



## Hearing Transcript

<b>Project:</b>	East Yorkshire Solar Farm
<b>Hearing:</b>	Issue Specific Hearing 2 – Session 2
<b>Date:</b>	10 July 2024

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00:06

Okay, it's just content that in fact, so we'll resume. And we move on to Item B on the agenda, which is the use of agricultural land. And in particular, the scale of change. Like to start on this one, if I may, by referring to his writings, local impact report, which refers to an assessment of the use of agricultural land by an independent consultant, which makes recommendations. That local impact, which doesn't go into a lot of detail on what those recommendations are, and whether they go beyond what the applicant is proposing in any case. So I'm perhaps looking to the council just to expand on the results of that assessment and and and what you're expecting the applicant to do in response to it.

01:16

John Marshall, sorry. John Marshall is run of Yorkshire Council. We have employed a agricultural land consultant, who has provided us a desk based assessment, which was submitted with our local impact report. Unfortunately, he's not available today to attend the hearing session. But we have agreed that if there's any points yesterday if we can provide a written response, if possible, with respect to this matter.

01:50

In terms of the recommendations in that report, is there anything in there which goes beyond what the applicant is proposing in its current submissions?

02:05

I think he's recommended further survey work be carried out along the cable route to ensure the soil resources are not damaged and where permanent structures such as compounds and substations are proposed, accurately determine the LC grid and to ensure full future restoration. And it's also miss read some points regarding sheep grazing. Unfortunately, I don't have any further information. It's not my area of expertise. But we are prepared to provide a further written comments. Unfortunately, he is on holiday at the moment, and he's unavailable to attend today.

02:55

Moving on then to my questions I asked about this issue, in particular, my question 102, which and the applicants respondents refers to discussions with farmers who farm the land, which is proposed for the solar site. And there's comments about the difficulty of farming it and the range of produce grown. I wonder whether the applicant could expand on those matters, in particular, because they seem to run counter to the perception of our great many local people in terms of the value of the agricultural land involved. Perhaps without Without wishing to burden you too much Sterling or whoever answers there is also Mr. Burton, and I refer to his written representation, which is one dash one false seven, which, and this may go back to the council's independent consultants. Mr. Burns refers to the variability of soil

conditions, as well as the potential to improve crop outputs. And again, perhaps that feeds into local the local perception that the land has a greater agricultural value than has been assessed.

04:34

Mr. Ling on behalf of the applicant? Yes, sir. I'll pass it to industrial today who is a technical director at AECOM, who can respond in agricultural land points, in particular the work that's gone into identifying the agricultural land classification and the productivity of the land within the solar PV and how that fits into the assessment.

04:56

Good morning, sir. Good morning, everybody. Now turn me around and lead On behalf of the applicant, there's a few points raised there. Perhaps if I can start with the comments from East riding Yorkshire Council just to provide a little bit of context, I appreciate your source experts not in the room. But the point on the further survey surveys being carried out on the cable routes. We did pick up on that in chapter 15, sole and agricultural land. So that is document app 067. Acknowledging a targeted survey of the grid connection interconnecting cable corridors will be undertaken prior to construction on any agricultural land within the working corridor. So that would be to support the soil management plan. We submitted a framework soil management plan as part of the application. And that would be updated and signed off by the Council, which would incorporate the the findings of the additional survey work. So based on your comments, I think we are in agreement with your soil expert. And that is something that we offered to do and are committed to doing on the sheep grazing point. We do welcome the applicant team is keen to investigate sheep grazing, that some something that's explored in detail after consent stage it relies on a pharma agreed Asia, identifying drug companies set up in the UK now to assist solar developers and bring together potential breaches and solar developers. There's benefits to that. In terms of the management of the solar farms site, the solar farms designed to avoid prohibiting soil grazing. So the panels are a minimum of one meter above the ground, which is sufficient sufficient for the soil grazing, they are Traquair single access tracker panel, so they do move in the daytime in the daytime hours, they'll tend to be moving towards a horizontal position, which is around if I recall, just over two meters off the ground. There is a grazing report that's been appended to the application. I'll try and just find the Thank you. So yes, that's ap 071, which is the grazing feasibility report that was undertaken by a sheep grazing expert to demonstrate grazing is not prohibited. So again, I think we're aligned on that point with your specialist

07:31

in terms of the comments from yourself, so in terms of the the the the existing farming I'll come on to the summary of the the feed yet the the surveys that are undertaken and and the findings which was your second point, the the first one, that the land, in terms of the context the land is 92.9% of the solar PV site, non but best and most versatile lands. So perhaps if I do begin with a context that might be a little bit easier in terms of background, we carried out the the primary surveys the the agricultural land classification surveys that was undertaken by a specialist, agricultural land company that was following our own desktop best best based assessments. So we began using the 9088 Defra maps. And that's presented in figure 15 dash one, which is app 221. And that shows the the 1988 data that's slightly outdated. Nowadays, the methodology has moved on in terms of how you undertake the survey data, so it doesn't quite align to what tends to be gathered in the UK for primary data collection. We therefore

we updated it, we use University Cranfield data that your specialists residing would have reviewed and that aligned actually quite well to the primary data. So that was in figure 15 dash two, which was document two to two. And that that's that showed that more of the site was grade three b so the the original 1988 data show grade four and grade three not distinguish it thinks distinguishing between three A and B. So that supported the site selection process. University of Cranfield data showed predominantly grade three B and then some grade three A and maybe some to grade two land predominantly though what we do rely on as an applicant as the ALC surveys. So that was carried out between May 2023 And September 2023. And that was using densities agreed with Natural England. So that was one observation per two hectare and then that increased to one per hectare, where there was a variation in the grading detected and in the ecology mitigation area. So I mentioned the the site itself so that's just just an To 93%, non best and most versatile land. And in terms of the the way that that's farm, so that's a mix of arable farming, some use for food production, some for animal feed, some for biomass, there's a different range there. The site itself has a different range of soils as well. So between clay soils and loamy soils, and different contexts, that means that are some parts of the site, which are more waterlogged, may perhaps have surface water flooding, and become more difficult to farm. And that was really, I think, a reference picking up on the difficulty of farming the land, it's not land at the moment that's farmed entirely for food production. And there are some areas where the farmers do struggle because of those localized conditions.

