

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]
Date: 14 December 2018 23:26:32
Attachments: [image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)
[image012.png](#)
[SE ISH 1 - Appendix ZN - Comprehensive analysis of flying conditions \(percentage frequency outcome\) based on 3-hourly weather data for J6A \(1 October 2017 - 29 September 2018\) 44088947_1.PDF](#)
[SE ISH 1 - Appendix ZM - Expert assessment of flying conditions for ARA - Sample of weather forecasts at Block J-West \(1 October 2017 - 29 September 2018\) 44088940_1.PDF](#)
[SE ISH 1 - Appendices List - 14 December 2018 44089241_1.PDF](#)
[SE ISH 1 - Appendix ZO - Issue Specific Hearing 1 \(4 December 2018\) - Summary of Evidence 44089235_1.PDF](#)
[SE ISH 1 - Appendix ZL - Composite of SE and Orsted Maps \(including nautical miles diameter and air or surface\) 44088926_1.PDF](#)
[SE ISH 1 - Appendix ZK - Map of Hornsea and 7.5nm radius \(including nautical miles diameter and air or surface\) 44088925_1.PDF](#)
[SE ISH 1 - Appendix ZJ - Map of Hornsea and 5nm radius \(including nautical miles diameter and air or surface\) 44088923_1.PDF](#)
[SE ISH 1 - Appendix ZI - Map of Hornsea and 2nm radius \(including nautical miles diameter and air or surface\) 44088922_1.PDF](#)
[SE ISH 1 - Appendix ZH - Map of Hornsea and all radii \(including nautical miles diameter and air or surface\) 44088915_1.PDF](#)
[SE ISH 1 - Appendix ZG - Spirit Energy Technical Note 44089234_1.PDF](#)
[SE ISH 1 - Appendix ZF - Legislative Framework Summary - 14 December 2018 44089227_1.PDF](#)
[SE ISH 1 - Appendix ZE - Addendum to AviateO International Limited Report \(December 2018\) 44089225_1.PDF](#)
[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](#)

CONFIDENTIAL MESSAGE - INTENDED RECIPIENT ONLY

Please find attached weather Appendix ZD – ZO

Kind regards

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

Direct Line +44(0) 131 656 0127



IMPORTANT NOTICE: This notice applies to this email and to any other email subsequently sent by anyone at Brodies LLP and appearing in the same chain of email correspondence. References below to "this email" should be read accordingly.

This e-mail and its attachments (if any) are confidential, protected by copyright and may be privileged. If you receive this e-mail in error, notify us immediately by reply e-mail, delete it and do not use, disclose or copy it. Unless we expressly say otherwise in this e-mail, this e-mail does not create, form part of, or vary, any contractual or unilateral obligation.

No liability is accepted for viruses and it is your responsibility to scan attachments (if any). Where this e-mail is unrelated to the business of Brodies LLP, the opinions expressed within this e-mail are the opinions of the sender and do not necessarily constitute those of Brodies LLP. Brodies LLP is a limited liability partnership and responsibility for e-mails related to its business lies with Brodies LLP and not the individual sender. The e-mail system of Brodies LLP is subject to random monitoring. A list of all the members is maintained and may be inspected during office hours at Brodies LLP's registered office.

Privacy: The e-mail system of Brodies LLP is subject to random monitoring. To find out more about how we use your personal information generally, please read our privacy statement. <http://www.brodies.com/privacy-notice>

Brodies LLP (registered no SO300334), Registered Office: 15 Atholl Crescent, Edinburgh, EH3 8HA, Scotland UK.
T 0131 228 3777, F 0131 228 3878, DX Ed10 Edinburgh-1

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

This email has been scanned by the Symantec Email Security.cloud service.
For more information please visit <http://www.symanteccloud.com>

APPENDIX ZM

EXPERT ASSESSMENT OF FLYING CONDITIONS FOR ARA – SAMPLE OF WEATHER FORECASTS AT BLOCK J-WEST (1 OCTOBER 2017 – 29 SEPTEMBER 2018)

