

TEXT_ISH4_Session2_19012021

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00:04

Good afternoon, ladies and gentlemen, welcome back to these issues specific hearings for Can I just check with the case team that the recordings have started and that the livestream has commenced and that I can be heard?

00:20

Mr. Smith, I can confirm the recordings have started soon as the live stream and we can see and hear you. Thank you very much was hope. Well, I'm very grateful for that. So ladies and gentlemen, we are at the tail end of agenda item two, I have a standing the need to hear from Miss Gilmore, foresees. Once I've heard from Miss Gilmore, I will then return to provide the applicants right of reply. So let's get them on.

00:45

Thank you, sir. First of all, I endorse very much Mr. Bedford's description and definition of development. And I'm not going to duplicate. But what I do want to do is just say how disappointed we were to read the replies that came in in the deadline January the 13th, from mg, eso and Angie et. And also often to the question, you know, is there something that you would now like to reconsider in the light of the white paper? And also the Bayes review?

01:29

Their response in a nutshell, was, we're too far advanced, there's not enough time. And we find that response disappointing because it's closing doors. And yet, at the same time, we're hearing a very different message coming from the base review. So first of all, I just want to say and challenge that in terms of time, their timetable has been brought forward. I was not aware until I read their responses that the if I may just talk about East Anglia to specifically you said we were allowed to split them at this stage. East Anglia two's completion date has suddenly become 2024. If you have a look, and I wasn't able to send this to you, because I don't think we're allowed to anymore. But this picture here is from the original document.

02:32

Appendix, oh, three, eight, page 72 of the DC Oh, Appendix 9.8, section 10. This timetable has curiously disappeared from the online reference, you can only look at it if you've got a hard copy. That's why I wanted to send it to you. But on this timetable, it says very clearly that East Anglia to completion date, okay, is planned for in the late 2020s. The construction date is planned to commence in 2024. Can I just interject very briefly, again, what am I clearly what you can do is photograph it or scan it. If either of those two are available to you and then put it in? I think it's important if you're going to make detailed reference to it. If it's no longer available online, then do put it in

03:35

place. Okay, I will and I photographed it and I will do that. Thank you. So anyway, my point is a very significant change has taken place to the timetable. And by bringing this project forward to 2024. I wonder why this has happened. I mean, arguably, it is because everything now is wanted yesterday. But equally, it seems to me that given that the opportunity for a Pathfinder project is now available. The last thing in the world that should happen is that we run before we can walk. And so I would question this new timetable that's come forward. And I would suggest that that reason for a 2024 date should be questioned. It may be that the SES is recommendation, that one goes ahead with the wind farms, but one pauses on the onshore infrastructure would be a practical way forward. And it might if you like or reduce this feeling of pressure cooker, I'm really pushing to get something done before we're ready to do it properly. Now the good news, the good news is that in addition to

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The white paper and I think there are some highly significant points that have already been made from that. So I'm not going to repeat them. There was a letter issued on the 18th of December. It was a busy period, the 16th to the 18th of December. And this letter was written by the deputy director of base and the deputy director of off gem,

05:24

Tereza k me and Rebecca Barnett, respectively. And if you analyse and I'm sure that Mr. Ennis has not only analysed the white paper in great detail, but has also analysed this letter in great detail, it says at point four, these are the things that have come up out of research with stakeholders, that there are a number of perceived barriers to the development of MPI projects. And it has been proposed by a number of stakeholders that Pathfinder project should be considered. And in particular, point five environmental considerations, stakeholders highlighted the significant impact from projects connecting by 2030 on the coast of East Anglia and asked the review to address these immediate challenges, for example, through a dedicated case study, now, it seems to us that not only are suffered, but also Norfolk projects included in the base review and development means something that has not yet been built. We would suggest therefore, that one looks out what those barriers are. And again, there is new evidence appearing from the National Grid eso offshore transmission report, that there are opportunities for a scenario 2025 and a scenario 2030 that involves integrated solutions. And we would like to suggest that these barriers that people talk about, could be removed. According to Bayes. What I find interesting is that even scottishpower renewables even scottishpower renewables are asking the question, can we remove the barriers? I attended the National Grid? So question and answer session on the afternoon of the 17th of December, after the Bayes review had been discussed that morning. And Mr. Ricardo de Silva Alvar is from scottishpower renewables a Power Systems Engineer asked the question, is it part of the scope for the targeted innovation strategy to remove risk and incentivize developers to adapt new technologies in their project?

08:16

I think Ricardo de Silva revealed by asking this question, something that we have all been wondering if there is an option incentivize developers, because of course, National Grid ventures is a developer to be more innovative right now, rather than later, we could step change to better more holistic solutions

along the lines of mpis, or modular offshore grids, which are being introduced successfully in Germany, Holland, and Belgium. It seems to me that the base and off gem letter is encouraging and promising all of us to open our eyes to these opportunities. And that is why I say that the responses to your particular question from off gem where in fact of jam uses the word in flight, that these projects are implied to be in flight, we would say that they are not in flight, we haven't even got to the runway.

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So that is the first thing. The second thing I'd like to mention is that

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with respect to the opportunity for an HVDC solution, as Chris Wheeler has proposed, that there are solutions that may, in fact, be most interesting and relevant. If we look at those now, we could be the Pathfinder pilot test project, but I believe phase is

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actually looking for all it requires is for the interested parties to say they'd like to open that discussion. Thank you.

10:13

Thank you very much Miss Gilmore. Now just before I let you disappear in relation to the Afghan and Bay's correspondence, you refer to that quite extensively. And if that also can be put in for deadline five, that it will be very helpful.

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Thank you very much. Now, I'm going to return then to the applicant for concluding remarks. And by way of response to all of

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the submissions that have input. And I mean, what I would note that we are a little pressed for time. So again, if the applicant can do that job fully in writing, that will be much appreciated.

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And, clearly, highlights can be spoken to now. So Mr. Ennis.

11:11

Now, if I may come back to the infamous second column on page 80, please of the

11:19

paper.

11:21

I think one bit that is slightly been mistyped by those that have spoken is the bit and it's really been ignored in almost all the submissions. It's where early opportunities for code Corp exist. So that's a prerequisite for a Pathfinder, there has to be an early opportunity for coordination to exist. And I just

want to put two points at the current time in the context of the njsa submission submitted to this examination at deadline for they confirmed that the early opportunities workstream is currently at an early stage of scoping and option nearing,

12:04

the end it is not yet confirmed decisions will be made. And they do not anticipate a decision on the Pathfinders will be made until after the conclusion of the examination. So in terms of us getting any further information about what is anticipated to be Pathfinders, that's not going to come forward. It appears from the energy so within the examination, but I just did want to address Mr. wheelers option, because that, in essence was to combine the two project to become a single single source project, I just want to highlight that's in the final report of the offshore coordination phase one published in December. But there are aspects of relevance to this. First of all, on page 21 of that document, it identifies that currently HVDC underground, well, submarine underground cables are in use. But currently, the current technology is really restricted to about 1.4 gigawatts. And the ambition of the technology available is there's going to have to be a technology advancement to potentially move that forward to a higher capacity at a future date. So based on and this meets with the information that Mr. Green provided about that 1.4 capacity. And in my submission, all of that demonstrates is that suppose that Pathfinder suggested by se C's is in fact a double circuit DC connection with two converter stations, it simply doesn't meet the technology available, that would be capable of being delivered in a connection agreement at the current time. So that's the first point is is a clear indication that technology that suggested for a Pathfinder doesn't exist and my submission, but the whole point of a Pathfinder is everything has to exist, and you're moving forward to demonstrate matters. That is the case. The second matter, which again, would bear upon that particular proposition, is that item page 22 of the summary of findings, and that is on top of the technical issue. In terms of cables. There's also an issue with security and quality of supply standards that currently applied to the grid. The current Sq SS effectively limits offshore connections to 1.32 gigawatts normal loss of power in feed risk. And that was essentially demonstrating that as far as the grids concerned there are limitations of what they take from a single feed as it currently stands. Now, to be fair, the summary of the findings go on to say that is also likely that further changes to the Sq SS will be required for an integrated offshore network and these should be assessed.

