

TEXT_SizewellC_ISH6_Session3_14072021

Wed, 7/14 4:10PM • 1:33:56

00:02

Good afternoon everyone. The hearing is resumed. Can I check with the case team that you can see and hear me and that the recording and live stream of the event has begun? Yes, I can see and hear you and the recording live stream have started. Thank you. So the next sub item II on the agenda the potential impacts upon the minsmere frontage and the role of the minsmere sluice. So the applicants position is that there is no potential for the proposed development to cause or effect the discharge from minsmere sluice and has provided further details in response to first question CG dot one dot 18. In the statement of common ground with the applicant is Suffolk, IDB highlights the importance of the sluice in relation to the surface water drainage from the catchment. And therefore from the proposed development area. There is also a reference to the applicant providing a technical note on minsmere sluice impact assessment. And so my first question actually is to the applicant. And has that technical note being completed and submitted to the examination? And if so, could you provide a reference for it? It will just pass that question over to Dr. Dolphin.

01:36

Thank you.

01:40

Hello, Tony dolphin for the African. Sorry, I'm not quite sure which technical notes being referred to is it? That's why I'm ask. It's actually if I give you the reference where it's mentioned, it's in the statement of common ground between the applicant and the Suffolk IDB. Unfortunately, we don't have as of the guided be here today. The law examination library references rec 2067. For that statement of common ground, it may be you just want to check it for me and come back to me later. It's just as a reference to a technical note, it may be in the examination under another name, or it may not be so I just wanted clarity on that. Thank you. We'll take that away. Madam. Sorry to interrupt and we'll provide you with an answer later today. All right, thank you.

02:39

So if I could ask the Environment Agency, please. Could you comment on the assessment of the impact on the minsmere sleeps, and also perhaps on the refurbishment works, which I understand took place in 2013 and then perhaps give an indication of the expected life at the present. I note.

03:07

Ian six six referred to then as having an expected life of around 20 years.

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Thanks, madam Cameron scared Environment Agency, my colleague Gary Watson. Well, Michelle failed this query.

03:23

Thank you.

03:26

Hello. Thank you. Yes. As with the previous submissions we've made

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the one of the caveats is we were only speaking with the information we received to date up to a period of about 20 1980. So with regards to the soft cost of defence picture proposed, we would regard that is being minor beneficial to the minsmere frontage.

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In terms of the irregular replenishment of material on the beach, I think the period stated is about every seven to 13 years should provide a supply of sediment to the north on to the menswear frontage under normal conditions.

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And in the event of there being as suddenly transport dominant transport over over a period of years, we will expect to see minor beneficial again due to the retention of naturally placed material

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moving south against the artificially will claim speech and then we'd expect to see the the sediment transport restored by the artificially replenished beach and moving onwards to the south. So that's mainly beneficial again, that's up to 2099. And beyond that, we are awaiting further information to include up to the the decommissioning period. And of course decommissioning which we will be discussing some point later.

05:01

With regards to the minsmere sluice,

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we do not expect a significant impact upon this loose or this from this development

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minsmere sluice versus two challenges in the in the long term. One of them is minsmere itself through coastal erosion of the June frontage and the other is the the ability to drain the sluice through gravity fed outfall. That means

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as a result of sea level rise, sea level rise will reduce the capacity for that to to occur.

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We've done various pieces of work assessing

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the life expectancy of that and the most recent was part of an appraisal for a project that we delivered in 2013 to refurbish the outfall.

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And that got assessed that the outfall realistically could have a

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life of 50 years plus.

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based on the current assessments of erosion and sea level rise. The refurbishing project we did had life expectancy of about a residual life for 20 years. That is 20 years before the next major capital investment.

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And we will expect based on current

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funding guidelines and current assessments, we will expect to be able to maintain the current assets in the current situation for the next term. 50 years or so. The means me a flume itself is is an old structure. its current form, it was delivered in 1967.

06:48

It last filled in 2013. And we instigated a 2003. Sorry, and we instigated emergency works to repair that, if that were to occur again, we would expect to be able to do so. And we'd expect to readily to be able to justify such a project. Beyond the 15 year timeframe. Obviously, there's uncertainty there. But one of the benefits I think we had that the long term shoreline management planning process is that we have some time to prepare for for changes that might be coming. And I know we've been working with RSPB with their long term management plan for for minsmere service, which which has only recently begun. Thank you. Thank you. Thank you. That's very helpful. Can I hear from a Suffolk council if they have anything they want to say on this agenda item?

07:45

Thank you, Madam Yes, I think Mr. Patterson would like to eventually

07:54

Thank you, Paul Patterson, then

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east of it cancel.

08:01

Our reply replies is relatively straightforward in that we're satisfied with the with the applicants assessment of the potential impacts on the minsmere frontage.

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And we're also content with the applicants assessment of how future changes in the condition of the sluice might affect the development side.

08:20

That that's, that's our feedback. Thank you. Thank you. Thank you. Could I hear from the minsmere level stakeholders group, please?

08:34

Mr. Collins, yes, sir. Apologies. I hit the wrong I put my hand up instead of turning the camera on.

08:43

Yes.

08:45

I think there are two things I want to raise. Partly it goes back to a statement that was made

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earlier by I think it was Dr. Dolphin.

08:56

I just like to check something because

08:59

the answer to this would probably have some impact on the minsmere sluice as well as other parts of the frontage and that is, do we understand correctly that the modelling that they've now presented for the size one with his with the size well done expanse removed as a you as a result of using the rave ride, avoid wave climate from outside, the size will damage complex on the inshore wave climate. So I'm trying to figure out whether what they're saying is truly a worst case or what it is. And if it's a worst case, obviously, then, if the if the impacts are still low according to that modelling and the flood risk risk assessment, then that would be a significant piece of information. We can't at the moment, see where all that information is, and wonder whether that's something that they're about to release in a deadline five or at some future deadline. So we'd like to understand

10:00

Not? And also, is there a new expert? Do more colour morphological assessment being done as a result of that. And I think that's all I can say at the moment. Thanks. Thank you. That's very clear. Mr. Parker. Did you have you anything you wanted to add on this topic?

10:23

No, thank you for asking I'm

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all add any comments and written response? Thank you. All right. Thank you. Can I ask then if there are any other interested parties that want to comment now?

10:42

Rosie Sutherland, Rosie Sutherland RSPB.

10:47

Thank you Madam guess

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mithuna and representing the RSPB and also Suffolk Wildlife Trust, just a short point if we may, on this agenda item and I would like to ask Mr. Adam rowland's who is the RSPB technical lead on Suffolk coastal processes to cover if that's okay. Thank you. Thank you.

11:21

Just checking if Miss Mr. Rollins is able to join he has joined

11:30

apologies for the delay.

12:07

Madam, perhaps we could come in I'm conscious, of course that the applicant needs to needs to respond to the brief points made.

