

From: [Victoria Lane \(Brodies Solicitors\)](#)
To: [Hornsea Project Three](#)
Cc: [Karen Hamilton \(Brodies Solicitors\)](#)
Subject: Spirit Energy ISH 1 Submission - Appendices List and Appendix ZD - ZO [BRO-D.FID4510105]
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[SE ISH 1 - Appendix ZD - Addendum to Noble Denton Marine Services Report to Spirit Energy Report Review of Marine Hazards \(December 2018\) 44089055_1.PDF](#)

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Please find attached Appendix ZD – ZO

Kind regards

Victoria Lane
Senior Solicitor
Edinburgh, UK
www.brodies.com

Direct Line +44(0) 131 656 0127



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Also at: 110 Queen Street, Glasgow G1 3BX, Scotland UK T 0141 248 4672, F 0141 221 9270, DX GW11 Glasgow-1; And: Brodies House, 31-33 Union Grove, Aberdeen AB10 6SD, Scotland UK T 01224 392 242, F 01224 392 244, DX AB10 Aberdeen; And: Dingwall Business Park, Dingwall, IV15 9XB, Scotland UK T 01349 860 111, F 01349 860 112; And: Scotland House, Rond-Point Schuman 6, 1040 Brussels, Belgium T +322 282 8301

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APPENDIX ZN

COMPREHENSIVE ANALYSIS OF
FLYING CONDITIONS (PERCENTAGE
FREQUENCY OUTCOME) BASED ON
3-HOURLY WEATHER DATA FOR J6A
(1 OCTOBER 2017 – 29 SEPTEMBER
2018)

Comprehensive analysis of flying conditions (percentage frequency occurrence) based on criteria provided by expert pilot. 3 hourly weather data for J6-A: Source WNI Weathernews for period 01/10/2017 - 29/09/2018

Chiswick	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Avg
<u>Without wind farm</u>													
No Fly	4%	13%	16%	1%	1%	0%	0%	0%	2%	5%	7%	6%	5%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR	32%	23%	45%	56%	37%	35%	18%	14%	21%	23%	29%	35%	31%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%
Fly in but not out +9hrs	4%	4%	2%	1%	0%	0%	0%	0%	1%	3%	6%	3%	2%
<u>With wind farm</u>													
No Fly	25%	22%	31%	20%	4%	9%	4%	8%	13%	22%	26%	28%	18%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	21%	9%	15%	19%	4%	9%	4%	8%	11%	17%	18%	22%	13%
IFR (incl. wind constraint)	11%	14%	30%	37%	34%	26%	13%	7%	10%	6%	10%	14%	18%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%
Fly in but not out +9hrs	15%	10%	12%	13%	3%	8%	4%	5%	10%	13%	18%	18%	11%
<u>Change due to wind farm (% times changed)</u>													
No Fly	21%	9%	15%	19%	4%	9%	4%	8%	11%	17%	18%	22%	13%
due to icing potential	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to sea state / visibility	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to wind direction	21%	9%	15%	19%	4%	9%	4%	8%	11%	17%	18%	22%	13%
IFR (incl. wind constraint)	-21%	-9%	-15%	-19%	-4%	-9%	-4%	-8%	-11%	-17%	-18%	-22%	-13%
VFR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fly in but not out +9hrs	11%	6%	11%	12%	2%	8%	4%	5%	8%	10%	12%	14%	9%
Grove													
<u>Without wind farm</u>													
No Fly	4%	13%	16%	1%	1%	0%	0%	0%	2%	5%	7%	6%	5%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR	32%	23%	45%	56%	37%	35%	18%	14%	21%	23%	29%	35%	31%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%
Fly in but not out +9hrs	4%	4%	2%	1%	0%	0%	0%	0%	1%	3%	6%	3%	2%
<u>With wind farm</u>													
No Fly	16%	17%	21%	5%	4%	4%	2%	5%	6%	10%	17%	16%	10%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	12%	4%	4%	4%	3%	4%	2%	5%	4%	6%	10%	10%	6%
IFR (incl. wind constraint)	20%	19%	40%	52%	34%	31%	16%	10%	17%	18%	19%	25%	25%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%
Fly in but not out +9hrs	13%	7%	6%	5%	3%	3%	2%	3%	5%	7%	14%	11%	6%
<u>Change due to wind farm (% times changed)</u>													
No Fly	12%	4%	4%	4%	3%	4%	2%	5%	4%	6%	10%	10%	6%
due to icing potential	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to sea state / visibility	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to wind direction	12%	4%	4%	4%	3%	4%	2%	5%	4%	6%	10%	10%	6%
IFR (incl. wind constraint)	-12%	-4%	-4%	-4%	-3%	-4%	-2%	-5%	-4%	-6%	-10%	-10%	-6%
VFR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fly in but not out +9hrs	9%	3%	4%	4%	2%	3%	2%	3%	3%	4%	8%	8%	4%
J6-A													
<u>Without wind farm</u>													

No Fly	4%	13%	16%	1%	1%	0%	0%	0%	2%	5%	7%	6%	5%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR	32%	23%	45%	56%	37%	35%	18%	14%	21%	23%	29%	35%	31%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%

With wind farm

No Fly	4%	13%	16%	1%	1%	0%	0%	0%	2%	5%	7%	6%	5%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR (incl. wind constraint)	32%	23%	45%	56%	37%	35%	18%	14%	21%	23%	29%	35%	31%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%

Change due to wind farm (% times changed)

No Fly	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to icing potential	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to sea state / visibility	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR (incl. wind constraint)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
VFR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

C6, C7

Without wind farm

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Avg
No Fly	4%	13%	16%	1%	1%	0%	0%	0%	2%	5%	7%	6%	5%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR	32%	23%	45%	56%	37%	35%	18%	14%	21%	23%	29%	35%	31%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%

With wind farm

No Fly	26%	22%	37%	21%	7%	13%	6%	11%	13%	23%	29%	30%	20%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	22%	9%	21%	20%	6%	13%	11%	11%	18%	22%	24%	24%	15%
IFR (incl. wind constraint)	10%	14%	24%	36%	31%	22%	11%	3%	10%	5%	7%	11%	15%
VFR	64%	64%	39%	43%	61%	65%	81%	86%	78%	72%	64%	59%	64%

Change due to wind farm (% times changed)

No Fly	22%	9%	21%	20%	6%	13%	6%	11%	11%	18%	22%	24%	15%
due to icing potential	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to sea state / visibility	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
due to wind direction	22%	9%	21%	20%	6%	13%	6%	11%	11%	18%	22%	24%	15%
IFR (incl. wind constraint)	-22%	-9%	-21%	-20%	-6%	-13%	-6%	-11%	-11%	-18%	-22%	-24%	-15%
VFR	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

G5

Without wind farm

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Avg
No Fly	4%	13%	16%	1%	1%	0%	0%	0%	2%	5%	7%	6%	5%
due to icing potential	0%	11%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%
due to sea state / visibility	4%	2%	4%	1%	1%	0%	0%	0%	2%	5%	7%	6%	3%
due to wind direction	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
IFR	32%	23%	45%	56%	37%	35%	18%	14%	21%	23%	29%	35%	31%

