TRANSCRIPT_BYERSGILL_ISH2_SESSION1_15102024

Wed, Oct 16, 2024 1:51PM • 1:52:08

00:05
Good morning. Can everyone hear me clearly? Yes, thank you. It's now 10 o'clock and it is time for this hearing to start. So good morning everyone. Can I also confirm with Mr. Shrimping shrimplink that the live streaming and recording of this event has commenced. Thank you for those people watching the live stream. Can I also advise that, should we at any point adjourn proceedings this morning, will have to stop the live stream in order to give us clear recording files as a result. At the point at which we recommend the meeting and restart the live stream, you'll need to refresh your browser page to view the restarted stream. I will remind you of this again. Should we need to adjourn? It is now 10 o'clock and it's time for this hearing to begin. I would like to welcome you all to this issue specific hearing two on the principle of the proposed development and the Historic Environment in relation to an application made by RWE renewables, UK solar and storage limited, who we will refer to as the applicant for an order granting development consent for bioskill solar. The development proposal consists of a solar farm with over 50 megawatts capacity, ground mounted solar photovoltaic modules and associated mounting structures, inverters, transformers, switch gear and control equipment, a substation, energy storage equipment and underground and offsite cabling on an offsite cabling. Thank you all for attending this hearing. My name is Andrea Pinto, and I am a chartered town planner employed by the planning inspectorate, and I have been appointed by Secretary of State for housing, communities and local government as the lead member of the panel to examine this application. I am now going to ask my fellow panel members to introduce themselves

02:00
Good morning. My name is Max Wiltshire. I'm a chartered civil engineer, and I've been appointed by the planning Inspectorate. I'm employed by the planning Inspectorate. Have been appointed by the Secretary of State for housing, communities and local government as a member of the panel of inspectors to examine this examination. Thank you. Applause.

02:29
Um, can I ask production 78 to just test microphones of all members, please? Thank you. Apologies. Some technical difficulties, as you can see, applause.

02:52
You. Sorry about that. My name is Alex oyebade. I'm a chartered transport planner employed by the planning inspectorate, and I've been appointed by the Secretary of State for housing, communities and local government to be a member of the panel to examine this application. You together,

03:22
we constitute the examining authority and will be reporting to the Secretary of State for energy security at net zero with a recommendation as to whether development consent order should be made. The case manager for this project is Jenny savage. Jenny is being supported here today by Mrs. Luxon, if you have any queries about the examination process or the technology we are using for virtual events, this should be your first point of contact. The contact details can be found at the top of any letter you have received from us on the project by just national infrastructure website. I will now deal with a few housekeeping matters for those attending in person. So first of all, can I ask everyone to please make sure that they set all of the devices and phones to silent. And I would also like to state that closest inclusive and female toilets are just outside of this room, on this floor, through the same doors you used to enter the room earlier. There are additional toilets just by the snack bar on the first floor. There are no fire evacuation tests plans planned for today. Should the fire alarm sound, please make your way to the nearest fire exit door using the fire doors marked in this room and head downstairs. Fire evacuation assembly point is at the square outside the main entrance to this building. Today is a hybrid event, meaning some of you are present with us at the hearing at the hearing venue, and some of you are joining us virtually, using Microsoft Teams for those people observing or participating through teams. Can you please make. Sure that you stay muted unless you are speaking. If you are participating virtually and you wish to speak at relevant point proceedings, please use the hand up function. Please be patient, as we may not get to you immediately, but we will invite you to speak at an appropriate time. We'll make sure that however you decide to participate in attend today, you'll be given a fair opportunity any questions on any of what I have to set out, I see no hands raised, so I will press on. In addition to the live stream, a recording of today's hearing will be made available on the BIOS gills solar section of the national infrastructure planning website, as soon as practicable after the meeting has finished, with this in mind, please ensure that you speak clearly into the microphone, setting your name, who you are representing each time before you speak for those at the table. Can you please do that by pressing the large button? It by softer microphone. If you are not at table with a microphone. There is a roving microphone, so please wait for one of those to be brought to you before you speak. If you are attending virtually and you do not want your image to be recorded recorded, you can switch off your camera. For those in the room that do not want to be recorded. There is an area at the back of the room to my left the four seats at the back, which are outside of camera shot. So please use one of those seats, because the digital recordings that we make are returned and published. They form a public record that can contain your personal information, into which the general data protection regulations apply only in the rarest of circumstances. Might we ask you to provide personal information of the type that most of us would prefer to keep private or confidential, therefore, to avoid the need to edit digital recordings, please try your best not to add information to the public record that you would wish to keep private and that is confidential. If you feel that personal information is necessary to make your case, please provide this in a written document that we can redact before publication. The planning inspectors practice is to retain and publish recordings for a period of five years from the Secretary of State's decision, a link to the planning inspectors private privacy notice was provided in the rule six letter alongside the notification for this hearing, I assume that everybody here today has familiarized themselves with this document with which establishes how the personal data of our customers is handled in accordance with the principles set out in data protection laws. Please speak to Jenny savage if you have any queries about this. This meeting will follow the agenda as published. And it would be helpful if you had a copy of this in front of you. I am now going to ask the agenda for today to be displayed on the screen, if I

may. Thank you. Can I also ask if anyone does not have an access, access to an agenda? People virtually no I would, as I have mentioned, this issue specific hearing too is on environmental matters, the principle of the proposed development and Historic Environment. I would also like to stress that this is an issue specific hearing, not an open floor hearing, and therefore it will be restricted to the topics included in the agenda and set by the xi this is so as to ensure that all participants with an interest in a topic have had an opportunity to register to participate and were able to make an informed decision based on the information provided as set out in the row six letter. Having reviewed responses to the event participation form for this hearing, it appears that there are a number of requests to speak on topics other than those set in the agenda for the hearings today, for the reasons stated above, only questions in relation to the topic set out in this agenda will be allowed if you have questions or topics that are not proposed to be discussed in ish two today, you can either submit those in written questions to the applicant at next deadline, or raise them at a later stage. If a hearing on that specific topic is requested by the XA topics for future hearings, if any are at the excise discretion. Any questions on this? Any questions on this point online,

09:35
I see that we have a hand raised online, I believe, from Andy. I'm sorry I do not have a last name. Yeah, hi. Can you hear me? Yes, we can hear you. We can hear you, not but we can hear you.

09:53
My name is Andy Anderson. I'm representing the bishopton villages action group just, just on the point of. Hearings. I didn't want to sort of interrupt the flow this early on, but you mentioned that there were topics that might not be able to be heard today, but might be heard at a later hearing. If I understood correctly, there was going to be a sort of an open hearing in November where people could, organizations could, could sort of take the floor as a kind of a closing open statement. Did I misunderstand that? I mean, is there another open hearing coming up in November? I think. Thank

10:33
you for your question. There was an open hearing in November. I can confirm the date, actually, could I ask please, one member of my panel to confirm the date of that week of hearings, those those hearings in November, there is an open floor hearing that was, if requested, and if required, we have had a request for an open floor hearing. Therefore an open floor hearing will occur in November. Does that answer your question?

11:06
It does. Thank you very much.

11:09
And it will be week commencing the 25th of November. 2024 on the timetable. At the moment, yes, at the moment.

11:18
That's great. Thank you. Thank you very much, sir.

11:21
Thank you. Thank you. Max. So to briefly summarize the agenda for today, Item one is welcome in introductions. Item two will cover the purpose of this issue, specific hearing. Item three will cover generating capacity, size, alternatives, storage and technology. Item four will cover Historic Environment. Item five will be a review of the issues and actions arising for today's hearing. Item six will be any other business, and Item seven is the closure of the hearing. Any questions? Okay, we will aim to finish this issue, specific hearing at 1231, o'clock at latest, with a break if needed, around half past 11. For those who are participating virtually, please remember to turn your cameras and microphones off during the break. We will conclude. We will conclude the hearing as soon as all relevant contributions have been made and all questions asked and responded to. But if the discussions can't be concluded, then it might be necessary for us to prioritize matters and defer other matters to written questions. Likewise, if you cannot answer the questions being asked or require time to get information requested, then please. Can you just indicate that you need to respond in writing, and we will then advise you when best submit your response. Thank you. Does anyone have any questions on any of the items that I have discovered? I see no hands raised in the room or online. So I'll now hand over to Mr. Wiltshire, who will now do introductions. Thank you.