10:57

Was that sufficient? Sir? Would you like any any elaborate elaboration on any points?

11:10

In terms of the range of produce grown, and once grown for human consumption, animal feed or biomass? Do you have any information on what the proportions are there?

11:35

Niall, totally on behalf of the applicant, we were just checking there. We don't it's not part of the application it changes year on year so the the farmers do rotate round. What we know from speaking with the landowners and the farmers, they do have a mix of food production land that's used for animal feed and biomass. We don't have this today have those specific breakdown of numbers.

12:11

A related issue on this point is again, it's something which has been highlighted in a number of submissions made. And it's also something which is concerned with my question maanden 0.2, which is the the alternative of using brownfield land or rooftops for solar panels rather than agricultural land? In your response to my question, you do refer to the mix of small scale including rooftops and larger scale sites to meet local to meet very national government targets. specific question I had was whether the provisions of a most recent written ministerial statement, which addresses itself in particular to the relationship between solar farms and agricultural land, whether there's anything in that, which suggests that it's rooftops should play a larger role in meeting targets in the future than then perhaps has been undertaken to date.

13:36

Play Healy on behalf of the applicant. And in our response, we do reference the statement of need, which is up to three to where we recognize that decentralized energy generation on rooftops has an important role to play in decarbonisation. However, we believe on its own smaller scale solar, including rooftop solar, is not likely to deliver the sufficient total capacity that's required by the government's policy and national policy statement. En one, and also National Policy Statement en three, for large scale ground mounted solar. And we yeah, we won't be able to deliver that at the required pace and at the affordable cost, in terms of what the unwritten ministerial statement says. I think it's it's saying that the rooftop solar is obviously encouraged and it's a priority for government. But as referenced in the NPS is it's not the only source of decarbonize solar energy.

14:46

So characteristics the applicant, think we can add to that to say that it was general consensus that the written ministerial statement is entirely aligned with the national policy statement that was adopted back In January this year. And I think we can also say that there is a general focus in policy and of the new government to push rooftop solar, as much as possible, perhaps hasn't been encouraged as much as it has been today. But there are a lot of constraints with rooftop solar, design constraints, engineering constraints, grid constraints, cost, all sorts of things that hold up that that solution. That doesn't mean it shouldn't be done or encouraged. But it's quite clear from our evidence, and from the evidence you find in the industry, that solar at scale is not going to be delivered through rooftop alone. And it needs to feature in the mix of technologies that we're considering as a country. So that's rooftop ground mounted solar, offshore wind, onshore wind as of earlier this week, and other technologies that are available. So one solution doesn't fix the the decarbonisation problem is to be considered alongside all of them. Thank you.

16:12

Going back to my questions, eight zero 16 referred to local concerns about the change to the land use character of the area, from agricultural to industrial. And the applicants response refers mainly to landscape and visual matters and soil quality matters. And this is a concern, which could be said to be a bit subjective, but I don't think that makes it any less real. So what I was looking for was some x expansion on your response to address may be perceived to be the loss of the traditional character of a rural area, as opposed to the more technical aspects of landscape assessment, which we covered in the session earlier this morning. So this is the perception that this is a rural area, and that you one would expect to see for one of the better term green fields rather than an industrial installation surrounding the local area. Subjective I know but I think it's something that needs to be addressed.

17:31

You know, totally on behalf of the applicant, we we recognized in the the landscape and visual assessments that my colleague miscounted candlelight was speaking about previously, the the change in landscape the is a reason why the applicants keen to incorporate sheep and why we've made that commitment to include incorporate the the grazing report, which if I remind myself is at 071. That would help in some ways retain that agricultural usage. Currently, the farmers have a great deal of flexibility in terms of what they can do on that land. Currently, they could choose to revert to grassland themselves, step away from arable land, they could choose to plant it with different forms of plantings such as woodland, the introduction of the the scheme is bringing quite extensive mixed use grassland across

that that fields with that aspiration to bring in the sheep grazing. So we do acknowledge some change in the local area and with that, with the aspirations from the applicant to retain some of the the agricultural use within the science.

19:09

Does anyone else wish to speak on the question of the the use of the agricultural land before we move on from this topic?

