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The Planning Inspectorate
National Infrastructure Directorate
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Date: 08 April 2025
Our Ref: [redacted]\327721-000007
Direct: [redacted]
Email: [redacted]@eversheds-sutherland.com

Dear Mr Jackson

Morecambe Offshore Windfarm Generation Assets Development Consent Order Application Planning Inspectorate Reference: EN010121

We are instructed by Spirit Energy (**Spirit**) in relation to the proposed development consent order application (the **Application**) made by Morecambe Offshore Windfarm Ltd (the **Applicant**) for the proposed Morecambe Offshore Windfarm Generation Assets (the **Project**). 'Spirit Energy' is the trading name used by Spirit Energy Limited and its subsidiaries, including Spirit Energy Production UK Limited, a group which collectively conducts European oil and gas operations.

Minutes of Shared Understanding Meetings

At Issue Specific Hearing 3 of the examination of the Application on Wednesday 5th February, the Examining Authority for the Application directed that Spirit and the Applicant convene to promote a shared understanding of the technical aspects of Spirit's concerns with the Project. At Deadline 5, Spirit submitted the minutes of meetings between Spirit and the Applicant on 18th February 2025 at which aviation and safety impacts were discussed (see Appendix A of Spirit's submission at Deadline 5 [REP5-089]. Subsequently, two further meetings were held in relation to decommissioning of Spirit's East Irish Sea assets and Spirit's Morecambe Net Zero (MNZ) project.

Spirit did not have the facility to record and transcribe these meetings and the Applicant did not elect to, however Spirit took full minutes which it has provided for the Examining Authority's benefit at Appendix A (Decommissioning Minutes) and Appendix B (MNZ Minutes) to this letter.

Spirit Responses to ExQ3

On the date of this letter, Spirit has separately submitted responses to the Examining Authority's further written questions and requests for information (**ExQ3**) [PD-015] directed to Spirit.

Response to the Applicant's Deadline 5 Submissions

At Deadline 5 of the examination, the Applicant submitted a Response to Spirit Energy's Deadline 4 Submission [REP5-062] accompanied by seven technical reports in Appendices A-G specifically in relation to Spirit. Spirit will submit a full response to these submissions at Deadline 6 in accordance with the second to last item for receipt by the Examining Authority at Deadline 6 under the revised timetable of the examination issued by the Examining Authority on 17 March 2025 under Rule 8(3) of the Infrastructure Planning (Examination Procedure) Rules 2010 (as amended) [PD-016].

Yours sincerely

Eversheds Sutherland (International) LLP
8 April 2024

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Appendix A

Decommissioning Minutes

Decommissioning Minutes

Shared Understanding Meeting between Spirit Energy and the Applicant (Morecambe Offshore Windfarm Limited (MOWL))

10:00-11:00 26th March 2025

Applicant Representatives			
Company	**Role**	**Name**	**Initials**
Applicant	Commercial Lead	Christopher Rowland	**CR**
Applicant	Senior Project Manager	Sam Park (joined at 10:29)	**SP**
Applicant	Consent Manager	Oliver Gardiner	**OG**
COP	Co-CEO for UK and Ireland at Copenhagen Offshore Partners (COP)	Holly Cartwright	**HC**
CMS	Partner	Robin Hutchison	**RH**
CMS	Trainee	Anna Andrasko	**AA**
Xodus	Gas Platform Decommissioning Assets Consultant	Mark Anderson	**MA**
DNV	Safety Consultant	John Morgan	**JM**

Spirit Representatives			
Company		**Name**	**Initials**
Spirit	Principal Commercial Specialist	Susan Gair	**SG**
Spirit	Operations and Compliance Manager	Ceri Wheaton	**CW**
Spirit	Technical Safety Technical Authority	Rosalyn Masson	**RM**
Spirit	Head of Logistics and Operations	Denis Ustich	**DU**
Spirit	Aviation Co-ordinator	Laura Taylor	**LT**
Eversheds Sutherland	Associate	[redacted]	[redacted]
Eversheds Sutherland	Partner	[redacted]	[redacted]

Agenda (provided by Spirit)

1. Decommissioning plan and process
2. Offshore decommissioning requirements
3. Access requirements throughout decommissioning activities

