

# TEXT\_ISH4\_Day2\_Session2\_20012021

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00:04

Good morning again, ladies and gentlemen, firstly, can I just ask for the resumption slides to be removed?

00:16

And whilst I'm doing so can I just check with the case team recordings have started, the live stream is live again. And that we can be heard.

00:26

I can confirm that the live streaming has is working. And we have started recording once again. Thank you very much, Mr. Williams now, and we're moving back to agenda item four. And just briefly, before I hand over to Mr. Rigby to continue questioning on that item, what I would just foreshadow is that we do I believe, need to remain on target to bring item four down by the lunch break that we're intending to call it approximately 1pm. And so therefore, what I would like to invite everybody to do is to try and be as precise and incisive as they are able, bearing in mind that we have to get the landscape of the ideas straight in the oral process. But a lot of the detail ladies and gentlemen can be dealt with in writing and written submissions are just as weighty in our deliberations as oral ones. So with no further ado, Mr. Rigby, your item item four.

01:29

Thank you, Mr. Smith.

01:32

Just to conclude on item four, a, I would like the applicants simply to present briefly as their right of reply, if you like on the points that have been raised so far, bearing in mind that as Mr. Smith has just said, we will take items in writing deadline five, sir, to the applicant. Thank you.

01:53

Yes, good morning, again, colonists on behalf of the applicants, and we will be very brief in our response. good progress has been made with the council's and in particularly Suffolk Council in relation to Air Quality Matters, we're continuing to engage effectively, and have narrowed the issues which still need to be resolved. And there are ongoing discussions in relation to those. I'm just going to invite Charlotte Goodman to respond to a couple of matters. But the bulk of the response will be made in writing, given the time pressures this morning. Thanks.

02:30

Thank you.

02:32

Thank you, Charlotte, on behalf of the applicant. And I just want to very briefly just explain air quality impacts and how they're measured. There was several comments on how the significance of the impacts were determined and what affects the sort of short term periods of congestion might have around changing shift patterns. And so from an air quality perspective, we measure impacts in relation to the averaging periods at which the government's health based equity objectives are set. So that's either an annual mean, or there are also some short term averaging times which are different for different pollutants. And now these air quality standards are health based, they were derived from epidemiological studies, and they do take into account effects on the most susceptible individuals in society. So the young, the elderly, and people with health conditions. So those levels that we assess against doing food and those more sensitive

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members of the population. So in terms of what effect these short term periods of congestion might have, and yes, there will be potentially higher emissions during those times. But when we look at an annual mean, air quality, objective, and an annual mean pollution concentration, it's unlikely to have a significant effect on that total annual mean concentration when it's only happening for short periods during the day. So in terms of how we consider the significance of air quality impacts, we're looking at a change as an annual mean, and the significance of impacts is derived based on what that changes as a result of the projects. And also what the total overall concentration is, if you have a concentration that's close to or exceeding the air quality objective, then the area is by nature considered to be more sensitive, and therefore a lower change in air quality has a higher effect. So that's been taken into account in the way that the impacts have been derived and the conclusions on the significance of impacts. And I did also just want to clarify there was a comment about HDD works and whether or not it would or wouldn't be required. And I think it was Mr. brimfield that had mentioned the the council's preference that the HDD wouldn't occur. And I just wanted to clarify that that is in relation to the crossing of the mspa rather than

05:00

Then at the landfall, the landfall HDD works are still the the proposed methodology. So I just wanted to clarify that point. And also in terms of the sequential nature of the works along the cable corridor and the substation, and the landfall that was in reference to the fact that by the very nature, the preparatory work needs to be undertaken before the substation foundations could be constructed, and then the the other surface structures etc, could be constructed. So in that sense, it's sequential. And also just an overarching point really on construction phase impacts from their quality perspective, it can be managed construction phase dust impacts, can be controlled with sufficient mitigation. And those are secured via the outline code of construction practice. And all of those measures need to be agreed with the local authorities before the construction will commence. So that's a suitable mechanism to control those impacts. And also, the code of construction practice includes Defra has recommended measures to control emissions from nonroad Mobile machinery and plant as well. So that's also secured in that document. And there are a number of issues raised by Mr. Read more, and we would need to review those written submissions and provide a detailed response to those points. And the same goes for the

health report. And but I did just want to clarify which cumulative projects were being referred to by Mr. Read more in his response, if I may.

06:41

Thank You. You. Did you say you would require clarification of that now? Or will you wait and examine the document when it comes in? For the sake of brevity and keeping keeping the meeting short, we can review that written submission that would help a great deal if you could do that. And that would ensure you did you miss nothing? Yes, absolutely. Thank you very much. Indeed, that's very helpful. So if we can now move on to item four B, which is noise. Now, I did have a couple of things I was going to ask you. But I think you've answered the questions for me Actually, it's really to do with the the toss up between HDD and trenchless. Where HDD is a quality problem, but quiet and transfer seems to be the other way around. And the the idea of perhaps using HDD in more areas than you currently are.

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We'll leave that for the moment. Because just having raised that briefly, I'd like to push on, if I may, and hear from the council's first on noise issues, and leave till the end and allow you as the applicant to come back at the end if that's okay with everybody presence in the interests of expediting things.

08:01

So, in that case, on noise, both construction and operational noise. I'd like to hear from if Suffolk County Council have anything they want to say bearing in mind that it's mostly a district council matter.

08:19

Sir, thank you very much. Michael Bedford for Suffolk County Council. No, we have nothing we want to say we leave this to the to the district. That's what I expected. Thank you very much. So I could move on to East Suffolk council please, on noise issues.

08:34

Thank you, Sir Andrew Tate.

08:37

I will address you very briefly on construction noise. And then on operational noise. I just identify the two points we have and then turn to Mr. Joe bear, who's the council's consultant from Adrian James acoustics. on construction noise. The Council's position is that its focus is on the adequacy of controls, because it he recognises the potential for significant adverse noise effects, in particular outside the consented operationalize during construction

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and the concerns it has still on construction noise relate in particular to requirements 23 and 24 be where there's an exclusion for essential activities,

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which includes but is not limited to certain specified activities. So, under that, although the timing and duration of these essential activities is to be approved by the Council, whether in fact they are essential, particularly where they fall outside the specified activities is not for approval, and so therefore

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the council's position on the on the

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controls under construction noise is that there needs to be a much fuller explanation of this, of what is essential or is not essential in the CCP. And that's important so that it isn't just an independent, entirely discretionary process of them, the applicant deciding what is

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or is not essential. And secondly, and related to that is that there is one of the essential activities described as fitting out works the substations

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that appears to sweeping, and we think it should be removed, and we don't see why that should be excluded from consented operating hours. So that is the nub of the council's current position in relation to construction noise.

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Essentially, there needs to be improvement in the controls. Secondly, on operational noise,

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we note the direction of the changes at D. Four with lower operational noise limits and a new monitoring location at SS three, and welcome the downward direction of travel that they represent. We don't think that those noise limits are on present information sufficiently low having regard to the existing very quiet noise environment.

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There's been a substantial volume of new modelling provided by the applicant de for which

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Mr. Bear and his team haven't had full opportunity to interrogate. But at the moment, it's not clear to those advising the council the basis upon which the new noise limits have been set, and I'll just ask Mr. Bear briefly to refer to that. And then secondly, in relation to operational noise, there remains the absence of any noise limit

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on operation of the National Grid substation work 41. And that appears to us to be a clear and unsatisfactory emission.

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So I'll just ask Mr. Bear, if I may, the council's specialist noise consultant to explain his position in relation to the lower operational noise limits now proposed by the applicant. Thank you. With that we are brief. It would thank you, just to give you the essence of what of the council's concern rather than to sending too much into noise modelling detail. Yes, which we will obviously hope to receive at deadline five. Yes, necessary. Thank you, of course.

