# AUDIO_RAMPION2_ISH1_SESSION6_080224

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00:06
Good morning, everybody. Can everybody hear me loud and clear, just hope so is considerably less people in the room today. And as the livestream event started, if it has gone is now 930. And this issue specific hearing in relation to the application made by ramping extension limited, or the proposed rampion to offshore wind farm is now resumed. Now, yesterday, we discussed onshore matters. And today, we won't be dealing with the offshore elements of the of the scheme. And just before we get onto that agenda, just a very few preliminary issues to deal with, if I can ask them, again, for mobile phones pleased to be to be switched off off to silence. Toilets, as I'm sure you can remember, or probably know by now we're back in the main lobby. There's no planned fire drill today. So if the fire alarm does go off, we need to follow the exits out of this building, I think it's to the right and to the left, and that will take us straight out of the building. And I think apart from the applicant, there's only one other person here. So who's not the applicant, if I'm looking around the room. So I'm going to ask you a Mr. Fisher's have anyone who wasn't able to get access to this room? Not aware. Okay. Thank you. Now, we did instructions yesterday. I'm not proposing we need to do those again. Mr. Mao, I assume as you did yesterday, you will introduce your your team as and when you call them.

01:53
Indeed, sir. And we may need to we will need to bring forward people who have sat behind me to the front table as we move through agenda items as well. So but yes, as yesterday,

02:01
thank you. I'm looking to anyone online or persons who was not here yesterday, who wishes to introduce themselves to the this examination.

02:17
So might I start off just by inviting our commercial fisheries experts to identify themselves things are the first topic on the agenda and present online. If I could ask Miss McNabb and miss an event to introduce themselves. Thank you.

02:35
Yeah, absolutely. Good morning. All I'm Sarah McNab. So I'll be speaking on behalf of the applicant regarding the effects of ramping into on commercial fisheries. And I'll be supported by my colleague, Fiona Nemo, who will introduce herself now.

02:51

Good morning, everybody. As Sarah said, my name is Fiona Nemo. And I will be speaking on commercial fisheries. Thank you.

02:59
Thank you. Okay, so no one else who wasn't here yesterday, wants to introduce themselves. So I'll move on. We will be making another slight change to the running order this morning. And this is to accommodate the maritime coastguard agency, who could not you can't be with us until mid morning. And they want to be here and speak on the shipping and navigation matters. So we will deal with commercial fishing as requested by the applicant this morning. And I know whilst I know that shipping and navigation does naturally run afterwards, we will push that back on the agenda. So that the MCA can participate in that discussion. So we will deal with commercial fishing. Firstly, as you requested, and then we will revert to the agenda as set out so all authority will will follow that discussion. And as with yesterday will do with action points after each agenda item as opposed to the end when that could take a hell of a long time. So I think it's easier to deal with it after each agenda item. So if I could just remind everybody again at the GP GDPR regulations, please and not to put anything any personal information that you would like on the public record. If there are no other preliminary points this morning. No, then we'll move straight on to what is tabled as item 13 on the agenda, commercial fishing Mr. Any.

04:35
Good morning. So, the x I want to focus on the potential effects of the potting fleet particularly the X understands the pond fleet fish in the rampion to area of both theory and the export cable corridor. The XR also understands from the ESD to the pots and traps had the highest value of total landings in 2020. bes has identified that construction works would result in reduced access to or exclusion from the established fishing grounds. So firstly, for the applicant, has there been any communication directly with the pot and fleet crews at all businesses to date? If so, how would you assess their response?

05:21
Yeah, I can come in here. So Sara McNab consultation with the fishing industry has been ongoing across a number of years now as the EIA consultants supporting on commercial fisheries, we've been involved in a round of that engagement. And that's been via direct with fisheries stakeholders direct with local industry, and that did capture people that operate putting fleets in the rear areas, I would say that wider engagement has been led by the client and by their company fisheries liaison officer. So I do expect them to come in after I've spoken and provide some more detail. As part of that engagement. I think responses have been very useful in shaping our assessment, they've indicated that kind of mixed responses around the extent of fishing that that takes place in rampion. One, so usefully, it helped us understand that some fishing does putting fishing does take place in rampion. One, and that fishing vessels do continue to transit through rampion one which has helped frame our assessment. But I think in terms of that relationship, and wider engagement, it's probably useful to pass to the applicant at this point.

06:45
If I could come in, if I may feel an emo or Poseidon. And thank you. So just to add to what Sarah was, was saying we had a process of of consultation setup so that there was day to day discussions with the

fishing industry which was delivered by the flow, which was Braden Mae Marine, and also the client and they established working groups around the area with regular meetings at ports. And then to support that and to support our EIA assessment we undertook specific consultations with relevant parties and that included national organisations such as the National Federation of fishermen's organisations, and also the Sussex inshore fisheries and Conservation Authority. We also spoke with local industry members, including Brighton in New Haven fish sales, and international organisations, including from Norwich, the French producers organisation. So as confirming what Sara said that the information we gained very much informed our impact assessment, but also importantly, helped us to ground truth the data as you identified the importance of the potting fleet in the region.

08:01
Thank you. Is there anything more from the applicant here? Only

08:04
two words, sir, in terms of in terms of that handover in the in the member of the applicant team you can speak to fisheries liaison matters. Unfortunately, that person is not not actually in the room at the moment. What we'll do is we'll we'll note that point down and add those further details in our in our post hearing submission just to pick up on those points if that's acceptable. Okay. Thank you.

08:27
So, for the applicant, again, there has been relevant representations received from the likes of Hubbard fisheries, and Monty unlimited. Like I see. commercial fishers in the Sussex Bay Area have raised some concerns. For instance, montem, limited expressed concern about brown crab since the development of rampion. One saying that the local crab industry is dying, explaining that the crab migration route has been affected and also that the catch in terms of numbers and quality of crab caught has been reduced. Is this an issue the applicant has been made aware of and are the lessons to be learned from rampion one development to avoid the potential worsening of that situation

09:13
at home mile for the applicant, as far as I'm aware. So yes, the the applicant is aware of that situation. And it has taken on board. Those lessons learned in terms of its its approach to to ramp into. I don't know whether Mr. Knab wants to add anything more to that. But again, we can provide further short details in our post hearing submission on the way in which that's been undertaken. And

09:42
the other I suppose follow on from that is is it acknowledged that some of the impacts on the local crab catching industry it has been as a result of rampion one that there is a cause and effect link there

10:01
Again, I think the the applicants position is it is aware of issues that have been raised in respect of the impact of rampion. One. There are specific issues associated with that project, which the applicant can't comment on, because obviously, it's not it's not the applicants project. No. So but but it as far as through consultation and liaison with interested parties, within the fishing industry lessons can be

learned from that the applicant has as taking those on board in in its approach to this particular project. And as I said, we can we can provide an indication of how that's been done. Yeah,

10:47
so I think it'd be it'd be particularly interesting to know, some, at least some examples of how what lessons have been learned. misnomer.

11:00
Many thanks. Just to touch on the baseline data. So the study area for commercial fisheries for this project was based on a scale of an ICS rectangle. And that which is how statistics circulated, which I'm sure you're familiar with from the technical report, and the commercial fishery study area was ICs, Rectangle 39, which includes rampion. One. So information was collected across both projects and the proposed and the existing. And to highlight brown crab, the landing statistics data was collected from 2016 to 2020, which was the time period available at the time of writing, and there was an increase in landed value from 2016 to 2018. And then there was a decrease from 2018 to 2022. So that information has been taken into consideration within the baseline environment for for the impact assessment.