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Asked and progressed as well. We're proposing progressing this at a future phase to work. Again, that's not a Pathfinder exercise. That's an exercise for a future one that seeks to try and establish technologies to look for the wider integration, that's likely to be a wider grid. And I just come back to that these relatively simple points from the review, which demonstrate that it simply doesn't get to this to say that at some point in the future, there may be something that becomes available.

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There is, in my submission when one looks at paragraph 80. And the requirement

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or the encouragement is the best description for parties in the process to look for these early opportunities, but they must exist. And that's the fundamental point is that nothing has been shown that exists. There's been lots of talk about potential future opportunities, multipurpose

16:02

grids, but nothing has been demonstrated to be suitable for Pathfinder for these two projects. And whilst, of course, any applicant will keep in mind, the fundamental point about this project is that it's actually state and I will obviously make

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submission on the matter. But I mean, this isn't just a project this is built upon supply chain work that the epics have gone on for years, the idea that you can suddenly just change projects, and it's an easy process. These are massively complex, large scale infrastructure projects that are born over many years of work, and also detailed iteration with the process. And equally, what cannot be also to force from these particular considerations is the future and how the markets operate. And you can't look at the good aspects as the as is recognised, but not understanding how the market operates and the regulatory framework. And in relation to all those matters. There is huge complexity in changing matters. And I, in my submission, the government white paper is very clear in its objectives. And I and my submission, nothing has been put forward this afternoon, which suggests of counters, the applicant seven says that there is a realistic Pathfinder for these projects. And equally in my submission, there is nothing in the government's white paper nor in the actions or the comments of other parties involved. That suggest that's the case either, under my submission, you can't just dismiss the information provided by parties like after they have been they are engaged, they understand what's going on. And in my submission, the evidence that they submitted to this examination is very clear on these matters. And clearly, given the time, I'll leave the rest for for written matters. But thank you. So

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thank you very much, Mr. Ellis. On that basis, ladies and gentlemen, I am going to just briefly check, I can see a hand from Mr. Wheeler.

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Before we leave this item.

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Mr. Wheeler other matters that you wish to put

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yes, no, I'm just very briefly The

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ministry says is well, there's a telephone ring somewhere I'm not sure that's gone up and says it will respond in more detail in writing to be sent today. And

18:48

then I would like to raise regarding the the energy capacity is that the government National Grid In fact, rather than government National Grid recently announced two domestic interconnectors between the northeast of Scotland and the northeast of England, both of which have been described as two gigawatt interconnectors using high voltage DC with bipolar technology, which is effectively a double circuit, high voltage DC technology. So

19:19

obviously, this needs further investigation. But at a broad level, and I'm not an expert in what can and can't be done with with trying to pick out the best information that is in the public domain. We are not so convinced that it cannot the 1.7 gigawatts cannot be achieved

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to investigate that in more detail. Indeed, I could ask the applicant obviously to pick that matter up in writing because they do need the ability to respond to your points. And I think, however, though, we should then draw this item to close.

19:56

So I'm going to move then on to the agenda.

20:00

Three and I will ask Miss Jones to leave that item.

20:08

Thank you very much, Mr. Smith. Yes, agenda item three deals with landfall and coastal processes. And in this item, I would like to cover the mount the outline and land for construction methods statement, proposed methods of installation, coastal change and the integrity of the cliffs, the potential impact on the Coraline crag, and less than two obra triple si a potential exposure of structures and remediation. However, we may deal with some aspects in between and so feel free at any time to come in on any of these topics. In the first instance, if I could just ask the applicant if it is their intention to submit any updated outline land or construction methods statements during the rest of the examination.

20:58

Prime grellus party outcomes It is our intention to submit an update. We need to update it, for instance, to reflect our commitment made it deadline V on the parallel doctrine of the second project that includes the HDD at the landfall for the second project, not only the onshore kilotons.

21:20

Great, thank you. And so in that case, the new the new statement that will commit to HDD because you've now said that you

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correct

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in response to issue specific hearing to action points, you state that in a recent desktop study was undertaken. Could you tell us when when that was undertaken

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gave me permission to

21:55

measure ticker. I like to design study in 2018. I just asked you to introduce yourself just for the recording, please. Yeah, dude, give it to him for applicants.

22:07

So we did a preliminary study in 2018. And that was carried out by Wardle Armstrong, and which indicated the feasibility of an HDD. And after that, we tried it a desktop study of art, and who further indicated in the PGS in the georgia.

22:29

Thank you. And so when you say recent,

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so, Okay, thank you.

22:39

So that that desktop study, was already part of the information submitted with the application?

22:46

No, the preliminary study of 2019 was in the application. Okay.

22:52

All right. And Will any of the desktop study or the evidence from those desktop studies be submitted into the examination? No, we're gonna continue working on the design of the HDD and with contractors provided engaged in charters was that work?

23:09

Okay, so why why why would you not submit the the results of the desktop study into the examination?

23:18

We don't use notice at the moment, we've got a filmmaker statement, which indicates our methodology.

23:24

Okay, I think from from our perspective, one of the things that we would like to ensure is that he if you're committing to HDD that HDD is actually a viable option at the landfill location and therefore, we would be requiring evidence from yourselves as to why that why that is and if that desktop study is part of, of your reasoning as to why you feel you can't commit to HDD, then we would expect that to be

submitted into the examination. Yeah, well, I mean, the method statement to deflate some parts of the desktop study

23:57

to demonstrate the viability of the HDD. Okay, thank you. So we will be getting further information on the viability of HDD. Yes. Okay, dude.

24:09

Okay. Can I just ask the council if they have any comments they would like to make on the outline line for construction method statement?

24:24

That's directly to the county council. The answer is no, because this is a matter that we already know.

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My thought.

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Mr. Tate, Madam, we are satisfied that subject to the amendments have just been referred to the OSI LMS does provide the requisite protection for the council

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through requirement 13, subject to one additional proviso relating to monitoring

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and that is essentially to reflect

24:58

what we see in record

25:00

And 37 At present, which does require reporting of any changes

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at the end of a period of 25 years in terms of coastal retreat, and remedial works or mitigation measures undertaken during that period. So it's implicit that we'll need monitoring, and we think that there should be a commitment to monitoring within the OSI LMS.

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And we can put forward some wording for that, but subject to that, and the changes that you've just heard, were content that the LMS is adequate. Thank you. I do want to come on to potential monitoring or potential remediation a bit a bit later, actually, come back to you on that if that's okay. Thank you. Okay. And finally, just before we move on, can I ask the applicant when you intend on submitting the revised out, outline landfall construction method statement?

