Morecambe Offshore Windfarm: Generation Assets

Examination Documents

Volume 9

The Applicant's Comments on Spirit Energy's Deadline 5 Submission

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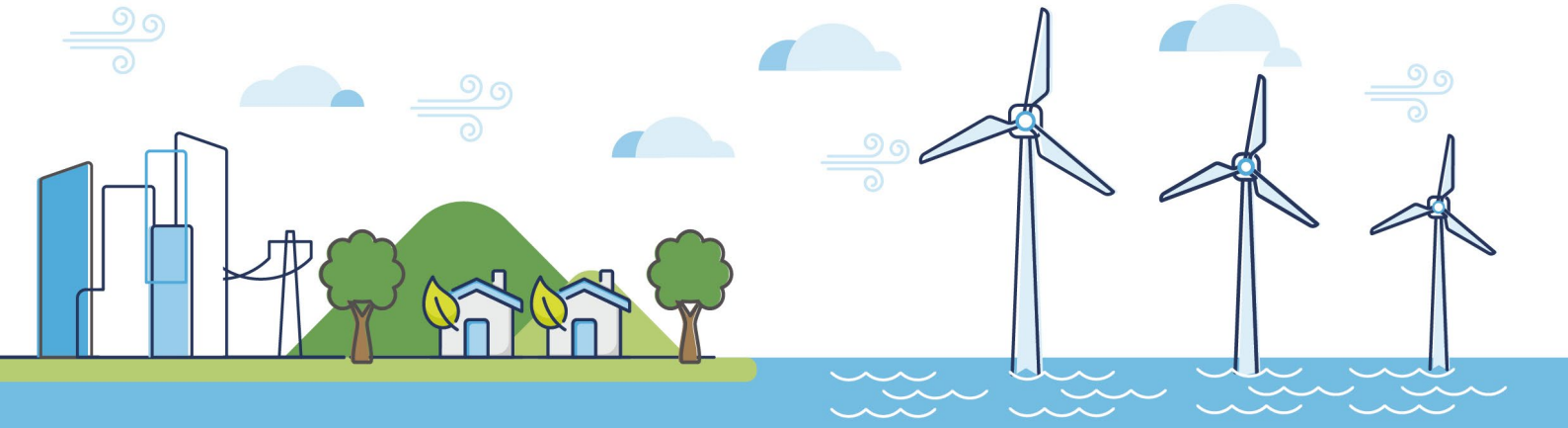

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Glossary of Acronyms

AfL	Agreement for Lease
ALARP	As Low As Reasonably Practicable
AltMoC	Alternative Means of Compliance
AMC	Acceptable Means of Compliance
CAA	Civil Aviation Authority
CCUS	Carbon Capture Usage and Storage
CfD	Contract for Difference
CO^2	Carbon Dioxide
COP	Cessation of Production
CPC	Central Processing Complex
CRNRA	Cumulative Regional Navigation Risk Assessment
DESNZ	Department for Energy Security and Net Zero
DCO	Development Consent Order
EERV	Emergency Evacuation and Rescue Vessel
EU	European Union
ExA	Examining Authority
HSE	Health and Safety Executive
IMC	Instrument Meteorological Conditions
MCA	Maritime and Coastguard Agency
MNZ	Morecambe Net Zero
NSTA	North Sea Transition Authority
NPS	National Policy Statements
NUI	Normally Unmanned Installation
ORA	Operational Risk Assessment
OSPs	Offshore Substation Platforms
OWES	Offshore Wind Environmental Standards
PEIR	Preliminary Environmental Impact Report
REWS	Radar Early Warning System
SAR	Search and Rescue
SEAA	Strategic Environmental Assessment Approach
SECEs	Safety & Environmental Critical Elements
SoCG	Statement of Common Ground
TCE	The Crown Estate
UK	United Kingdom
USA	United States of America
VCRA	Vessel Collision Risk Assessment
WTGs	Wind Turbine Generators

Glossary of Unit Terms

nm	nitric metre
km^2	square kilometre
km	kilometre
m	metre
MW	Megawatt

Glossary of Terminology

Applicant	Morecambe Offshore Windfarm Ltd
Agreement for Lease (AfL)	Agreements under which seabed rights are awarded following the completion of The Crown Estate tender process.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach, and information to support, the Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA) for certain topics. The EPP provides a mechanism to agree the information required to be submitted to the Planning Inspectorate as part of the Development Consent Order (DCO) application. This function of the EPP helps Applicants to provide sufficient information in their application, so that the Examining Authority (ExA) can recommend to the Secretary of State whether or not to accept the application for examination and whether an appropriate assessment is required.
Expert Topic Group (ETG)	A forum for targeted engagement with regulators and interested stakeholders through the EPP.
Generation Assets (the Project)	Generation assets associated with the Morecambe Offshore Windfarm. This is infrastructure in connection with electricity production, namely the fixed foundation wind turbine generators (WTGs), inter-array cables, offshore substation platform(s) (OSP(s)) and possible platform link cables to connect OSP(s).
Other infrastructure projects	The offshore windfarm projects detailed in Appendix D of the Rule 6 Letter (PD-007).
Inter-array cables	Cables which link the WTGs to each other and the OSP(s).
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The Transmission Assets for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm. Also referred to in this report as the Transmission Assets, for ease of reading.
Offshore substation platform(s)	A fixed structure located within the windfarm site, containing electrical equipment to aggregate the power from the WTGs and convert it into a more suitable form for export to shore.
Platform link cable	An electrical cable which links one or more OSP(s).
Windfarm site	The area within which the WTGs, inter-array cables, OSP(s) and platform link cables will be present.

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1 Introduction

1. This document, together with its Appendices, presents the Applicant's comments on Deadline 5 submissions by Spirit Energy.

2. As the owner of the Morecambe Offshore Windfarm Generation Assets, Morecambe Offshore Windfarm Ltd is the named undertaker that has the benefit of the Development Consent Order (DCO). References in this document to obligations on, or commitments by, 'the Applicant' are given on behalf of Morecambe Offshore Windfarm Ltd as the undertaker of Morecambe Offshore Windfarm Generation Assets.

3. This document has been prepared by the Applicant with the benefit of advice from its experts Anatec, DNV and Xodus. Where a specific expert opinion is being relied upon, which is not contained in another document submitted to the Examination, the opinion is attributed to the Expert and provided in *"quotation marks"*.

2 The Applicant's Comments on Spirit Energy's Responses to ExQ2s (REP5-090)

2.1 ExQ 2CAR5

4. For ease of reference ExQ 2CAR5 is provided below:

> *Minimum distance from platform(s) in VMC / Visual Flight Rules (VFR)*
> *In Spirit Energy's WR at D1 and D3 ([REP1- 116], paragraph 2.22 and [REP3-102] paragraph 2.12) it states that a minimum distance of 1.9nm would be required to ensure safe approach and OEI take off in VMC using VFR. Without prejudice to Spirit Energy's wider position that a minimum 3.76nm buffer is required, should the SoS be minded to make the DCO in favour of the applicant accepting that this would restrict access to daytime VMC/ VFR only, can Spirit Energy advise:*
> *a) whether a minimum distance of 1.9nm would be acceptable and, if not, what minimum distance would be required and why?*
>
> *b) whether this should be secured by way of a Protective Provision and if so, can you please provide drafting of such a provision?*

2.1.1 Day VMC

5. Section 4.1.1 of the Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix A: Helicopter Access (REP5-063) (hereafter referred to as the 'Anatec Report'), clearly explains and evidences why an **approach distance of 1.26nm is appropriate in day VMC conditions**. This includes a

stabilisation distance of 0.75nm, on the basis that that one CAT operator is known to use this rather than the 0.5nm in the relevant guidance, and so the 1.26nm is a reasonable worst case and provides for an additional 0.25nm stabilisation distance above that required in the guidance. Specifically, operators Bond use 0.75nm, CHC use 0.3nm and other operators 0.5nm.