13:07
Thank you, Mr. Pinto I'm now going to ask those of you who are participating in today's meeting to introduce yourselves when I state your organization's name. Could you introduce yourself stating your name and who you represent and which agenda item you wish to speak on. If you're not representing an organization, please confirm your name, summarize your interest in the application and confirm the agenda item upon which you wish wish to speak. Please. Could all everybody also state how you wish to be addressed. For example, Mr. Mrs. Miss, etc, please, can I start with the applicant and their advisors?

13:57
We've got a microphone problem with Mr. Manhinik, for the moment, we'll fix that in a little bit. Thank you.

14:08
Good morning, sirs. My name is Alex manhinik. I'm a solicitor from Burges salmon, and I'm representing the applicant, RWE renewables, UK, solar and storage. I'm instructed by my client, Mr. Michael Baker, who is sitting immediately to my left, on your right. Mr. Baker is the DCO development project manager for RWE for this project, we are joined to my right, your left by Miss Laura Bing, who is a planner from Arup. And then to Mr. Baker's left, we have Mr. David Brown, who is an associate director, a town planner from Arup. And then to Mr. Brown. Left, we have Mr. Andrew Reed, who is a heritage consultant. We will all be contributing to different items of the agenda. I expect Mr. Reid will be limited to Agenda Item number four others may come in on different items as we move through. Thank you.

15:22
Okay, can I just ask a couple of questions from our attendance list I've also got here? Jonathan cat,

15:34
yes, he's also present. He's a solicitor from Burges salmon.

15:41
So is he likely to be speaking?

15:44
He's not likely to be speaking. I've run through those attendees for the applicant are likely to be speaking in nice hearing.

15:51
Thank you. Thank you for that. Can we now move on to the organizations and individuals that have given notice of their intention to speak. First of all, can I start with Darlington Borough Council.

16:12
Good morning, sirs. I'm Lisa Hutchinson, development manager at Darlington Borough Council. On my left is Fiona beige, principal heritage consultant from elg planning, representing Darlington Borough Council, and she will be speaking on item or answering questions on item number four. I'm also joined virtually by Nick baldrini of Durham County Council archeology, who will be representing Darlington Borough Council on archeological matters, who will also be commenting on item number four, and I will answer questions as necessary on all items. Thank you.

16:48
Thank you very much for that. And we have Stockton Borough Council.

16:58
Helen Boston, principal planner at Stockton Borough Council, and to our right is Catherine Freeman, who is our historic buildings officer. We've not ready to speak on any particular items, but we're here. Should

17:10
any questions be asked? Thank you. Thank you. Applause.

17:27
And moving on to statutory parties, please. Historic England, good

17:34
morning. Can you hear me? Okay?

17:39
Online? Yes, I can thank you.

17:40

My name is Henry Cumbers, Mr. Cumbers, planner at Historic England, again here, mainly if there's questions required the organization.

17:56
Thank you very much. Mr. Cumbersome

18:04
now I'll turn to the parish councils. Please, starting queens, bishopton parish council, please.

18:13
My name is Norman Mullaney, representing bishopton parish council. I'm quite happy we missed it always, Norman and I want to talk about item four.

18:27
Thank you, Mr. Mullaney and great Stainton parish council, please

18:37
Good morning. My name is Colin Taylor, and I'm the chairman of the great Stanton parish meeting. I'm not going to speak on any specific item, but here to answer questions or to raise questions in relation to in response to anything that our we might present. Thank you very much,

18:59
and thanks. A gentleman on the other gentleman the table. I'm sorry it's not very big. The writing on the

19:12
triangles, good morning. My name is Sean Anderson, representing bishops and visual villages action group I'm happy to be known as Sean. I plan to speak on two areas that being proposed, technology and the consideration of alternative sites away from receptors that is subject to what is discussed today. Thank you.

19:42
Thank you very much. Any other gentlemen?

19:49
Yeah, good morning. My name is Mark Smith. I'm part of the bishops and villages Action Group and happy to be known as Mark. There's no issue there. The item I'm hoping to speak on is the principle of the. Development. However, if the BSA feels that my topic isn't applicable, I'll take guidance on that when we get to it.

20:09
Thank you very much. Thank you. I'm now going to move on to interested parties. I'm going to run down the names, and I'm going to ask somebody to take the microphone to you too, so you can tell us which item you wish to speak on. I'll go in the order of your names on the attendance list. So I first got Mary Kemp, could you put your hand up, please?

20:54
Sorry, I think you're observing. Um, you just observing? Yes, sorry, okay, the next person is, is Susan Mullaney,

21:14
good morning. I was hoping to speak about the closeness and the proximity to the village of the solar farm.

21:26
Thank you for that. Just as I covered earlier today, the topics for today's hearing are set, and I'm afraid that we are not going to cover that today, but as I have advised, I'll save that for the open mic, if that's possible. I think I'm having some difficulties with my mic again. Apologies. Doesn't seem to be is it? Can everyone still hear me clearly? Okay, it's my thank you, right? As I was confirming to you, Miss Mullaney, we will take into consideration when setting topics for future hearings, the interest that interested parties have on specific topics. So it is worth noting that interest, but I am afraid that we cannot actually discuss the topic today for the reasons I have explained earlier. But we will take note of your interest in having a hearing and a discussion on the topic, I understand, but you will always be subject to our schedule and to the excess discretion what topics are going to be covered at hearings. Okay? Thank you very much. Thank you.

22:35
Thank you. The next person I've got who's noted to speak is Paul frost.

22:47
Good morning. I'm a bishop and resident, and I was hoping to comment about why I object strongly. It's a personal point of view about the intrusion which will be caused by the proposals. If that doesn't fit the agenda to diagnose come back when it does,

23:08
you will be able to judge that, I would assume, as well as as the hearing progresses. But judging from the information that you have just shared with us, Mr. Frost, I would probably suggest that it would be more appropriate on the open floor hearing that we have mentioned in November. Thank you. Thank you.

23:31
I have Peter wood listed as wishing to speak,

23:41
good morning. My name is Peter wood. I'm a bishops and resident Chair of the village Bishop Village Hall Association. I'm not here today, this morning to speak on anything specifically, but would like to have the opportunity to respond to anything that RW we state that I may not have agreement with Thank you.

24:03
Thank you.

24:04
Thank you very much.

24:11
I have next Carly Tinkler, please.

24:19
Good morning, sir. I am Ms Carly Tinkler, and I am working with the Bishop bishopton villages Action Group. I was not intending to speak today, but again, if there are matters which may need the response, then I will raise my hand.

24:34
Thank you very much,

24:37
if I may, Mr. Wheelchair, can, can I just confirm, Miss Tinkler, if you said that you are working with the bishoptown villages Section Group, may I ask if you are working in a specific capacity with a group? Yes,

24:54
sir, I'm their landscape consultant.

24:56
Thank you. Thank you very much. Applause.

25:01
John, thank you. Sean Anderson, please, which we've already had. Yes, thank you.

25:21
Andrew Anderson, we've already spoken to, haven't we? Yes, thank you. So we're out of order. And Paul Brown, please,

25:41
good morning. I'm Paul Brown. I am a bishop and resident. I'm quite happy to be addressed as Paul. I'm here to respond to any of the answers or replies that our wa gave in relation to this morning's session. Thank you.

25:59
Thank you very much.

26:07

Victoria Harrington, please, Hannigan, I do apologize.

26:21
Good morning. Victoria Hannigan, I wish to ask questions specifically about the soil environment and its restoration. I'm a resident in great Stanton.

26:37
Thank you, Miss Hannigan, as I have mentioned before, I'm afraid that we're not going to cover soil and land use today. That is not one of the topics that we have elected to cover in this hearing. But as I have explained earlier, please do submit any requests that you have for that specific topic in writing. And when we come to define topics for hearings, for in future hearings, we'll take all submissions into consideration. Thank you.

