The Planning Inspectorate
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Hearing Transcript

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00:05
Good afternoon. The time is now after quarter past 15 minutes to four, and the next item will continue with item the next item on flood risk, water environment and flood risk, Item four of the agenda, as said in the earlier session, a list of the key written submission that will inform my questions has been included in the agenda published in anticipation of these hearings. 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. No, thank you. I will now refer to ES environment statement, chapter 10, hydrology and flood risk, and ask the applicant to take us through existing features of the other limits that can contribute to flooding and how the assessment of the flood risk impact of the proposed development was carried out to arrive at the conclusions that were made.

01:37
Thank you, Sir Paul Blackman, for the applicant so the relevant features that were taken into account were the relevant water courses within the site. So you have got the riverskern, the billing and Beck the bishopton, Beck the little state and Brook there's some of the key water courses there. We've relied a lot upon the environment agencies flood maps for fluvial flooding, so that's flooding from rivers, and also their pluvial flood maps, which estimates extent of surface water flooding that affect the site. So we've assessed the development layouts against those flood zones, both river flooding and surface water flooding. And so that the outcome of that is summarized in our flood risk assessment, and there has been an updated version of that submitted, which is rep 204, so on the whole, in flood risk terms, it's a relatively low flood risk site, and certainly within the order limits, there are very limited areas of flood zones. Within those those limits, there are isolated areas of surface water flooding, which is quite common where you have depressions in fields, etc. So we've commented on some of those more significant features as relevant and in certainly in terms of the fluvial flood zones, all of the solar panels remain outside of those areas, except for one small area of panel, zone D 02 which is next to the little Stainton Beck. So the impacts, both impacts flood risk impacts in terms of the infrastructure itself that's proposed and impacts elsewhere have been assessed as not being significant.

03:42
Thank you, Mr. Blackman, I would also ask the applicant to describe the mitigation measures that are embedded into the proposed development and any other proposed mitigation measures that complement this.

03:59

Okay. Thanks. Paul Blackman for the applicant, so, sir, the key mitigations for the development, a key mitigation really, especially under the panel areas in terms of flooding, is the maintenance of a grass Ward through the site. So that's both underneath the panels themselves, but also around the panels and maintaining a buffer strip between the edge of the panel areas and any adjacent water courses or any other features of minimum 10 meters width, which again would be vegetated in terms of the areas outside of the panels. That's proposed to be vegetated with a grass seed mix, a legume rich grass seed mix, which would give a thicker sword to the site. So it's hoped that through the provision of that maintained the maintained grass that that in effect, will help to attenuate flows from the site and. And should improve upon existing conditions where their fields are maintained as they are of all farming at the moment, in terms of other mitigations. So there are, there will be requirements placed on the contractor to to mitigate during construction, and there is a requirement to develop a construction surface water and management plan as part of the Kemp, which is the construction and environmental management plan. So details of those, the sorts of measures that could be undertaken are outlined within our documents, but also they will be developed and taken on further by the contractor in a detailed construction surface water management plan.

05:48
Thanks, Mister black mark, would you just mention a few critical ones in terms of mitigating the impact of flooding? That because you said the contractors, the onus is on the contractor to carry out those within the CMP. So can you give us an idea any of these measures?

06:11
Yes. So, so during construction survey, obviously, they will be creating some, some mess. There's relatively little excavation, with a with a solar farm installing the panels, they're installed mainly on pile supports into the ground, so there's relatively little, relatively little excavation that's required. But some of the mitigation measures would include maintaining buffer strips, ensuring they're not working within that 10 meter buffer that I mentioned on the edge of those solar panels, and also making sure that where, where there are surface water flooding routes that may come through the panels, where those are identified on site, that you take those away from the construction area and divert those around the construction area is Quite a key mitigation as well. So those are the sorts of things that you'd be looking for, as well as pollution control measures. So for example, in terms of the type of plant that they'll be using to ensure they've got measures in place to control any spillages on site, as well, in terms of water quality type issues,

07:21
thanks, Mr. Blackman, the other question I have is, where this particular part of the other limit is close to residential properties. Are there specific actions that the applicant has proposed around there to mitigate impact on those properties that are very close to the other limit, I think, specific sites around the electricity station.