12:01
Thank you very much. Okay, yes, I think that would be good just to maybe follow up with some of those said lessons learned, and maybe some examples of that that can be incorporated into the design or rampion to the x. I also acknowledge that the US chapter six on fish and shellfish conclude that there will be no adverse impacts greater than minor adverse to fish and shellfish. However, if the effect of the proposed development was greater than the ES predicted on the catch itself, is this something that could be done to compensate for this in the future?

12:50
Is the point we

12:53
very much know how you You continue. I was going

12:55
to say, I think that's something we'll have to come back at that we'll have to consider and come back to you.

13:02
Yeah, okay. I'm sort of thinking about, obviously, rampion. One has a different project, but it does seem like there might have been some unforeseen consequences potentially. So it was it was what would happen in a similar situation if something happened along the line with rampion, two, but so you can come back to me maybe on on that point? Yes.

13:25
And just to add the FL CP, the fisheries liaison and coexistence plan, which includes consistent liaison and communication with the fishing industry. So there is opportunity for concerns to be raised through

that means, but at this stage, based on the findings from the impact assessment, no further monitoring has been proposed from a commercial fisheries perspective.

13:48
There is that point of contact if there is concerns in the future for the liaison officer I understand okay. Just moving on, I want to talk about some of the aspects of the outline fisheries leaves on a coexistence plan the FLC P. And I want to discuss the potential for compensation for the fishing fleet which sets the the FRCP sets out the possibility of commercial disruption payments, which might be more likely for potting fleets then then other forms of fishing. But the extra understands that this would be a last resort solution if the mitigation cannot address significant residual impacts. However, for the applicants, if there is a disagreement over whether such a commercial disruption payment is warranted for a fishing crew or business, how would this be resolved? In other words, is there any recourse for the efficient business if the applicant does not think there is sufficient evidence for the payment for the payment

15:02
Governor, I don't know if you want to come in there.

15:06
Yeah. So if if the as as you have set out in terms of the disruption payment, there'll be a process, there an evidence based process, which requires documentation and evidence provided by the fishing business, to the applicant, that can be various means of evidence to, to work towards what is correct understanding of the loss for that, fisherman. And that can depend on whether they choose to continue to fish or whether they store their posts on land. So that discussion will be made at an individual level between the applicant and the fishing business. And then in terms of if agreement can't be made the following flow guidance that there is an independent arbitration process in place. So I saw guidance. Thank

15:58
you. I mean, that that sort of leads me on to this next question. Maybe you've answered it there. But does the alternative dispute resolution relate just to the level of compensation, or whether the payment is necessary in the first place?

16:17
My understanding is it relates to both.

16:22
Yes, I think obviously, that depends upon the nature of the the nature of the dispute, the how that how that particular dispute mechanism kicks in, in each situation? Yes,

16:32
I think when we didn't, yes, it seems like it sort of suggests about the alternative. Dispute Resolution may be related more to the payment, but it was just, I would just sort of going down the line of if there was a disagreement upfront, someone thinks they've submitted enough evidence for compensation.

And then the African developer says we don't think you have whether there is that recourse, then. But there is that resolution possible, where maybe a third party independent could look at it and decide whether compensation was in fact, do you or not.

17:09
I would agree that that is the process. So I would say that there that ADR process presents that opportunity for the fisherman. Okay.

17:17
And is the applicant bank to enter into an alternate alternative dispute resolution process if requested by the third party? And how would this be secured? And maybe who would oversee the process?

17:33
I think we might have to take that away and come back on that point. Okay. Can

17:40
I add here as well, that in terms of who's able to apply for, for this process, and for this compensation and disruption agreement process, it also is linked to the environmental statement. So it's those fleets where there was a significant impact identified that we would expect to be taking up or to have the evidence to be able to justify such entering such a process?

18:06
Yes, yes, I understand. I think, you know, it is it is put forward in the LCP and it is something that's talked about within the IES as far as possible, and I understand from looking at the potential impact will be more likely for the porting fleet than than others. But it was it was just a sort of overview of the process itself. And the sort of practicalities about what would happen if there was a dispute in the future. So

18:37
can I can I add that perhaps the action to come back is is potential to update the EFA LCP, on that point? And to provide further clarity around that? I

18:46
think that would be useful. Yes. Because, yeah, it's it's, it talks about, you know, the alternative resolution dispute resolution method, but it's just to be clear, what that relates to, who would maybe oversee that, and, you know, it's it's I'm trying to work out whether this the applicant who has the sort of final say in this, or whether there is some recourse if someone feels aggrieved in any way that they hadn't being compensated sufficiently, albeit, I realised this as a, you know, a last resort, and it's something that would be avoided and other mitigation would be looked at first. Also, on this matter of compensation, there could be situations which I think have been raised in the relevant representations. But those who now fish in the sea rampion to area would would or could be sort of forced to fish elsewhere. And during the course of construction, this would possibly impact those who are ready commonly fish in those alternative areas. Is there any mitigation or compensation in the circumstance was to offset the adverse effects of this.

20:04
In that instance, the I suppose the simple answer would be no. So the in our commercial fisheries assessment, we look at the potential for that displacement effect. And we deem that not to be significant. So our assessment conclusion is that not significant. So there is no trigger there for that additional mitigation requirements around compensation. And the aim Certainly, on behalf of the speaking on behalf of the applicant, the aim would be to manage that temporary loss of access during construction, such that it does not create a significant displacement effect and potential gear conflict.

20:48
Actually, this, I think, is my final question on commercial fishing this morning. My final question is, in the ES chapter 13, on shipping and navigation. It says that in winter months, it is known that fishing vessels prefer to avoid navigating internally within rampion. One thing as paragraph 13.1 dot 110 as such for much of the year, or the least the winter months, or that sort of time of year where the weather is more inclement, if you like, would the array area be likely to be avoided by fishing vessels for rampion to for the sake of a 30? year project lifetime?

21:30
So in terms of sorry, just to clarify, are you referring to active fishing there or transit?

21:37
Fishing? Yes, it's because there was there was also in the fishing chapter, the yes, it says that there was an expectation that pot in that activity will resume within the rampion to array area. But then in the shipping chapter, it suggests that fishing wouldn't there wouldn't be active fishing within the rampion to area over winter months or unlikely to from what rampion one is suggested. So I'm just looking to conclude from that whether is actually going to be the case that there is going to be unlikely to be any active fishing during the winter months for the duration of the project lifetime.

22:18
So our general starting assumption and premise is that fishing will be possible by the potting fleet during the operational phase of rampion to in our commercial fisheries assessment, we do recognise that in terms of fishing vessels, both transiting through the wind farm and fishing, that activity really comes down to the individual decisions made by skippers. And those decisions around safety could be influenced by, for example, poor weather conditions in winter. So our assessment ticks does take into account the fact that your individual skippers may opt not to transit through and fish within the array. And we would suggest that that's that's reflected in our assessment outcomes.

23:04
So it may also be helpful if the applicant from its shipping and navigation team could clarify the extent of what's considered as part of that assessment as well in relation to that specific point

23:16
manda westward for the applicant. So yeah, just to confirm that the navigational risk assessment, which is at 155, and chapter 13, which is at 05, for deal with commercial fishing vessels in transit. So that

section that you referenced there, is talking about fishing vessels, navigating in transit through the array to access fishing areas to the south or other ports to the south. So the commercial fisheries chapter deals with the fishing vessels engaged in fishing and the NRA only fishing vessels in transit.

23:46
But would it be a situation if they are avoiding it through transit? Is this to a situation where they would be comfortable fishing within that area actively fishing? If they provide net for transit? Doesn't that suggest they might avoid to actively fish there as well?

24:05
Think about a question for for Sara and Fiona.