26:02

primer girls, but applicants are targeting deadline six for that submission.

26:08

Thank you very much. I'm just moving on to the proposed methods of installation just to the applicant.

26:15

In the first instance, addition specific hearing to we did end up discussing that you were considering other trenchless techniques, but now, you have confirmed that you are committing to HDD.

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Will this be secured in the DCU?

26:38

parameterless for outcomes? Yes, that is our intention to submit through reflect that in the decio. refer back to Stephanie Mills, who can fight for these halls?

26:58

Definitely known for the applicant? And yes, at the moment, the DCR refers to HDD compounds and whatnot at the landfall. And so there wasn't an intention to make specific reference to HDD further than what's what's already included within the DCU. And obviously, the outline line for construction method statement, and will include the commitment within within that, but we can certainly take that point away though and and consider it. Yeah, can I just also ask the specifics and counsels opinion on on whether

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they are happy that h HDD is secured, or whether they feel that it should be within the decio as well.

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It isn't present firmly within the OSI LMS. The minimum it needs to be that and I understand that change is going to be made. Whether it needs to be as a requirement as well, is something that we will get back to if we may on that and reflect whether that is

27:53

necessary or appropriate, but it may well be. Yeah, that's only if you could do that by deadline. Five, please. Yes, we'll do that. Thank you. And Councillor fellows, I see you've got your hand raised.

28:11

Yes, thank you, madam. I'm conscious very much of the time this afternoon, but I just wanted to double check and check out with you. Are you asking the applicant and the council just to comment on A, B, C, and D? Or this afternoon in the hour so that we've got left? Are we just going to concentrate on a as part of item three or a and b? Because I certainly have comments on item three, A and B. And to some extent C and D. Yeah, no. Our intention is to complete all of item three this afternoon counsellor

fellows, so please do you know Raise your hand if you do have anything to say? And you're more than welcome to come in at any point?

28:54

Okay, um, I thought it might be because I'm having some internet connection problems as I've been but did I hear you, madam, that you've already moved on to be you finished talking about a? I did but it is perfect settle? If you would like to read something under a

29:11

Would you like me to do that now or after you've finished talking to our producer? That's fine. Okay. Um, thank you very much Marianne fellows over town council. So with regard to landfall and coastal processes, this is something that is very much going to impact our local communities. Well, Brett, as you know, is just down the coast south of the landfill site. And many of our residents, those that work in the area and visit the area do access the landfill site and would be affected adversely by Coastal processes.

29:47

In terms of construction methods, there are several outstanding questions proposed by natural England in their representation in the first round of representations, and although

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I diligently tried to look through the website, I couldn't see that the applicant had answered all of these. So I think there's a number of questions raised still unanswered. And I particularly looked at the scottishpower, renewables code of construction, or code for construction, because it includes sections on how they're going to work with the local community, setting up a local community liaison officer, etc, once Construction began. But I particularly looked at things like the working times, and how how there's going to be contingencies put in place if a piece of work is started. And it has to go beyond the 7am to 7pm, timeframe, and overruns, I also looked at things like

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links to the impact that we're going to be talking about tomorrow, which is noise like vibration. And so it's quite hard to just look at the construction methods for the landfill, because it does link into so many other things. And it also links into what we're going to talk about tomorrow, which is impact on social economics, and the health and well being of people. So I still think there's a lot of unanswered questions about the construction methods are going to be approached. And I do rely heavily on Paul Patterson, one of the officers that's also in attendance this afternoon, who knows very much about the technical makeup of the cliffs and the area and the potential harm and hazards that could be caused by this application.

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With regard to installation,

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I think there does need to be mentioned also made of the links to size We'll see. And the fact that the size of see proposed site is going to be further to the sea than size will be is currently and how any impact on what is proposed at the landfill site may coincide with other construction in the area.

32:03

I've got some comments on See, but I'll stop there and hear from others perhaps and then come back in classic, yet that's fine. Allow the applicant a right of reply to anything that if you'd like to make some of the matters that you have, and touched upon counsel fellows will be covered in the continuation of this hearing tomorrow when we do deal with noise. And light, like you said, with the applicant like to respond to anything that Councillor fellows has raised.

32:36

parameterless for outcomes, a lot of those points actually touched on point C that we will cover enter your course today.

32:45

Really, we'd like to stress the headline off the trenchless technique after HDD and particularly landfall. The reason for the choice of HDD is to avoid those impacts on coastal processes. And again, on point C, we can expand on our further with our colleague, Nick.

33:03

Thank you very much cancer fellows, your hand is still raised, if you got any further points to make or is that still from before? Thank you.

33:12

Okay, I'll just return to Section B then

33:16

to the applicant did issue specific hearing to refer to a comment from natural England that documentation evidence and evidence presented in other examinations for offshore wind along the east coast showed that two kilometres is not viable. And we asked for evidence that this would be viable. And you did refer

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to one example I think in your response to the action notes. Do you have any further evidence that you can show us or talk to us about that? A two kilometre HDD is viable.

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He gives him for the applicant. Yeah, we have seen projects and wind farm projects across Britain and Canada by ourselves

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and other developers in East Anglia one each time the three year Coast Guard a dark offshore wind

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compatible nature and extent

34:17

revolta Hong Kong.

34:20

Hey, I know you carry on. We've also come to you from a landfill contractor includes there's no reason to state that would not be possible to undertake landfill hdds on the scale and visitors on this project.

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Here's a good deal of information regarding the potential geology with the drills without having to contend with. So that's a backup from an international landfill contractor. Okay, And is that something that you intend on submitting into the examination forest?

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Yes. Yes. And could we have that by deadline? Five, please. Yes.

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That's great. And in terms of the distance you're committing

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To

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HD under the Coraline crag, and then obviously when it landed missing the triple si as well, what what is that distance? What what's the minimum distance that you would need to avoid to avoid both of those? So that's 1500 metres but could extend up to 2000 metres. Right, it's 1500, the minimum that you need what you could do here. We've also looked at moving the Josiah to the south to avoid the corner, in fact.

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Okay, and what would that distance be?

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That that'd be between 15.

35:38

Okay, thank you.

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Are there any other parties that would like to raise any matters in relation to the proposed methods of installation?

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No. Okay.

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Mr. Chandler?

36:00

I'm sorry, I was a bit late. They're raising my hand.

36:03

I know that the last comment there that they're looking at moving the drill site further south. Do we have any? Or can we have some indication as to where that's going to be lost if you've got a rough idea of where it's planned to be at the moment? And obviously, if it's

36:21

moving into other areas, we would we would obviously object to them to potentially object to them and ask the applicant to confirm it.

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I will and

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does that it moving south does that still come within the area shown on bigger 7.7

36:44

Mr.

36:45

Brian McGrath without Ken so I was just looking for the trigger reference. So yesterday the figure 7.7 but towards the like the point chart area. So it is all about microsite and within that area, so we are absolutely within our limits. And we are still targeting punchcard area. So within the figure 7.7. So it's moving south within that PunchOut area. Yeah. Mr. Chandler, does that answer your question? Yes. Thank you.

37:14

Thank you. Thank you.

37:18

Okay, I'm going to move on to item C, which is coastal change and the integrity of the Cliff's to the applicants. First, in your response to issues to the queuing to action points. You state that in 2021, you're going to undertake ground investigations to determine the geological characteristics of soil types to ensure that HDD carry can be carried out safely. Can you confirm when it is you intend on doing those tests?