Section 4.1.2 of this Anatec Report (REP5-063) then clearly explains and evidences why a worst case **take-off distance of 1.44nm is appropriate in day VMC conditions.** Section 4.1.2.5 explains why Spirit Energy's position is and has been: (a) inappropriately conservative (in the case of approach distance Spirit Energy have applied "professional judgement" to add an additional 1nm to their calculated approach distance which is not stated in CAA or HeliOffshore guidance, any other industry best practice or observed by existing operators); and (b) simply incorrect (in the case of take-off Spirit Energy incorrectly calculated 500ft above helideck height instead of sea level). The Applicant notes that Spirit Energy has subsequently changed their calculations based on height above sea level, which then does not follow the required flight profile in the Rotorcraft Flight Manual (RFM). This contrasts with their previous DCO submissions, such as Morecambe REP1-116 Figure 14A and Hornsea Three Rep 7-093, where Spirit Energy, and their same aviation advisor AviateQ, applied the same methodology as the Applicant by following the required RFM flight profile and then making the turn away from the wind farm based on height above sea level. Therefore, the Applicant draws the ExA attention to Spirit Energy's and their aviation advisors inconsistency in calculation approach. In comparison of these cases, the Proposed Development with previous DCO submissions, Spirit Energy has undertaken different calculation assumptions; it is respectfully submitted that this erodes the credibility of the Spirit Energy's calculations.

6. The **Day VMC approach and take-off distances** (1.26nm and 1.44nm respectively) are considered appropriate, conservative and a reasonable worst case, and importantly both lie within the 1.5nm WTG and OSP aviation buffer zone secured in the draft Protective Provisions (Document Reference 3.1).

2.1.2 Night VMC

7. The Applicant further reiterates the analysis presented in the Anatec Report (REP5-063), that the frequency of flights flown between 2018 and 2022 at night and in IMC is 8% and those that would not be mitigated by the IMC take-off Corridor is approximately 4%. Accounting for the removal of DP3 and DP4 would further reduce these numbers as flights that were flown to/from DP3 and DP4 are now no longer taking place as these NUIs have been decommissioned and all infrastructure removed. Based on **Table 1** and **Table 2**, which have been extracted from Tables A-1 to A-20 in Anatec Report

(REP5-063), it can be seen that up to half of the flights are Night VMC compared to Day IMC and Night IMC. The Applicant maintains its position with the proposed IMC Corridor provides effective mitigation to affected Day IMC, Night VMC and Night IMC flights. This is due to the prevailing wind direction in IMC conditions, as shown in **Figure 1** (Figure 7.2 in the Anatec Report (REP5-063)).

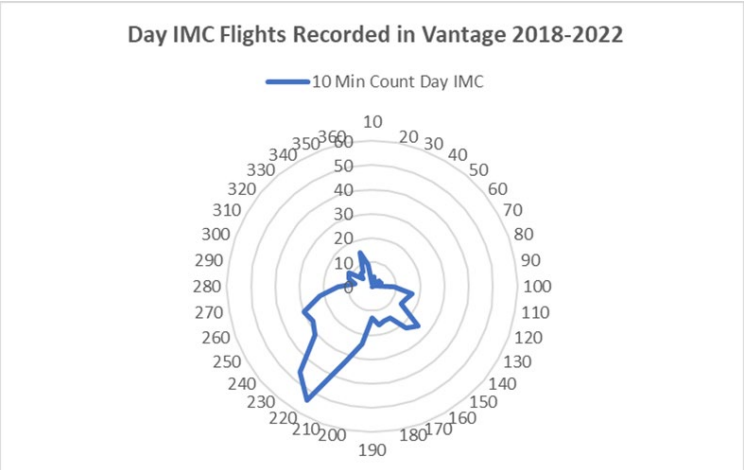
Table 1: Distribution of flights in Day VMC, Day IMC and Night VMC and Night IMC

	Day VMC	Day IMC	Night VMC	Night IMC
CPC-1	9175	404	408	31
Calder	1048	63	40	3
DP6	896	46	7	0
DP8	1281	72	30	0
DPPA	2414	71	109	4

Table 2: Percentage distribution of flights in Day VMC, Day IMC, Night VMC and Night IMC

	Day VMC	Day IMC	Night VMC	Night IMC
CPC-1	92%	4%	4%	0%
Calder	91%	5%	3%	0%
DP6	94%	5%	1%	0%
DP8	93%	5%	2%	0%
DPPA	93%	3%	4%	0%

Figure 1: Wind direction count of 10 minute periods in IMC conditions



2.2 ExQ 2DCO2 and 2OOI1

8. For ease of reference, ExQ's 2DCO2 and 2OOI1 are provided below:

2DCO2

Potential additional requirement Without prejudice to its consideration, the position of the parties and further representations, in the event that the ExA or SoS were to conclude that the objections of Spirit Energy and Harbour Energy were overriding to prevent development in proximity to the existing oil and gas installations, could the applicant, Spirit Energy and Harbour Energy all produce an additional requirement (on a 'without prejudice' basis where appropriate) to prevent development taking place within the relevant area until decommissioning activities would no longer represent an impediment to construction of the proposed development.

Such a requirement should consider:

- *a defined point or points (if phased) in time relating to decommissioning activities at which the proposed development could take place*
- *distance from the outer extremity edge of the Calder Platform (or other defined structure, such as the CPC)*
- *height above HAT beyond which no development could be installed*
- *height above HAT beyond which no temporary equipment could be located If possible, the ExA would appreciate agreed drafting of the basic text, even if there may be differences over the precise criteria. See also ExQ2OOI1.*

2OOI1

Decommissioning of existing assets At ISH3, and in Spirit Energy's post hearing summary ([REP4-070, paragraph 2.47) it states that the cessation of production for the Central Processing Complex (CPC) is 2027, plus or minus two years, but that Spirit are looking to extend the life of the asset to 2030 and beyond. a) Please can you advise for what future purpose the CPC is proposed to be used and whether a new consent or licence would be required for any such new use? b) Given the age of the platform, would any new development or works be required to extend the life of the asset? c) If the decision is taken to decommission the CPC (and Calder CA1 platform), how long would it take to remove the infrastructure? See also question ExQ2DCO2.

9. It is convenient to deal with the responses to these two questions together, as they are linked.

10. Spirit Energy has provided the wording of a requirement in response to 2DCO2. The Applicant also provided the wording of a requirement, and

Protective Provisions. All of these submissions are on a without prejudice basis.

11. The requirements drafted by both the Applicant and Spirit Energy are based on a defined "decommissioning date" at which point the additional interim buffer in the vicinity of the Affected Assets falls away (for the avoidance of doubt, the currently proposed 1.5nm WTG and OSP aviation buffers and WTG aviation corridor would not fall away at that point). Key differences between the parties' submissions are each considered in turn below:

- the decommissioning date itself;
- the decision to decommission (addressed in response to 2OOL1);
- the extent of the interim buffer zone; and
- what should be restricted in the interim buffer zone.

2.2.1 Decommissioning Date

12. In its without prejudice draft requirement, the Applicant has defined the "decommissioning date" as the earlier of COP or 1 January 2029. This is based on Spirit Energy's submissions to the Examination, made orally at ISH3 (REP4-070). This continues to align with Spirit Energy's response to this ExQ 2DDCO2 which states: *"To be clear, a new licence or consent would not be required to 'extend' the life of Spirit's East Irish Sea assets until 2030. Spirit has indicated that it **intends to decommission two years before or after 2027**. However, current economic factors indicate that the life of the East Irish Sea assets **could be maintained to 2030** in accordance with MER."* The Applicant submitted in its response to 2DCO2 that it would not be appropriate to sterilise seabed leased for offshore wind based on only the possibility of an extension of projected life. If Spirit Energy's position on this (keeping in mind the consistent presentation of a worst case position to this Examination) is at its highest that the life of assets "could" be maintained and only "to 2030", the Applicant considers its position (decommissioning date of 1 January 2029 at the latest) is affirmed as a reasonable worst case based on all information provided to date by Spirit Energy. It also aligns with Spirit Energy's aspirations for the future re-development of the site in Morecambe Net Zero targeting first injection in 2031[1].

[1] At the shared understanding meeting held on 26th March 2025 it was stated by Spirit that the carbon storage license runs out in mid 2027 and therefore permit application submission is needed by this date, thereafter moving to financial close early in 2028, which opens a 3 year execute phase targeting first injection in 2031.

13. Critically, it would be necessary to have a defined date as the "decommissioning date" by which any interim buffer falls away. This is because the delivery of the Project, including CfD bid, engaging with supply chain in preparation for placing significant contracts and reaching financial close, will need to be programmed around this date which cannot be done without the clarity and confidence of a clearly specified date.