Weather Forecast Spirit Energy - Expert Assessment of Flying Conditions for ARA

Block J-West

Sample of 200 days from period 01/10/2017 - 29/09/2018

	Date	ARA instrument approach Required	60% probability instrument approach is required	30% probability instrument approach is required	No instrument approach required	Comments
1	01/10/2017	1				Mist, Vis 1000m, cloud base 400 feet
2	02/10/2017				1	
3	03/10/2017				1	
4	04/10/2017				1	
5	05/10/2017			1		AM rain, vis 4500, cloud Hight 600 feet
6	06/10/2017			1		Rain/CB, vis down to 1800m, cloud Hight 800 feet
7	07/10/2017	1				Drizzle, vis 5100, cloud Hight 300 feet
8	08/10/2017				1	
9	09/10/2017				1	
10	10/10/2017				1	
11	11/10/2017	1				Rain, vis 2100m, cloud Hight 400 feet
12	12/10/2017				1	
13	13/10/2017				1	
14	14/10/2017				1	
15	15/10/2017				1	
16	16/10/2017	1				Mist early morning
17	17/10/2017				1	
18	18/10/2017		1			Late afternoon, overcast, cloud base 400 feet
19	25/10/2017				1	
20	26/10/2017				1	
21	27/10/2017				1	
22	01/11/2017				1	
23	02/11/2017				1	
24	03/11/2017				1	
25	04/11/2017	1				Drizzle/rain. Vis 3600, cloud base 300 feet
26	05/11/2017				1	
27	06/11/2017				1	
28	07/11/2017				1	
29	08/11/2017				1	
30	09/11/2017				1	
31	10/11/2017		1			Rain showers all day, vis 4800, cloud base 800 feet
32	11/11/2017		1			Rain, vis 3700, cloud base 900 feet

33	12/11/2017	1				Rain all day, vis down to 1400m, cloud base 800 feet
34	13/11/2017	1				Rain showers, vis down to 3100m, cloud base 600 feet
35	14/11/2017			1		Rain, vis 4400m, cloud base 800 feet
36	15/11/2017	1				Cloud base 400 feet
37	16/11/2017				1	
38	17/11/2017				1	
39	18/11/2017	1				Rain showers PM, vis 3000m
40	19/11/2017	1				Rain/hail, vis 3200m
41	28/11/2017				1	
42	29/11/2017				1	
43	30/11/2017				1	
44	01/12/2017				1	
45	02/12/2017				1	
46	03/12/2017		1			Drizzle, vis 3300m, cloud base 500 feet
47	04/12/2017				1	
48	05/12/2017				1	
49	06/12/2017				1	
50	07/12/2017		1			Rain PM, vis 2400m, cloud base 900 feet
51	08/12/2017	1				Showers all day, vis 2400m, cloud base 500 feet
52	09/12/2017		1			Rain showers, vis 2900, cloud base 700 feet
53	10/12/2017		1			Rain PM, vis 2200m, cloud down to 600 feet
54	11/12/2017				1	
55	12/12/2017				1	
56	13/12/2017	1				Drizzle AM, vis 1800m, cloud base 400 feet
57	17/12/2017			1		Rain after 1500 hrs, vis 4600
58	18/12/2017				1	
59	19/12/2017	1				PM cloud base reducing after midday to 100 feet
60	20/12/2017	1				Mist and low cloud, cloud base 200 feet
61	21/12/2017			1		Cloud base 600 feet
62	22/12/2017				1	
63	23/12/2017	1				Fog/mist, low vis and cloud base
64	24/12/2017	1				Fog/mist, low vis and cloud base
65	25/12/2017				1	
66	26/12/2017		1			Rain/overcast with the vis down to 2900m and cloud base to 300 feet

67	27/12/2017	1				Rain all day, vis 3500m, cloud base 700 feet
68	28/12/2017			1		Rain/hail, vis down to 3700m, no flight PM due hail
69	29/12/2017			1		Overcast rain showers
70	30/12/2017		1			Overcast rain showers
71	31/12/2017		1			Overcast rain showers
72	01/01/2018			1		Rain shower 1800
73	02/01/2018			1		Rain shower 1200
74	03/01/2018	1				Rain and Drizzle 0900-1800
75	04/01/2018		1			Rain 1200-1800
76	05/01/2018	1				AM weather VFR, PM vis 1300 m, 400 foot cloud base
77	06/01/2018				1	
78	07/01/2018				1	
79	08/01/2018				1	
80	09/01/2018				1	
81	10/01/2018	1				Low cloud 0000-2100
82	11/01/2018				1	
83	12/01/2018	1				Low cloud/Rain from 1200-1800
84	13/01/2018				1	
85	14/01/2018			1		
86	01/02/2018		1			CB Drizzle part of the day
87	02/02/2018		1			Rain 0600, 0900 overcast
88	03/02/2018		1			Rain for periods
89	04/02/2018	1				Rain
90	05/02/2018	1				Showers Vis 1700 m, 800 cloud base
91	06/02/2018		1			Rain showers
92	12/02/2018				1	
93	13/02/2018	1				Rain/hail, vis 2100m, 600 feet cloud base
94	14/02/2018				1	
95	15/02/2018	1				Rain/drizzle , vis 2800m, cloud base 400 feet
96	16/02/2018				1	
97	17/02/2018				1	
98	18/02/2018				1	
99	19/02/2018	1				Rain/drizzle, vis 2200m, cloud base 300 feet
100	01/03/2018				1	
101	02/03/2018				1	
102	03/03/2018				1	
103	04/03/2018	1				Rain/drizzle vis 3400 m, cloud base 600 feet
104	05/03/2018	1				Mist Vis 1600, cloud base 500 feet
105	06/03/2018	1				