27:08
Thank you. Is there anyone else in the room who wishes to speak today on the topics we're covering in this hearing that I've not called already? If yes, could I please ask you to introduce yourself and let me know which agenda item you wish to speak on. Thank you. I'm Stacey Gowan, a resident of Bishop and village. I'd like to comment on agenda item four. Thank you. Was that? Gowan? Yes, Gowan, thank you. Anyone else, nobody else in the room. Is there anybody virtually who I haven't already called? If you could raise your hand, please? No. Thank you. I will now hand back to Mr. Pinto, who will lead you through item three of the agenda.

28:13
Thank you, Mr. Wheelchair. Can everyone still hear me clearly? Yes, okay, thank you so moving on, then to item two. Purpose of the issue specific hearing. I would like to start by briefly explaining the purpose of this issue specific hearing. And it is number one for the examination authority to explore matters in relation to the principle of the proposed development, namely, overall electricity generating capacity, energy storage, size, technology, alternatives and site selection and for the examining authority to explore the effects of the proposed development on the historic environment, particularly heritage and archeology. Today's hearing will be a structured discussion led by the examining authority. Please be assured that we are familiar with what you have already submitted to us, so you don't have to repeat in length anything that you have already put to us in writing. Submissions carry equal weight regardless of the format in which they are put to us. If you do refer to any documents this morning, it would be helpful if you could give us the correct examination Library Reference Number, please do try avoid using any acronyms as people who might be watching or in the room might not be as familiar with those terms as you are. Are there any comments anyone would like to make on item two of the agenda? Yes, Mr. Malani,

29:40
I indicated I wanted to speak in item four, but I noticed item two includes battery storage, so I would like to talk on battery storage.

29:53

Yes, next one, it will include the role of battery storage in terms of harnessing and collecting energy. But so it will be on that topic, but yes, it will include battery storage. Okay, okay, thank you, Mr. Malani, any further questions? Okay, I will then, in that case, move us on to Item three, which is generating capacity, sites, alternatives, storage and technology. So a list of the written key pardon at least a list of the key written submissions that will inform my questions has been included in the agenda published in anticipation of this hearing. As it is a long list, I do not propose going through it in detail now, but can I ask if anyone has any comments they would like to make on the list included in the agenda for this item, and if we since we have the list on the shared screen, thank you. Could I ask to scroll down just so that we can see the full list? Please, thank you. Any comments on that list that is in the agenda? I think that we have one hand raised virtually. I can't see a name.

31:17
Can I ask if anyone joining us virtually. Would like to comment on what we have just set out.

31:33
Okay, I don't it must be a situation with technology. Okay, thank you very much. I will then press this on.

31:47
And the next couple of questions will be focused mainly on es chapter three, alternatives and design iteration. And that will be library reference a, PP zero to six, and then info included in the Energy Information, included in the energy generation, generation, in design evolution document that will be rep 2010, and then the applicant's response to the exercise, ex q1, and that will be wrapped, 2007, can I proceed? Everyone? Okay, right. So first question then, and in line with the excise q1, PPD, 1.1 set out in rep 2007, can the applicant please confirm what is the likely generating capacity of the proposed development? I?

32:40
Michael Baker for RWE so the generating capacity for the proposed development has been designed to meet the grid connection agreement with Northern power grid to export 180 megawatts in AC of electricity to the national grid at the Norton substation. So the generating capacity is 180 megawatts AC. Okay.

33:13
So can the applicant, in that case please talk the XA through its calculations presented and the point 3.1 energy generating in design evolution is set out in the energy generation and design evolution document that will be rep two Oh 10. So that will be point 3.1 of the documents, rep two Oh 10.

33:38
Yeah. So I'll take us from how we've come to that number. So from an early stage, when we started to assemble the land in the for the project, we needed to include enough land to ensure that the grid connection of 180 megawatts AC was maximized across the lifetime of the project. So this means that we've taken into account when we've been doing that exercise of establishing whether we have enough land throughout the project, we've been looking at panel technology in terms of fixed versus tracking

panels. We've been looking at panel technology in terms of the types of modules used, and we've been also looking at the available land to accommodate the appropriate intero spacing in order to provide enough yield to meet the energy generating station requirements.

34:37
Thank you very much. So my first question is actually, then, to do with the numbers that are set in paragraph 3.1, point four, where you actually set out as part of your calculations for the ratio of dependent areas of proposed development in DC, generation, 739 acres, which obviously you explain. In earlier, what that area of land means, and it means the panel areas, if I'm not mistaken. And then you mentioned 280 weight, 288 megawatts P which I believe refers to megawatts peak. So can you please then, just so that we are all on the same page and understand the values that we're looking at. Yeah, explain the difference between the one height, the 180 that you just confirmed, and the 288 megawatts, and what one represents and what the other represents. Yeah. So

35:36
the panel areas, which will the size of the panel areas, have been designed to generate 288 megawatt peak and that's measured in direct current electricity. The reason why that number is higher than the 180 megawatts in alternating current grid capacity is because of a number of factors. So when we designed the solar farm and it's presented and we have a DC generating capacity, we have to take into account the following factors which create a difference between the 288 megawatt DC and the 180 megawatts AC. So firstly, over the lifetime of the project, the panels will degrade, and we account for 15% degradation throughout the lifetime of the project. There are power losses from both transforming the electricity in terms of increasing and decreasing the volt voltage within the site and to get to the grid connection, there are then power losses for transporting the electricity as well, and then the actual conversion between DC and AC. That means that when you generate in DC, that will always be more than the equivalent value in AC as well, and that accounts for 9% but most importantly as well, we we put, we have a 1.6 over over planting ratio on this project, which means that the the 288, megawatt peak number is 1.6 times the one the 180 megawatt ACV number. And that is because, when we are seeking to generate electricity and maximize the use of our grid connection, we can then generate more electricity at times of lower irradiance, so in the morning and in the evening and in the spring and in the autumn, where there is less sun, we can still generate and maximize our grid capacity because there's enough panels to generate enough electricity to fulfill 180 megawatt AC grid connection.

37:55
Thank you very much for that. But in terms of the reason why we have asked this specific question on our exa and why you have submitted this document was to answer a question that exa has made in terms of the ratio per hectare of energy production according to your proposed development, and also how that ratio compares with standards set out in NPS, en three.

38:27
Oh, right, yes, in terms of that ratio we are running at the so the total acreage for the red line boundary is 1211 acres, if you just add up everything within the fence line, which will contain solar panels, that 739 acres bear in mind, within that fence line, you still have further buffers. So we're always two meters away from a fence at least, if not five meters in some cases. So you know, the 739 acres of panel areas

within a fence line means that dividing that by the 288 megawatt peak generating generation of the solar farm, that would equal around 2.5 acres per megawatt.

39:15
Okay, thank you very much for that. Pressing on that specific point though npscn Three refers to megawatts output generally, which is and you recognize this in your response to us, which is correct, and the applicant states that this should be measured in megawatts, peak or direct current in the calculations to establish pre acre generation. Can you explain why you believe that we should take the value that you are proposing is the correct reference to measure it against the criteria of Indian PS will be megawatt, peak and direct current and not AC, not alternating current. Do.

40:02
It's the most relevant number as that's how we generate electricity. It's in DC. So if you're looking at the output, as is named in the policy, if looking at the output of the project and trying to establish how many megawatts per acre, then the output of the project is 280 watt 288, megawatts DC electricity. And that's that's measured per acre. It's then limited by the grid connection. So trying to apply the grid connection to the per a to the per acre would be not accurate. To understand exactly what you're producing from per acre in terms of megawatt electricity, that's, that's our view, but it's a policy matter and and it's not in policy. Is

40:48
that how you measure it, as you said, or is it how the industry measures it?

40:53
It's, I would say it's both. I think the from my understanding of submissions on this point, some other parts of the industry. It's been proposed that it's DC, okay,

41:03
thank you. Thank you for confirming that it also, I would like to just question the applicant on the overall value. So the overall value that was included, it's 2.5 acres per megawatt DC According to the calculations that I have done based on the information and the numbers that you have provided, it seems to me that the real number to start with is 256.5 which actually rounding. It should be 2.6 rather than 2.5 and I am sorry to be penetrating here, but particularly considering what you have just explained now in terms of degradation, I think it would be really useful for us to actually be a little bit more accurate in terms of the value. If you agree that that is the value that it comes to. Well, rounding it up, it should be 2.6 not 2.5 according to my calculations. We

42:04
can look at that in the break, if I've got my design here, and we can confirm that. Thank

42:10
you. Now, can the applicant please also confirm what is over planting and why it is required in this case.