14. It is also important to note that there would be no requirement for Spirit Energy or Harbour Energy to decommission at the agreed "decommissioning date". The Applicant explained in its response to 2DCO2 that if Spirit Energy or Harbour Energy were to revise these COP dates / decommissioning plan, those decisions could be taken in time in the context of the Project being a neighbour at that time. In other words, prior to this identified "decommissioning date" it would be for the Applicant to accommodate Spirit Energy on its terms, and after this date it would be for Spirit Energy to accommodate the wind farm **(noting the Applicant's clear primary position is that safe co-existence is absolutely achievable immediately without the need for this interim buffer and the Protective Provisions already provide compensation for additional costs in doing so).**

15. The Applicant understands that Spirit Energy is considering a holistic decommissioning readiness programme for all of its remaining Assets. It was confirmed at a technical shared understanding meeting held on 26 March 2025 by Spirit Energy's Operations and Compliance Manager that CPP1 would be the last of the Affected Assets to be decommissioned. This aligns with the Applicant's decommissioning experts', Xodus, expectations for the sequence of decommissioning, outlined at Section 5.1 of the Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix D: Impact on Decommissioning of Gas Production Facilities_Rev 02 (Document Reference 9.59.4) (hereafter referred to as the 'Xodus Report').

16. It was explained in the shared understanding meeting that the NUIs are dependent on CPC to operate. So the timeframe for COP stated by Spirit Energy is the latest date that any of the Affected Assets will achieve COP – the NUIs will have ceased to produce before that. This justifies the Applicant's position that linking the "decommissioning date" to the COP of CPP1 (as opposed to Calder or other NUIs) is an appropriate and precautionary approach.

17. By way of further context and background, Xodus has outlined the typical phases in a decommissioning programme (see Annex A of this document). As Xodus note on page 7 of the Xodus Report (Document Reference 9.59.4), *"Throughout the decommissioning phase there will be a continuing decrease in risk to personnel as measured by Individual Risk Per Annum (IRPA) as Major Accident Hazards (MAH) are removed and the requirement to fly to NUIs is reduced and then removed".* The three most notable milestones from

operations, access requirements, personnel on board and safety perspective are:

Key Milestone 1:

18. **Cease of Production**; at the earliest upon decision to COP and certainly no later than COP itself; then revisions can be made to the maintenance schedules by introducing a maintenance taper. This will enable some reduction in maintenance requirements once COP occurs, in particular to NUI assets with a consequent reduction in the frequency of access and the impact of deferred flights (see Table 4-1 and Section 6.3.1 of the Xodus Report (Document Reference 9.59.4)). Also, flights to the NUIs may be postponed or rescheduled without risk to production revenues. In addition, the sequential nature of decommissioning the Affected Assets means that by the time COP has been reached for CPP1, the NUI's will require reduced numbers of flights (see Table 5-2 of the Xodus Report (Document Reference 9.59.4)). The reduction in flights to the NUIs, via CPP1, will in turn have a material reduction on the number and time critical nature of flights required to and from CPP1.

Key Milestone 2:

19. **Process Systems Hydrocarbon Free**; the Xodus Report (Document Reference 9.59.4) sets out an indicative timescale for both CPP1 and Calder to reach this stage of 6 months and 3 months post COP respectively. Xodus explain that these timelines align with industry norms and benchmarking (see page 41 of the Xodus Report (Document Reference 9.59.4) and **paragraph 24** of this document on timelines). At Process Systems Hydrocarbon Free, a number of the significant Major Accident Hazards cease or will be significantly reduced thereby reducing safety risk to persons on board. In the Applicant's view and in reference to **Table 3** (Table 5-1 in the Xodus Report) in the updated submission by Xodus, this significantly reduces the requirement for immediate evacuation; and as such further reduces any need for Day IMC, Night IMC or Night VMC access by Spirit Energy.

Key Milestone 3:

20. **Disembark**; immediately prior to entering 'Lighthouse Mode'. The Xodus Report (Document Reference 9.59.4) sets out an indicative timescale for both CPP1 and Calder to reach this stage of 12 months and 9 months post COP respectively, again, based on industry norms and benchmarking (see page 41 of the Xodus Report (Document Reference 9.59.4)). When the facility enters 'Lighthouse mode', all personnel will have been removed from the asset and as a consequence operational safety obligations to persons onboard dramatically reduce and associated safety case obligations cease to a minimum level. At this stage plug and abandonment activities will have been completed. During Lighthouse Mode flights are no longer possible as the

helideck is no longer maintained in compliance with CAP437 (see Section 6.2.3 of the Xodus Report (Document Reference 9.59.4)).

Table 3: CPC1 – Decommissioning Milestone Dates (Extract of Table 5-1 from Xodus Report (Document Reference 9.59.4))

Table 5-1: CPC1 - Decommissioning Milestone Dates

MILESTONE	DURATION AFTER COP	SCHEDULE RISKS	RISK RANKING	COMMENTS
Cease of Production	N/A	N/A	N/A	
Process Systems HC Free	6 months	Undertaken by Operations staff	L	This is simpler for gas platforms
Well P&A Complete	8 months	Subject to: • Availability of jack-up rig or installation of modular rig for slant wells • Possible well integrity issues that need to be addressed	M	There are a comparatively small number of wells, but it's anticipated that there will be slant wells
Cold Suspension Start	9 months	Dependent on completion of above activities	M	Asset free of all sources of production hydrocarbons
Disembarkation / Lighthouse Mode	12 months	On completion of the above activities this is a decision by the operator	M	For a complex there may be tasks to be undertaken during cold suspension in preparation of final disembarkation
Removal	2-3 years	Subject to: • Heavy lift vessel availability • HLV preferred removal window • Field removal strategy (i.e., removal of multiple assets in single campaign)	H	Will be dependent on vessel availability and contracting strategy, typically a contract will be awarded with a removal window with the actual dates at the discretion of the HLV contractor
Close Out Report Acceptance	5-6 years	Subject to completion of all of the activities There are a number of requirements outside the direct control of operator, including: • Survey • Remediation • Waste management, etc. Operator has a year to submit the report on completion of all activities and there is statutory consultation requirement	H	Close out report submitted to OPRED within a year of the completion of all decommissioning activities

21. Before the date of COP itself, the Applicant understands Spirit Energy will take a decision to Cease Production (i.e. it takes a decision when COP will be). Timing between decision to Cease Production and actual Cease of Production is part of the decommissioning programme which Spirit Energy is continually

working on and unknown to the Applicant at this stage. Decision of COP date is the first marker at which the Applicant can be sure that Spirit Energy will be able to reassess its maintenance obligations on the Affected Assets. At this point, Spirit Energy can re-evaluate maintenance obligations and introduce a maintenance taper (see Section 3.1 of the Xodus Report (Document Reference 9.59.4)) and thus reduce maintenance hours, which can reduce flight access requirements to NUIs. Spirit Energy has stated in their submission at Deadline 4 (REP4-069); *'PH If there is 3 years to go on the asset we wouldn't do 5-year maintenance. Until you've fixed COP date you have to continue operating as normally. You can do maintenance taper once you've fixed COP date.'* DNV also noted in their Deadline 5 (REP5-064) report that *"Spirit has stated (13th February meeting) that there will be some tapering of maintenance in the run in to COP to reducing the overall the maintenance load."*.

22. The Applicant's proposed approach in its without prejudice Protective Provisions and requirement is to propose that "decommissioning date" is defined as COP itself (either actual COP or a conservative projection of 1 January 2029 based on Spirit Energy's submissions), rather than the earlier decision to COP.

23. The Applicant's position (for the purposes of the without prejudice requirement and Protective Provisions) that the "decommissioning date" should be defined as the earlier of either 1 January 2029 or COP is based on the following:

- COP will stop production of Hydrocarbons from wells; production critical maintenance stops and production resets are no longer required.
- COP will most likely be taken in a stepwise fashion well by well starting with least productive NUIs; with the possibility of some plug and abandonment activities able to commence on certain wells in parallel to cease of production in others.
- Reduction in production volumes will reduce the operational load on the complex and as such some process and hydrocarbon risks associated with an energised processing operation.
- The consequence of the above is a reduction in the frequency of access and the impact of deferred flights to NUIs, with in turn a reduction on pressure for helicopter access across the Affected Assets.

24. If the ExA or SoS were minded not to accept the Applicant's primary position and seek to apply the Applicant's without prejudice requirement or Projective Provisions, and were also not minded to accept the Applicant's definition of "decommissioning date", the Applicant, for the purposes of providing further optionality, discusses below the Process Systems Hydrocarbon Free date as an alternative to COP. The Applicant considers that it is not proportionate to consider a "decommissioning date" any further through the decommissioning process.

