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Morecambe Offshore Windfarm: Generation Assets

Examination Documents

Volume 9

The Applicant's Response to the Rule 17 Appendix A: Spirit Energy Issue Specific Hearing 8 Position Statement

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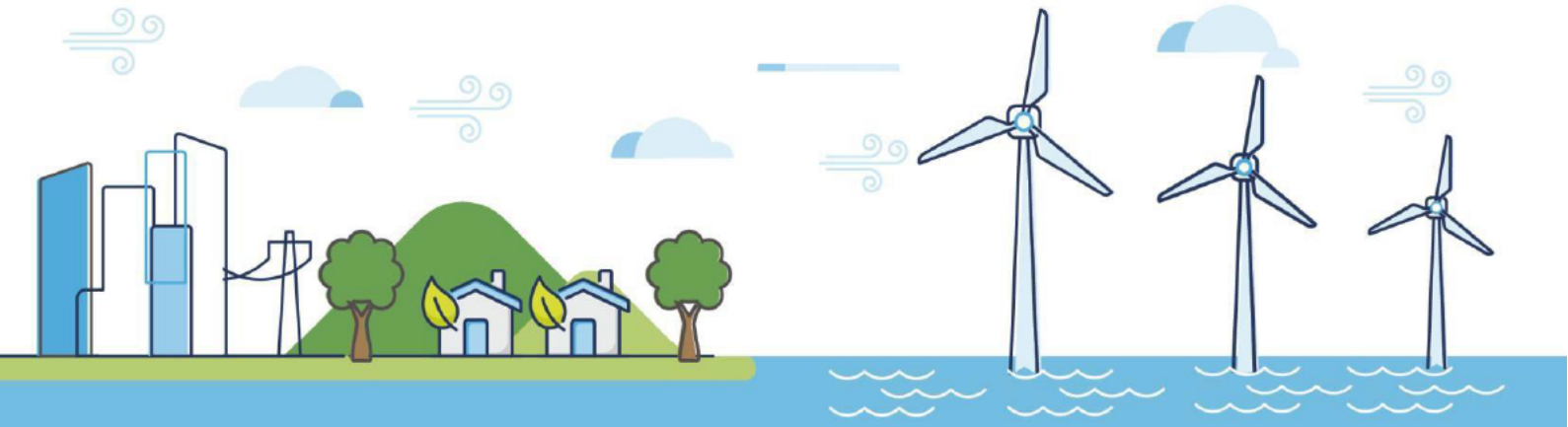

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image012.png
Position Statement ISH8 USE THIS ONE with updated BUT NOT YET FINAL aviation section from Max_45157195_2.pdf

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CONFIDENTIAL MESSAGE - INTENDED RECIPIENT ONLY

Dear Sirs

Please find attached our client's post hearing submission. Please acknowledge safe receipt.

Yours sincerely

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SPIRIT ENERGY

ISSUE SPECIFIC HEARING 8

POSITION STATEMENT

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1 EXECUTIVE SUMMARY AND INTRODUCTION

1.1 This Position Statement prepared on behalf of Spirit Energy (SE) in relation to Issue Specific Hearing 8 on 7 March 2019 ("ISH 8") summarises SE's current position on marine and aviation matters in so far as they affect the ongoing safe operation of SE's interests. SE has engaged constructively with Ørsted throughout the DCO process with a view to narrowing the issues in dispute where possible and exploring potential mitigations. As informed by those discussions and further work undertaken by both SE and Ørsted, SE has refined its position in line with the principle of co-existence. While it is clear that Protective Provisions remain necessary to safeguard SE's personnel, assets and activities, their scope of has been narrowed so far as possible so as to minimise the impact on Ørsted's proposals so as to ensure successful co-existence between existing and foreseeable gas exploitation and a close by proposed array.

1.2 Marine Allision Risk – While constructive discussions have taken place with Ørsted and their consultants Anatec allowing a fuller understanding of the modelling work undertaken, SE's concerns regarding allision by third party commercial vessels with SE's infrastructure remain. However an appropriately worded Protective Provision prohibiting the construction of turbines within a 2nm radius of C6, and C7 and in a 2NM wide corridor immediately to the west of a straight line passing through the Grove and Chiswick NUIs, would, in conjunction with radar and AIS warning systems and mutually agreed plans for proximate work on the windfarm and/or oil & gas facilities, sufficiently address the risk to enable the risk to be rendered tolerable.

1.3 Aviation Operational Safety Risk – A series of useful meetings have taken place amongst SE, Ørsted and their respective technical advisers, as well as third party helicopter operators, during which a level of consensus was reached on various matters. As a result of this, SE now propose a less onerous Protective Provision which still reflects the continuing need for helicopters to be able to operate under a variety of weather conditions to and from the NUIs and rigs or vessels over subsea infrastructure, whereby any wind turbines will require to be offset from the NUIs and C6 and C7 by at least 6nm.

1.4 Radar – As a result of helpful meetings between SE and Ørsted's radar adviser and informed by further work undertaken by both SE and Ørsted, SE now believes that its current radar and AIS warning systems are likely to continue to perform as required post-development. Nonetheless, and as recognised by Ørsted's radar adviser, the performance of SE's existing system should be tested following construction to ensure that the theoretical modelling carried out to date has been proven. A Protective Provision is requested in this respect.

2 AVIATION IMPLICATIONS FOR GAS EXPLOITATION BY SE

2.1 SE currently exploits gas from below the North Sea pursuant to its having been granted licences by the Oil and Gas Authority that permit SE to seek, bore for and get hydrocarbon resource. Furthermore, OGA places requirements upon its licensees (referred to as 'Asset Stewardship Expectations'). One such Expectation is the preparation of an Annual Subsurface Work Programme that includes an evaluation of all prospective/contingent resources on each licence.

SE Operates and owns the Chiswick Field. SE also Operates on behalf of its owners (SE and RockRose Energy) the Grove Field. SE currently exploits gas from established wells in the Greater Markham Area, including those in the Chiswick and Grove fields where the wells flow to the sea surface respectively at the Chiswick and Grove NUIs. Although not permanently manned, the NUIs remain attended regularly by personnel for planned and unplanned work. SE proposes to drill for ("bore") and extract ("get") gas from the eastern sectors of the Chiswick Field by means of subsea wells (where the wellhead is on the seabed some distance from the Chiswick NUI and connected to it by subsea pipelines and umbilicals) known as C6 and C7. Drilling operations are currently estimated to commence at C6 in Q4 2021 or Q1 2022 following gathering of production data from the C5 currently being completed. The decision as to whether to drill C6 is likely to be made in the second half of 2019. A decision on C7 would follow this. The safe operation of gas platforms, such as the Chiswick and Grove NUIs, and of drilling rigs, such as the Noble Hans Duel currently drilling the C5 well at Chiswick, is partly based on safe unfettered access by helicopter to enable regular and emergency personnel access.

2.2 It is not safe for a helicopter to fly close to a wind turbine because of the foreseeable loss of life to pilot(s) and passengers due to the risk of collision with the turbine towers or blades resulting in catastrophic unacceptable risk to life. Indeed, there are limitations prohibiting the operation of helicopters within 1nm of any obstacles in Instrument Meteorological Conditions (IMC). If it is not safe to fly, then a helicopter will not fly because safe flight remains paramount. In consequence: a) evacuation of personnel by helicopter in accordance with emergency procedures may not be possible when required; b) personnel could not access the NUI(s) whenever required; c) NUI operation would cease pending restoration of safe production; and d) personnel are likely to spend more time on the NUIs due to flight delays and would thus be exposed to greater risk. The first scenario would increase the risk to personnel above the current level – which is assessed to be ALARP. The second and third scenarios would affect production rates and result in financial losses/additional costs for SE and, where applicable, its partners and affect the economic viability of the fields.

2.3 Ørsted seeks development consent for an area of seabed in which it may situate up to 300 wind turbines made of fibreglass and carbon fibre attached to concrete and steel footings in particular locations not at this time able to be known. Ørsted has made no Board financial decision yet nor shown where turbines will be situated and so there is currently no evidence of their proposed siting. Instead, siting can only be theoretically assumed at this this time. The DCO application environmental impact assessment (EIA), aside from its EIA approach, contains evidence of the actual potential of helicopter/turbine collision (and, therefore, evidence of the risk to life and, therefore, of a foreseeable unacceptable safety situation for SE asset operation were turbine obstacles to be micro-sited within air space necessary to be kept free from obstruction in line with CAA CAP 764 guidance and regulator approval(s)). Analysis of relevant meteorological data demonstrates that, without appropriate mitigation, the development may reduce otherwise available opportunities to access / egress the NUIs by helicopter by 66%. Access to other Spirit vessels and installations such as those close to the C6 and C7 well locations within the proposed array could be subject to much greater limitations with up to 90% of flying days lost.

2.4 Within EN-1 and EN-3, Parliament differentiates between EIA and ALARP processes and in particular in relation to existing oil and gas infrastructure and activities. In EN-3, Parliament provides for successful co-existence between users of the sea by ensuring safe proximity between proposed wind turbines and existing gas exploitation, and exploitation activity, but only where the Applicant (here Orsted), as the new intervener into the infrastructure and activity status quo, has actually executed an ALARP process in addition to its separate EIA process. An ALARP process operates at a different and more granular level than an EIA process. ALARP requires the reduction of risk *by the relevant party* to as low as reasonably practicable. See EN-3, §2.6.183. Here, Ørsted remains the relevant party and has not executed an ALARP process as expected of it by EN-3. This omission is surprising but cannot remove the expectation cast by Parliament in EN-3 upon Ørsted to itself undertake an ALARP assessment (as opposed to SE doing so). SE remains subject to occupational ALARP considerations but these fall under other regimes whose scope and purposes are not the same as those of the Planning Act 2008, section 104(3) and EN-3.

2.5 The independent Government regulator and DBEIS advisor, the CAA, advises in CAP 764 (paragraph 1.4(1)) that safety remains "paramount" notwithstanding the Government's EN-1 approach to provision of renewable energy provision, and the CAA requires a column of obstacle free air space be ensured around platforms so as to preserve safe gas exploitation. The CAA assumes the column radius to be at least 9nm and its reduction is dependent upon an ALARP process. In the ongoing absence of Ørsted's own ALARP assessment, SE has itself assessed the potential reduction of the radius to 6nm nautical miles ("NM") around each existing and proposed particular NUI. The radii are fact sensitive due to the position of the NUI(s) relative to the proposed array plan shape. Preservation of the required obstacle-free airspace would be maintained by Protective Provisions that also enable reduction in radii in the event of further assessments being satisfied in the future by Ørsted to SE's satisfaction. The Provisions would themselves evidence a risk to ongoing safe gas exploitation being made tolerable here and provide relevant clearly defined parameters in which detailed matters such as the precise radii extent could be refined in future (from a start point of a tolerable change in the risk from interposition of Orsted's envisaged turbines).

2.6 Given the continuing need for helicopters to be able to perform an Airborne Radar approach to the NUIs, and that alternative options such as a visual or "circling" approach from a downwind ARA are subject to weather and regulatory approval, any wind turbines will require to be offset from the NUIs and C6 and C7 by at least 6nm. SE's proposed Protective Provisions provide for this.

2.7 SE submits that the acceptance by the Secretary of State of the Protective Provisions would result in the evidenced removal of an otherwise unacceptable safety risk and so ensure that the EN-3 requirement for "successful co-existence" was properly, and lawfully, addressed. The acceptance of the Provisions would also operate as a lawful proxy for satisfaction of the machinery of EN-3, paragraphs 2.6.183-186 by which Parliament ensures that successful co-existence of important energy providers can be ensured.

3 MARINE IMPLICATIONS FOR GAS EXPLOITATION BY SE

3.1 The NUIs at Chiswick and Grove comprise gas platforms through the structure of which pipes pass bearing exploited gas from the subsea wells to sea level and then back to the sea bed and along pipes to J6-A, before the gas is conveyed to the mainland. The NUI structures are unable to bear vessel impacts (allision) above 5 mega joules without significant damage (while impacts of more than 50 mega joules are likely to cause the immediate collapse of the structure), and with consequent risk of catastrophic explosion and attendant risk to life of nearby personnel (of the NUI and vessel). Structural deformation of a NUI can occur from vessel allision (or "contact") with a NUI and result in pipe deformation and consequent gas release. Currently (without wind farm), a sufficient distance may be maintained between the NUIs and passing vessels to ensure safe operation of each NUI. Vessel contact with structures is a recognised hazard which, as a result of recent incidents, is a particular concern to the HSE. The absence of evidence of risk is not evidence of absence of risk.

3.2 Ørsted seek outline consent to establish the outer boundary of an array of wind turbines whose easternmost edge would be 1.5 NM close to the existing Chiswick NUI (and encompasses the eastern segments of the Chiswick Reservoir to be accessed from subsea well locations identified as C6 and C7 lying within seaward licence P.468). The Application has begun to address navigation risk matters in EIA terms and purports to have addressed all vessel considerations, but it has failed to consider (using Government guidance for ALARP assessment) the risk of allision with SE infrastructure and activities. However, to the extent that the Application appears to address navigation risk with reference to ALARP, it has also done so exclusively through the EIA lens and EN-3, §§2.6.163 (Navigation and Shipping) stopping short of particular (ALARP) hazard assessment of SE infrastructure and activities under §2.6.156 and §2.6.183. The general NRA undertaken (deploying an EIA assessment approach) remains incomplete and has gaps including future route simulation *theoretically assuming* as an input to the computer simulation that the array will be impermeable to vessels. By that theoretical assumption, it excludes consideration of <u>any</u> potential for vessels to transit the array (see also EN-3, §§2.6.170-2.6.173) albeit that Ørsted acknowledges (outwith the modelling exercise) that some vessels, particularly fishing vessels, *may* transit the array. But, the MCA Guidance MGN 372, §4.3, states: "Permanent Safety Zones are not expected to be established around entire wind farm arrays, as compelling risk-assessed arguments would be required for their establishment". Yet, Ørsted have identified no evidence for such arguments nor applied to the MCA for permanent exclusion of vessels from the proposed HP3 array area.

3.3 Further, MGN 543, Annex 2, §3(a) and (c), remains unsatisfied by any evidence and does not permit unjustified exclusion of vessels from the sea areas.

3.4 MGN 543 also requires its approach to be applied in conjunction with the Government's Marine Navigational Goal in the relevant Methodology for Assessing the Marine Navigational Safety Risks & Emergency Response Risks of Offshore Wind Farms (2013) (based on the 2006 guidance and incorporating IMO criteria). But this has not been done. ExA and SoS review would reveal the

same, as has the SE Gap Analysis. Necessary review discloses an incomplete (EIA) assessment for want of a Methodolgy (2013) compliant ALARP assessment in relation to proximate infrastructure and activities. Consequently, the Navigational Risk Assessment undertaken remains simply an EIA NRA, is incomplete for want of the required ALARP component that has here failed to address (at all) vessels transiting through the array area close to existing and proposed NUIs and with attendant allision risks with SE assets and consequential risk to safe operation of those assets.