19:24

Okay, in that case, we'll move on to item C, which is the efficiency of the proposal with particular regard to the output. In relation to its Atlantique. Again, this was a question I asked my father in questions to which the applicant has responded. Mr. field has also made submissions on this point. And I believe Mr. Scott Warren Ahmed, Mr. Mrs. Scott Warren wants to speak on this point as well. However, it is quite complex. And there are a number of, in my mind at least interacting considerations. So what I'd like to do to start with is just set out my thoughts. And then perhaps we'll have a discussion on how they need to be addressed. As I say, this was the subject of first certain questions, and I'm looking in particular at one point 5.1. And in particular, what the national national policy statement en three says about and take. Your response says that we don't have technical support for what that says, and I accept that. However, it does set out a range of figures in terms of acres per megawatt output that solar farms are expected to to achieve. The applicant has sought to to address this. However, there are a couple of points that I'd like to make, one of which is that in three, and this is where it gets rather technical. But please bear with me in three is clear that we should be using AC rather than DC as a measure of output, which is not what the applicants response does. And it's also clear that when it's talking about areas of solar panels, it includes associated infrastructure. So it seems to me that it would be reasonable to include in that figure, things like fencing public rights away and the like. So if you do the calculation again, on that basis, it looks like the proposal uses just under six acres per megawatt, which is higher than the two to four, which in three refers to, and again, you'll have to take my word for it, although I can give you the figures later if you need them. Other solar farm and sips have a land time range between 1.3 and 4.7 acres per megawatt. This the field comes to a similar view in his submission. So that's one way of measuring the efficiency of the proposal. The second consideration is in respect of the applicants response to my question one, point 2.4. And this, again, it gets rather technical, but that gives further information on the number of panels required to achieve the 40 megawatt peak output, which is determined by the grid connection offer that's available to the applicants. The result of that is that there would be need to be something like 740,000 panels. That figure doesn't appear to allow for over planting, and nor does it appear in the outline design principles statements, which is the document which sets the parameters for the Rochdale envelope assessments. Nevertheless, looking at that number of panels and their sizing and spacing, again, this is my estimation, and we can go through the figures in more detail if necessary. But it seems to me that to accommodate that number of panels will take less than half of the area of the proposed solar panel area. As I say, that doesn't include over planting. It doesn't include in the inevitable inefficiencies in the layout of the site. And then the accommodation of fencing and the like. However, there does seem to be quite a big gap between the two, the two areas required. And I mentioned yesterday that I feel that you know this is an issue which has implications for compulsory acquisition, as well as environmental effects of the proposal and policy compliance. So I think that's something that does need to be

addressed. The applicants statement of need refers to the benefits and limitations of over planting and finds that an optimum figure may be between 1.3 and one point Five then goes on to refer to the land, the land take required to achieve a balance, a planning balance. And really that is my concern. I feel that at the moment, I don't have the information necessary to find the appropriate balance has been achieved. And therefore whether the scheme meets the test for CIA as well as other policy effects. So I think what I'm asked the applicant to do is to produce a further document a technical note, if you like, which sets out some quite specific information. One is the output of the proposal, the profile of output, sorry, the output profile of the scheme over the year, which is to do with the, the the what the scheme actually achieves during the year and bearing in mind, the amount of electricity generated at different times of the year and different times of the day. As opposed to the the output peak of 400, which is the connection limits. Secondly, an estimate of the degradation of the outputs over the lifetime of the project. And from those two things, I think that out of that comes the approach that needs to be taken to over planting. The next thing on the the technical note should address I think, is assumptions used for the output per panel, and the estimate of the number of panels required, that may not change from the information that you've already given. But I think it needs needs to be restated. And from all that, I think a revised assessment could be made of the land take of that number of panels, and the assumptions that have been made for adjustments to site layout, efficiency, the associated infrastructure or combination of fencing, buffers, planting and all of those things. So I think there's quite a lot there, to digest. But as things stand in there, I feel I need that additional information in order to be sure that I understand the the land use implications of the proposal. So with that, perhaps there's a lot to digest, perhaps I'll pass it over to the applicant to give your initial thoughts. Me

27:49

Sterling on behalf of the applicant. Yes, they're more than happy to prepare any documents that you would need, the better inform you in relation to the Atlantic and the efficiency of the proposal. Just to clarify, is this a request that is being made today for a particular deadline? Is this a request that's going to come in the next written questions, just so we can understand what we're working with? I say that not knowing from the team of deadline three overachiever whether that may be

28:20

think to be to be fair to you, as I say there is quite a lot of information requested there. I don't think it's realistic right to ask you to do that by deadline three. However, if we leave it to the next second written questions, that's going to take us quite close to the to the end of the examination. Unless there's anything you require from me in terms of clarification on what's needed in the content of the report, perhaps we'll look to to have that submitted by deadline for

29:03

me standing on behalf of the Africans. Yes, that's a problem severalty that we'd like to submit that report for deadline for I just wanted to make one clarification and particularly comments around the National Policy Statement and what that does and doesn't require. So the paragraph that you're referring to in terms of the acre per megawatt output is paragraph two point 10 point 17 of national policy statement en three, just to clarify, that paragraph does not require any solar farm to be within that particular range and that it recognizes quite the opposite. It recognizes that a typical solar 50 megawatt solar farm may consist of X number of 2x number of panels with about 50% margin of error. And a solar

farm typically requires between two to four acres of each megawatt output. It goes on to say, however, that this will vary significantly, depending on the state of something larger and some being smaller. So it doesn't set a policy range for whatever a solar project has to fit between. In addition, it refers to associated infrastructure. And there are some comparisons made with schemes, perhaps at a much lower end of the range nor 1.2 hectares per megawatt, we'll need to take that away and when the comparisons but I would suggest that, for example, public rights of way, ecological mitigation areas, landscaping areas are not infrastructure. And the way that I would read two point 10 point 17 is infrastructure, which is essential to the generation of the solar PV being, for example, fuel stations, perhaps inverters, perhaps because your grid connection is one to make sure we're competing apples with apples, I would be surprised if there are other figures, which have been quoted include all of the landscaping and public rights of way. But