- Industry benchmarks outline a reasonable worst case estimate for CPP1 Process Systems Hydrocarbon Free or after cleaning, flushing and de-energisation is a six months after COP (three months for NUIs) - if COP is 1 January 2029 then this date would be 1 June 2029.
- The Operator is incentivised to complete Process Hydrocarbon Free works in the shortest possible time with largely existing operational resources to minimise operating costs.
- At this point, all production related hydrocarbon hazards on the topsides have been removed. This is a material milestone with regards to the safety case and enables a material reduction in the Major Accident Hazards for personnel. At this stage it is also reasonable for the 'time critical' requirement of immediate evacuation to be significantly reduced; as the likelihood of major hydrocarbon combustion events has been removed from CPP1 – this thus further aligns to removal of the need for Spirit Energy to require IMC and Night VMC access to CPC; and
- Further, upon becoming hydrocarbon free, Spirit Energy has stated (REP4-069), 'RM - *As the platform becomes hydrocarbon free we start to remove safety critical elements one by one until we can reach lighthouse mode and we can minimise visits. The safety case would be maintained by the presence of the asset so until the jacket is removed. Major accident hazards are becoming fewer and fewer through P&A*.'

25. Later in the decommissioning programme, activities for Plug and Abandonment will commence, usually with the support of drill rigs and additional specialists as in the case for DP3 and DP4 with support from PD& MS Group. This phase of the decommissioning programme is independent to the initial phase and governed by a separate regulator. During this plug and abandonment period, since drill rigs and alternative evacuation and refuge options are operating within the site, the need to retain Night VMC, Day IMC and Night IMC flights is not necessary. Although it is acknowledged by both DNV and Xodus that the most significant reduction in risk would take place after all wells have been plugged and abandoned, the level of risk reduction at the Process Systems Hydrocarbon Free is such that it would be entirely disproportionate to maintain any additional interim buffers for any longer during the decommissioning process, i.e. until all Plug and Abandon activities are completed (or until the very last verification step in the process, as is suggested by Spirit Energy). For the avoidance of doubt, the Applicant's without prejudice position remains that the most appropriate "decommissioning date" is the earlier of COP or 1 January 2029.

26. Spirit Energy proposes in its response to 2DCO2 a decommissioning date as the date on which *"OPRED confirms acceptance of the close-out reports for the decommissioning of the Spirit Energy's East Irish Sea assets under the Seaward Production Licences P.251, P.1483 and P.153."* Spirit Energy further explains that acceptance of the close-out report requires satisfactory third party over-trawl of the 500m safety zones around each platform. From the

MOWL perspective, this is unnecessarily conservative. By this time, each Affected Asset will have respectively been through significant stages of decommissioning. For example, as explained above, the heli-decks will stop being maintained (and so can't be used) after Disembark which is many years before an accepted OPRED close out report, which may be approximately 5-6 years after COP.

27. The Operator is incentivised to complete all activities from COP until Lighthouse Mode (which include Process Systems Hydrocarbon Free) in the shortest possible and most economical way, due to the assets not generating revenue and maintaining cost burden on operator.

28. At the time of entering Lighthouse Mode the removal of the asset will be optimised for the availability of Heavy Lift Vessels. Due to the market constraints this may be a longer window; perhaps 6-18 months or longer. Due to this, it does not have practical or reasonable sense to make the construction of the windfarm dependent upon the final removal of the physical assets. During Lighthouse Mode, it is understood that Spirit Energy may need to maintain the ability to 're-man' the Assets, however, in reality, the Heli-deck and structural integrity will quickly become unable to sustain Helicopter landings or persons on board and any access to the Asset, if at all, will need to be by vessel. Further, any surveys during this period will be undertaken by drone.

2.2.2 Decision to Decommission

29. On 1st November 2022, the NSTA retired the Cessation of Production Process and now manages cessation of production dates through its asset stewardship process. The expectation is that an email notification to the relevant Area Manager at the NSTA should be made: "*Once production has ceased permanently and all the wells have been shut in, of the date on which this occurred. Please also provide the Licensees' written consent to the NSTA sharing this information with HMRC should they request it to process a claim for Transferrable Tax History*[2]*"*.

30. In addition, as set out in the OGA Plan to reduce UKCS greenhouse gas emissions published in 2024,[3] "*Relevant persons, as appropriate, must declare early COP, company COP and backstop dates for their assets to the NSTA...To support the above and streamline reporting, the NSTA will from*

[2] Cessation of Production

[3] OGA Plan - Emissions Reduction

2024 update the UKCS Stewardship Survey to allow reporting of company COP date for all assets, and where appropriate early COP and backstop dates. To support the above the NSTA will work with industry to support their development of best practice for setting COP dates."

31. The Applicant understands that Spirit Energy will maintain a regular dialogue with the NSTA as part of its stewardship discussions, and as part of this dialogue the NSTA will be informed about Spirit Energy's expectation with regards to Cease Production. A series of checks are required as part of the asset's obligation to maximise economic recovery and explore re-use or re-purposing of assets prior to determining the end state and before OPRED will approve the decommissioning programme.

32. However, the decision for COP rests entirely with Spirit Energy and Harbour Energy (respectively for this own assets) and is dependent upon their assessment of the ongoing economic recovery of Hydrocarbons incorporating any re-purposing or future plans for the asset e.g. Morecambe Net Zero for Spirit Energy. The position that the eventual decision is the operator's was confirmed by Spirit Energy's Decommissioning Operations and Compliance Manager at the shared understanding meeting on 26 March 2025.

33. As outlined clearly by Spirit Energy in response 2OOL1 a) Spirit Energy operates under the principle of maximising the economic recovery (MER) of UK petroleum under section 9A(1) of the Petroleum Act 1998 and the OGA Strategy[4]. The NSTA's Decommissioning Strategy defines an operator's approach to cost-effective decommissioning delivery in line with MER UK obligations. Spirit Energy state in their response to 2OOL1 (REP5-090) *"there is no decommissioning deadline or requirement set by OPRED or the NSTA. In accordance with MER, Spirit Energy will decommission CPC and its East Irish Sea assets once it is in a position to demonstrate that it has maximised economic recovery of the field and any reuse or repurposing options have been explored"*. Pursuant to the OGA Plan[5] to reduce UKCS greenhouse gas emissions published in 2024, and as noted at **paragraph 30** of this document, licensees are expected to notify NSTA of its COP dates in the UKCS Stewardship survey – this includes a company COP date, an early COP date and a backstop COP date and these dates are chosen by Spirit Energy and Harbour Energy based on their own business criteria. This criteria does not negate the business to continually re-evaluate its own performance in lieu of changes over time; whether that be price of gas or cost of operations or the

[4] The OGA Strategy

[5] OGA Plan - Emissions Reduction

societal carbon value. The nature of end of life operations will mean that the viability of life extension will be sensitive to all relevant elements. As noted in the OGA Plan, the OGA Strategy's definition of 'economically recoverable' states that, where relevant, UK Government carbon appraisal values will be used to assess the societal impacts of GHG emissions and that industry should recognise that the full societal costs of emissions are more significant than the market-based carbon price: "*In preserving their social licence to operate, relevant persons should therefore also consider as one factor the societal costs of emissions in their overall decision making*."

34. The process and speed in which Morecambe Net Zero can proceed may also be a factor in regards to the COP date Spirit Energy choses, as outlined by the Applicant in its Deadline 4 submission (REP5-062) regarding the 'mind the gap' approach to sector resources and skills. In reference to Morecambe Net Zero 'shared understanding' meeting on 26th March 2025, the Applicant understands that Spirit Energy plans to apply for carbon storage license in 2027 and achieve financial close on Morecambe Net Zero also in 2027 with a target for first injection in 2031. The Applicant cannot comment on the realism of this schedule in the context of necessary regulatory, planning and consenting processes, however, it does note these timelines to be somewhat aligned to the planned construction of the windfarm and as such possible to be planned alongside each other with regards to decommissioning and construction activities.

