

Preliminary Environmental Information Report: Annex 10.3 – Seascape and Visual Resources Cumulative Wirelines

Date: July 2017



Offshore Wind Farm





Environmental Impact Assessment

Preliminary Environmental Information Report

Volume 5

Annex.10.3 – Seascape and Visual Resources Cumulative Wirelines

Liability

This report has been prepared by RPS, with all reasonable skill, care and diligence within the terms of their contracts with DONG Energy Power (UK) Ltd.

Report Number: P6.5.10.3

Version: Final

Date: July 2017

This report is also downloadable from the Hornsea Project Three offshore wind farm website at: www.dongenergy.co.uk/hornseaproject3

DONG Energy Power (UK) Ltd.

5 Howick Place,

London, SW1P 1WG

© DONG Energy Power (UK) Ltd, 2017. All rights reserved

Front cover picture: Kite surfer near one of DONG Energy's UK offshore wind farms © DONG Energy Hornsea Project Three (UK) Ltd., 2016.

Prepared by: RPS Checked by: Julian Carolan Accepted by: Sophie Banham Approved by: Sophie Banham







List of Figures

Figure 1:	Cumulative Schemes and Present Day Seascape Characteristics.
Figure 2:	Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route North and East (Layout A)2
Figure 3:	Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route South and West (Layout A)3
Figure 4:	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North and East (Layout A)4
Figure 5:	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route South and West (Layout A)5
Figure 6:	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North and East (Layout A)6
Figure 7:	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route South and West (Layout A)7
Figure 8:	Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route North and East (Layout B)8
Figure 9:	Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route South and West (Layout B)9
Figure 10:	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North and East (Layout B)10
Figure 11:	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route South and West (Layout B)11
Figure 12:	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North and East (Layout B)12
Figure 13:	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route South and West (Layout B)13









Figure 1: Cumulative Schemes and Present Day Seascape Characteristics.







	Hornsea Project Two		Hornsea Project One
	Г		
+ + ++ + ++ ++ ++ ++ ++ ++ ++ ++++++++	K + + # + + + + + + + + + + + + + + + +	+ The the + + + the + + the + the + the	+# + # + + + + + + + + + + + + + + + +
S 84 Datum: 53° 45.680' N 1° 38.506' E			
rpoint height: 26.5m LAT ance from Hornsea 3: 45 km			
orizontal field of view: 90° iewing distance: 251mm @ A3 iew North		Cumulative Wireline Viewpoint 1: Newo	astle to Amsterdam Ferry Route North (Layout A)
ewing distance: 251mm @ A3		Cumulative Wireline Viewpoint 1: Newc	astle to Amsterdam Ferry Route North (Layout A)
ewing distance: 251mm @ A3 ew North		Cumulative Wireline Viewpoint 1: Newo	astle to Amsterdam Ferry Route North (Layout A)
wing distance: 251mm @ A3 w North		Cumulative Wireline Viewpoint 1: Newo	astle to Amsterdam Ferry Route North (Layout A)
wing distance: 251mm @ A3 w North Hornsea Three - Layout A		Cumulative Wireline Viewpoint 1: Newo	astle to Amsterdam Ferry Route North (Layout A)
ving distance: 251mm @ A3 v North Hornsea Three - Layout A		Cumulative Wireline Viewpoint 1: News	aastle to Amsterdam Ferry Route North (Layout A)
ving distance: 251mm @ A3 v North Hornsea Three - Layout A		Cumulative Wireline Viewpoint 1: Newo	eastle to Amsterdam Ferry Route North (Layout A)
ving distance: 251mm @ A3 v North Hornsea Three - Layout A		Cumulative Wireline Viewpoint 1: Newo	eastle to Amsterdam Ferry Route North (Layout A)
ving distance: 251mm @ A3 v North Hornsea Three - Layout A		Cumulative Wireline Viewpoint 1: Newo	eastle to Amsterdam Ferry Route North (Layout A)
ving distance: 251mm @ A3 v North Hornsea Three - Layout A		Cumulative Wireline Viewpoint 1: Newo	Hornsea Three
wing distance: 251mm @ A3 w North Hornsea Three - Layout A 1 st 4 st the state the state the state the state of the sta		Cumulative Wireline Viewpoint 1: Newo	 ✓ Hornsea Three ✓ Operational/under construction ✓ Consented/approved
wing distance: 251mm @ A3 w North Hornsea Three - Layout A And the and the		Cumulative Wireline Viewpoint 1: Newo	Hornsea Three
ewing distance: 251mm @ A3 ew North		Cumulative Wireline Viewpoint 1: Newo	 ✓ Hornsea Three ✓ Operational/under construction ✓ Consented/approved ✓ Planned/pre-planning

Figure 2: Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route North and East (Layout A).







