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00:10

Good afternoon it's 20 past two and this issue specific hearing is reopened. Just before I get back to the agenda on pasta, my colleague Miss MCI.

00:22

My apologies everyone for the delayed resumption. And you may have noticed that we are one examining inspect to short. That's because Mr. Brock was pinged by the NHS app during the lunchtime adjournment. And as a matter of law, he is now required to self isolate for 10 days, he did have he has no symptoms. He did have a COVID test yesterday. So what we propose to do is to continue with the four of us, he is returned home now immediately, we are going to what he will do is obviously watch the video, recall recording of this afternoon's proceedings, and we'll adjourn sorry, will attend the hearings via teams for the remainder of this week. So I appreciate that there may be people in the room who are feeling uneasy with with that announcement. If you do, then we fully understand if you wish to leave although we are very well socially distance today. If you do wish to leave, the case team will arrange for you to find somewhere more isolated and separate if you wish to join on teams, or if you wish to return home and join in that way. So they can ask if there's anyone present that does feel uncomfortable, and would wish to join on teams from another location. Nope. In that case, we will continue with the agenda.

02:21

Thank you. Thank you, Miss McCoy. Just before I do continue with the actual agenda, just to note that the examining authority have accepted an additional submission via email yesterday from Mr. Mrs. Lacey, which does affect does have issue about for the road and the floodway in part, the flood risk assessment. So that will be published as soon as possible on our website. So it's just a note that additional submission. Having done that could no partway through item five and I want to deal with the associated development sites and drainage design notes they're off. But in a change the agenda before item six and seven. We'd like to move item eight upwards the crew coastal processes update. So I'm aware and messenger is over there's patiently with us. So we will deal with that after I've finished on item five if that's all right. So returning to item five, which is Associate development sites and deadline five the applicant submitted preliminary drainage design notes for size well link road to village bypass yachtsman roundabout updated draining strategy. deadline. 6am aware that interested parties still had questions about lack of clarity on to inform those strategies. And I would like to hear from the interested parties about outstanding issues they still feel need to be addressed. So could at this point start with Suffolk County Council please.

04:07

Thank you. So microbead for Suffolk County Council. I don't think I need to say anything by way of the introductory remarks. I'll bring Mr. Williams in to deal with the specifics there with a certain flavour

which is similar to some of the matters that were raised this morning in relation to the main development site issues.

04:33

Matt Williams, Suffolk County Council, as Mr. Bedford says it's a very similar flavour to this morning's issues. Just to come back on a point as well. The applicant seemed to think that we were asking for points of detail just to be very clear here. What we're asking for is a demonstration that the primary mitigation the applicant is reliant on his deliverable, and it does what it says it does IE prevent pollution, and much Greenfield runoff rates within allowance for climate change. As per the environmental statement, if that's not demonstrated, as far as we're concerned, the mitigation isn't there, quite frankly. And that has knock on impact. So that's relevant to the ad sites, just as it is the main development site. Then firstly of the ad sites focusing on the road schemes, we have some information on those schemes, the technical notes submitted as part of rep five hyphen, 120, Appendix f, g, and h, give some details. There is no supporting information for those details. We have seen some infiltration testing results for the size or link road. And it's agreed with the applicant, the infiltration is not possible on the size or encroach on the to village bypass and the Oxford, we have seen some infiltration testing data. However, we aren't the understanding that we have not seen all of it. And certainly the information that is contained within appendix g for the two village bypass the infiltration rates used in that document do not accord with the results we have. So we're very much of the opinion that there is further information out there that we don't have. I believe some of those tests that we have seen are to be 3365 methodology, which again, we support. And we would assume that any further tests that have been undertaken by the applicant do accord with that we have a very limited exception on the two village bypass where we had a request from the applicant to accept a infiltration test in a borehole because of the depth of the test. And we agreed that and just by way of example, given the fact that they've asked for an exception in that instance, was an implied that that is very much an exception and should not be seen as a standard approach. So we don't have infiltration tests that accord with the information in appendix G. There's no calculations for any of those roads schemes. Indeed, Appendix g does have some design information in there such as the water depths, which we do not agree with, some of them I think are up to 1.7 metres deep. As Highway Authority adopting these basins, we would expect to maximum water depth of one metre, as would be the case for all developments in Suffolk. And as in accordance with the serious suds manual, which is the National guidance the applicant seems to think they are complying with in addition to that, for the team that is bypassed, we've requested more groundwater monitoring, and they have achieved a very high infiltration rate close to the river rolled in the region of I believe 300 million our the rate used for appendix G is even greater than that. So we do have some concerns about potential continuity with groundwater. We've not seen any information for the groundwater monitoring at that location. So it's not possible for us to confirm the infiltration is 100% available. There's been no pollution assessments Well, there has been a pollution assessment stated by the applicant, but we haven't seen the results of that. And we don't have any sections for any of the road schemes. So a lot of the roads schemes use swales to catch the runoff from the roads and direct that towards either attenuation or infiltration basins. We do not know whether those swales are at the top of embankments or at the bottom of embankments, how they work in terms of earthworks, which is very important from highways perspective. So not just talking from my own opinion here, but look into my right my colleague from highways, the swales need to obviously be maintained. They need to be in a location where they are maintainable, but also the surface water

flows. If they were for example, to go down an embankment could cause potential scour issues, which would have maintenance impacts there as well. So that's just touching on some of the roads schemes, outfall locations as well. We've discussed previously that again, in terms of order limits, we need to see that they are within the order limits especially as in the incidence of the size or link road, for example, that is they're not within the size of an estate, it could be outside of the order limits. So that would be a potential concern.

09:00

Moving on to the northern Park and rides and staying on that same topic of the discharge location. The highways round about the a 12 round about that is proposed it's currently proposed to discharge to an ordinary watercourse 150 metres east of the a 12. Now the order limits do not extend 150 metres east to be a 12 a and to the east of the a 12 more or less immediately. So the applicants outfall is 150 metres outside of their order limits as far as we're aware. Now, that outfall and the outfall from the northern Park and Ride site itself are both two water courses. Neither of these water courses have been evidence we don't have photographic evidence topographic evidence of any of these water courses. So can that applicant actually discharge into the water courses that they say they are discharging to, again for the Northern Park and Ride no ground investigation information, no pollution assessment, no calculations. The applicant is proposing to use a key bar discharge rate which we support. However, we don't approve the methodology that they've used to calculate that they're reliant on FSR methodology. Indeed, fvh is probably going to be more conservative. For the southern park and ride, we do have infiltration test results. We have results of four infiltration tests on the site and they are to be our 365 methodology. Three are in the middle of the site and one is to the north. No infiltration tests have been undertaken in the south of the site. The three in the middle of the site failed, the one to the north of the site did demonstrate infiltration. The applicant, however, has used an average infiltration rate which is not in accordance with national guidance that being br a 365 methodology, that which states that the worst of the three test results should be used. Therefore, the applicant using the average being better than the worst is not using the worst case example and not compliant with the methodology. Now, the applicant proposes to capture the water in the south and central areas of the site which topographically aren't linked to the north and to then contain that runoff in a crated below ground attenuation system, which is not supported by local plan policy SC Ip 9.6 to then pump that to the north. Now, the reason that they pumping it is because they have not undertaken any infiltration tests in the south of the site. Now pumping is a last resort. a last resort being if you can't infiltrate, the applicant has had adequate time to undertake infiltration testing indeed they have undertaken infiltration testing just not at that location. That is not justification to use a pump system that is not sustainable drainage and it does not accord with any national guidance. Now, that principle could be supported if there was an infiltration test that was undertaken and it failed. However, as I mentioned earlier, the current calculations provided for that area show that the pump system could not cope with a 24 hour failure. So if there was a one in 140% rainfall event, the the site would flood and most likely flood off site. So again, we have concerns about that. Now, the applicant if they do not have time to undertake infiltration testing, which they most likely do not could address this by using a machined worst case infiltration rate of 10 millimetres an hour, which is the worst we would seek to accept and sighs their infiltration features off that just to show that they can actually fit an infiltration feature in the southern area of the site, which works to our worst case scenario. But I would highlight that that should be an above ground feature. There's no reason to use below ground features here other than weather if the

applicant has not allowed enough space when drawing up their order limits. Interestingly, no climate change allowance has been used on the calculations that were provided for this Southern park and ride. So again, that does not accord with national requirements, there's been no pollution assessments, the wrong calculations have been provided or only FSR calculations. For reference, the main development site undertakes three sets of calculations for each water management zone, one being FSR, one being fvh 1999, and one being fvh 2013 fvh. 2013 is generally the worst case example for all of the main development site with only one exception that produces the worst case requirement for storage of surface water. So using FSR by all accounts is most likely under estimating the size of storage required for the southern parking ride.

