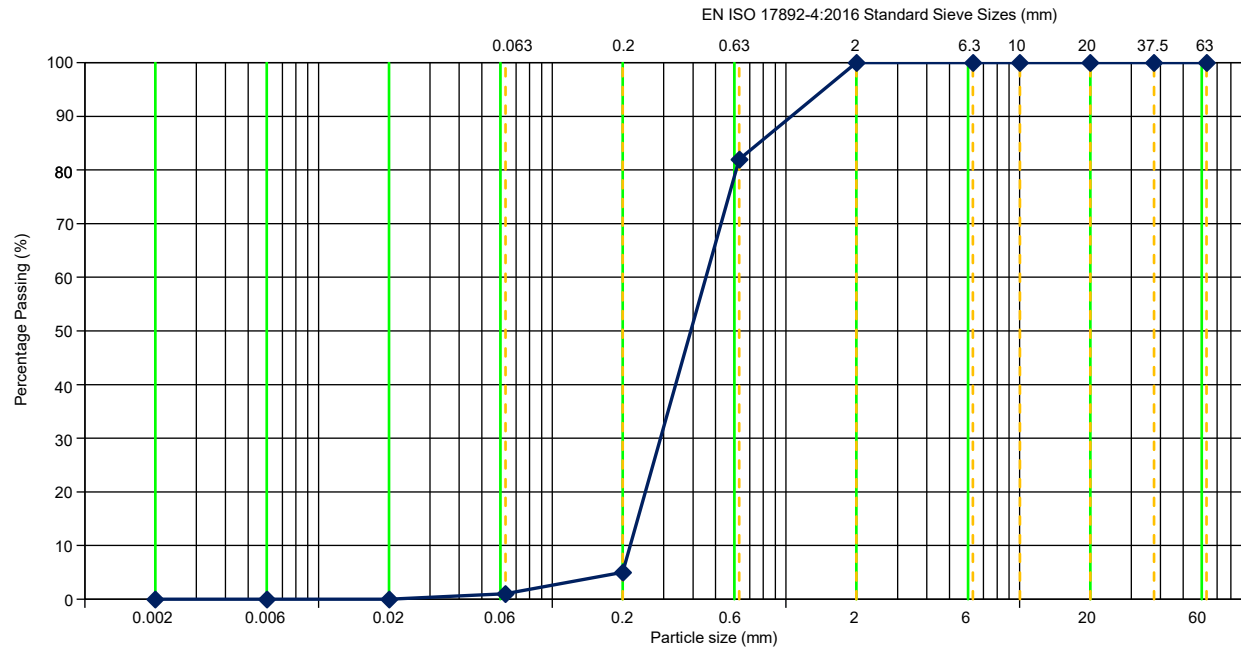
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	3.7
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.2

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-010	Comments Sample is a SAND, fine to coarse, poorly sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	100		
0.63	82		
0.2	5		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	0%
	Sand	99%
	Silt	1%
	Clay	0%

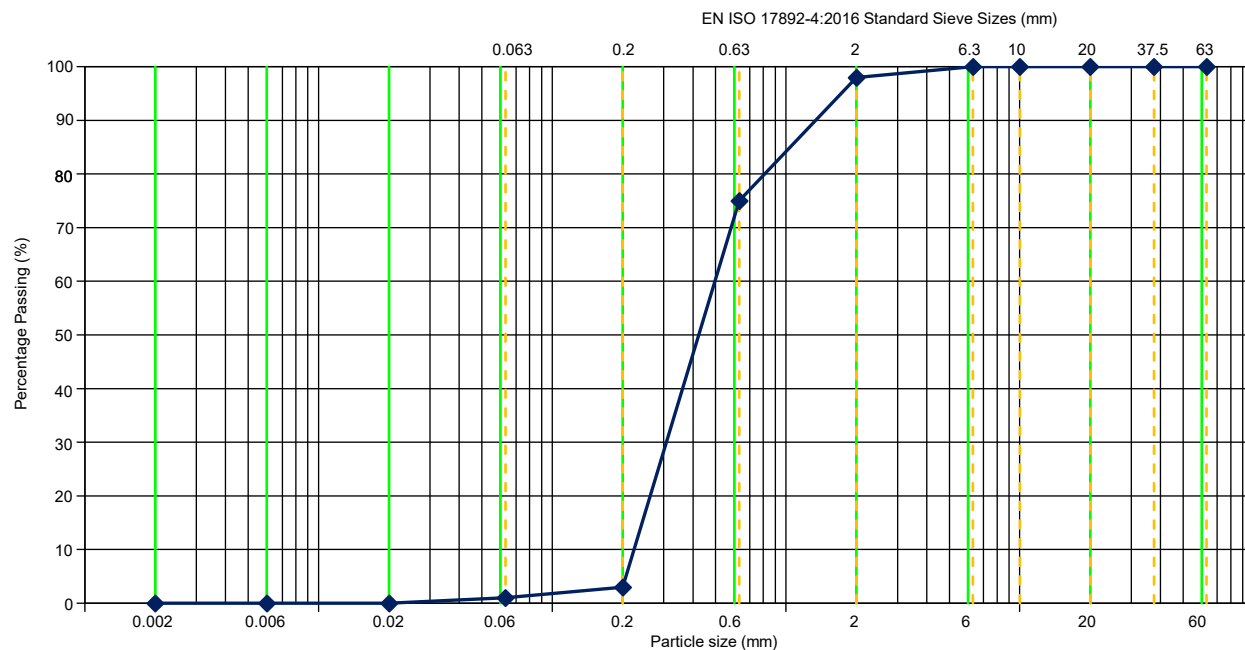
Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location	783-GS-OWF-B6-011	Comments Sample is a SAND, medium to coarse, sorted, slightly silty.
Project	North Sea OWF and Energy Islands			
Client	Energinet			

Particle Size Distribution



Sieving

Particle Size mm	% Passing	Particle Size mm	% Passing
63	100	0.02	-
37.5	100	0.006	-
20	100	0.002	-
10	100		
6.3	100		
2	98		
0.63	75		
0.2	3		
0.063	1		

Sedimentation

CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	SILT			SAND			GRAVEL			

Sample Proportions	Cobbles / boulders	0%
	Gravel	2%
	Sand	97%
	Silt	1%
	Clay	0%

Sample Details	Sample Top, mBGL	0.00
	Sample Base, mBGL	0.20
	Sample Ref	1
	Sample Type	D

Uniformity Coefficient (Cu) D60 / D10	2.2
Coefficient of Curvature (Cc) D30 ² / (D10 x D60)	1.0

Test Method	EN ISO 17892-4 : 2016	
	Sieving	5.2 wet

Project Number	103783	Grab Sample Location 783-GS-OWF-B6-012	Comments Sample is a SAND, medium to coarse, sorted, slightly silty, slightly gravelly.
Project	North Sea OWF and Energy Islands		
Client	Energinet		

Summary of Chemical Test Results - Block 6



MMT Project No. 103783

Survey Area	Grab Sample ID	Depth		Analyte	Organic Matter Content	Total Organic Carbon
		Top (m)	Base (m)			
				LOD	0.1	0.1
				Unit	% w/w	% w/w C
B6	783-GS-OWF-B6-002	0.00	0.20		0.41	0.24
B6	783-GS-OWF-B6-004	0.00	0.20		1.05	0.61
B6	783-GS-OWF-B6-007	0.00	0.20		0.47	0.27
B6	783-GS-OWF-B6-009	0.00	0.20		2.64	1.53

Client

ENERGINET

Project

North Sea OWF and Energy Islands

Project No.

103783

Carried out for

Energinet

Table

CHEM - Block 6