Minutes of the Meeting

Speaker	Minute
SG opened the meeting with introductions. Spirit noted that as the Applicant had not notified at commencement of the meeting as it has done in previous meetings that it was not recording for the purposes of meeting transcript, Spirit assumed that the Applicant was not recording the meeting as per previous meetings. The Applicant confirmed that it was not recording today's meeting for transcript purposes. SG then handed over to CW to set out the decommissioning plan and process, noting that if there is anything Spirit could not answer on the call Spirit would take it away and respond in writing.	
CW	I'll start with an overview of the decommissioning legislation and regulations. I work with the regulatory compliance aspects of decommissioning. I'm au fait with the regulations and a focal point for the regulators, NSTA and OPRED. It's good to start with a common understanding of the regulatory framework for decommissioning and I'll say what I can on details for our assets. It's worth kicking off with a bit around that. One of the key elements is our engagement with NSTA. The NSTA has set clear expectations through Maximising Economic Recovery (MER) strategy. We engage with the NSTA on a regular basis and one key requirement from their perspective is that we engage with them at least 6 years prior to cessation of our assets and we have discussions around strategy and

	costs. Once we get closer to cessation of production (CoP) we discuss how we execute decommissioning with supply chain and contractors etc. As we get closer to CoP, the expectation from the regulator is that we have a more detailed plan. With the Morecambe Hub, we're not there. We're at early stages of engagement with the NSTA. Their expectation is that we engage in line with the MER strategy. We look at our obligations and ensure we can meet their commitments as well. We look at CCUS and anything else in terms of reuse and repurposing. This is done using a basic Excel form that we complete to update the NSTA. Some of this will lead into the MNZ conversation. One of the key aspects is ensuring is that we meet the decommissioning obligation that we re-use and repurpose. We need to demonstrate what we're going to do with our asset: how do we ensure we maximise our field, and how are we going to do that. CoP is the final piece in the picture. So not only extending life, we are also looking to re-use and repurposing.
OG	I wanted to understand, with regard to the MER strategy and decommissioning path, how area plans work in this? There is a lot in there around stewardship, how asset owners operate and maximise and commitments in there to enable and support SoS targets with net zero, i.e. the new system that will come in and take over, to ensure you are able and support the Secretary of State's target of net zero?
CW	It doesn't really change anything. The NSTA is tightening up. Looking at EIS as an example it's not just Spirit, Spirit is working alongside other operators. What do we do regarding supply chain engagement, contracting strategies – we need to become more efficient by engaging with other operators. The NSTA set a clear stance which we must apply – which is easier said than done. We work closely with other operators to have those conversations. Operators are more keen to share lessons and learning and have a good flow of information but obviously it becomes challenging when it comes to contracting. It doesn't change much in terms of the wider piece. Of course every operator is looking at re-use and repurposing, plugging and abandoning (P&A) is a good example where you can develop a joint strategy.
SG	It's worth noting that in terms of process from the NSTA, there are 11-12 stewardship expectations included in the NSTA strategy. This was updated in 2021 to include the net zero limb. The regulator has the ability in that to obligate us to include an area plan to show that recovery has been maximised. They've got the ability to run their own statistics/economics. They are well established NSTA processes. Spirit's operations, in relation to those expectations and the OGA strategy, need to ensure they are meeting all the obligations they need to.
CR	You mentioned the need to set an end state of obligation with the NSTA and consider repurposing and CCUS. Does CCUS form part of MER obligations? Does that influence the timing for CoP if you're able to get to a mature alternative use?
SG	We have to prove to the NSTA that we have maximised the economic recovery of petroleum products. We're not the only operator in our system. We can't switch that off until MER is proven for us and other operators in the area.
CR	So repurposing for other uses is related to the decommissioning plan rather than timing of COP?
SG	As part of plans for CoP, we need to consider those plans, so that when we go to the NSTA with CoP we can prove we've maximised recovery.
CW	One of key precursors for a decision to CoP is that spreadsheet where we outline our assessment of repurpose and reuse, look at each individual asset, use of pipelines and opportunities for that. There is a legislative frame to enable reuse for hydrogen or CCUS, and we have to assess each bit – for example can we reuse pipelines – and consider if we could do it from an integrity and commercial perspective, and assess if it is viable. It's a matrix framework to show whether any options are feasible and we must assess each one.