13:44

Moving on to the freight management facility, there is again some testing at the freight management facility. It is to be re 365 methodology. However, they have again used the average infiltration rate across the three tests of each infiltration test pit that is, which again does not accord. Interestingly, only one of the three infiltration test pits across the site actually exhibited acceptable infiltration, which was in the middle of the site. There's been no analysis however, of the soil logs. Do you understand why that is? Indeed we don't know if the soil logs were showing sand whether they were showing a silty material that information is not available but national guidance and best practice does encourage infiltration tests are accompanied with soil locks. However, the biggest problem for the freight management facility is that it is entirely below ground attenuation. There is no above ground attenuation whatsoever. Again that does not accord with the local plan policy as CLP 9.6 no climate change allowance has been allowed for in the modelling that has been provided, which again uses only one methodology and does not sensitivity test the others. No pollution assessment and this is the most concerning site in terms of pollution. This is a freight management facility. I say the most concerning site in terms of ad site size. This is a freight management facility that has parked hdb's. It's considered a high pollution hazard level. This is a site that is going to drain water using gullies into an underground crated system, there is very limited if any opportunity for attenuation or treatment robber prior to the attenuation system. And any treatment that was there be that proprietary or otherwise is unlikely to be sufficient. So as far as we're concerned, the applicant is going to be unable with their current drainage strategy to provide sufficient pollutant mitigation. As I say, this is not a matter of detail. This is a matter of primary mitigation. And finally, a site that tends to be overlooked the least and sports facilities and these are the proposed pictures, the off site pictures. Those pictures will generate surface water runoff and laced and does have an established surface water drainage issue. The surface water drainage system in leisten is fairly well accepted to be overcapacity, and Leysin is not very favourable for infiltration, as demonstrated by the Le IE not being able to infiltrate. So where is that water going to go? would be a very interesting answer to hear. Thank you.

16:19

Thank you. Before I go to the applicant is any other interested parties or want to raise issues on the drainage strategies or the associated development sites? No, in that case, Mr. Phil bought. Thank you. So

16:40

I'm going to ask Mr. Jones to provide an overview again, I'm not going to ask him to go through provide a detailed responses to all of those points, we can do that in writing. So I get to invite him to provide an overview response. And depending on what he says that there may be one or two points that I want to add at the end.

17:07

Thank you, Mr. Philpott. So yes, a quite a long list again, and a list that we do intend to liaise with, with the Suffolk County and get to the bottom of them and provide solutions that are to their satisfaction. So I'd like to make that point before I say anything else. The infiltration has been done across the ad sites and the general approach the Thai emphasise this morning is pretty much the same in terms of the object of the overall strategy. And progression of the ad sites or the associated development sites as has gone through a risk based approach with probably the most important points like the the roads being done first. There are other things that are coming on later. And to be honest, there has been a lot of good dialogue with Suffolk County. And I hope they'd agree that and in general, in general terms, the approach is using the same type of approaches that has been used on the main site, which is using swales and detention basins, whether the detention basins are critical primarily there for the the major storm situations.

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Where the sides are different is that some of them are quite remote. And we have a different requirement in terms of lunch take and the temporary nature of the sites. And over the last couple of years, two or three years that we've been dealing with Suffolk County, we've become aware of their preference for different approaches and different styles of such structures that they they may wish to use or the that they prefer to use. It's fair to say that as you move around the country, these could these can vary quite considerably. So Mr. Williams talks about things like the use of a created system, and things like that. And the only reason that's been done is because the sites and the land take are essentially based on what is appropriate for the area. And there are other factors affecting the disruptive nature of construction and not wishing unnecessarily to take further land. disrupt further environment, disrupt further habitats for what is, in these cases, some of these cases, a temporary site, which at the at the end will be removed. So, it will take the environment and the habitats longer to recover than to actually replace it back to how it is. Mr. Robot? I don't know whether we want to elaborate on that

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with some of the

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answers. I mean, that is one of the points that I thought I might pick up because when you hear from the county council on these points, there doesn't appear to be any acknowledgement of that important differentiation between permanent structures such as the road, and temporary structures where compulsory powers are being used to take land for a temporary period. And therefore what is appropriate on those sites is not necessarily going to be the same as what is appropriate for a permanent side. And there are necessarily balances to be strapped, and Mr. Jones is referred to some of those. So clearly, the more land you take, the harder it is for the person whose land is being

acquired. The more disruption the more work is required and more disruption of the environment. And there is a balance to be struck in deciding what is appropriate for a temporary side, we're using compulsory powers, and what's appropriate for a permanent side such as a road. And that's the point I think Mr. Jones is elaborating on. And clearly it's a point which resonates in terms of the the test for compulsory acquisition, but also just the general planning balance of the extent to which you allow subs and drainage to be the driver and the be all and end all of what your scheme looks like for the sides. And the extent to which it is one factor amongst many that has to be balanced in deciding what's the most appropriate proposal. And so that that was what I was going to add. I don't know whether Mr. Jones wants to pick up on any of the other points by way of example, or, or overall theme.

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No, suffice to say that we will take on both the comments, Mr. Williams, and in the spirit of collaboration and liaison, we will will seek to

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to take them off.

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So obviously, it's it's in our interests to do so so far as reasonable, particularly when it comes to the roads recognising that they are ultimately, the intention is they will ultimately become part of the highway network. And we realise the role that Suffolk County Council has to play in that so don't there's any difference between is that we need to satisfy them that these are appropriate and sustainable.

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I think from our point of view, again, mindful of how close we are to the end of the examination, what we'd like to see is you together with Suffolk County Council come closer together and if you like trying to agree, what you can agree and let us know what you disagree on.

23:06

That that's plenty in everyone's interested and most obviously yours for the purposes of reporting, but also as as the applicant, we see that as something which is entirely appropriate.

23:18

Thank you. In that case, that agenda, agenda item is concluded and we'll move on to what was item eight, which is now item six.

23:31

Thank you Mr. Humphrey. So at deadlines seven the applicant submitted the present preliminary design and maintenance requirements for the CDF and the storm erosion, erosion modelling of the CDF and permanent and temporary BLF plans were also provided. So, I propose first to consider the modelling for the S CDF followed by the s CDF design. Then moving on to the detailed design of the adapted h CDF in that order before considering the remaining agenda items. So firstly, the modelling for the scdf through decommissioning to 2140. So at deadlines seven, the applicant submitted the storm erosion modelling of

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oh four five, which assesses the erosion potential of the s CDF and investigates the response to the proposed s CDF to storm wave conditions. So if I could begin by asking the Environment Agency, whether the modelling submitted by the applicant deadlines seven overcomes its concerns in relation to the assessments and viability of the CDF in the long term.

25:02

Thanks, madam Cameron's guide from the Environment Agency. At this point, I'll bring in my colleague Ollie bones who, who we've had the modelling for a matter of days, but I think he can offer some initial views on what we've received.