12:16

I believe that Mr. Rollins is having some technical issues. So apologies. And we will we will cover these points in writing.

12:26

All right. All right. Well, you know, if you can get in it came back. I'm sure we could manage to fit him in otherwise.

12:35

Yes, please do respond in writing.

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In the light of what the applicant says, and I'm asking them to respond now.

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Thank you. We're very grateful.

12:49

Thank you, Madam, I'll ask Dr. Dolphin, if he has any response to the points that have just been made.

12:58

Hello, turn it off and on behalf of the applicant, just one response to the query about the modelling.

13:06

So two parts really, just to clarify that the modelling that's been done in Tr 545, which is rep three dash zero 48

13:19

is for the soft coastal defence feature. It's not for flood risk assessment work. And indeed, the we use the best from the east event as driven as measured outside of the sandbank by the by the wave boy. And taking those conditions directly ensure.

13:42

And I think there was a further question about whether there would be another expert geomorphological assessment. Yes.

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And the answer to that, is that there there aren't any planned at present.

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And we that was discussed this morning as well.

14:01

Right. Thank you. Thank you for that. Thank you.

14:06

Madam Can I just check that you left with us the issue of the further technical note Can I just check the reference in the initial statement of common ground with the Suffolk internal drainage board? item four point 10 where the matter identified as I II II comments based on report title sizewell c enabling works. There was a statement of the internal drainage board's position and then sizewell c COEs position was sizewell C. CO is preparing a further technical note on the Le e IE basic drain drainage design, is that the reference you had in mind or something else I just tried to assist those who are seeking to track it down.

15:02

Yeah, I think I think that probably is. I had it down as being a technical note on minsmere slues impact assessment. But it was as I say, it was just a very short reference, I think in the past fleeting reference to a technical note. So unless there are two such fleeting references I should imagine that's that's the one I'm directed to another one to just check trying to trying to make sure we help is 5.1 on the minsmere sluice

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where we the responses to recognise the concerns, explain the position in terms of

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ownership and so on. And then bed and within I just scroll

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down

16:00

then just hold on what I just checked the further action Yes. sighs further action sighs well see to provide the technical note on minsmere sleaze impact. That's when complete that's when you have much yeah, I shall fight. We will check that now. I've identified exactly what it is. We'll come back to you on that point. Thank you. Thank you.

16:23

And can I I see.

16:26

Rosie Sutherland. Do you have your hand up is Mr. rowland's available? Now? He is, madam. Thank you so much. I apologise for this. Would that still be acceptable?

16:39

No, indeed, well, let's let's hear from him. We've we all have these issues. Thank you so much. Thank you.

16:48

Thank you. And good afternoon, Madam, I apologise for that. I could see and hear everything's the buttons weren't working. So I reached out.

17:00

And thank you very much for the opportunity to come back on this item. And I just want to bring in a point with regard to the minsmere frontage that we have raised in our written representation and deadline, three, but just to make sure that it's captured here. And that's consideration of the nature of the protected site for its nature conservation interest in the potential relationship to the coastal processes. We're just conscious that this issue isn't raised in the issue specific hearing seven agenda for Thursday and Friday, and given its integral relationship with the coastal processes, and that it forms part of the coastal processes monitoring and mitigation plan as proposed. We're keen that it's captured in this discussion. So we're, we're very grateful that the applicant has taken it into consideration for the coastal processes monitoring and mitigation plan. And we are also extremely grateful that although as others have fed in today, that there's a sense that any impact along the minsmere frontage will be minor and beneficial, that the applicant has agreed to extend as a precautionary measure the monitoring of the coastal processes along the minsmere frontage up to and including the minsmere

sluice, and that and that is really important in the context of this. Our main concern and we know that natural England as well have raised concerns around this interest feature is that the vegetated shingle that is currently present along that seven minsmere frontage, which is a internationally important recognised feature, part of the special area of conservation and a ramsau feature does not appear to have been acknowledged. In fact, the applicant has repeated in several of the documents both submitted recently. And as part of the environmental assessment, they've concluded that that vegetated shingle feature was lost in 2010, which is based on in in accurate conclusion drawn from the natural England site assessment where it is true that a site of special scientific interest unit has been lost. But that's geographically lost the feature remains in the existing sssi unit on that frontage. So what we are very keen to see is that that is taken into consideration. We feel that the baseline survey monitoring can't be considered as accurate because that feature has been concluded at last when it is still there. And we've provided that evidence in our deadline to and deadline three submissions. And our greatest concern is that that feature is related to the dynamic processes.

20:00

of the beach frontage, and particularly to the super tidal shingle, and the finer grain shingle and sand that moves around on that frontage. And that actually some of the mitigation measures, as has been discussed earlier, could impact on that movement of that super tidal thing shingle, and ultimately, therefore, impact on that interest feature. So, we just want to make sure that that is taken into consideration as part of the coastal processes monitoring. And at present, we are not aware of any examples where the proposed mitigation measures of recharge recycling or bypassing have actually worked successfully in areas where these vegetated shingle habitats are present. So again, it It raises concerns that we don't we have yet to see a viable mitigation strategy that's been proposed by the applicant.

20:55

Thank you. Well, I'll ask the applicant to respond to that. Thank you.

21:00

Thank you, I can ask I think Dr. Dolphin to deal with the coastal geomorphology aspects of that. I are I'll stand to be corrected, but I doubt he's going to be able to assist on the biodiversity elements. I don't have a biodiversity now him.

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Yeah, but he may, he may surprise me.

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But

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But

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in any case, gonna suggest that you might, we might want to park that. And you could give us a response, either over the next two days or in writing.

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Well, in that case, I'll just check to see if Dr. Dolphin has anything on the on the areas within his expertise. And if there's nothing more on that, we'll come back to you in writing on the biodiversity aspect.

21:57

Hello, Miss Mackay, Tony dolphin on behalf of the applicant. And I don't have much to add, I would love to adorn my ecology has been instructed, not allowed to in this case. And so, really the the basis for identifying a potential beneficial impact on the very southern part of the minsmere frontage is that the soft coastal defence feature would be supplying

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shingle material to the coast that it will not otherwise receive. And in particular, as the

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southern minsmere frontage recedes, and the size of our sea frontage is maintained. For shoreline orientation there changes slightly. And so there would have become a point that a certain amount of natural erosion would lead to a sediment trap for both natural sediments and sediments coming from the soft coastal defence feature. And as that material would primarily be pebble sized, there's a good potential for it to build up over a relatively small area and form larger super tidal deposits. And obviously, the larger they are I understand have drifted into ecology apologies, but the larger the app, perhaps the better the potential for that habitat to, to increase.

23:26

Thank you.

23:29

Thank you.

23:31

Thank you, Madam that that is I think all we're going to provide on that matter. For now we've got a note of the need to come back on the biodiversity aspect, that those who were in the room with me have informed me that the note that we referred to a moment ago in the statement of Common Ground is still in preparation. It's doing I think deadline six All right, that thank thank you for that. Does it does it have a particular name so we can watch out for it?