RH	Could I ask who the other operators using the system are?
SG	Harbour Energy
CW	We collaborate with other operators. Every operator will need to use the area - we provide every operator with the reuse and repurpose demonstration.
OG	In terms of area plan, it's just you and Harbour Energy?
SG	It's not a joint venture, but yes it would be.
RH	Who takes the eventual decision on decommissioning?
CW	At CoP, the operator makes the decision . We advise the NSTA on the date we have ceased production. It is a formal process. The NSTA then come back with formal letter agreeing to that date. It's not the NSTA that defines that, it's the operator. It used to a lengthier process by applying to the NSTA, but this is now done through the stewardship process with an evolving conversation with the NSTA. CoP is not a surprise, the NSTA is engaged from the start, but the decision sits with the Operator.
JM	The linkage to Harbour – is that power for Calder specifically, or are there other physical linkages that affect decommissioning?
SG	They're linked to our operations via the Calder pipeline and the Rivers terminal They make their own CoP decisions, but there are other linkages we need to work together on.
OG	But the Calder pipeline goes direct offshore?
SG	Yes.
OG	So you notify the NSTA and then they send a letter – is that "you've done it" or before you do it?
CW	You give the NSTA warning. You advise them of CoP date as a formal notification. There shouldn't be any surprises as you would have gone through the due process. You wouldn't want to be in the place where they disagree – you engage with them ahead of that. I was going to talk about engagement with OPRED and the process for submitting a decommissioning programme which is signed off by OPRED on behalf of the Secretary of State. The regulator expects it to be submitted about 1 year before you start. There is engagement with the NSTA up front, but it shifts in terms of the decommissioning programme aspect, which is a critical enabler for decommissioning. This is managed by OPRED. OPRED and the NSTA engage with each other, but the decommissioning programme is signed off by OPRED for the Secretary of State. The regulator expects that to be submitted 1 year in advance. Essentially, the decommissioning programme is submitted under the Petroleum Act by the section 29 operator. In simple terms, it sets out what you propose to decommission, not how, for example any installation or structures, subsea infrastructure, pipelines, mattresses etc. You need the ability to be flexible for the duration and time you're looking at. Essentially, the operator submits that. We have not submitted anything for the Morecambe Hub yet – we are working on it. The NSTA is interested in the cost element and how we manage our costs appropriately – they see the costs of the programme in advance. The NSTA is a statutory consultee on the decommissioning programme along with others. In the process of submitting the programme, we engage regularly with statutory consultees, such as fisherman. The programme describes what you are going to decommission and your end state of where you're going to get to. When looking at decommissioning, we will be removing the NUIs themselves - they are not derogation cases – we will be removing jackets and

	topsides. With pipelines, we have to undertake a comparative process with an informed assessment to determine best option. Whether we will remove sections or not depends on having good justification. We have not submitted that programme yet so don't have an approved way forward for decommissioning. We are at the early phases. When we do come to that point, it needs to be approved by Regulator. If we put in a case for leaving pipelines in place, this is not fixed until approved by the regulator for the Secretary of State. If any infrastructure is left in situ, it falls into monitoring and post decommissioning monitoring.
OG	We are used to dealing with clear timelines. You mentioned 1 year in advance. Are there any statutory requirements for doing it by a certain date or guidance?
CW	The regulator prepared clear guidance. There is a clear process for statutory consultation in the Petroleum Act. It's preparation that is a difficult piece – The regulator provides approximately one year, depending on resources, assets, the size of the project, and other issues. Morecambe Hub is a larger programme. It will be more prudent to submit earlier.
OG	So once submitted to them other than consultation, there isn't a KPI for OPRED to review by certain date?
CW	No.
OG	You mentioned differentiation between NUIS and other structures. How is that determined?
CW	That is set out in guidance as well. The threshold for an asset that you can apply to OPRED for derogation is 10,000 tonnes. So if whole jacket is greater than 10,000 tonnes, you can apply for derogation to leave them in situ. It's a much more complex process. None of these assets fall into that category. This means that they require the decommissioning programme to be approved, and they will need comparative assessment and statement but the assets don't fall into 10,000 tonnes bracket. The decommissioning process still needs to be supported by comparative process and Environmental assessment.
OG	So you have 3 categories of decommissioning?
CW	Yes, in essence you have 3 types of decommissioning programmes. For the hub you're looking at standard decommissioning programme.
OG	For every asset, including the NUI's?
CW	There are certain cases where you could submit a slimline programme without supporting information. For NUIs, we would do a combined decommissioning programme for North and South Morecambe. We'd be looking to submit a combined decommissioning programme for the hub as a whole as it is a simpler process, which can be done with the approval of the regulators.
OG	So for things this small there is no need for the comparative process, the items that are in between require the comparative process, and then larger assets aren't relevant to this.
CR	In a previous meeting we talked about decommissioning readiness by 2027. Is that the internal project, or does that include all this comparative assessment and process work?
SG	Ceri, by way of background, during the meeting on 13 Feb, we said that we are currently working on decommissioning readiness, and working our way towards being ready and execute when we need to. Our CoP is currently set for 2027 +/- 2 years and we're looking at investment to go out to 2030. So CR's question is about whether all this process is included in that.