30:43

the figures that I quoted are in respective areas, which are defined as solar PV array areas, which, again, I do acknowledge that a lot of this is site specific. And that's the the the figures in in three, we don't have a technical information to back that up. How, however, it taking all of that into account, it seems to me that there is quite a big discrepancy between the amount of land required to accommodate the number of solar panels that you say is necessary to achieve the the peak output of 400 megawatts, and the amount of land that you're proposing to take in these solar PV areas. Now, what I've tried to do in setting out the what I would like to see in the content of this technical note is to ensure that all of those considerations are taken into account and I have clear a clear understanding of the assumptions which have been made, the allowances which have been made for all of those things, whether you define a pass and fencing as infrastructure, I don't think matters too much easy to have. It's how they're taken into account and what the land take is arising from

32:16

me standing on behalf of the applicant and that things are we're confident that there is an efficient proposal and that we are compatible with other schemes. And it looks like it's a presentational plan, that bullet to address and the note that we provide a deadline for

32:29

now you miss the field. I think he's still with us virtually are Is there anything you wish to add on this point? Yes, sir, can you hear me? Yes, again.

32:44

It's on a related one, which is to do we I don't if you're looking at my deed to submission, but in my answer, or my comment on cue 151, it's there on the screen, you could just scroll up, it's the next one up is the picture with the yellow arrows for the sun on it. I'm working out, I'm trying to work out how they worked out that they need 480 megawatts of installed capacity in order to produce the 400 megawatts output on the grid. On that one there, I've worked it out, and I get it at 638. So I was wondering if they could explain how they got to 400 native.

33:30



Nail totally on behalf of the applicant. The applicant has developed the illustrative design layout. And I'll just find the app number for that.

33:52

So that's rep rep 1028. And out that is based on a 480 megawatt DC so just to recap, the grid connection agreement is a 400 megawatt AC alternating current export, that's the maximum that would be exported. So with the with the over planting, bad as a ratio of 1.2. The scheme is designed with the degree of over planting, and it would be the inverters that would cap that to the 400 megawatt AC is the statement of need rep 201 10 That covers the the concept of over planting. So perhaps if we give a little bit of an overview, a summary of that to provide the context, the over planting has to roll so it offsets the aggregate aggregation of the panels over time. So it's achieving more hours that that 400 megawatt AC export over the lifetime and that's explained in NPS en three, that's in paragraph 210 55. Have en three, the state's applicant may account for this by over planting solar panel arrays. So that's part of the design, that's very common in the industry, amongst different developers, the over planting also puts more generation capacity on the ground, meaning that when the conditions are not quite right, so perhaps it's a cloudy day, you'll get more hours at that maximum Gen generation. So you're maximizing that export grid connection, maximizing the amount of renewable energy that will be developed over the year. And over the lifetime. The cost of that is when conditions are not are when they are just right. So it may be a sunny day, maximum light on those solar panels. At that time, the 480 megawatt could, it has the ability to produce more, but that is then kept I mentioned by the inverters buy the duty cycle in those inverters or left as waste heat from the panels and the inverters to keep it at that maximum. So with the ratios that were mentioned by yourself, and Mr. Field, as you're looking at the optimum over planting ratios, it's typical in the industry to go with a ratio of about 1.2 1.25. Some developers and applicants will go beyond that, you get to a point of about 1.5, when it becomes inefficient, so you might well have not have done over planting. So the applicants bearing in mind the the optimum level of designed to maximize the lifetime megawatt hours per year of renewable energy from that grid connection. agreement. So this comes back to the technological technology point, you're making the acres per land, and the objective of the scheme and it's the applicant subjective, and the applicant aligning with the NPS, renewable energy and three, where it's clear a developer should maximize renewable energy delivery. And there being evidence within that, that MPs there's a strong need for energy in the UK. Did I answer the question specifically? So I'm

37:11

not sure that you did, because as I understand this, the fields concern is so perhaps more limited, but more technical issue. That's the calculations that he's done and reflected in his D two submission is that in order to achieve the 400 megawatt peak output, the the DC output at the panel would need to be closer to 640 rather than 480 megawatts DC. Mr. Field? Is that is that the essence of your concern?

37:52

I'm very close. Yes. Can you still hear me? I think I've lost my camera.

37:56

No, we can't see you. But we can hear you. Yes, sorry,

37:59

the camera doesn't come up with some reason. Yes, that's more or less. In essence, the statement of need went between 1.3 and 1.5. They are now saying 1.2. Okay. The other thing they're not taking account of is the fact that the trackers will lose a considerable proportion of the energy because they're not having the light directed at them, which is the point I was making in my day to submission. If you saw that picture, equation at the bottom that shows how I arrived at the 638.

38:37

But even if you substitute in 1.2, instead of 1.3, you're still way off the 400 megawatts they're claiming to be

38:50

I don't know if you've got my dear to submission.

38:54

We haven't got it on the screen. Sure, that could be achieved.

39:04

It's my response to 151. And it's the picture with the yellow arrows if you can find it.

39:25

Yeah, I can see it on my screen. I'm not sure that we've brought it up on the main screen. I think essentially the point that Mr. Field is making is whereas the if you have the fixed trackers, the panels are angled towards the sun and therefore more suited to higher latitudes. Whereas if you have the single axis trackers, the panels are essentially horizontal as regards the sun direction, and therefore they're more suited to lower latitudes and aid the applicant submissions are two examples in Australia and Spain where these are used. Mr field therefore considers that in order to achieve the full 100 megawatt peak output, you need panels which are generating up to 680 or 630 or 6,000,040 megawatt DC output that the panel before it goes through the process to get to to the substation.