42:19
So as I explained, over planting is where we put if you had a ratio of one, where you had a grid connection of 180 megawatts AC and a enough DC panels at 180 megawatts, you would never actually generate 180 megawatts in AC, for the factors, as I've set out, just in the in terms of the conversion from DC to AC, in terms of the power losses from transforming electricity, electricity. And you know, this happens in all in all types of generating stations, various types of losses. You would never end up produce. You would never have a production of 100 megawatt AC energy from 100 megawatt DC, 180 megawatt DC panels. So we apply a ratio in order to provide enough panels to generate 180 megawatts AC, which is a 1.6 ratio, which which is an RW proposal and a RGB ratio.

43:34
Thank you, Mr. Baker, to help out illustrate this point, and to actually help out with your Russ as well. Maybe if I could ask the applicant to actually shared document that I have mentioned earlier today, earlier so that will be wrapped to zero 10, the energy generation and design evolution document. And if I could ask the applicant to go to page 14 out of 23 that would be the number on the top of the PDF. I think that figure one by as Gill solar energy generation calculations they need for over planting might be very useful in terms of illustrating the point that you're trying to make. Mr.

44:22
Baker, you

44:31
it would be page four. The number at the bottom of the page would be 12 of 21 or 14 out of 23 so 12 out of 21 Yeah, that's one. Thank you.

44:43
Thank you. So Michael Baker for RWE this is the graph that shows a generation on an ideal day. So this day might not ever exist, but if you put it into our model, then it's a perfect day on the 21st of June, which is a solstice and. Generating curve for what would be generated by the solar farm. The lighter blue line below shows that if we were to just have 180 megawatts worth of panels in DC, measuring the DC output of that you will see that it would never meet the turquoise line, which is our 180 megawatt AC connection because of the factors that I've set out regarding power losses during the generation of electricity and the conversion between AC to DC. So even on the perfect day, it would never, it would never produce enough energy the over planting. This shows what happens when you have over planting on that perfect day, and it shows that the solar farm will start generating earlier in the day and later into the evening, and then the excess at the top would be used to and then the excess over the on this perfect day would be used to charge the batteries and then discharge in the evening. So if you imagine this curve on an imperfect day, or on, you know, a spring or autumn day, those line come those lines, you know, come down, and they would mean, it would mean that on those imperfect days, we're still generating enough to export to the grid At the 180 megawatt AC values.

46:21

Thank you. And ratio of over planting that you are proposing is 1.6 1.61 being no over planting, 1.6 being over planting. And that over planting is taken into consideration in terms of the overall acres in the overall length take that you are including within the order,

46:45
yes, yes, yeah, no, it's defined what we it's defined the land take that we require. Yeah, okay. Thank

46:51
you very much.

46:58
So moving on. Then from this point, I'm now moving on to battery energy storage system proposed, and can the applicant please explain what work has been carried out to ensure that proposed battery energy storage system will be able to store the energy being produced, particularly looking at the 1.6 of a planting in which cannot be exported immediately into the network.

47:32
The batteries capacity is equivalent to the capacity of the solar farm, so you're effectively able to charge it if the to the equivalent amount of the solar farm, if required, during that period where the generation is over the 800 megawatt AC.

47:55
Okay, if I could go back to figure one, please. So on that figure, one bioscience, solar energy generation calculations they need for implanting correct me if I am interpreting this incorrectly, but the export limit or the lightest blue line represents the 1.8 correct

48:22
that represents 180 megawatts.

48:23
180 megawatts exactly which is what you are able to export to the to the grid. Yeah, correct. Okay. So, as you have explained, in terms of the over planting, the over planting is needed to compensate for the times when energy production is not as high due to daylight and sunlight conditions, correct? Yes, right. So the need for the battery storage, in light of that is to store the energy that is being produced above that 180 megawatts, when it happens to compensate and to level the energy that is going to the grid? Correct, correct.

49:06
Yeah. But there is a dual use to the batteries, which is that they can import electricity from the grid and store it from the grid and help back balance the grid as well.

49:16
That is an additional benefit of the battery system that you are proposing, yes,

49:21
right?

49:31
So you would say, then I take on what you have just stated in terms of that benefit of the battery, energy storage system, but its main purpose really is to store the energy that cannot be exported immediately into the network.

49:50
Yeah, the benefits are both as equal as equally important to the benefits in terms of both its ability to store the excess energy. During the ideals of June day, and its ability to help balance the grid and import electricity and export electricity from the grid is both equally important.

50:10
Therefore, if I am understanding the proposal correctly, you are proposing this over planting in order to be able to maximize the connection that you have on Norton substation in connection to the grid, so that it can be feeding to the grid. The maximum amount for the maximum amount of time, is that, what I'm looking at in terms of justification for the battery and the over planting.

50:36
So the over planting is so that if there weren't any batteries, we would do over planting so that we're maximizing the use of the grid connection. So the kind of is just with the batteries. It means that we can capture any excess energy as a on the ideal day as a cause of the over planting. But the over planting is there to maximize the use of the grid connection, and that would be sitting on other solar farms how they don't have a battery system.

51:05
Thank you. Thank you for confirming that. Can I ask if members of the panel have any questions? Perhaps, Mr. Wheelchair,

51:17
I've just got a quick question. You may have explained this. To apologies. Mr. Baker, the 1.6 figure is that taken from figure one, and is that the is that a ratio that allows the the area of the graph above that horizontal light blue line to equalize with the area of the graph that's below the light blue line, but above the the lower curve is that where the 1.6 has come from. I just didn't hear it explained where, how you came up with 1.6 1.6

51:57
is our design is our design standard to in order, in order to maximize the big connection capacity. It's what we use to understand the viability of our projects and propose, understand whether we can propose projects and whether they'll work. That's, that's our

52:17
number. So it's not specific to buyers Gill, it's, it's an industry.

52:22
It's used across our portfolio. Other developers may have different approaches, but it's certainly used across the RWE portfolio as much as we Yeah. Do

52:32
you ever use other ratios on other projects? I

52:44
for fixed panel projects, which is what this is, where we have fixed panels, we use 1.6 and for if it was a tracker panels, we would use an overinstall radio ratio of 1.4 as trackers have greater yield, but you also require greater pitch, and you need more space for trackers, so there's lots of balancing that we have to do in choosing the technology and that over planting ratio, but the over planting ratio is fixed for the type of panels that we're proposing. Thank you.

53:17
Following up from, thank you. Mr. Wheelchair. Following up from Mr. Wheelchair's question, can I ask if the ratio of 1.6 does it? Would the applicant be able to provide us with further information regarding the scientific basis for that ratio? If there is any or because you've mentioned that it's across your portfolio, and I think that we would be very interested in examining that issue from an industry, practice, profession perspective. If that makes sense,

53:52
that's something that we can consider after the hearings and look what we can do there. I think what I will say is that, you know, it's, it's a figure that's informed by our viability modeling and how we design our project. So there may be matters which are commercially sensitive, which I won't be able to put into the public domain, but we will come back. We can

54:14
always redact information. Okay, yeah, we can do that. Thank you. So in that case, can I please get an action for the applicant to provide information regarding the industry based evidence regarding over planting as it pertains to this application, in relation to the 1.6 proposed level, yeah, thank you. Can I ask if there are any questions on this point? Okay, we have some questions from the floor. Can I ask Mr. Anderson if you. Would like to ask you a question.

55:02
Thank you. Can I just clarify that using a ratio 1.6 that that means the the over planting necessitates 60% more land take.

55:19
Okay, can I ask if the applicant is able to provide an answer for that specific question in terms of the consequences of the land take from the over planting, it's

55:36

60% more panels. Yeah,

55:39
okay, 60% more panels, I'd

55:41
say 60% more panels, yes, because there are other factors that influence the land take, such as the pitch or the inter row spacing. So there isn't a direct you can't say that 1.6 causes 60% causes 60% more land, but it does require 60% more panels.