24:04

I'll have to revert back to just say yeah, just Yes. Okay. So deadlines six we look out for a technical note indeed, in connection with minsmere sluice. Right, thank you. So we'll move on now to the next agenda item which is relating to

24:26

for the permanent p sladek. facility during the construction phase, the impacts of any dredging and the barge birthing platform, and the applicant is provided responses to first questions raised in relation to the dredge birth area, including cG 1.9 and cG wandoor 13. And there are conditions relating stretching in the de marine licence. Now it was something I was hoping to take out with the marine management organisation, but they're not in attendance today. So

25:00

And perhaps if I ask a Suffolk counsel, whether there's whether this is within your remit, and whether there's anything you would like to say under this item.

25:15

Isabella for free software counsel, I think Miss Patterson does just have a brief comment I'd like to make on that. Thank you. Thank you.

25:25

Thank you, Paul Patterson for the Suffolk cancel.

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Our view is that the the assessments carried out by the applicant in terms of the potential impacts of both dredging and birthing platform

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are

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reasonable. And we're satisfied with the conclusions that have been drawn,

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that have been informed by by reason studies that we've been shared with us and that we have commented on. So in general, generally satisfied, and their residual concerns. Thank you. That Thank you.

26:06

Are there any other interested parties who wish to make points under this sub item?

26:17

Well, I don't have any hands up. So I'll go back to the applicant.

26:24

Fill pot.

26:25

Thank you, Madam, I'm not sure that there's anything in what's been said on behalf of the seven we need to respond to thank you. Thank you.

26:33

So if you move on to the next agenda item, cumulative impacts. So the first sub item is cumulative impacts of the coastal defences, in kind of combination with the beach landing facilities and other features. Now, for those situm. I know that the old un or Association have raised the issue of the cumulative effects of traffic access. So whilst that is the matter for examination, for the purposes of today, the discussion is limited to the cumulative impact upon coastal geomorphology. So the Environment Agency is deadline to written submissions, indicated that it was generally satisfied with report Tr 545. On the modelling of the temporary and permanent beach loading facilities at size we'll see, but was unable to comment on the impact in combination with the hard coastal defence feature and soft coastal defence feature. So really, I wanted to check if that remained the environment agency's position.

27:42

Combined scope, environmental agency, my colleague, Ollie burns, can give you an update of where we are position.

27:52

Good afternoon, Ollie burns for the Environment Agency.

27:56

I think I think our position has as largely not changed on this one. Obviously, as we've previously discussed, we, the work that we have is of is of a good quality. But it does not extend for the full lifetime of the project yet. So what we what we can't do is scrutinise the cumulative impacts for the full duration of the project at this stage. So I think in particular, obviously, we've discussed the next modelling, the modelling that's coming. But I think in particular, for example, the modelling of the adapted h CDF design, which Dr. Dolphin mentioned earlier is likely to be informative. So we await that further information before we're able to to form a an informed opinion on the cumulative impacts in total.

28:45

Thank you, that's helpful. And so if I could ask

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the Suffolk Council, if there's anything they'd like to, to add,

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is a letter for a Suffolk Council. Nothing to add, in addition to what the EA have just said, we also are satisfied with the assessments to date. And we look forward to the additional information. And we'll comment upon that in due course. All right, thank you. Thank you.

29:16

Turning to other interested parties, is there anything anyone wants to say on this site and

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Alison Andrews.

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Thank you, Chairman.

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Let me just one extra point is I know that the African doesn't

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going south or not going very much south. But a cumulative impact of all these things could actually be the efforts put into shingle recycling on the

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soft defence front, because Okay, it's some of it might land up at minsmere but

30:00

They they keep recycling it. What might have gone sour hasn't gone South either. So. So that's the cumulative effect to be brought in mind. Thank you. Thank you.

30:11

Paul Collins.

30:18

Yes, thank you, for Collins minsmere level stakeholders. I guess the other aspect of that is that the changes are about to come in particular about the beach Landing Facility and the withdrawal or, or changes or should I say to the hard coastal defence, that that northern corner will make a difference, as well as how that will be changed at any later adaptive process would be something we would have to wait and see. So I think basically, we have to wait and see what comes next. Thank you. Thank you. That seems to be the consensus. Mr. Parker.

31:04

Thank you.

31:05

I concur with the comments just passed, there are a couple of points, I just want to add into cumulative impacts, one of which is referred to as any consideration being given to what's known as complex system behaviours. This is where there are feedback loops in system linkages, which actually become an emergent behaviour. So things that happen, which hadn't been hadn't happened before, which have been generated either by things like sea level rise, or

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elements, which are evolve over time, whilst looking back in history that is helpful to try and pick some of these things up, it's just to ensure that there's a sufficient level of precaution is taken that

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if something does emerge, that

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the mitigating actions can be held. The second point is on the wide issue of climate change. Particularly, there's been quite a lot of research and academic commentary on the loss of ice, a place like Greenland, and so on, which will generate some increased activity, particularly on things like tsunami, which makes the North Sea more vulnerable. I know there is a debate in academic circles about how much of this is, but some of the well respected ones is indicating that there's a 5% chance within the next 200 years of a tsunami affecting the North Sea.

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It's really how effective this application would be in dealing with that.

32:48

So when one's taking the worst case scenarios, what has to look beyond what has been modelled to date with things like patient needs, and actually take it one stage further. So those are just two observations, I'd like to add. Thank you very much.

33:05

Right? I have no my hands up. So I'll go to the applicant to respond.

33:12

Thank you, madam.

33:13

I'll go to Dr. Dolphin in a moment we've talked before and indeed Dr. Dolphin has talked before about the CP MMP and its ability to respond in the event that modelling reveals any impacts which have not been forecast. So I suspect we've we've identified that important point sufficiently clearly already. But there were a couple of technical matters raised by Mr. Parker. And I do at least want to give Dr. Dolphin the chance to respond to those. Thank you.

33:48

And I miss MCI Tony dolphin on behalf of the applicant. I can just return quickly to Allison Henry's comment about beach recycling. Absolutely correct.

34:00

When we when we do beach recycling, but I think Firstly, it's important to acknowledge that beach recharge is going to be the primary form of of primary form of secondary mitigation. Sorry about that. So that is adding new material where recycling would be done. Great care would need to be taken to ensure that it was and emulating

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area of material and that it will replace the area that's in deficit without affecting the longshore transport. So that would be part of what will be expected of the monitoring plan

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in identifying whether recycling was or was not appropriate.

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And I think with respect to Mr. Parker's comments, the main reply that I have

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about

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emergent impacts is just to return to something I said before

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that impacts on geomorphology from sizewell seas activities begin at the location of those activities and and would be able to be traced in the in the direction of other sediment transport disruption, so they can't appear somewhere else within the climate change comments are Australia outside of my area? I think that probably more related to under risk assessment. Thank you. Thank Thank you.