25:19

yet. Thank you, Cameron, Ollie burns for the Environment Agency. Yes. So as Kevin says, we we have received the modelling very recently. So I need to caveat our response here, by saying that the review, a detailed review is ongoing. And so we don't have a final response to the query at this point. But what we can do is give a feel for some of the some of the main headlines arising from our review so far on this work, which I will I will do now. So the the latest modelling from from our view, so far, we've seen, we've seen an extension of some of the scenarios and some of the some of the design layouts out to the year 2140, which by our understanding takes it to the end of the decommissioning phase. So this is positive. And this is this is something that we had previously raised as being a requirement and discussed at the previous issue specific hearing. For coastal geomorphology. There are still some areas that further work is required and is flagged in the latest edition of the modelling reports. So in particular, at the the previous issue specific hearing for coastal geomorphology, we outlined an expectation that more severe storm condition conditions would need to be modelled. And so it's worth bearing in mind at this point that our understanding is that this this this latest modelling only takes the one in 20 year return period event at this point. And we understand that there hasn't been time to model the base for the sequence yet. Now the one in 20 year northeasterly event was was the previous modelling was shown to be the most erosive of the events model so far. So using that at this point, we think is appropriate and positive. But we Nevertheless, we are anticipating further work to to explore more severe storm conditions still. And we understand from a recent conversation with the applicant that a one in 10,000 year return interval event combining very extreme sea level scenario and combined wave and storm surge conditions is going to be is going to be modelled. And so we consider this to be a necessary step as part of the work to assess this the full scope of reasonable worst case scenarios for for the site. And so we look forward to receiving that work and undertaking further detailed review. So I suppose in summary, waste, we do need to complete our detailed technical review, as I say some of this may change slightly. But in light of what we've seen to date, which is as a site, which I suppose is effectively a partial assessment of the risks for the full duration of the project. We are comfortable with the approach that's being used and the conclusions that have been drawn so far. And we look forward to that next stage of work as I've as I've said.

28:22

Thank you, Mr. Burns. Mr. Scary, take it that concludes the environment agency's contribution at this stage. It does. Thank you. Right if I could hear from a Suffolk Council, please.

28:42

Isabella for 40 Suffolk Council, we are in a similar position to that of the Environment Agency in that a detailed review of the storm erosion modelling is still underway and will provide our detailed comments on that deadline eight. I think the preliminary review that the Council have reached is that based on this additional modelling, the soft coastal defence feature does appear to be viable to 2140. But we will confirm that as I say in our detailed comments at the next deadline.

29:20

Thank you.

29:22

Thank you. So if I could hear now from Alison Andrews order or Association. Thank you, Alison Andrews order and our association. And as the previous speakers have made up made up, there is still work to be done. So it's I wouldn't repeat what they've said because the works got to be done. But I hate to say this but the model is only as good as the material you put into it. And I'm still concerned that there isn't enough of the right material around. This is still only focuses on the three kilometres around size. We'll see Despite the fact that there's a recognition that there's a long term transport south, it's actually recognised in some of the EDS and papers. And in a shoreline management plan report we had for the SL ordinaria, which is they're worried about further south, and actually said, and one of the conclusions about contemporary coastal processes, previous studies generally concur that the natural sources of shingle to the slaughter frontage are from the north with little or no input from the offshore. So it's seems to be a generally accepted fact that is not in the calculations. Secondly, within this context, there is this very interesting and detailed gravel transport survey worth 2600 pieces. Yes, that is substantial. But it's only for a very limited area, it's only from minsmere sluice to just south of sizewell Hall, it doesn't even get to thorpness rich, so we don't actually know what happens to the gravel, or the shingle further south as a result of that particular survey. And,

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and

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keep that out of the way. There's in page 56, of Rep. 11107 says it shows a lot of losses, and how they will increase over the years. But it brings me on to the point that we haven't got the timescale on this, right, that's losses to 2099. And we've got, as others have mentioned, this increase in climate change in sea level rise, or frequent and ferocious storms. So there are going to be significant losses, even in the papers that are up to now. But there could be more, this is a very surprising and difficult coast, it keeps coming up with surprises and hitting us all. And I would like also to raise in rep 7101. The easiest place to look at is in the conclusions in the Sorry, could I just say that we are coming on to modelling one in a minute. Thank you. Thank you. I'll stop there. Right. Are there any other interested parties that want to comment? And that's on the storm erosion modelling? That's rep 7045. Mr. Collins, you have your hand up?

32:27

Yes, it wasn't actually. Maybe this is the wrong time to put it. This is basically on the viability of the soft coastal defence modelling in general, not specifically the storm modelling, I have a more wide concern about the underlying assumptions that have been made in the soft coastal defence, monitoring and mitigation and how they maintain it, basically. So is this the right time to bring that up?

32:58

I think it might be more relevant if we go on when we get on to the next item.

33:02

Oh, wait for that, then. Thank you. Right, Mr. Wilson? Thank you, Madam crisscrossing task. I just wanted to sort of reiterate my comments this morning that he said about the timing and the the 2140 date, the applicant seemed to be suggesting that I raised the comment because it was regard to dry fuel storage when it's stuffing the salt, it's it's the inadequacy of the timeline for the modelling. However, just really think 2140 is to shorter period.

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And this is totally at odds with what the officer nuclear regulation told me about the length of time spent fuel would be on site. Thank you.

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Thank you, Mr. Collins. I don't see any more hands up. So if I go to the applicant, please

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think about him. I'm going to invite Dr. Tony dolphin who is taking part remotely, just to deal with the points raised on behalf of the old and older Association and also any questions that you may have so far as I understand it, the position is set out by both the Environment Agency and the suffered Council is that their preliminary view and they were carefully rested in this way was positive. They were still completing their review and there were other items which are being assessed, which they will look at when they come so it might one of the things that dot dolphin might deal with is just what else is coming to to reassure you on that. But then it on behalf of the old and order Association, a number of points were raised. Largely I think around the scope of the modelling the geographical scape of the modelling and the scape of the exercise undertaken in terms of the detailed gravel transport work. And so I was going to ask Dr. Dolphin to deal with that the point that Mr. Wilson raises, I think we've said we'll deal with that in writing because it requires looking at what the DNR has said. So if Dr. Dolphin is on the line, I'll pass over to him looking hopefully at the screen, but what if I might just get someone to check whether he's

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it helps I could hear from the other interested parties and the AIA on the second item, and then he could deal with all matters relating to the scdf.

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If yes, if I if in the meantime, someone can just see if they can get hold of him to make sure that he does join the call what we might need to do. That looks like he's aware that that's what he's promising

now. What am I do once, once he is present, it sounds it isn't just to make sure that he has heard the point that I was expecting him to deal with dusted off interview. Did you hear the exchanges just a moment ago?

37:16

Looks like he's muted. Sounds like it's a systemic issue rather than his failure to click the right button. And do apologise is one of those things that happens with remote hearings? Ah, here we are that looked like the man I was expecting. Hello, can you hear me? Excellent. Yes, it just wanted to check whether you had heard the contributions made a moment ago by the environmental agency, he suffered Council in the olden order Association. Yes. And so the point I was going to ask you to deal with and I'll just recap, was to provide a short update on what further modelling is to come to just pick up the points raised by the first two speakers. And then so far as the oldest or Association, to comment on the geographical scope of the modelling, and the global transport surveys, if you would, please.

38:38

Yes, so Good afternoon, Mr. Chi, I'm turning it off and on behalf applicant. Sorry about that. When you caught me on, all of my neaton camera buttons froze up. So I pre joined, hopefully you can hear me okay. And I'll just run through with respect to the results that we've published that deadline seven, the Environment Agency, we're referring to our use of the larger one and 20 a storm case. The other cases, the only reason they will not run was just due to a lack of time in particular, the beast from the east is a bit of a beast. As far as modelling is concerned, it's a very difficult run to model because it's such a long storm. So those models are running as we speak, and indeed, they're coming to completion. And we're intending to fully update for the other storm conditions at deadline 10. Also separately and worth mentioning, even though it's part of a of a separate safety case, process. The same models have been used for safety case, design conditions. That's the end One in 10,000 year join, wave and water level probability with storm surge, pre eroded beach, and so on have have also been run, but they've not been reported yet. So those runs have completed in modelling space. And the only thing I just wanted to add there was that under those very severe conditions, the hard defence feature was not exposed. And that was using the modal article size 10 millimetres. Moving on to some of the comments, they're made by Alison Andrews, and I've just got a small correction in front of me about the model domain. And it's not three kilometres, it's actually 4.5 kilometres. But in the graphs, we we've tended to show the smaller range because the primary objective of the reporting was really to look at the viability of the soft coastal defence feature. So I think some of Allison Andrews points do touch on conversations we had at the last hearing about the impacts to sediment transport, and geomorphology, where they move to where they do not move to. So I would harken back to those conversations. And what we see is that, because we're not removing any sediment from the system, the impacts are really quite small, the monitoring extents are much larger than those impacts. And the evidence also shows moving self that the shingle material is contained within the bay. So there's there's no potential for or very, very minimal potential for any effect to move around the headland. And indeed, all effects will be contained, close to the station well monitored. And we will be able to, to see early, if any of the predictions are not correct. And to compensate, compensate for those. With respect to losses, it's important to realise that this is storm modelling, one of the big challenges and one of the academic interfaces with storm modelling is it's actually getting the recovery phase after the storm correct. And that's an area that's still being developed. But the erosion models are much better. So here in these reports, when we talk about