3.5 The Applicant has not executed (at all) a discrete ALARP assessment in line with EN-3,§2.6.183 (Offshore infrastructure and activities), despite SE raising collision (allision) concerns in September 2017 and disputing the methodology then and the subsisting ALARP expectation *upon* Ørsted that it (not SE) demonstrate that safety risks are ALARP.

3.6 SE submits that a sea level circular area, of 2NM radius centred on the proposed subsea wells, together with a 2NM wide routing corridor immediately to the west of a straight line through the Chiswick and Grove NUIs, in conjunction with radar and AIS warning systems and mutually agreed plans for proximate work on the windfarm and/or oil & gas facilities, would sufficiently address the hazard of catastrophic explosion to enable the risk to be rendered tolerable.

APPENDIX 1 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Draft Protective Provisions

1 Introduction

1.1 These amended Protective Provisions relate to the proposed intervention of an area in which wind turbines would be authorised by the draft Development Consent Order entitled "The Hornsea Three Offshore Wind Order" and take account of the evidence submitted to the Examining Authority as at 14th March 2019 and discussions between Spirit Energy and the Applicant on all matters relating to the Provisions.

1.2 Article 3(1) of the 2dDCO (8th February 2019) would authorise (a) development consent for the authorised development to be carried out within the Order limits but subject to the provisions of that Order and to the requirements.

1.3 The authorised development is specified in Part 1 of Schedule 1. By paragraph 1 of Part 1, Works No.1(a) describes the provision of up to 300 wind turbines. Paragraph 2 defines the coordinates including for Works No. 1.

1.4 Spirit Energy operates offshore infrastructure situated in locations that would be in close proximity to the proposed eastern edge of the area of Works No.1.

1.5 As currently drafted, the current draft 2DCO fails to make provision for the successful co-existence of the Project with Spirit Energy's oil and gas interests.

1.6 With the draft proposed provisions (attached hereto) included in the draft 2DCO, successful co-existence can occur and the provisions of EN-3, paragraphs 2.6.184 to 2.6.186 would be addressed and, thereby, enable the EX A to recommend that consent be granted and the Secretary of State to determine, as required by section 104(3) of the Planning Act 2008, the Application in accordance with the relevant national policy statements.

1.7 The draft amended Protective Provisions together comprise an offshore exclusion zone to address safe operation of Spirit Energy's infrastructure and activities in relation to airspace and at sea and sea bed level.

DRAFT 2 PROTECTIVE PROVISIONS

SCHEDULE 9

Part 8

For Protection of Spirit Energy North Sea Limited, Spirit Energy Resources Limited and Spirit Energy Nedlerland B.V. and their Co-Venturers

Application

1. For the protection of the Spirit Energy Group referred to in this part of this Schedule the following provisions must, unless otherwise agreed in writing between the undertaker and the Spirit Energy Group, the affected undertaking concerned, have effect.

Interpretation

2. In this Part of this Schedule -

"Obstacle-Free Helicopter Flight Volume" means a volume of obstacle-free space comprising a cylinder with a horizontal radius of 6 nautical miles extending from a point at the centre of the helideck of each of the Relevant Platforms, and extending vertically from mean sea level.

"Proposed C6 sub-sea well-head" means the proposed sub-sea well-head located within the area of sea bed within [INSERT COORDINATES].

"Proposed C7 sub-sea well-head" means the proposed sub-sea well-head located within the area of sea bed within [INSERT COORDINATES].

"Chiswick Field" means the hydrocarbon accumulation underlying blocks 49/4a, 49/4c and 49/4b of the United Kingdom Continental Shelf.

"Chiswick Platform" means the production and processing platform installed in block 49/4a of the United Kingdom Continental Shelf for the exploitation of the Chiswick Field.

"Co-Venturer" means any other entity with whom Spirit Energy is or may be from time to time a party to a joint operating agreement or unitisation agreement or similar agreement relating to the operations of the Relevant platforms, the J6A Platform and/or the Relevant Subsea Well Heads, and any future successors and/or assignees of such Co-Venturer.

"Grove Field" means the hydrocarbon accumulation underlying blocks 49/10a and 49/9c of the United Kingdom Continental Shelf.

"Grove Platform" means the production and processing platform installed in block 49/10a of the United Kingdom Continental Shelf for the exploitation of the Grove Field.

"Grove G5 sub-sea well-head" means the existing sub-sea well-head located at (lat/long: 53° 43' 04.080'', N 02° 49' 48.020'' E).

"J6A Platform" means the production and processing platform installed in block J6 of the Netherlands Continental Shelf for the exploitation of the Markham Field.

“Kew subsea well-head” means the existing sub-sea well-head located at (lat/long: 53° 57' 20.520” N, 2° 47' 9.395” E).

“Markham Field” means the hydrocarbon accumulation underlying blocks 49/5a and 49/10b of the United Kingdom Continental Shelf and blocks J3b and J6 of the Netherlands Continental Shelf.

“Relevant platforms” means, together, each of the Chiswick Platform, the Grove Platform, and the Relevant Sub-Sea Well Heads.

“Relevant Sub-Sea Well Heads” means, together, each of Grove G5 sub-sea well-head, the Kew subsea well-head, and the Proposed C6 sub-sea well-head and Proposed C7 sub-sea well-head.

“Spirit Energy” means one or each of (as applicable) Spirit Energy North Sea Limited (UK Company Number: 04594558), Spirit Energy Resources Limited (UK Company Number: 02855151) and/or Spirit Energy Nederland B.V. (Company Number: 34081068) who are owners of the Relevant platforms, the J6A Platform and/or the Relevant Subsea Well Heads, and any future successors and/or assignees.

“Spirit Energy Group” means Spirit Energy, its Co-Venturers (as applicable), and its and their respective affiliates.

“Vessel Exclusion Area” means in so far as relevant, the volumes extending from the sea surface at mean sea level down to the sea bed (i) bounded to the east by a notional loxodrome drawn through and extending beyond the centres of the Chiswick and Grove Platforms, to the west by a loxodrome parallel to that loxodrome and at all times 2 nm to the east of it, to the north by the loxodrome of latitude passing through the northernmost point on the perimeter of the windfarm array, to the south by the loxodrome of latitude passing through the southernmost point on the perimeter of the windfarm array and (ii) bounded by a circle of radius of 2 nautical miles centred on the centre point of each of the Relevant Sub-Sea Well Heads.

“Hornsea Project 3 Infrastructure” means any temporary or permanent infrastructure (including but not limited to vessels supporting wind generator turbine infrastructure, buoys, anchor chains, pipes and cables).

“Buoy” means any buoy as defined in either Article 2(1) of the Order or in paragraph 1(1) of Part 1 of Schedule 11.

“Vessel” means any vessel as defined in Article 2(1) of the Order or in paragraph 1(1) of Part 1 of Schedule 11.

“Predictive Radar Early Warning System” means measures including a radar early warning system used to monitor and track the positions of vessels proximate to the Relevant Platforms with associated software providing a multi-sensor integrated marine surveillance system with a predictive early warning capability.

“Works No. 1” means the area of land within the Order Land specified in paragraph 5 of Part 1 of Schedule 11, the volume of water above it, and the volume of air above that water.

“Includes” is to be construed without limitation unless the contrary intention appears.

“Order Land” means the Order Land as defined in Article 2(1) of the Order.

“Undertaker” means the Undertaker as defined in Article 2(1) of the Order, and any entity within Article 5(1).

Protective Provisions

3. Unless otherwise agreed in writing by the Spirit Energy Group, no authorised development described in paragraph 1, Work No. 1 (a) and (b) and Work No. 2 (a) and (b) of Part 1 of Schedule 1 may be within the area of Works No.1 to the extent that such development is within any Obstacle-Free Helicopter Flight Volume.
4. Unless otherwise agreed in writing by the Spirit Energy Group, no authorised development comprising Hornsea Project 3 Infrastructure under any deemed licence in terms of paragraph 31 of Part 6 of the Order and paragraph 3 of Part 1 of Schedule 11, or otherwise permitted, may be constructed within any Vessel Exclusion Area.
5. Unless otherwise agreed in writing by the Spirit Energy Group, no electricity shall be generated by the authorised development unless and until: (i) a validation test in relation to the existing Predictive Radar Early Warning System operating from the J6A Platform has been carried out; (ii) the results of the aforementioned validation test have been shared in writing with the Spirit Energy Group; and (iii) the results of the validation test demonstrate to the Spirit Energy Group's satisfaction in writing acting reasonably that the Predictive Radar Early Warning System will continue to operate effectively in relation to the Spirit Energy Group's Relevant platforms following construction and installation of the authorised development, such that a minimum of 20 minutes warning of potential vessel allision with that infrastructure may be given.
6. Prior to commencing construction of the authorised development described in paragraph 1, Work No. 1 (a) and (b) and Work No. 2 (a) and (b) of Part 1 of Schedule 1, the Undertaker and the Spirit Energy Group shall enter into a good working and communications protocol. The purpose of this protocol is to ensure the safe working of each of the parties' supply and work vessels during the construction, operational and decommissioning phases of the authorised development. The protocol shall be observed and complied with by both the Undertaker and the Spirit Energy Group unless or until any alternative co-operation agreement has been entered into.
7. Unless the Spirit Energy Group has been consulted in writing for 60 days and such representations as it may make to the Undertaker have been included in an application under paragraph 14 of Part 2 of Schedule 11, no application may be made under that paragraph.
8. Subject to a minimum of three arbitrators being appointed with at least one of the arbitrators appointed having expertise in planning and public law and the arbitration taking place in England, the provisions of Article 37 and the Arbitration Rules in Schedule 13 apply to any dispute arising between the Undertaker and the Spirit Energy Group under this Part unless otherwise agreed in writing by the Spirit Energy Group.

Proposed Drafting Amendments to Part 2 of Schedule 11.

1. The term "collision" in paragraph 5(5) and (6) of Part 2 of Schedule 11 shall include "allision".

APPENDIX 2 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Aviation Considerations

Spirit Energy and Ørsted have worked together to understand the proposed impact of turbine proximity on existing and foreseeable helicopter operations to platforms, rigs and vessels and foreseeable exploitation. Meetings have been held with helicopter operators and a broad consensus has emerged albeit two of the four UK based major operators have not been fully represented.

In order to fly personnel to an offshore facility a helicopter needs to be able to land and take-off again shortly thereafter. Under normal circumstances the helicopter's engines and rotors are not shut down when onboard an offshore facility.

Drilling rigs are typically served by two flights per day. On a normally unmanned installation (NUI), whenever personnel are required to attend the installation, which for Spirit Energy's platforms is expected to be between 70 and 200 times per year, two helicopter visits are required, one to take people to the installation and the other to collect them at the end of their shift. As a result, a total 140-400 flights per year are expected. The need for personnel to visit the NUIs is increasing as the installations get older and require more maintenance and other manual interventions.

Offshore helicopter flying is heavily proceduralised. These procedures ensure repeatability and minimise the potential for errors of judgement. Unfortunately, when carrying out shuttle flights within the Morecambe Bay gas field on the 27th December 2006, a helicopter operating on contract to Centrica (now Spirit Energy) flew into the sea when preparing to land on the North Morecambe platform in the dark. The pilot lost control in poor weather conditions. The helicopter flew past the platform and struck the surface of the sea. The fuselage disintegrated on impact and the majority of the structure sank. There were no survivors amongst the five passengers or two crew.

The legal requirements for operating helicopters are set down in legislation (for the UK this is set by the European Aviation Safety Agency (EASA)). Each helicopter operator operates in accordance with procedures included in its Operations Manuals particular to each type of helicopter. These procedures are authorised by the UK CAA (Member State Authority) and all pilots are legally required to abide by the operator's Operations Manuals. Other bodies, such as HeliOffshore and the International Oi and Gas Producers association (IOGP) will, from time to time, publish recommendations based on industry best practice. Such best practice recommendation guidance is not mandatory, but helicopter operators will often incorporate such recommendations into their operating procedures. Some oil & gas companies, through their contracts, will also impose additional limitations upon helicopter operators flying on their behalf. Spirit Energy is a company that places some additional requirements upon its helicopter operators when flying on its behalf. All of these layers of mandatory and discretionary restrictions to helicopter operations seek to ensure that offshore helicopter flights consistently operate to the highest standards of safety. In discussing helicopter operations below, only the legal requirements have been applied. In practice, helicopter operators flying on behalf of Spirit Energy or any other oil & gas company may require a greater footprint to carry out these operations than those set out below.

As will be discussed further below, each manoeuvre is contingent upon certain weather conditions. In order to ensure operations can be conducted under *all* flying weather conditions, there needs to be an obstacle-free cylindrical column of air space, centred on each helideck, with a radius at least equal to the greatest footprint of airspace area use, whether this be an approach to, or departure from, the helideck, which at this time is the 'ARA' directly into wind. Should this volume not be available, a number of other manoeuvres may remain possible within a smaller footprint **but these would only be available under certain weather conditions** (as and when those conditions may or may not occur) and, therefore, would result in **restrictions to helicopter operations.** Such restrictions are further assessed in the last section analysing met-ocean data.

The footprints calculated by Ørsted presented below are **provisional results** pending a range of simulator trials (such as the one already conducted by Aviateq in SE's previous submissions) and review by helicopter operators. It should also be noted that, as the Government's aviation regulator, the CAA recognises in CAP 764, the effects of turbulence downstream of turbines (also as noted by Ørsted in their EIA) can affect aircraft during critical stages of flight. Ørsted incorrectly concluded that, as the windfarm is far from any airport, no such effects would apply. In fact the footprints generated by Ørsted show that aircraft in the form of helicopters carrying out these manoeuvres may well encounter turbulence during critical stages of flight. Of most concern would be a One Engine Inoperative (OEI) continued take-off where turbulence could significantly reduce the actual rate of climb achieved relative to that theoretically determined. It was suggested by the helicopter operators, and agreed by Spirit Energy and Ørsted, that the footprints of all approaches and departures would need to be validated by undertaking flights in a simulator representative of the helicopter type contracted by Spirit Energy. This would allow the feasibility of each to be

confirmed whilst taking into account human factors, such as pilot load, and environmental factors including turbulence.

It was emphasised by one of the helicopter operators that all the operators need to agree acceptable approach and departure profiles. This was to prevent any one helicopter operator gaining a commercial advantage during future tenders. The CAA is, also, the ultimate arbiter of changed operational procedures and ensures that safety remains paramount. See CAP 764.

Visual Meteorological Conditions (VMC)

Helicopter operations occur within the dynamic weather conditions of the North Sea in which a wide range of weather can be encountered during a single flight and during a particular procedure segment. A change in weather conditions requires immediate relevant action to be taken by the pilot.