35:35

Right.

35:38

So if there's nothing else on that item, we'll move on to cumulative impact in combination with other projects. In particular, interested parties have raised projects such as East Anglia, one north and to another propose projects that have the potential to impact upon the Suffolk coastline. Could I just ask

36:04

the Environment Agency first to summarise their position on that aspect of cumulative impact?

36:20

Thank you Cameron's get from the Environment Agency. I don't believe we have any further comments to make. No, that's fine. Thank you. Again, it may be something that I'll get more information on later on in the examination. So if I can ask other interested parties, if they've any additional points they want to make under this agenda item.

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Allison m juice.

36:57

Thank you very much.

37:00

I don't think we addressed at this dinner.

37:04

A big concern about the scottishpower renewables development, which is taking place literally like a kilometre and a half down the coast from sizewell C, is that they're proposing to do what's called horizontal direct drilling through a cliff, that's basically just a hardened sand dune. And it's more a question of a warning. They're going to go through there and if it collapses, they say it won't. But if it does, because it's nobody really knows. That's going to accept effect the size will be area. And the other thing is both both plant side as well and scottishpower renewables they're having to drill in or under or around the Coraline crag on the shore and under the seabed. And, again, it's unknowable, but it is a fairly brittle, brittle, fragile rock. And I don't know how much that and how much manmade and climatic pounding it can take just as a warning. Thank you. Thank you.

38:04

I've no more hands up. So I would ask the applicant to respond.

38:13

Thank you very much. I'll ask Dr. Dolphin if he's got any response to the points that have just been made by us and Andrews.

38:24

And I miss MCI turn it off. And on behalf of the applicant? I don't have any further comment. All right, thank you. Thank you very much. And so therefore move on to the next agenda item. That's

38:41

the adequacy of the proposed climate change adaptation measures and the resilience of the proposed development to ongoing and potential future coastal change during the project's operational life and any decommissioning period.

38:56

So MPs in one section 4.8 sets out that the environmental statement should take into account how the proposal will take account of the projected impacts of climate change. And this should include climate adaptation, as already much in writing before the examination on climate change adaptation, including in response to first questions on this topic. But today, I'd like to focus on one aspect which is set out in the subitems a. So that is the scope for the hard coastal defence feature to undergo design adaptation to maintain nuclear safety against predicted sea level rises. So the applicant has provided responses to first questions on this, in particular CC, dot 1.7 and Fr. dot 1.2. So it's explained how the design of the H CDF would accommodate raising the level of the Defence crest to defence

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To aggress level of 16.4 a day if required. And indeed, in addition submitted details pursuant to requirement 12 B must include a monitoring and adaptive c defence plan that sets out the periodic monitoring proposals for the sea defence features the trigger point for that. And so the detailed drafting of requirement 12 B will be considered under another agenda item. But I wanted to know if there are any additional comments parties wanted to make at this stage on the scope for the H CDF to undergo design adaptation in response to impacts of climate change on sea level rise. So, the environmental agency, is there anything you would like to say on this topic?

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Cameron's environmental agency has just passed to my colleague, Ollie burns.

41:01

Thanks coming on he balanced environment you see.

41:06

I think our interest in the in the adaptive design of the hard coastal defence feature is one of coastal process impacts we are we're not commenting on issues of nuclear safety. Obviously, we would defer to the office of nuclear regulation on that. But it affects any the the adaptive design, which is of course yet to be finalised any scope to move the toe of that defence seawards has the potential to affect opposition from a from a coastal process coastal geomorphology perspective. And as I say, the odnr I'm sure we would be able to comment on nuclear safety. Thank you. Thank you. Thank you. So if I turn now to the Suffolk Council.

41:50

Isabella, for that you suffer Council. Our position really, again is aligned with the EAA. It's we accept that there is scope for adaptation. We don't have comments to make on nuclear safety. And our concerns would be the impact of that design adaptation on coastal processes. Thank you.

42:09

Are there any other interested parties that would like to speak on this topic?

42:19

Mr. Parker,

42:28

thank you. My questions really on this are really to do with the to do with the connection between the HUD coast of defence and the other flood defences within the site.

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In particular, it's not far to the triple si crossing point, which I believe is sheduled to be at a height of 7.3 metres with a possible extension to 10.6 metres high.

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What I have yet to understand is how the various

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coasts flood defences integrate together and form a protective nature to the site.

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So that should the front face need to be increased in height, one would assume that other areas would also need to be increased. So I think without better information from the applicant, it's very difficult for us to be able to tease that out. But it is important to think of it as a

43:38

as a whole. And that water will find its way through the weakest point wherever that is, it doesn't just stop at the front face. So I think it's something that needs to be certainly explored and considered and and shown. The other point on this is that I'm assuming that if the flood defence needs to be adapted, it will that will mean the removal of all vegetation which is current which will have developed on the rock protection in order to be able to put the concrete blocks or whatever system is then used to increase the height of the fence

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and whether another wasn't part of the landscape impacts whether that's being considered and whether the vulnerability of the

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Defence whilst that process is ongoing as being considered. So it's really how does this process works to ensure that there's a continual high level of protection from all angles at all times. Thank you. Thank you.

44:43

Could I hear from Wayne Jones? Next please?

44:53

Hello, good afternoon. This is MCI.

44:58

I'm Wayne Jones. I'm

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I was annexed official of Wales Friends of the Earth from the mid 80s.

45:04

I was also a consulte and representative of the Welsh anti nuclear alliance that gave expertise help to groups which caused nuclear power in Wales. And I'd also mentioned that I've lived in the local area of Suffolk as well, when I attended the size or B inquiry. I am in a position to give some small insight into the nuclear problems. Of all really today I've come to talk on other issues, which will be the next question. But

45:39

every girl, I think that's right, Mr. Jones, so really, I was wanting to concentrate on the coastal processes aspect of this. I'll be very short on this. Okay.

45:51

We can get in perspective, what we're told

45:54

is that if you were to ask EDF, that a future dates that the data showed that the site was imminently reachable.

46:06

If you asked them, What the position would be, to deal with a problem, their answer would be in relation to nuclear unloading, there will be probably a three month period in which before the fuel would be able to be unloaded. So we'd have a three month period of danger

46:28

of meltdown if the site was breached, and and electric power was lost. When it comes to decommissioning. I don't think there's been a power station world that's has been operating for 60 years, and certainly the activation products, which is the thing that stops the decommit LED decommissioning. If you ask them if they could do that earlier than the date that they've already set for it, I'm sure that they will tell you, No, we can't. No nuclear power station is operated for 60 years in the world, as far as I'm aware, especially not in this country. 3040 years at the most. So I just wanted to add that at the moment. So we understand what we're dealing with.

47:14

Thank you. Thank you. Thank you.

47:19

There's a Christopher Wilson police desk.