40:39

You know totally from the on behalf of the applicant, thank you for clarifying that, sir. The single axis tracker, which is on the right hand side of the screen as I look to it, which does tilt to the to the horizontal that the applicants proposing that is the more efficient technology for this particular site and will be for other sites in the UK. It's a relatively new technology for the UK. That's previously not been part of what developers have sought because of the cost implications of purchasing that that is the market change. Whereas the cost that has reduced to that technology for this particular location is more efficient. We mentioned that in terms of the same number of panels being used with a fixed south facing, I believe it's 15% More generation over the lifetime that would be developed just trying to find that specific number.

41:50

13%. So the same number of panels for a fixed south facing scheme which the fixed are facing regenerate 13% Lower annual yield with the same number of panels, it does vary site by sight. So in

the UK, it will depend on the size of the fields, the number of hedges the shape of them. Because of the different design where you have a fixed south facing, you can add or remove panels to fit within fields, the single access tracker, they have more combined panels per motor. And therefore, as you approach the field edges, you may not wish to put another group of panels in that in that space. But overall, a single access tracker is demonstrated to be the better for the ski, we'll incorporate that within the the technical nodes will give a comparison for different energy yields, and a comparison of the different panels. But in summary for that fixed south facing, where you mentioned, you referred or suggested earlier about the interrows spacing, you can put more panels within a pasture land for thick south facing because there's a reduction in the shadowing, that would be an increase of panels, another 143,000 Extra panels, if it was fixed south facing to try and attempt to generate the same annual yield, it would still generate 3% less than the single access tracker. So I appreciate where Mr. fields coming from and a few of the comments. Were coming off the back of a screening tool that was used online. We will respond Mr. Field to your questions. But these are the modeling software that the applicant uses is a industry standard called PV cyst. So it's PV system, it's used to model the irradiance and model the the annual yield the lifetime yield from those panels.

44:00

Just a couple of once on the response you've given there. At one point, you referred to 13% Less generation from the text. And then you refer to three percents last generation I'm not sure whether they are in that discrepancy or whether they're different figures or figures measuring different things. And the second thing is, are those figures related to the latitude that we're at as opposed to some other latitude?

44:37

Alternately, on behalf of the applicant, they were different numbers so that 13% was like for like compared to the the the fixed south facing with the same number of panels. So with the same number of panels. The scheme as proposed a single access Tracker will generate 13% more. That's for this specific Science. So it's modeled for this specific site in PVCs. So that number may differ if you had a site in Scotland versus southern England versus Europe. So these numbers are for the specific site model by that industry software PBSS. The 3% I mentioned that was, had it been a fixer facing scheme, the applicant would have chosen to maximize to optimize the amount of renewable energy that was generated to do that, you would incorporate more panels, so so you could achieve something within 3% of what the scheme is doing still 3% Lower. So the single access tracker proposed is generating that as the optimum solution generating more reduced renewable energy. But you would be bringing in another 143, approximately 143,000 Extra panels. So that would increase obviously, the number of road trips, there would be more panels in that area to to reduce the the ecological and vegetation benefits the bng. So it does have a different implication on the assessment, but they were two different numbers. And we will put this in the technical note, because I appreciate we are stepping into a slightly more numerical tip around.

46:19

Mr. Field anything more from you on what you've heard so far?

46:25

Yes. You've expressed very well, my concern was, I would strongly urge them to explain how they get the 13%. Because, frankly, it's not. So the details of what they put into their software to get 13%. I think that would be what you're getting Australia. But that's the energy computation, which I think it's wrong. But the power company, and how they ended up with a 400 megawatt. Even if I adjust my equation that I have on that page 1.1 points. It's still miles off. The new technology. Push I know, it's not new technology. That's been around a year.

47:15

You can quote, Mr. Field, have you finished or Yes. Mr. Tally? Did you understand the point that Mr. Field is making? And can you address that in the technical note?

47:32

Now, ultimately, on behalf of the applicant? I wasn't entirely clear what the question was, if I'm honest, but I think the general emphasis, I think I did understand which was Mr. Fields, suggesting that it is more than 480 megawatt DC he suggested as needed needed. We will address that point in the technical note, I think that possibly comes back to the different modeling software that's been used. So Mr. Field, use a software that's freely available on the internet a screening tool that's that's useful to screen sites, the applicant wouldn't and no developer would use that level of software to develop a scheme and secure funding has used that industry standard PV cyst, and we will explain the the outputs, the inputs and the outputs of that in in the technical note to hopefully answer Mr. Fields, concerns and questions that have been raised.

48:32

I think Mr. Field unless there's anything specific, the best way forward here will be to wait for the applicant to produce his technical notes, see if that does, indeed, answer your queries. If it doesn't, then there will be opportunities to make further submissions. I'm not sure that getting further and further into the physics of it in the hearing today is going to help too much. Is that a reasonable way to go forward?

49:06

It is yes. Thank you very much.

49:12

Mr. Mrs. Scott. Warren, I think you had something on this point as well.

49:23

Right, in that in that case, we're coming on to human health next. If you've got nothing to add on the efficiency of the proposal down well, we'll take up your concern in the next item. Right, that's covers everything I had on land use efficiency is anything the applicant wants to say before we move on to, indeed human health.