12:44

Hello, I'm Joe bear. I'm an associate acoustics consultant Adrian James acoustics, got a degree in acoustical engineering and a member of the Institute of acoustics. And

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we've been engaged with the applicant to review started engaged by the use of a council to review the applicants information. And we've made extensive comments throughout. But at this point proceedings, it's probably not worth this. It's all there in the record. So we won't go through it in incredible detail. Instead, we'll just focus on the operational limits that are set. Now, obviously, the applicants have just submitted some revised operational limits, which we haven't had a chance to review in incredible detail.

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But fundamentally, it doesn't really change it, although, as Andrew says, is welcomed by the Council, it doesn't change the fundamental position that

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we think an operational limit of in the height of the low 30s doesn't actually still represent will represent a significant change to the noise environment in the area. And it's a good illustration of this in figures one and two off a suffix deadline for response to noise, which are referred to which is based on the applicants

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state a stage three submission, which shows all of their noise data plotted together for background noise levels. And I think that gives us a good example of how you introduce a new industrial, if you imagine introducing a new constant industrial noise source to a very variable, very rural noise environment.

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If you look at that, you can clearly see that essentially levelling off the noise climate, so it cannot drop below this. This level that's been deemed in this VCO is a fundamental change. And when you say you're sorry, just to ask you what you're saying is your position hasn't really changed. But we'd look forward to hearing more detail on that deadline five, perhaps when you've had a chance to have a quick look what came in deadline for Yes, the only thing I'd say about the deadline fight for stuff, we will obviously review it properly. It's not clear to me just having looked at it very quickly. Whether the

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position has changed about the reason for the choice of the operational limits. Previously, my understanding it was chosen on the basis of the lowest reverse loads observed

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adverse effect level which the applicant determined to be 34, which is their background noise level plus five dB,

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which the argument is that's in accordance with the standards. There's 442. But actually, the standard is not prescriptive about that it says, you know, to do with context, while introducing an industrial source to an industrial area, could be five DB over the background noise level might be an appropriate context. Yeah, I don't at my position would be an additional source in a very rural area, five DB over the background noise level is not the appropriate context. That's very helpful. We'll come back, obviously, at the end of this item. Yes. Yeah, absolutely. There is another points related to the information that's just been issued by the applicant, which is

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the operation, as I understand it, they're set on the basis of

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this limit of five DB over the background noise level. So that's depends on that, and, and also what the actual background noise level is. And I've, there's chapter and verse on this. So we're going to introduce detail, but

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we still feel that the background noise levels used by the applicant are not.

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They're not representative of this very rural environment.

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There's been some movement on some of the background noise levels.

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But given the issues they've got, which we all have in measuring noise levels in very low noise environments, there are still issues with the the mean level, which has been chosen to which I think is the reason for the moving the operational limit. But as I say, I'm not entirely clear.

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So can I Is there anything else you need to say quickly? I think Andrew has probably said it already. The other question? Yes. Just the national grid.

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41. So I think

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in summary, that's, that's the noise position, as is subject to be any comments on the new information. Thanks very much. And I'm hoping that you'll be a half time perhaps before the next deadline to have a look and make some comments on what came in and deadline for

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Thank you very much, Mr. There. So if I could carry on to town obrah. town council, do you have anything you wish to say about noise?

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At this juncture? I'm looking for hands? Yes, yes. Mr. Rubio here. Thank you. It's very close over town council. And I'm a bit concerned that it seems today, we have very limited opportunity to have this really important discussion in the round versus written comments. I believe that is crucial to matters we're talking about agenda item for And may I ask, does this topic include vibration, because it doesn't appear anywhere else. So I have prepared some things to speak to you about in terms of noise and vibration.

18:13

I'd like you to remember the extremely harmful person town councils and the public, as well as yourself to actually read all the written documentation, especially as there's limited time between them being printed, published, and then the deadline to which to respond. And we are, you know, this isn't the day job. This isn't, you know, what I do every day in the office. Um, these hearings are vital to for the public to have a level of confidence in your process. But as I spoke previously on noise in the earlier hearings, and as I'm conscious that many colleagues probably more eloquent than myself and put the points that I was going to say, anyway, I'm not going to say any more today, other than to say that so far, I concur with what Mr. Tatum, Mr. Beer has said. And I look forward to other colleagues being able to use their time with yourself. And diabet at this point, but thank you so much. Thank you very much, Miss fellows, if you've already made points in, for instance, open for hearings, and it's not necessary to make them again. So that's very helpful and no, but you know, how is that all going to get to put together, as I say, in the round, there's a level of confidence for the public. You know, I sat down last night for two hours reading several chapters to prepare for today. And I thought that would be helpful. But I do feel the manner in the tone this morning is, have you got anything else coming? move on? Okay, it might take longer, but I'm going to allow on this point, I'll allow colleagues to cover I'm sure what I would have said, and I hope that you will have the time to review all the written documentation yourself. Thank you. Thank you. Thank you very much. That's very helpful if the points are going to come out.

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out anyway, then that's absolutely fine. Because that's the nature of an issue specific hearing, so long as we can hear on the issues. That's that's our main concern. So thank you very much, Mr. fellows. That's very helpful.

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parish councils, any comments to make at this stage? Please?

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Miss Mr. Cooper, I see your hand up.

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Yes, this is just Richard Cooper master parish Council, just to pick up on an issue that Marian fellows raised, we, too are very concerned about vibration. This. This is from traffic using the a 12 through miles from Little gaming. And and if you think that we could be up to 1200 additional HDTV movements a day through the villages, we are very concerned about the structural integrity of properties close to the 12th as a result of vibration from HDTVs. Thank you. So if we've got this rock, you're sort of where you are, you're the the end of the grown up better very well, where it suddenly degenerates to single carriageway. And you've got a problem already, and you're worried about it getting worse. So if I got that right, you have summed it up. Exactly. Thanks very much. We've driven this area and had a good look at it. So thanks. Very, that's very helpful comment. Thank you very much. Anybody else from parish councils want to say anything at this stage?

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I'm not seeing any hands shooting up. So if I could move on? Oh, yes, Mr. Cooper, your hands still up. I presume it's a virtual hand and it will eventually go down.

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Right. So let's move on to item C, which is light.

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But before we do that, could I hear from the applicant on anything that's been said? I'm sorry. to interrupt, but this is Richard turning on, Barbara says I did put my hand up. And also, I do apologise, Mr. Attorney, I couldn't see your hand. It's always I see it now. Sorry. It's the digital hand. Yes, please. Thank you, sir. And as you know, so I represent faces, which is the community group in Friston, just to say because obviously, the sharp end of the construction effects is felt at Reston, Friston parish council endorse Stacy's position here. That's why they're not separately here. So we do speak, at least for today, on behalf of the parish Council, as well.

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So this issue noise, operational noise and construction noise is a major issue for the residents of Friston. It is a significant long term issue from the proposals. And we do need to take I'm afraid a bit of your time. If not today. We'll we'll have to ask for further hearing on it. But I realise we're short on time today because of the crowded programme, but I have, I won't waste more time making that point. I have with me on the line. Rupert Thornley, Taylor. He's an acoustician, noise expert. With over 50 years experience, he'll give more of an introduction to himself. There are a number of points that he wishes to cover. And I hope that you will have time to accommodate him making those points.

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Yes, that's, that's absolutely fine. If you can get him on the line, I think that should be fine.

23:34



If he could make the points in five minutes, as he was looking for hearing that will be absolutely great. And then we can move on. Because in this type of hearing, we just want to hear the issues. So I appreciate that you're speaking for more than one organisation. But it is a highly complex area. And it's an area where there is going to be if this is consented a permanent impact on the people of Friston. And I know Mr. thorny Taylor will be as quick as possible, but a commitment to

24:06

to use one of the country's leading acoustics experts that only five minutes to address an issue of this significance to the to the residents of Reston, I'm afraid maybe a little bit tight for us. But we'll let Mr. Thorndike till he gets on and dalish himself he say.

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Thank you very much indeed.