47:26

Thank you. Yes, Christopher Wilson come together. Right. So So say you're just in terms of the how coastal sea defence,

47:33

it was talked earlier about if the adaptive design was needed, about moving the hard coasts, some of the features 17 metres for the seaward. One is obviously have concerns there. And in terms of if we're facing climate change, impacts the practicality of that and just what the implications were about. I don't know if that's will be something that will be presented in more detail a later date.

48:04

Thank you.

48:12

Right, so if I can go to the applicant now for a response.

48:18

Yes, thank you. And just very briefly, in terms of the

48:25

H CDF and adaptive design and the impacts of that, that as I understand it is being considered by the modelling work, which is going to go in at D seven.

48:37

Mr. Parker raised a point about the triple si crossing and how that fits in with the flood defences. I understand that it deadline five, when the adaptive design of the triple si crossing is going in. There will also be a report associated with that that deals with point that Mr. Parker is raising. So hopefully when he sees that that will provide him with the information that he seeks.

49:07

I don't have anything to add in response to what Mr. Jones said, which appeared to be to do with the design life of the station. And I'm not conscious of any evidence that challenges the evidence that there is about it's likely design life.

49:26

Thank you, Mr. Phil part.

49:31

So I'll move on now to the next sub item, which is the resilience of the proposed development taking account of climate change in response to shoreline evolution, and change scenarios over the anticipated site life.

49:51

So, could I ask a Suffolk council? What is its position in relations to the resilience of the

50:00

proposed development of coastal erosion deposition. And given that you have now seen some more of the modelling work.

50:09

And if I could just have an update from you on that.

50:14

Certainly, madam Mr. Patterson will address you on that. Thank you.

50:20

Thank you, Paul Patterson that East Suffolk Council,

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I return to some points made earlier.

50:28

Really that

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notwithstanding the reports that we've received,

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and we have yet to provide feedback on, then we do have some concerns that

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a changing shoreline over the life of the development has potential to put at risk, the foundation level of the the hard coastal defence feature, as as the design exists at the moment.

51:02

We knew the earlier comments regarding an assessment of the durability. If those comments were based upon the original design report, then we have raised some challenges against that. So we would we would like to, to keep that that issue open.

51:19

And the other the other point that that I would like to make,

51:24

really is how the

51:29

potential for the hard coastal defence with the soft coastal defence in front, either with the original design or with an adaptive design, that this may become a commentary as shorelines to the north and south roll back behind it.

51:46

And then that would become an issue that requires management's again, that's that that's not new. We've been raised early this afternoon. And more work, I think needs to be done on that to satisfy us. Thank you. Thank you.

52:05

Can I ask the minsmere level stakeholders group because you've raised raised concerns as to the design resilience, the permanent beach Landing Facility. And I just wondered if there's anything you wanted to add to your written submissions on design resilience?

52:25

Well, I guess we need to go back to the same point. From what we've seen so far of design for the beach landing for permanent beach Landing Facility, it seemed to sit somewhat outside of the hard coastal defence, I understand if it's going to be moved back as a result of changing the, the the whole road or whatever you want to call it to get material in and out of the campus or out of the sorry, out of the site, then that part of the coastal defence is going to be withdrawn westward. And possibly, perhaps in further detail will actually arrive as to exactly what the beach landing the landward side of the beach Landing Facility looks like. And how that is also reinforced and protected. Because at the moment, it seemed like all it was there was the original temporary sheet pile, surrounding it with just soft coastal defence pile up against it. So it's very difficult to say, where this is going, and how that would actually then adapt. Due to an adaptive design, presumably, it would be even further inland of whatever that adaptive design is. Because it's also not clear whether the adaptive design goes all around the north end and off towards the the triple si crossing. So there's a lot of things missing here to be able to put a proper comment on that at this point in time.

53:54

Thank you.

53:56

Can I just ask for any other interested parties? Who would like to speak at this point?

54:05

I have got Andy that's the only identification I've got on my list. So if I could hear from Andy

54:22

Can I be saying I can see your papers?

54:28

Oh, sorry. Yes, that's

54:32

we've read your notes. Okay. I'm sorry. Yeah, okay. Yeah, that's fine. could actually could you do you mind just giving your full name because I didn't have it on my on Professor Andrew blows.

54:44

You Open University and I formally was a member of the committee on radioactive waste management. I'm currently co chair of the bays NGO nuclear forum and also I lead a

55:00

an NGO group around the Bradwell site.

55:05

I wanted to speak particularly about the period beyond 2100. And have to say I've listened all day and I find

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the the This area has been very under researched and under theorised. And there's very little on it. Indeed, I think the Period up to that it has also got a number of problems which have been coming out bit by bit. To the extent that I don't think we can regard the project as viable or sustainable, particularly beyond the end of the century. And I say this for four reasons. One is the question of the impact of climate change. And again, this has been alluded to, but I don't think we can not take very seriously the continuing

55:58

changes in forecasts, and predictions and so on, about climate change, even to the end of the century. It looks at the moment as a three degrees and it possibly four degrees C, which would lead to sea level rises of possibly up to two metres.

56:17

And you have to ask yourself, whether the conditions for dealing with this at Sizewell can be met through the But beyond that, then we are now looking at situations where it looks likely that Antarctic sea ice and indeed the Greenland sea ice will be impacted leading to let's be frank, unknown conditions, total uncertainty, unknowable position, certainly beyond the end of the century. So it's very, very difficult, it seems to me to be able to make plans for something you cannot possibly know about.

56:56

And the importance of this is that this site will still be live

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into the next century.

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Even on the calculations given here,

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it is likely that radioactive waste will be on the site up until the calculation is 2165. That is even assuming that there is a facility available for his disposal, and that that facility facility is able to cope, because it's got to deal with all the backlog of stuff. Legacy waste, including those already on the site at size will lay and size will be and nothing's been said about that. But that's another major problem in terms of this coast. So

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we have this position of I would say indeterminacy over that period, in which you cannot possibly claim that

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the site has integrity and the facilities on the site can be maintained.

58:05

And managed adaptation. I have doubts about its efficacy. Some of those points have been made. But there is no

58:15

programme, it seems to me for the decommissioning and manage that occasional any form of adaptation. Indeed, I learned to my astonishment this morning, that there's talk of taking down the sea defences at the year 2000, which would make the slide even more vulnerable if it's not already impacted. By that time. And I stress there will still be on the site. A lot of radioactive waste in the decommissioning process. And Springfield's doors are programmed to be there

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until the middle of the century. The two other points are

58:51

the question of institutional continuity, nothing much has been said about this, but resources and skills and so on, and the ability to maintain these sites into the deep future, which we know nothing about, has to be there. And I certainly don't think one can make forecasts on that. So that is improbable. And the final point is the one about the burdens that we are passing on. These burdens will be inevitable,

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if they raise intergenerational aspects and and the granting of AI and therefore,

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any permission is granted must knowingly be granted, on the grounds that it will impact on future generations not may but will impact on future generations. And I think in giving such permission, it should be clearly stated that that risk is

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imposed on future generations, which has to be acknowledged in other words, that the future generations will have to deal with the problem. It cannot

1:00:00

be dealt with at this end into the far future. And this leads me to the conclusion that of course, the project should not be entertained in the first place, particularly as it's not needed

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in terms of dealing with the counter problems of climate change as climate change or inflict itself on this project, not this project, doing anything particularly useful about climate change, and if I could possibly conclude, thank you very much.