24:09
Okay. Yes, it's something that we considered within the technical technical report to look at seasonality of landings. So let me get back to yet to do that. And that I don't have the exact figure in front of me. Okay, that's fine.

24:26
Does anyone got any comments that wish to make either in the room or online on aspects of commercial fishing? It's in your hands up online. Nothing in the room. So I haven't got anything else on commercial fishing. So thank you for that. Can I just ask if you've recorded any action points for fishing?

24:57
Yes, thank you, sir. There were a A couple of weeks, we're going to provide further clarity from the applicant side on fisheries liaison that has taken taken place during the consultation stage. We were going to provide further information on how lessons learned from rampion. One have informed the approach to commercial fisheries for this particular project. We're going to provide further clarity on the alternative dispute resolution process, in particular, how it's secured and the detail of it termination procedures and will if further clarity needs to be provided, we'll update the relevant documents as needed to provide that and then in relation to that last point discussed provide the further information over the extent to which fishing activity during the winter months may be avoided as a matter of choice and efficient Yes,

26:09
it probably no other urgent Thank you very much all I shall pass on to miss below to cover the next item on the agenda. ornithology.

26:23
Thank you. Thank you, Miss Bella, could we just swap on the applicants from pinch tank? Thank you.

26:48
Okay, so we're now turning to item 9.1. On the agenda, which is the worst case scenario for the ornithological collision and displacement risk in terms of numbers five, spacing and layout of turbines. So just to start off this section and Mr. Male, could the applicant provide a brief explanation and

justification of the worst case scenario for the owner for logical collision and displacement risk posed by the proposed development?

27:14
Certainly, ma'am, I'd like to introduce Mr. Boa who sat to my left who's the applicant, lead ontological consultant, Mr. Berry, if you could introduce yourself and answer the question. Thank you.

27:28
Good morning, ma'am. I'm Matthew Bauer on behalf of the applicant covering topics on offshore on ufology with respect to the worst case scenario in terms of the collision in terms of both collision. The applicant on the early stages of the project undertook collision risk modelling for different turbine scenarios, which was discussed with Natural England and the worst case scenario was agreed is the smaller wind turbine generators over their larger wind turbine generators. This is primarily due to the fact that with respect to wind turbine generator parameters within the model, the key factors which influence the impact levels is primarily the air gap and the number of turbines therefore, obviously, we cannot do anything about the air gap with respect to this project. Therefore, the next most critical impact from the wind turbine generator perspective is the number of turbines hence why the number of the maximum number of turbines was concluded as the worst case design with respect to displacement sensitive species, currently, in regards to assessment, the non the turbine layout and design is not currently taken into account with within respect within assessments. This is primarily due to just lack of research on the topic. And therefore, both wind turbine generator designs which had been presented are considered to have an equal level of effect.

29:01
Thank you. So we note that the applicant has responded to the examining authorities request for the calculations to support the statement you've given and that was received at the PPD as is as document PPD 041. So, thank you. We heard yesterday the explanation from you how the how the total rotor swept area 4.45 kilometres squared was derived. Can I confirm that this is a fully commercial decision consideration and not based on any environmental factors such as collision risk

29:42
the thank you my uncle miles the applicant. Yes, in terms of the obviously that larger turbine type is what sets the maximum parameter for the reach of the Rochdale envelope, and then it's that maximum parameter which has fed into a variety of technical assessments throughout the environmental statement. So, in terms of what's, what's driven that, yes, it is a commercial decision of what the applicant considers the potential turbine types that might be available in order to be delivered on the project that has set the extents of the envelope and therefore, that envelope is secured through the requirements set out in in the draft development consent order and as informed various assessments in the environmental statement.

30:40
Thank you so has the has that figure of 4.45 kilometres squared been agreed with Natural England

30:50

with respect to collision risk modelling long mythology we don't typically assess with regards to total swept area that's not been discussed we primarily discussed in terms of rotor radius is that's the actual value that goes within the model. As noted in the early stages of the project, we undertook comparative analysis of different turbine designs and presented in front of Natural England, Natural England where it would agreement of ourselves that the smaller wind turbine generator type produce the largest collision impact and therefore was considered the worst case design.

31:25
Okay. Thank you. You mentioned just now, about the later clearance 22 metres, and you just you said that they could not be anything be done about the the air gap. Could you just explain that a little bit more.

31:48
With respect to the air gap, the issue is as you increase the height of the turbine, it then has other ramifications in terms of over impacts for example, on landscape and visual as raising the air gap will make it more visible and therefore, with respect to the project is a bit of a balancing act of trying to work out the best type of design to equal out the impact across the multiple different environmental parameters.

32:17
Thank you. And again have Natural England degree is our agreement with the figure of 20 metres with Natural England.

32:28
response within the relevant representations Natural England are very accepting that in regards to this project, although typically they would advocate for a higher air gap on latest projects, they do take into the count that the unique consideration of rampion to and have not pushed further on the increase in air gap.

32:50
Thank you helpful. So moving on to the spacing of the wind turbines. Could the applicant confirm if spacing between the wind turbine generators is a parameter within the collision risk modelling?

33:07
I can confirm it's not currently working

33:19
they can you confirm that the spacing stated in the draft DCO is 130 metres and that this is the spacing used in the worst case scenario in the environmental statement irrespective of turbine size.

33:38
Yes, that's that's correct, ma'am. Obviously, that spacing is relevant for a number of other technical disciplines in terms of distances between turbines, so So yes, it is.

33:52
I could also just for for add to that that, as previously noted with respect to displacement assessments due to the lack of research currently, elements such as turbine design isn't taken into account there. However, a critical appraisal undertaken by a pen limited in 2022, which reviewed evidence in support of organic displacement or mortality rates, which was basically a critical appraisal of all offshore wind farm post consent monitoring within the UK and Europe, which total over 30 winter wind turbines that were currently operational. And as part of that critical appraisal, one of the considerations that we took into account was how wind turbine designs did influence the level of displacement that was reported with respect to gannets and one of the elements that was found to be statistically significant was turbine spacing with larger turbine space in shown to lead to reduce levels of displacement from the species.

34:57
Okay, thank you. That's helpful.

35:00
understand, Mr. Goldberg also wants to speak on this particular point, ma'am, as well, thank you.

35:07
Tim Golding representing the applicant, I just wanted to come back to the spacing, aspect or the project. With respect to many of the topics spacing is a fundamental aspect of the assessment. When it comes to collision, risk, and blockage for movements of birds, the approach is not so much based on what the minimum spacing requirements or controls would be for the project, but actually the the largest occupancy of turbines across the area. So what we're looking at really is establishing a worst case, where we are filling the widest path within the movement of the birds, in order to assess the worst case for the collision. This is a slightly different way of approaching it.

36:03
Thanks for explanation.

36:10
Chapter Four of the environmental statement, a PP. 045 states that the wind turbines will be spaced at a distance of 950 for the smaller and 1130. For the larger, yet, there's no requirement in the draft DCO committee and the applicant to construct them at these specified spacings. Without the requirements in the detail, what prevents the larger wind turbine being constructed at the 830 metre spacing?