35. Importantly, the Applicant reiterates that the presence of the windfarm would not prevent Spirit Energy delaying COP beyond the back-stop date of 1st January 2029 in the Applicant's without prejudice Protective Provisions should they choose to. Any operational impacts that would arise due to the presence of WTG within the interim buffer zone, once it has ceased to be in place, would become just be another of the number of factors for Spirit Energy to consider in taking their COP decision in light of MER. MER obligations are not a barrier to new renewable projects, quite the opposite, progress with the energy transition will be an important factor to take into account. Therefore, MER obligations are not a barrier to identifying a specified "decommissioning date" if the ExA or SoS were not minded to accept the Applicant's primary position and instead were minded to include the Applicant's without prejudice Protective Provisions. **Noting of course the Applicant's primary position that with the mitigation provided by the 1.5nm WTG and OSP aviation buffer, which will remain in place, there would be sufficient access during day VMC to allow for the continued safe operation of the Affected Assets before and beyond 1st January 2029 should Spirit Energy choose to delay COP.**

2.2.3 Extent of the interim buffer zone

36. Both Spirit Energy and the Applicant propose in their without prejudice requirement / protective provision wording an interim buffer zone to apply until a defined decommissioning date (as discussed above). The Applicant did not provide an exact buffer zone, recognising the differences between the parties' experts would require a decision from the ExA and the Secretary of State. Spirit Energy proposed 3.76nm. The Applicant could accommodate a 3.76nm interim buffer for an interim period so long as there is defined end point. The criticality of this point (a specified date when any interim buffer falls away) for the delivery of the windfarm has been explained above - the Applicant's without prejudice proposal is that this should be 1 January 2029 (i.e. the defined "decommissioning date"). The Applicant would note, however, that all restrictions have potential implications for the delivery and cost of the project and the evidence from Anatec that such a large interim buffer is not necessary to maintain night and IMC access (see Section 4.2 of the Anatec Report (REP5-063)). Should the ExA and SoS be minded to consider an interim buffer is required, Anatec identify an IMC take-off range from 2.88nm to 3.46nm (REP5-063), and it appears the CAA's favoured buffer distance is 3nm.

37. For avoidance of doubt, there can be no phasing in the delivery of the windfarm, as the Project is already a relatively small site and given the number of turbines will need likely need to be installed in one offshore season.

38. For convenience, as a reiteration of the Applicant's position in regards to the Calder platform, the Applicant does not consider an interim aviation buffer zone around the Calder platform to be necessary or proportionate, as this platform is a normally unmanned installation (NUI) which has significantly fewer flights when compared with CPP1. The Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix B: Effect of Proposed Morecambe Offshore Windfarm on Offshore Oil and Gas Operations (REP5-064) identifies that there were on average flights to the Calder platform on 95 days of the year for the period 2018-2024 (Section 2.1.3). Therefore, to restrict Calder to VMC access only is proportionate when considering this much reduced flight schedule compared with CPP1. There is also clear precedent within made offshore wind DCOs for windfarms to be located this close to NUIs, for example the existing Waveney platform (also an operational NUI which the operator Perenco confirmed requires weekly support from helicopters) has a buffer zone of 1.26nm from the centre of the platform in Protective Provisions in Part 14 of Schedule 14 to The Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024. The Applicant could, however, accommodate an interim buffer around Calder on the same basis as CPP1 if considered absolutely necessary.

2.2.4 Restrictions within the interim additional buffer zone

39. The Applicant has proposed that the interim additional buffer should apply to the installation of WTGs only. The construction programme for the Project identifies as the base case construction scenario WTG installation commences in Q2 2029. It can also be seen from the Programme that a number of activities will occur significantly in advance of the WTG installation in order to achieve the target completion date, including foundation installation and cable laying. To also restrict these activities would result in substantial additional delay to the delivery of the Project.

40. In its response to 2DCO2, Spirit Energy suggest that *"IMC operations cannot be undertaken above any infrastructure, temporary or otherwise, within the horizontal path of the flight"*. Spirit Energy's proposed drafting in its response to 2DCO2 is a blanket exclusion of all aspects of the authorised development from the interim additional buffer.

41. The Applicant considers its tailored approach to activities within any interim buffer strikes an appropriate balance, and a blanket restriction is unnecessarily restrictive. In fairness, the Applicant and Spirit Energy have not discussed the interim buffers or how this would facilitate co-existence, so Spirit Energy could not be expected to understand the Applicant's activities prior to WTG installation. The following explains those activities in more detail:

    - Taking a distance of 3.76nm for the interim buffer around CPP1, the distance which Spirit Energy considered is necessary to allow for IMC and night VMC access, there could be up to 13 WTG located within the interim buffer dependant on the final layout of the windfarm and the choice of turbine. The programmes submitted by the Applicant at Deadline 2 (REP1-086) set out that the installation of WTG foundations will take place across three months, with installation of inter-array cables taking up to six months. With the maximum of 35 WTG it can therefore be anticipated that it would take an average of 2.5 days per WTG for foundation installation and an average of 5 days per WTG for installing inter-array cables. This would mean vessels undertaking works within the interim buffer for up to one month installing turbines and slightly over two months for inter-array cables with the works overlapping.
    - The Applicant has committed to no concurrent pilling to mitigate the effects of underwater noise, therefore there will be no more than one pilling rig or jack-up vessel present on the windfarm site at any one-time undertaking foundation installation. The availability of cable-lay vessels, and the economics of construction will mean that there will only be a single vessel on the windfarm site installing the inter-array cables. For each of these construction activities there would be guard or support vessels present, typically up to four vessels per construction activity; and other works that might be undertaken with the interim buffer in place, for example surveys or seabed preparation, would require fewer

vessels on site at one time: typically a single vessel undertaking the activity with a single guard or support vessel. These works would generally be undertaken in advance of the foundation or inter-array cable installation, but there might be some overlap of works within the interim buffer.

- Any obstruction would be localised to the immediate vicinity of the vessel, the largest of which would be the pilling-rig or cable-lay vessels with a maximum size of vessels currently in service of 130m in length and a width of 30m. Although the majority if the vessels on site would be significantly smaller. The vessels would be working at one to three discreet locations within the interim buffer rather than spread across the entire area, with some of the support vessels travelling to/from the windfarm site to the construction/marshalling port(s) as required.

42. In advance of the commencement of construction activities the Project is required to publish and provide notifications to the relevant stakeholders, Notice to Mariner (NtM) to the MMO, MCA and Trinity House, and Notices to Airmen (NOTAM) and Air Information Circulars (AIC) to the CAA. These will provide information on the number and types of vessels on site, their locations (including transit routes), works to be undertaken, and duration on site. During construction the Applicant, and all their contractors and subcontractors, will be required to comply with all relevant health and safety legislation including The Construction (Design and Management) Regulations 2015 (CDM Regs). This includes demonstrating that the projects is 'safe-by-design'. To achieve this a marine coordinator will be appointed to manage all simultaneous operations (SIMOPS) and to reduce any significant risks related to SIMOPS to ALARP. This will include coordination with Spirit Energy and notifications of the construction works to be undertaken (NtM, NOTAM), which it is proposed would form part of the coexistence agreement between the Applicant and Spirit Energy. The notifications and coordination will ensure that any localised, temporary and short-term impacts within the interim buffer can be sufficiently mitigated to achieve ALARP.

43. It should also be noted that the interim buffer would be in place to provide helicopter access during night-VMC and IMC, and that there will be no impact to flights during day-VMC due to the presence of the 1.5nm WTG and OSP aviation buffer around the Affected Assets. The offshore construction season, when the foundation and inter-array cable installation works would be planned to occur, typically lasts from April to September to take advantage of the better weather conditions and longer hours of daylight. Therefore, this will further mitigate any potential impact as percentage of flights flown during night-VMC or IMC is much lower during these months.

44. It is also the case the CAA 3nm AMC (should it be brought in) would be in relation to wind turbines only, so there would be no need to consider an AltMoC to enable the construction activities within the additional interim buffer.

It would be 'business as usual' for access by helicopter to Spirit Energy's Affected Assets.

45. The Applicant highlights that there are already vessels operating regularly within the windfarm site and the vicinity of the Affected Assets, including vessels from Stena Line using one of the Liverpool to Belfast passages, fishing vessels, vessels transiting to/from the existing offshore windfarms, and vessels servicing the oil and gas facilities themselves. For many of these vessels there will be no formal system of coordination or notification in place with Spirit Energy. For works such as the decommissioning of DP3 and DP4, which required the presence of jack-up rigs and heavy-lift vessels, Spirit Energy ensured coordination between the assets team and the contractor to overcome any impacts to asset maintenance routines due to the presence of large vessels within proximity to the Affected Assets[6].