37:52

Dickerson for the applicant and currently other programme for April 21.

37:58

And should be a 68 cooperation with boreholes planned offshore. In addition, we'll have onshore boreholes being carried over as well. Okay, so not during the course of the examination.

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No, no. Can I ask why those investigations were carried out prior to or during the examination?

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For there weren't? Yes. And we need to be working in April or May for the weather conditions.

38:30

Okay. And, and so it couldn't It couldn't have been done prior or during the examination last year?

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No, no. Okay. And is there a chance that these investigations might show that HDD isn't viable.

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And there's a small chance or desktop study indicates that we do have a viable HDD, but there could be a very, very small chance, we will change the way we would conducted the ACD more than we would change the entire methodology. We could change the baby drill and the drill mode. And rather than changing a HDD fluid, okay, so if there's a small chance that those investigations do show that HCD isn't viable, then what what are the implications for the project? We'll have to make our Bible

39:26

okay, but you just said that there's a small chance it might not be viable. So my question is where what what? What would be the implications if that's more risk came to be true? It's all very detailed design and detailed installation work. It will be an HDD.

39:46

Okay, I'm sorry, I don't think I don't think that really answers my question. So you're saying that those investigations there is a small chance that HDD wouldn't be viable and obviously, you do rely on HDD to avoid the Coraline crash.

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And to avoid the lesson to all grow triple si. And I think my question to you is, what would the implications be? If you could, you know, if those investigation did come back to the HDD wouldn't be possible at the landfall location?

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Absolutely. Is it by comment? There's a small chance.

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Right. So you're saying that there isn't any any risk that those those investigations so that there isn't any, there isn't ever

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a situation where HDD isn't safe to be used, for example, for I'm thinking of the fragility of the clips, for example. So there's no, there's no chance at all, that those ground investigations would come back and show that the soil type or the rock type wouldn't be capable of withstanding any vibrations from the HDD no ebridge work in any way. But the methodology would have to change perhaps. Okay, I think I think probably, we would need a little bit more from from you to, to convince us of that. So perhaps by deadline five, you could put some evidence to us to demonstrate that there isn't any chance of those investigations, showing that HDD wouldn't be viable at the site, or that it would always be the case that it would be viable that but you would just have to look at different options of installation.

41:28

Yeah.

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And my concern there is that at the moment, because you haven't done those ground investigations, particularly onshore, that there isn't any evidence before us to show that the HDD wouldn't have any impact on the stability of the cliffs. Because we don't have the desktop study evidence, and we don't have any ground investigations that have actually taken place. So at the moment, we can't say that the HDD wouldn't have any impact on the stability of the cliffs.

42:00

Brian McGraw sport outcomes. Within the art lane landfall construction method statement, we do set out the measures that we will employ to ensure the integrity of the cliffs. As Dave mentioned, the the investigations that we're undertaking this year, it's all about the detailed design of the horizontal directional drilling. So, the depth below the cliffs that we need to maintain in order to protect the cliff integrity, drill bits, the actual specific drill bits of the HDD itself, one is the specification of those drill bits that contractors will then need to specify and build into their

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tender documentation and detailed detailed design method statements. So, it is very much for foremost in the mind, ensuring the stability and the measures to represent find within the art line landfill construction method statement will secure that they cover undertaking vibration monitoring prior to construction, feeding up back into the the detailed design of the HDD, so, we can ensure that the the vibration levels are contained within the drill head itself and not immediate area they don't percolate to the to the cliffs. So So, so is there a material

43:19

factor and clip stability and of course, during the hitch D operations itself, we identified that we will be undertaking vibration monitoring continuously during the hedge to the operations and we will have alarm level set with enough to assess so that the when the engineering calculations come back during

the details that are established during the detailed design stage, if a vibration level is achieved, a level alarm is established and then the drilling operations are real or other tailback or they're stopped in order to investigate that in more detail. So they the outline method statement that we have submitted certainly covers the cliff stability aspects, and that will be expanded upon further and the final method statement which is approved by Barbies. I think my next question was I think we would have from everything that's been discussed this morning, I think we would either ask for that information within in the method statement or we would ask for a note from yourselves fully explaining why without those investigations or an including the you know, the information from the desktop studies why you consider that it is viable, and it won't have any impact on on the cliffs. I think we just need more information from yourselves along that so either all's fine if you want to put it into the method statement or if you want to put a note to us, which whichever is preferable.

44:38

Yeah, I suspect the outline land folder. Structure method statement would be the ideal application for that. In terms of the deliverability of HTTP, we're absolutely confident in the deliverability of the hitch to the at the landfall that's based on engagement with or leading HD contractors and based on the delivery of the information. We

45:00

an undertaking such as the BJs surveys are experienced in East Anglia, one of these days of their free drilling and similar similar environments. And of course, just slightly further north. We have calibre Greta Gabbard offshore wind farm. So we have also hitched a deed under the cliff under the beach area, not as far offshore as ourselves. But nevertheless, they've demonstrated that the ability to HDD through the cliffs on the beach is deliverable. Yeah. Thank you. I think I think I understand, you know, what you're trying to say to me, I just think that this is all information that should be submitted into the examination.

45:40

For this topic, please. So that's deadline six, you're going to submit the Olympics that Hey, thank you. Okay, before moving on to East Suffolk Council have anything they would like to comment on in relation to coastal change and the integrity of the cliffs?

45:57

Could I ask Mr. Paul Patterson, the senior coastal engineer to speak to this please.

46:10

Paul, fasten them East Suffolk Council, senior coastal engineer,

46:14

the the reports that have been produced by the applicants that consider potential for coastal change over the operational life of the asset have been prepared, I think in in parallel with or involved in consultation with ourselves and other coastal management authorities. And we are satisfied that the forecasts that the conclusions that these reports have reached are reasonable and robust.

46:44

And that we are comfortable with with the findings of the reports. And we look forward to seeing the further detailed design information that shows how that risk data will be applied to the final design of the the position of the

47:03

the transfer Bay and the line of the HDD.

47:08

Thank you very much, Mr. Patterson,

47:11

and cancer fellows. Did you have your hand raised?

47:19

Yes, thank you, Miss Jones, appreciate the opportunity to reply. So Maria fellows, on behalf of all retain counsel.

47:28

First of all, with regard to the integrity of the Cliff's a bit last words regarding

47:34

what's just been said by the applicant, and the investigations are not going to happen until after this examining authorities process is concluded.

47:44

You will be aware that tragically in April 2018, there was a huge Cliff collapse, following high tides, excuse me, resulting in a fatality.

47:57

This was caused, we think, by gap in the crests on banks out at sea, allowing strong winds, strong waves to hit shore.

48:07

And there was a survey in 2006 showed that there was periodic storm erosion along this area of the coast, with large sections of the cliff being weakened. And there's also many studies of coastal changes and size, we'll see EDF has also had to take this into account, and is building its platform or proposed to build its new platform for its DCR application for size will see much higher than previously intended.

48:38

And I'm concerned it feels a bit too late to have alarms going off if drilling has started, because it could do irreparable harm to the cliff, even a small amount of vibration and damage and not to commit to tests before the examination finishes. It is not acceptable. Because the community or the town council, our surrounding community, we don't understand what vehicle or mechanism will we have after the

examination process has finished to engage with the applicant when it does all these different negotiations and investigations and new technical information, because we can't share concerns after this hearing has taken place. And the decision has been made.