	Clipper	Dudgeon
	12	
IN CONTRACTOR STATE		
WGS 84 Datum: 53° 45.680' N 1° 38.506' E		
Viewpoint height: 26.5m LAT		
Distance from Hornsea 3: 45 km		
Horizontal field of view: 90°		
Viewing distance: 251mm @ A3		
Viewing distance: 251mm @ A3		Cumulative Wireline Viewpoint 1: Newcastle to Ams
View South		Cumulative whenne viewpoint 1. Newcastle to Ams
Triton Knoll	West Sole	
a an ann ann ann ann an an an an a' a L d B. C - A shart an an an		
WGS 84 Datum: 53° 45.680' N 1° 38.506' E		
Viewpoint height: 26.5m LAT		
Distance from Hornsea 3: 45 km		
Horizontal field of view: 90°		
Viewing distance: 251mm @ A3		
		Cumulative Wireline Viewpoint 1: Newcastle to Am
View West		Culturative Whenne Viewpoint 1. Newcastle to Ann

Figure 3: Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route South and West (Layout A).









Annex	10.3	- Se

vo	Hornsea Three - Layout A
o Hornsea Project One	
र मेलेकर के नेश्वसंघरण हो के र मेलाल रहे र फेल्लमी सरके र मार्ग्रेक्स ने के मेरे र में के संघर ने ने ने ने ने क	如 林子 化二苯基化二丁基基基 人名达 化二苯基 人名英人名英人名英人名英人名英人名 医子子子 医子子子 医子子子 医子子子 医子子子 医子子子 医子子子 医子
S 84 Datum: 53° 36.494' N 2° 18.857' E	
vpoint height: 26.5m LAT	
anas from Horness 2: 22 km	
rizontal field of view: 90° ewing distance: 251mm @ A3	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North (Layout
brizontal field of view: 90° ewing distance: 251mm @ A3	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North (Layout
vizontal field of view: 90° ewing distance: 251mm @ A3 ew North	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North (Layout
vizontal field of view: 90° ewing distance: 251mm @ A3 ew North	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North (Layout A
prizontal field of view: 90° ewing distance: 251mm @ A3 ew North	Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North (Layout A
ation field of view: 90° ewing distance: 251mm @ A3 ew North 	↑ Homses Three ↑ Operational/under construction
orizontal field of view: 90° iewing distance: 251mm @ A3 iew North	 ✓ Operational/under construction ✓ Consented/approved
istance from Hornsea 3: 23 km orizontal field of view: 90° iew North	↑ Hornsea Three ↑ Operational/under construction

Figure 4: Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North and East (Layout A).







Annex	10 3	
Alliex	10.3	s - se

	Viking Bravo	Viking Alpha Riser	Loggs Riser/ North Valiant
GS 84 Datum: 53° 36.494' N_2° 18.857' E			
iewpoint height: 26.5m LAT istance from Hornsea 3: 23 km orizontal field of view: 90° iewing distance: 251mm @ A3 iew South		Cumulative Wireline Viewpoint 2: Newcastle to A	Amsterdam Ferry Route South (Layout
			Hornsea
		F	
Clipper			
Clipper			, en an unit en annaldt en a stilletig, ein terke

Figure 5: Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route South and West (Layout A).





Hornsea 3 Offshore Wind Farm

Hornsea Three - Layout A	
84 Datum: 53° 17.962' N 2° 56.452' E oint height: 26.5m LAT	
tal field of view: 90° distance: 251mm @ A3	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout A)
tal field of view: 90° g distance: 251mm @ A3	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout A)
ntal field of view: 90° g distance: 251mm @ A3	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout A)
ntal field of view: 90° g distance: 251mm @ A3	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout A)
ntal field of view: 90° g distance: 251mm @ A3	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout A)
Ace from Hornsea 3: 45 km ontal field of view: 90° ng distance: 251mm @ A3 North 84 Datum: 53° 17.962' N 2° 56.452' E point height: 26.5m LAT nce from Hornsea 3: 45 km	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout A)

Figure 6: Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North and East (Layout A).