In the absence of nearby wind turbines, helicopter operations to and from offshore locations remain able to be undertaken in a wide range of weather conditions. In good weather (good visibility and a high cloud base) there are few operational restrictions, namely the maximum windspeed over the helideck (60knots including gusts) and an acceptable sea state (significant wave height < 6m). The final section of all helicopter approaches and the initial section of all take-offs are conducted into wind.

Helicopters departing onshore airports depart either in VMC or if specifically approved by the Authority may carry out Low Visibility Take-Offs from runways. Depending on the weather encountered en-route, the helicopters are operated in either VMC or in Instrument Meteorological Conditions (IMC). If the helicopter enters IMC then before landing offshore the pilot must establish VMC.

En-Route Operating Minima

There will be occasions when it may be appropriate, or necessary e.g. icing, to descend en route to below MESA in order to recover from IMC to VMC. Descent below the Minimum En-Route Safety Altitude (MESA) to establish or resume VMC flight are made in accordance with a notified instrument approach procedure at an offshore installation or an en-route descent procedure.

An En-Route descent offshore through cloud for the purpose of regaining visual contact with the surface is not permitted unless the following specific minima and requirements are met:

1. The latest information available to the Commander with respect to En-Route weather indicates that the conditions of cloud base and visibility at the completion of the descent will not be less than:

    - By day: 600 ft cloud base and 4km visibility
    - By night: 1200ft cloud base and 5km visibility

2. The aircraft weather radar must be serviceable and must be used to establish a clear area into which to descend below MESA; It is not permitted to descend below MESA offshore when IMC without a serviceable weather radar.

3. The descent can take place using a calibrated barometric altimeter providing the area QNH has been set.

4. Once below MESA, if VMC has not been established and the helicopter is at a range of 10 nm from any radar return, then a descent down to 500 ft Rad Alt (day) or 1000 ft (night) may be continued on a safe heading at least 30° offset from the radar return; likely drift is taken into account. If VMC is not achieved, a climb back to MESA must be initiated.

5. If VMC has been achieved within 10nm of the destination or nearest radar return and the expected visibility is at least 4km (day) or 5km (night) then descent may be continued to 300 ft (day) or 500ft (night).

6. If the pilot is not visual with the destination or nearest radar return by 2nm (day) or 3nm (night), a climb back to MESA must be initiated for an ARA.

Minima for VFR flights in sight of the surface in reduced VMC

When operating helicopters on offshore flights when out of sight of land the following minima apply:

- By day: 600 ft cloud base and 4km visibility with a minimum operating height of 500ft.
- By night: 1200ft cloud base and 5km visibility with a minimum operating height of 1000ft.

Minima for Flying between Helidecks Located in Class G Airspace

In Class G airspace when flying between offshore locations where the overwater sector is less than 10nm it is permitted to conduct a visual flight. Note that Chiswick and Grove are within 10nm of J6-A but the C6 and C7 subsea well locations are more than 10km from J6-A.

The operating minima are:

- By day: A minimum operating height of 300 ft. The cloud base must be such as to allow flight at the specified height below and clear of cloud; (400 feet). Visibility is 2km

- By night: A minimum operating height of 500 ft. The cloud base must be such as to allow flight at the specified height below and clear of cloud; (600 feet). Visibility is 5km.

Visibility limitations may be further reduced provided the destination or an intermediate structure is continuously visible. Advisory speeds in reduced VMC also apply.

Visual Gate Approaches Day and Night

A new procedure, promoted by HeliOffshore, and currently being adopted by the helicopter industry, is a Visual Gate Approach (VGA), day and night. The VGA approach adopted by one helicopter operator commences at a point 2nm from the destination with the helicopter in a stable configuration, on a direct heading to the destination. The required footprint that is clear of obstacles must therefore include at least 2nm + room to turn and stabilise should the pilot need to position downwind of the facility. Ørsted has calculated this footprint to be 2.42nm. Spirit Energy does not disagree with this.

IMC

In poor weather conditions, where the cloud base and visibility do not meet the above minima, referred to as Instrument Meteorological Conditions (IMC), an approach using the aircraft's onboard instruments may be carried out which will subsequently lead to a final visual approach to land otherwise the approach has to be aborted (known as a missed approach procedure).

When being operated offshore in IMC conditions the helicopter is flown at a Minimum Safe Altitude above the surface of the sea (1,500 feet) or 1,000 feet above the highest obstructions below the helicopter whichever is the higher.

When operating to an offshore helideck in IMC when VMC cannot be established en-route, helicopter operators use an approach which combines information presented to the pilot via the onboard helicopter instruments and distances from obstructions shown on the onboard weather radar. This type of approach is known as an Airborne Radar Approach (ARA).

ARA

The helicopter ARA procedure may have as many as five separate segments: the arrival, initial, intermediate, final approach and a missed approach segment. The approach procedure also consists of height checks at defined points during the approach. The approach path and profile are flown to a minimum descent height in a stabilised configuration and, provided the destination target becomes visual by the Missed Approach Point (MAP), the pilot can continue the approach to land visually. Where there are no obstructions, the initial, intermediate and final segments are all flown into wind. Where there are obstructions it is permitted, although currently most helicopter operators do not use or train for, to fly the initial segment out of wind then make a turn during the intermediate section so that by the start of the final 4nm segment the aircraft is stabilised and on a direct track towards the helideck flying into wind. There are however tail-wind, groundspeed and cross-wind / drift limitations that have to be taken into account to determine whether the out of wind segments are possible and some helicopter types can handle cross-wind conditions better than others.

The operating minima for conducting an into wind ARA are:

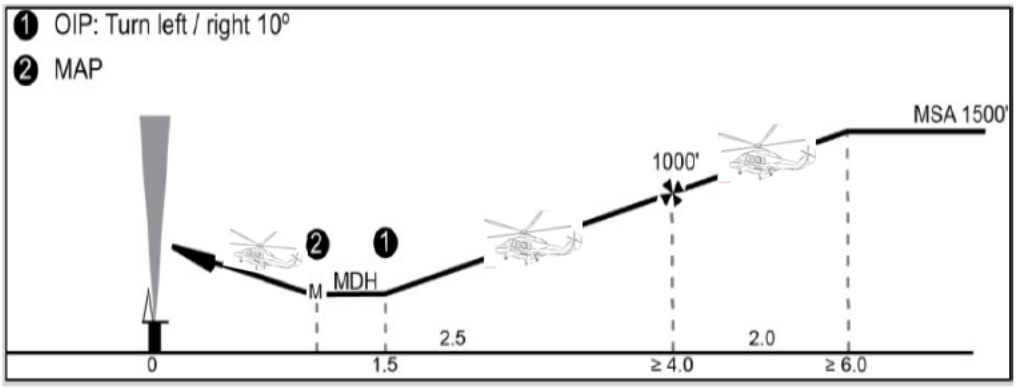
ARA Day: The aircraft must be clear of cloud when it has descended to 200ft and the pilot must be able to see the platform from the MAP (at least 0.75nm).

ARA Night: The aircraft must be clear of cloud when it has descended to 300 ft and the pilot must be able to see the platform from the MAP (at least 0.75nm)

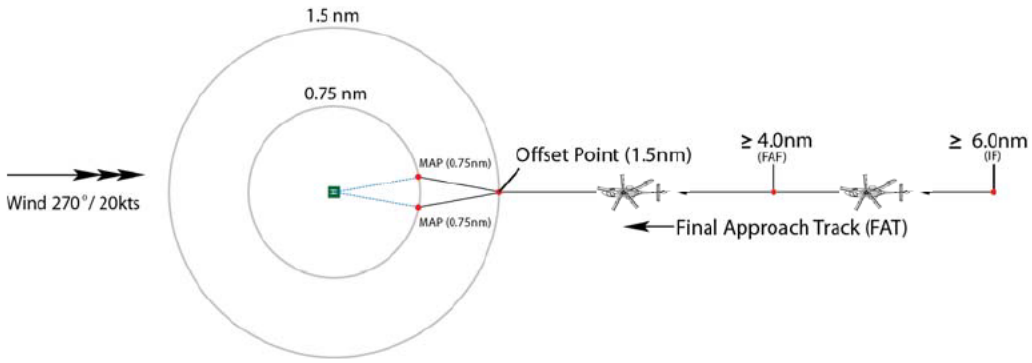
In the event the pilot does not, at the MAP, see or after passing the MAP looses contact with the target platform a missed approach must be carried out and the aircraft flown back to the MSA.

The vertical and horizontal ARA profiles are illustrated in the diagrams below:

ARA Vertical Profile into wind



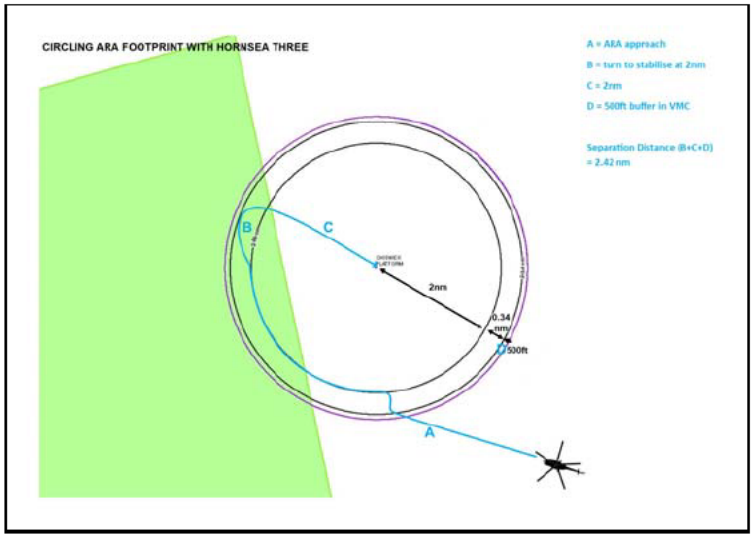
ARA Horizontal Profile into wind



Circling (Visual) Approach off an ARA

Alternatively, where there are obstacles allowing insufficient space to execute an ARA directly into wind, then pilots may fly the ARA approach either downwind or out of wind until reaching the MAP. Again, there are aircraft model dependent tail-wind, indicated airspeed, groundspeed and cross-wind limitations that may limit the ability for out of wind segments to be carried out. Assuming the downwind/crosswind ARA has resulted in the pilots becoming visual with the target platform by the MAP (otherwise the missed approach procedure must be carried out), then the pilots need to re-position the helicopter from the MAP where the helicopter will be travelling with a tail wind component to an into wind position for the landing. This visual manoeuvre (below cloud) is referred to as a circling approach. Not all aircraft operators currently train for circling approaches. The destination must remain in view throughout the circling manoeuvre in order to position for a stabilised approach resulting in a safe landing. As can be seen from the following diagram, Ørsted has calculated the obstacle free footprint for a circling manoeuvre to be 2.42nm. The MAP is at a range of 2nm from the destination platform. This therefore requires visibility of at least 2nm in order to keep the platform visible at all times. Ørsted has not added a 1nm buffer zone to allow for inadvertent entry into cloud. This means that it is assumed that the aircraft will be clear of cloud and will not encounter an area of reduced visibility (less than 2nm) e.g. heavy rain showers throughout the manoeuvre. This cannot be guaranteed. In

discussion with Ørsted they advised that, after discussion with one helicopter operator, 100ft would be added to the cloudbase requirement. Spirit does not disagree with Ørsted's approach or conclusion based on these assumptions but notse that if there is any chance of becoming IMC an additional 1nm would need to be added (i.e. a footprint of 3.42nm). Even so, it will be the collective decision of the helicopter operators based on the helicopter simulator trial results that will determine the acceptable footprint and safe margin.

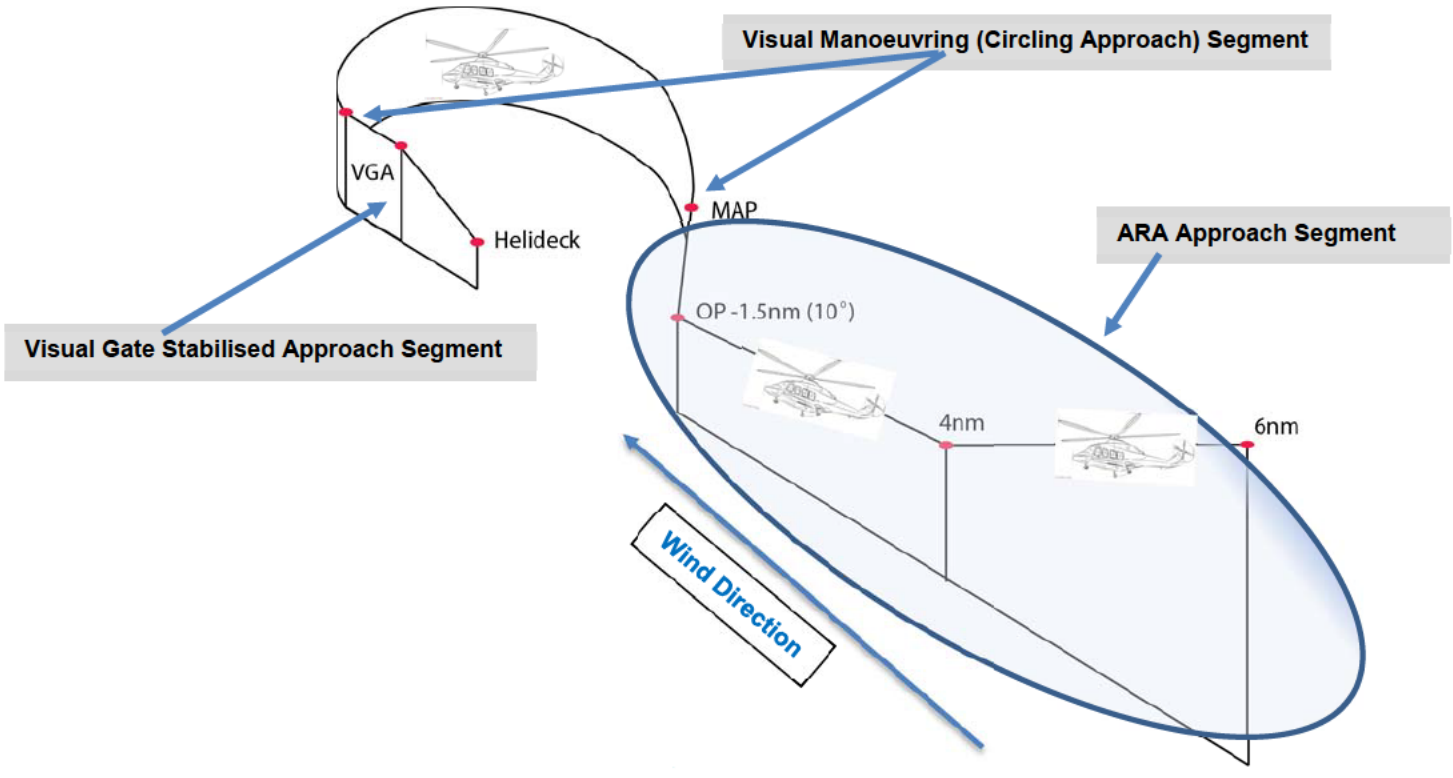


The operating minima for conducting a circling approach are:

Circling Day: The aircraft must be clear of cloud when it has descended to 300 ft and must be able to see the platform throughout the manoeuvre (from the MAP) (Based on Ørsted's approach this requires a cloud base of 400 ft and as shown in the above circling ARA footprint a visibility of 2nm)

Circling Night: The aircraft must be clear of cloud when it has descended to 500 ft and must be able to see the platform throughout the manoeuvre (from the MAP) (Based on Ørsted's approach this requires a cloud base of 600 ft and as shown in the above circling ARA footprint a visibility of 2nm)

A downwind ARA, circling approach back into wind and a visual gate stabilised approach segment is illustrated in the following diagram:



Departure from an Offshore Elevated Helideck

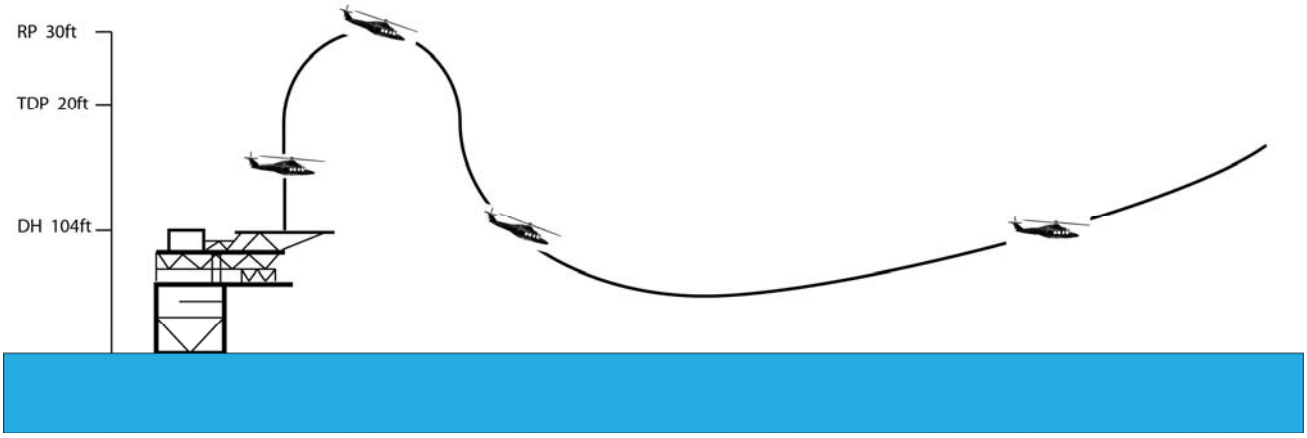
Helicopters departing an offshore elevated helideck take-off with both engines operating and into wind. In the event of an engine failure being recognised at or after the take-off decision point (TDP), the pilot is committed to continue the take-off with one engine inoperative (OEI). The helicopter is flown manually by the pilot using the maximum power permitted (2.5 minute power OEI) to achieve a safety speed (V_{TOSS}) / positive rate of climb to 200ft above the height of the take-off surface. Thereafter the pilot will fly the helicopter at the best rate of climb speed (V_Y) on maximum continuous power OEI to 1,000ft above mean sea level.

Depending on the weight of the helicopter relative to the operating environment the helicopter may descend below the level of the helideck (drop down) before reaching V_{TOSS}.

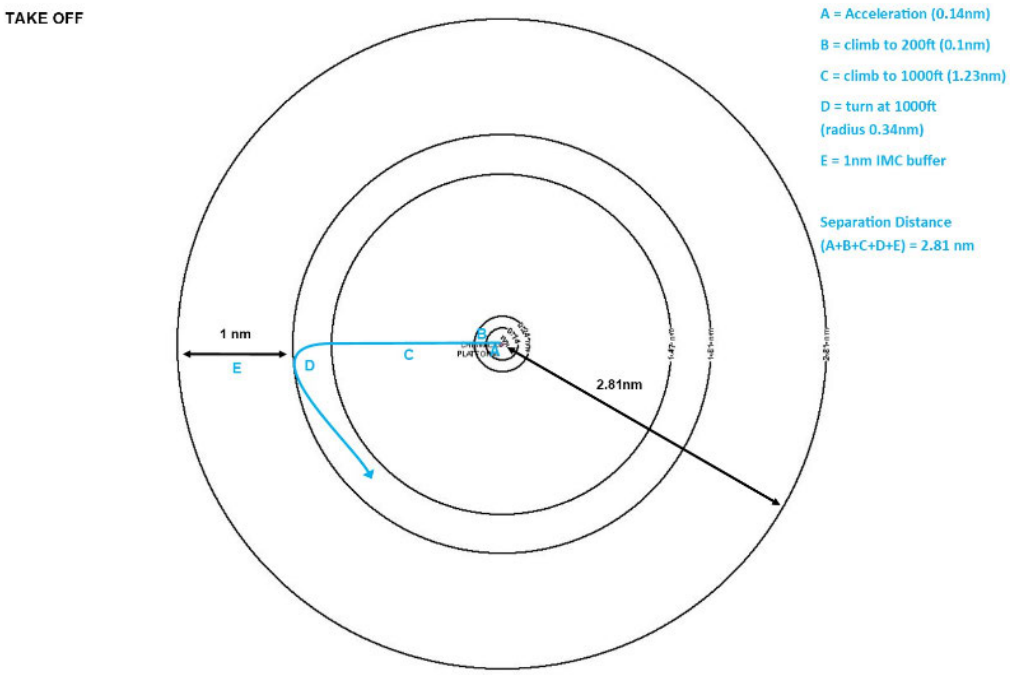
The remaining narrative focusses on this situation as this constrains the footprint required.

The horizontal distance travelled to reach 1,000ft depends upon the temperature, atmospheric pressure, the weight, the headwind component and the performance capability of the helicopter type being used. For aircraft currently in use and likely to be used in the foreseeable future, Ørsted has calculated a worst case of 2.81nm upwind of the platform. Spirit Energy does not disagree with this but emphasises that Orsted has not taken into consideration any degrading effects of turbine induced turbulence.

An example of a helicopter offshore take-off profile with engine failure at/after TDP and Drop Down is illustrated in the diagram below along with the required horizontal distance travelled footprint as calculated by Ørsted.



Not to scale. For illustrative proposes only



Take-off footprint – Horizontal distances travelled OEI

Meteorological Data Analysis

Analysis of one year's met-ocean data involving calculating every three hours the distance west of the offshore facility and perpendicular to the eastern edge of the windfarm array required to effect a landing and subsequent take-off enables quantification of the effects of placing the turbine array at any given distance from any one facility. The table below shows this analysis using the footprints calculated by Ørsted and considering what proportion of flights that could be used to take maintenance personnel to and from a NUI would still be available to support oil & gas operations. The table also shows on how many days in a year such flights would not be possible. It should be stressed that this is a theoretical calculation based on footprints and operating minima that may need to be increased in the light of simulations and/or operating experience and which have not considered a variety of factors, including pilot judgement, which would lead to a greater impact than that shown. The numbers should thus be treated as indicative minima.

Minimum footprint required for:	Distance to windfarm (nm)	No windfarm	With Windfarm	% of available flights lost	Lost flights due to H3 (days)
ARA (with turn to FAF)	6	97%	97%	0%	0
	5.5	97%	97%	0%	0
	5	97%	93%	4%	14
	4.5	97%	93%	4%	14
	4	97%	91%	7%	24
Circle (if go into IMC during circle)	3.5	97%	91%	7%	24
Take-off (OEI)	3	97%	89%	9%	30
VMC/Shuttle/Circle	2.5	97%	89%	9%	30
	2	97%	33%	66%	225
	1.5	97%	33%	66%	225
	1	97%	11%	89%	304

Narrative

=> With no windfarm, conditions (icing potential, wind gusts, sea state,cloudbase) preclude flying 3% of the time

Note: this figure is lower than Orsted's as Spirit have only considered flights at times that fit with shift patterns, a much higher proportion of which will be in daylight (see below)

=> Consideration of cloudbase and visibility constraints for each flying manoeuvre *without* considering the relevant space required to execute them shows that during:

	Daylight	Night	
ARA is not possible	5%	8%	of times when flights are possible
ARA descent with circling is not possible an additional	15%	15%	
Shuttle flights are not possible an additional	0%	5%	
Visual (VMC) flights are not possible an additional	3%	9%	
En-route let-downs are not possible an additional	0%	0%	
	22%	36%	

=> Consideration of shift patterns means that on most days the following flight patterns could be used
06:00 mobilise to NUI, returning at 15:00 or 18:00
09:00 mobilise to NUI, returning at 18:00
Combining the above patterns (which allow 3 weather windows to execute 2 flights) with the footprints required for each manoeuvre yields the following estimates of the impact on Spirit's operations.

=> If the winfarm is >=6nm from any facility, no additional flights will be lost due to the windfarm and the risk to personnel involved in Spirit Energy's operations will remain ALARP

=> As the distance to the windfarm decreases, an increasing number of flying opportunities for maintenance crew will be lost, such that at the distance to Chiswick proposed in the DCO 66% or 225 days flying opportunities will be lost with a consequent:
(i) increase in risk to personnel (due to spending longer on the NUI); and
(ii) loss of production revenues (due to delays in re-instating production after unplanned shutdowns

Notes:

(a) In 2017 (a representative year), there were 66 unplanned shutdowns on Chiswick requiring personnel to visit the platform

(b) Orsted have assumed, based on their commercial proposal, that, apart from when an ARA is the only option to access the platform, turbines will not be placed in locations so as to restrict the footprint of any other manoeuvre irrespective of wind direction

(c) Footprints used in this comparative analysis are the minimum legally possible. Spirit Energy has not agreed these

=> footprints and awaits information on distances and procedures adopted by helicopter operators in the North Sea following simulator trials to address pilot workload and environmentall factors including turbulence.

Orsted's commercial proposal to have a 2.8nm exclusion zone around Chiswick can be seen to reduce the commercial impact upon Spirit Energy's operations with only flying opportunities being lost but never-the-less an increase in the risk to personnel above the current ALARP level. Note: This result is dependent upon agreement to footprints for each manoeuvre, in particular take-off which will depend upon verification by helicopter operators and simulator trials as mentioned above	9%	or	30	days

APPENDIX 3 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

DNV GL Technical Note

APPENDIX 4 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Aviation Slides

APPENDIX 5 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Potential Affects on Safety

Aviation

At the ISH 8 on 7 March 2019, Orsted wrongly characterised Spirit Energy's case on aviation as relating to commercial concerns only. In particular Mr Philips stated that the loss of opportunities to access to, or egress from the Chiswick or Grove NUIs would have no safety implications. The characterisation of the SE case by Orsted is misplaced and is incorrect as is set out below. SE concerns remain with safe operation of SE infrastructure and activities. As Mr Rowe explained during the ISH 8:

- Currently, the SE platforms and activities operate without nearby obstacles impeding their safe operation;
- The turbines would change that existing situation and each would form a high physical obstruction and dynamic obstacle (due to blade sweep and rotation) to helicopters;
- The parties agree, and the EIA and SE evidence shows, that in certain weather conditions and in certain wind directions, the currently available opportunities for accessing and taking off by helicopter from Spirit Energy's platforms, including the NUIs at Chiswick and Grove will be restricted if the DCO were to be confirmed without SE's Protective Provisions;
- Spirit Energy's position on the nature and effect of the (proposed) restrictions and the circumstances in which the restrictions arise was addressed by Mr Reynolds (AviateQ) at the ISH8 hearing and is set out within the slides prepared by Mr Reynolds submitted with this representation;
- Whilst Orsted initially envisaged that 7nm would be required to ensure safe operation (see Figure 7.5 in Volume 5, Annex 8.1 of the ES), helpful evidence from Mr Rowe (Sprit Energy) establishes that the reduction in available opportunities to access/take off from the platforms due to the turbines will be in the range of 6nm and so would allow turbines closer to SE assets and exploration situations;
- In the proposed situation of the array close to the SE assets, helicopters commissioned by Spirit Energy will not fly to/from the platforms in circumstances where it is not safe to do so as safety remains paramount;
- Spirit Energy will also not plan to fly personnel to the platforms where there are not good prospects of collecting them at the end of their shift due to changing weather conditions;
- The dynamic nature of North Sea weather conditions and limitations of localised weather forecasting, however, means that the uplift of personnel cannot be guaranteed;
- The presence of the turbines will increase the risk of personnel being left on the platforms for longer periods, including overnight;
- The presence of personnel on a platform such as other NUIs exposes them to risk of injury, accident or loss of life;

- Increasing the period of time during which personnel are present on a platform increases proportionately the level of that risk;
- The Safety Case for the Chiswick and Grove NUIs identify helicopters as the preferred means of evacuation, save in instances of fire and explosion;
- A reduction in the potential availability of helicopter access to and from the NUIs represents a change to the basis on which the Safety Cases were prepared;
- This change in risk level requires to be assessed as a "potential affect" in terms of EN-3 so as to ensure that the resultant risks are ALARP. Orsted has not assessed this as Parliament "expects" that it should;
- This change of risk applies equally to the future exploitation activity at the proposed well head locations C6 and C7, where drilling rigs will have the same requirement for access by helicopters.

Marine

If Mr Philips' remarks were also intended to apply to Spirit Energy's marine case then they were incorrect in that respect too. The safety implications of the Hornsea 3 Project arising from new and diverted vessel traffic transiting in close proximity to Spirit Energy infrastructure are as follows –

- The turbines will form a physical obstruction to third party vessels requiring them to divert around or through the array area;
- In certain weather conditions (particularly westerly and northerly gales) small and medium size commercial vessels may choose to transit, respectively –
    - To the east of the array in close proximity to Spirit Energy's infrastructure
    - To the south of the array and around or through the south east corner of the array in close proximity to the Grove NUI
- Vessels transiting in closer proximity to the Chiswick and Grove NUIs in consequence of the H3 Project increases the risk of allision with the platforms;Separately the Applicant's traffic model has assumed that vessels will not transit through the array area.
- Vessels (including commercial vessels) will however be permitted to do so, and may do so as is recognised by Spirit Energy and Trinity House (ISH8 hearing), and acknowledged by the Applicant in oral evidence (Ali McDonald, Anatec). (See also MGN543 and Methodology for Assessing the Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations, B.3.4 H2 Navigation Activity).
- Vessels exiting the array area in close proximity to the Chiswick and Grove NUIs risk alliding with the platforms;

- While it is currently anticipated that Spirit Energy's predictive REWS will allow such vessels to be identified in sufficient time to facilitate evacuation if required, the continued effective operation of the REWS will require to be tested post-construction.