07:57
Okay, so, okay, thanks. So, yeah. So the key mitigation is the 10 meter minimum buffer. There are areas, though, where you've got a greater buffer distance from the order limits to the solar panel areas was the particular residential area that you had in mind.

08:17
You're thinking about one representation where we're told, one minute the the other limit was set, 100 meters from the from from the side before and now is now brought closer to to the residential properties. So I'm just thinking, what sort of measures have you? Have you thought of any measures to address those sort of issues

08:47
so there are no specific measures at particular sites in that in that regard, no,

09:02
my next I will now turn to environment statement, chapter five on climate change, and ask the applicant to illustrate the water causes that cross the other limits and how the climate change impact of the development on this water causes has been addressed.

09:30
I think that's what you just sorry. The next one is sorry. I take that back. I will now ask the applicant to describe what each of the flood zones within the other limits means and what proportions of the other limits lie within each zone.

09:50
Okay, so thank you, sir. So the question is, describe the classification of each

09:59
within. The other limits, and what proportions of the other limits lie within each zone?

10:04
Okay? Yeah. Thank you so sir. The in terms of river flood zones, those are classified on the Environment Agency. Flood map says flood zones one, two and three. So flood zone one is where there's very limited flood risk, almost no, no flood risk. Flood Zone Two is where the flood plain may be impacted by floods of up to one in 1000 year event, and flood zone three, up to one in 100 year event. So that says a statistical probability which is, which is estimated, so within the order limits. So we have not got the percentage of the within the order limits. But certainly there are no, no parts of the development which are in flood zones, two or three, aside from the panel Area D 02 which I mentioned earlier, which is partially within flood zones two and three of the little state and Brook similarly, with the with pluvial flood risk, the Flood Risk Assessment highlights some key areas where the the surface water flood map shows some deeper areas of flooding, which all very localized. So the flood risk assessment goes through those particular sites, and there's a table within the flood risk assessment which tabulates those, panel areas which are affected by some of those more significant areas of surface water flooding. But we haven't calculated specific proportions of flood zones within the order limits and within within the panel areas, etc. Thanks,

11:57

Mr. Blackwell. Will it be possible then to sort of break this down to say, because that will give a clear explanation of the impact, how significant the impact on say, if we're looking at 10% area, we can say, Oh yes, it's only 10% or we're looking at 90% area, then we say large proportion of this order limit falls within this part of the flood zone. So I would like an action from the applicant on that place. Yep,

12:31
so yes, that's certainly something we could quite easily do to give us those percentages. Yeah. Thanks,

12:37
Mr. Blackma. Focusing now on the critical flood zones two and three. Would the applicant now explain the pertinent approach used to evaluate the flood risk relating to those parts of the other limits falling within these flood zones? And the outcome of this assessment.

13:05
So Paul Blackman for the applicant, so yes, so we have undertaken so I've mentioned panel Area D 02 which is on the little Stainton. Breck back, sorry. So that is the only part of the infrastructure which is within flood zones two and three, aside from two to cable crossings and to existing road crossings. So in the flood risk assessment, we describe those crossings and justify why there's no impact on flood risk because the cable will be, will be in the ground for those those river crossings, for those stream crossings, and there's no works proposed to the to the existing bridges. So that remains, as is so the key area is the solar panel area, D 02, where part of the panel area does fall within flood zones two and three. So we've discussed this with the Environment Agency and agreed a method to assess the flood risk for that that particular panel area, when you look at the the the EAS flood zone mapping, the the mapping does look a little odd in that area, sort of cut off a bit, so we'd agreed with him to do some mathematical modeling of that stretch of watercourse, the little Stainton Beck, and that modeling has been undertaken over the last few few months, and discussions progress with the Environment Agency on that so that modeling confirmed more precisely a flood depth for those those panels. So so that flood depth was between 300 millimeters and 500 millimeters flood depth, and as the panels will be a minimum of 800 millimeters above ground levels, it was deemed that that was. Appropriate in terms of risk to the infrastructure itself. So essentially, you've just got the legs of the panels which are within that 300 to 500 millimeter flood depth. So what we did as part of that modeling, as well as we assessed the potential impact of those legs being within the flow, although it's quite a small area of legs compared to the overall flow within the floodplain, we assess that potential impact by increasing the roughness in the floodplain. So essentially, we're modeling the Cerner panel legs as you know, as woodland in effect, so a similar sort of effect to Woodland, just to see what impact that might have as a worst case sort of scenario, and that confirmed that any impacts were restricted to within the order limits, up to about 50 millimeters increase in flood depth within the order limits, within the solar panel field, and some minor impacts, just very locally, around the, you know, around the solar panels of about 10 millimeters within the watercourse itself, just, just locally next to the field. So again, I believe it's been agreed with the Environment Agency now that those impacts can be deemed to be not, you know, not significant in the context of what's proposed. So that was really the main piece of analysis that we've done in terms of those, those fluvial flood zones two and three.