losses, we're talking about the losses that follow straight after a storm. And that hasn't included the natural recovery phase. So in a sense, they themselves are very much worst case, because it's not correct that their material isn't coming back. And indeed, with the heavily size material. These are the particles up around where we see most of the material on the coast, with the modal size around one centimetre that material is confined to to the beach. And we see from all of our subtitle sampling, that it's all sand off there and combo or composite beach, and the shingle or pebbles are retained up high on the beach. So in net terms, they're not lost that they're combined combined, and they remain in the bay.

43:40

And the only other two comments I had with respect to sea level rise. Of course, the modelling has considered the sea level rise scenarios, all the way up to the end of decommissioning at 2140. And there was a comment there about storms. And just to reiterate that the UK CPA team predictions show don't show that the storminess is increasing at sizewell in fact they show slight decreases. Although I would note that for the safety case modelling the approach which is standard for that work, I was to increase the wave conditions by 10%. And that has been done. Hopefully that answers the questions that were raised. Thank you.

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Can I just come back on the modelling of other storms the other storm modelling that sought by the EIA think he did say that that would be submitted by deadline? 10. But But my thoughts are that that's going to be late for anyone to comment on that. And could that be submitted to an earlier deadline? Perhaps deadline nine If not, you know if it's not available for eight Could it be submitted for deadline nine perhaps shared with The EIA and and others before the actual submission date.

45:06

And the reason we chose the one and 10 sorry, one, one and 20 condition is that it was one that we could model on time, and was very similar to, to the beast from the east in some respects worse. So we don't feel as though the conclusions will change as a result of the upcoming modelling. Of course, we'll wait for that to be seen. I am not sure that we would be able to make it for deadline nine, but we can we can certainly do our best.

45:41

Thank you. Certainly, Madam, we've taken away the helpful suggestion that even if it can't be put in a deadline nine, if it's available to be shared with the Environment Agency beforehand, that then we can do that before it comes in to you. We're conscious of the need to get it to them in particular, as early as possible, so they've got a chance to look at it.

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Now that's right, it's just obviously it'd be beneficial to all to have their views and comments on. Right was that

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those are the only points in wanted to make by way of response. Thank

46:27

you. Right, so moving on to the SC d f design. Deadline seven, the applicant submitted the preliminary design and maintenance requirements for the scdf version three, that's rep 7101. The counsellor previously stated that same rep 5144 there is preferred position is the scdf designed to provide a sacrificial surface layer that's able to be mobilised by waves and tidal current in a manner that is comparable to adjacent beaches. And that matter was stated to be under discussion with the applicant. So if I could go to East Suffolk council first, please Can the East Suffolk council provide an update on those discussions? And do you have any further comments on the scdf design? In the light of the applicant's latest deal seven version

47:30

is developer for for his suffer Council. Madam, I'm going to ask Mr. Patterson to address you on this issue.

47:43

Thank you, Paul Patterson, senior coastal engineer at East Suffolk Council. We are partway through a review of the of the most recent reports submitted by the applicant.

48:00

We are

48:03

comfortable with the the approach used in the report. And that our print preliminary position is that the conclusions appear to be reasonable. And the most significant concern that we've raised in previous assessments of the soft coastal defence

48:27

design has been as as was mentioned in the introduction, the size of the sediment that it would be made of. And we understand from recent discussions with the applicant that there was a move now towards

48:45

the specification of the material that will make up the soft coastal defence to be closer to if not

48:53

comparable with the the native beach to either side. So we look forward to confirmation from the applicant that that will be the case, which will be a significant comfort for us.

49:10

In addition to that, there may very well be other points that we will make in our detail submission. That I think is the most fundamental concern that we have. Thank you. Thank you,

49:25

Madam just just Isabella for for yourself or council just to note that, for example, in the coastal processes monitoring and mitigation plan, there's reference to intentions to use particles within the natural range and that sort of language. We're hoping that there'll be firmer commitments to that and that's that's what Mr. Patterson was referring to that we're hoping that there'll be some movement on that.

49:52

No, thank you for making that clear. So the Environment Agency, are there any further comments on points you wish to make on the SCF design in the light of the applicants. Dr. Seven submission on this?

50:10

Thank you, Madam cameras gates Environment Agency, I will just turn to my colleague Ali burns, if that was the case to see if he has anything further to add. Yes,

50:20

thank you, Ollie bones environment and see. We I would echo I think we will echo what we've just heard from a Suffolk Council. Certainly with regard to the to the settlement sighs I think we are aligned with their thinking in that in that regard. So I won't repeat that again. And I would also point out with regards to the CDF design, we heard just then from Dr. Dolphin, about the safety case, one in 10,000 year model work that's going on that that does suggest no risk of exposure of the H CDF and or certainly minimal risk. Now that obviously, is new information to us. So we await the result, the chance to review in detail that work to be able to draw our own conclusions with that regard. So yes, we're aligned with a soft Council. And we are waiting that that further information that I think is should hopefully be informative with regards to our stance on scdf design.

51:16

Thank you. Thank you. Now the marine management organisation on not in attendance that that hate this hearing, but they have submitted a letter in lieu of attendance, and that that is dated the 10th of September. So they haven't yet reviewed these latest submissions from the applicant. But in looking at Tr 544 and Tr 545, they have suggested made suggestions. So in the light of those suggestions, I was going to ask the applicant, whether they intended to extend the area of coverage and monitoring surveys, that the as suggested by the MMO. And if they could also comment on the justification for use of a much course for material for the scdf in the light of the latest modelling and comments from the MMO and other IPS. So rapidly. Just leave that with you for the moment and we'll hear first from other IPS first, Alison Andrews, is there anything you want to add on this item? Thank you, gentlemen. It was it's a question. It's simply that in the rep 711 it stated that the CDF will provide a large reservoir of shingles designed to release sediment into the coastal system to prevent acdf exposure and thereby avoids or minimises disruption of long shore shingle transport and the potential downdraft beach erosion. And it uses working with nature where the release of sediment into the coastal system. And what I'm asking is, how does this fit in with the earlier papers about there might be either recycling recharging or bypassing? Because again, my concern is it might not interfere with this minimal bit in very large bit in front of the front of thing. What happens to the rest of the longshore down drift? And maybe it isn't for this paper, but I thought we ought to see what recharging recycling or bypassing does the longshore drift Thank you. No, thank you. Right Mr. Collins.