- The risk of vessel allision is recognised in MGN 543, Methodology B.3.3 and B.3.5;

- While the level of vessel traffic in the area is acknowledged to be low; the consequences of allision may be catastrophic, including loss of life or severe injury to vessel crew and Spirit Energy personnel;

- Accordingly the risk of allision with Spirit Energy's infrastructure requires to be assessed to ensure that the resultant risks are ALARP.

APPENDIX 6 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Spirit Energy Legal Note on Parameters and Protective Provisions

INTRODUCTION

1. This is a Legal Note to place Spirit Energy's draft Protective Provisions into the relevant legal framework, in the context of this outline Application for a development consent order.

LAW

2. The Planning Act 2008 regulates the grant of development consent orders. By section 31, development consent is required for development to the extent that the development is or forms part of a nationally significant infrastructure project. By section 104(3), the Secretary of State must decide the application in accordance with any relevant national policy statement, except to the extent that one or more of subsections (4) to (8) applies.

3. By section 120(1), an order granting development consent may impose requirements in connection with the development for which consent is granted. By subsection (2), the requirements may in particular include – a) requirements corresponding to conditions which could have been imposed on the grant of any permission, consent or authorisation, and b) requirements to obtain the approval of the Secretary of State or any other person, so far as not within paragraph (a).

4. By section 120(3), an order granting development consent may make provision relating to, or to matters ancillary to, the development for which consent is granted.

5. By subsection (5), an order granting development consent may a — c) include any provision that appears to the Secretary of State to be necessary or expedient for giving full effect to any other provision of the order.

6. A development consent order may be made where it adheres to *Rochdale Envelope* principles. See Advice Note 9. The cases underpinning that approach are summarised in that Note, and derive from the following:

   a) *R v Rochdale MBC, ex parte Tew* [2000] Env LR 1; and

   b) *R v Rochdale MBC, ex parte Milne* [2001] Env LR 22.

7. The Orsted Application is, in essence, a red line around part of the North Sea bed and the sea and air above that. No details can be provided at this stage because the Applicant's Financial Board has not yet made a decision about the project and so its detailed content remains unknown. Two illustrative layouts accompany the Application and show illustrations (only) of what might be *in situ*. On its facts, the Application is closer to the bare outline application for planning permission that was considered in *Tew*.

8. In *Tew*, Sullivan said this:

> *The fact that certain particulars requested in the form cannot be provided if an application is made for a "bare" outline planning permission does not mean that such an application may not lawfully be made. Such an approach would ascribe too great a significance to the precise terms of the application form, and negate the right which is expressly conferred by reg. 3 to apply for an outline planning permission. Adopting a purposive, rather than a literal, interpretation of reg. 3, an application for planning permission must include*

the particulars specified in the form, but only in so far as they are appropriate to the kind of development that is being proposed. It is in the nature of an outline application that many of the particulars sought will not be available at the outline stage, and hence it will not be appropriate to provide them on the form.

9. In *Milne*, Sullivan J endorsed his approach in *Tew* and said this:

> *11. …* I concluded: (Emphasis added)
>
> *In summary, while the council took into consideration 'environmental information' about the effects of carrying out a business park development in accordance with an illustrative masterplan and an indicative schedule of land uses, that was not the development that was proposed to be carried out in the application for planning permission, nor was it the development for which planning permission was granted; nor was the information sufficient in any event to comply with the requirements of Schedule 3: see, for example, para 2(d), as to mitigation measures. It follows that the council did not have power to grant planning permission for the business park: see regulation 4(2) of the assessment regulations." See page 99C to E.*
>
> *15. I … turned to the description of the development in the 1998 business park application and reached the conclusions set out above. At page 96H I acknowledged that the outline application procedure is particularly valuable for projects such as a business park which are demand led and which may be expected to evolve over many years (if the 1999 permissions are upheld the new environmental statement explains that construction will commence in 2001 and all the buildings are not expected to be occupied until 2013).*
>
> *16. In response to the practical difficulties posed by such developments I said this at page 98F to G:*
>
> > *"Recognising, as I do, the utility of the outline application procedure for projects such as this, I would not wish to rule out the adoption of a masterplan approach, provided the masterplan was tied, for example, by the imposition of conditions, to the description of the development permitted. If illustrative floorspace or hectarage figures are given, it may be appropriate for an environmental assessment to assess the impact of a range of possible figures before describing the likely significant effects. Conditions may then be imposed to ensure that any permitted development keeps within those ranges." …*
>
> *90. If a particular kind of project, such as an industrial estate development project (or perhaps an urban development project) is, by its very nature, not fixed at the outset, but is expected to evolve over a number of years depending on market demand, there is no reason why "a description of the project" for the purposes of the directive should not recognise that reality. What is important is that the environmental assessment process should then take full account at the outset of the implications for the environment of this need for an element of for flexibility. The assessment process may well be easier in the case of projects which are "fixed" in every detail from the outset, but the difficulty of assessing projects which do require a degree of flexibility is not a reason for frustrating their implementation. It is for the authority responsible for granting the development consent (in England the local planning authority or the Secretary of State) to decide whether the difficulties and uncertainties are such that the proposed degree of flexibility is not acceptable in terms of its potential effect on the environment.*
>
> *91. In Tew I said at page 97C that projects such as industrial estate developments and urban development projects have been placed "in a legal straitjacket" by the assessment regulations, in transposing the requirements of the directive into domestic law. The directive did not envisage that the "straitjacket" would be drawn so tightly as to suffocate such projects…*
>
> *93. In my judgment, integrating environmental assessment into the domestic procedure for seeking outline planning permission, which acknowledges this need for flexibility for some kinds of building projects, is not contrary to the objectives of the Directive. There is no analogy between the procedure for obtaining outline planning permission, with certain matters reserved for detailed approval, and the procedure which was in issue in Bozen . In that case, not only was there no environmental assessment, the legislative act which authorised the project was generalised in the extreme, amounting to little more than a proposed programme, which was subject to preliminary feasibility assessments, see paragraphs 5, 71 and 79 of the Advocate General's opinion in that case. The European Court was also concerned with proposed "modifications to development projects". If such modifications have not been subjected to environmental assessment, the Court's conclusion that they should be "when by reason of their nature, size or location they were likely to have significant effects on the environment" (see paragraphs 40 and 49) is readily understandable. Provided the outline application has acknowledged the need for details of a project to evolve over a number of years, within clearly defined parameters, provided the environmental assessment has taken account of the need for evolution, within those parameters, and reflected the likely significant effects of such a flexible project in the environmental statement, and provided the local planning authority in granting outline planning permission imposes conditions to ensure that the process of evolution keeps within the parameters applied for and assessed, it is not accurate to equate the approval of reserved matters with "modifications" to the project. The project, as it evolves with the benefit of approvals of reserved matters, remains the same as the project which was assessed…*

95. This does not give developers an excuse to provide inadequate descriptions of their projects. It will be for the authority responsible for issuing the development consent to decide whether it is satisfied, given the nature of the project in question, that it has "full knowledge" of its likely significant effects on the environment. If it considers that an unnecessary degree of flexibility, and hence uncertainty as to the likely significant environmental effects, has been incorporated into the description of the development, then it can require more detail, or refuse consent…

120. Acknowledging the uncertainties that are inherent in a project of this nature and scale Mr Gilder explained that the environmental statement had considered "the worst environmental impacts which would arise from the development, the so-called worst case".

12. He explained that although the definition of the worst case might differ according to which environmental effect was being assessed:

> *Where details were to be reserved for subsequent approval by the local planning authority, the worst case was defined as the minimum standards which a reasonable local planning authority might require, taking account of all other matters already fully defined in the applications.*
>
> *In the case of construction impacts, such as noise and dust, the worst case was taken to be the minimum standards which would be required by the regulatory authorities under, for example, the Control of Pollution Act 1974 and/or the relevant British Standards."*

122. … Both the directive and the regulations recognise the uncertainties in assessing the likely significant effects, particularly of the major projects, which may take many years to come to fruition. The assessment may conclude that a particular effect may fall within a fairly wide range. In assessing the "likely" effects, it is entirely consistent with the objectives of the directive to adopt a cautious "worst case" approach. Such an approach will then feed through into the mitigation measures envisaged under paragraph 2(c). It is important that they should be adequate to deal with the worst case, in order to optimise the effects of the development on the environment…

128. Any major development project will be subject to a number of detailed controls, not all of them included within the planning permission. Emissions to air, discharges into water, disposal of the waste produced by the project, will all be subject to controls under legislation dealing with environmental protection. In assessing the likely significant environmental effects of a project the authors of the environmental statement and the local planning authority are entitled to rely on the operation of those controls with a reasonable degree of competence on the part of the responsible authority: see, for example, the assumptions made in respect of construction impacts, above. The same approach should be adopted to the local planning authority's power to approve reserved matters. Mistakes may occur in any system of detailed controls, but one is identifying and mitigating the "likely significant effects", not every conceivable effect, however minor or unlikely, of a major project.

10. In *Smith v Secretary of State for the Environment* [2003] 2 P&CR 11 at page 162, the Court of Appeal approved *Tew* and *Milne* and said this about the use of parameters:

22. The starting point is the Directive to which the United Kingdom gave effect by the 1988 Regulations. I will quote the relevant provisions of the 1988 Regulations, but the approach to the Regulations is coloured by the Directive, the purpose of which is described in the speech of Lord Hoffman in Berkley v Secretary of State for the Environment [2001] 2 A.C. 603 at 615 in the following terms:

> *I said in R. v North Yorkshire County Council Ex p. Brown [2000] 1 A.C. 397 , 404 that the purpose of the Directive was 'to ensure that planning decisions which may affect the environment are made on the basis of full information'. This was a concise statement, adequate in its context, but which needs for present purposes to be filled out. The Directive requires not merely that the planning authority should have the necessary information, but that it should have been obtained by means of a particular procedure, namely that of an EIA. And an essential element in this procedure is that what the Regulations call the 'environmental statement' by the developer should have been 'made available to the public' and that the public should have been 'given the opportunity to express an opinion' in accordance with Art.6(2) of the Directive. As Advocate General Elmer said in* Commission of the European Communities v Federal Republic of Germany (Case C-431/92) [1995] E.C.R. 1–2189 , *2208–2209, para.35:*
>
> > *'It must be emphasised that the provisions of the Directive are essentially of a procedural nature. By the inclusion of information on the environment in the consent procedure it is ensured that the environmental impact of the project shall be included in the public debate and that the decision as to whether consent is to be given shall be adopted on an appropriate basis.'*

24. We have also been referred to the following decisions: R. v Rochdale Metropolitan Borough Council Ex p. Tew [1999] 3 P.L.R. 74 ****705*** *and* R. v Rochdale Metropolitan Borough Council Ex p. Milne [2001] J.P.L. 470 *decisions of Sullivan J.;* R. v Cornwall County Council Ex p. Hardy [2001] Env. L.R. 26 *a decision of Harrison J. which followed Sullivan J.'s approach in* Tew *and* Milne *;* R. (on the application of Barker) v

London Borough of Bromley [2002] Env. L.R. 631 CA *in which Sullivan J.'s approach in* Milne *and* Tew *was approved.*

25. Principles which those authorities establish seem to me to be the following: First, where outline planning consent is being applied for (and Tew and Milne *were cases concerned with outline planning consent,* Milne *being round two of a battle over the same development), it is at the outline consent stage that the planning authority must have sufficient details of the proposed development, sufficient details of any impact on the environment, and sufficient details of any mitigation to enable it to comply with its Art.4(2) obligation.*

26. Second, the reason for that is that once outline planning consent has been given there is effectively no going back without (at the very least) the payment of compensation.

> *Even if significant adverse impacts are identified at the reserved matters stage, and it is then realised that mitigation measures will be inadequate, the local planning authority is powerless to prevent the development from proceeding" [97F].*

27. Third, the planning authority or the Inspector will have failed to comply with Art.4(2) if they attempt to leave over questions which relate to the significance of the impact on the environment, and the effectiveness of any mitigation. This is so because the scheme of the regulations giving effect to the Directive is to allow the public to have an opportunity to debate the environmental issues, and because it is for those considering whether consent to the development should be given to consider the impact and mitigation after that opportunity has been given….

28. Fourth, (and here as it seems to me one reaches the most difficult area) it is certainly possible consistent with the above principles to leave the final details of for example a landscaping scheme to be clarified either in the context of a reserved matter where outline planning consent has been granted, or by virtue of a condition where full planning consent is being given as in the instant case.

31. … The conditions in Milne *as I understand it in the view of the judge placed constraints on the degree to which any decision at the reserved stage could have any environmental impact, and the constraints ensured that no decision should have a significant impact.*

32. …at para.[128] of his judgment in Milne Sullivan J. said this:

> *"Any major development project will be subject to a number of detailed controls, not all of them included within the planning permission. Emissions to air, discharges into water, disposal of the waste produced by the project, will all be subject to controls under legislation dealing with environmental protection. In assessing the likely significant environmental effects of a project the authors of the environmental statement and the local planning authority are entitled to rely on the operation of those controls with a reasonable degree of competence on the part of the responsible authority: see, for example, the assumptions made in respect of construction impacts, above. The same approach should be adopted to the local planning authority's power to approve reserved matters. Mistakes may occur in any system of detailed controls, but one is identifying and mitigating the 'likely significant effects', not every conceivable effect, however minor or unlikely, of a major project."*

33. In my view it is a further important principle that when consideration is being given to the impact on the environment in the context of a planning decision, it is permissible for the decision-maker to contemplate the likely decisions that others will take in relation to details where those others have the interests of the environment as one of their objectives. The decision-maker is not however entitled to leave the assessment of likely impact to a future occasion simply because he contemplates that the future decision-maker will act competently. Constraints must be placed on the Planning Permission within which future details can be worked out, and the decision-maker must form a view about the likely details and their impact on the environment.

GUIDANCE

11. Pursuant to section 104(3) of the Planning Act 2008, the Secretary of State is required to determine the application in accordance with any relevant national policy statement. Here, EN-1 and EN-3 are relevant national policy statements.