1:00:33

So I consider that the physical and social conditions, the size of our site, will become increasingly unpredictable to the point where they are unknowable. proposals for defending the site against climate

change and its effects will be at Best Short term. in the longer run, and especially during the indefinite period of decommissioning and cleanup. It is impossible to provide unequivocal technical assurance of safety and security. In the management of radioactive waste, including Springfield fuel, there is the possibility of calamitous risks being passed on to generations in the far future. This may be acceptable to the developer and government, in which case they should say so it is not acceptable to those who oppose the development. I believe it is technically improbable and ethically indefensible for the present generation, who enjoy the debatable benefits and consign the cost to the future. We have no voice and no interest in the present proposals.

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Conclusion meditating using the examining authority, I think you have an obligation to make this point and not to harp shield behind what the Environment Agency or the odnr might be saying about the matter. Because they are working, it seems to me on

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on a on a sort of mainstream basis, which will become increasingly untenable. Thank you very much.

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Mr. Parker.

1:02:09

Thank you, may I wholeheartedly support the previous speaker, Professor blowers that it needs to be said and recognised?

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I point I want to highlight is that we I understand this process is that it's meant to be front loaded by the applicant, so that the information is pulled together to ensure that there is reasoned and reasonable debate about the points and issues to be talked about to be promoted and discussed.

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What's happening on the coastal issues in particular is it feels very last minute.

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And that worries me because that doesn't allow sufficient time for effective debate and analysis and for people to reach a considered conclusion. And we're here just now from Mr. Phil, is that some is that we're going to have something delivered on deadline seven. I mean, this is just

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unacceptable for something that is so important for the long term future of this particular coastline.

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Whether it's deliberate or poor management, I don't know whether EDF and C fast but quite clearly, as a planning Inspector, you must take this into account. As it really is not acceptable. In terms of the Pacific's on the evolution, we really not got much clarity on the how this coastline will evolve. I assume

that's going to come through in future documents. I share your sufferings concern about the creation of a headland

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and the long term risks, liabilities, and who will pay and maintain it and if they can be maintained, really need to have further, much more detailed consideration.

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And I look forward to hearing

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some of those details, some of those elements in detail, because you really cannot progress with this particular application until that is clear in terms of what the applicant is proposing. Thank you. Thank you.

1:04:21

Christopher Wilson of task.

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Thank you, Mira. Yes, Christopher Wilson from together again. So as we'll see, I was fully endorse what Bill Parker just said in terms of the timing of information. But my main point was really

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that she had been taken away by a professional Professor bloggers as well, is this the legacy is the moral issue. In terms it's not just the nuclear waste where can be leaving for generations yet unborn? We've also got the responsibility of safeguarding this site and given all the

1:04:58

the lack of data

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tentative predictions that can be made with regard to climate change and their impacts.

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I believe it's also indefensible to proceed with this project. Thank you. Thank you.

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Right, I see no other hands up. So if I returned to the applicant to respond, I know that

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it may be that some of those

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comments that you would wish to respond in writing to but Mr. Phil part.

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Oh, sorry. Sorry. Just one moment, this late, hands up from a John several. So if I could hear from John, sir, all first.

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Thank you Miss MCI.

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I just would like to endorse what the last two or three speakers have said. And I think there's a very interesting contrast in what we're looking at here is the constant

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pressure to speed for this very complex project, which has got tremendous ramifications, which is being put through in a very short term that way, compared to the long term issues. And I just all I can say is, I that's something that seems to be coming out throughout this investigation, the the contrast between the short term approach

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of the applicant

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in respect of the various issues, and I would just endorse some of the other comments there. But thank you very much. That's all I got to say. Thank you, Mr. stuff. And Wayne Jones, you have your hand up. So if you have something else to say on this, if you could speak now. Yeah, I'm a little bit confused, whether we're on still on a or b, a five, the agenda for item five, or we are we are we have moved on to B We're also on B Yes, I have.

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I

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haven't got the camera there.

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So I can see you or you can see him you can just close with myself. I am in a professional capacity, I've been a botanist, and is my main line of work. And as such, I presented this with the Nature Conservancy counsellor which bought land, which borders on the sea to Ivy marshes. And there's red spread data species Red Book data book species on that land, which is threatened by rising ocean levels. So this is not just an academic interest. For me. It's something I follow for many years. So the night is I looked at climatic change, and the history of climatic change from the point of view of pollen morphology, which is a big input into on our understanding of climate change in the past.

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And what I like to develop here is the idea of whether we can actually look at climate change as looked at by climatologist in the past to give us some idea of what's gonna happen in the future.

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Now, climate changes as we know it, and as climatologists will tell you, in the past was a matter of the

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one period of stable climate, going through a period of instability in a matter of decades, and then

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plateauing out in another level of climatic stability, which could last for maybe centuries, or maybe millennia, which was absolutely essential to the establishment of flora,

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which, of course, is the basis of life support on the planet.

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What we've got now is something different to that.

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It doesn't have any real

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it doesn't have any real

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comparison with the past climate changes. And I really don't like the term climate change. A lot of people don't use that to this thought the president EPA has brought us because the the changes that we're seeing now are measured changes of temperature and of ice melt, which compare to the graph shown industrial pollution levels.

1:09:29

Now that is not represented in the climatic history of the last 10,000 years. So I find it hard to for when I listened to EDF or anybody else really trying to make comparisons with things that happened in the past or things might happen in the future. I know of no predictions that have said what the next have predicted and a new level of, of climate stability to come. I have heard nobody give any idea

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That only attack pressing the panic buttons to say we've got to do something to change the trend that we're on. So when we talk about 10,000 years of, you know, 10,000 years and flood events and, you know, when we talk about the last 200 years and what's happened coastally, I can't really see that anything in the past, it gives any idea of predictability. And what we're actually dealing with here in terms of a long term project is all comes down to one word, predictability. In a nutshell, how predictable

is what we're looking at, I want to give a little bit more detail as some of the other speakers have given that to what we're looking at.

1:10:42

A lot has been said today about predictive modelling. And predictive modelling was something that was really introduced at the size will be inquiry. And it was in marine contests, context by the Ministry of Agriculture, and fisheries and food, are attempting to justify their marine discharges using predictive modelling. Now, the thing with predictive modelling is, it doesn't actually predict what's going to happen. What it does is it gives you a window on what's happening at the present with the ability to add extra data as it comes in.