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Thank you. So

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I've been a consultant for over 52 years and I've given evidence in many decio processes. Tilbury to dams, tideway tunnel, Silvertown tunnel and also in parliament on behalf of the Secretary of State in the HS to Bill process. Can I start by setting the scene This is a very crowded area. Indeed, as I think everyone knows, I have in my long career only encountered one other place that has been quieter. And this in itself is an important environmental resource.

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As we know, policy requires that development sent is not given unless the proposals avoid significant adverse effects on health and quality of life.

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And they must mitigate and minimise other adverse effects on health and quality of life. And these are critical avoid means do not let it happen.

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The n one, advisors use a British Standard for and for two, and that gives us guidance on working out whether there are adverse effects. Its assessment is based on the difference between rating level which is the physical sound level plus

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corrections for things like tonal character difference between that and the background sound level, and Bs four and four two, which again, one recommends says a difference of around 10 Db is likely to be an indication of a significant adverse impact difference around five DB is likely to be an indication of an adverse impact depending on the context. Job out mentioned context, but I need to read some specific words from bs 4142 about it. It says consider whether it would be beneficial to compare the frequency spectrum or temporal variation of the specific sound without at the ambient or is it your sound to assess

the degree to which the specific sound source is likely to be distinguishable and will represent an in Congress sound by comparison to the acoustic environment that would occur in the absence of a specific sound and as I've said the acoustic environment is exceptionally quiet.

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vs 4142 says a difference of around five DB between the relative level and the background is an indication of an adverse impact. depending on the context, no one says mitigate and minimise other adverse impacts on health and quality of life. So the limit of the proposed DB DCA requirement which is chosen to be five DB greater than the background, the applicant should still be mitigating and minimising noise to record with anyone.

27:11

The applicants are predicting noise levels, which are lower than the DCA requirement. But that's only because they're not taking into account the likely presence of tonal characteristics in the noise, which add up to 60 Db to the predictions, and they're not considered uncertainty and likely variation in the predictions.

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The applicants are now saying that consideration of tonality will be part of the detail design process. They say they haven't got the information to do it now. But it is well established that noise from transformers and associated equipment is dominated by the second harmonic of the line frequency that is a pure tone of 100 hertz. Now there's a special feature about this scheme, which is that there will be two substations relatively close together with similar equipment in them. And that brings to the fore something which is referred to NBS 142, where it says established whether standing waves or interference patterns are present by considering the nature of the source and the influence of any nearby sound reflecting surfaces. And the consequence of that is whether or to similar tonal sources heard together the receptor in the resulting combined level can be 3d big greater than the result obtained by standard noise models. Other predictions that the application includes our single finger predictions for each location, no indication of confidence limits. And of course, they're subject to uncertainty, the correctness of the model the accuracy of the manufacturers source data, effective atmospheric conditions, interference effects that I've just described an error on the part of the operator the model, and there's no validation against existing comparable sites. atmospheric conditions are extremely important because the predictions include large amounts of excess attenuation due to the presence of a soft ground, but in frequently occurring weather conditions, temperature inversions like wind from source to receiver, those excess attenuation figures will not arise. And there will be many occasions when sound levels are materially higher than the central single figures that have been predicted. The applicants say Well, the only thing that really matters is achievement the decio requirement limits but these apply on all days including those when there are atmospheric conditions favourable to noise propagation from source to receiver, the noise limits turn out to be exceeded. Applying retrospective mitigation measures will be extremely demanding challenging, from a technical point of view and time consuming and it is vital the applicants really do face up to

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much more accurate predictions of what noise levels will be because the decio requirements

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26 and 27. So the noise rating level for operation does not exceed it currently says 34 DDL aq five minutes at any time at a free field location immediately adjacent to the specified locations. It also might be interpreted that the following requirement about a monitoring scheme only applies on two occasions that if you comply after initial commencement of work, and six months after, then that's all you have to do and that needs, it needs to be made quite clear that enforcement will apply with regard to noise at any time, as it says, beginning of those two requirements.

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as Joe said, Those noise requirements are on the move, but the following things need to be done. Number one is the correct background noise levels should be used, and the applicants own analysis indicates it should be a lower figure than the ones they are assuming even with their revised submission. Number two is predictions should be made including an estimate of uncertainty, full consideration of tonality, frequently occurring atmospheric conditions and constructive interference. And number three needs to be properly established, the amount of mitigation necessary is practically achievable. Finally on construction, the approach to construction eyes assessment is completely out of line with modern practice in major projects and I have been advising many major projects over the past decades. The assessment criteria are based on a misapplication of British Standard 45228. And modern practice, which is highlighted by recently issued guidance from highways England is to set the threshold of significant observed adverse effect level at the point where the applicants A is the boundary between no impact and negligible impact, they have got that wrong, and they set the lowest observed adverse effect level, that is highways England do at this background level.

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This is critical because exceedances of significant observed adverse effect level have to be avoided. We know from Thames tideway tunnel decision, the Secretary of State considers that avoidance can be achieved by the provision of noise insulation, although that's not very appropriate for rural areas. It's the first major project I've come across in recent times where there is no provision for the enforcement of a requirement to employ the best practical means to reduce noise. In other words, it's normal for a major project to acquire in its csep, that the

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contractor applies for prior consent under Section 61 of the controlling Pollution Act, in the absence of that, enforcing a failure to follow the cscp be a long drawn out process, possibly necessitating proceedings or breach of fiduciary requirement or even common law nuisance proceedings. And that is as quickly as I was able to do it. So that's very kind of you, sir. And very useful indeed, because it makes the main points as I see, it's about the application of the standards. And if I've got this, right, also, the application to the existing baseline, because if, if I understand this correctly, the existing baseline noise levels are very low. And consequently, they're, they're automatically more sensitive, so that changes is more more apparent.

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Because I'm thinking about the construction. I'm also thinking about what I might call the Friston hum, which is what we nicknamed for the operational noise. So would that be in relation to your comments on tonality in detail, and of great importance, because it is a fundamental characteristic of this type of land that it has.

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Where it's not so much the level, it's the type of noise in the in the sound spectrum? Indeed. So that is absolutely right. Thank you very much. Indeed, that's very helpful. And we would look forward to receiving your full written submission on this subject. Thank you, Mr. Turney. So just very briefly, to close off the issue that thank you for that. Mr. litella. Can I just say briefly, sir, that there are significant legal consequences if the examining authority and the central state cannot be confident that the mitigation measures which are relied upon can in fact, deliver the mitigation which is claimed and that's one point where Mr. thorny tenders emphasise there is at the moment uncertainty, and that that cuts across EIA law and also just in terms of ensuring that you can have confidence in mitigation which you are requiring to be imposed. The second important legal point, which Mr. Tommy Taylor touched on, is that if the noise limit cannot be complied with, because, for example, there is tonality, then it's not enough for the applicant to say well, it's

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Till the noise limit, because that will lead to a serious and profound enforcement issue. Ultimately, there will be a battle between whether to switch off to offshore wind farms by disconnecting the substations which are causing the tonality and causing the breach or to permit a variation, which necessarily will lead to greater noise impact. So, and that's why, of course, in DCA requirements as in planning conditions, you must be satisfied that it's capable of being complied with. And at the moment, the evidence from Mr. Tony Tedder is it is not capable of being complied with. And so those are two sort of headline legal points. I won't take more time in it, because I know there's pressure on time. And we'll put those in more detail in our written submissions.

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Thank you, Mr. Turner. That's very helpful. Right.

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Could I think we would best place now see no further hands here. Could I hear briefly from the applicants on noise issues, please. And then I think we might skip to the flood risk and drainage part of the agenda. So I'll just hear briefly from the applicants on what's been said on noise so far today.

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Yes, colonists and perhaps the applicant, I would invite Alister Baxter, who's an associate consultant at ITP anodised, based in Leeds, he has extensive experience in assessing noise for major projects, and also in particular energy projects. And he is best placed to respond on behalf of the applicant to the matters have been raised. Thank you.