56:01
Okay? I think that the question was to do with the land, not the panels. So if the applicant cannot answer that question, now, can I ask the applicant to provide us with a written answer to this question? I've

56:16
actually just had advice from my design team, so yeah, it can be 15 to 20% more land,

56:23
15 to 20% more land, right? Does that answer your question? Mr. Ensign,

56:30
can we ask for a clear demonstration of that calculation?

56:35
Yes, yes. I would like to see that myself as well. So can I please ask the EXA to provide us with evidence regarding the consequential land take between the one the no over planting, which obviously is the baseline, and then the 1.6 over planting. And what are the differences in terms of land take?

56:59
We Yeah, I think you're more than happy to do 1.6 and explain that and regarding the land and how we've that calculation happens. I think the one over planting would isn't a baseline, because that wouldn't be a viable solar farm. You would always have an element of over planting.

57:22
In that case, what did you take as the baseline?

57:28
1.6 because that's our design parameter for

57:31
your baseline is due for planting. Yes, that's how in that case, can I please ask the applicant to justify why the baseline that they are proposing is deal for planting baseline. I

57:43
think that's the case. Thing that we can come Yeah,

57:46
right. Move, yes. Mr. Anderson,

57:52
thank you. It would seem to be a direct correlation between 739 acres of panel footprint and the 1.6 ratio that must be dictated by panel technology and what can be generated by the panels on the basis that the application was submitted some time ago, things have moved on, technology will be better. Is the 1.6 ratio still applicable

58:24
on that specific point. I have some questions today prepared already for technology, which I think will probably go, hopefully some way to answer your question as well, which I would like the applicant to respond to. So if I could ask you, Mr. Anderson, to please wait until we ask those questions and then, if it's still not clarified, I will ask you to intervene again, if that's acceptable. Thank you. Mr. Anderson, right. Mr. Smith, I believe that you had your hand raised as well. No, our apologies. Mr. Tyler, has been covered. Okay, anyone else has any questions on this point before we move on, anyone online? Okay, I don't see any hands raised around room or online. So I'll then move on, and I'll be moving this on to alternatives. Then under section 2.2, of the energy generation in design evolution document, I think I will always struggle with the title apologies. When the applicant sets out its consideration of alternatives, the applicant recognizes the need to provide the XA with information regarding reasonable alternatives and an indication of the main reasons for the option chosen checking to account the effects of the development on the environment. Can the applicant please set out its approach to alternatives, focusing on how it has taken account of the effects of proposed development on the wider environment.

59:54
Thank you, sir. David Brown, on behalf of Adora the applicant, so we. Consider alternatives in a number of places, in the application, primarily Chapter Three of the environmental statement, which is a PP, 026, the energy generation and design document that you just mentioned, which is R, E, p2, 010, and then also in the planning statement, so as well, which is a PP, 163, so just in terms of the planning statement, paragraphs, 521827, set out our summary of consideration of alternatives, specifically in relation to the policy context and how that accords with the policy and what the policy is asking of us. I think it's really important to note, sir, that the MPs em one actually contains no general requirement to consider alternatives, and it's quite specific, actually, in saying that consideration should be proportionate, and only alternative proposals which deliver the same capacity in the same timescales should be considered. So that's our starting point, really. So for that consideration, as well as that, the MPs directs us to any other legislation or policy that is relevant when considering alternatives, and in the case of the scheme and the proposed development that really relates to the EI regulations and also the sequential tests from a flood risk assessment perspective. So again, that has been the focus of our consideration of alternatives to date as part of the application submission, and I think in terms of what's presented in chapter three of the environmental statement alongside the updated fra that we submitted recently into the application, our view is that we've demonstrated our consideration of alternatives and

do not need to Do Anything further beyond that as part of the application in terms of the information we have submitted. So chapter three, firstly, looks at Site selection, and that considers a number of parameters which have driven that site selection, including irradiance, grid connection, environmental constraints and also the ability to secure land for the proposed development. A no development alternative wasn't considered because,

1:02:07
Mr. Havelton, can I ask you to speak directly to the microphone, otherwise cut off

1:02:12
a no development alternative wasn't considered as part of the consideration, because that wouldn't provide the benefits in terms of renewable energy generation that the scheme would provide. But alternatives in terms of those parameters were looked at in terms of site selection. We then also set out alternatives that have been considered from a design iteration perspective, and that has included things such as site layout. We retain, for example, optionality on cable routes as part of the application, we looked at different solar technologies. We've talked about fixed and tracking panels already, and we considered both of those in the application preparation. We looked at the substation location and then also the other infrastructure, in terms of location of that infrastructure across the site primarily. So we've submitted further information on that recently in the energy generation and design evolution document, but our position, so very much, is that we've demonstrated that alternatives have been considered both from a site selection perspective and a design iteration perspective in accordance with policy.

1:03:14
Thank you. You have mentioned yourself Chapter Three of the Yes And in chapter three of the yes and the point 3.5 approach to alternatives, you set out in paragraph 3.5 point one, that alternatives included in terms of the design iterations, site layout, cable route, solar technology, substation and energy storage facilities. I will go back into those in a couple of questions. But I also I wanted to take us now to paragraph 3.5 point three of chapter, years of Chapter Three of the years where you state the scope of reasonable alternatives assessed by the applicant is therefore limited to those which could be deliverable in accordance with the land acquisition strategy outlined above. IE, no compulsory acquisition of land required for panel areas can the applicant then confirm if this means that the applicant did not consider any of the sites for the location of the panels, because land owners were not willing to enter an agreement with the applicant, or there were other reasons for that.

1:04:35
Sir, Alex mannick, for the applicant. RWE, so with respect, that's a very broad question, so I'm not 100% sure we're going to be able to answer it in a very precise way. Certainly, what the site selection process, which is outlined in the environmental statement, chapter three and. Explains is that the availability of land, ie landowners with appropriate land parcels who were willing to participate as part of the scheme that land availability was one of the factors that was considered in the development of the scheme in the site selection process. So I believe so the answer to your question is yes, but just with that qualification that it is there, there are a wide number of factors which went into the site selection process. The availability of land was one of them.

1:05:41
Okay, can I ask then how the applicant suggests that they might be able to confirm the language on that paragraph to reasonable detail.

1:05:55
Alex menick, from the applicant, sir, sorry, I'm not 100% sure I've followed that precisely

1:06:04
different approach then, so if I have understood your alternatives in chapter three correctly, and please correct me if I get anything wrong as I'm explaining. It seems to me that one of the starting points that you had in terms of site selection was connection a possible connection to the grid network, which makes perfect sense, considering it is a solar farm for the production of energy. Based on that connection, which you have identified in northern substation, you then and again, please correct me if I am wrong in terms of my understanding of the alternatives. You looked at several different sites, and you came to a selection of sites based on a series of constraints in the series of information, environmental factors and land availability. Correct? Yes.

1:06:56
The before we approach landowners. We look at environmental constraints and designations that would would inhibit the the building of a solar farm, so landscape designated areas, environment ecologically protected areas, before we send, you know, before we approach landowners to come in and and be part of the project. Okay?

1:07:21
So once you have actually carried out that process, I assume that you contacted landowners within your suitable such area in order to get a sense for what sites would be available for the solar panels is that the case that's

1:07:42
correct, following the following the assessment of environmental constraints.

1:07:46
So if that is the case, then actually, I would like us to go back to that specific paragraph, 3.5 point three within Chapter Three of the yes, you then stated scope of reasonable alternatives assessed by the applicant is therefore limited to those which could be deliverable in accordance with the land acquisition strategy outlined above. In the land acquisition strategy outlined above was a land acquisition strategy that looked particularly at no compulsory acquisition of land required for penal areas because it's being such draconian powers, is that

1:08:27
it would, yeah, we don't seek to build solar farms using compulsory acquisition powers. And you know, there's a number of, you know, solar farms under 50 megawatts don't benefit from those powers either. So, okay, it's always through voluntary agreement, and that's a policy that we have now

1:08:45
in terms of answering and clarifying why the XA is asking these questions. Mr. Mcinnich, in that case, then can the applicant please confirm what strategy and what was the key items that led to the decision on that, in terms of not looking at land that was outside of their acquisition strategy. Was it the compulsory equity? Was the need for not, not having no need for compulsory acquisition, or were there any other factors besides the compulsory acquisition factor? That's, that's all I'm trying to clarify.