49:24

And also the applicant referred to successfully using HDD to to in other projects. But other projects to the north of us don't have the same Coraline crab, or the overlays and sssi. So this is a very unique part of the coast and very fragile.

49:45

So in terms of the integrity of the cliffs, and potential harm to close through processes, we remain extremely concerned. We're not satisfied with the evidence or the information that's been presented and we feel there's a lot more information

50:00

We need before we can even comment and coming up deadline six makes it very tight, but in the process to do so adequately.

50:10

Thank you. I'm just going to hear from Miss Andrews before returning to to the applicants. Miss Andrews.

50:25

Hello.

50:27

I have unmuted Can you hear me? Yes, I can hear you and see you miss Andrews.

50:32

Thank you very much. I'm very grateful to you for all the questions you've been asking. Because my concern is about the integrity of the Suffolk heritage coast. And any damage to the cliffs could actually damage the longshore coastal evolution of this very fragile coast. I noticed that the applicant had chosen the section on the coast.

50:55

They're going into it best fits the need to avoid size well past stations and the concern reasonable concern for the seabed of Coraline crag. But I happen to have chosen one of the most vulnerable points along this cliff.

51:10

It was only when really the examining authority and others like natural England ask questions that any details came out about the cliff. I'm slightly concerned that there doesn't seem to be enough knowledge as to exactly what kind of Cliff land is being dealt with. And that's one of the problems of doing case studies. Is Cliff consists of it's a very confer I walk over it frequently. And it's a scenario very confused,

partial sedimentary layers reflecting the coming and going of the sea in geological times on the edges of marine base. And it's complicated to further by Uplift on top of it as a modest layer of glacial till and sand and gravel. This overlay is what's called Norwich crag formation, which the British geological survey shows. But the problem about the word crag is it's a 19th century term, which misleadingly suggests it might be a solid rock formation. But it's not. It's a name given to a deposit of fossil shells and any Shelly sand or gravel. And here in fact, you can see it as you walk along the beach. It's a mix of yellow and brown sand banks. But no strength against crashing see as how some fellows commented,

52:23

I think it was 2017 on Southern seven precisely where the applicant wants to go in.

52:30

There was a lot of work for the landfall after a series of storms, some something like 20 feet of the southern end of the applicants sector stretching from inland to the coast itself. After that series of storms. It just slumped in no notice at all absolutely instantly, and sadly killed somebody below that an orange crab this red crag and below that there's the Carroll Coraline crag.

52:57

So the landfall is proposed through this incredibly soft layer of mainly sand and gravel using HDD. Now it's understandable that the HDD will come up at five metres inland because after all, none of us can deny it the coast is moving inland. up what and I think this follows up the questions you are asking an examiner.

53:21

What's the issue? The issue is not whether it should be 85 metres, but the issue is Can this soft ground structure withstand tunnelling with a series of ducks through it with the volume of material to be extracted, the impact of tunnelling itself and the time taken?

53:38

We don't know how many exactly cables there are to be going through, people seem to seem to add and multiply, not multiply, add them together and everything else but there will be a substantial amount of sand and gravel to be taken out. On top of that.

53:55

The HDD methods are still not certain, as you have rightly pointed out. And

54:02

we need evidence that no substantial damage will occur if this method is used, and it simply isn't there yet.

54:11

Yes, it's acknowledged that provision will be made for monitoring and managing vibration.

54:18

problem about HDD even Well done, it seems drilling operations are inevitably take a long time. They sometimes involve continuous 24 hour working periods, and they will be spread over two years. Now given a non rock like composition of the land, even modest or small vibration over a long period is likely to weaken the natural loosely packed around. If this era is de compacted and loosened in this way, the advanced inland of the sea may not be an average of point naught one a metre a year, but it could be accelerated as landslips such as the one that killed somebody will occur very easily when

55:00

ashore is attacked and shattered by waves on top of the regular winter surges. We'd like to point out

55:08

the applicant mentioned that it seems fine because they went in through the Gabba Gabba cables went in via sighs Well, the problem about this wretched crag formation is that it varies hugely. And probably what was there is not the same as on top of the cliff. And you can probably look at that by seeing the cliff profiles themselves are different.

55:32

And

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so what I'm what I'm my concern is, and I think you've already there is that, given the nature of the land forming the cliffs, and any interference with its composition, is going to could make a huge step change in erosion with dramatic changes to the coast shape, and coastal flows, who which thought ness and obrah, and the areas to the south will have no time to adjust. The problem is there is no way once lost that that cliff can be restored. On top of that, I know it's not before you but it's a consideration. there appear to be something like seven other wind farms with plans to come in on the back of these two. So how many more ducts are to be challenged through this delicate cliff. And

56:18

I don't think these fears might be could be should not be dismissed as not proven. The respected company Mott MacDonald said in a report in December 2014, on coastal management strategy, that thought nurses located in a zone of relatively high wave energy, and improved understanding of the features is required. It said a bit more, but you obviously don't have time to do that. So I would just like to conclude that

56:45

a state that I'm concerned because there doesn't seem to be enough detailed thinking behind what they're going into. But the statement and the applicants documents says that it will not result in any direct or physical change in the coastal cliffs, it seems to me that is still open to question as a sustainable conclusion. And thank you for listening to me. Thank you very much, Mr. Andrews, for those comprehensive submissions there. I think that some of the points that you've raised, are will be included in some of the information that we've requested from the applicant today.

57:21

Would the applicant like to respond to anything that Councillor fellows Miss Andrews has raised before we move on to Section D?

57:32

Thank you, Madam is Nick Cooper on behalf of the applicant? could I possibly deal with the matters that were related to coastal processes and the features of the coast and the nature of erosion and then perhaps hand back to my colleagues to deal with them? What I think was probably the crux of most of those comments, which was the installation effects on the integrity of the clips if there's anything more to add on that but beyond what they've already stated. So regarding the coastal processes,

58:07

coastal change coastal processes and matters that were raised by not only today, but by many community stakeholders, as well as EDF and the coast Protection Authority. So the topic did receive very robust consideration at the outset of site selection of the landfall within the landfall corridor.

58:29

We use historic maps and data, historic maps going back to the late 1800s contemporary survey records and further information that was kindly provided by EDF investment agency, the local coast Protection Authority. So an understanding of the coastline here was built up.

58:49

There is a need indeed to understand the coastal system and how it functions over time, looking at the key controls the linkages and interactions that exist, and that was undertaken, and that has informed appendix 4.6 supporting the environmental statement. And in particular, it has looked at three things the influence of coastal management and coastal change on the selection of the landfall location. The construction related effects of cable installation on the sizewell cooling water infrastructure, and the effect of cable burial on the baseline, seabed and shoreline processes. And I think considering those matters at the outset, is actually an example of good practice, because it's helped inform selection of a location within the corridor and selection of installation methods, which go as far as I believe is practicable in reducing potential impacts on coastal processes.

59:53

In particular, putting the landfall towards the southern end of the cable corridor

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is

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A comparatively stable or more stable area of coasts compared to the areas further north and further south of thought mess.

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Notwithstanding that, I acknowledge that storms do cause change. And it is also the furthest away from the size as well calling water infrastructure. And it also enables the Coraline crag to be avoided by using the HDD technique. And I think I would sort of conclude that that by just sort of summarising that, you know, I think robust assessments have been made, they have helped him form the setback distance of infrastructure on the cliff top,

1:00:43

the sea would extend of the breakout point of add to minimise effects on coastal processes. And that information, you know, has been shared with with various bodies and inputs have been made as that aspect has been developed.