36:45

Thank you.

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Thank you, Carmen. Thank you, sir. Alister Baxter, for the applicant. Just wanted to go briefly through the points that were raised by a Suffolk, Joe bear. And also I say says by Taylor, if I can put back immediately just on the reference to Friston hum, done it, that's really inappropriate

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way of describing things, I

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really do feel that I need to push back on that on that particular terminology at the outset. But to

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basically deal with the the points as they've been raised, the first point I believe was regarding construction noise and he suffered had concerns about the adequacy of controls particularly in terms of outside standard construction hours, the exclusion for essential activities and desiring a fuller explanation of essential and non essential activities.

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We can clarify Certainly, the code of construction practices is an outline and code of construction practice at the moment will be further developed. As more details of the construction methodology and construction phasing become available, it does now make provision for a noise and vibration management plan which will be fully developed to address any of the issues that have been raised with with construction noise. So did want to to make that point, we know the council's welcoming of the downward direction of the operational noise limits.

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We do particularly feel that this to show the applicant's commitment to

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continuous improvement on that matter.

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A point was raised regarding the National Grid infrastructure, if I can make reference to a document that has been submitted at deadline for and the reference that it is a noise modelling clarification note

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and the reference is xa dot S dash eight D four dot v one it doesn't have a pins reference at the moment as its deadline for document that was submitted on the 13th of January

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National Grid infrastructure is dealt with within this noise modelling clarification note it provides details of

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how the National Grid infrastructure will or will not create any any additional noise in addition to the a one north and the two substations and it does conclude that there will be no significant additional noise generated by the National Grid infrastructure. But as I say more details are contained within that noise modelling clarification note.

39:46

We note Mr. Bear's comments that this is an industrial source being introduced to a rural area we're very aware that it is a quiet area. We would not say that it is absolutely exceptionally quiet.

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In terms of the background noise levels that we recorded during the baseline noise survey,

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a comprehensive background noise survey was undertaken over quite a lengthy period

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obtaining

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ambient and background 90 noise levels during that period, the measured data was fully analysed, rigorously statistically analysed using graphical distribution, both mean mode and median averaging and noting the frequency distribution

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of all of the recorded background noise levels. The representative background noise level was arrived at using this rigorous statistical analysis procedure. And we do want to make a point. Mr. Baird did

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question the rationale behind the recent changes in proposed changes in the DCM noise limit. If I can address that for a moment that is detailed within the project deadline for project update note, again, no pins referenced but the document references axe ay ay ay S dash two dot d four dot v one.

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Within that there is a full explanation of the rationale behind the downward direction of the hub the noise limits and the choice of noise limits. And that was in relation to

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the introduction of a new

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sensitive receptor at which to apply a limit, which is referred to as SSR. Three,

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which now with SSR, three SSR, two and SSR, five new, which I mentioned within the previous dcl limits.

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It now forms a triangular pattern around the substations to allow for control of noise in all directions.

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And, as I say further details on the rationale behind

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the point he wants to make now, So, before we wrap up on for that

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deadline five anyway.

42:34

Yes, indeed a lot of a lot of this will be will be detailed and written responses going through to deadline five, and we know that the applicant has totally cancels, haven't had a huge chance to review all of our deadline for submission. There was one point on the structural integrity of structures by Mr. Cooper, in terms of traffic coming through a particular area could certainly set his mind at rest in terms of that.

43:03

In the vibration levels, where structural integrity does become a problem are vastly exceeding the

43:13

types of vibration levels that will be generated by passing HGV traffic. So just to to make that point and Moving now to Mr. Tommy Taylor's comments.

43:27

If we can mention tonality

43:30

we're aware that that substation equipment does have

43:36

particular

43:39

levels at around about 100 hertz mark. I'm going to draw on my recent experience with East Anglia one for which I did a commissioning noise survey. This is publicly available information so it can be accessed by anyone on the call.

43:56

We went to do a commissioning survey at the one station and there was no evidence whatsoever, either within the sound intensity measurements that we took the fast Fourier transform measurements that we took, or in subjective

44:16

observations by the surveyors any tonality, either within the substation itself, which we did access directly into the substation, nor at any of the receptors. As I say that that information is publicly available for anyone who does want to say that

44:32

the issue of inphase constructive interference, whilst we acknowledge that that is not out with the bounds of possibility, it is a rare occurrence and one that can be very adequately dealt with, through the detailed design process in terms of the micro siting of equipment in relation to

44:53

nearby receptors. So we feel that that can be dealt with very adequately in the detailed design process.

45:00

In terms of the the comment

45:03

regarding the practical achievability of mitigation, I will again draw on my experience of the East Anglia, one substation, which has been extremely effectively mitigate against noise with various noise enclosures around noisy equipment. And has been demonstrated to not only be meeting its its noise limits, but to be essentially inaudible at nearby sensitive receptors. So we do want to work to draw on that

45:36

as appoint

45:40

I think that is all I'm going to say. Let me just

45:47

double check. I think that, that brings my responses to a conclusion. Thank you. Thank you very much. That's very useful. And we'll hear obviously all in writing deadline five.

46:00

Mr. Ennis, indeed, Yes, Mr. Mr. Mark the applicant, I just want to come back to the comment made by the hummock Friston, and some prejudged potential perception of the character of the noise.

46:15

The applicant would does not accept the submissions that have been made by others that there's no visibility but tonality. Far from it. We have already commissioned this type of substation, similar type of



substation without too ternal elements. And I think it is very important before people comment on particular equipment, that they understand the electrical equipment that's been deployed, and do not draw comparisons, unless there is a direct comparison to be made with the equipment. And equally in the context of where we are as the applicant in relation to this process. The work that we've undertaken in terms of the noise abatement has been with the supply chain, it's not

47:01

academic, it is real. And that is why the materials submitted deadline for shows better mitigation than the original application, we have taken the time to engage the supply chain. The requirements in relation to noise would be specific project requirements and be contractual requirements in terms of the design of the substation. And I don't really want to add to that, but I thought it was important to set that context before essentially, something gains, what might be called an inevitability it is not and we will give the further evidence on the matter. But I just wanted to clarify the applicants position on that particular matter at an early stage. Thank you very much indeed. That's very helpful. I see that. Mr. Turner, you have your hand raised, is that something you forgot to say before? Or is it a virtual hand?

47:56

Sir, thank you, rich. 24 says and I know you don't want us to respond to that now, but we'll have to respond to what was said by Mr. Baxter in writing. Can I just say that it would be helpful, I think for the examining authority, and certainly for us to receive from the applicants as soon as possible. Any sound survey information from the actual operation of the EAA, one substation, that so far as I can see is not a matter which has been included in the application. Mr. Baxter just relied on it. And it'd be helpful when we will need to see that to see whether what he says is correct. Thank you very much for that. Yes, I agree that would be useful as it has been ciphered in the examination in this hearing. So to the applicant, could you please make sure when you put your submission deadline, Father, you do include everything that you've relied on in your submission just now.

48:50

Mr. So off the applicant? Yes, we will do so. Thank you, sir. Thank you very much, indeed. Now, I've been I'm being advised that Mr. Reaves has his hand raised, is that correct?

49:03

It is yes. Yes. Excellent. So Oh, yes, I see you now. Yes. Thank you.

49:09

Briefly, thank you. Thank you, Mr. Chairman. So I'll be less than a minute in saying this. It's just to refer to monitoring and testing that the applicant refers to about noise levels, and it's in particular to

49:25

the noise levels that will be around plots 410 711 and 13. Namely the area in and around the warden Centre for disabled people and elderly and vulnerable children.

49:38

The monitoring that we were advised would be taking place and in fact did not take place. What happened was having a landmark of the cottage called the coach at coach house cottage.