53:45

Thank you. Yes, I want to talk about sort of more fundamentally about the positioning of partly the coastal defence tow at the most south eastern point of the size or sea defence, which is positioned significantly seaward on the sides will be hydraulic join us growing or salient and the expand the extent that the size will be salient and its effect on the overall defensibility of the just move this over here. Soft coastal defence feature from the outset. The extensive reach of the size will be salient to the North has significant major maintenance challenges for both the hard coastal defence, the soft coastal defence, and the things that are stated within the coastal processes monitoring and mitigation plan, given the current date of 2035 for the cessation of size will be operation submissions in a pp 311 paragraphs 20 point 9.25 2.27 and 20.1 2.2 to 225 app 312 page 44 state that the state salient has been stable since 2011. However, in Section 2.5 of app 312 at section 7.5, it states the present day beach salient formed at the size will be out for is likely to be maintained until the station ceases to operate, after which the beach is expected to relax, eroding locally until the salient has disappeared as per the site size or a salient following cessation operation. At 7.4 point one it goes on to state the expected relaxation of the shoreline when size will be enters its decommissioning phase, which was also observed when safe size while they stopped operating may or may also reduce erosion pressure immediately north of the hard coastal defence due to gross transport during southeasterly events and trapping of some materials immediately north of the acdf. However, the remains of the soliant at that size while they is still visible in size, a lot of day, having been protected by the set size will be salient against the predominant north south longshore drift. So this part of the statement seems to be without foundation and does not really reflect the reality of the current shoreline. The final statements regarding trapping of materials north of the hard coastal defence may no longer be supportable given the change in the position landlord of the permanent beach Landing Facility. These last two early references are the only ones regarding the size will be salient and the expected behaviour following cessation. Besides all be operations, none are present in the two scdf modelling documents rep 2115 or rep seven zero 45. On the 20th of August we traced the toe of the current proposed placement of the hard coastal defence feature toe using Ordnance Survey references for the three positions of the hard coastal defence as provided in rep 5015. These positions are the permanent beach landing facilitate the North, the most southeastern point where the H cdfw turns towards the size will be hard coastal defence, and that point approximately 150 metres north of that south south easterly point where there is an inflection point and the hard coastal defence turns in a slightly more northerly direction towards the permanent VLF position referred to earlier. The ordinate serving grid references were converted into latitudes and longitudes using the Ordnance Survey code conversion page, and then we walk through each of the three positions using a compass. We were taken by surprise when we made the most made our way to the most southeastern point, as we found ourselves some 15 to 20 metres seaward of the current sacrificial Dune on the vegetated shingle between a viewing platform that sits on top of the dune and directly in line with the size Welby inlet and outfall positions. So this is right on the sides won't be salient. The inflection point position approximately 150 miles north of metres north of this position is immediately on top of the sacrificial Dune where a path has been created by regularly walking use. The position of the permanent BLF now sits immediately behind the sacrificial Dune representing the change positioning in the applicants recent updated design in red 5015. These positions were not what we expected, given that the positions that were marked out during the accompany site inspection to the hard and soft

coastal defence on June the eighth, we now realise that those positions being north of the inflection point, rarely representative of the Northern two thirds of the Hardcastle defendant feature.

59:02

pictures of all of these points are given in rep 7242 and rep 7241, which was submitted as part of the oral summary prior to age 10. on biodiversity and ecology. In each of the pictures the person standing at the appropriate coordinates is holding a pole with a red flag on the top the height of the flag roughly represents ground level. At about point 5.4 metres above ordnance datum was the new scdf has been built on top of the H cdfw to a hard coastal defence tout plus one metre. Coincidentally, at the same time, we were sent a drone picture showing the entire suite of sizewell Bay, taken from the south of the minsmere SLOs and showing the entire suite of the bay all the way to the NES just north of thought ness. The picture shows almost the entire three kilometres zone of influence that the applicant centres on the new size we'll see site and are pretty By pictures of this in a summary of the session, what is striking about the picture is not the view of the proposed size while see size and size will be in size on a. But beyond that it clearly shows the two salience created by size will a initially and then enhanced extended and currently maintained by the current size or be out for In fact, the current size will be salient starts at the northern end of the proposed size we'll see site close to where the permanent BLF is proposed and reaches a maximum Eastern point opposite the size will be out for decreases slightly to the south before another man a maximum is reached, where the old sighs well as for salient is still located before returning to the general sweep of embayment that stretches from minsmere sluice to the Knesset thorpeness despite sizewell A have been shut down since 2006. The hydraulic Sally entity created has been protected by the operation of the size one of size will be creating its own salient during the 11 years when both stations were operating simultaneously. The fact that the size or a salient is still present also reflects that predominant north south longshore sediment drift that is typical at this part of the coast. So when sides will be shut down is shut down permanently the coast in front of sizewell C, size will be inside as well a will erode back to the natural size wall Bay in embayment profile based on the statements in AP 311 and ap 312 referred to above. The size will be shut down is currently scheduled to occur in 2035. Roughly at the same time that we are told sizewell c if consented and built on time will begin operation. Of course, EDF generation have stated that there have an intention to apply. The Office for nuclear regulation for an extension of operation for size will be beyond 2035. But the length of the extension the conditions and potential enhancements that might be required such as raising and reinforcing the current hard coastal defence for size or B, which is not seismically competent and or other possible reactor safety and safety enhancing enhancements to bring it up to post Fukushima standards made by make such an extension financially challenge or if not, if not practicable, perhaps limit the length of any extension. What is clear is that size will be will be shut down in the early part in size we'll see operation even if not when the first reactor size we'll see is brought online. So what happens to the coast on the coast to the extensive size with a size or B salience when the size will be out for no longer tech maintains them? How long will it take for the size will be salient to relax or erode back to the natural size will be embayment profile. When precisely as the SE where precisely is the SE the end of the size will see hard coastal defence relative to natural environment profile of size while de minsmere solution the Knesset thorpeness the current plans the hard coastal defence overlaid onto the light grey contours of the underlying OS map in rep five 0.15 did not give a clear indication of where the 750 to 200 metres and the hdds are compared to the current sacrificial June and the hydraulic salient of size will be or the natural environment profile of size while bit of size

will obey despite knowing the size will be setting will erode or relax. No attempt has been made to model this feature. its eventual erosion and timeline and then consider the impact this will have on the overall so soft coastal defence modelling in terms of the time that the erosion the size will be salient is concerned. First, if we go back to the period between consultations two and three, when there was a proposal for a substantial jetty to be built for the sidewalk, see development. The applicant applicant shared with Suffolk coastal District Council coastal partnership East minsmere level stakeholder group in Suffolk coast action for resilience. The model the effect of the jetty on longshore drift, and clearly showed the buildup of set of sediment beneath the structure during operation and once removed that the natural longshore drift process removed the shingle growing or shingle, growing over a period of three to four years returning the shoreline to its natural environment profile.

1:04:36

Whilst it may take longer time for the erosion of the of the size will be salient to take place, the loss of the size will be out for maintaining for us who mean the erosion will be unstoppable and no amount of beach recharge from the coastal processes monitoring and mitigation plan will be capable of stopping restoration of the naturally invade size. Well Bay Beach profile in front of size on a size will be in size we'll see size with a and b sex aliens are referred to in the coastal processes monitoring and mitigation plan version two, rep five zero 59 in Section four in the context of the two fish return outfalls and combined drainage outfalls plan for the size we'll see it states. The precautionary monitoring of the three outfalls is proposed because of analogous changes in the shoreline accretion an outer longshore bar deflection considered to be the cause of the nearby size will be out for subject subsequent shoreline accretion ensure of the AP four could be due to changes in wave refraction around the altar bar. Although is this evidence is inferred a similar feature was observed opposite sides well a during Operation only. He goes on to say that the low flow rates that will be characteristic of these new outfalls would not be considered sufficient to create yet another salient in front of sidewall see. So now we come to the soft coastal defence in rep 50095. cross sections of the hard coastal defence are given three part profiling the new northern Maryland and to showing the profile of the eastwood failing facing pitch defences. In both cases, the scdf profile runs from plus 6.4 metre AOD apex of the new sacrificial June to the 2013 mean high water springs at approximately one and a half metres arrow D. The most southerly of these two is north of the point where the H CDF crow toe crosses the existing sacrificial June to the vegetated shingles is part of the site will be hydraulic salient. No cross sections are given of the high powered coastal defence soft coastal defence profile south of the inflection point or the maximum southeasterly point close to where the acdf terminates and the interface to the existing size will be hard coastal defence is proposed. This is where this site will be salient is at his most extensive and it can be seen very clearly in the drone pictures of the size wall Bay. In fact, as I indicated earlier, the reach of the size will be salient goes all the way north to where the permanent BLF is proposed. This means that the position of me in high water springs along the whole length of the site we'll see coastal defence is further east than would be the case should the natural environment profile be in place today or at some point in the future. So as soon as size will be is turned off, and the salient sustaining flow outflow sees the coast will begin returning to its natural environment profile and the new size we'll see outfalls will not be capable of maintaining or creating a similar protective structure for sizewell C. This means that the main high water springs will begin to move back westwards towards the hard coastal defence toe and the scdf profile will start eroding and will not stop eroding until the natural environment profile is reached, or another hardpoint is encountered. The longshore drift process will

simply be unstoppable and beach recharge will be unable to stop this process. This means that the forward position of the hard coastal defence tow particularly at the southern end, will potentially be in significant Jeopardy, from day the day that size will be is finally shut down.