36:57
Toby Lee for the applicants, turbine spacing is is mainly done to improve the efficiency of the wind farm. In terms of spacing, we normally have requirements from the turbine manufacturers with regards to what they accept, in terms of turbines being close to each other, typically, we don't want to go too much closer than the equivalent of four diameter spacing. That can be pushed down a bit more. As generally the limit after that point, we get into issues with potentially with the guarantees offered with the turbines on their sort of integrity over their design life. So it's a very typically we won't want to go much closer than for time to spacings away from each turbine that's between the sort of centre point of the turbine. That makes sense. Not only does that require any further clarity,

38:02
no, thank you. Thank you. Yeah, that's that's helpful. I'm just pursuing really the, you know, what's the commitments? What's in the DCO? The draft DCA so I suppose has, has the spacing of 830 metres been discussed with Natural England and the MMR? And is their agreement that in theory, a large wind turbine size could be constructed at a spacing of 830

38:27
is Tim Golding on behalf of the applicant. I suppose this comes down to whether building the larger turbines at the closest spacing is actually relevant to any of the assessments. So there's the structures themselves foundations, that sort of distance of informed things like commercial fishing, access to navigation risk, cetera. And there's this, the difference in size of the foundation's structures between the different turbine sizes is relatively modest. So actually, if if the largest turbines were installed at the closest distances, it wouldn't affect any of the environmental impact assessment outcomes. But what it would do would be to detrimentally affect the benefits delivered by the project so the developer wouldn't put the largest ones at that sort of spacing, because of the points that my colleague has made in terms of the requirements are separate those largest turbines by sport rotor diameters or whatever to maintain efficient power output from the devices. Okay, thank you.

39:55
Okay, so my last question on this topic is that the designated doesn't tend to a national policy statement in three paragraph 2.8. Point 240 states that subject to other constraints, wind turbines should be laid out within a site in a way that minimises collision risk. Could the applicant explain how the proposal meets this criteria?

40:27
I think we'll take that one away, ma'am, if we can.

40:31
Okay, thank you.

40:38
We'll now move on to agenda item 9.2, which is the effect of the array areas as proposed on birds migrating to inform European and nationally important sites, including cumulative impact assessments. So I'd like to start by discussing the cumulative impact of the proposed development and other projects on the great black backed goal. Natural England has stated in its relative representation that it does not agree with the applicants conclusion, in chapter 12 of the environmental statement, a PP o five three, that the cumulative impact on the great black backed girl across the UK Southwest and channel, biologically defined minimum population scale is not significant. Natural England's relative representation states that a 1.99% increase in on base mortality is significant in the environmental impact assessment terms, and that the population viability analysis results show this would severely impact the regional population resulting in a population 19% smaller than the counterfactual after 30 years. Mr. MOUT Could I ask the applicant to clarify his latest position on this point?

41:54
Receive on behalf of the applicant, the applicant maintains the position that rampion TOS impact with regard to the great blackbuck or population can still be considered not significant in EIA terms. The rationale for this is with respect to collision risk modelling for which the species great BiPAC goal is sensitive. We have taken a precautionary approach, which has been effectively is the worst case scenario, which shouldn't be construed as a realistic scenario. This is because, as we've used all recommended parameters by Natural England, there is multiple layers of precaution with an assessment with respect to collision risk modelling. The actual developer of the original model Bill band within his 2012 guidance specifically states that you shouldn't take precautionary approach within the model, because of the sensitivity of the model to incorrectly specifying biometric parameters will lead to an unrealistic syrup scenario. To give an example of this, Natural England have recommended the use of generic logical avoidance rate, which when used within the model is really predicted the impact of 19.8 for individuals per Amman. A recent assessment on critical appraisal undertaken by us Lanuf and Harris itself. 2023 on behalf of gmcc recommended a revised species specific avoidance rate for great blackbuck goal, which, when incorporated into the assessment, instead of natural England's generic leads to a reduction in the overall collision risk by 85%, reducing the actual annual impact total to 2.71 individuals and that's just one single biometric value being changed. There are also other areas of significant precaution within the model. For example, flight speed which is used to calculate the flux of number of birds passing through the turbines per hour. And natural England's value is based on an extremely old paper by Aleister natal 2007. Originally, the data is actually from the 90s and he's actually only based on four observations for great black backed goal using the tool which the author of the paper specifies as being not particularly accurate. If you are then talk to more latest evidence, which has been collected by the offshore renewables joint industry programme, as part of post consent monitoring for found it offshore wind farm, which had a significantly greater number of observations of 284 and found significantly slower flight speeds which one incorporated within the model again, led to a further reduction of 18% impacts within the actual predicted impact. Finally, another area which is again an area of precaution is with respect to nocturnal activity again Natural England recommended a rate of 25 to 50%, which is not based on any evidence but purely speculation based on expert opinion, rather than empirical evidence. Again, nocturnal activity was collected as part of the post consent monitoring it found at offshore wind farm as part of the audit programme, which although wasn't able to identify species down to species level due to collecting data at night, found that activity at most was only 3% during those nocturnal hours. Similarly, within the Auslan, orb and Harris critical appraisal of collision risk, they recommended the precautionary value would be a maximum of 25%. These compounding factors are therefore what is leading to a unrealistic outcome with respect to great Blackbaud goal. It's also worth noting that with respect to great blackbutt goal, their population had seen an abnormal increase in the 90s with respect to population incline. This was primarily due to change in fishing practice of discarding which inflate artificially inflated the number. And similarly with regards to the way of recycling, making opportunistic foraging opportunities for the species, which caused them to significantly increase. Now that we've changed those kinds of fishing practices, this is primarily the reason why we're seeing these kinds of declines in the population. However, it's this shouldn't necessarily therefore be taken as the population being in decline, but could simply be potentially that the population is just returning to a natural level.

46:42

Thank you for that explanation. Is your intention to continue to discuss this point with Natural England? And has there been any narrowing of the positions on this point

46:57
of view on behalf of the African? Yeah, we're happy to continue to liaise with Natural England on this point. Currently, what we're looking at is to try and confirm as well what is causing the number and behaviour of the great black bubbles within the area which interestingly, if you do look at the information within the baseline Technical Report for offshore on ufology, you can see that there is actually quite a distinct hotspot within the rampion. One area, which currently from our further investigation has found that within that period, a number of large goals are actually roosting on a substation of rampion one, which is then artificially inflating the number of CBRE density with respect to large goals that we're putting through the collision risk model. Again, artificially inflating the collision impact that's been produced from the model. If birds are roosting on these offshore substations, there are potentially two options here. There is the logical sense that if these birds are roosting on this platform, they are likely to be showing exhibiting what's called macro avoidance, which is the bird simply avoiding entirely the actual windswept zones of the area. And therefore, that is learned behaviorally to avoid the wind farms and therefore are not particularly considered at risk of collision. Or alternatively, a potential mitigation option which could be pursued and we will discuss further with Natural England in due course, is to see if there is any potential to try and report preventative measures in to prevent those birds from roosting in that area. Therefore, again, negating any potential risk of them coming into contact with the offshore wind farm.

48:42
Okay, thank you for that. So if you could please state the latest position on this in your Statement of common ground at the appropriate time that would be that would be very useful. Okay. So I'll now move on to the cumulative impact assessment for the gannets, guillemots, Razorbill, kisi rake, great black back girl and left the black back goal. So again, Natural England has stated in its relative representation, that in cumulative impact assessment for Gannett Gilly mod Razorbill kitty week, great black back girl and less a black black girl breeding season impacts appear to have been screened out the most other projects and state they do not agree with this method. They state they're not clear why this appears to have been done for the species mentioned, but not herring go. And they advise at the impacts for all projects within the relevant biologically defined minimum population scope or seasons should be included in the cumulative impact assessment and state it's particularly important the lesser black black girl and great black black girl. Could you please explain your position on this point and the rationale behind the figures included?