12. In EN-1, Parliament has stated as follows:

> *4.2.11 In this NPS and the technology-specific NPSs, the terms 'effects', 'impacts' or 'benefits' should be understood to mean likely significant effects, impacts or benefits.*

13. In EN-3, Parliament has stated as follows: (Emphasis added)

> *2.6.182 There are statutory requirements concerning automatic establishment of navigational safety zones relating to offshore petroleum developments30.*
> *2.6.183 Where a proposed offshore wind farm potentially affects other offshore infrastructure or activity, a pragmatic approach should be employed by the IPC. Much of this infrastructure is important to other offshore industries as is its contribution to the UK economy. In such circumstances the IPC should expect the applicant to minimise negative impacts and reduce risks to as low as reasonably practicable.*
> *2.6.184 As such, the IPC should be satisfied that the site selection and site design of the proposed offshore wind farm has been made with a view to avoiding or minimising disruption or economic loss or any adverse effect on safety to other offshore industries. The IPC should not consent applications which pose unacceptable risks to safety after mitigation measures have been considered.*
> *2.6.185 Where a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity, the IPC should give these adverse effects substantial weight in its decision-making.*
> *2.6.186 Providing proposed schemes have been carefully designed by the applicants, and that the necessary consultation with relevant bodies has been undertaken at an early stage, mitigation measures may be possible to negate or reduce effects on other offshore infrastructure or operations to a level sufficient to enable the IPC to grant consent…*
> *2.6.187 Detailed discussions between the applicant for the offshore wind farm and the relevant consultees should have progressed as far as reasonably possible prior to the submission of an application to the IPC. As such, appropriate mitigation should be included in any application to the IPC, and ideally agreed between relevant parties.*

14. The Civil Aviation Authority ("CAA") is the Government's independent air safety advisor and has published most recently its guidance concerning new wind farms in CAP 764. It says that:

> *1.4 The CAA policy on wind energy is that:*
> *1. Wind turbine developments and aviation need to co-exist in order for the UK to achieve its binding European target to achieve a 15% renewable energy commitment by 2020, and enhance energy security, whilst meeting national and international transport policies. However, safety in the air is paramount and will not be compromised. As the independent aviation regulator, the CAA is well placed to provide clarification to both the aviation industry and the wind energy industry;*

15. The CAA includes in its guidance consideration of ALARP at Footnote 4:

> *1.11 Aerodrome operators are responsible for liaising with LPAs to prevent operational airspace being infringed by new development. One significant consideration is the protection of the Obstacle Limitation Surface (OLS)[4] that should be applied for aerodrome safeguarding. The CAA may be required to explain technical matters to local or central government if a contested development proposal is referred to Ministers for decision.*
>
> *Footnote 4: OLS is the hypothetical boundary which indicates the extent of a volume of airspace which should be kept free of obstacles, so far as is reasonably practicable, to facilitate the safe passage of aircraft. It is used collectively to refer to other terms which are fully defined in Chapter 4 of Annex 14 to the Chicago Convention and incorporated into UK civil aviation regulation within CAP 168. OLS comprises of: approach surface, balked landing surface, conical surface, inner approach surface, inner horizontal surface, inner transitional surface, take-off climb surface and transitional surface.*

16. By contrast, the minimum requirement of the CAA in relation to offshore aviation is as follows in Section 3:

> *3.30 For many years, the CAA has emphasised the importance of operators and developers taking into consideration all existing and planned obstacles around offshore helicopter destinations that might impact on the safe operation of associated helicopter low visibility approaches in poor weather conditions. In order to help achieve a safe operating environment, a consultation zone of 9 NM radius exists around offshore helicopter destinations. This consultation zone is not a prohibition on development within a 9 NM radius of offshore operations, but a trigger for consultation with offshore helicopter operators, the operators of existing installations and exploration and development locations to determine a solution that maintains safe offshore helicopter operations alongside the proposed development. This consultation is essential in respect of established developments. However, wind energy lease holders, oil and gas developers, and petroleum licence holders are advised to discuss their development plans with each other to minimise the risks of*

unanticipated conflict at a later date. Topics for discussion within any such consultation should include, but are not limited to:

1. *Prevailing weather conditions, including predominant wind direction;*
2. *Manning status of the installation;*
3. *Frequency of flights to the installation and predominant routes;*
4. *Performance limitations of offshore helicopter types utilising the helideck;*
5. *Established helicopter instrument and low visibility approach procedures;*
6. *Mandated constraints on approaches to helidecks on installations;*
7. *Long term access to well and subsea infrastructure;*
8. *Concurrent wind farm operations and oil and gas operations to well and subsea infrastructure;*
9. *SAR operations to the installation in the event of an emergency;*
10. *Location and height of potential obstacles including proposed wind turbines.*

3.31 The following paragraphs provide, in layman's terms, an explanation of the reasoning behind the need for the 9 NM consultation zone. While procedures will differ depending upon the installation, operator and aircraft type involved, the following notes are based upon Commission Regulation (EU) No 965/2012 (the European Air Operations Regulation), improved flight procedure documentation and the practical application of such requirements:

1. *Basic Requirement. The 9 NM consultation zone aims to provide a volume of obstacle-free airspace within which a low visibility approach profile and, in the event of a pilot not being able to complete his approach, a missed approach can be flown safely. Such profiles must allow for an acceptable pilot workload, a controlled rate of descent, one engine inoperative performance and obstacle clearance.*
2. *Approach…As helicopters approaching offshore installations must make the final approach substantially into wind, the approach could be from any direction. The obstacle-free zone must, therefore, extend throughout 360° around the installation to prevent restrictions being placed on the direction of low visibility approaches and departures.*
3. *Go-Around and Missed Approach Procedure (MAP)… For obvious safety reasons, a go-around involving a climb from the minimum descent height needs to be conducted in an area free of obstructions as this procedure assures safe avoidance of the destination structure.*
4. *Departure Procedure. On departure from an offshore installation the aircraft will be climbed vertically over the deck to a height determined by its performance criteria and is committed to the take off once a nose down attitude is adopted.*

3.32 In summary, obstacles within 9 NM of an offshore destination would potentially impact upon the feasibility to conduct some helicopter operations (namely, low visibility or missed approach procedures) at the associated site. Owing to the obstruction avoidance criteria, inappropriately located wind turbines could delay the descent of a helicopter on approach such that the required rate of descent (at low level) would be excessive and impair the ability of a pilot to safely descend to 200/300 ft by the appropriate point of the approach (2 NM). If the zone is compromised by an obstruction, it should be appreciated that routine low visibility flight operations to an installation may be impaired with subsequent consequences for the platform operator or drilling unit charterer. One such consequence could be that the integrity of offshore platform or drilling unit safety cases, where emergency procedures are predicated on the use of helicopters to evacuate the installation, is threatened. Additionally, helicopter operations to wind farms may impact on oil and gas operations. It is therefore essential that the installation operators, helicopter operators and other interested parties are engaged in the consultation process.

SPIRIT ENERGY SUBMISSIONS

17. The Application is, in essence, an outline application for a development consent order. The draft terms of the DCO recognise this in providing the terms of parameters within which up to 300 wind turbines may be built up to specified heights and minimum spacings.

18. It is common ground that the intervention of physical wind turbines can result in the obstruction of air space near to SE assets, including at C6 and C7 in due course, in consequence of which the disruption of helicopter access to such assets will affect on the safety case of SE. See ES, Chapter 8, page 14, §8.7.4.13: "safety implications include a potential impact upon the integrity of offshore platform Safety Cases that are based on the use of helicopters to facilitate evacuation procedures.". See also ES, Annex 8.1, page 20, §7.4.1.4 and

§7.4.3.1: “Should the airspace that is required to fly a MAP not be available due to the presence of turbines, then this would restrict helicopter operations”. Table 7.4 confirms that SE assets’ operations would be affected by the presence of turbines. See also Figure 7.10 and 7.5 of Annex 8.1. Consequently, EN-3 §2.6.183 is satisfied on the facts.

19. The minimum standards for aviation safety are published in CAP 764. The standards require a volume of obstacle-free space in which a helicopter can execute all necessary manoeuvres and without which, as §3.32 recognises, the “consequence could be that the integrity of offshore platform or drilling unit safety cases, where emergency procedures are predicated on the use of helicopters to evacuate the installation, is threatened. Additionally, helicopter operations to wind farms may impact on oil and gas operations.”. That would be so in relation to SE assets. See SE’s Statutory Declarations on Safety Case provided at Deadline 1.

20. Contrary to CAP 764, and it mandate to undertake essential consultation with SE, and despite Centrica raising access by helicopter with the Applicant

21. The Applicant has not (to date) reduced, to as low as reasonably practicable, the risk to the safe ongoing operation of SE assets and its activities including exploration in the locality of C6 and C7 by the exclusion of any turbines so as to create an obstacle free volume of airspace around each SE asset (including C6 and C7).

22. Further, EN-3, §2.6.185 elevates a likely affect on the safety of (here) an SE asset to the status of a “likely significant effect” and requires that substantial weight be attributed to that effect.

23. In the ongoing absence by the Applicant of ensuring that the *minimum* standard of the CAA, being to ensure an obstacle free airspace is provided so as to exclude an affect on an SE asset safety case (see CAP 764, §3.32 and the basic requirement of §3.31(1) and §1.14(1) (that safety remains paramount over the installation of turbines), §§2.6.185-186 recognise that mitigation measures be applied to address that risk.

24. The SE draft Protective Provisions supply two functions to the Application:

    a) In themselves they provide evidence of a proxy for the absence of provision by the Applicant of an ALARP assessment to reduce the risk of safe operation of SE assets to as low as reasonably practical. The provisions are, therefore, both legally essential as well as supplying the means by which EN-3, §§2.6.183-6 can be properly applied by the ExA and the Secretary of State and avoid a substantially weighty factor against the Application;

    b) They provide clearly defined terms of parameters within which details can be worked out in due course. For this reason, the parameters include a provision by which SE can give written consent (for example, where terms or further assessments may be agreed) that enable detailed modification of the parameters today sought whilst avoiding rendering powerless the Secretary of State, or a regulator or arbitrator, in due course were a risk to crystallise and catastrophic consequences occurred to safe operation of SE assets.

25. Conversely, *without* the SE draft Protective Provisions, the EN-3 machinery could be lawfully discharged and so substantial weight would be required to be applied to the "potential affects" evidenced by the parties. That would weigh heavily against the Application. Consultation with SE did not occur at an early stage and design is a reserved matter. §2.6.186 would, it appears, preclude the ExA from being able to recommend consent.

[redacted]
39 Essex Chambers
14th March 2019

APPENDIX 7 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Clarifications to matters arising from ISH 8 Hearing

Introduction

The following clarifications are given in response to issues or questions which arose at the ISH 8 hearing.

Unplanned visits

In 2017, Spirit Energy had 42 unplanned visits to the Grove NUI and 66 unplanned visits to Chiswick. 2017 was chosen as a reasonably representative year as since then a drill rig has been on location at Chiswick.

C6 and C7

Since the ISH 8 hearing, Spirit Energy has pursued various enquiries with a view to submitting further evidence to the ExA of the current status of SE activities C6 and C7, in addition to that in its Written Representations that showed their location, and when various particular steps have been undertaken in relation to C6 and C7. SE will provide an update at the earliest possible opportunity.

East Anglia 3 wind farm

Some discussion took place at the ISH 8 hearing regarding the East Anglia 3 wind farm (EA3) in the context of the protective provisions sought by Spirit Energy in respect of C6 and C7. In EA3, the DCO included protective provisions that encompassed exploration, drilling and exploiting petroleum resources.

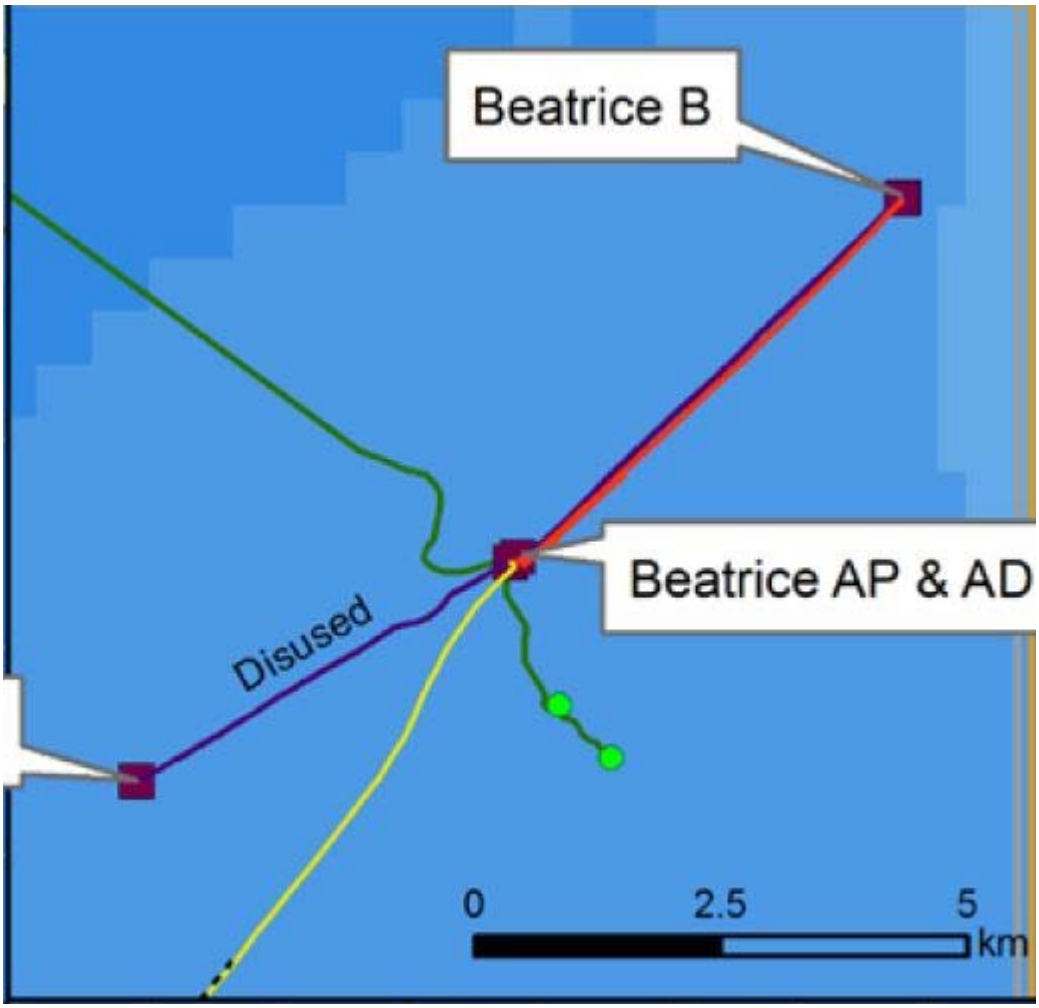
It is Spirit Energy's position that EA3 provides a relevant precedent in respect of the current Application in that EA3 shows the scope of activities and infrastructure falling to be protected under EN-3 and that is also consistent with the range (and need for) activities in the UK Marine Statement (2012), §§3.3.7-3.3.10: "these resources need to be accessed to achieve the objective of maximum economic recovery… Continued access to areas of interest for exploration surveys is necessary, but this exploration need not be a permanent barrier to other uses of the sea. Where economically recoverable quantities of hydrocarbons are found, the exclusion footprint of any drilling or offshore production facilities can be relatively small".

Paragraphs 9.5.17 and 9.5.18 of the Examining Authority's Report of Findings and Conclusions note that the uncertainty and timing of both the exploration activities and the wind farm were key. The same features are present in the current case.