CR	Yes, is that programme all for 2027?
CW	These documents take a while as they are quite significant. We might require an Environmental Impact Assessment (EIA) supported by data and an environmental base line survey. We will need a planning session to provide the comparative assessment etc. We have one that is valid as currently stands. We need a good bit of planning to get a comparative assessment and EIA cannot be done overnight. We use windows for decommissioning schedule to allow flexibility. This would be in line with the extension of field life into 2030. We would always look to prepare and submit in plenty of time. I wouldn't be surprised if the programme was submitted in those windows but that doesn't mean we are ready to decommission. The process is lengthy, so we try to submit earlier, as that allows us to be prepared and meet the statutory process. We need to engage with the section 29 notice holders and they need to provide letters of support. We try to do that earlier to have them in place. We need the windows to have that in place. The only fixed part is 28 days of statutory consultation. It also depends on the regulator's resourcing and availability. Essentially, I have a strategy for when I submit the decommissioning strategy and expect the regulator's review. We have things on the shelf for Morecambe Hub that would need to be updated. We are in a fairly good place. But we will submit our decommissioning in accordance with the dates we have already stated.
CR	So yes you will be ready by 2027, based on being in a good place?
CW	If we were looking at 2027. The trigger for decommissioning is the removal of the infrastructure. We can CoP regardless. There is an element of risk not to have the decommissioning programme in place. It makes sense to have it ready for earliest heavy lift window.
JM	Do you anticipate staggered decommissioning for the field like DP3 and DP4? Or is it all or nothing?
CW	Interesting question. This depends on the asset life strategy. We are currently looking at strategy for the hub as a whole. We would be looking at operations to decommission certain parts of the hub and not others. It's not part of the decommissioning programme that I'm involved with, but not to say that's not prudent.
SG	For now we are looking at it as a whole, it's not to say something couldn't happen in 2 years' time and we change our direction
JM	The Borran rig worked as a flotel for DP3 and DP4 in the past, were they responsible for the aviation operations or was it part of current operation?
DU	The Borran in 2019 and 2020 was a P&A jack up rig, serviced through Spirit's aviation contract at the time with Babcock, not a flotel following P&A. We had a unit there operating for removal. The Borran work was purely P&A activities.
JM	We read an article it was just a flotel.
DU	The flotel was a JB-115 barge when we had completed P&A with the Borran. They went there to P&A several wells not just DP3 and DP4
JM	With it being specific well intervention for slanted wells how does that work with the existing rig? Using rig equipment but specific for slanted wells?

CW	My understanding is that we have a rig that has been manufactured specifically for these slanted wells. They appear to be the only ones that an operator in North Sea has. There is an interface as well. At the moment we are looking at different strategies as there is a mix of slanted and traditional wells. So if we did choose P&A across all assets we will need to cover that with a rig that works for both. We are still in early phases of engineering and supply chain engagement.
DU	Yes, we have bespoke rig for slanted wells. Spirit is the only one with offshore slanted wells from 1980s. There are still onshore wells that use slant wells technology.
RH	Basic question: the NUIs, are they all dependent on CPC maintaining operation? You wouldn't have NUI operating independently?
CW	CPC is our main asset. All flights are managed via CPC. There wouldn't be a case for having a NUI without CPC without changing the operation of NUIS.
SG	Currently there are no plans that would lead to a NUI operating without CPC.
DU	CPC provides the power link for all NUIs and export links and compression via CPC. There are no direct links from DP6 or DP8 to onshore. The northern field, which is DPPA, has its own link to onshore but it needs to be powered by CPC.
RH	So CPC will be the last man standing?
SG	Yes.
RH	Is P&A a separate approval regime?
CW	The decommissioning programme is specifically for infrastructure. The wells abandonment process is regulated by NSTA but there is OPRED engagement e.g. chemical permits. The actual process for suspending work, abandoning, etc is managed by the NSTA WONS system. We engage with them and the stewardship team and wells team and work with each other. When we talk about abandoning wells we go through that process of applying to the NSTA ahead of doing that through their WONS system. We list wells in the decommissioning programme at request of OPRED.
CR	For future MNZ would that also sit under NSTA?
CW	Yes, that's part of the reason why you have a discussion around the reason for abandoning the wells. You need to set out plugs and confirm how much cement you're using, etc. This has to be done up to a standard that could be used for CCS in future.
MA	Regarding CPC – how many wells are there on the platform, are any of those slant wells? Have any been plugged and abandoned in advance?
CW	There are 8 wells on DP1 and 9 on DP8 that form part of CPC.
DU	There may be confusion here.
SG	Let's take it away and make sure we are not giving you wrong information. What's the reason for you asking?
MA	Just looking to understand how long P&A will take and if you have slant wells, as we know it'll take longer. I've seen well programmes before and the first thing the operators had to do was re-enter wells that were plugged and abandoned previously