1:01:02

And I think the other year The other thing about the the nature of the erosion, I think reference was made to annual average erosion rates in probably from some of the work that's been presented supporting the environmental statement. And it is perfectly acknowledged that the coastline does not necessarily erode in a nice even way year on year, there will be periods of relative stability, and then there'll be periods where particular storms induce quite notable slumping and change in one particular event. So I think some of the things that have been said there have been considered, they are not necessarily in the documents that were being referred to earlier. But they are, as I say, dealt with in appendix 4.6 of the Yes. And it may be at that point is perhaps a hand over to my colleagues, if there was any more to add on the integrity of the cliffs through the installation approach.

1:02:06

Thank you,

1:02:09

Brian Morales for napkins. Thanks very much, Nick.

1:02:15

In terms of the hitch the process itself, it is a very very controlled process that is undertaken. The reason we have adopted the HDD technology is so we can drill down and get under the cliffs without causing any vibration impacts on the cliff on the cliff system get onto the beach to avoid interacting with the beach and under the intertidal area out avoid the car lane the physical extents of the of the car Lane Craig. So, all these measures are pointing towards the use of HDD has been an optimal technique in order to secure the delivery of the after landfall.

1:02:50

In terms of the the process itself that detailed the same elements found is what the survey has been referred to earlier are seeking to verify it's verifying the detailed saying exactly how deep Do we need to go onto the cliffs exactly how exactly where's the punch out area within the punch chart, soon identified within figure 7.7 of the often environmental statements. These are fairly much tried and tested techniques they're used, they're used, the entity techniques are used globally, very successfully. And I say they are very, very controlled measures, we can control the speed of the drill bit, we can control the depth of the drill bit. That's all established during the detailed design stage. And the reason we can do

that is to ensure that were approved appropriate depth below Cliff in order to ensure that there's no vibration impact on the cliff.

1:03:47

Thank you very much Mr. McManus.

1:03:50

counsel fellows, do you have some new points you would like to raise in relation to 3d scene before we move on?

1:03:58

Yes, thank you, madam. And I'm very kind for your indulgence. As you know, I'm just an amateur. So getting my head around things sometimes takes a little while at the moment. So I'm, I was looking through papers and colleagues have been doing so as well. And although the offer of a connection by national grid is subject to a coin process, you know, and sort of sighting of the substations is subject to that. What about the selection of the landing point? And how is that arrived at I know we've got certain, you know, constraints with size we'll see with the Coraline Craig. But is that public because I think we should be able to read that and, and sort of interrogate that please if possible, and where is that published? Thank you.

1:04:47

Okay, I'm not gonna respond to that please.

1:04:58

Now prime across for debt consolidation.

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information that is contained within our environmental statement, chapter chapter four. And there's also a coastal processes chapter within the in the environment statement, which I believe is chapter seven.

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Thank you very much. Miss Andrews. Do you have a further point you'd like to raise in relation to three?
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Yes, yes, please.

1:05:23

Um, I'm,

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I'm concerned because I don't think the points that Marian and I were trying to make are being heard. And one of the last comments was

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everything being done deep for void by vibrational. I do understand. And well, under the cliff is one of the diagram shows it's 10 metres on the cliff. My point is, is the whole of the land between the edge of the cliff and the 85 metres inland. All that is still the what's called the knowledge crap, but it's still basically a hard sand dune. So the

1:06:03

right back into the coast, the home of that section is fragile. And one of the reasons I've been concerned and try and taking up your time is that although one of the earliest speakers from the applicants kindly said it all in, I think it was section 4.6. It's precisely because it isn't in 4.6. I don't think there's a sufficient awareness of quite What strange and crazy

1:06:26

Europe geology there is in this crag cliff. And it is highly vulnerable. It's the one one bit that keeps falling worst is the bit near where you want, where Africa wants to go in. So I very much look forward to hearing further what's the applicant in reply to your questions. Thank you. Thank you, Miss Andrews. Can I just confirm then with with the applicant in the extra evidence that the examining authorities are asking you to put to us at deadlines six, that that will include evidence that that whole distance from landfall to the exit pits will be will be covered.

1:07:09

macros for the outcomes? Yes, that will be covered. Thank you.

1:07:16

Okay, Miss Andrews, do you still have your hand raised from before?

1:07:22

Thank you. And just before we move on to item three d we do want to

1:07:30

finish off item three, so that we can adjourn on begin tomorrow where we planned on our agenda. So we are going to press on until 530 will that cause any problems for anybody?

1:07:45

I'm not seeing any hands raised. So I will continue on to 3d this afternoon, which has the potential impact on the Coraline Krug outcrop on the recent over Triple S i i know EDF have requested to speak on this item. Would you like to come in at this point?

1:08:07

Hi, yeah, thank you Madam.

1:08:10

I am here on behalf of EDF energy nuclear regeneration limited to the owner operator of the size will be nuclear power station. And NGLS. primary concern on this point is that the protection afforded to the

site offshore by the coralayne crag between sizewell and thorpeness should not be compromised. And that relates to the continued to ensure the continued safe operation of the site will be nuclear power station and

1:08:37

the commitments that ngl is seeking in respect to the Coraline kragh to ensure that its concerns are addressed and are several

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ngl is seeking that SPR. The applicants submit commit to carry out geophysical surveys to confirm the current extent of the Coraline crag formation prior to carrying out of any of the work six and gel is also seeking that the HDD PunchOut shall be to the south of the coralayne crag and that the HDD PunchOut should not be within 100 metres of the extent of the Coraline crag which is established following the carrying out of the geophysical surveys.

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In addition, Angelica is seeking to be consulted as part of the landfall construction method statement in respect to works number six. And again this is to ensure that the price development doesn't adversely affect the operation of the size of the nuclear power station.

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Irrespective

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event of these points are agreed by the applicant, which we are in discussions with as part of our engagements on the statement of common ground and which we're still waiting for confirmation of irrespective a number of the points. Then ngl is seeking that these be secured through the inclusion of protected provisions on the face of the order for NGOs benefit and also an amendment to requirement 30

1:10:00

Gain, which is the land for construction method statement to ensure that ngl is consulted in respect to words number six. And the reason that ngl is seeking that these points be secured by way of protective provisions and amendment to the requirement rather than through updates, the outline application documents is to enable MDL to get comfortable that these points are legally secured and that they will be delivered and that they are enforceable to ensure that the continued safe operation of the power station is secured. And we have prepared a set of adrar set of protective provisions which we provided to the applicant in December, along with the amendments that were seeking to the requirements. And the these cover the protections that we're seeking in respect to the coal and crag but also to the size will gap road that we'll talk about tomorrow.

1:10:49

In addition, also the to protect the quality of the size will be cooling water intake there, Mr. Cooper, referred to a moment ago. And also to include a buffer zone for the size will be offshore in

infrastructure. We are still awaiting comments back from the applicant on these documents. So the amendments of the requirements that we're seeking and also our draft form protective provisions. And obviously, we welcome further engagement on these points by the applicant to ensure that these points can be closed out and NGOs concerns are adequately addressed.