49:52

The applicants, monitoring equipment was in fact taken to the wrong coach house cottage like many others,

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In rural Suffolk, there are many cottages with the same name. So actually this area even around this very vulnerable situation here were quite near the landfall. And also, obviously there is the impact of all these things on the vulnerable children and adults who attend Warden centre

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has not in fact been surveyed. It's a very brief point, but I think it's important because if we were relying on things that hadn't actually happened, in terms of assessing noise levels, then really the whole process is slightly faulty. Thank you very much, sir, for taking my point. Thank you very much, Mr. Reeves. If I go back briefly to the applicant, on that point, please.

50:49

Comments off that concern? Yes, I'll just hand over to ask the Baxter again, please.

50:58

Thank you, Alice Baxter for the applicant. Just a response to Mr. Reeves comment regarding the wardens trust property.

51:07

The I believe what Mr. Orange is referring to is the baseline noise survey that was undertaken throughout the landfall area in the

51:16

cable route corridor that that is used to inform the assessment in a particular way. It is used to define the threshold at which as Mr. Bromley Taylor mentioned earlier, which significant adverse impact occur

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just from memory from that survey, every location along the landfall and along the cable route corridor

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was categorised as threshold a which is the lower

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the lowest threshold within British Standard five to eight.

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So, actually undertaking a survey at a particular property would not have affected

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the classification of that property has a

52:09

threshold value and therefore would not have made a material difference to the to the assessment. So, it will already be been classified as a particularly quiet area

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applicable to threshold a British Standard five to eight, and that was done within the assessment. So just to set Mr. Reaves mind at rest on that one.

52:34

Thank you. Right. I think now that I need to, we need to move on. Mr. Smith, you wanted to come in, I see. Thank you very much, Mr. Ravi. And we are going to adjust the agenda at this point and move directly to item four D and flood risk and drainage conscious of the fact that we do have a number of representatives of the local community here, wishing to speak particularly to that item, we will review and lighting items, see and think about how we fit that into the remainder of the day or subsequently. So we'll move directly to item four D immediately after the close of this item. And what I will just briefly do however, is respond to Mr. Baxter, and indeed, Mr. Ennis, for the applicant on I guess the point around the the shorthand use of the hum. And I, I do feel it's necessary to observe there that the examining authority take has been critically important, the need not to appear to be pre judged around a particular set of potentially important and relevant effects. And also to remain focused very clearly on the striking of a judgement that is based on the particular technical solution proposed for the particular place in these applications as distinct from solutions that may have been installed or used or observed by others elsewhere. So I need to give everybody that concrete assurance we will be very specifically focused on what is proposed here and have to make judgments and recommendations in due course the secretary of state based on that. And nevertheless, as you all be conscious, there is an enormous amount of material to cover and if occasionally, we do slip into the use of a shorthand to avoid the use of

54:45

a much longer set of descriptions and are afraid that does occasionally occur but it's important that you are clear that we are not leading ourselves in any way into any form of pre confusion or error. By

55:01

Forming a view this is there is a specific effect and that it might be described in a particular manner. So I did think it was very important to place that

55:10

observation on the record before moving on from this item. One other, just very brief procedural observation as well also to ask all other interested parties other than the applicant, if you believe that you have an important matter that has arisen from an item, if you are able to pitch that in before the

inspector leading that item returns to the applicant for its final responses, that would be very, very helpful indeed, because in this instance, you've seen a case where we've had to then

55:43

go back to the applicant twice to enable them to respond to a matter that arose late. So again, if we can all try it and make sure that points that need to be made before the applicant concludes, are made, so the applicant can wrap their conclusion in a single go. No more from me, let's move directly on to Mrs. Jones, and item D flood risk.

56:08

Thank you very much, Mr. Smith, I'm going to change slightly how we deal with flood risk this morning recognising that this is a very important matter to the local community. Instead of going through each of the subheadings that we had in the agenda, I'm instead going to ask each party to put their points across in turn to make sure that we hear from all of you this morning. So in the first instance, could I ask Suffolk County Council, if they could set out give us an update and set out any status of any outstanding areas of disagreement that you have both in relation to flood risk and drainage during the construction phase? and operational please?

56:55

Thank you, Miss Jones, Michael Bedford for Suffolk County Council.

57:01

Can I

57:03

saw clearly you you're not proposing to pose any questions the applicant at the outset? You I say you've you've, you've changed the structure to move. Because we are very time limited today. And we've got an awful lot to get through. I'd rather hear from everybody in the first instance and then return to the applicant. And can I can I just

57:22

preface a point that I may need to return to an agenda item seven, which is on timing, very conscious of the

57:32

need for expedition and concision but also very conscious of the need for proper exploration of matters. I know there is a reserve slot at the beginning of February 1 second of February for potentially further issue specific hearings. But unfortunately, that comes before deadline five, and a lot of the were nitty gritty material. If it's deferred to written representations at deadline five comes too late to use that slot to explore some of these issues. So I felt may need to say something more about that under item seven. But we do have some we do have something of a concern about trying to abridge too much detail into two shorter pieces space of of time.

58:20

As I get sent Mr. Williams in a moment, but in terms of the overarching introductory points, there was a lot of new material that came in at deadline for including a replacement outline.

58:34

Drainage scheme, we've perused it as quickly and as efficiently as we can. We're not persuaded it is addressed the substantive criticisms that we've made in our earlier comments. We do think that there is a need for the applicant, both to provide further assessment work and to correct what we still see to be erroneous assumptions in part of the present modelling and therefore that on flood risk and drainage, we are not yet satisfied that the applicant has been able to show that there will be no material adverse increased flood risk to Friston. So with those kind of overarching comments, I intend to Mr. Williams, in relation to the items on the agenda, he has got something to say on all barring sub item six, which is foul water drainage. But what I've asked him to do is to try to keep it to headline points. Bear in mind your your guidance on how you would like to deal with matters. So I'll bring in Mr. Williams, please. Thank you very much.

59:43

Thank you, Matt Williams, Suffolk County Council food and water engineer. The morning Mr. Williams. On the first point surface water flood risk in Friston. I'll point you towards our representation made at deadline one, reference rep 1185 which

1:00:00

gives a very detailed history on the flooding matters specifically for surface water flooding matters in Friston

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that can move on from that topic. And we will then move on to item two, napkins D three and now default outline operational drainage management plan. And what I'd like to do in this item is also include the suds infiltration note. At this stage, the applicants have used two separate notes to cover the two different topics. However, we feel that the suds infiltration note should be integral to the outline operational drainage management plan. infiltration is the first first port of call for surface water disposal. And that should be viewed as option one, as it were and what is currently contained in the outline operational drainage management plan should be option two. Now on that point, in terms of the suds infiltration note, we're working on worst case scenarios here. And that is because we have no information to work off the applicant has not undertaken any ground infiltration testing has not undertaken any ground investigations, even the simplest borehole for working off desktop surveys here. So, to ensure this stage there is sufficient space within the red line boundary, we have worked off what we would consider an acceptable worst case scenario infiltration rate of 10 million hour. Now as per the statement of common ground with the applicants which this particular item and a 005 is agreed, we agreed that it would be used 10 mile an hour with the appropriate factor of safety. Now, we would determine an appropriate factor of safety to be 10. Because if this bait in these basins were to fail, we deem that the risk would be significant to properties in Friston and to the roads in Reston. Now on that basis, that is how we believe that those basins should be designed.

1:01:58

There is a sufficient space as per the plans used by the applicants in the site's infiltration note. However, there is a query raised on half drain times but that's starting to get into quite a lot of detail. We'd like to say we're just looking to agree with them at this stage that there is sufficient space because of the lack of detail. Then moving on to option two, as it were, which is the discharge to the first and watercourse. Now, this is an option that the applicant would like to use no matter what the infiltration rate is which we dispute completely. Infiltration should be first, there should be no discharge to the first and watercourse. If infiltration is achievable and is usable, ie there is no increase in groundwater flood risk in Friston.