	because they weren't done up to the current standards. That gave them quite a lengthy campaign as they needed to bore out and reset cement plugs.
SG	In terms of timing, without knowing the individual make up of wells, could you advise the time the decommissioning will take?
CW	The NSTA benchmarking report gives indicators for wells or durations. In terms of overall programme, we already provided information at a very high level because of course we can only talk in rounded terms. We gave an indicative COP of 2030 to maximise well life. After that, we broadly said 2035. The reason for that window is that we anticipate doing P&A in stages, taking the rig to P&A the wells, getting towards the hydrocarbon free status, to enable us to bring each asset to lighthouse mode. The removal campaign is contractually driven. The normal practice is to provide a contractual window to the contractor to remove assets. We have limited control over that, as it depends on when they can execute the work. I can't give the window in our contracts. I can only talk in high levels terms. This enables contractor to come in when they have the vessel available. It is also important to note that we are looking at a complex set of assets. The contractor will need to do removals in one season for topsides and another for jackets. We are looking at a few seasons.
MA	Until you get into detail you're not going to have a schedule. But as CPC is the hub and you will need the gas, electricity and export. Presumably there will be a programme where you will start with NUI well P&A, get that into lighthouse mode, then go onto the next NUI then focus on CPC towards the end. So in programme you will have assets with lighthouse mode. There will be very little reason to fly to them during decommissioning. Usually they are flown by drones.
CW	Even at lighthouse mode, we need to retain potential to re-man if there is an issue. Even though they are in lighthouse mode, we need to be cognisant that the asset is sat there unmanned and we need to be able to get there if something happens. Broadly yes, there would be a sequence. We usually do it via vessel but occasionally we might need to fly.
CR	Could we get the high level decommissioning strategy and then also any more information about the specific P&A (i.e. NUI to CPC) as an overview? In relation to wells and slanted wells, which wells are at the standard for CCUS, in lieu of trying to understand the timing of these activities?
CW	We are at the early engineering stage.
SG	I am not sure if we have it available, given the phase we're in, but I will take it away. I might manage to give you the number and types of wells, but in terms of strategy, I'm not sure we can give you what you're looking for.
CR	The well status would be instructive.
SG	I'm sure you have a list of what you're looking for. Send that by email and we can consider.
CR	Referring back to Spirit's Written Representation REP1-116, paragraph 9.7, related to additional costs with flight restrictions as outlined before in excess of £10 million. We capped them in the last protective provisions. We would welcome your views and sharing your assumptions behind the £10 million figure; that would be helpful.
SG	We can take the conversation offline. We've got our own assumptions and have a good handle on what we need to do and how we do it. I haven't been through the Xodus report in detail and will need to.

	I did notice a cap which is extremely low, lower than even just the decommissioning figure. Since you obviously think it's just an operational nuisance, why not make it unlimited? There are other things like safety that cannot be compensated against.
CR	We would welcome your views.
HC	Noted that she would like a call to discuss with SG or another member of the team in as are keen to resolve prior to deadline close
SG	I am unsure what it is that you are looking to resolve as Spirit's position is clear but let's take it offline and see what's required.

Meeting closed.

Appendix B

MNZ Minutes

Morecambe Net Zero (MNZ) Minutes

Shared Understanding Meeting between Spirit Energy and the Applicant

11:00-12:00 26th March 2025

Applicant Representatives			
Company	**Role**	**Name**	**Initials**
Applicant	Commercial Lead	Christopher Rowland	**CR**
Applicant	Senior Project Manager	Sam Park	**SP**
Applicant	Consent Manager	Oliver Gardiner	**OG**
COP	Co-CEO for UK and Ireland at Copenhagen Offshore Partners (COP)	Holly Cartwright	**HC**
CMS	Partner	Robin Hutchison	**RH**
CMS	Trainee	Anna Andrasko	**AA**
Xodus	Gas Platform Decommissioning Assets Consultant	Mark Anderson	**MA**
Xodus	Director of Subsurface	Andrew Sewell	**AS**
DNV	Safety Consultant	John Morgan	**JM**

Spirit Representatives			
Company		**Name**	**Initials**
Spirit	Principal Commercial Specialist	Susan Gair	**SG**
Spirit	Head of Logistics and Operations	Denis Ustich	**DU**
Spirit	Aviation Co-ordinator	Laura Taylor	**LT**
Eversheds Sutherland	Associate	[redacted]	[redacted]
Eversheds Sutherland	Partner	[redacted]	[redacted]
Spirit	Energy Transition Director	Matt Browell-Hook	**MBH**
Spirit	Development Subsurface Manager UK & NL	Peter MacKintosh	**PM**

Agenda (provided by Spirit)

1. Project overview
2. Licence commitments and status
3. Aviation, marine, well and monitoring requirements

Minutes of the Meeting

Speaker	Minute
SG opened meetings with introductions and then handed over to MBH.	
MBH	Where are we with MNZ? Nothing is different to positions previously put in writing. As you are aware, we have held the carbon storage (CS) licence CS0010 since May 2023. We are developing that from an offshore and carbon storage perspective. We have partnered with the Peak Cluster. The base case is to decarbonise the cement and lime production industry by 40% of UK production. The pipeline [from MNZ] may go directly to the store, or it may need to be sent to Barrow for further gas treatment and aggregation, before going offshore to new injection facilities. We are looking at reuse of pipelines but we would not re-use jackets, topsides, etc from existing oil and gas infrastructure. Currently, the project is targeting DCO proposition for the pipeline this summer. We will pick a suitable date. In respect of the licence itself, we are targeting this year to come to reach the end of the first phase and move into the second phase, which is progressing well. We shot the seismic survey last summer, and we are coming to the end of processing of the results. We accelerated this as we were conscious of the windfarm and wanted to avoid clashing with future operational activities. We will need to complete other route surveys. I will not repeat the examination submissions in full from the DCO process, but I am happy to take any questions.