1:09:26
Sir, Alex Manick, for the applicant, I think at a at a general level, it's, it's correct that where RWE didn't think it would be able to obtain the relevant land interests that it needed in land to deliver a solar farm on that land, the solar array, part of that solar farm, the land in that category, didn't flow through the site selection process, bearing in mind that the site selection process is not it. Given the fragmented nature of land ownership, it's not as straightforward as there being a cohesive Site A, VA, cohesive Site B. There are a number of different land interests owned by different parties, some of which will be closer to others than other parcels of land and which would all have their underlying relationship with those broad environmental constraints that Mr. Baker outlined initially. So bearing in my in mind the fragment, the fragmented nature of land ownership and the areas of land which are required to deliver the scheme, yes, the the areas of land over which RWE didn't think it could acquire, those, those the necessary rights weren't taken forward through to the final stages of the site selection and design iteration process, which sir is is Common with the remainder of the DCOs which have been granted for solar schemes recently.

1:11:04
Okay? Thank you very much. Right now, looking at Site selection in the context, in the context of alternatives, particularly section 3.6 of DS, Chapter three alternatives in design iteration. That's a PP, 026, can the applicant please explain its approach to the XA is set out under that specific section of the document in relation to site selection. The I'm looking for information, particularly under stage one that has been set out in stage two, and can the applicant please stage three, stage four, leading to then the alternative site layouts.

1:11:58
Thanks. David Brown, on behalf of the applicant, so that the process we've set out is one that arably goes through in identifying sites across the UK. As you say, the grid connection is the starting point for that process. The grid connection was secured at Norton substation and a search corridor, which is stage one of that process, was defined around that grid connection of around 12 kilometers, I believe, from memory, stage two is then consideration of environmental and planning constraints within that radius from the substation and the connection point. And as Mr. Baker has outlined, that includes things such as brownfield land, agricultural land classification, ecological designations, flood risk areas, heritage assets and landscape designations and rights of way, and an appraisal is done within that broad radius from the connection point of all of those constraints in order to refine the land holdings down to areas that might be suitable for solar development based on this desk, based constraint analysis. Stage three serves, then land assembly. Mr. Baker has mentioned this. The applicant begins to engage with relevant landowners in terms of expression to interest and those that may be interested in looking at solar development on their land before then an initial identification of potential panel areas

under stage four is undertaken, and so that will be on land that has come forward as potential land for solar development as part of that site search.

1:13:35
Thank you. So in terms of site layout, can the applicant then please set out its approach as proposed in the site layout, including alternatives considered and to help and to guide the applicant's response. I am looking particularly at info included in Table 3.1 and that would be summary of design changes between peer preliminary environmental information report and the DCO application included in ES chapter three.

1:14:12
So sorry, could you repeat the reference you mentioned Mr. Baker coffin at the time? I didn't quite catch

1:14:16
it, certainly. So the reference that I am particularly looking at and would like further explanation on we table 3.1 that summary of design, summary of stage Two output reflected in land assembly in chapter three.

1:14:48
Actually, pardon I have an incorrect reference. Apologies. Table 3.2 summary of design changes between peer and this year. Application. Table 3.2 apologies. Pay. Age 11 out of 19.

1:15:05
Yeah. So in broad terms, following the statutory consultation, we had originally proposed 4.35 meter high trackers these this technology is coming forward and is used in other countries, and would have been a possibility on a British solar farm. However, given the response to the consultation, we reduced the maximum height of the panels to 3.5 meters, so that it was in line with more standard solar farms. We went from well because the area of land was reduced following consultation as a result, we talked as a result of factors we talked about in other hearings, and we'll talk about, I'm sure, in later hearings. In this set of hearings, we went from using tracking technology to fix technology, which meant that instead of using trackers going north to south, we're using fixed solar panels going east to west. And then we introduced a number of setbacks, for example, in panel area B and panel area f, to move the panels further away from residential properties. And we gave more specific we presented that more specifically in the energy generation and design evolution document at deadline two. We also reviewed the location of battery energy storage systems following statutory consultation, and moved those further away from the residential receptors. And we had full wholesale removal of land parcels as well, including a land we discussed at the previous hearings, which was removed in response to a landowner no longer wishing to be part of the project, as well as other areas removed in response to landscape considerations. We also quite substantively changed the construction access routes and access tracks onto the site. The main things that we did was move it away from move the main access on panel area A to the south of brackfordton village, so the majority of the traffic will avoid going through Brafton village, and moved the access point on panel area f to the north of bishopton so that no construction traffic would need to go through bishopton. And then we also looked at the cable routes as well. Excuse

me, have we moved a route where there was no chance of meeting land agreements? So that's in broad terms, the matters that changed as a response to the statutory consultation.

1:17:56
Thank you. And that information in Table 3.2 that you have just talked through, I am assuming that it then is linked, as you have mentioned in your response, as well to the information submitted within the energy generation and design evolution document. Following is such one where you have table for 4.1 which is reasons for removal of panel areas prior to the submission of the AI scoping report in prior to the statutory consultation. And I'm guessing that those changes are reflected on that table,

1:18:32
yeah, so they provide more detail to the text which is provided in this table.

1:18:38
Perfect. Thank you very much for confirming that situation. I would just like to expand a little bit further on the last change that you have mentioned on summary table, which is reduction in order limits in panel area f, where land no longer required. In through further engagement with land owner, where your justification says further technical assessment and design development of ecology mitigation determined precise quantum of land required, enabling the remainder, the remainder to be released from the order limits. If there is a direct connection between table 3.2, of chapter three, and then table 4.1, of the energy generation and design evolution document. Can I just ask what items relate to that specific change?

1:19:36
Which specific but in terms of the

1:19:38
that last change, still the change of reduction of the order limits in panel Raf, and how does that change? Is then reported in the energy generation and design evolution document,

1:19:52
so the table is numbered, so table four, two in the energy generation and design evolution Document. And has numbers indicating that. So that would be number 17, where we've provided further information to what's in the pier table. But yeah, so number 17 on table four two would be the relevant part of that.

1:20:20
Okay. Thank you very much for confirming that. And it is in relation then change 11 is then the same land owner as designed. Change for 12 for 13, yes, 17

1:20:36
in that table, the the landowner, which no longer became part of this project was was related to rows 1112, and 13 and 17 of that table, and

1:20:47
that then we like to figure three panel errors removed following statutory consultation on the page above and ended the numbers that we have mentioned. Okay. Thank you very much for confirming that

1:21:09
can I just ask if Mr. Wiltshire would like to intervene at this point, I

1:21:15
just wanted to clarify something. Mr. Baker please, with regard to road to selection of fixed only solar PV panels. And just going back to the item about the 1.6 ratio, where you explain that, you explained the reasons for selecting that, and I think you also said that the ratio for tracking panels is 1.4 there the reason you've given against road two is to do with visual impacts and the height of the tracking panels being higher is Is that the main reason for the change to fixed panels purely the height, as opposed to the land. Take that the greater land, take the fixed panels. Take,

1:22:13
well, no, this could be so. I think in the table, we just focused on the height in response to the consultation. The other consideration which we have spoke about in the energy generation and design evolution document and provide more information on the trackers take more land, so you need a greater pitch between each row of tracker, and they are also more costly as well. And so if you don't have a greater pitch equaling higher yield, then it doesn't make them fire. They're not viable as a technology to use. So then we went to fixed panels, which which don't have as great a need of poor interos facing and which are lower costs and was more suitable for the lower amount of land that we had. If we'd have retained the land that was originally proposed, we may have carried on using tracker technology, because we been able to increase the pitch and therefore the yield to make that technology viable on a site with lower radiance such as this. However, we didn't retain that land, and therefore we weren't able to achieve that greater pitch or intro spatial spacing, and therefore went to fixed panels as the more viable solution based on yield and cost.