1:08:34

It is noted is notable as in the one dimensional modelling of the soft coastal defence in rec 2115 the H CDF crest is entirely straight, and the inflection towards the eastern iOS coordinate not North 9263 900 is not reflected in the LIDAR topography figures six and seven. In fact, neither is the full length of the H CDF and relevant beach typography which goes beyond the southeast and turn of the Defence at and M 263713. The figures referred to are cut off at around 263770 the position of the southeast and tip of the hard coastal defence to that compared to the natural embayment profile of the bay is also not available. There's no modelling is provided to show whether the hard coastal defence so at this point would be in an unsustainable position. When size will be inside will as aliens succumb to natural erosion from longshore drift and winter storms as his name it is inevitable. In Section 2.2 of the report it states whilst the shoreline immediately to the south is relatively stable, the shoreline to the north is steadily retreating. However, as the whole of the shingle beach frontage across sidewall sea and further south, South across sides will be incisal away a part of the salient being sustained by Besides won't be out for the stability of both the beach to the south and across the sidewall sea frontage to the north cannot be relied upon one size will be stopped operating as the sustaining force for the salient. All of the cyber. All of the soft coastal defence modelling relies on the current beach profile data and does not not look to the impact of future changes that operational substation of size will be will impose on the beach front. In the ex beach modelling rep seven zero 45 figure 3.7 shows four storm scenarios with the old BLF and once again in and once again and inaccurate se in position of the hard coastal defence toe. In fact, it looks like the toe is not positioned far enough south. As you can see the size will be salient in the contours below the art coastal defence determination where the hard coastal defence has its most southeasterly extent. Unfortunately, no Ordnance Survey references are given in this report. There's just an arbitrary alongshore meet in metres. So we cannot cross reference between these two scdf modelling reports. So the combines soft coastal defence modelling in these two reports is inadequate it is as it does not represent the latest configure of the heart. Coastal defence doesn't properly reflect the southern part coastal defence location or their new retracted position in the permanent BLF. They are also inadequate as they are both ignore the impact of size will be cessation of operation by assuming that the beach to the south is relatively stable. And the impact that this event will have on the size will be salient across the entire size or C frontage to the north and south across both sides will be an A.

1:11:53

So whilst changes in front of size will A and B are not the concern of this examination impacts on size we'll see because of size will be operational changes are and need to be assessed. I'm not I'm also sure that the O and O would be interested in both sets and changes including how sighs we'll see how coastal defence and soft coastal defence will impact cyber A and B once they are both in once they are both in decommissioning phase. Currently these impacts are unknown as they are not modelled or considered. So the idea that the CP MMP and beach recharge will be able to counter this natural process or that the adaptive hard coastal defence will have something to adapt into it 95 or so is wishful thinking a quite an astonishing level and reflects the fact of that out of date and inaccurate. Hard

coastal defence and soft coastal defence definitions and positions are used in the modelling and no account of the impact of size will be shut down has been examined all models. So we are still in a position of insufficient design, modelling and impact assessment having been done by the applicant, given the strategic nature of the hard coastal and soft coastal defence, the total reliance on it to be maintainable for adaption to in approximately 2090. And until the end of site protection in 2140 has been mentioned here but also 2190 has been talked about by the DNR. The current proposals are simply not robust enough to ensure protection for 60 years that the site is operational, nevermind protection of the decommissioning and decommission site close to the end of next Secretary did. And that's all I have to say at this point. Thank you very much.

1:13:42

Thank you, Mr. Collins. Right, there are no other interested parties with their hands up. So if I go to the applicant for the response.

1:13:54

Thank you, madam. So before I turn to Dr. Dolphin, just to first of all summarise what I'm going to ask him to pick up the issue raised by his Suffolk Council, related to the size of the particles that are going to be used as part of the soft coastal defence feature and whether that can be committed committed to so I'm going to ask Dr. Dolphin to just explain the position in terms of that and whether that is something that is technically possible. I got a comment on that before I do. Second point relation to the MMO. There were two specific questions there. One was in relation to use of particle size the second was in relation to the extent of the area. And I'm going to ask Dr. Dolphin to deal with that. There was then a question on behalf of the old Nora Association about what happens to the longshore drift. And then we had a lengthy contribution from a detailed contribution from Mr. Paul Collins, which dealt with the extent and significance of the size well be salient. And its effect on the overall defensive ability of the size well see Hard and Soft coastal defence features, and also associated questions to do with the location of those features. And I'm not anticipating in relation to that last matter, the doctor often will go through every single point that was raised, but it may be helpful for you to get his response to the essential things that were articulated there. Unless there's something in

1:16:10

there that That's right. And that's the way I would ask you to approach it, obviously, though, it was, as you say, it was a very detailed contribution. I wouldn't expect the detailed response to be Friday now, but obviously, you may wish to cover the points, a greater length in your written summary. But I think I think the basic point that was made the account type that has been taken do both both in effect, and also whether the mouse modelling is satisfactory. Yes, in that respect, exactly. Whether that is reliable without taking those factors into account.

1:16:53

Yeah, so that I'd like Dr. Dolphin to deal with those essential big picture points, the detail we can return to in writing. But before I asked him to speak, I just wanted to return to this question of fixing the size of the material that is used in the soft coastal defence feature. As I understand it, and Allah be corrected in a moment by Dr. Dolphin, if I've got this wrong, I don't understand that to be a technical concern, that if it were fixed in the way that this sort of council would prefer, that that would be problematic in the

sense of one couldn't achieve the engineering and design function. So it could be done. As I understand it, the question is, is not so much feasibility is whether in fact, it's desirable, to fix it now, or for it to be determined pursuant to the discharge of a condition in due course. And the reason that issue arises. And it is because there is, as I'm told a trade off, between different factors that come into play, depending on the size of the particle. So if you have larger particles, they operate in a different way. And that brings with it certain advantages. If you made the particles smaller, they operate in a slightly different way, but they bring with them certain other advantages. And whilst one can fix it now, the balance as between those different pros and cons is something that the discharging authority may want to be able to strike at the time, or it made us want to fix it. Now, as I understand is not a question of feasibility. It's just whether it's a good idea in the public interest to make that judgement now, or to defer the discharge of the requirement. And that's at a very high non technical level, it might be helpful to you if Dr. Dolphin just explains some of those pros and cons, so you can understand that the issue that underlies it, so I'll pass over to him now.