84 Datum: 53° 17.962' N 2° 56.452' E		
oint height: 26.5m LAT		
ce from Hornsea 3: 45 km ntal field of view: 90°		
ng distance: 251mm @ A3		
ew South	 Cumulative Wireline Viewpoint 3: Newcast	le to Amsterdam Ferry Route South (Layout /
/ South	Cumulative Wireline Viewpoint 3: Newcast	le to Amsterdam Ferry Route South (Layout
South	Cumulative Wireline Viewpoint 3: Newcast	le to Amsterdam Ferry Route South (Layout
South	Cumulative Wireline Viewpoint 3: Newcast	le to Amsterdam Ferry Route South (Layout
South	Cumulative Wireline Viewpoint 3: Newcast	le to Amsterdam Ferry Route South (Layout
South	Cumulative Wireline Viewpoint 3: Newcast	le to Amsterdam Ferry Route South (Layout
	Cumulative Wireline Viewpoint 3: Newcast	↑ Hornsea Three ↑ Operational/under constructio
84 Datum: 53° 17.962' N 2° 56.452' E	Cumulative Wireline Viewpoint 3: Newcast	 ↓ Hornsea Three ↑ Operational/under constructio ↑ Consented/approved
3 84 Datum: 53° 17.962' N 2° 56.452' E point height: 26.5m LAT ance from Hornsea 3: 45 km	Cumulative Wireline Viewpoint 3: Newcast	 ✓ Hornsea Three ✓ Operational/under construction ✓ Consented/approved ✓ Planned/pre-planning
S 84 Datum: 53° 17.962' N 2° 56.452' E point height: 26.5m LAT ance from Hornsea 3: 45 km contal field of view: 90° ing distance: 251mm @ A3	Cumulative Wireline Viewpoint 3: Newcast	 ✓ Hornsea Three ✓ Operational/under construction ✓ Consented/approved

Figure 7: Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route South and West (Layout A).







	Hornsea Project	t Two		
+ + + + + + ++ ++ ++ ++ + + ++ ++ ++++++	1. Athur 1. A. A.		und the descent	the stand of the
	A A TO WAT A A A PAT DA A			A THAT A TAY ATTA ATTA A THA
				Second Charles
WGS 84 Datum: 53° 45.680' N 1° 38.506' E				
Viewpoint height: 26.5m LAT				
Distance from Hornsea 3: 45 km				
Horizontal field of view: 90°				
Viewing distance: 251mm @ A3				
View North			Cumulative Wireline V	iewpoint 1: Newcastle to Am
Horns	ea Three - Layout B			
· 新市小市 赤市 水市 オトキ オトキャ オーキ キーオ キーオ キーオ キー · · · · · · · · · · · · · · · · · ·	tate to set the advantage of a set of the set			
		a adad a da data a		STREET, AND STREET
WGS 84 Datum: 53° 45.680' N 1° 38.506' E				
Viewpoint height: 26.5m LAT				
Distance from Hornsea 3: 45 km				
Horizontal field of view: 90°				
Viewing distance: 251mm @ A3				
View East			Cumulative Wireline	Viewpoint 1: Newcastle to An

Figure 8: Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route North and East (Layout B).









	Clipper	Dudgeon
WGS 84 Datum: 53° 45.680' N 1° 38.506' E Viewpoint height: 26.5m LAT		
Distance from Hornsea 3: 45 km Horizontal field of view: 90°		
Viewing distance: 251mm @ A3 View South		Cumulative Wireline Viewpoint 1: Newcastle to Ame
Triton Knoll	West Sole	
WGS 84 Datum: 53° 45.680' N 1° 38.506' E Viewpoint height: 26.5m LAT		
Distance from Hornsea 3: 45 km Horizontal field of view: 90°		
Viewing distance: 251mm @ A3		
View West	f.	Cumulative Wireline Viewpoint 1: Newcastle to Am

Figure 9: Cumulative Wireline Viewpoint 1: Newcastle to Amsterdam Ferry Route South and West (Layout B).