OG	You mentioned that you are working with Peak Cluster and looking at a DCO application for this year, but you are not decided on onshore route. Presumably you have an idea if you're planning to submit to PINS? And, are you actually planning on running a pipeline from the Peak District all the way to Barrow – is that really viable?
MBH	For the onshore route, we have a full set of completed surveys, so we know where that is going. We have also completed the desk-top study for the offshore route, so we know where both pipelines are. The question is: does the pipeline go directly to the offshore injection facility or does it go via Barrow? This is a technical issue – it only makes 35km difference, which is material, but it could be cheaper if we can do more work at Barrow where we have easier access to land and power etc. That's the select phase engineering we are going through from an optimisation perspective.
OG	So regardless, the pipeline will be going to Barrow from the Peak District?
MBH	No – the onshore route goes from the Peak District to somewhere near Wirral. There are only a few options. Then this will go to the offshore pipeline around the coast to Barrow or straight to South Morecambe.
CR	Firstly, it's an exciting prospect, the MNZ project. I understand the size of the asset and what it offers for the UK. My question is more on the NSTA permit road map. As I understand, there are 4 phases: appraise, define, assess and execute. I understand you are reaching the end of the appraisal phase. What's the timing expectation on each phase?
PM	In the appraisal phase, we conducted an early risk assessment in 2023, and it finished at the start of 2024. Now, we are undertaking site characterisation which will finish in Q3 2025, when we will submit the report. Following the site characterisation phase, we then move to the assessment phase. The current timeline for this takes us up to permit application submission in 2027. The CS licence is until mid-2027 – so that's our timeframe for completing licence obligations.
RH	The permit application, is that the DCO?
PM	No, the permit application is for a carbon storage permit. We are in possession of the carbon storage licence. We now have the opportunity to apply for a carbon storage permit, which means you can store CO2 in the reservoir. The permit is granted at the end of the 'define' stage.
MBH	At end of carbon storage licence you have the opportunity to apply for the carbon storage permit. That allows you to technically store carbon. You get it at the end of the 'define' stage.
CR	So you would get the permit at the end of 2027, which would be the end of the 'define' phase? Then you can move into 'execute' phase?
PM	Yes, we are applying for a permit in 2027. Then when this is granted we move into the 'execute' phase. It depends how long that process takes. We are trying to submit the permit application at the start of 2027. Our licence is until mid-2027. In order to get that approved in that timeframe, we will have to work with regulators.
CR	Can you say anything on the next phases? How long until the 'execute' phase can start?
MBH	We are expecting to apply for permit in 2027 and look to take financial close near the end of 2027 or early in 2028 and will then move into the 'execute' period which will take approximately 3 years and are targeting first injection in 2031 from the Peak Cluster. There are two other elements to the project development: shipping and Barrow energy park. Shipping is on a longer timeline than the pipeline solution so we're not developing that at the same pace, whereas Barrow is an industrial park and

	development is underway so could execute quicker. We expect that to be more iterative: based on early site adopters or users and being able to take carbon away.
AS	Are you essentially following the timeline in the CS licence fairly closely? It sounds like you are. You have completed seismic surveys, so the next step would be the injection test. Are you completing an injection test and what is the status of this?
PM	We completed a well injection feasibility study in 2024. Our conclusion was that we don't need to do an injection test. NSTA agreed with us. So that commitment has been waived.
AS	Does that save you any time or are you sticking with the timeline for the licence?
PM	It makes it easier for us to achieve the licence timeline.
OG	Could you give us an update on where you are with Crown Estate with leases? The new process for appraisal stage then into lease.
SG	We are in open dialogue with the Crown Estate and have been for a number of years. We entered into early Storage Exploration and Appraisal Agreement (SEAA) consultation conversations at the request of the Crown Estate to comment on the content. We will need a SEAA appraisal agreement and the timing is important. It is based on when we next put vessels in the area to carry out activities related to the Carbon Storage Licence. Our seismic activities predate the requirement for a SEAA that is a new introduction by the Crown Estate so we do not need a SEAA yet. Because it's a 12 month rolling date that you are awarded the SEAA for, we won't sign it until we are ready to put a vessel in the area.
OG	So you do not have one yet?
SG	No, we don't need one yet. We will not sign one until we need it as it only for 12 month term and depending upon activities we may need more than one if we sign too early. It depends on activity timing.
OG	So the next step is full lease with them?
MBH	We have in effect a negotiated contract. We have comments back from the Crown Estate and have funding in the current development envelope to pay for that. As you will appreciate, you don't just spend money until you need to. We are holding off on that until the next trigger point, which will be the offshore pipeline surveys.
OG	So in terms of the DCO, will there be a separate lease agreement for the seabed infrastructure?
MBH	The DCO will only take us to mid high water springs (MHWS). There is a linkage to offshore work but there are options to use a maritime agency and pipeline works authorisations. The carbon store itself is via NSTA. The lease is via the Crown Estate, but they have not yet defined if the pipeline route is part of reservoir or not – that will define the offshore leasing strategy when the Crown Estate are clear on their requirements.
RH	So no offshore DCO?
MBH	We do not need one.
RH	Presumably need marine licence and EIA?
MBH	Yes.