49:51

Me selling on behalf of the applicant? No, sir.

49:53

Thank you.

49:57

So Item D on the edge And is human health. And the concerns here are as expressed on the on the screen, whether the assessment adequately takes into account more sensitive or more vulnerable people in the local population, whether effects are adequately mitigated in respect of local health facilities. And again, this comes back to a more subjective, but nonetheless widely felt concern, which is about the nature and scale of the change brought about the proposal and the effect that that may have on the mental health and well being of local communities. If we start then with the concerns expressed by North Yorkshire Council, which finds in its local impact reports, that there are a number of shortcomings in the human health assessment. And in particular, I'm looking at your paragraph 14.4 onwards. Some of those concerns, also expressed in my written questions, but perhaps we can start by asking the the council to to expand on its position.

51:33

Michael Reynolds Northridge Council, and I'm not sure if we can expand on the position as such, I can say that we have again, we've met with the applicant recently to open the dialogue on on some of the concerns that were raised, particularly with raised issues around the cumulative earned income nation effects and whether or not those had been assessed correctly on particularly over 60 fives and there was a specific issue that we raised in the local impact report around a particular group. Those concerning themselves have long term health conditions or a disability, that they will be deemed vulnerable and whether or not that had been assessed correctly. Again, we have opened up a dialogue to discuss these matters further.

52:32

Okay, what will be the fruits of that dialogue in terms of submissions to the examination?

52:43

Council counsel? Well, at the moment, we have and the applicant has agreed to consider some of the things that we've been asking for which is particularly around whether whether there's enough data and whether or not they need to continue to reassess those impacts. I know that they've there is a response coming to the local impact report, which I think refers to where some in combination effects have been, have been assessed. And we'll need to look at that and see if that's insufficient.

53:19

Okay. From the applicants point of view. Can we expect something further on this deadline three, in terms of responding to the concerns in North Yorkshire have expressed

53:37

interest Sterling on behalf of the applicant? And yes, we do with what's been very much recently met with North Yorkshire Council yesterday to discuss these concerns. And we will respond to the concerns in condition and further and also local impact report that they're going through.

54:03

Mr. Scott Warren, would you like to come up to the table?

54:14

Thank you. So Anthony Scott Warren. Local residents in Houghton and interested party. Yesterday, sir, in a brief interlude in the rain, we took a drive in the countryside. And we enjoy the view of the fields in production with a harvester not very far away now. And we went through Spalding Eaton brind Willa Taft wrestle Bub with and Britain delightful communities in a rural environment. As we were enjoying the woodland and the open fields, we spotted rabbits and pheasant swallows blackbirds. And we were amazed and delighted to see a barn out onto the road in broad daylight. But all that, sir is going to be swept away under the proposals for the steel because our farm communities here whose ancestors in some cases of the land for centuries, are going to sit buried under huge solar panels and their concrete footings. And the adverse effect of those changes on the local populace is physical and mental health and well being can't be overstated. For views across open fields to being hemmed in by rows of panels, marching over the miles, will undoubtedly cause feelings of claustrophobia, and maybe of despair. Instead of a pleasant walk through a local village or the surrounding countryside. For hundreds of people, the daily prospect of this changed industrialized landscape will be so upsetting that it would be easier to avoid distress and to stay indoors. Such understandable reticence to go outside could lead to obesity in general ill health. We have knowledge of mental health issues, Celia, my wife ran a mental health charity in the Channel Islands for 27 years, offering structured support at weekly meetings to suffer as a phobias and obsessive compulsive disorder. The mental health implications arising as a result of a familiar picturesque village being turned into a part of a massive industrial site a considerable initial avoidance of going out could lead to Agra phobia, and or social phobia. And in addition, the onset of depression and anxiety among the population seems likely. We support solar panels on appropriately sized sites and industrial warehouses. The application does not directly affect us as we live nearby in Houghton. And the reason for our attendance and our written submissions is that we totally empathize with all those whose homes will be surrounded by this unnatural industrial environment. In our opinion, the proposed solar farm is too large in the wrong place, and will have serious effects on the mental well being of the residents.

57:01

Thank you, sir. Thank you, Mr. Scott.

57:10

Mr. Scott Barnes submission their demo no other DJ says the same thing as outlined in the agenda in terms of the scale of the proposal and its effect on mental health and well being.

57:32

The applicant did respond to my question on this. And it refers to NHS and Institute of Environmental Management and assessment guidance. Accepting that this is a difficult matter to quantify. And don't think Mr. Scotland's concerns are isolated by any means. I think they're widely felt. So I think what I'm looking for the applicant to do is to touch on to explain further the position on and it may be perception rather than reality, we leave that to for you to to consider but the idea that this scheme is going to have

such a large impact over such a large area that people's suddenly mental health and possibly physical health will be affected by it.

58:37

Mr. Sterling on behalf of the applicant. So we do have Miss Esther her who is attending virtually, who is an economic development consultant at AECOM, who prepared the human health chapter, I will hand over to Misho to explain not how generalized concerns around solar may impact health but actually how this specific impact assessment for this scheme and its impacts on landscape, its impact on public raceway excetera have been considered in the context of the determinants of health generally and how that health assessment has been carried out. handled.

59:14

Thank you.