1:02:42

Now, that outline operational drainage management plan uses several methodologies. Some we agree with some we don't that set out in our deadline for response and we will respond on that again at deadline five. But there are some points in there that are not relevant. Now,

1:03:00

the methodology used in terms of attenuation volumes, there is a correct methodology there fvh 13, as far as we're concerned, and that identifies two volumes, one for the one in 120% and one for the one and 140% that needs to be retained cumulatively, the figures that I'm about to give you for both projects. So but one in 120%, that's 15,400 metres cubed for one in 140%. That's 18,973.9 metres cubed. Now they're No, they're no insignificant numbers. For reference, they may seem like rather odd numbers, they don't really have any meaning. But an Olympic swimming pool contains roughly 2.5 million litres or 2500 metres cubed.

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Now moving on from that, you'll see on the calculations that the 140% event does show flooding and that's to a volume of 2,639.5 metres cubed, which is conveniently very close to that of an Olympic sized swimming pool. So that gives you some reference.

1:04:11

However, the one in 120% event looks on the face of it to be accommodated in the basins. That is not the case that is accommodated within the basin but it also utilises freeboard and it utilises storage in the perimeter access track. Now freeboard the definition of that in the serious suds manual is quote, distance between the design water level and the top of a structure provided as a precautionary safety measure against early system failure. And quite now it's been the one in 120% event which is as far as we're concerned, what the applicant would like to be the design water level we maintain that it should be 101 in 140% then there is no free board. There is no safety measure that has been removed in this instance. And that shouldn't

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not be the case there should be a minimum freeboard of 300 millimetres across the basin. cumulatively the attenuation storage provided and this is from the calculations contained in the outline operational drainage management plans

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deadline for cumulatively, the design storage is 9,997.1 metres cubed, so, around 10,000. Now compare that to the figures I gave you earlier and that sees a shortfall of around five and a half 1000 or 5,402.9 metres cubed for the one in 120% event and then nearly 9000 metres cubed and the one in 140% event, they are significant shortfalls and we would consider that to be it represents a significant increase in surface water flood risk to Friston.

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Now, I've already touched on existing conditions, we don't have any information unfortunately from the applicant as to what those existing conditions are other than what is available online publicly.

1:06:02

What I would say however, is there are multiple ordinary water courses north of Friston in the D catchment serving system. There is also a existing flood storage basin which takes water out of the water courses and stores it and it does infiltrate. That therefore does provide some resilience to Friston in terms of flood risk. The access roads proposed for these projects would receive that base and removed it would also see multiple ordinary water courses removed, we have no information as to how that basin would be replaced or how the flow of water which currently goes through the watercourses would be maintained. Now the applicant has committed to an additional sub storage basin which they will provide details for post consent. Our question would be how can the removal of an existing flood storage basin and the risk that that would then result in be left post consent surely we need to know now how that basin can be

1:07:02

provided in in situ like for like now, we don't think that can wait unfortunately.

1:07:09

In terms of sustainable drainage principles. So this is now moving on to item four, as I've said already infiltration is is the number one principle. You then move down the hierarchy to discharge to a surface water body and the npG states generally the aim should be to discharge surface water runoff as high up the hierarchy as reasonably practicable. We do not see any reasonably practical reason why infiltration cannot be utilised. If an infiltration rate could be achieved, there should be no discharge to the surface water courts in Preston, if infiltration can be achieved.

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Now the four pillars of sites are also of relevance and that's water quantity, water quality, biodiversity and amenity. And they all link to the basic principle of managing water as close to source as possible, ie not discharging to surface water cores.

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I'll also touch on this point on climate change factors. I'm sure you've picked up the the applicants and the Suffolk County Council disagree on the climate change factor that should be used. We maintain opposition that 40% should be used as a critical event this is on the basis that there is no commitment and there is no way of knowing that all impermeable surfaces associated with the projects would be removed by 2017. And as such that risk would still remain.

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And lastly, I'll just highlight that all of these points are points that were raised in our local impact report under the further work required section.

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As you know, from my representation today, very little of those points have been addressed today and is of significant concern to Suffolk County Council. Thank you. Thank you very much. Mr. Evans, if I could just ask you a couple of questions. And I appreciate that it was submitted a deadline for and you might not have had the chance to look at it in detail yet. And the applicants view is that infiltration only wouldn't be reasonably practical to implement and they want a combined infiltration attenuation system. And they have

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put some information in the sense infiltration clarification of that was submitted deadline, or have you had the opportunity to look at that in any detail yet. And that still doesn't contain the information that you would require to convince you that that it doesn't

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know and I can I can briefly just cover why. And that comes back to the point I was mentioning earlier that the 10 million hour as an assumed worst case infiltration rate is based on purely trying to determine there is sufficient space. The applicants have used that to say that well a 10 million our infiltration rate with a factors factor of safety of 10 the worst case scenario

1:10:00

Would not half drain in a sufficient time. And therefore, that is not a reasonable approach to take. Like I say these numbers are being used just to demonstrate there's sufficient space. Ideally, if infiltration is going to be used, we'd have a much higher infiltration rate. And therefore the half drain times can then be looked at as part of detailed design. But for these purposes, we do not have the information in front of us to use that. That argument as it were, to rule that option out. Because I think in this some clarification, no, I think it was a half train time of seven days. Is that correct? Yes, Yes, that is correct. And there's there's other criteria that can be worked around in terms of half drink. If a basin doesn't half drained within 24 hours, there's criteria that you could add an additional storm on top of the water volume or the water level that is left after 24 hours of an additional one intense storm. Now for these purposes, as per Rochdale envelope approaches it, we're using the worst case scenario, that would be a reasonable approach in terms of just establishing there is sufficient space.

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Thank you very much, Mr. Williams.

1:11:11

Okay, I'm presuming that east pacific council are deferring to the county council. Just before I move on. Can I just double check that Mr. Tate? Yes, that's exactly correct. We to avoid duplication we we are deferring to Suffolk in this matter. Thank you for confirming that.



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counsellor fellows, would you like to make any response on flood risk and drainage today?

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No, other than with climate change and all the recent activities we've seen in the local area, it remains a huge concern to us.

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Thank you very much mastered parish Council. Would you like to make any comments in relation to this? agenda item?

1:12:00

Thank you, madam. No, I've got nothing further to add. Thank you very much.

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Snaith parish Council. No, thank you, madam there's nothing else that we can add to that. Thank you. Okay. Then in that case, I will

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turn to cc's please.

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Thank you very much attorney for says I'm going to hand over straightaway to miss carpenter, please. Who's our flood expert and he'll set out his qualifications. Introduce yourself. Thank you.

1:12:36

Thank you, Richard. Good afternoon, Miss Jones. My name is Clyde carpenter. I'm a BSc and MSC qualified Water Resources specialist. I'm a chartered hydrogeologist and environmental manager. I have more than 30 years experience in water resources, flood risk management and drainage. And by way of directly relevant experience, I'm currently one of the lead advisors on the 85 kilometre stretch of the HS to construction project advising on construction stormwater runoff, and drainage designed for the construction phase of that project.

1:13:13

The risks to to fishing village have been discussed in previous materials that have been submitted. But there are a number of other points or additional points that I would like to raise beyond that, which has been mentioned by by Matt Williams of the Council.

1:13:30

The fact there is an existing flood risk to Friston village means that there are or existing constraints on the storm flows that pass through the village. This means ordinarily, when we look at addressing flood risk, we look at trying to ensure that the pre development peak flows and not exceeded and this is considered to be an acceptable way of doing things in general terms. But because there is existing

constriction to the fluid flows that pass through the village, this means that not only the peak flows, but also the total flows that leave the development side also needs to be maintained at the pre development level, else those tidal flows can back up within the system and a flood risk can be can be generated. And this issue often paying no attention to the increase in the total flows that will leave the site is a consistent failure across the the applicants approach to identifying, assessing and mitigating flood risk.