RH	So with the Crown Estate, the agreement is in agreed form and you have funding, but you have not pulled the trigger – so the agreements are not in place but you can put them in place quickly?
SG	Yes.
MBH	In theory we have an agreement with the Crown Estate because the NSTA licence was agreed with the Crown Estate. The Crown Estate signed off on the CS licence locations. The Crown Estate was part of approval process.
OG	But that is only for subsurface, not on the seabed?
MBH	Yes, you need maritime agency approval for pipelines and facilities for the seabed.
OG	But anything above the seabed or on the sea is subject to separate leasing process?
MBH	Yes, that's part of the SEA process released last year.
CR	Regarding the issue of not needing to do an injection test, C1-1082 and 1-1087 – what does this mean?
AS	The injection test was about being able to inject a rate of CO2. It just means they do not need to do the injection test.
CR	So perhaps the question I had still stands. There is a potential need to drill beneath wells or over existing legacy wells [*CR shared the slide at Annex 1*]. With reference to C5 and 110/8-2, the one next to South Morecambe – there is a leakage risk and it is outside licence area. What is Spirit's view on the criticality of that well?
AS	So why would you consider 8A-7 to be an issue? We have been given a location and it should have been plugged and abandoned already. Secondly, with the two wells you think you need access to in order to do a relief well, considering they have also been plugged and abandoned.
PM	All of the wells on the map are part of our well integrity assessment, which is part of our carbon storage licence commitment. This is ongoing at the moment. We have to submit a well integrity report and evaluation before well characterisation. The NSTA – after early risk assessment – defined which wells they wanted us to investigate. They said any well in hydraulic communication with our future storage site. So not just wells in the gas field, but also offset wells to the south, including 8A-7, which is outside the licence area but penetrates the same reservoir area.
AS	Is that part of the aquifer that is completed? There is limited ingress so virgin pressure.
PM	There is an active aquifer on South Morecambe. We experienced aquifer ingress through production lifetime. The DP3 location on that map experienced water through wells. The DP4 platform to the north did too. The aquifer was active on the eastern flank of the gas field and also proven through wells drilled off structure. There is another gas field called the Bains field about 6-7 km from South Morecambe and that is in pressure communication with Morecambe. We have monitoring information that demonstrates that. The 8A-7 well was drilled and it had some depletion and there is a well further north-east which had evidence of pressure communication through the aquifer. Essentially, the NSTA used that to define which wells should be in the integrity assessment. Seven of them are off structure and a long way from the actual future storage site. That is why this well is currently in our assessment and we are flagging it. The way the process will work through the CS licence over the next 18 months is that we will complete the well integrity assessment, then integrate the outcome from that into the containment risk assessment, that will then drive the monitoring plan, then the monitoring plan will drive what the corrective measures plan needs to be in place. So following through: if you have a well that is in the containment risk assessment and the outcome is that we need to monitor that well, then we need a