49:59
For you On behalf of the applicant with respect to our approach to breeding season cumulative assessment, due to the discreet location of rampion to within the English Channel with the only other offshore wind farm being rampion, one within this discreet location. In the early stages of consultation with Natural England, the applicant discussed with on with Natural England on doing a regional approach to the cumulative assessment within the breeding season. At that point in time, Natural England were in agreement that that was a suitable approach. And this was taken forward within our preliminary environmental impact report, which as can be cited within natural engineering section 42

responses with regards to all species with the exception of herring goal, no issues were raised in terms of our approach. Now what's worth noting at this point is due to the timeframes of the project in the end of 2022, Natural England change their advice on how to go about undertaking cumulative assessments, changing from what was previously the standard of a regional approach to more of a entire, including all offshore wind farms within a certain region, rather than all offshore wind farms within foraging ranges. Because of this change, and because we previously hadn't got an agreement with regards to hearing all that the regional approach was appropriate. We just took the decision to when we decided to undertake the hearing goal assessment as recommended by Natural England for the environmental statement, that we would undertake such assessment using the latest guidance. It's also worth noting that although there is this minor disagreement with respect to seasonality Natural England overall seems to be primarily an agreement on the impacts that the applicant has concluded, with the exception of great blackbutt goal which has noted we are currently undertaking further investigations and will further engage with Natural England to come to a conclusion.

52:04
Hey, thank you for that explanation. Can I just ask the opportunity now to ask if there are any other parties in the room or online have any comments on the last couple of matters? I can't see any hands up online. Thank you. Okay, so I'm now going to move on to the next subtopic habitats regulations assessment relating to the offshore on ecological matters. So firstly, I'd like to discuss the in combination impacts on kitty wake at the Flamborough and finally co special protection area. The applicant has presented or without prejudice, derogation case a PP 039 describing options for compensating for the potential adverse effects on integrity on Kittiwake for Flamborough and finally cursed and submitted a letter at the procedure deadline PPD 001 from Dogger bank south wind farms confirming their interest in an existing on shore artificial nesting structure on land within their control. Could the applicant explain its composition on its without prejudice derogation case?

53:16
James miles on behalf of the applicant. So based on the comments within the relevant representations Natural England, the applicant has continued to pursue compensation options for q2 Eek, our current position is that we'll be looking at onshore artificial nesting structures on in with collaboration from Dogger bank south on the time history. So there's a lot of evidence that onshore structures on the shore structures are affected for Gatwick compensation and they've been implemented for several recently consented North Sea projects including once you put it three East Anglia one north and to Norfolk, various Norfolk Vanguard and then Hornsey for have also evidenced the effectiveness of offshore artificial nesting structures for Kittiwake to compensate for the potential impacts on Lambert by the coast special protection area. So, Natural England have been supported with the collaborative approach and the use of the kind time to aid tower within the relevant representations and that letter of intent has been submitted at the procedural deadline. So, that confirms that document staff are willing to allocate nesting platforms at its existing onshore artificial nesting structure and on any other artificial nesting structure that may be provided as part of the Dogger bank South project to ramp into. So in an in the Secretary of State has also approved artificial nesting structures for Kittiwake within the strategic compensation measures that's recently been put forward by the cask expert topic group as well. So that is that As we proceed forward, we'll look at workers compensation without prejudice case.

55:06
Okay, thank you. So has there been any further discussions with Natural England since they made their relative representation? And regarding the issue dug about south wind farms confirming their interest? And is there any updated information regarding you for the examination with discussions with actual England on this?

55:25
We haven't had any further discussions since there's relevant representations. But as far as I'm aware, they're supportive of the measure. So in general, they're for larger impact projects with larger impacts. They're not supportive on sort of structures, but they've made a an exception for ramp into suggesting that an on involvement in an onshore nesting structure is proportionate to the impact on the project of less than a bird.

55:50
Thank you. I will follow up with Natural England post this hearing on the comments on that. Thank you

55:57
forever. Just

55:58
to add on that point, Matthew both for the applicant with respect to the adverse effects on site integrity, the applicant maintains that due to the impact of the project, which is considered less than a single breeding adult peranan which again, as previously noted, when you consider the inherent levels of precaution, this is can be considered an absolute worst case scenario, and therefore, the realistic impact is far less especially considering the highly limited nature of connectivity with the FFC SBA, with birds primarily only passing through the English Channel on migration into the Atlantic and therefore, again, highly limited and only to the nonbreeding season, that we maintain the position of de minimis contribution to any in combination assessment. Okay, thank you.

56:55
So in in one of natural England's recommended relative representations, they suggested that the applicant should submit into the examination and updated keep up to date implementation and monitoring plan. Has the applicant further developed its Qt wait implementation monitoring plan in light of natural England's comments?

57:17
transmitters and buff the applicant? Yes. Will providing a update to the Kittiwake and blood pressure monitoring plan. At the next deadline,

57:24
that deadline one Yeah. Okay. Thank you. And could the applicant clarify if there's been any update to the likely scope and delivery mechanism of the marine recovery fund since the application was made?

57:46

James Madison Park the applicant. The green Recovery Fund, as far as I'm aware was meant to be introduced towards the end of 2023. And we haven't heard any further information on that. But we've maintained that marine recovery found as an option, a secondary or primary option going forward if we hear more. Okay,

58:07
thank you. Just the last few questions now, at the pre application deadline, the applicant submitted schedule 17 PPD 017. In in the scenario that the Secretary of State accepts that adverse effects on integrity cannot be excluded for kitty weight. Can the applicant confirm the schedule 17 will be inserted into the draft DCO to secure the kitty weight implementation and monitoring plan.

58:39
Grammatically, yes, ma'am. That that that is the that is obviously the intention is just the case of how you formally wanted that submitted into the application because obviously that was presented on it without prejudice. without prejudice basis. So it's the the applicants current position, obviously on the evidence that you've heard and the diminishment de minimis nature of the impacts that that is not something that the applicant would propose to include in the DCO at this at this stage.

59:08
Okay, thank you. Any other parties have any comments on these matters just discussed. We'll obviously be following up with Natural England regarding those questions as well. I can't see any hands up online or in the room. Okay, I'd now like to discuss the impacts on guillemots and raise a bill at the Flamborough and finally Coast special protection area. So again, Natural England state in their relative representation is until a fault in combination assessment is carried out on the impacts of gleam autumn Razorbill at the Flamborough and finally Coast special protection area. They're currently unable to advise whether they can rule out adverse effects on integrity is the act of planning to provide a full in combination assessment of the impacts of this.

59:56
If you borrow on behalf of the African, the African can confirm that we currently undertaking undertaking in combination assessments for the Guillain Barre unreasonable feature of the FFC SBA and the gilmont feature of the foreign islands as requested by Natural England and are due to submit a deadline one.

1:00:16
Thank you for that clarification

1:00:24
okay.

1:00:41
So the examining authority notes that the habitat habitats regulations assessment without prejudice derogation case ATP 039 only provides provisions for adverse effects on integrity for the Flamborough and finally co special protection area in combination with other plans and projects on the Kittiwake

feature. In the event of adverse effects and integrity cannot be ruled out for the Gilly monitor the foreign islands SPCA and Gilliam also raised a bill at Flamborough impliedly co special protection, Eric can the applicant provide a derogation case to provide to the Secretary of State with the necessary information to support a case ramping to should they conclude adverse effects on integrity for these features at the site?

1:01:26
Well, I certainly think ma'am, from our position that depends rather on the on the on the assessment result we'll go through the process and see what the outcome is before we before we look at then what the procedural steps are from there but those those procedural steps in the advice are well understood.