106	14/03/2018				1	
107	15/03/2018				1	
108	16/03/2018	1				Rain/drizzle, vis 4000m, cloud base 400 feet
109	17/03/2018				1	
110	18/03/2018				1	
111	19/03/2018				1	
112	01/04/2018				1	
113	02/04/2018	1				Rain with reduced visibility to 3400 m and cloud base down to 100 feet
114	03/04/2018	1				Rain and mist vis down to 1300 m and cloud bas at 200 feet
115	04/04/2018	1				Mist, drizzle and rain, vis 4000 m, cloud base 200 feet
116	05/04/2018				1	
117	06/04/2018				1	
118	11/04/2018	1				Rain/mist, vis down to 1100m, cloud base 400 feet
119	12/04/2018	1				Drizzle/mist, vis 2100, clod base 300 feet
120	13/04/2018	1				Rain/mist, vis down to 1000m, cloud base down to 100 feet.
121	14/04/2018				1	
122	15/04/2018				1	
123	26/04/2018				1	
124	27/04/2018	1				Rain/drizzle, vis 4100m, cloud base 400 feet
125	28/04/2018				1	
126	29/04/2018				1	
127	01/05/2018				1	
128	02/05/2018	1				Rain/mist, vis 2700m, cloud base 300 feet
129	03/05/2018				1	
130	04/05/2018				1	
131	05/05/2018				1	
132	06/05/2018				1	
133	11/05/2018				1	
134	12/05/2018	1				AM weather good, PM mist vis 3900m, cloud base 500 feet
135	13/05/2018	1				Mist and rain all day. Vis down to 1700m and cloud base to 300 feet
136	14/05/2018				1	
137	15/05/2018				1	
138	16/05/2018	1				Mist and rain, vis 3600m, cloud bas 500 feet

139	22/05/2018			1		Mist early morning
140	23/05/2018			1		Mist early morning
141	24/05/2018				1	
142	25/05/2018				1	
143	02/06/2018	1				Rain/mist/fog, vis 1400, low cloud
144	03/06/2018	1				Fog, low is and cloud base
145	04/06/2018	1				Mist
146	05/06/2018				1	
147	06/06/2018				1	
148	11/06/2018				1	
149	12/06/2018				1	
150	13/06/2018				1	
151	14/06/2018				1	
152	15/06/2018				1	
153	26/06/2018				1	
154	27/06/2018				1	
155	28/06/2018				1	
156	29/06/2018				1	
157	02/07/2018				1	
158	03/07/2018				1	
159	04/07/2018	1				Overcast cloud base 300 feet
160	05/07/2018				1	
161	10/07/2018				1	
162	11/07/2018				1	
163	12/07/2018				1	
164	13/07/2018				1	
165	14/07/2018				1	
166	15/07/2018				1	
167	21/07/2018				1	
168	22/07/2018				1	
169	23/07/2018				1	
170	24/07/2018				1	
171	04/08/2018				1	
172	05/08/2018				1	
173	06/08/2018				1	
174	07/08/2018				1	
175	11/08/2018				1	
176	12/08/2018	1				Rain/drizzle AM vis 3700m, cloud base 500 feet
177	13/08/2018		1			Thunderstorms 0600 vis 4400m, cloud base 600 feet
178	14/08/2018				1	
179	15/08/2018				1	
180	16/08/2018		1			Rain from 1200 vis 1200m, cloud base 900 feet
181	26/08/2018				1	
182	27/08/2018				1	
183	28/08/2018				1	

184	29/08/2018	1				Rain, vis 4000m, cloud base 600 feet
185	30/08/2018				1	
186	01/09/2018				1	
187	02/09/2018				1	
188	03/09/2018				1	
189	04/09/2018				1	
190	05/09/2018				1	
191	06/09/2018				1	
192	13/09/2018					
193	14/09/2018				1	
194	15/09/2018				1	
195	16/09/2018	1				Rain from 1200, vis 5700m, cloud base 900 feet
196	17/09/2018				1	
197	18/09/2018				1	
198	25/09/2018				1	
199	26/09/2018				1	
200	27/09/2018				1	
Total		48	17	12	122	
% off Days		24%	8.50%	6%	61%	
		ARA instrument approach Required	60% probability instrument approach is required	30% probability instrument approach is required	No instrument approach required	
No. of days per Year		88 days	32 days	22 days	223 days	