1:19:07

Good afternoon, Mr. mkhitarian. Dolphin on behalf of the applicant. Actually, I don't have that much to add to what Mr. Phil Park just described. I think he hit the nail on the head there. But just to talk about those trade offs of of what we call beach coarsening, and to emphasise that we only ever talked about beach coarsening within the native particle size distribution. So we have a bulk of the soft coastal defence material, we weren't talking about bringing in particles that were larger than what's naturally there, but moving around a little bit within that size range. And the advantages that brings are decreasing beach maintenance and the mitigation activity and the disturbance of that they entail. And also, of course, it decreases the risk because those bigger particle sizes are more difficult to erode. But we have heard the concerns of various parties. sighs we'll see are comfortable with the native particle size distribution and to not course on it and and we're happy to take that as the default position going forward. But as Mr. Philpott mentioned there, it may be better for that decision to be made later, once every piece of evidence is in place. And the encouraging point is that the modelling results for the native particle sizes show that the soft coastal defences feature is viable throughout its lifetime. So, so I think that's the that's the positive message and means absolutely, that that could be the particle size that's used and taken forward. And I think the the MMO also raised the particle size question in their, in their letter that you mentioned earlier that they just sent through, they also did mention a consideration of increasing the monitoring extent my interpretation. And we'll need to talk with them to check that I've understood it correctly. But my interpretation was that their concern is to increase the extent if we are coarsening, because changing the particle size distribution on the on the beach may have effects to longshore transport and increase uncertainty. And if that were the direction that is taken, then I think what they're proposing is that the extent would be increased. So if we're settling back to our default position of maintaining the native particle size distribution in the soft coastal defence feature, then I don't think there's a rationale for looking at the extents selected. Again, if I move on to the old or I think the question here was about the soft coastal defence feature and the other mitigation methods that were set out in chapter 20, Volume Two of the environmental statement, app 311. And two, really just to describe how they how we see this operating so that the soft coastal defence feature its and its maintenance is secondary mitigation to maintain the longshore transport corridor primarily. Although it may serve other other functions, too. The there's other mitigation methods which were further recharge, bypassing, and beach recycling are, they're effectively if the soft coast fence feature isn't doing the job

that we expect it to do. And we did discuss this last time and I see it there and some of the examiners questions three, that it's possible in the future as a result of the adjacent shorelines receiving at the the maintain soft defence feature becomes a little bit of a format and the change in the angle of the coast there. If you imagine it

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going out as it comes past size, we'll see the change in the angle can mean that it'll be localised, fixed and localised trapping of sediment coming from the north to the south in particular, in net terms, and to the concerns being raised that that that process might might leave the longshore transport in deficit in terms of the Down Down drift shorelines. So there's a couple of important points here. The first one is that we're that situation to arise and that's a distinct possibility, which is why we've modelled it and Tr 545 where that situation to rise. first principles and the modelling both show us that the soft defence feature will begin to erode more quickly. So whilst it may begin to intercept some of the sediment that will naturally be passing by, it will simultaneously be putting out more sediment. And so it will it will counterbalance that. Now, it's very difficult to know exactly what those shorelines will look like in the future. So it is possible There's two possibilities of coastal defence which will either produce more traps, or it might produce less. And this is where the other mitigation methods would come into play. So the coastal processes monitoring plan sets out the monitoring for this section of the coast, we can measure volumes, beach volumes and fine detail all the way across the soft defence feature, as well as, as well as beyond that north and south. And we'll be able to detect if as if it forms a fall and in this trapping material, we'll be able to measure those volumes, we'll also be able to measure the volumes of material coming out and the and the downdraft volumes to so we'll have a good handle on on what's happening in terms of volumes, and if that shows that the soft defence feature, and it will definitely be at least partly compensating for any blockage that occurs. But if there's still a deficit, then we can bring into play the other three methods. So the beach recycling and the bypassing might identify an obvious area where materials accumulating and not getting past size or seeing it could be moved. Or alternatively, additional recharge could be applied in those areas where there's a deficit to volumetrically compensate. So that's, that's how they that's how they would be used. And I think I had this on one on my list of under the monitoring plan of things to be a bit more explicit about in the submission, the next submission of the monitoring plan. So we'll, I think all the pieces are already there. And this is exactly what we intend to do. But it's probably not expressed as well as it could be. So I'd like to, to update that. I think the main moving on to Mr. Collins comments, and as Mr. Forgot said, there, there's a lot of content there and probably best that we work through the written submissions and give a written reply. But I would like to talk about the the salient there. I know he was referring to that as a hydraulic failure. And I think that's a hangover from some of the initial hypotheses on on how it was formed. And now there is more evidence that the idea of a hydraulic growing isn't isn't the cause of why there's a salient there, a small bolt in the coast. In fact, it is to do with the the base stations outfall and its strong outfall jet interfering with the position of the longshore bar and Mr. Collins did mentioned this as well. And that ensure you have changes in very localised changes and coastal processes that lead to a very localised build up or or a salient and these kind of features typically formed behind small islands and and reefs all around the world.

1:28:24

And he is correct, that we observed at Sizewell A, that there was a similar feature and that the shoreline there relatively quickly. I think in a year or two, it's straightened. So when you look at the coast in a map form, not in a prospective format, looking down directly on it. The shoreline effectively straightens out the bulge disappears, that extra sediment in the bulge is redistributed to the neighbouring shorelines. And so we would expect that size will be we'll do that that it will straighten out. The consequence of that is not endless erosion that carries on forever. And that's not what we saw at Sizewell A and it's not at all what we would expect. But there would be a phase of erosion as that material was redistributed. Some of it would come on to Sizewell B we'll see some of it would, some of it would head south. But I think the important point really here is looking back to those two new monitoring reports on the soft defence feature 544 and 545, which as you've mentioned are rep 101 and 045. They clearly show that it's a feature that can be quite comfortably maintained through the life of the station. So whilst the loss of the salient on Sizewell B will reduce the volumes in that area. is an area with a more stable area and And likewise, heading further south we see patterns from Sizewell B we'll see and then heading south, quite stable beaches for a number of kilometres. It would reduce the volumes in that area. But we've anticipated that it's on our watch list as as the northern end of the softer fence feature, those the two parts of the of the feature that are showing the modelling as areas that would most likely need recharge in order to maintain them. I don't think there's any other points. I've got that please do. Let me if I've missed something that you'd like me to address. Thank you,

1:30:45

man. And that's by way of an initial high level response. We'll go into more detail in writing. there's anything else you specifically want to ask Dr. Dolphin about, then obviously, he's here to assist you

1:30:57

know that thanks very much for the offer. But right. So if we move on now, to the details of the HCF design. I've had, we've had various comments submitted on the details of the H CDF design, including by IPS at deadlines six, a noted a Suffolk Council's response to certain questions CG dot 2.4. And they were seeking the provision of quantified information to demonstrate the merits of rock armour versus the use of concrete army units subject to both meeting the same required design standards. So could I first asked the East Suffolk council to provide an update on their position in relation to the details that have been provided in relation to the H CDF design and explain any requests for additional information that they do seek in relation to that.

1:32:03

Isabella for a Suffolk Council. Madam, we made certain requests in our comments on the coastal defences design report in rep 3062. And our understanding from our most recent discussions, which transcend took place on Friday of last week, with the applicant as they're proposing to provide a detailed response to those additional matters at deadline eight, and we will be able to comment on them thereafter.

1:32:37

Thank you have the Environment Agency any additional points or comments they want to make on the H CDF design at this stage? Thank you madam comer. And scared from the Environment Agency. I'll just just double check with my colleague, Olli burns, if that's okay. Thank you. I don't think we've just

seem to have lost your sound. Mr. Burns. We can't hear you. Hopefully we can come back to the environmental agency. Shortly, Miss Mr. scared.

1:33:47

Thank you, madam. I've just sorry. Yeah, you go on. Let's just say Mr. Burns lost his connection, but he's just starting him. Now.

1:34:12

He may be waiting to be admitted. Excuse me, madam. I've just had a message from Mr. Burns. See, he says he he doesn't really have any major additional points to add on. So he's content to move on. And keep

1:34:47

right that's not worth redialing for. right thank you very much for that, Mr. scared. So bad just on this topic. Just flag it to the applicant. I've noted Mr. Parker's response to CG dot 2.4. And he's saying that whilst the movement away from the coasts and beaches welcomed, it's grossly inadequate, and makes little difference in reality over the time period being examined. So obviously, Mr. Parker isn't here. But you will have noted that and I look forward to receiving the applicants response to that. And just before I shoot to respond, finally, on this topic, Can I check if there are any other IPS who have points to make? No. All right, I'll go to the applicant now.

1:35:43

Thank you, Mary. So as I, as I habit, you are expecting not unreasonably a written response to what Mr. Parker said in response to that question, which we will provide in due course, environment agents editing has had anything to say on this matter. And so far as the Suffolk Council is concerned, it's expecting information at deadline eight, which it will consider. So I think I'll check with Dr. Often series anything further to add in relation to those matters. But otherwise, it wouldn't seem that there's a great deal to respond to. So don't stop. Is there anything you want to add by way of comment?