1:23:39
So the if I understood this right that the fixed panels take more land than the Tracking panels,

1:23:47
no tracking panels generally require greater patrons. I

1:24:04
They generally require a greater pitch. Yeah, so and the considerations up here were we would have needed to retain that land to achieve the pitch, to make the viable, to make the project viable in this location, using trackers.

1:24:31
Yeah, so when I say pitch, I mean inter row spacing, and therefore you need more land. So the trackers in this location would have required greater land in order to make them viable.

1:24:44
Okay? Thank you.

1:24:47
Thank you. Mr. Wheelchair. Now continuing on the topic of technology that we have just touched on the applicant in response. To the XQ, PPD, 1.5 the applicant in answer to the access question, the applicant assumes that bifacial panels have energy general that have energy generating surfaces on both sides of the PV panel and n type panels would also be used as they perform better in low light environments, considering that soil technology is fast evolving. Can the applicant please provide assurance to the excited best possible technology will be used, and how will this be assessed throughout the lifetime of the project and from the moment that DCO is granted, if granted, you

1:25:53
so this is the best technology relevant at this time, 570 watt Genco panels are the best relevant technology for this solar farm, and that's on the basis which we've assessed our technology. We will take into account any future panels that are that do come forward, and that would happen at the detailed design stage, when the that requirement is discharged by Darlington Borough Council, and we would go through a procurement process to see which panel is most suitable, given the land available and the Parameter Set as part of the DCO, we you know there could be a higher rated panel that is available, however, that doesn't necessarily equal requiring less area, or they might not be suitable. Higher rated panels can be less energy dense, so they can be, per module, less efficient than the ones that we've proposed as part of this project and used as to the assessment for the assessment to date, and they can also literally be physically bigger, meaning that you get less panels on each row, and therefore you need more rows. And would need to look at the inter row spacing as well. So there are a number of factors that will go into the detailed design related to the available modules at the time on the market.

1:27:21
I accept that, and I understand that, however, how can the xi be assured that the applicant will look at those alternatives? And when you say that there are several different factors that might change, that is correct, and it's not necessarily a guarantee that latest technology will imply less land needed, however it might. And within the justification of the DCO, you ask for flexibility exactly to look at technology and technology as technology evolves. So how, where is that set out, and how can we be assured that the applicant will look into those things?

1:28:19
Sir alexman Henck for the applicant. The DCi application, by its nature, has been made at a certain point in time based on information which is available at that point in time, recognizing that there will be a future design stage in the event that DCO is granted and the project comes forward at which the detailed layout and the choice of panel would be fixed. It's the common industry approach to approach things in that way, and there's very good reason why that's the case, and it is principally that as a developer of solar arrays, RWE is obviously acquiring its panels in the marketplace, and it needs to be able to run that procurement exercise to obtain the panels that are available when they are available. Now, we can't speak with certainty to events that haven't happened. There is necessarily an element of

conditionality to all of this as to when it will take place, but I think so that you can be assured that to the extent that there are more efficient panels which are available to enable RWE to deliver the same quantity of electricity On a more in a more efficient way. The expectation is that that would also represent a positive cost proposition to our W E in the delivery of its panels. And I think so you can, you can, you can take comfort from the market forces which will be present at that time and the need for our W E to. Deliver a competitive project to influence that future design process that will take place. There is also the design approach document, which is one of the documents that the applicant has submitted as part of the application, and that is a document which is to be taken into account in that future design process when it has the final layout settled under the requirement.

1:30:27
So if I am to interpret your answer correctly, that requirement will be set out in design approach document. Is that the case?

1:30:37
So yes, the factors that will be taken into account and the way in which that final layout will be approved will be set out in well, they are recorded in that design approach document, okay? And

1:30:49
in terms of the requirements for the applicant to discharge its obligations against the design approach document, how will that be secured.

1:31:03
So that's written into requirement three. I believe it is. It could be two, though I would need to double check of the draft of the draft. Eco, yes, yeah, yeah. Thanks, correct. Do.

1:31:24
Thank you, right? I'm mindful that It is half past 11, and I did say that we would have a break, but I would like to press on, if everyone is okay with that, just for a couple more minutes until I actually finish my questions. If everyone is okay with that and no one objects, can I ask? If anyone objects to that? No, okay, pressing on then and I will prioritize. Matt is now on my questioning. You.

1:32:05
In relation to the connection agreement, the applicant states, in response to CU 1.1 that it has been notified by Northern power grid that the connection will only be available in 2031 due to the need to carry out reinforcement work, the applicant also states that it assumes that it will be that this will be brought forward to 2028 based on the applicant's conversations with Northern power grid, how likely It is that the state will be brought forward the

1:32:49
so the we are assuming that, based on that, the fact that the it would be able to conform based on reforms to the grid queuing system, which would remove so called Zombie projects from the grid queuing system, which may be affecting the queue in the area, and we are able to demonstrate, should we be granted development consent? And already are able to demonstrate, based on our land rights,

that we are, you know, a project that is not a zombie project, and that we could be jumped up to the top of the queue based on the reforms that are being undertaken to the grid connection process at the moment. I don't have a percentage of you know potential of that, but it's something which we are assuming and to build our models around so it shows confidence in that approach.

1:33:45
Apologies, you don't have a percentage, but have you any written information to confirm that that is actually the understanding from Northern power grid as well.

1:33:55
We provided the written information that we have this is based on our own modeling and our own understanding of the grid system. We have a grid team internally that advises us, and we you have provided, or we have, in response to the question, we provided the statement for Northern power grid in response to this, the essay question under discussion, and that's all that we have now. So we don't have any further written.

1:34:17
You don't have any further I've read the statement from Northern power grid, and although there is that intention, surely I wouldn't say it is secure. So what I am trying or very firm, what I am trying to ascertain here is the likelihood of this date being brought forward, and if it is likely or if it's not likely. So I'm not asking exactly for a percentage of likelihood, but how likely it is or not for it to be brought forward, and if it isn't, and if it isn't, based on a worst case scenario, which is what we should obviously be looking at. And. And how does the applicant envisage this issue moving forward into consequences based

1:35:06
on our modeling and understanding of the grid reform system, and even prior to that, our understanding of the grid in the local area, we think it's more likely than not that the grid connection agreement would come forward to the time we sent out.

1:35:21
Okay. So apologies, but moving on in that case from that specific point, then considering the worst case scenario for the construction program, which you have on your own document, assumes the construction period of 18 to 24 months. So let's assume the 24 month period, not yet in period which brings us closer to the potential or confirmed date from Northern power grid, and assuming that this year is granted, if granted in 2025 how does the applicant propose to manage to consideration and considers The loss of efficiency of solar panels through time

1:36:02
again? Would be something that we've dealt with at the detailed design stage under requirement three of the DCO. So yeah, we'd have, we would have to consider latest technology and what we're procuring for the project.

1:36:17

But whatever the technology, my understanding is that there is no technology at moment, particularly in relation to lower panels and battery storage, when it comes to that that does not degrade through time. So if there is going to be again in the worst case scenario, so assuming the 24 months construction, if the DCO is granted in 2025 that will take us to 2027 to 2027 so on your best case scenario, in discussions with Northern grid, there will be one year between the best possible date for the connection and the real date for the connection.

1:36:54
Well, we account for the time it takes to discharge requirements as well, which we usually have to, you know, account for at least six to nine months, and it's usually prudent to account for a year for that.

1:37:04
I understand that, but my question is to do with how panels become less and less efficient through time, and if that has actually been taken into considerations by the time that you connect to the power grids,

1:37:18
we wouldn't commit to construction until we have, until we have a firm understanding of the good connection date. Okay, thank

1:37:25
you. And in the DCO, you have included a clause that allows for the construction to be the light power this year being granted. If granted,

1:37:40
yes. So you. Alex penink, for the applicant, the DCO contains the usual provisions which enable the development to be brought forward within five years of the date of the order and the reference there, sir, is requirement one of the draft DCO, thank you, which the application version was at zero, 31 and so my previous reference to requirements was correct. It is requirement three, which deals with detailed design. Thank

1:38:12
you very much. Mr. Min Hak, right. Can I ask now, if my fellow panel members have any further questions they would like to ask on this topic, I Mr. Abade,

1:38:27
thanks. Just a quick question relating to what my colleague discussed about your response, the applicant's response to CU dot, 1.1 I just like to know whether the connection that will be available in 2031 is a contractual date, but that is definite because national northern power grid says it needs to carry out reinforcement work. Do we know how long, weather is guaranteed that that reinforcement work will be completed, and that 2031 is definitely guaranteed.