The need for the draft Protective Provision to ensure safe operation of C6 and C7 exploitation is, therefore, supported by the policy of EN-3, §2.6.183 (as an "activity") and under the UK Marine Statement which recognises the scope of activities as encompassing exploration as securing achievement of the MER strategy core objective. It is also consistent to facilitate successful co-existence, with the C6 and C7 resource location.

Beatrice wind farm

Similarly, discussion took place at the ISH 8 hearing regarding wind turbines in close proximity to the Beatrice platform. It is understood that the two Beatrice turbines were both hub height 88m and rotor diameter 126m therefore considerably smaller than those proposed in the present case. They were however both placed in line 1.9km from the nearest platform and 900m apart to the south south east of the platform, i.e. the sector least likely to be affected by the prevailing weather. Given this siting, a helicopter taking off towards them, even with a course change of around 5 degrees would be clear.



Walk2Work (W2W)

At the ISH 8 hearing, Emily Wood (RPS) suggested that the use of W2W vessels would mitigate the impact of the reduced opportunities for helicopters to access Spirit Energy's platforms for the purposes of unplanned works, and thereby minimise or avoid consequent financial losses.

Spirit Energy recognise that W2W vessels may be used for planned maintenance and construction campaigns. The current costs of W2W vessels and their limited availability make them suitable for extended maintenance campaigns but not for short, unplanned visits to unmanned platforms.

By their very nature, unplanned activities have an immediate impact on production, and therefore need accelerated access to put right – i.e. a helicopter flight. A delay of some days waiting for a W2W vessel to allow production to be recommenced would not be acceptable or economic.

APPENDIX 8 TO SPIRIT ENERGY POSITION STATEMENT FOR ISH 8

Spirit Energy Policy Submission: 14TH MARCH 2019

The following policy submission has been prepared to set in context the Technical Note prepared by DNV GL Nobel Denton Marine Services dated 12 March 2019. This policy submission should be read in conjunction with the Technical Note.

Law

By section 104(1) of the Planning Act 2008, section 104 requires, by subsection (2) the Secretary of State to have regard to (a) any national policy statement which has effect in relation to the development of the description to which the application relates. In this matter, EN-1 and EN-3 have effect in relation to the development of part of the sea-bed for up to 300 turbines within the red line area. Subsection (3) requires the Secretary of State to decide the application in accordance with "any" relevant national policy statement.

Section 5 provides for designation of a national policy statement for the purposes of the Planning Act 2008. By section 13(1), a national policy statement can only be "questioned" in a claim brought prior to the expiry of 6 weeks after its date of publication. The terms of EN-1 and EN-3 cannot be questioned today.

The court's general approach to the interpretation of planning policy is well established and clear. Statements of policy are to be interpreted objectively in accordance with the language used, read in its proper context. The author of a planning policy is not free to interpret the policy so as to give it whatever meaning he might choose in a particular case. The interpretation of planning policy is, in the end, a matter for the court. The interpretation of policy is a matter of law and its application is a matter of judgement for the decision maker. See, for example *R (aoa Scarisbrook) v Secretary of State for Communities and Local Government* [2017] EWCA Civ 787 at §19.

Guidance

EN-1 Overarching National Policy Statement for Energy

EN-1 provides in Part 4, Assessment Principles, includes in section 4.2 for Environmental Statement. §4.2.1-3 provide:

> *4.2.1 All proposals for projects that are subject to the European Environmental Impact Assessment Directive[74] must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project[75]…*
> *4.2.2 To consider the potential effects, including benefits, of a proposal for a project, the IPC will find it helpful if the applicant sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated.*
> *4.2.3 For the purposes of this NPS and the technology-specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project. In some circumstances (for example, gas pipe-lines) it may be appropriate to assess effects arising from commissioning infrastructure once it is completed but before it comes into operation. Details of this and any other additional assessments are set out where necessary in sections on individual impacts in this NPS and in the technology-specific NPSs. In the absence of any additional information on additional assessments, the principles set out in this Section will apply to all assessments…*
> *4.2.5 When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)77. The IPC may also have other evidence before it, for example from appraisals of sustainability of relevant NPSs or development plans, on such effects and potential interactions. Any such information may assist the IPC in reaching decisions on proposals and on mitigation measures that may be required…*

The Environmental Assessment section then concludes with §4.2.11 which provides:

> *4.2.11 In this NPS and the technology-specific NPSs, the terms 'effects', 'impacts' or 'benefits' should be understood to mean likely significant effects, impacts or benefits.*

On a plain reading on EN-1, §4.2.11, Parliament has chosen to apply an expanded definition to the terms "effects", "impacts" and "benefits" alone and to not objectively expressly expand the definition of any other terms.

SE considers this objective provision to define terms self-explanatory and obvious in its meaning. Each time the EN uses one of the three terms cited, Parliament requires that such a term be read as §4.2.11 defines it.

Orsted disagrees and asserts that this is a "too contractual" a reading of EN-1. Orsted reiterated that disagreement at ISH8. Orsted contends that §4.2.11 also by implication expands the definition of "affect" to mean "likely significant affects". By so implying, it has raised the threshold of its assessment so as to exclude from account matters falling below the threshold of "likely significant affects" as well as "likely significant affects". An example of Orsted's application of its approach is in ES, Volume 2, Chapter 7, paragraph 7.11.2.52 & following, in which 'ALARP ' is mention exclusively in the EIA context & which context uses (non-ALARP) EIA thresholds) resulting is down playing of real risks with catastrophic consequences By its approach, Orsted has underplayed the potential affects of its proposed physical intervention into the existing marine environment close to pre-existing infrastructure and ongoing exploration activity

SE continues to submit that Orsted's assertion that the expanded definition must apply to many other terms in the EN's (such as "affects") is, in reality, a disagreement with the *merits* of the EN-1, §4.2.11 and EN-3, §§2.6.163 and 2.6. 183. But section 13 of the PA 2008 today precludes a challenge to the merits of the policy terms.

EN-3 National Policy Statement for Renewable Energy Infrastructure

The technology national policy statements include EN-3. §2.6.156 provides for a navigational risk assessment ("NRA") and states this:

2.6.157 Applicants should undertake a Navigational Risk Assessment (NRA) in accordance with relevant Government guidance prepared in consultation with the MCA and the other navigation stakeholders listed above.

2.6.157 The navigation risk assessment will for example necessitate:

- *a survey of vessels in the vicinity of the proposed wind farm;*
- *a full NRA of the likely impact of the wind farm on navigation in the immediate area of the wind farm in accordance with the relevant marine guidance; and*
- *cumulative and in-combination risks associated with the development and other developments (including other wind farms) in the same area of sea.*

2.6.158 Where there is a possibility that safety zones will be sought around offshore infrastructure, potential effects should be included in the assessment on navigation and shipping.

§2.6.183 then states:

> *Where a proposed offshore wind farm is likely to affect less strategically important shipping routes, a pragmatic approach should be employed by the IPC. For example, vessels usually tend to transit point to point routes between ports (regional, national and international). Many of these routes are important to the shipping and ports industry as is their contribution to the UK economy. In such circumstances the IPC should expect the applicant to minimise negative impacts to as low as reasonably practicable (ALARP).*

In this Application, there is no dispute that shipping lanes are "likely to" be affected. See, for example, Figures 7.3 and 7.4 on pages 16-17, and Figure 7.11 on page 51 of ES Chapter 7, and Figure 18.6 on page 87 of Annex 7.1 of the ES.

SE considers that Parliament's objectively stated terms expressly introduce the principle of "ALARP" into the assessment of certain descriptions of project. The terms of §2.6.163 also introduce a requirement ("should"). The ordinary meaning of "should" is "shall" and "shall" includes both a requirement of necessity, a requirement according to a command, and that something ought to be done as the right or suitable thing. The analysis below shows evidence of Orsetd accepting that a discrete ALARP is the necessary, suitable, and required assessment to undertake in relation to SE assets (including C6 and C7).

However, at the Examination, and notwithstanding various express references to "ALARP" in its ES (see for example, Table 7.1, row 4, page 3; and Table 7.2, row 3, and §7.11.2.66 on page 57 of ES Chapter 7, Orsted persists in disagreeing that Parliament has even introduced (*per se*) the concept of "ALARP" into EN-3 or that Orsted is required to do anything (or, confusingly, that if it is required, then it has done an ALARP assessment. In the face of the simple SE submission that Orsted must carry out an ALARP assessment, Orsted contends (variously) that "ALARP" is an "HSE principle" (in ISH 1), or applies to only to an existing occupier (and not to Orsted) (in ISH1), that HSE matters have no application under the Planning Act 2008 (in ISH 8), or that Orsted cannot satisfy the ALARP principle *per se* (in ISH 8) or because it contends that the principle includes a financial

element so that it cannot be correct that Orsted must assess matters to be ALARP because it could never be in a position to address financial aspects.

SE continues to submit that Orsted's assertion - that ALARP is not applicable or cannot be complied with due to cost considerations - in the Planning Act 2008 is misplaced and is, in reality, a disagreement with the *merits* of the EN-3, §2.6.183. It is also a disagreement with EN-3, §2.6.156 because that paragraph requires the NRA to be prepared in accordance with "relevant Government guidance". That guidance includes here MGN 543. MGN 543 objectively states that it "should be read in conjunction with … Methodology for Assessing Marine Navigational Safety Risks & Emergency Response of Offshore Renewable Energy Installations ["the Methodology (2013)"]". The Methodology includes, at page 59, Question (ii), bullet 1, a requirement ("must") to consider whether the cost of further measures would be grossly disproportionate to the value of the benefit obtained and (bullet two) whether relevant good practice has been followed. Contrary to Orsted's contentions about the principle of ALARP and cost, section 13 of the PA 2008 today precludes a challenge to the merits of the policy terms of either §§2.6.156 or 2.6.163 of EN-3. In essence, Orsted is not today entitled to avoid the requirements of §§2.6.156 or 2.6.163 nor of page 59, Question (ii) of the Methodology.

Further, in fact, Orsted's Application follows the Rochdale Envelope approach. Advice Note 9 (2017), page 2, states that "the need for flexibility should not be abused". In its Application, Orsted is not today in a position to supply financial information about its position because its Finance Board has yet to make a decision to proceed (see Mr Philips in ISH1). SE submits that Orsted cannot rely on its absence today (albeit understandable) of its own financial knowledge or situation to justify not itself today being able to discharge its ALARP obligation without abusing the flexibility that it also seeks. Furthermore, in the absence of its own ability to supply financial information to the ExA and Secretary of State, Orsted cannot cast onto SE the burden of Orsted's current lack of financial information and contend that *because* SE has not supplied financial information, *then* Orsted is not in a position to be able to assess ALARP. If it were otherwise, then Orsted would be abusing the flexibility that it seeks in its Application.

Rather, the reality is that EN-3, §2.6.156 (via MGN 543 and the Methodology (2013) require Orsted to assess ALARP and that Orsted itself considers ALARP relevant to its Application and both suitable and required (see ES, Chapter 7, Shipping and Navigation, page 3, Table 7.1, row 4 (reference to EN-3, §2.6.156), and Table 7.2, row 3, (express reference to ALARP and to EN-3, §2.6.163); and, e.g., page 57, §7.11.2.66.

In particular, ES, Chapter 7, page 13, §7.7.1.3, bullet 2 identified the SE assets as being "*in close proximity* to the offshore aspects of Hornsea Three" and §7.7.1.1, bullet 1 identified that the existing routes "currently co-exist alongside a number of *notable activities* [including, bullet 1] oil and gas activities including operational gas platforms". Page 12 and Table 11.4 of ES Chapter 11, records SE as having raised allision as being "intolerable from a safety perspective". §12.7.2.22, bullet 2 identifies an "increase in vessel to structures allision risk … both *externally* and internally within the array". But, then Table 12.11, row 2, page 25 of ES Chapter 11 stops short of undertaking any form of true ALARP assessment for that (accepted) potential affect in relation to SE assets (existing and C6 and C7) and instead categorises the "effect" "vessel to structure allision risk external to the array" as "minor adverse" (i.e. for EIA assessment purposes and not for ALARP assessment purposes).

Whilst §7.11.2.52-55 on pages 56-57 of ES Chapter 7, undertakes an (EIA-based) "magnitude of [EIA] impact" assessment of allision risk, §7.11.2.55 understates the consequences of a impact upon SE assets by describing risk frequency as "negligible" and at §7.11.2.53 "based on the modelling of the revised routing (Figure 7.12)" whereas Figure 18.6 on page 87 of ES Annex 7.1 incorrectly models the array red line area as *solid*.

Further, §7.11.2.63 on page 57 of ES Chapter 7, expressly concludes in relation to the (EIA) "significance of effect": (Emphasis added)

> *Overall, the sensitivity of the receptor [undefined] is considered to be medium and the magnitude is deemed to be minor. The effect will, therefore, be minor adverse significance, which is not significant in EIA terms; noting that the presence of larger structures on the periphery of the array could significantly increase risk and may require assessment post-consent.*

By contrast, on page 57 of ES, Chapter 7, §7.11.2.66, EIA assessment of a potential impact includes consideration of "ALARP" (but in an EIA context and not in an ALARP context). This reinforces the absence of ALARP assessment of the (accepted) increase in allision risk external to the array.

Therefore, notwithstanding that the ES provides a lot of information, it is an EIA (only), it has assessed ALARP in error, and, it is clear on the evidence before the ExA (and the Secretary of State) that:

a) It is common ground between SE and Orsted that:

   i) "*the presence of larger structures on the periphery of the array could significantly increase risk";* and
   ii) that risk "*may require assessment post-consent*".

b) Orsted have not, on analysis of the ES actually executed an ALARP assessment in relation to SE assets (both operational and C6 and C7).

It is also no answer that Orsted cannot know the financial situation of SE and, therefore, that Orsted is relieved of its ALARP obligation at this stage of the decision making process (and can instead defer in principle an ALARP assessment "post-consent".

The express requirement of the Methodoogy (2013) to address Question (ii), bullet 1 on page 59 of the Methodology (2013) can (in the circumstances of Rochdale Approach) be properly addressed at this stage of the consent process by recognition of the fact that financial information is not today available to Orsted and so Orsted cannot itself contend at this stage of the decision making process that it *is or would be* grossly disproportionate to impose measures such as the draft Protective Provisions advanced by SE (see SE Draft Protective Provisions).

Further, in approaching the ALARP done, it is evident that it is not fit for purpose as a discrete ALARP assessment because Orsted has *meshed* ALARP assessment into EIA assessment whereas the two concepts are distinct and Parliament has recognised that differentiation in EN-1, §4.2.11 and EN-3, §§2.6.156, 163 and 183.

In so meshing EIA and ALARP assessments, Orsted has not in fact executed an ALARP assessment (despite recognising the requirement to execute the same) and the meshing has resulted in a failure to properly apply ALARP at all to its Application. For example, it has set a different (EIA-based) threshold resulting in exclusion of important relevant factors (see **DNV GL's Technical Note dated 12 March 2019**) stopped short of proceedings to assess ALARP matters that it indicates falls to be subject to a proper ALARP assessment.