1:11:21

Thank you very much just before I ask the applicant to respond to some of those points, is it your intention to attend our issue specific hearing six, which was the decio? Just next Friday? Yes, yes. We do intend to attend that as well. Yeah. Does obviously I think some of those points that you've you've raised today should also be raised at issue specific hearing six as well. Yeah. Thank you. Can I ask the applicant to respond to ETFs points there please.

1:11:54

Brian mcgillis for the applicants, the key moderators by science will be related to the safeguarding of their clean water infrastructure in near shore which is a jewel north of landfall location.

1:12:05

To summarise size will be requested that delicates avoid interaction with their title restricted shallow water area, which is defined area and avoid the existing

1:12:18

site avoid exiting our punch note the hitch D within the car Lane Craig seabed feature, as has been mentioned, have requested protective provisions to protect their interests. To address these matters. The outcomes are considering the implementation of a HDD punchcard exclusion zone, which would be based on the physical extent of the carline crag as shown within figure 7.7 often final statement, and I would include 100 metre buffer to allow for slight variations on the physical arc crop and also FSL transit and Bluefin exclusion zone which is based on the science will be tightly restricted water area so that the find area would essentially be a facile transit and loving exclusion zone, we are quite quite a bit safe to size will be infrastructure.

1:13:11

And in terms of how we propose that those measures are secured once we are still discussing the mechanisms websites shall be established in a position that security news measures within the art line landfall construction method statements will be an appropriate mechanism. But as I say we are still in discussion with size will be on that point. Okay, and so when you say you're you're considering including PunchOut exclusion zone and to include 100 metre buffer, what do you mean by considering?

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So, we will include those areas within the art lane landfall construction method statement, that considering is really a nod to the fact that we are still in discussions of science will be over whether or not is acceptable to sizewell B. in their conscious, they're

1:14:01

pushing the protective vision

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lane, whereas we're pushing the dark line on full construction methods to complain. Okay, and then do you intend on having that submitted deadline six. Right. Okay, and one of the other points raised was up to date geophysical surveys of the Coraline crag prior to construction.

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Is that something that will that will be included as

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Bremmer grounds for the applicants that is absolutely something that we will be undertaking prior to construction. Again, there's a detailed design package measure. Once the the the the the exact extent of the carline crag is established, then we'll feed that back into the HTV design process. And we don't expect any variation from or any material variation from the extent of darkrp shown in figure 7.7 often final statements but certainly the

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The pre construction surveys need to be undertaken to fit into that detail, same process.

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Thank you very much. Mr. Patterson.

1:15:13

Thank you. Paul Paterson, senior coastal engineer East Suffolk Council. This is a question to Katie,

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regarding the points that that she made earlier if that's acceptable, and that I understand that that you you're seeking a agreement from SPR that the

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the PunchOut will be 100 metres away from

1:15:42

the Coraline crag. Can I just clarify that I presume that you mean that it will be 100 metres away from the point where the Coraline crag is is visible on the surface of the sea bass is is that correct?

1:15:58

Would EDF like to respond? I will defer to my colleague, Angus Bloomfield, who's the expert in this area.

1:16:10

Hello, yes, I miss Bloomfield EDF nuclear generation. I'm sorry, I don't have a camera set up. That's absolutely fine. I can hear you well.

1:16:21

Paul, to answer your question that that is that is our expectation as well because yes, the Coraline crag could extend considerably further below the seabed.

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Thank you.

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So yes, the extent the extent surveyed where the Coraline Greg is exposed above the seabed. Okay. And that is probably something to put to the applicant that that needs to be clarified in any revised outline unformatted statement as well.

1:16:56

Okay, does anybody. Mr. Patterson, do you still have your hand raised from before? Or do you have a thank you? Does anybody else have anything that they would like to raise in relation to 3d before we move on to three?

1:17:10

Okay, then we'll move on to three, which is the potential exposure structures

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remediation to the applicants. Mr. Cooper said before that coastal erosion is unpredictable, is there any chance that any of the structures could become exposed due to coastal erosion during the lifetime of development?

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Nick Cooper on behalf of the applicant, I can talk in terms of the setback distance in terms of the landfill infrastructure that's on the cliff top. And we consider that very conservative assessments have been made of those erosion distances. And in fact, the assessments have been made over 2050 and 100 years. And of course, 100 years is by far in excess, the life time of the development itself. So by adopting the most conservative

1:18:14

erosion distance at the worst affected location, which is not where the landfill will be, and but by adopting that value, it's a very conservative approach. Also, climate change has been considered in the assessments. And we have compared the factors of climate change that we've considered against the United Kingdom climate projections that were published in 2018, which actually will we're after our assessments were made, and we've confirmed that in the majority of instances and majority of scenarios considered, we are more conservative than the UK CP projections. So I think in terms of the cliff top

1:18:58

infrastructure, it is a very, very conservative setback distance. Yeah, I appreciate that. That is what you are doing. I think my question would be, can you rule it out altogether? Because coastal erosion isn't

predictable? Can you rule it out altogether? And should there be any monitoring included to make sure that nothing none of the structures are becoming exposed?

1:19:27

I think if you look over the lifetime of the proposed development to anticipate 85 metres of erosion is you can never say it is impossible, but it's as near to impossible as can be anticipated. Okay. If we can never say it's impossible, should we include monitoring to ensure that the impossible doesn't become possible? I don't know if any of my colleagues from the applicant would like to answer that question. But I certainly from my perspective, I would not consider that monitoring

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is unreasonable monitoring of cliff top change, you mean?

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Yes, monitoring, yes monitoring to ensure that none of you cliff top change, and then obviously, if that monitoring was taking place, and you could see that there was a potential for

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structures to become exposed because

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the unpredictability of the cliff change has meant that they meet, then you'd have a plan in place to deal with that early. But that's my question. That's my point to you. Really? Yeah. Shall I hand over to Brian to respond, please. Brian Morales for for the applicants as Nick has stated, The conservatism that we have applied and the setback distance is, is quite quite significant. We do have monitoring within the DC already within requirements 37 which requires that's after a period of 24 years, but before the expiration of a period of 25 years following completion of construction work number eight, which is the landfall, we must undertake report and submit that to the relevant planning authority, which details the extent of coastal retreat experience Following completion of construction, whether any remedial works would be required or mitigation marks required to protect work number eight, the length of any anticipated remaining operational lifespan of the authorised project, the extent of the likely coastal retreat during that remaining lifetime of the project. And any proposed remedial works or mitigation works identified on the paragraph D above. So we do have a monitoring provision provided for it is at the year 2425. Mark, because that is where the conservatism that we have adopted in the 85 metre setback. That's what up puts us we don't believe there's a requirement to do annual or five year monitoring, for instance, on the coastal the coastal erosion, we're sufficiently far back to cover that 25 year period, which requirements 37,000 kicks in and requires the monitoring to be undertaken at that point.

1:22:08

Could I ask a specific counsels opinion on that and whether they feel that monitoring should should be part of requirements 30 and all the outline construction method statement?

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Yes, ma'am. That is a view. And we also think requirement 37 just after 24 years is insufficient. But I'll ask Mr. Patterson to elaborate on that.

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Thank you, uh, Paul Paterson, senior coastal engineer, he suffered counsel

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It's, um,

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it's my view that

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there are that there are probably two strands at least to the monitoring risk elements here.