1:01:37
Okay. Thank you. Now finally like to discuss the habitats regulations assessment in relation to the literal cenote morale SPI in France policies for the Annunciation, natural England's relative representation notes that the applicant has screened out great backback golf from the habitats related regulations assessment in relation to this SBA on the basis of perceived low collision risk with turbines. Natural England advised that this species is at high risk of collisions with turbines and therefore advise that advice is sought from the French authorities in relation to the decision to screen this out. Can the applicant confirm if advice has been sought from French authorities in relation to the screening decision,

1:02:28
if you will, on behalf of the applicant, just another point to clarify on that matter. So with respect to alarm, we're gonna butcher it probably as much as yourself is that a literal sign or Marin, SBA is a breeding colony. With respect to the records of great blackbutt great black back goal within the rampion to area, it was primarily limited to only the nonbreeding season only. And therefore, this was one of the significant justifications as to why a likely significant effect could be screened out for this feature, as within the non breeding season, you get greater mixing of birds from wider colonies, and therefore any impact that could be contributed to that single SBA would be considered highly limited, and therefore was concluded as de minimis. With respect to the French authorities, the applicant can confirm that we did reach out to try and consult with the French authorities. Although we didn't get no response back as currently, but we will intend to pursue further.

1:03:30
Okay, thanks for that clarification. Are there any further questions or input from anybody any other interested persons on these topics? Either in the room or online? I cannot see any hands up. And I have no further questions. So that concludes this agenda item. Shall we go through the action points, please?

1:03:56
Yes. Mr.

1:03:57
Male, can you list the action points you've you've taken?

1:04:04
Yes, certainly. I noted sort of really only one action arising and then there were various things that were coming anyway at deadline one, so I'll I'll go through those. But the the action I noted was to come back in relation to the question that was posed about the content of the updated National Policy Statement en three and the extent to which the project engages with the advice in there on the design minimising collision risk. Then we have an updated sea wake. kit well KMP being updated by deadline one, and the in combination assessment for a glimmer on Razorbill at the glamour And finally coast in the foreign islands being also submitted a deadline one yeah

1:05:03
so don't don't have any anything else at all. Thank you

1:05:23
Okay, so we're now going to move to item 10 on the agenda, underwater noise

1:05:36
I think starting don't just get a handout to my colleague, Mr. Binney?

1:05:49
Sorry it might be helpful when members of the applicant team have settled that they introduce themselves given that there's a number of them and explain their their various roles on the project because that will assist you in directing questions as well.

1:06:38
Okay, so we're item 10.1 on the agenda, which is the impacts on fish, shellfish, marine mammals and divers from construction activities, including foundation piling and potential unexploded ordnance clearance.

1:07:03
So a number of documents relating to underwater noise was submitted into the examination at the procedure deadline, could the applicant state whether the new information has changed any of the conclusions on the underwater noise assessment?

1:07:15
Thank you, mom. Before we proceed to that, if I could just ask the the various members of the team to introduce themselves in their roles. Thank you.

1:07:24
Nick take from APM and I'll be covering the fish ecology and hearing aspects of any questions

1:07:32
to Mason from sub acoustic and I'll be covering underwater noise generally and modelling.

1:07:40
Rachel Sinclair from FMR, you consulting, marine mammal baseline and assessment of piling activities on marine mammal

1:07:50
Josephine Brown from Goby consultants covering UFO impacts on marine mammals.

1:08:01
Hey, thank you for those introductions. So, the first question is relating to the documents that were submitted into the examination and the procedure deadline. Could the applicant state whether the new information has changed any of the conclusions on the underwater noise assessment?

1:08:19
To my son for the applicant, the documents that we've submitted, I think we stand by and I think that the areas of disagreement remain with the the s&c B's.

1:08:36
Okay, thank you

1:08:39
by Tim Golding on behalf of the applicant, the findings, the conclusions of our assessments haven't been changed by the updated information that we've provided on background noise etc. In the most recent submissions,

1:08:55
thank you for that clarification. So, with regards to foundation type, could the applicant briefly explain the types of foundation proposed and what different methods of piling and therefore underwater noise could be associated with these

1:09:12
to Mason on behalf of the applicant, so, the primary methods for foundation for the wind turbines that are proposed are a jacket pile foundation and a monopile Foundation. The monopiles are typically much larger, and I single pile that is installed using a hammer in order to drive it into the seabed. The jacket piles are a collection of four much smaller piles, which will be driven again using a hammer and it will be requiring less less energy and therefore less sound as a consequence for each blow because The smaller pile size. Thank you.

1:10:06
So could the applicant, is it possible for the applicant to commit to one type of foundation to be used for the wind turbine generators? And if not, can you explain justify your allowance for more than one type to be admitted in the DCO?

1:10:23

Toby Lee on behalf of developer short answer is no. We require the option of both the monopile and the what we've termed the multi leg. But he's typically would be a jacket monopiles have typically been the most used solution for turbine installation, and it's generally the cheaper option getting into much larger turbines and deeper water which we have on this this particular site. Then you get to the point where monopiles may be effectively too large or beyond the manufacturing capability of the industry to make it viable. So that's where we need to look at the potential to use the the multi leg foundation. Is that a sufficient answer for you?

1:11:23
Okay, yes, that's understood.

1:11:24
Thank you. Thanks.

1:11:28
Stay in regards to

1:11:30
the worst case piling scenario. The marine management organisation states in its relative representation that there are discrepancies between the maximum duration of piling per day stated in the underwater noise impact assessment and throughout the environmental chapter eight a PP o four nine. Could the applicate comment on this is

1:11:57
to Mason on behalf of the applicant, my understanding of the confusion here is relating to the potential for multiple rigs to be present on site. Our estimate, if I recall correctly, is that one pile the maximum duration, whether that be a pin pile from the multi leg or from the monopole could be driven in four and a half hours. Although we expect that to be significantly less, that's an upper estimate for the duration. But multiple piles are likely to be driven within a 24 hour period and the 24 hour period is the duration that has to be considered for the for the guidelines that we use. If there are two monopiles being driven in a 24 hour period by a single rake, therefore, that's a period of nine hours of piling. If pin piles are being driven, that's up to four pin piles in the multi leg with four and a half hours per pile, which leaves a total of 18 hours up to 18 hours being driven within 24 hour period.

1:13:13
Thank you. Okay. So could you just confirm your worst case scenario for piling that's been presented in the environmental statement.

1:13:28
The worst case scenario is the durations, which I've just stated, although that could potentially be two rigs, each, in theory, being able to drive that much within 24 hours. Although I think that's very unlikely to actually happen in practice. The worst case scenario that we use and in reference to underwater noise also includes the parameters that we will model. The predictions which are primarily related to the blow energy of the hammer that is used. The maximum design scenario for the monopiles is up to 4400

kilojoules. The piles that are much smaller, the pin piles for the multi leg are excuse me, I'm just trying to find the correct figures that can be driven up to 2500 kilojoules. Again, these are the effectively the maximum capabilities of the hammer and typically they will the actual driving energies will be much lower than that and it is in the engineers interest to keep it as low as possible.

1:14:55
Yeah, thank you. So you mentioned to To in a 24 hour period it is that is that for both monopile and jacket foundations

1:15:08
for the monopile foundations, it is up to in a 24 hour period because the multilocus jacket foundations are all being driven within the same immediate area, they can drive up to four which is the average is a single jacket effectively

1:15:28
and is simultaneous piling proposed

1:15:33
where there are two rigs on site in that event there is the possibility of simultaneous pie. Okay, thank you

1:15:52
so, in chapter 11, the marine mammals environmental statement states that for operational noise impact 65 turbines have been used as this is likely to result in the largest noise can the applicant justify this statement with figures and or calculations

1:16:16
I think if we need figures and calculations, then we can provide a written statement on that. It's worth noting that in terms of operational noise, the noises that is generated underwater from these turbines is typically very low it is orders of magnitude lower than the worst case and noise levels that we are considering here, which is for things like piling. And, and typically, we would not expect one turbine to be audible was significantly above background noise by the time we reached the next one. And the noise levels really do not travel very far, because there's such relatively low noise. And the only points when they are likely to get louder are times when there's going to be high wind, therefore high waves and so the background noise level rises as well. And so the point of interest here, I think if if we're if we're being asked to justify 65 as opposed to any other number of turbines, in terms of the operational noise, it will certainly be present over a larger area, but they will the noise levels will significantly interact. So it's really more consideration of the area over which the turbines are present and operating rather than the actual number.