1:39:09
That's a contractual date. So that's the latest date it could be, and it's, it's a contract between us and northern power grid that they've provided to us. Yeah. Okay. Thank you.

1:39:21
Any further questions from the XA, no, okay. Can I now open the discussion to members of in the room and IPs? I would first of all like to go to the local planning authorities and ask if they have any questions on this specific

1:39:44
topic, thank you. Lisa Hutchinson, Darlington Borough Council, no, we don't have any questions. Thank

1:39:48
you. Thank you very much. Okay, do we have any questions from Stockton on this point? No, no, we don't. Thank you. Thank you very much. Wright, can I ask if there are any interested parties within the room that would like to ask any further questions on this specific point? Mr. Sean Anderson,

1:40:18
thank you. The DCO application was submitted early 2024 and there is a very specific acreage mentioned, which is 739

1:40:32
acres as a panel footprint. This must have a direct correlation to the ability to achieve the 180 megawatts, yet we can't seem to nail that down. Is that based on a specific panel? Is that based on the 570 megawatt Ginko?

1:40:54
Can I ask? Can I ask the applicant to reply to the question of Mr. Anderson, please?

1:40:59
Yes, that's based on the 570 watching co founder, yeah.

1:41:02
Okay, so the next is a series of questions, was that the best available technology at that time?

1:41:11
I think that the applicant has clarified that position, but I will ask the applicant to state again if that was the best technology available at the time. I on,

1:41:23
yes,

1:41:25
okay, thank you. The next question this series, if the grid connection isn't until 2031 there's a period of six years that will last between when the original design was done, are you saying that the design development that may be achieved, and has probably be achieved in that period, will not equate to a less footprint than 739 acres.

1:41:51
Can I ask the applicant to reply? Please,

1:41:53
sir, Mr. Minick, for the applicant, the series of questions that Mr. Anderson is asking are starting to sound an awful lot like cross examination, of which there has been no notification made, there has been no request for cross examination to be carried out of any of the applicant's team. So we appreciate that the local residents and other interested parties will have questions that they want to ask, but we would encourage you to explain the process which is taking place during this hearing to them, and perhaps the better form of submitting questions of the sort would be in writing, so that the applicant, Ms

1:42:37
meinich, I have explained The process, and I have asked my questions, and as per the agenda, there was an opportunity for IPs to ask questions. Now I am giving Mr. Sean Anderson the opportunity to ask that question. And as I have explained at the beginning of the hearing, if any party, including the applicant, needs time or cannot replied to the question being asked immediately, then please type so and we'll give the applicant and anyone else an opportunity to actually reply in writing. However, I have allowed that question, so would like the applicant to reply and provide us with information. Thank you,

1:43:16
sir. Thank you. In that case, I will ask Mr. Baker to answer the question, I'm

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going to have to ask for a repeat of the question.

1:43:26
It's quite a long winded one, but I'll try again. So the DCO was submitted in 2024

1:43:37
No, I I wanted to interrupt you. Can I ask Mr. Anderson to actually direct your question to the xi, and then the Xi will adjudicate on that question and ask whoever the party is appropriate to answer that question. Thank you, please, if you'd like to.

1:43:59
So the question was, in the period between potentially 2024 and 2031 are you saying that the design development in panel technology will not result in a less footprint of 739 acres?

1:44:22
I think that Mr. Sean Anderson's question is linked with the ratio, in terms of the panels, the energy production and the amount of land take, that is proposed. These links with the questions that the XA had on this specific topic, and has actually added this hearing as well at the beginning of this hearing. Therefore, can the applicant clarify again, what is the land take presumptions based on the 1.6 plan?

Planting of solar panels, the over planting of solar panels as proposed, and if there is any link between that land take and the energy that is being produced,

1:45:14
the 1.6 ratio is in relation to over planting. And we've agreed to follow up, following the hearing, with more information as to why that is justified and required in order to meet the generation requirements and maximize our grid connection in terms of the advancement of of panel technology, as Mr. Anderson set out, that is something which would have to be accounted for in the detailed, the detailed design stage. We don't know what that will end up looking like in terms of panels. I have set out some limitations on just because a panel is a is a high rated per watt. So if it's 610 watt or 650 watt, it still may not perform in the same way as a more densely, lower rated panel, which is provides more dense power generation, or is physically larger, which still may require more land or may not ameliorate the situation. But it is something that would have to be looked at a detailed design. Should there be a gap of the land set out to the grid connection agreement and our assumptions beyond our assumptions.

1:46:35
Thank you, Mr. Baker, Mr. Shawn, answer. Do you have any further questions that you would like to put forward on this specific point. Well, thank you. Thank you, right? Mr. Taylor,

1:46:47
hello. Thank you for great state and parish council. Colin Taylor, if more efficient panels are procured by RWE

1:46:57
apologies, Mr. Taylor, can you speak a little bit closer to the mic. I'm missing some of your words, and direct the question to the xi, please. I can't hear you now,

1:47:09
if more efficient panels are procured by RWE, what is the intention of the company? Is it to increase output, or is it to reduce the area, the footprint of the land that's required.

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Could I ask you, Mr. Chell, to clarify your question, so your question in terms is on the intention behind the design approach document and the need for the applicant to utilize the most efficient technology available, it

1:47:43
is, and whether there's an intention to use the most efficient technology, and therefore to be able to reduce the land footprint,

1:47:52
I think that the applicant has already confirmed in the response To me earlier today that the most efficient technology does not necessarily mean a reduction in the land take it might, but it might not, but I will ask the applicant to confirm if my understanding of the applicant's response is correct.

1:48:15
That's yeah, that's correct. I think it's important to notice in our in our interest to use the most efficient technology available and the most for the site relative to its irradiance. And it's in our interest to there is a natural there is a natural limit on what we could do in terms of land use, in terms of, you know that over planting ratio, we also don't want to go too far in what we put in, what we put on the ground to maximize output, because then the cost of the construction outweighs the benefit that you gain from from that extra from those extra panels. There are natural limits to what we could do.

1:48:59
Okay, does that answer your question? Mr. Tyler, thank you very much, right? I'm mindful of the time so Mr. Mr. Smith, I believe that you have another question.

1:49:15
Yes, thank you. It's Mark Smith on behalf of the Shipton villages Action Group. And just query to the applicant, do they have a number of panels based on the 570 watt panels, a total number of panels to have that estimate?

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Can I ask the applicant to reply to that? Please.

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We do. I might need to clarify how we can report on that, because the number of panels that we model is commercially sensitive, which you

1:49:45
can actually offer

1:49:49
response will work out what we can

1:49:52
Okay. Can I ask the applicant to please, following from this hearing, provided to answer in writing? Please. Thank you. Any further questions for. Anyone else on the here with us today, in the room? I have one question online from Mr. Endy again. Do

1:50:23
Mr. And if you can hear me, I'm not sure if you can hear me or not. We can't hear you at the moment. If you still have a question,

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we can see you, but we can't hear you.

1:50:45

I'm afraid I still cannot hear you. Can I just ask production 78 to just check if we're having any technical issues or glitches with this person or not. I

1:51:11
what while we are trying to resolve this issue, and clearly I cannot, I cannot hear Mr. Andy. Mr. Andy, I have just been informed that you might need to turn your mic on it. It appears as being turned off on our screens while we're having those technical problems, I will ask, I will take this opportunity to actually agenda meeting then and have a quick break so if we could resume at five minutes past 12 again, please. And by then I will come back to you. Mr. Andy, if you can hear me before I move on to the next item, which will be item four. Historic Environment. Thank you. This meeting, this hearing, is now adjourned. Thank.