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I think the the the item that that's identified most readily and with with with with some reason, and logic behind it is the setback distance. And and and I would share the view expressed by Nick Cooper, that an eight an 85 metre setback, there is unlikely to be breached, there is another element to the risk, and that is the depth below the beach level that the depths are installed. Now I know that there are targets for profile installation, I'm also aware that the tolerance on achievement of those those targets is quite high, I believe plus or minus two metres.

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And so whilst we can have an aspiration

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to to ensure that the ducks are buried to a level that makes the risk of their exposure very low, until we know the the actual as built

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up position of the ducts in relation to the nest, then there is an uncertainty there. And also, I would add that I understand that the the line of the

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of the ducks is to run at a at a

1:24:14

fairly acute angle across the nest. I know that that depends upon more investigation, and we haven't seen the the final details of it. But that the nest feature is liable to significant change both accretion and erosion. And so I think just touching on some of the points that were made earlier by Council of fellows and an Allison Andrews then then change around vaness can be quite significant. And so I think that

1:24:44

the risk of there being an exposure is present. I don't believe that an annual review of profile data is an onerous task. And my recommendation would be that that scottishpower

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adopts that as an element of good practice. Thank you. Thank you, Mr. Patterson. So you would you would recommend that monitoring take place annually then?

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Yes, I would. Yes. Thank you. Could I ask the applicant to respond to Mr. Mr. Patterson's points there, please?

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I guess Brahma Carlos productions to again reaffirm the purpose of the HD and the length of HD is to avoid that coastal interaction off of Coraline Craig with the cliffs with the beach, etc. In terms of the monitoring point, we will take that away and respond in due course.

1:25:43

Thank you very much. When when is it that you would respond to a spy for that, please? 13 six.

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Thank you.

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Mr. Reaves. You have your hand raised?

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Yes, thank you.

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Okay, I'm unmuted and I should be on camera.

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I can. I can't see you at the moment. Um,

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yes, I can see you now. Okay.

1:26:19

Thank you, Madam Chair very much for allowing me to speak at this moment. And I'm prompted because of the discussion that happened about the exposure of items of structures, particularly down on the beach. I personally was present in 2017, exactly appalam 4.2 photograph and film, which I have included in previous submissions. Together with all the detailed information I discovered about it, the exposure of a deeply layered communications cable, you can shut it, communications cable that comes across from Europe, and goes under the beach and thorpeness point under the cliff and then continues

its path inland. Now this cable, like the proposed perhaps one to two metres that is suggested for incoming cables from the wind farms was laid at that depth. What happened was

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a storm surge compared combined with

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weather conditions at the time, and a particularly large spring tide simply moved hundreds if not 1000s of tonnes of the previously described fragile crag material, that beach material which underlies the sea is part of the cliffs moves inland is part of the whole structure. And it moved it and disrupted vast amounts of this material to expose at a level of two to three feet above the level of the beach. So while you're walking along there at night, you trip over it, it was exposed to that level, it wasn't just simply partly visible, filmed it photographed it have sent it in. So speculation and desktop surveys about whether structures can be exposed.

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however far inland, they might be secure under the ground, at five metres, I have about four on the beach itself, there is absolutely no evidence that it can be guaranteed that the structures won't be exposed. And I also have provided actual evidence that significant and important pieces of equipment like the concetto cable have been exposed and such a cable, which comes

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almost perpendicularly at right angles to the shore into the sea Under the beach there would also be crossed by this acute angle of the incoming cables that have just been described.

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So I just like to remind everybody, and if I may ask you to relook at that submission I made. And consider the fact that this is genuine, recent actual events, actual evidence of these things happening. And it's not desk based research, which will not be provided to you even before the end of your examination process.

1:29:20

That's my point. And thank you very much indeed for allowing me to make it today. Thank you. Thank you, Mr. Reeves, I can assure you that I have I have seen your submissions and indeed, partly contributed to some of the questions that we've asked today. So thank you for that.

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And council fellows.

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Thank you very much Miss Jones, Maryam fellows over town council. I wanted to go back to the direction that the applicant has given us to look in the report chapter four and chapter seven. With regard to the selection of land

1:30:00

Because I think it's really important that the reason I think it's important, it's a little bit like the selection of Friston, or the offer by national grid of the connection to the 400 kV lines is kind of pivotal in everything else that then takes place. And if we overlook it or don't interrogate it, we fail to then prevent something that might happen later on that we regret. So, um, in terms of selection of the land for location, I quote from the report, I'm going to read it now, this report does not consider the site selection work undertaken to define the onshore transition by brackets landfall. This is captured in the Wardell Armstrong land for location options review. And as far as I can see, that's not published. So perhaps I'll leave that with you to try to uncover that. So I think that how the location was determined of the cliff, there is actually needs more interrogation. Because please remember, if these applications are approved, ultimately are the connections will follow. And I've seen a map it is in the public domain, it's not just within the industry, there is a map that was given out to communities, and it showed the potential land for sites for the additional projects, notice your link, all the you know, all the other ones that are going to come to have to be within five kilometres of Reston. And it showed four potential sites, but included that this was the preferred option. So this site, that same site we're talking about, for em one north and ad two was included, and shown us the preferred location. So we're not just talking about these cliffs needing to withstand these applications. We're saying this potential for others to follow. And it is, I can't emphasise enough how concerned I am about this. And, and the impact on life. You know, it is extremely hazardous cliffs in this area, they are vulnerable. There isn't the technology or the funding in resources to actually prevent loss of the cliff. And the heritage that then follows inland from Thank you, thank

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you to the applicants then if they could, perhaps draw our attention to where in the application Consular Fellows can find the information she she requires.

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Bremen grellus for the applicants, I again, we would reiterate the the chapter for site selection alternatives. And with that chapter four comes appendix reject the reference,

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Appendix 4.6, which is coastal processes on landfall site selection. We also covered within our presentation that we submitted, it's one of the previous issue specific hearings, which the number escapes me, we also provided out

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an overview of our site selection process. That was an issue specific hearing, too.

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Thank you. Thank you.

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Does anybody have any further points they would like to make in relation to three?

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not seeing any hands raised. Okay, that is all that the zoning authorities wish to raise today in relation to item three. So I'm going to hand back to Mr. Smith.

1:33:56

Thank you very much, Miss Jones. And that really does bring us to the point at which we anticipated that we break. And so we will be resuming again, with issue specific hearings for at agenda item four. I would have liked to thank all the speakers who've contributed so far this afternoon, and thank you for your attendance and the various contributions you've made. I would also like to thank our case team led by Mr. Williams, who has supported the hearing so ably today, I'll just have a final check around the virtual room. Is there anything of a procedural nature that anybody wants to raise that we need to decide or deal with now? Because it needs to be resolved before we break or in the gap between now and tomorrow morning? Just looking around the room to see if there are any hands raised and I'm seeing none. Okay, ladies and gentlemen on that basis, and I will ask my colleagues

1:35:00

Who has been working with me on this hearing this afternoon to say their goodbyes. So firstly, Miss Jones. Yes, thank you very much everybody for your contributions this afternoon. They've been most helpful.

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And then Mr. Hockley,

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thank you for your assistance this afternoon.

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Thank you. Apologies.

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Thank you very much Mr. Hockley. So if we take a note of the time it is now 25 minutes past five.

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These issues specific hearings for will adjourn and resumed tomorrow morning with an arrangements conference at 9:20am in the normal manner, and commencing fully with agenda item or at 10am. Thank you very much, ladies and gentlemen.