46. In conclusion on this matter, it is clear that any co-existence required of Spirit Energy during any pre-WTG installation activities (e.g. surveys, cable laying and foundation installation) is materially different to the co-existence required of Spirit Energy once the WTGs are installed. The short-term and localised nature of the obstacles are much more of a business as usual nature from marine and aviation operations perspective. The Applicant considers the foregoing explanation fully justifies its position that any interim buffer should only restrict the installation to WTGs.

47. The Applicant also reiterates that in order to achieve the best economics for the Project it is essential that the construction programme is optimised with the installation of foundations and inter-array cables undertaken in a single offshore construction season across all of the windfarm site.

3 Comments on Spirit Energy's Deadline 5 submission (REP5-089)

48. The Applicant set out a full position in the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-062) submitted at Deadline 5 with supporting appendices, which included two independent peer reviews of its position. The Applicant does not seek to repeat this.

49. The Applicant only makes some specific points in response to Spirit Energy's Deadline 5 submissions.

[6] Spirit-Energy.pdf

3.1 Spirit Energy Concern 1: Understanding or Recognition of how Spirit Energy Operates

50. Spirit Energy states that the Applicant was unable to understand or accept the limitations that Spirit Energy faces in regards to its maintenance activities. The Applicant and its expert advisors do understand and recognise the challenges outlined by Spirit Energy. The area of difference is that it is the position of the Applicant is that the challenges may be solved with consideration to changes in operating model, and implicit therefore, potential for some additional cost. Spirit Energy simply declines to engage with the possibility of any such changes or accommodations.

51. Spirit Energy states that *"The Applicant accepted the figure of 22% excluding the aviation corridor"*. This is not correct. This 'loss of time offshore' was a new concept introduced by Spirit Energy at the Meeting held between Spirit Energy and the Applicant on 13th February, which claims to calculate the impact of reduced night / IMC access by quantifying the loss of blocks of 7 hours at NUIs. The 22% figure assumes a loss of day VMC access (on the basis Spirit Energy consider a 1.9nm buffer is needed for day VMC), so would be immediately reduced once it is accepted that a 1.5nm buffer is more than enough for day VMC access. In addition, the Applicant's experts have analysed the proposed approach using the Vantage data in relation to actual flights and historic meteorological data and have responded in full in Section 4.3 of the Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix B: Effect of Proposed Morecambe Offshore Windfarm on Offshore Oil and Gas Operations_Rev 02 (REP5-064). The Applicant summarised its position in Paragraph 15 of the Executive summary of the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-062) as follows:

"It is also noted that Spirit at D4 submitted a new loss of time offshore metric at Deadline 4 which seeks to identify the loss of access of seven hour maintenance blocks to NUIs, which was calculated as 22% (it is not relevant to CPC-1, as the team to maintain it are already on board) (Slide 15, PDF page 48, REP4-069). However, Spirit include their view that day VMC access will be restricted in this 22%, so this figure would of course be substantially reduced once it is factored in that all day VMC flights will be able to continue and so not contribute to any loss of time offshore. In Appendix B DNV calculate this figure to be 1.5%-3% of the total working hours not taking into account the IMC Take-Off Corridor [9 days per annum in total for Calder] and with the corridor this figure drops to 1-2% [6 days per annum for Calder]." The Applicant's O&G safety advisor DNV considers that: *"This small loss can be more than made up by lengthening other visits without even considering days where crew change flights occurred, but NUIs were not visited."*

52. The Applicant anticipated that Spirit Energy may make submissions that they have hit or are currently in a situation of peak maintenance, and are running an optimised maintenance schedule on the brink of a significant maintenance backlog (see 7.1.5 of the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-062). The Applicant does not consider this position is tenable, especially given the reduction in maintenance burden following decommissioning of DP3 and DP4 and the fact that DNV analysis shows 10% further time can be made up by longer days on the NUIs when this is possible and yet more time by flying to the NUIs on other days which were suitable but were not used. See Appendix B of the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-064) where DNV conclude *"There is very significant normal variation in visits to a NUI from no visits in a given month to almost every day. The change in helicopter access adds to this variation but does not materially change it."*

53. Even if the Applicant were wrong on this and it so happens that the Project is 'the straw that breaks the camel's back' in terms of the current maintenance schedule, then the Applicant's consultants present evidence of strategies to mitigate this impact (Section 4.4 in REP5-064). As set out in the draft Protective Provisions, the Applicant has committed to paying for additional costs incurred by Spirit Energy resulting from impaired helicopter access, which would include an additional shore based helicopter service or Flotel in the event such a strategy becomes necessary.

54. Spirit Energy has not provided its maintenance schedule to allow its claims to be verified, and has simply said it is 'optimised'. The Applicant has requested the following additional information from Spirit Energy so that it might understand this: a) Emergency Response Plan for CPC-1, b) PFEER Reg.5 assessment for Calder and CPC-1, c) PFEER Reg.10 assessment for Marine Traffic for Calder and CPC-1, d) Scenario's for which precautionary evacuation of CPC-1 by CAT helicopter may be required (i.e. events that are not so time critical to be an emergency, e) and cannot be put off by a few days), f) clarification if the safety case restricts the number of visits to a NUI that someone (or a group of people) can do in a year / shift, g) Can Spirit Energy consider a Heli-copter operational (e.g. Payload) restriction to 4,400kg on those flights undertaken at night or in poor weather (i.e. IMC).

55. In regards to the constraints reported by Spirit Energy due to its already Optimised Maintenance Plan, the Applicant recognises the challenges and constraints placed upon Spirit Energy's Helicopter operations and integrated maintenance set up across the Morecambe Hub. Notwithstanding these constraints, the Applicant reiterates: Spirit Energy has been able to operate in the Morecambe Hub including now decommissioned assets: DP3 and DP4, and therefore the Applicant maintains could change its current operating setup to include consideration of the windfarm.

56. With regards to providing additional provision for aviation services, the Applicant has tried to discuss directly with helicopter operator NHV to understand operational setup and commercial arrangements. NHV has declined to engage with the Applicant to date citing a conflict of interest in regards to the ongoing planning objection by Spirit Energy. The Applicant has requested of Spirit Energy: (a) Is Spirit Energy able to permit MOWL to discuss, without prejudice and under NDA, typical operational criteria and commercial pricing with NHV; (b) is Spirit Energy willing to join these dialogues with a view to explore options for additional helicopter provisions; and c) can Spirit Energy provide information about the commercial arrangement (under NDA), with NHV such that additional helicopter charter costs could be reasonably calculated by MOWL? To date the request for a meeting is outstanding, and no information has been provided; the Applicant remains open to further discussion on this matter and to exploring further potential solutions with NHV and Spirit Energy as part of the wider discussions on coexistence and cooperation.

3.2 Spirit Energy Concern 2: The Applicant has failed to address Spirit Energy's safety concerns

57. The Applicant has participated in four 'shared understanding' meetings at the request of Spirit Energy as part of the process prior to commencing any negotiations on Protective Provisions and/or a co-existence agreement to listen to and understand Spirit Energy's operations, safety concerns, decommissioning situation and Morecambe Net Zero plans. The Applicant believes it has used best endeavours to understand the concerns of Spirit Energy. In regards to specific concerns, the Applicant refers to the Deadline 5 submissions (REP5-062 to REP5-069) and reiterated below.

58. The Applicant's experts on safety, DNV Services UK Limited, have considered the ORS report submitted by Spirit Energy, and provided a critical analysis (refer to the Applicant's Response to Spirit Energy's Deadline 5 Submission Appendix A: Review of OSR Safety Report (Document Reference 9.65.1). In particular, DNV state that the ORS report "*is simply a reiteration of Spirit's position with no new analysis, or justification of the position. It contains numerous errors and inaccuracies using information selectively such that it can be misleading.* It states the report: *Does not contain analysis of justification, Does not understand material change, Does not understand reverse ALARP and Does not understand cumulative impacts".*

59. One important further observation is that the focus of the ORS report is whether or not the changes would amount to a material change to Spirit Energy's safety case which would need to be submitted to the regulator. ORS conclude that it would be a material change. The Discussion section concludes: *"The assessment completed in this report shows that a Material*

Change will be required for the increase in risk that the MOWL project will introduce to CPC operations. The outcome is unknown, and would see Spirit Energy submit a Safety Case that they themselves don't consider credible and don't support." It is notable that ORS do not suggest that there are any reasons why the regulator might not accept an updated safety case. Instead, they make the self-evident point (here and in other places) that the outcome of a future process is unknown, and then refer to Spirit Energy's position (rather than their own) that the revised safety case is not credible. As DNV also observe, this is not evidence of any material increased safety risk, nor is it evidence that an acceptable updated safety case could not be prepared and submitted should Spirit choose to do so.