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It is in fact,

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misleading to suggest that it's predictive at all the gentleman is saying when they talk about predictive modelling, is we've got a handle on what's happening, and we can change it when new parameters arise.

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It doesn't actually give assurances, particularly for planners that they actually know what's going to come from, you know, it's good science. Yes, it's good technique, but it is, As for whether how accurate his predictions is going to be, that remains to be seen.

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Now, Mike, to my evidence, has talked about, particularly prediction of tidal increase in relation to

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the rapidly rising oceans. And I'm afraid to say that since 2005, I have questioned many people involved in marine work on what this might entail in the future. And I have actually got no answers from anybody that has been satisfactory. From 2007. What I questioned the Green Party's spokesman on climate, right up to recently as recently as March, I approached,

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lecturer in in terrestrial ecology, at the sciences at a university in Britain, who'd written articles for the New Scientist in the past on the very issue of climate, and oceanic problems with new nuclear power stations being built. And even though in To start with, she was very enthusiastic to do but I spelt out the idea of tide. She didn't want to know I didn't get another reply from a non answer. Everybody's sitting on the fence, no one's willing to stick their neck out and give some prediction about what the tidal range might be. So what are we talking about with tide? Well, they might see when you standing across the inch, or even a foot of ocean level rise, seems like a very small amount, when you consider that that is stretched across the entire area of the oceans, the actual mass it represents is absolutely massive, it's huge. And the way that I've looked at tidal relationships with increased ocean level is that

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it's the the mass will add to the momentum of the moving mass of water, of course, tide is that the whole mass of the water moving is not a surface effect, like with wind, therefore, and so I've looked at the physics of the whole equation, the masses moving and it's gives out momentum, and then you look for inertia to see what's stopping that momentum. And I can't really find any inertia in the fluid of the seawater that is going to stop that momentum from building. Therefore, I have purported that there is going to be a relationship between the increased ocean levels and the title range has been rather more

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rather than being linear,

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as being somewhat more, it's going to rise exponentially. I don't know what to expect, what To what extent it might rise exponentially. But it's something that there seems to be a lot of denial about and nobody wants to, to grapple with this. It is extremely difficult to get your head around because it's such a complex phenomena, the London

1:15:00

See is constantly rising and dropping. So we can't look at any past evidence to give us any real answers to what we might be what we might find. And therefore, I have suggested in my evidence that we postpone any decision for at least 10 years. So we've got more more data, which was was told to me by a guy that actually works on tide gauges. That's what he does for a living, I asked him. So that's the one problem that I'm looking at. The other problem that I'm looking at is potential storm surges, which wasn't really looked up at the Hinkley inquiry which has set a precedent, right. And

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people were much more interested in tsunamis that because of the Fukushima thing and everything else I wasn't involved in. But I did come across a lot of information on storm surges, particularly a 1607 event, which really is more evidence that that was a strong surge. And there is no evidence that it was a tsunami, which has affected that region for storm surges is something that happens in the North Sea as well. We've got a recent history of that. But the particular storm surges that I mentioned to you, which was the one of 2013 in Ireland was a particularly disruptive storm. And when you're looking at possible combinations of this, you have to with other oceanic effects, you have to consider a difference between a tsunami or storm surge is a scenario of being very destructive, travelling extremely fast, can be hundreds of miles an hour, it is relatively quick. If you look at all the documented film of tsunamis Japan, in other parts of the world, the waters come in and it's gone out within say half an hour. That's not the case with a storm surge of storm surge can last for up to 24 hours or more. It's continuous. And although the waves are smoothing, rather slowly, they can be very violent. Now, I didn't have any film to offer you with my video representation of the actual the wave effect of the storm because it was at night. But

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Mr. Jones, I will just interrupt you there. We have got your video.

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And I have listened carefully to you've provided quite a lot of detail. So far. But I've got I've got your points. I wonder, could I ask you to put to put that in writing for deadline five? And perhaps you know it. I've got both of those points. So yeah, yeah. Could you just add one very small thing? Well, yes, go on very small thing that the recent storm one and a half weeks ago, in in Jamaica actually showed this violent stormy action in the film that was made of it as it was in the day. That tropical storm was originally a hurricane of a sustained wind speed 70 miles per hour. It then dropped to a truckload and was downgraded to a tropical storm warning reached landfall and Jamaica, other with a sustained wind speed of 60 miles per hour, and four to five foot storm surge with it. And you can see in the videos of that see exactly the destructive power of those waves and the power of them coming ashore. So yeah, I wouldn't eat for I've added all the extra information. Thank you. Thank you for it. Thank you very much. Mr. Jones. Thank you. You're welcome. Thank you. So if I could hear from the applicant in response. I think as I indicated, then there may be some points that have perhaps strayed from this specific topic that you might might or might not wish to respond to in writing. Yes, indeed. I've just got a number of points before I

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pick up the issues we've been listening to. I promised to come back to you with the name of the the technical note. It's the minsmere sluice operation evaluation technical note. That's what I'm told it is called. So that's what one should look out for.

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Having got that bit of housekeeping out of the way, there are

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just a few points that I would make. Before I pass over to two other speakers. That the first point, Professor blowers

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has, I think provided a written either written representational or relevant representation. And what we will do in our post hearing note is for your benefit, we will provide the references to where we've responded in writing to the points that have been made.

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The second point I would make about Professor blower's presentation, is that while some aspects of it, we're going to the agenda item

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And in a moment I'll I'll ask

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Dr. Dolphin whether there are any matters arising from that, that he wants to respond to. There were also a number of matters

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tucked away in there, which are clearly not only not for this agenda item, but not for this examination. So, in particular,

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arrangements made for dealing with the waste from nuclear power stations en six, paragraph 211. Four makes clear that that is not something that should be considered in the examination. Secondly, questions raised about need, which we've dealt with extensively in writing, and where both the policy and subsequently the courts have made clear that that is not for the examination, save to the limited extent that has been identified in the policy.

1:21:00

And then thirdly, safety. And security also matters where the MPs makes clear, they're not for the examination. And but in your You'll recall that we were asked in the first round of written questions for an elaboration on what the planning statement says about those matters, which are not for the examination. And we provided, hopefully a full answer in relation to that. So I won't go over those points. Again.

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I also noted similarly in relation to

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a later speaker, questions about things being done at speed. But clearly, in so far as questions of urgency and the urgency of the need concerned, again, the matter is settled by policy. And so far as the appropriate response to the urgent problem of climate change, and the role of nuclear within that that's clearly a matter for government as a matter of policy, not a matter for this examination. So with those preliminary points out of the way, there were a couple of points that arose. First, from Mr. Patterson, and then Mr. Collins about the adaptive design. And I know Mr. Lang, the Andrew Langley, who you heard from a moment ago, just wants to comment briefly on those. And once he's done that, I'll then look to Dr. Dolphin to see if everything he wants to add on the way that climate change has been built into the assessment on this issue. Thank you.