1:17:38
Okay, thank you. If I could ask you to take that away as an action point then to to provide the explanation in writing along with any pictures or calculations that you can that will be helpful. Okay, thank you. I'm now going to pass over to my colleague Mr. Rene to cover the UX Oh, clearance.

1:18:01
Thank you. Just a few questions on this matter of unexploded ordnance clearance. Natural England in their relevant representations suggested the applicant should revise and strengthen its wording of C 275. The use of lower order detonations to dispose of offshore UFOs using the deflagration method. How does the applicant respond to this?

1:18:37
Is Tim Goulding on behalf of the applicant? Essentially, we have stipulated exactly that process within the application documents don't have the reference actually to handle. But within that process, there is a hierarchy of actions and the first is to assess the UX Oh, for the potential for a low order or deflagration destination for the clearance. So I think we've we respond in our response to relevant reps and deadline one with details as to our approach to that but I think we feel that we have sufficiently catered for exactly that request already in the wording. Okay,

1:19:27
okay. Naturally, the note also that the maximum charge weight differs from the natural and best practice advice. In other words, 525 kilogrammes used rather than the 750 kilogramme, which has been used naturally and requested the applicant should use a maximum yoke so weight of seven and 50 kilogrammes in the modelling. As per natural England's best practice advice and should model the impact rangers have assembled and 50 kilogramme UX So, as the worst case scenario Mario, again, how does the applicant respond to this from that Finland

1:20:05
to Mason on behalf of the applicant 525 kilogrammes was originally modelled because that was the greatest size of UX. So that has been already found within the area and that wasn't rampion one. In order to estimate the underwater noise level that's generated by 750 kilogramme charge, we can remodel it, although I can tell you now that I the the basis of calculations on this is roughly an increase of three decibels for every doubling of of charge weight. So the increase of from 525 kilogrammes up to 750 would lead to roughly just over one decibel increase, which, on the basis of the noise levels that would already be present in our calculations from a 525 kilogramme charge would not represent a noticeable increase in the noise level.

1:21:12
Okay, thank you. Yes. Again, when you put your relevant represent the response to relevant representations to Natural England, if you could cover that, that would be very useful. And we'll see what their responses then. Again, looking from natural England's comments on this, they recommend that the applicant consider committing to a to no unabated high order UX, oh clearance, should any high order explosively be required? Can the applicant confirm that they are willing to commit to this? And how would that be secured?

1:21:50

Hi, I'm Tim Goulding on behalf of the applicant, I think we'll definitely consider that. And we can come back with a response on how that might be secured if we were to agree to commit or made that commitment. So yeah, I think that's our position currently.

1:22:08
I think is also worth noting. So as part of this is that you xo clearance does not is not authorised currently by the proposed the marine licence. So then there would be a separate licencing process and a separate securing mechanism to be gone through in relation to how you xo clearance is undertaken.

1:22:28
I think that's that's sort of covered in the next question. And but there obviously has been quite a lot of information already submitted with regards UX clearance. So it's, and obviously we've got these responses from Natural England, which is the source of some of these questions. The next one, though, is from MMO. They would like clarity, they would like clarity on if the investigation and the detonation of UFOs are included within the licenced activities, which I think is basically what you're mentioning. These are not part of any works order set out within the activities of sheduled, 11 and 12. However, draft you so marine mammal mitigation plan is proposed. And so could the applicant provide clarity on this matter, which I think is what you were doing? There basically wasn't? Yes,

1:23:17
sir. Absolutely. So so it's not covered by the proposed de marine licences in the schedules that are draft DCO, a further one will be required. Nevertheless, as it's a potential effect of the project, that's why it's being considered and assessed in the environmental in the environmental statement, and a protocol proposed simply to indicate how any mitigation that might need to be provided in connection with any likely significant effect would be put forward and achievable. Yeah.

1:23:48
Okay. Thank you very much.

1:23:56
That's the end of my questions on UX. So clearance. Is there anyone who's got any point that they want to raise for the guards that you'd have in the room or online? Okay, in that case, I look to move on to the next section of this item where we're going to talk about the impact of noise, particularly Perlin noise on fish species. The first of which I want to talk about is, is with a focus on black Sebring, which I would probably prefer to just assume from now on because there's only really see during the talk, this is the only sort of Sebring we're talking about. So, I set out in the ES chapter eight on fish and shellfish, sea being nesting areas with located within an adjacent to the rampion to offshore export cable corridor. Also near the array and cable corridors. is the king Mia marine conservation zone or MCs Zed? We're nesting seabream are a protected feature of this designation. Firstly, can the applicant explain briefly why the black seabream are sensitive to noise? When in this nesting season, it'd be a bit of an overview.

1:25:24

Nick take on behalf of the applicants, when they will be nesting they will be laying eggs and the males then protect those nests. And to so they guard the nests and therefore they'd be particularly sensitive to any behavioural impact. So largely mortal impacts and sort of recoverable injury and threshold shifts have largely been rolled out as part of the assessment. And it's largely focused on the mitigation measures have focused around the potential for behavioural disturbance, because we're the males to leave the nest, then the eggs could be predated upon or they could become still siltation increases on them, which will reduce their survivability.

1:26:04
Okay. So that behavioural effect would essentially could mean that the male would abandon the nest. Is that Is that correct? It

1:26:13
could leave for a period of time that could increase predation or ultimately it could abandon the Nurse. Yes, okay.

1:26:21
Yes, chapter eight states that there is a commitment to no piling within the western part of the rampion to offshore array closest to the king Mia MC said during the majority of the Black Sea being period nesting period which which is March to June, and sequenced piling in the western part of the offshore array area during July, to reduce the risk of significant effects from installation works on breeding black seabream. within or outside of Kings King Mia MC said, however, Natural England consider that pine in activities from the first of March until the 31st of July of any year inclusive, have the has the potential to hinder the conservation objectives are the king Mia MC said in relation to black Sebring, and therefore in their view, a full season of restriction is needed. So the question for the applicant is therefore, why do you consider there to be this difference of opinion between yourselves and Natural England? And why can the applicant be so sure that any piling in July is acceptable, particularly when the applicant agrees it is not appropriate to do so in the preceding month of June?

1:27:37
Nick take on behalf of the applicants. So the piling in March to June would be zoning. So there would still be a piling within the array but not within the 141 decibel behavioural threshold zone is considered that March June is the key sensitive period based on data that has been collected for the sites. March in the period of July, June. Males were found on the NASA at 9.4% of the nest. And then during the July period, that reduced to 5% by the 10th of July, and 0% by the end of July. And so it's felt that March to June is the key fob key period in terms of NES guiding for this site, and that the other noise abatement techniques that are being employed, including the scheduling and the zoning, as well as the other mitigation measures are suitable for that period given the lower risk on that month.

1:28:37
Okay. And is it not possible, though, that there could be variability in that going from one breeding season to the next? Obviously, the data has shown that your data has shown that there isn't much activity within July in terms of active nests. But could that change in the years that So, in the years that rampion two was being constructed, there was much more activity within July is that possibility.

1:29:12
In any fish, biological terms, there is always the potential for variability. Data has generally suggested that March to June was has been the key period. July has been sort of a new occurrence that has been discussed, but generally March to June is considered to be the most sensitive period.