60. Without having received Spirit Energy's specific operational information, and based on industry precedence and best practice, DNV consider that a material change to the safety case would not be required. See paragraph 224 of the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-062). *"The Applicant refers to Section 6 of the DNV Report at Appendix B and conclusion that any increased helicopter transportation risk is not material and safety critical maintenance issues can be mitigated by various means and indeed are evidenced in the Vantage date historically to have been done so with e.g. additional direct flights from shore, and so it is not considered that any material change to the safety case would be is required."* The Applicant and its experts are unaware of a case example in the industry where the HSE has not worked closely with the Operator to ensure a safety case is revised towards a satisfactorily accepted outcome. This is not a risk to maintaining day to day production or operations. The clear conclusion of this evidence is that if Spirit Energy were to choose to submit an updated safety case, there is no reason why it would not be accepted. The Applicant's experts have also addressed this expressly in the Applicant's Response to Spirit Energy's Deadline 5 Submission Appendix A: Review of OSR Safety Report (Document Reference 9.65.1) and conclude that *"Should Spirit choose to declare the changes to be material and submit the safety case to the HSE before any new infrastructure for the windfarm is in place, DNV consider that it would be accepted"*. Indeed the authors of the ORS report refer to fact that one of the Applicant's experts (John Morgan, DNV, who draws this conclusion and appeared at ISH3) chaired the workgroup that compiled the industry guidance on what constitutes a material change to a safety case.

61. Another important observation is the scope of the ORS report: *"ORS have been tasked by Spirit Energy to review the effect of the proposed wind farm layout on safety on the CPC installations; the impact on the CPC safety case, legislative compliance, and requirements for future safety case submissions."* However, it does not appear that ORS have been tasked with suggesting any solutions or exploring the potential for co-existence – they are tasked with

identifying issues for Spirit Energy in accommodating the windfarm based only on the status quo.

62. In relation to Spirit Energy's other points, evacuation, safety critical maintenance and flight exposure risk, these are generally a restatement of Spirit Energy's previous position. The Applicant takes safety very seriously, and has engaged thoroughly with Spirit Energy's concerns, and this can be seen in the calibre of experts which it has appointed. The Applicant does not restate its position on safety, but reiterates that it has demonstrated through evidence from its experts in previous submissions to the Examination (see in particular REP5-062 and appendices) that all concerns raised by Spirit Energy are unfounded and/or manageable. There is no precedent in the industry for solutions not being found where solutions to similar such issues have been sought in earnest. The Applicant remains committed to compensate Spirit Energy for all reasonable additional costs necessary as a consequence of the windfarm.

63. The Applicant notes in both the ORS report, and the Spirit Energy submission, that Shut down is stated as an unacceptable outcome as a result of impeded operations or breach in valid safety case as a result of the windfarm. The Applicant understands that this would be an intolerable situation for Spirit Energy, in particular in concern or re-start risk and risk of reduced economic recovery. However, the Applicant disputes, with unilateral support by its expert advisors, that this is a credible scenario. All such aspects to consideration of maintaining, sustaining and updating a safety case are part of business as usual.

3.3 Spirit Energy Concern 3: The Applicant has not demonstrated how an aviation buffer of 1.5nm is safe

64. See the Applicant's response to ExA2 2CAR5, this point is considered comprehensively addressed and closed. Given that Spirit Energy's position has become effectively one of an in-principle objector, it is not anticipated that Spirit Energy will make any concessions on this point. It would appear their strategy is instead content to make arguments and wait to the see the outcome of the DCO process.

65. In relation to the IMC Corridor Mitigation, it is unclear how Spirit Energy can conclude that because an AltMoC is required the mitigation is not workable. The Applicant bases the mitigation on the fact that Spirit Energy's helicopter operator NHV would need to undertake the AltMoC process, and as a reasonable and prudent operator acting in accordance with co-existence principles, would be open to do so.

66. The CAA has confirmed that the AltMoC process is available (Responses to ExQ1 (REP3-075)) and the Applicant's expert consultant Anatec has

considered that the requirements to obtain an AltMoC can be met and so there is not an impediment to obtaining an AltMoC. The Applicant has also provided a response to the ExA's Question 3CAR2 directed to the CAA in relation to the AltMoC process within the Applicant's Responses to ExQ3 (Document Reference 9.61).

67. The rationale for why an AltMoC can be met is because within the corridor the safety position is the same as within a full buffer zone of equivalent length (see the Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix A: Helicopter Access (REP5-063)).

68. As the corridor would permit both night and IMC flights in the appropriate wind directions, Anatec calculate the corridor would reinstate around half of night and IMC access (summarised at 5.3.3 – 5.3.5 of the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-062)), and DNV estimate it would reduce total hours lost (going from 1.5-3% down to 1-2%) (summarised at 7.1.8 of the Applicant's Response to Spirit Energy's Deadline 4 Submission (REP5-059)).

69. Spirit Energy do not present any working or explanation as to why at 3.29 of their Deadline 5 response they state that benefit of the corridor would result in an "extremely small reduced impact". This conclusion simply cannot be accepted in the face of the detailed Anatec analysis and the clear evidence about the prevailing wind direction during IMC conditions submitted into this Examination (REP5-063) which unpins the corridor mitigation proposal.

70. The Applicant does, however, acknowledge that an AltMoC cannot be applied for at this time (in particular as the AMC in question is still just a proposal). For this reason, it has ensured to instruct its experts not to assume the benefit of the corridor mitigation when analysing safety and Spirit Energy and Harbour Energy's concerns, so the conclusions on safety are not dependant on the corridor mitigation being in place (see REP5-062 and appendices).

3.4 MNZ

71. In para 4.3 of Spirit Energy's Deadline 5 Submission (REP5-090), they state they are in the concept select phase for MNZ, which is part of Assess Phase (see Fig 2-1 of The Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix C: Morecambe Offshore Windfarm / Morecambe Net Zero Interactions Report (REP5-066)). According to Spirit Energy's Carbon Storage Licence for MNZ (CS010) the project is still in the Appraise Phase (the stage before Assess Phase), which includes delivery of a feasibility study for the surface facilities by 30th June 2025. This was confirmed by Spirit Energy's Energy Transition Director (with overall responsibility for MNZ) at a shared understanding meeting on 26 March 2025. Concept Select would take place in 2026 according to the schedule in CS010. This implies that Spirit

Energy is yet to demonstrate technical and commercial feasibility for MNZ, which is a necessary precursor to undertaking more comprehensive engineering to identify the preferred option for how to develop MNZ. That preferred development concept option will not be known until the end of 2026.

72. It has also been confirmed by Spirit Energy at the shared understanding meeting on 26 March 2025 that they currently do not hold an Agreement for Lease from The Crown Estate (in contrast of course to the Applicant). They have commenced negotiations on the contract for a Storage Exploration & Appraisal Agreement (SEAA)[7] but that they are holding off from signing the agreement until they undertake further surveys. Following this they will still need to enter into an agreement for lease with The Crown Estate. Spirit Energy have not provided any timelines or updates for this although as outlined in Figure 2.1 of REP5-066 lease preparation is part of the Define Phase which based on the schedule in CS010 would be 2027 at the earliest. Through its own engagement with The Crown Estate the Applicant understands that each agreement for lease for a CCS project will be bespoke. The Crown Estate informed the Applicant that the Appraisal Term is expected to take 8 years in total including both the Storage Exploration & Appraisal Agreement (SEAA) and Carbon Storage Agreement for Lease.

73. The Applicant's Agreement for Lease contains rights for The Crown Estate to grant interests in connection with the injection or removal of gas below the Site, provided that such rights are granted for an area below the surface of the Site at a depth which exceeds any reasonably foreseeable depth which could be proposed by the Applicant in its works specification. The Applicant's Lease also contains a right for The Crown Estate to use and install conduits within the Site for the purpose of gas storage, however the use of such rights is stated to be "without interruption or interference", therefore The Crown Estate could not grant such rights to the extent they allowed for interference with the operation of the Project's assets.