	corrective measures plan in place for that well. Ultimately monitoring and corrective plans need to be agreed with the regulator before the permit application.
AS	I appreciate there is ongoing work, but for the 8A-7 well, that looks low risk that any CO2 will make it down that well?
PM	I wouldn't disagree with the way you have assessed it, it's not high risk for us. As we follow through the process with the regulator, they recognise that it has been abandoned to OEUK guidelines so don't anticipate work prior to carbon storage. It's a case of whether it requires monitoring.
AS	Do you know of any mechanism for how CO2 will make it to that well from the injection site? There are no known geological pathways.
PM	As per your report, it's a low likelihood that CO2 will migrate that direction. This would mean there are no catastrophic containment issues. It's the fact there is hydraulic communication which needs to be included – we've seen it in the production lifetime, so would in the storage lifetime.
MBH	The issue we face is that we have a regulator that says there is proven pressure communication so that needs to be assessed, and there is a clear legal requirement to have a remediation plan should you need it. This is a process – we do not know which plans will need to be actioned and need monitoring. We have not had regulator sign off but if the well is in that position we need to be able to access it. There is a legal obligation on us through the licence: this could be a pathway so we have flagged it. We do not know if it will go away or not. The NSTA has taken an extremely cautious position on the need to remediate wells etc. That is the only regulatory position we have at the moment so we have flagged it. There are steps to go through between today and the final regulatory decision but we cannot pre-empt that decision. The regulator is not minded to make any decision before then. They won't give us early sign off..
AS	It is ultimately a technical question, so we're trying to get a feel for that well in particular. I think it would be surprising if the NSTA made that a key issue.
MBH	It's low risk but their behaviour to date is an incredibly low tolerance of risk. We have seen that the NSTA as regulator has taken a very cautious position on the CCS Track 1 and 2 sites up to now. For example, they are not applying ALARP to the CS licence.
CR	Regarding timelines, by the time you make the permit application in 2027, will you have a view on the monitoring plan and corrective measures needed? Will this be subject to NSTA validation and agreement?
PM	Yes, after the 'assess' phase and when we are ready to submit the permit application, we will have a preliminary monitoring plan to approve in that process. Corrective measures are part of the permit application and approval process before passing to the 'execute' phase. This is all part of the work programme that we have to complete and commit to before early 2027.
CR	You mentioned that 8A-7 is plugged and abandoned in accordance with OEUK guidelines. If there are remedial measures to be taken, could they be taken within 2 years of 2027? Is there another process to follow?
PM	Generally, if we have wells that the regulator considers to have no significant risk, we will not need to do any corrective measures. If there is a considerable risk, we are expected to deal with them before we are granted a permit. Fundamentally, we do not see this as posing a significant risk so we do not expect to do remedial action before getting the permit.
MBH	But we may be asked to monitor that well. Because of the OEUK standard, there is no point in re-abandoning. But they are more likely to say that we need a plan to monitor

	and intervene if you see leakage from that well. So we have to set out a monitoring plan, and worst case scenario is we have to re-abandon that well.
CR	For C5 in the north and 8A-7 in the south, do you foresee that you can work that over from outside the windfarm area by some means?
PM	At the moment, we don't think we could do remedial work at C5 or 8A-7 without a rig on location. For the well in north, we can potentially reach it from outside windfarm location – we can deviate by a new well to intersect and do remedial work. But that wouldn't be possible at 8A-7.
RH	Just an observation from me, but this granular detail is extremely helpful for getting protective provisions that are mutually agreeable. Everything that is being said opens up how to capture this sort of co-existence. My question is on the granular detail: in terms of access for monitoring for future re-abandonment in the worst case scenario, what is the requirement for that?
PM	In a scenario where we need a rig on location, we need a 500m buffer zone around that rig, which is the dashed circles of 500m radius. Then, there are logistical issues of getting a rig on location with tugs and anchor handling vessels. This has been described in written submissions.
RH	The anchor lengths feel like a pinch point. There are other options like dynamic positioning which do not require over 1km. Is there any common understanding on that type of access?
DU	There are no dynamic positioning rigs available in the North Sea.
MBH	If we had to go in and re-abandon, time is of the essence. The rig market is very tight with all decommissioning. So we would not have many options. As DU points out, dynamic positioning rigs are just not here. With the time it takes to transport a rig like that from the US or Middle East, it is not feasible. I am keen to ask you if you have a view on vessel sizes that can move within the windfarm and around jackets etc. Is there a maritime safety position that vessels must be under a certain size, such as small personnel vessels etc?
OG	We are not applying for a safety zone as standard, so there will be no 500m safety zone during operation. There will be rolling safety zones during construction, but during operation there will be no restriction on vessel size, beyond the captain's view. If you needed to bring in vessel there is no restriction in terms of a safety zone beyond co-existence notifications etc. Dynamic positioning rigs are not readily available but they can be available. As we said in one of our submissions, we have a requirement to bring in jack up barges and heavy lift vessels ourselves so we expect to operate that size anyway.
DU	Just to add, I have seen in the submission comments regarding vessels of a similar nature, but we are mixing up dynamic positioning barges and jack-up drilling rigs, which do not have dynamic positioning. There are no dynamic positioning drilling rigs. They exist in Mexico, but they cannot be used in North Sea. There are no dynamic positioning drilling rigs for the jack-up. Dynamic positioning semi-submarines cannot operate in the water depths of the East Irish Sea.
CR	From an operational point of view, we would look at the activity, risk assessment, and a possible co-existence agreement to handle risk assessments. There should be a way to look at the specific location and siting of turbines and anchors. Perhaps this is a topic for us to continue to engage on a technical solution or options?
SG	What is the space we are talking about between turbines, if vessels can move freely?

OG	The minimum spacing is 1060m between turbines. This is secured in the DCO: turbines cannot be closer than that. There is a micro-siting allowance of 55m, so we could take 110m off of that, so 950m.
SG	We are out of time and several of us have hard stops. If there are any other questions, we can follow up in writing.
RH	Should we be expecting revised protective provisions?
SG	The team are working on it, I will discuss with PN and I'll get back to you on timings.

Meeting closed.

Annex 1 – Slide shared by CR