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The

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this issue of of peak and total flows is something that is mentioned on the EAA

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strategies. It's also mentioned in the council's flood risk management strategy and it's also a requirement of policy energy policy em one and I can reference you to clauses five 722

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And 24 on page 88, which specifically require that all flows including total flows are considered in assessment, fraud risk assessment and, and mitigation.

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The characterization of flood risk by the applicant is is weak and the council has has alluded to this point themselves that there is there is very little information.

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The applicant states themselves that the Greenfield runoff rates, which is the pre development runoff rate at which they need to be trying to ensure they do not exceed will be confirmed that during detailed design,

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this to us is inadequate, because if they do not if they cannot yet confirm the the flows that they need to restrict the off site run off to, then they're not in a position to come up with designs to achieve that objective

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the flows. So, the website the way we approach funders characterization is to consider the source the pathway from that source to the receptors, those those

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stakeholders that you know that are that are vulnerable to the flood risk, the sources the site and the Greenford runoff rate is what they should be assessing to. And then this source becomes the site once it's developed and therefore they need to be demonstrating that that flood risk can be come, the flood flows can be reduced. The pathway, the Duff, the routes from the site to the to the village in this

particular case, has not been assessed in any detail by the by the applicant at all. Other than consideration that it's it's downstream there are constrictions on that and there are details on that which which are not identified and Mr. Williams refer to some existing infiltration that occurred

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which, then others the details become important, because we start to talk about hydraulics and when flows will leave them these routes that pass through the village.

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The applicant hasn't considered that soil erosion will potentially increase and the mobilisation of that soil and the transport and deposition into the village is also part of the flood risk. And that deposition of material then increases the flood risk within the village. And again, this is not a risk that has been considered in any sense.

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And lastly, in terms of that source, pathway receptor way of looking at flood risk, there have been no specific considerations of the receptors within the village, whether they're properties, whether they're residences, whether they're businesses, whether there are frail,

1:17:39

specific residents whose ability to

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to mitigate the risk within their own property or to themselves, it's it differs from from receptor to receptor and the applicant hasn't looked at this. Instead, they had chosen to say that because they can mitigate the flood hazard that therefore this risk is it does not need to be assessed in terms of these are the individual receptors. And this is, you know, this is not a reasonable approach to take.

1:18:06

In terms of the scheme designs that they that they put forward.

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Mr. Williams, did refer to this

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this infiltration rate of 10 millimetres per hour as a means by which they assess whether it's whether a scheme may be viable or not. This rate relates to whether it's possible to get water into the ground and their rates lower than that it's not considered to be essentially feasible for an infiltration scheme. I think the point that Mr. Williams was making was that the applicant hasn't actually identified whether this rate is achievable. Now, this goes on to the issue of the factors of safety which were being discussed. And I think it's worth pointing out that infiltration rates in the natural environment can vary by more than six orders of magnitude. So, a factor of safety of 10 may seem to be generous from an engineering perspective, but in terms of the input parameters into the analysis and design, this could be this could be insignificant and the failure to actually undertake infiltration testing inside the catchment means that

there is a significant constriction or constraint on which to have any confidence on the sizing of the volumes that are required to provide storage in order to allow that water to infiltrate into the ground or if it cannot, for it to

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leave the site and go into the forest and multicourse.

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All of that analysis and design the hell that that limited analysis and design has been provided is all focused on the operational phase. There is no detail on how the sizing and design of the construction phase of the project will be undertaken. The construction working area is considerably larger, perhaps two to three times larger than the operational phase vegetation will be stripped soils will be stripped

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runoff will increase and turbidity will increase. And the issue with turbidity is significant because turbidity will prevent infiltration, but avidity turbidity will also prevent water being allowed to be released from the site. The Environment Agency will impose quite strict turbidity limits on that, and in order to clarify that water and get the turbidity out of the water that requires treatment, and that requires extended periods of water retention on site potentially above and beyond that required to achieve the Greenfield runoff rates, none of this has been considered. So, the viability of being able to actually have a construction scheme surface water management design is entirely unproven.

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Such a scheme has to work for both for both peak and total flows. And it needs to work across a range of design periods. It's not just about the one in 100 year the one in it also the one in 30 year and the one in one year as well. And the silver scheme has to have the flexibility to to work to prevent fraud risk across a range of of different sized flood events and this information has not been provided. The applicant does provide some details on what on a storm event excuse me,

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which are referred to as coupon which is basically the one in sort of 2.3 year return period.

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But there are no details on on the scheme to enable that discharge to to be achieved. So no details on what their assumptions are infiltration rate on floor area on the inflow storm, what what storm were they allowing for that was going to be released at this flow rate, the factors of safety use the emptying times and so on and so on.

1:21:46

We did identify as Mr. Williams has pointed out that the applicant has calculated storage required storage volumes that are upwards of 50% greater than the design volumes that they are proposing to provide and that they're skipped. The calculations they provide are required the use of the freeboard, which is again, it's an it's unacceptable, it's there for very specific reasons, which is to include for blockage for a high intensity storm, storm associated winds and so on.

1:22:23

And there is no consideration of the risk of overuse of overtopping overtopping from any bonded structure has to be done or has to be allowed to occur say for the one in 1000 euro event in a controlled manner. These attenuation ponds, which are only in terms of their footprints are largely only provided in the application. In terms of the landscaping plans. These are above ground level on their downslope side. So we have 10s of 1000s of cubic metres of storage of water above ground level, with no consideration provided of consequences of the overtopping of those bonds and whether there will be a catastrophic failure. And, of course, there is no there's no information on what's the consequences of such a failure should that be should that happen.

1:23:15

In the most recent submissions, which were provided quite close to the deadline date, the applicant has provided further details on the outline operational drainage management plan and reference to the code of construction practice and this has been their response to earlier queries in in earlier deadlines that the information will be available in these two documents. This is not the case there is insufficient detail or analysis in either of these documents to enable the to demonstrate that the flood risk has been adequately assessed that the surface water schemes are viable and that they will achieve adequate flood risk mitigation.

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Thank you.

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Thank you very, very much. Mr. Bedford.

1:24:02

You have your hand raised. Madam just very briefly one of the points that Mr. Williams abridged in his presentation, but he would I think like to endorse was what Mr. Carpenter was saying to you about construction effects and that not being adequately assessed. I just made that point now just to pick it up. Thank you. Thank you for confirming that.

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Okay, is there anything about CS we'd like to raise on this agenda item?

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No, thank you.

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And save us some things.

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take that as a note, just before I returned to the app, any further points that any of the parties would like to raise before we return

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to the applicant?

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Mr. Chandler

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Thank you. I see, Richard Reeves has his hand raised, that whether that was an issue that he wanted to be able to just comment on this. I know he's having a lot of

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connection issues hasn't shown on my screen. Now I can sit on mine, but you just coming up with a stop. I don't

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like you. Okay. Thank you. No problem.

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Okay. In that case, then I am going to return to the applicant to respond to the points raised within this agenda item.

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Thank you, Madam colonist. On behalf of the applicant in terms of these matters, the applicant has got two speakers that will respond. Mr. Brian McGregor is the shopping centre manager who you've already heard from, but also Halina Wilks, who is a senior flood risk consultant with robber scheming and has extensive experience both in the public and private sector, having worked in flood risk management for the environmental agency, and also been a land drainage officer for the local flood authority. She subsequently works in the consultancy sector, and has been involved in a number of large scale infrastructure projects and feeding into environmental assessment and the subsequent analysis of appropriate approaches and hydraulic modelling. Just to give a context for us, because I'm going to first of all hand over to Brian mcnellis, who will then just hand straight on afterwards without any further intervention. Thank you. Thank you.

1:26:44

afternoon.

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Thank you very much, Alice. But outcomes, free points, that intellect raise just in terms of principle. Firstly, there's reference from prior speakers to existing flooding issues within the Christian area. We have agreed with the local authorities through the statement of Common Ground process, the flood of friends that have occurred and Friston during late 2019. And early 2020 was as a result of multiple flow paths, and not as a direct result of surface water runoff from the land associated with the onshore substations or national grid substation. So that's the first principle that we would like to confirm.