74. The status of the other consents, permits and licences required for MNZ and the associated infrastructure are also unclear at this time. As stated by Spirit Energy the intention is for MNZ to store CO^2 from the Peak Cluster. It is noted that while the Peak Cluster CCS Pipeline is lodged with the Planning Inspectorate[8], with a stated target submission date of between July and September 2026, there are limited details of the project available at this time and no Scoping Report has been submitted. There is also no information

[7] Carbon capture | The Crown Estate

[8] Peak Cluster CCS Pipeline - Project information

available at this time about the offshore pipeline and how this will be consented. From the Applicant and their teams considerable experience of the DCO process it would be reasonable to assume that there is still several years work required to obtain all of the other necessary consents, permits and licences required. And that given that the Applicant's proposals are fully developed with a clear set of design parameters secured within the draft Development Consent Order (REP5-002) it would be possible for MNZ to be designed in a way that allows for coexistence with the Project.

75. In paras 4.6 to 4.8 of REP5-089, Spirit Energy provides some information about the reservoir quality variation in South Morecambe. According to this description the best and thickest part of the reservoir is located in the area around CPC/DP1 and therefore this is the area that Spirit Energy has initially earmarked for the CO^2 injection platform. The description seems reasonable, but we have no way of confirming this without seeing more detailed data. Spirit Energy implies there would only be one injection platform, while information in the public domain[9] suggests there are to be 3 injection platforms in South Morecambe. As shown in the map that Spirit Energy provides as part of para 4.13 (REP5-089), this puts the injection platform 1.5 to 2.0 km north of the northern edge of the wind farm area.

76. The aviation corridor already proposed means that this location would be a significant distance from the nearest turbine. The map in 4.13 (REP5-089) shows a boundary which is 3.76nm north of the wind farm area, rather than anchored on where the wind turbines would actually be based on the proposed aviation corridor and other buffers secured as protective provisions. It is therefore pessimistic in terms of the area of MNZ that Spirit Energy claims is excluded for locating the injection platform.

77. Spirit Energy has also not explained why it would need an equivalent level of helicopter access to the injection platform for MNZ to that currently needed for access to CPP and the NUIs. It is also noted in their submission at Deadline 5 (REP5-089) para 4.3 that Spirit Energy state the options being considered include *'both normally unmanned and manned solutions, which are likely to be serviced by walk to work (ship) access and also helicopter access'*. Therefore, given that the design of the offshore infrastructure for MNZ is at an early stage it would be possible for Spirit Energy to design these facilities such that access is not impacted by the presence of the Project. **In any event, of course, full VMC access would be available so the Applicant's analysis**

[9] Monitoring of CO2 injection in depleted gas reservoirs through measurements of seafloor deformation and 4D gravity

on the very small percentage of flights impacted by an IMC or night VMC restriction would be equally applicable.

78. Spirit Energy's conclusion in para 4.13 is that if it needs to locate the injection platform 3.76 nm away from the wind farm (or nearest turbine), and therefore in the northern half of South Morecambe, it would make the CCS project economically unviable. This is an unreasonable conclusion to make at this early stage of the MNZ project, especially with significant uncertainty which can only be reduced with detailed modelling (subsurface and economic), which Spirit Energy has probably not undertaken yet, given the stage that MNZ is at.

79. The final para in this section (4.19) implies that Spirit Energy already has contracts with the cement and lime producers in the peak district (the "Peak Cluster") who will be the source of the CO^2 for MNZ. Spirit Energy also implies that there is no other way for those emitters to mitigate their emissions. However, it is possible that there would be other CCS projects that the emitters could potentially connect to if MNZ doesn't happen, or that companies could use high-integrity carbon credits as part of their climate strategy[10].

80. Spirit Energy has not clearly addressed the timeline implications of planning and consent for onshore and offshore aspects of the Morecambe Net Zero development. The Applicant understands Spirit Energy's plans to move forwards with the project, however, the Applicant does not have visibility on the realistic timelines to move into Execute phase, having secured all necessary project consents, leases, permits and a commercial route to market in time for a final investment decision that can work with the necessary clarity needed by the Applicant. For this reason, the Applicant reiterates the need for clarity on the decommissioning date secured in the Protective Provisions upon which interim aviation buffer distances can fall away, pivoting from Oil and Gas precedence to Windfarm precedence and as such allow MNZ (and the Oil and Gas assets if still operating) to continue taking full consideration of the windfarm leased area. The Applicant is supportive of working collaboratively to support the delivery of MNZ, but the context is important when considering that the Project is a net zero 'bird in the hand'.

81. The Applicant also refers to paragraph 9.3.2 of REP5-062 which identifies all of Spirit Energy's requests for co-existence with MNZ which have been secured in the draft protective provisions.

[10] Raising integrity in the voluntary carbon and nature market - notice - GOV.UK

82. Despite the early stage and lack of funding pathway for MNZ, and consequent inherent uncertainty, the Applicant reiterates that it considers that the two developments, the Project and MNZ, can successfully coexist and is committed to engaging further with Spirit Energy in that regard. The Applicant intends to enter into agreements with Spirit Energy to manage simultaneous operations, including survey and preparatory works, as well as agreements to manage crossings of infrastructure. The Applicant intends to maintain dialogue with Spirit Energy on the final design and layout of the Project so that it may optimise MNZ accordingly.

4 Annex A: Extract from the Xodus Report

Extract from the Xodus Report (The Applicant's Response to Spirit Energy's Deadline 4 Submission Appendix D: Impact on Decommissioning of Gas Production Facilities_Rev 02 Document Reference 5.59.4)

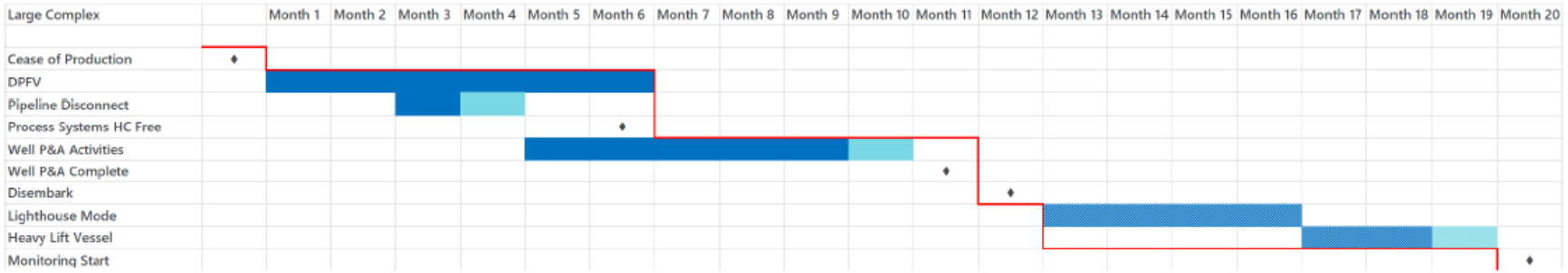


Figure 5.1 - Indicative Decommissioning Schedule for a Complex

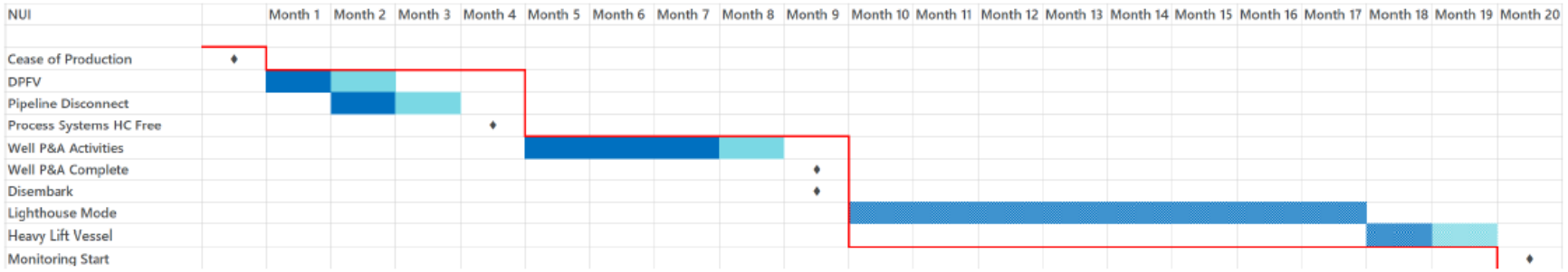


Figure 5.2 - Indicative Decommissioning Schedule for a NUI