		-
Annex	10.3	l - Se

formsea Project One	F;		Hornsea Three - Layout B
	*** * * * * * * * * * * * * * * *	****	
S 84 Datum: 53° 36.494' N 2° 18.857' E			
nce from Hornsea 3: 23 km ontal field of view: 90° ng distance: 251mm @ A3		Cumulative Wireline Viev	vpoint 2: Newcastle to Amsterdam Ferry Route North (Layout
ance from Hornsea 3: 23 km zontal field of view: 90° ing distance: 251mm @ A3 / North		Cumulative Wireline Viev	vpoint 2: Newcastle to Amsterdam Ferry Route North (Layout I
vpoint height: 26.5m LAT ance from Hornsea 3: 23 km zontal field of view: 90° ving distance: 251mm @ A3 v North		Cumulative Wireline View	vpoint 2: Newcastle to Amsterdam Ferry Route North (Layout)

Figure 10: Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route North and East (Layout B).







		-
Annex 1	0.3	- Se

	Viking Bravo	Viking Alpha Riser	Loggs Riser/ North Valiant
WGS 84 Datum: 53° 36.494' N 2° 18.857' E Viewpoint height: 26.5m LAT Distance from Hornsea 3: 23 km Horizontal field of view: 90° Viewing distance: 251mm @ A3 View South		Cumulative Wireline Viewpoint 2: Newcastle to A	msterdam Ferry Route South (Layout B)
Clipper			Hornsea Proj
Clipper			Hornsea Proj

Figure 11: Cumulative Wireline Viewpoint 2: Newcastle to Amsterdam Ferry Route South and West (Layout B).







Hornsea Three - Layout B	
1. The second and the second at the second device device the second device the	
WGS 84 Datum: 53° 17.962' N 2° 56.452' E	
Viewpoint height: 26.5m LAT Distance from Hornsea 3: 45 km	
Horizontal field of view: 90°	
Viewing distance: 251mm @ A3 View North	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
	Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North (Layout B)
View North	↑ Hornsea Three ↑ Operational/under construction
View North	Hornsea Three

Figure 12: Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route North and East (Layout B).







	Ken Antonin and Antonia and		Investment and the
tum: 53° 17.962' N 2° 56.452' E			
light: 26.5m LAT			
ield of view: 90°			
field of view: 90° stance: 251mm @ A3		Cumulative Wireline Viewneint 2: New	costle to Ameterdam Form Pouto South // evout
from Hornsea 3: 45 km I field of view: 90° istance: 251mm @ A3 t th		Cumulative Wireline Viewpoint 3: New	castle to Amsterdam Ferry Route South (Layout B
field of view: 90° stance: 251mm @ A3		Cumulative Wireline Viewpoint 3: New	castle to Amsterdam Ferry Route South (Layout
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: New	castle to Amsterdam Ferry Route South (Layout
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: New	castle to Amsterdam Ferry Route South (Layout
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: New	castle to Amsterdam Ferry Route South (Layout
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: News	castle to Amsterdam Ferry Route South (Layout
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: News	
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: New	↑ Hornsea Three
eld of view: 90° ance: 251mm @ A3		Cumulative Wireline Viewpoint 3: New	Hornsea Three Operational/under constructio
field of view: 90° trance: 251mm @ A3 h atum: 53° 17.962' N 2° 56.452' E		Cumulative Wireline Viewpoint 3: New	↑ Hornsea Three ↑ Operational/under construction ↑ Consented/approved
field of view: 90° stance: 251mm @ A3 h atum: 53° 17.962' N 2° 56.452' E height: 26.5m LAT om Hornsea 3: 45 km		Cumulative Wireline Viewpoint 3: News	 ✓ Hornsea Three ✓ Operational/under construction ✓ Consented/approved ✓ Planned/pre-planning
atum: 53° 17.962' N 2° 56.452' E neight: 26.5m LAT		Cumulative Wireline Viewpoint 3: News	↑ Hornsea Three ↑ Operational/under construction ↑ Consented/approved

Figure 13: Cumulative Wireline Viewpoint 3: Newcastle to Amsterdam Ferry Route South and West (Layout B).