1:36:27

Hello, turn it off. And on behalf of the applicant, Mr. Phil, but I have nothing to add. So that that's it from us on this matter, man.

1:36:37

Thank you, Mr. Phil part. So just looking at provision of additional modelling plans and other information sought by interested parties. So ESC and other IPS have a detailed comments a deadline six and deadlines seven seeking other additional plans and information. you've indicated some other information that will be provided, it would be really helpful, I think, at the next deadline to provide an updated list of the information that is to be provided. And at which deadline on the on this topic. And if it's not intended to provide all the further plans and information sought, if you could give reasons why you don't consider the information sought by other parties is it's necessary for you to provide. We will do that I've got a note of that request. Thank you, man. And also that also in that context, natural England aren't here, but they have made a response to second question CG dot 2.9. So if again, you could look at that response in that in this context, and inform the examining authority of all the

information listed has been provided, and if not, why, why it's not considered necessary. Thank you. We'll do that. Alright, so if we move on now to the minsmere sluice operational, technical operation technical note. So that document was submitted a deadline six. The environment agency's position, as I understand is, is that it does not anticipate a significant impact on the minsmere sluice. And the IDB, I believe, on this issue defers to the Environment Agency. So I'll just ask the Environment Agency to confirm its position on that.

1:38:49

Madam cameras guide from the Environment Agency. That is my understanding. I just want to hand to my colleague Gary Watson, just to make sure there isn't anything further, he'd like to say.

1:39:02

Thank you, Gary Watson Environment Agency. Yes, the document deals with several issues raised by the RSPB and he suffered IDB and E select IDB to comment is in relation to coastal geomorphology. The the developers assess the situation and is suggesting that the the soft coastal defence renourishment campaigns will not cause blockages to the sooth sluice through artificial accretion. We agree with that position. And but it's highly likely to occur with such a such a distance away. There is a minor point that I'd like to raise in relation to the document. It does state that the Environment Agency has secured funding for capital and revenue costs associated with the amendments made It's been a sluice over the next 50 years. And it's just a technical Pantanal that whilst we have appraised and forecast costs for the economic viability of the asset over the next 50 years, we of course, we haven't secured costs, because we we will have to apply for funding as on when the time comes. And of course, our funds will be a capital flood to find grants and aid funds will be depending on the funding roles at the time. Thank you.

1:40:31

Thank you. Can I just check the East Suffolk Council is content with the applicants assessment?

1:40:45

Isabella for a Suffolk council? Yes, madam. Thank you. we defer to the EA on this topic.

1:40:52

And then Are there any other IPS that want to comment on the information provided in the technical note? Right. Mr. Fillmore any response?

1:41:09

No. I noted the clarification provided by Mr. Watson on behalf of the Environment Agency. But I didn't understand that to be a concern or problem raised on the back of it. It was simply clarifying the position in relation to funding so there's nothing else I need to respond to I think.

1:41:27

Thank you, Mr. Phil pot. So if we look now at the various monitoring triggers mitigation, including the draft decio requirements DML and the CPM MP co just check with a Suffolk council whether the drafting of requirement two is now agreed.

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Isabella to four quarters Suffolk Council. So remember this. Thank you requirement to in respect to the code of construction practice. That's correct. Just bear with me for one moment. Madam apologies. I think there are some outstanding points on the code of construction practice not specifically related to this topic, which we were hoping to pick up on Friday. We just

1:42:39

fine. If you were if we'll defer that till Friday, then that's fine.

1:42:44

Thank you, Madam, we do have some comments on requirements seven a. Would you like me to Yes, if you'd like to go ahead with those. Thank you. First, if I may, Madam, just just under this general heading monitoring triggers mitigation and controls. something of an update, you'll recall that there was some discussion at the last issue specific hearing on this topic about monitoring thorpeness and whether that should be included. And there's been some progress on that matter, in that the applicant is proposing to provide some funding for council resourcing. And the council has indicated that part of that funding it proposes to us to carry out monitoring at thorpeness. So that's just an update on that topic. Then in respect of requirements seven, a the has been so

1:43:39

to interrupt. So I think you said it was going to be there was going to be a cost sharing agreement. So is that agreed in principle and if it's agreed in principle, is there any revision either of the CPM MP or the decio? Need?

1:43:55

Isabella tuffle for East Suffolk council Nomad, and we don't consider there's any revision of either either of those documents is necessary. That is going to be a payment towards resourcing and the council intends to use some of that funding to carry out the monitoring. So there's nothing further required of the applicant or to be secured through the documents. So then, in respect of requirements seven a there have been some discussion with the applicant about whether there should be a provision for their CPM MP to be reviewed annually by the marine technical forum. And originally Suffolk counts were asking for that to be made clear through the wording of requirements seven a the the arrangements for such a review and the applicant was reluctant to set up the mechanism for that within the wording. But they did suggest that that could be something that was covered in the CPM MP and suggested that they would include some wording in The requirements seven a which tells us what should be included in the CPM MP, which made it clear that review provisions is something that should be detailed in the CPM MP. So we wonder if that is still something that they're proposing, we would certainly welcome it. Where there's a list of the matters that must be included. That would be an additional requirement that deals with review provisions. And the precise mechanisms for that review can then be detailed within the CPM NP itself. One further issue is that requirements seven a now includes a requirement that the CPM MP should contain details concerning the appropriate timing for a monitoring and mitigations to sation report to be provided. And section 10 of the CPM MP does now include that. One of the things that says For example, there is that the default position will be that the hard coastal defence feature will

be removed, which we welcome. But that there doesn't seem to be anything requiring compliance with the recommendations of the cessation report. So in Section 10, of the CPM MP, we're told that a cessation report should be prepared within 10 years prior to decommissioning and that it should include recommendations for the removal of the H, CDF or other mitigation options. But then there doesn't seem to be anything requiring adherence to that plan. So we think that's something that should be covered somewhere. Thank you, madam. That's all.

1:46:46

No, that's fine. And those are all your outstanding concerns, including interaction between requirements seven and condition 17 of the DML.

1:47:03

That's correct, Madam, that there is obviously the concern that we raised earlier about the CPM p including a firmer commitment to an appropriate range of particle size within the native range. So it's not just that it should be within the native range, because it could then be that all of the sediment will be at the top of that range, which we don't consider will be appropriate. Here what the applicant says about retaining sufficient flexibility, but we think that a default position should be established now that there should be an appropriate range within that native particle size, subject to any subsequent decision later, later down the line when the final version of that plan is approved.

1:47:48

Thank you, thank you. If I can just flag it to the applicant. We have the National Trust at deadlines seven in response to questions si G. dot 2.6, making a suggestion for particular commitments we set out in the CPM MP, and to see whether that might enable common ground to be achieved. And that was a suggestion to carry out a bathymetric survey and drone serve in the beach and Cliff along the frontage of their land ownership every five years. So if I could hear a response from that, in writing the next deadline, and also the marine management organisation, in its letter of the 10th of September, makes quite a number of comments on the CPM MP. And also I'm assuming the applicant and respond to those points in writing a deadline eight.

1:48:50

Madam Yes, we'll do that we'll also respond deadline eight to the point that's just been raised by a southern council about adherence to the monitoring and mitigation cessation reports recommendations, I wanted to take that away and understand what the position is there. I have just jet in relation to the other point, which was about including within the scope of requirement seven a that the CP MMP should include provision for review, I understand that it is not controversial in principle. And so drafting to reflect that can be included in the next version.

1:49:48

Thank you and also natural England are responding to cG 2.6 at deadline eight, so obviously your response to that will be delayed. And they indicate that they anticipate that the final statement of Common Ground will clarify the position between the parties on the CPM MP. Right. Are there any other IPS that have comments to make on requirements seven, a

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German for my just having heard all this new stuff, I'll take it away and think about it because I was still concerned there wasn't much on sort of financing and framework, but clearly some more work has been done on that. And I'd like to reiterate that I would like the monitoring to go wider than the narrow area proposed because there will be an area of coasts that could be affected. Thank you. Note that thank you very much. Probably is an appropriate point to take another break. So if we adjourn now and resume at 25 past four