59:18

Good afternoon, sir. As to how or the applicant is so, yes, with regard to the human health assessment, which is application number 66. Within chapter 14, yes, I think that the starting point is very much for the applicant to recognize that the potential future environmental changes associated with this scheme do have potential to affect the health and well being of nursing and the environmental impact assessment. Done have content to examine that those protections effects and where significant effects have been identified their mitigation has been designed enhancements. Also the the assessments within Chapter number three, chapter 14 Is the as follows, as you mentioned the guidance published by the Institute for Environmental Management and assessment, as well as the healthy urban development units in order to assess the human health impacts of this scheme within the environmental statement. So the definition of health which is taken in line with that guidance acknowledges that health, physical consideration the definition is the World Health Organization definition as permission or guidance, perspective can be the mental and social well being and not just the absence of documents or infirmity. Similarly, the determinants of health we can consider it, the assessment and we can take the guidance very much reflect Holistic Health as about quality of life, well being mental health and not just physical effects. So when we add the term determined, we look at input elements, like access to open space and recreation, landscape and effects, as well as very much mental health. Some determinants of health such as noise and vibration, it's related to both physical and mental health. Again, when it comes to the criteria, which you know, the magnitude of impact, and sensitivity of receptors, those criteria do very much include things such as quality of life effects, and capacity of the relevant population to cope. So in following that guidance, we have considered the mental health and the effects of populations as well as health. The assessment finds that there are loads of facts on how it very much draws together other chapters a bit yet finding environmental statements, for example, relating to your vibration also looks at the fact that it has access to employment. And in that respect, it follows methodology in order to come up with its conclusions. One element I wanted to mention also was the importance of stakeholder engagement. So there is the in the framework construction Environmental Management Plan, which is rep 1053. There's a commitment to a stakeholder communications plan. And key elements of litigation for mental health impacts certainly is about communication with local people. There's a commitment to a Community Liaison Group based on the framework, but also CCA requirement number four, to community liaison groups and the aim there is to

make sure that there is potential there there can be engagement to those working on the sites and those managing projects and the local community. So that changes in the environment forthcoming work on the site. Potential if there is r&d, environmental issues, which are coming up then these can be fed back and mitigated and acted upon. So that is an important step in mitigating factor adverse effects on on mental mental health.

1:04:14

Have you finished Marcel? Okay. We've heard a lot from you there on the methodology that's been used to undertake the assessment to didn't hear so much from you on the specifics of how the scheme would affect these communities. And something you can help us out with.

1:04:45

Yes. So the best way that we look at, to speed down Latin dissection assessment essentially, effects on health care services infrastructure. effects on other social infrastructure in schools and community facilities, noise and vibration shows us access to open space and active travel, access to employment and training, social cohesion and neighborhoods, flood risk and landscaping visual immunity. And for many of those topics, we are referring directly to the findings of other assessments, which when taken as part of the EIA. And then with regard to the mitigations, again, we're referring to that the measures which are identified by these other topics. And to illustrate how we would go about the assessment, taking the first determinant of health effects on health care services and infrastructure. So we consider the sensitivity of the population. And we've identified a large older population in the study area, that group has given a high sensitivity for the rest of the population, we've given that and medium sensitivity. And then for this particular topic, we consider whether there could be extra pressure on GP services from construction workers during the construction phase, we also look at the transport chapter and effects which could arise due to traffic, separate effects. And then we bring those together and use the criteria which are which is in the finding the guidance to determine the magnitude of effects, which, and then the sensitivity, they combined in order to come up with the with the effect, which in this instance, is minor adverse. That's an example that I trust.

1:07:03

Mr. Scotland, is anything you'd like to add in response to what we've heard from the applicants?

1:07:11

I don't think so, sir. But I noticed that the responses is heavy on the side of the services and not on the side of the individuals who are going to be affected by this.

1:07:31

Is there anything you can add us how to help? Mr. Scott? Warren, in terms of effects on individuals or? And I think it's, well, it's individuals and groups of people in in small communities that are in and around the site?

1:07:54

Yes, absolutely. I can assess. So that example was particularly about infrastructure, that, again, going back to the definition of health and the acknowledgement that it's not about the infrastructure



necessarily, it's about more than that. It's about the social networks, it's about accessing nature, it's about access to employment. So those factors are dealt with within the other determinants that I've referred to. So access to employment, for example, we refer to the socio economic assessment, and the framework skills and employment plan with regard to access to ethnic space and active travel, so So that's about local people being able to use the public rights of way. And also, again, we look at the transport assessment there. And what the transport assessment says about non motorized immunity separates safety, fear and intimidation. landscape and visual immunity, we've mentioned and talked about already today, and that is very much about the experiences of, of local people in their environment. So with health, I think that Lee it's about the infrastructure, but certainly with public health and thinking about it more broadly. It's about the step beyond that. And that is very much reflected in what the assessment covers.

1:09:24

You touched on

1:09:31

safety and fears in that respect. Again, without try not to be too unfair to read this session yesterday open floor here and yesterday evening. There was concerned about fear of crime, fear of the risk of fire is that I'm not sure whether you're the right person to speak to about that, but that's certainly feeds into this idea of the is the change that the scheme will have on the lives of local communities? Is that something you can speak to? Or do we need to look to someone else from the applicant to address those concerns?

1:10:14

I can't speak to those actually. Yes, I need to refer you to others for those.

1:10:24

Any Sterling on behalf of the African youth I've got Mr. Spurrier, who's head of planning at Ben para, who'd like to respond.