1:29:28
So we're just going to ask actually is sort of their consensus of the breeding season for Black Sea bream would have been typically March to June is what you're saying. Inclusive? Not July and as is so dry is not I mean, naturally not seem to think July as part of the season but you're suggesting it's not typically part of that season is that right?

1:29:54
Data is limited because the species in terms of UK waters and their breeding grounds are fairly limited, and therefore there's not a great deal of research on it. In regards to rampion. One, it was largely assessed in relation to the March to June period with a six week piling restriction enforced. So July is effectively extension to the thoughts that have been considered in the past. But the data is limited to support either sort of that June or July cutoff. And so we're using the best available evidence and then using the other noise abatement technologies that are being proposed as that additional precautionary measure.

1:30:34
But if the the data is limited, are you taking a suitably precautionary approach when it comes to black sea bream, knowing that there has been some nest in July, that could be the variability variability where there could be more nests in a future years July? And you've got limited data? We would you on that basis? Do you feel that you're taking notes? Does the applicant feel this is taking us to some suitably precautionary approach?

1:31:06
I think we're basing it on the available evidence and rampion one had piling the populations and have it was only a six week piling restriction during rampion. One, and evidence shows that the Black Sea breeding populations in the area have continued to increase both during that period and beyond suggesting that there was no impact from that piling activity. And that we feel that due to the lower risk in July, that is a suitable evidence base that has been employed. Okay.

1:31:53
Maybe this was touched on with your last answer to do with the effects from rampion. One. But if there were to be adverse effects on from the piling noise on black seabream during this construction period during their nesting season, could that possibly lead to the seabream not returning to the area in the future for their spawning nesting within the Kingsman MC said in future years? Is it something that could sort of put them off if you like for for future years? Or is it would it just affect that particular time where that payment has taken place?

1:32:28

Evidence suggests that black seabream might show strong site fidelity, so it is likely that they come back to the same sites is unlikely in terms of fish behaviour and fish ecology, that it would deter them from returning in future years. And I would consider that it would just be an impact in that single season that would be felt by the population.

1:32:48
Okay, that's useful. Thank you. I'm just thinking. I mean, obviously, you've submitted a lot of information already. And we've got this strong concern from Natural England particularly. Is there further evidence that could be submitted into the examination to help convince Natural England and the examining authority that the full piling restriction does not need to include July?

1:33:25
I think we'll probably find limited additional evidence base. On top of what has already been considered within the assessments. There are some considerations around sort of the zoning that they have also raised in terms of the 141 decibel behaviour or threshold. And there's potentially further evidence and discussion that could be raised on that point that could firm up the zoning protocol. Okay.

1:33:52
Naturally in the divorce was stated in the relevant representation that they do not agree with 141 decibel threshold used by the applicant or that the noise level is a sufficient reduction in noise impact within the MCS ad to avoid behavioural impacts to the Sebring, the examiner authority understands that decibel level of 141 is based on research on European sea bass. Naturally in the state, there are differences between the sea bream and the sea bass. They don't exhibit the same nest breed and behaviours for example. Also, as I understand it, the Cebu noise threshold was concluded using laboratory type conditions. How does the applicant respond to this and is it possible within the examination to maybe gather more specific evidence for this actual species of black Sebring?

1:34:49
So in terms of many of the other hearing impacts in terms of mortal injury, etc, there are stated guidelines that can be followed that have specific thresholds for the different And hearing categories of species. When we get into behavioural impacts, that becomes a much rarer impact that's investigated especially when it comes to egg nesting in this instance. So the data is limited is also limited in particular for black seabream or seabream of any species, sea bass was identified as a suitable proxy because it was in the same hearing category as seabream being category three, so we consider that to be a suitable proxy. The we also consider it to be a precautionary data set that has been used because the particular study although in laboratory conditions, did show a very, very small startle response from the individuals investigated, and that it was extremely short lived and the individuals went straight back to their normal behaviour. As they say, there isn't the same nesting behaviour and you wouldn't be able to really test that even within a laboratory or a field based environment. So we consider the paper and the study that has been used to be the best and most precautionary from a proxy basis. The other study that Natural England have raised is around spreads, and sprouts are in a different hearing category to seabream and sea bass, they are known to be more highly sensitive to hearing and sort of in category four. And on that basis, we considered that it would be overly precautionary and that they don't represent a suitable proxy species. That particular study was also undertaken in not necessarily

suitable conditions as well. So both have their limitations in terms of the study that was undertaken. But we feel that the sea bass is more appropriate given the more close proxy to in terms of species hearing anatomy. Okay.

1:36:50
Okay. Just a couple of last questions just to look at all eventualities, I suppose, what would be the consequences to the proposed development of the use of a lower threshold, which could potentially be agreed by Natural England for the behavioural the I think it's 141? Isn't it decibel? If that was agreed at a lower threshold, which naturally we would see as maybe more precautionary? What would that mean to the modelling? Would it potentially mean more in the way of seasonal restriction.

1:37:27
So Natural England have raised 135 decibel instead of the 141, it would need to be remodelled in terms of what the impact would that would be, it wouldn't change the seasonality because that is that around the breeding season, rather than than the decibel threshold, it would change the zoning pattern. So it was an increase the area where piling couldn't be undertaken during that seasonal period, which would therefore limit the ability to undertake construction activity during the March to June period. Okay.

1:37:59
And similarly, what would be the result on the construction of the proposed development if there was to be the full seasonal restriction as advised by Natural England?

1:38:16
Toby Lee, on behalf of the developer, I think you also need to take into account the other hiring restrictions which are proposed. So in total, what that leaves is hiring restrictions with the exception of February, August, September, and October. So that's four months of the year. February is not great for weather. Yeah. And it's also a single month would not be viable for us to carry out an installation campaign in a single month, due to the cost of the vessels, mobilising the vessel, and d-mo by mobilising it, plus the likelihood we would get this work done if the weather was particularly affluent. So that would leave us with a three month period during the year to do installation work. We put the application together on the basis that we will be able to do foundation installation work on at least some of the site for the felt board 12 month period. And we've indicated it will take about two years to complete. So for us to then compress that work into a three month period over two years will mean we will get a fraction of the installation work completed.

1:39:40
I understand you've you've missed out some of the winter months and is that because the I think MMO particularly I've suggested restriction to do with the Heron breeding season as well over those winter months is that we've taken to Canada Yes. Okay. I've got no more questions. On the issue of like Sebring is there anyone else who wants to comment on this particular species? Yes, online. I've got Miss Maga.

1:40:20

Hello. Good morning. I just have a quick question. I wondered if you could, you could tell me what the maximum decibel level is for piling a 13.5 metre monopile would be

1:40:37
something the applicant could respond

1:40:40
to Mason for the applicant? That's a very difficult question to answer on the basis of the question that has been asked. It's a little bit like when somebody says something is as loud as a jumbo jet. It's only relevant under specific circumstances specific positions. Anything that is very close to the monopile, or any other pile, frankly, would of course be much louder than it is at a significant distance off the top of my head the monopile being struck by a hammer of this order of magnitude would be something like 240 decibels at one metre. Please bear in mind that's 240 Decibels are a one micro Pascal compared to 20 Micro Pascal's which is what you're used to. So do not compare that figure to a sound level that that you're thinking of because it's nowhere near that if the question who wants to have a specific question about that then please feel free to ask.

1:41:54
Now I do understand the conversion. Thank you very much. Thank you

1:42:05
it might be a good time for a bit of a break. I'll be going on afterwards to talk about a couple of fish species. And so say till break till half past or past 11. Okay. Okay.