1:22:49

underlining the off the applicant, chicken, can him see me?

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Thank you. Yes. Okay. In relation to point one, Mr. Patterson's queries about the adaptive analysis have been done for the market, the fence like to point you into rep 2.116. And table three dash one that talks about the parameters that have been used for what is deemed as a reasonably foreseeable case and agree with our now and what might be a credible maximum case.

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January 2021, the applicant proposes the harkers offence feature to be amended, which we're now examining,

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that basically enable the 2140 design life to be not adaptive for a reasonable foreseeable case.

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The reason we have an adaptable design on the table and are sharing that if in such cases that through the life of the plan, has to adapt for non foreseeable events, the current predictions on the hedge business scenarios and the UK CPA standards,

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you're making provision for that, in that I am interrupting you now you are just sounding a little bit faint. I don't know if anything can be done to improve that

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quality for me now. That's that's that he's a little better. If you could make sure that we do get everything that you do say in writing just just in case people can't hear perfectly, of course. And so the point I'm trying to make is that

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based on the analysis available to us today, we do not deem that the seat of bench should need to be adapted with the forecasts that we can make of

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point 1.2. Mr. Collins talked about the adoption of the Northern mound and the BLF area and the fact that it is a promontory

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should this area need to be adapted, it will be adapted, inward, adapted into the plot if you like. So the site would be protected to the right commensurate level, but the forward extent of the citizens would not be affected.

1:25:01

I'll hand back to Mr. Phil. Thank you. Thank you.

1:25:06

Thank you, madam. So finally, over to Dr. Dolphin just to see what if anything he wishes to add on the on the matters we've been listening to.

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Thank you.

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Thank you. Hello, I turn it off and on behalf of the applicant,

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I'm just going to reply on those topics that relate to coastal geomorphology

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and hydrodynamics. So I think both Mr. Patterson and Mr. Parker, raise concerns about the potential I think many many decades away for the

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sizewell frontage to become primary and as a result of that, to potentially influence

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the transmission rates of settlement across the frontage. And we would agree that that is a potential which is why it is included in the modelling and reporting and both Tr 545544 that's our EP three dash, zero 48 and dash zero 32. So that that is already considered there. And certainly for me suffered, we look forward to seeing feedback on that.

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And the I think it's important to raise and I think I mentioned earlier that the monitoring plan and the techniques used being spatially continuous, will be able to detect whether or not there is a blockage and therefore a loss of supply to the downdraft coastline. And so,

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those three mitigation

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methods which are in the environmental statement, Chapter 20, that ap 311

1:27:02

Section seven, they will, they can be used in order to to compensate for any loss and supply. But I think it's also important to remember that as the

1:27:16

as those naturally receding coastline on either side lead to this perimeter there will be and this is shown in the modelling, there will be more erosion pressure. So, there will be a greater degree of natural supply out of the soft, soft defences which will be compensating for any disruption to longshore transport. And it's not possible to foresee whether the soft defence feature will supply more or less, but the monitoring programme will be able to see that when it happens. And therefore there will be

1:27:51

an option that to mitigate.

1:27:54

The last comment I have related to the comment about climate change in tide.

1:28:00

I am aware of a paper on this for UK waters.

1:28:07

We will need to get back in writing. So I can't recall exactly the numbers but it is very small.

1:28:14

map the effect of additional water in the order of a few centimetres, I believe. But we put that in a short note back to you. That's okay. Thank you.

1:28:26

Thank you. Thank you. Thank you and those that those are our responses to what you've just been listening to.

1:28:33

Thank you. I do just see that we have got a late hands. Well, a couple of hands up. Just to say that I would not normally go back to people once they've had a chance to speak. And I do note one of those persons has spoken before. Mr. Wilkinson.

1:28:55

Yes, thank you, Mr. Chi.

1:28:58

I just I just wanted to make an observation. That I find it odd that when Mr. Dolphin introduces himself, he introduces himself as from CFS, but on behalf of the applicant. That seems to me as though it would be odd also if, for instance, the Office of nuclear regulation or the Environment Agency introduced themselves from their companies and from their organisations, speaking on behalf of the applicant or were not entitled to more independent advice than we're getting from CFS.

1:29:32

Thank you.

1:29:35

And

1:29:39

I have a handset from Professor

1:29:44

that's an MD sorry. And he blows i don't i think you might be muted mister.

1:29:54

I got you there. It can you be brief, please because you have had a

1:30:00

A fair opportunity to speak. So

1:30:04

thank you for your courtesy and allow me to speak again.

1:30:08

It's just

1:30:10

I can't.

1:30:12

I just asked Mr. Wilkinson to turn his camera off.

1:30:18

I wouldn't like the introductory comments to my contribution from the developer sorry, from the requesting party to go without any comments at all, I mean, that they are he is now retreating behind

1:30:35

certain aspects, because there are, there are things that are not in his application, which simply need to be, and the idea that you cannot examine the viability of the site. Because what you're supposed to be undertaking through the NPS is the judge whether the site is potentially suitable, I'd been trying and what I have to say, and very many others have, that the site is potentially and is unsuitable, and the lack of any thought or arrangements about what to do about radioactive waste management beyond 2100. Seems to me entirely irresponsible on the part of the developer.

1:31:22

And I hope that you as the examining authority will not miss the opportunity to look into that. And the whole question of whether the decommissioning arrangements are satisfactory. Thank you. I just ask this to fill pot if he does want to respond to that. Yes, only very briefly, to both points that have been Sorry, can I ask the professor to turn his camera of your Absolutely.

1:31:50

I'm grateful. Both respond to both points that were made your appreciate, I'm sure, Madam, that when Dr. Dolphin introduced himself and the way he does it, he reflects the convention that's used in examinations, which is reasons that are explained at the start of each hearing. It's important for any speaker to identify on behalf of which party they are speaking, and he simply adopts that convention, it doesn't affect his independence any more than it affects the independence of those who speak on behalf of other parties. It's simply in order to make it more understandable for those who are listening to the recording. So I say that on his behalf. Secondly, as I'm sure you'll appreciate the comments I make were very specific to those elements of Professor blowers presentation that goes to matters that are excluded by policy, not to those matters, which go to the elements which do need to be considered in

relation to site suitability and the acceptability of the particular proposal. So that is the point I make. And it is a point which is based on policy, therefore, is really incontestable.

1:33:07

Thank you, Mr. Phil port.

1:33:09

Right. That brings us to the end of that agenda item. So it's nearly trying to pass three. So I'll take a short adjournment now. And resume at 25 to four. I'll also remind those watching on the live stream just to refresh your browsers to join the restarted live stream for the assumption. And when we resume we'll be dealing with the last item on the agenda, which is dealing with mitigation and controls. So we adjourn now and resume at 25 to four