Furthermore, the draft SE Protective Provisions provide a 2nm radius around each SE asset as well as the legal framework parameters within which matters of detail can be appropriately assessed in due course and in the event that Orsted were to seek (by demonstrating in a Methodology (2013) guidance compliant an ALARP assessment) to reduce the 2nm radius. Thus, the imposition of the draft SE Provisions operate to entitle the ExA and the Secretary of State to lawfully take account of the EN-3 ALARP guidance in the circumstances of this Application. See **Spirit Energy Legal Note on Rochdale Envelope Parameters** (14th March 2019).

The Application Navigational Risk Assessment

As part of the process for seeking a development consent order for the Hornsea 3 Offshore Wind Farm, the Applicant is required, by EN-3, §2.6.156, to produce a Navigational Risk Assessment (NRA) for marine traffic in the vicinity of the proposed array site in accordance with relevant Government guidance prepared in consultation with the MCA and other navigation stakeholders.

Those stakeholders include, as outlined in EN-3, §2.6.154, the MMO and the MCA and, under § 2.6.153 "interested parties in the navigation sector" to ensure that solutions are sought to allow wind farms and navigation uses of the sea to successfully co-exist. SE is such an interested party and raised, on 20th September 2017, allision risk See page 12, of Table 11.4 of ES Chapter 11.

Wind turbines present a physical hazard to vessels due to the presence in the sea of such obstructions. The application defers to a future occasion the siting of up to 300 wind turbines within the application area and so their actual location at this time cannot be known.

It is understood that the MCA and other regulators have signed a statement of common ground that the NRA prepared by the Applicant is satisfactory.

SE's primary position is that the statement cannot justify the absence of an ALARP assessment in relation to SE assets nor be asserted as being a proxy ALARP assessment.

In particular, Orsted has expressly recognised in §7.11.2.63 on page 57 of ES Chapter 7 both a difference between the EIA assessment and an ALARP assessment, and also that the latter may be necessary post-consent. i.e. that the NRA undertaken does not actually cover an ALARP assessment of SE assets at all. In that situation, the

statements agreed with the MCA, and others, cannot justify the NRA done as lawfully covering the requirement of §2.6.156 of EN-3 to execute an NRA that includes ALARP as extending to assess SE assets.

Further, there are two types of NRA: a 'general' type and an 'other' type. The agreed statements can be regarded as consistent with a 'general' NRA whereas an 'other type' has not here been done (even though triggered as requiring to be done).

The Methodology for Assessing the Marine Navigational Safety Risks & Emergency Response of Offshore Renewable Energy Installations' (2013), paragraph 1.4, defines the *two types* of Navigation Safety Risk Assessment: a "General [NSRA]"; and an "Other [NRSA]" and it is not inconsistent for the MCA and others to have agreed that the General NRSA may be satisfactory whilst at the same time the NRA undertaken has not included an "Other NRSA".

The allision risks identified by Orsted in §7.7.1.1, bullet 1 (oil and gas activities including operational gas platforms) and §7.7.1.3, bullet 2, (oil or gas platforms located approximately 0.98nm and 1.45nm east of the proposed array); of concern as "intolerable from a safety perspective" to Spirit Energy (page 12, Table 11.4, row 1, CES Chapter 11), and accepted by Orsted in §7.11.2.63 on page 57 of ES Chapter 7, as: "*the presence of larger structures on the periphery of the array could significantly increase [allision] risk and may require assessment post-consent"* , would fall within the scope of an "Other NRSA" - but that "Other NRSA" has not been undertaken.

Further, in terms of EN-3, §§ 2.6.156 and 2.6.161-169 and Methodology (2013) pages 7-8, the Government is required to assess whether the tools and techniques used in the assessments (done) are acceptable and whether there is sufficient information with the NRA submission to have confidence in the claims that it makes. At this time, it is understood that the MCA and Trinity House in fact have certain concerns about search and rescue and proposed lines of orientation, and there remains no agreement in the General NRSA about these matters at this time. Therefore, the evidence before the ExA shows that the MCA, and others, do not regard their statements of common ground as a blanket agreement even to the "General" NRA done.

Furthermore, whilst it is also understood that the MCA and others have agreed a statement of common ground, the statement cannot bind the ExA or the Secretary of State because neither is a signatory. Rather, (see below) the Methodology (2013) requires the ExA and the Secretary of State to reach their own views of what has (and has not) been done in themselves applying relevant guidance pursuant to §2.6.156 of EN-3.

The Applicant's Failure to Expressly Apply the Methodology (2013) required by MGN 543 and §2.6.156 of EN-3

In line with EN-3, §h 2.6.156, "relevant Government guidance" evidently includes Marine Guidance Note 543 (M+F): Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response. The Applicant accepts that it has applied this Note and its ES refers to that Note. See e.g. page 11, §§7.6.2.1-2, and page 29 and §§7.7.6.5 of ES Chapter 7.

As set out above, the Applicant does <u>not</u> accept that it must also apply an ALARP approach and guidance providing for an ALARP assessment is not referred to in the ES.

The current relevant UK Government Guidance on this matter is contained in:

a) Marine Guidance Note 543 (M+F): Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response; and
b) the supporting document 'Methodology for Assessing the Marine Navigational Safety Risks & Emergency Response of Offshore Renewable Energy Installations' (2013, updating the 2006 DTI Guidance). This document is available online and has also been submitted by Spirit Energy in its Post ISH1 Written Submission, Appendix H (14th December 2018); REP3 -038. Notwithstanding that provision, to date the Applicant has not expressly applied that Methodology to the proposal nor its process;
c) IMO, 2006, included in the Methodology at pages 59 to 60 and stated as "available to download at" a specified web address. It is not evident that the Applicant has applied or considered the IMO criteria to the assessment of risks in relation to Spirit Energy's assets arising from the proposed array.

The Methodology (2013) expressly "requires a submission that shows that sufficient risk controls are, or will be, in place for the assessed risk to be judged as broadly acceptable or tolerable" and at page 7 identifies 9 "key features". Risk control is explained at paragraph 1.2 and aims to satisfy the "Marine Navigational Safety Goal" in Section 4 at page 19 - 20That Goal is stated by the UK Government to be:

> *Due to the lack of specified goals it is therefore prudent to consider the overarching UK principle of reducing risk to that which is "as low as reasonably practical" and that "relevant good practice risk controls are in place".*
>
> *This overarching principle is based on the UK Health and Safety Executive (HSE) document "Reducing Risks Protecting People", which is a guide to the HSE's decision-making process and therefore contains much useful information on risk-based decision making.*

As has been set out above, at ISH 1, the Applicant contended that Spirit Energy's reliance on the consideration under the Planning Act 2008 on HSE-type ALARP principles was fundamentally misplaced.

Spirit Energy disagrees and refers the Examining Authority and Secretary of State to page 19-20 and the Marine Navigational Safety Goal in paragraph 4.2 (and, in assessing the tolerability of risk, to paragraph C4, pages 58-60), of the UK Government's Methodology where in its Questions (i) and (ii) the Government requires consideration of and a conclusion on the reduction of risk to ALARP and application of IMO 2006 criteria to risks assessed under the Planning Act 2008 in seeking consents and licences (see paragraph 9.2, page 33).

At ISH8, the Applicant continued to contend that Spirit Energy's reliance on ALARP was misplaced and that Spirit Energy was subject to HSE Regulations.

Spirit Energy disagrees. As the Applicant is seeking development consent, and EN-3 requires an NRA in line with relevant Government guidance, the Methodology (2013) falls within the scope of "relevant Government guidance". As has been referred to above, the Methodology (2013) includes consideration by the Applicant as undertaker of the assessment of the *cost* of further measures to it as part of the relevant Guidance for ALARP assessment by the Applicant but this is in relation to the Applicant. See page 59, bullet 1 of Question(ii). As page 60 states:

> *These two questions are "pure safety" ones.*

Therefore, Orsted is required to address cost *if* it wants to contend that measures would have a grossly disproportionate affect on the Application. However, because Orsted cannot at this time know its financial situation absent Finance Board decision, it is not open to it at this time to suggest that measures (in the form of SE draft Protective Provisions) would be grossly disproportionate as it can only assert (without evidence) the same. In other words, bullet 1 of Question (ii) can at this stage be satisfied by concluding that it cannot be said that the [draft] SE Protective Provisions (radii around SE assets including C6 and C7) could be said to be "grossly disproportionate and (further) Question (ii) is a pure safety one in any event. Thus, financial considerations cannot be determinative of ALARP in the context of its application by Parliament to the purposes of the Planning Act 2008 concerning development consent orders.

The Gap Analysis paper by Noble Denton Marine Services, DNV GL, compares the requirements of the MGN 543, and the associated Methodology criteria also required to be followed by the Examining Authority and Secretary of State in their particular "review of …[the] submissions" (see page 7-8, criteria 1-9 and 1-4, and 9.2-3) and of what the Applicant has or has not done. The Gap Analysis paper compares what was required to have been applied with the outputs of the General NRA done (that itself expressly only applied the MGN and makes no mention of the Methodolgy(2013)) submitted by the Applicant, insofar as the outputs impact on the safety of the gas production platforms operated by Spirit Energy and those opportunities being explored by Spirit Energy in the Greater Markham licensed area.

Furthermore, the Gap Analysis paper seeks to ascertain whether what has been done by the Applicant aligns with the Methodology (despite regard not being had to it) and, if not, what gaps in the evidence the NRA contains so far as risks to Spirit Energy's assets are concerned.

It should be noted that these installations are sited *close* ("in proximity to" (§7.7.1.3, bullet 2, on page 13 of ES Chapter 7) to the proposed eastern boundary of the array (J6A: 6.9nm; Chiswick: 1.5nm; ST1: 4.5nm; Grove 2.4nm and West Grove 1.5nm). Sites for future planned wells (C6 & C7) will be *within* the array area. It should also be noted that Spirit Energy (formerly Centrica) raised concerns in 20th September 2017 about allision, that the risk of allision was intolerable from a safety prespective, and also highlighted that the Applicant had applied the wrong methodology. (Despite that clear point being raised, to date (14th March 2019), Orsted has failed to exeute an ALARP assessment in relation to marine allision risk with SE assets including C6 and C7 during all phases of the proposed Application development.

This is indicated within the ES, Volume 2, Chapter 11, Table 11.4, page 12, row 1: "Risk assessment methodology: discussion is needed on the approach and conclusions reached. SE has concerns that what is considered intolerable from a safety perspective are incorrectly evaluated as not posing a significant impact. Maximising

Economic Recovery: discussion is needed on impacts of the proposed development on oil and gas companies' legal obligation to take the steps necessary to secure the maximum value of economically recoverable petroleum from the strata beneath UK waters".

The Applicant's response on page 12 directs the reader to Collision Risk in ES Volume 2, Chapter &, Navigation and Shipping (but that does not address allision risk from vessels *to* Spirit Energy's assets); and to the effects of displaced shipping in paragraph 11.11.2.79 (but this does not address the allision risk either). Between 20th September 2017 and 14th March 2019 it is not evident that the Applicant has actually *applied* the Methodology criteria and approach to Spirit Energy's assets in relation to allision risk. To date, the Applicant's approach during the Examination Period remains to disavow (on any basis) that any ALARP assessment is required to be executed by it. Therefore, the ExA has a matter of principle to make recommendations in respect of it to the Secretary of State.

As se tout above, allison risk (as a matter of evidence and not on a correct ALARP approach) from vessels *potentially affecting* Spirit Energy's assets is covered by EN-3, paragraphs 2.6.156 and 2.6.183. The ES, Volume 2, Chapter 12, page 24, paragraph 12.7.2.22, bullet 2 states that "the following *potential impacts* have been considered within the inter-related assessment: *increase* in vessel to structures allision risk (including emergency situations) both *externally* and internally within the array"; paragraph 12.7.2.23 states that "Table 12.11 lists the inter-related effects (project lifetime effects) that *are predicted to arise during … operation* …of Hornsea Three". Table 12.11, page 25, row 2, identifies the Impact Type "Increase in vessel to structures allision risk … - Hornsea Three array" and Residual Effect in operation of "minor adverse (external and internal risk)". The ES identifies, therefore, external risk, and using EIA characterisation, assesses this as "minor adverse" on page 25.

Whilst accepting such a potential external risk of allision, as set out above, the Applicant has not addressed this further in its NRA, for example, by undertaking an Other NRSA for Spirit Energy assets. As a result, out of line with the Methodology, page 20, bullet 2, the Applicant has not arrived at the point itself to make the required commitment to set in place risk mitigations and controls.

Whilst not addressed or assessed by Orset, the nature of the risk of concern to SE is covered at a high level by MGN543 but at a detailed level the Methodology (2013). For example, in the Methodology (2013), the following paragraphs show the basis of what considerations would fall to be considered by an "Other" NRA specific to the proper consideration by Orsted of allision risk between displaced vessels and SE assets (including C6 and C7):

a) Paragraph E.2.1 Stakeholders: which specifies within the category of Navigational Stakeholders the category of "Offshore Oil and Gas Industry";
b) Paragraph B.2.1, bullet 3, where it is stated that account should be taken of the future change in all marine activities such as offshore exploitation;
c) Paragraph B.3.4, which identifies Navigation Activity H2(2)(2) navigating or operating around an OREI; H2(2)(3) navigating around and through an OREI; and H2(6)(6) Other Marine Operations close to or within an OREI, "Oil and gas operations" are stated as a category;
d) Paragraph B.3.7, Other structures and features that could affect Navigation Activities, H5(2) Oil and Gas Installations (existing and projected);
e) Paragraph C.3.2 identifies various Risk Factors. Under the category of 'Interrelations between vessels' Pinching and Reduction in sea room for manoeuvring are noted; and
f) Definition 4 – Site Specific Assessment, (i) "model or assess the chain of navigational events as vessels pass within or close to the OREI (i.e. where an alteration of course … produces a further encounter…)" and (k) "examine the cumulative effects of all wind farms and other OREI … other offshore installations etc., within the proximity of the given site"; (s) "examine the hazards and consequences of major incidents within or close to the OREI" and (u) "recommend minimum separation distances of the specific wind farm … from other offshore operations".

The evidence referred to above in §§7.7.1.1. bullet 1, and 7.7.1.3 bullet 2 of the ES Chapter 7, also shows that the risks posed by the close distance of Spirit Energy's assets is within the scope of the Methodology (2013) and so too is the consideration of allision risk.

Evidence-Based Examination by the Examining Authority

It is UK Government policy that the "absence of evidence of risk" is not to be taken as "evidence of absence of risk" as set out at paragraph 8.4(2), page 32, of the Methodology (2013).

SE has provided a considerable volume of expert evidence (and continues to do so) evidencing the presence of the allision risk as a result of the proposed array being situated in close proximity to the existing SE assets and around C6 and C7.