Secondly, we have confirmed from the outset, that are the same objective on our design, our design commitment is that we will not exceed the current discharge rates going into the system watercourse. That's an important design consideration for ourselves. And it's one that we stand by. So they and thirdly,

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there's a lot of reference to to the hierarchy to the to the drainage hierarchy.

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It's entirely appropriate on the line of the hierarchy with the drainage hierarchy for a combination of infiltration. And that discharge to the first watercourse to be incorporated within the design of the surface water management system, coupled with our commitment not to increase the surface water drainage rate going into the forest and water course, we see that as being wholly appropriate for these nationalistic, significant infrastructure projects and the name of the with the drainage hierarchy.

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So in saying that I can I hand across to Helena to take some of the more detailed points forward.

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Afternoon, on the mix on half the applicants, afternoon respects, there are quite a lot of issues that have been obviously raised there. I think, to some extent, we will be providing a written response to D five to cover those because I don't think we can cover all of those off at this stage.

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I just wanted to some of the key points is that flood risk for the project is is very much focused now on the issues at Reston

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and the onshore substations and the substation sites because obviously we've looked along the cable route and the lamb falls and with regard to flood risk in those elements, Environment Agency have agreed to all comments on the statement of Common Ground etc. So, obviously, there's a lot of discussion focusing down now on to the Friston issues. What I'd like to come back to on

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some of the comments that

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Mr. Mr. Williams made in relation to the ordinary watercourses and the storage areas

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located at the onshore stops substation areas. He noted that these would be the ordinary workers will be removed. It is not the intention of the applicant to remove these it is to redirect the watercourse around it is not a culvert or pipe it is to retain an open water course.

1:30:00

That northern periphery,

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storage basin as well. Yeah. And that was the second point that the storage basin that's falls with in proximity to the access road or aren't where the access road will be. The that will need to be the volume and storage for that will need to be replicated provided within the site and the applicant is

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confident that that can be provided for for within there. So that's a sort of response on that. Mr. Williams, his comments that those would be removed and whilst the storage area would be removed, but it would be relocated as it was in order to or volume provided for to offset that.

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Sorry, sorry to interrupt. Well, you did. I think what Mr. Williams was seeing is that information isn't included currently in in the operational and drainage plan. Is your intention to include that information within there?

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The commitment to it is yes, in terms of making sure that there's a comparable volume provided for both of those within the site. Okay. Okay.

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I'm

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sorry, there are a lot of comments to cover in relation to the

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sub hierarchy. Obviously, at the moment, we have comments from various parties on infiltration versus versus discharge through drainage.

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And comments from Mr. Carpenter related to total flows, obviously, total flows with with with the design that's being proposed currently,

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a hybrid of infiltration and discharge to the first and watercourse which that that will allow for some of the total flows to be addressed obviously, was part of the infiltration element.

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His observation that there would be an increase in total flows

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is key to point out that in Appendix A of the Suffolk flood risk management strategy, which is a local policy in relation to in relation to drainage design,

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because we are limiting the proposing to limit discharge from the site to Cuba, up to and including them wanting 100 plus climate change event.

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There would there is no sort of further requirement that that addresses the concerns related to total flows in in line with the policy that they have set out there.

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So, the hybrid approach does actually address some of the total flows concerns that have been raised in that instance.

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I'd like to just draw just also and elaborate on Brian's comments that there is obviously an exist we are aware of an existing flood risk through Friston

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and through through the site. We have we have been provided with all the information

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in relation to photographs, etc. of the event in question. We have been able to walk over the site in the 19th of November, just out not long after the event and witness were those flow routes, which were those flow routes are. And I think it's key to note that the subsequent BMT report that was commissioned by Suffolk County Council does highlight that there are these four flow routes that result in the flooding in Preston and three of these are to the south and not not from the substation substation and National Grid substation site. And therefore, there is this existing risk and the commitments that from the applicant is to limit to Greenfield runoff rates and therefore, we will be

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providing mitigation to ensure that flood risk from the source or the flow rate to the to the north through the substation is actually reduced, and therefore should actually be mitigating some of the risk through through Friston itself.

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Obviously, we've done a lot of work, or they've been a lot of work being carried out on the drainage design to date. However, obviously,

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we've addressed some of the comments that were raised at deadline three by both by Suffolk County Council in relation to the parameters being used. These have been submitted in the deadline for submission, which

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doesn't have a pins referenced yet, I think but it's x a.as hyphen, one, dot default dot v2 and in that we have taken on board the common

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It's related to factor safety, which we've adopted the factor of safety of 10. Now, which

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is the industry standard to be used? It's a conservative approach. It's set out in the serious suds manual.

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And is the worst case scenario that were expected that set out in industry standard to be utilised.

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Just trying to

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dress to where there was there was a lot of points made. Yes, exactly. And there are quite quite a lot. And I think, and what I'd like to know now, yeah, exactly, I think those are the key points for is really in the construction phase, we have set out standard mitigation measures are contained in the outline code of construction practice. And as was highlighted in the air quality and noise sort of discussion as well. This is an outline code of construction practice. And we believe that there are sufficient mitigation measures that can be implemented to reduce that risk through through the construction phase. And obviously, these will be developed further

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as part of the final code of construction practice, and they will be reliant on the construction method statement, they'll be reliant on phasing and site specific measures, because

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each part of sort of the cable route, and the substation will have their own set of measures that will be required. So it's very hard to

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it's going to be difficult to to

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elaborate and confirm those at the current stage. Because each one needs to be looked at specifically, when they're when we have the information that will also lead back to the information to be collected, post decio that the applicant is proposing in terms of soil conditions, site investigations, infiltration, testing, etc. Like that. I think it's key for us to note that there is an existing flow flow route through the substation site. However,

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we believe that the drainage design is such that we can limit it that limit runoff from the development to the cube or rate and therefore will not be adversely impacting flood risk downstream in first, and I think many of the specific comments related to the parameters that Matt and Mr. Carpenter sorry, and Mr. Williams raised in relation to that drainage design will be part of a written representation at D five, because they are very specific and detailed at that stage. Yeah, I think that we do have Sorry, I think, to take that away and respond if we can't if you can't answer the concerns, the exact concerns that Mr. Williams raised and Mr. Carter's reason, if you could provide a detailed response to each of those points that that they've raised this afternoon, by deadline five, that would be most helpful. And to to affirm that there are micro drainage calculations and plans have an outlined plan available already. They they're supporting it, they just weren't have not been submitted to date. However, these can be provided as part of their submission deadline, five, yes. So that would be great. Thank you.

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If I can just pass back to Mr. McGregor's to understand what there's anything further he wants to add to that.

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comments and half the applicant know what happened to rust on that? All those responses, man, thank you. Thank you very much. Well, in that that case, that draws to a close all the items that I want to raise under foot risk and drainage, and I'm going to hand back to Mr. Smith. He would like to say a few words before we break for lunch.

1:38:59

Thank you very much, Mrs. Jones. And I think it's worth making a brief remark before we adjourn, that we are conscious that that this morning sessions have been very tight. And we've made a very conscious decision therefore to defer item for be on lighting and related effects. We'll be considering over the lunch break how best to manage that issue. And we will provide a very brief opportunity for submissions on that specific point from parties immediately after the return from lunch. And

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I would also in in speaking to that and say that we are also conscious of comments that have arisen from both Mr. Attorney and indeed others around whether there may be a need to open up some additional focused hearing time for some topics. And we'll be reviewing a range of options before us including

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The possibility of introducing additional hearing space in the hearing week reserved from the eighth of March. So again, that's something that we will be turning our mind to. So that's where we currently are. It is now 10 past one Ladies and gentlemen, we do you need the full hour to break for lunch people have a range of tasks to attend to. And so let us resume at 10 past two, ladies and gentlemen 10 past two. On that note, I will now adjourn for lunch. Thank you very much.