1:10:33

Thanks. Yeah. So to go to some of your questions around perceptions, that cause concern, and worry, obviously, we recognize that there are there is concern and worry, and, you know, obviously, that that can have impact, but to take a bit of the pressure off of Miss Howe, the the team that we've put together to design the scheme has assessed the the impacts that we need to assess so on all of some of the things that you mentioned, their effects on wildlife, you know, probably right away, etc. We have done all of the assessments that we need to do, and some of those perceptions and fears around what might change. You know, we feel that the web to the best of our ability with designer scheme that mitigates those, but we completely understand that that residual fear and worry around impacts may remain, will still call it cause you worry but but yeah, our scheme has been been designed to mitigate those impacts as best as as best as possible.

1:11:41

In me standing on behalf of the applicant. And just to add to what he said and what my favorite area and that is the purpose of the commitment to continue community liaison throughout construction, and particularly secured by requirements for that Community Liaison Group will be set up and will be used to manage the construction phase to try to alleviate some of the concerns I'll be it it actually has to be put in place until the day of final commissioning. So not only work managing all prior notice of work etc to local community, which is often with advanced north as people are more robust than their ability to manage change. With advance notice it will endure for the operational lifetime of the scheme that can into Liaison Group one will be used as a tool to seek to investigate any realized fears or complaints and action will be taken at that time in relation to the specific aspects of fire and crime. Discovery also says African has carried out a comprehensive environmental impact survey, environmental impact assessment, which has presented over 1000s of pages of detailed industry standard evidence based reviews, which indicates there is no fire risk associated associated with the solar PV and indeed there is no risk of crime associated with solar PV either.

1:13:07

I think perhaps it is worth making the point that it has been made before the battery element of the scheme has been taken out and that there has been concerns about fire risk associated with battery that no longer applies in the scheme. Anything else on human health before we finish on that topic? Mr. Reynolds Maga

1:13:31

and as Natasha counsel, I think we just wanted to reiterate that we were the reasons why we've been asking for additional data is that we do whilst we note what you said about in the guidance. We are concerned that the gathering of this information from the separate environmental topics whether or not that's going to be sufficient for something of this size and whether when it gets to the nub of interest where we're asking for additional so data gathering to go on. I did want to bring Michelle into to raise an issue with regard to the the local health facilities if I can. Michelle Saunders.

1:14:07

Thanks, Michael. Yeah. Michelle Saunders, public health North Yorkshire Council. I just wanted to flag up our submissions, really, that the consideration about the assessment and the conclusion. based assessment on the health facilities isn't using up to date adequate data on patient numbers. It was discussed at the meeting yesterday that further work would be undertaken on consideration would be given to re calculating the impact however, it didn't. At this point, they the assumption that there's no impact I don't think can be made or should be made in the assessment. Similarly, the issues we've raised around the conclusion of low magnitude or negligible magnitude and sensitivity of the population, we continue to raise the combined and intra project cumulative impacts of the development and the impact on our populations, which could equally be applied to be striding. Just North Yorkshire. And we don't at the moment feel that they have been considered in an inappropriate way. Thank you.

1:15:35

Is the up to date data which you consider the applicant needs to take into account is that made available and has that been made available to the applicant?

1:15:47

Michelle Sanders, public health it should be put, we've asked them to contact the NHS ICB to capture this data because public health don't have this information. And it should be publicly publicly available by contacting that those those GPS that are in that vicinity, who will be taking some of the burden of the the increased workload workforce?

1:16:18

On behalf of the applicant? Yes, I mean, I think we've kind of circled back to the start that these discussions were had yesterday at the African as considering the information that's been provided and whether or not any further information is to be provided into examination or assumptions revised. Current view is that the assessment provided of the impacts of local services, specifically GPS is an appropriate worst case scenario. And that even if those numbers were to increase, ie the number of patients per GP, which I think is what has been referred to, that wouldn't materially change the assessment or indeed change at all, but nevertheless, this information was provided yesterday. So we are still considering it and we are responding to local impact report comments, and these points for a deadline three. Also, just to note that this would be simply not simply this would be only a construction impact being made and not actually cancelled, we are talking about the construction of an underground cable which will remain underground for 40 years. So it is a short term impact. But nevertheless, we understand that it is important to the council and we're considering in the comments that you've made.

1:17:35

So is it your expectation that the submission that you can make a deadline three will have been agreed with the council beforehand? I'm sort of leading question, but is there sufficient time but I suppose what I'm asking is a sufficient time before deadline three in which for you to have construct gold continue constructive dialog in the hope of reaching some form of agreement or in practice with this be best left at the deadline for and more fuller engagements Incorporated.

1:18:19

Understanding behalf of the applicant, I am advised that in order to share and lead to agree information prior to submission, we would need to submit that information at deadline for rather than deadlines. We are happy to submit it they're going to be and then continue those discussions in the background and provide an updated deadline for enhancer okay.

1:18:38

I think if it's submitted at deadline three ever, as a draft or provisional however you want to term it. The dialogue continues and hopefully a full final version is submitted a deadline for re agree that as as a way forward

1:18:58

anything on behalf of the African yes or

1:19:02

no Future Councils pointers and a reasonable way to go forward.

1:19:06

Regardless nefarious counsel Yes, we can certainly commit to or to that and whether we can commit to you no agreement

1:19:13

no of course of course yeah.

1:19:24

Rights any more on human health before we we bring that matter to a close

1:19:35

the next topic on the agenda is biodiversity. And this is another one where there's quite a lot to get through. So what I would suggest is even though it's only just gone 10 to one we take a break now and come back at would help us one that will give us 14 minutes Is that sufficient

1:20:01

yeah

1:20:02

okay well let's break now and we'll resume at 1/3 Thank you