16:31

Thanks, Mr. Blackman. So am I right in thinking that you still are waiting environment agencies comment on this assessment?

16:43
So I believe so discussions have been ongoing. So I understand we've been liaising with Lewis Pemberton from the Environment Agency, and I understand that they are, they have approved our modeling work, and also that they are happy with the with the predicted impacts due to the solar panels, but perhaps, as they are online, it might be, might be better to confirm with the Environment Agency, yes.

17:11
Thank you. Mr. Blackwell,

17:15
Hi, sir Lewis pamberton from the Environment Agency, yes. So we've reviewed the buyer skill modeling and hydrological assessment we received that at the beginning of September, that's currently not available within the examination library, as it's yet to be submitted, but we do not have any comments to raise with regards to the model construct or the calculated flows. The model construct aligns with the method which was discussed during our meeting with the applicant earlier in the year, on the 12th of June, and the subsequent follow up methodology on the 14th of June. So we are happy that the solar panel support frames would not increase flood risk off site, where they are placed in areas that flood, which is solar panel Area D 02 Thank you.

18:14
And sir, just to clarify as well, that it is intended to submit an updated flood risk assessment with that modeling technical note for deadline For as well,

18:26
okay, thank you, Mr. Blackwell,

18:30
deadline. Okay,

18:47
this question I think you might have answered. I will now ask the applicant to explain the acceptability of his adoptive fraud. I think that's the question that Environment Agency has just confirmed. So we await the updated document for the deadline for

19:15
turning out to the applicant's response to Darlington Borough Council, county council and Stockton borough Council's local impact reports, rep 2008, Darlington Borough Council and Environment Agency asked for sequential and exception test To the pass of the order limits in flood zones two and three. Can the applicant please describe this test and associate a result?

19:51
Sir Paul Blackman for the applicant? Yes. So the sequential test outlined in. And the requirements for infrastructure this type, and also they reflect the process required in the national planning policy framework, as well as a very similar approach to sequential tests. So essentially, the sequential test is a planning measure that seeks to direct development into the lowest flood risk zones. So I mentioned flood risk zones one, two and three before, with one being the lowest risk and three being the highest risk. So obviously, the intention of the sequential test is to direct as much development into flood zone one and if necessary flood zone two, and if necessary flood zone three, in a sequential way, and that also takes into account the vulnerability of the development as well. So in this case, we're talking about about, about infrastructure. So under the under the planning test, it's that's deemed to be called essential infrastructure. So you got different types of development will have different vulnerabilities. So for example, housing would be deemed to be relatively vulnerable, and so would be directed towards much lower flood risk zones, and say, commercial development, etc, so that that's in general, is the is the purpose of the sequential test, is a way of taking account of the vulnerability of the development and directing it to the most appropriate flood zone, and ideally the lowest flood zone. So what we've done for this site is, I think earlier this morning, we were talking about site selection processes to a certain extent, and the distance from the point of connection. So that's clearly a key criteria to be taken into account when selecting the site for all sorts of reasons, not just flood risk. So the latest version of the flood risk assessment, which is rep 2014, does describe that sequential test process that we've gone through, and as part of that at a at a regional scale, then we have looked at the proposed site in relation to flood risk zones. So in the latest flood risk assessment, drawing one within the main body of the report itself, there is a figure there, which shows that radius from the from the point of connection, looking at the flood flood risk mapping for that on that wide regional scale. And I think that that demonstrates that the the site is in a relatively low flood risk zone compound compared to surrounding areas within that that figure, I don't know if you've got that available to use. Sir, no. Okay, so it may, may be useful To share that If we can, I

23:49
yeah, thank you for that. Yeah. So this is the figure I'm referring to. So, so the red line shows the outline of the development site, and you can see there the various River flood zones mapped, mapped onto that. And then the yellow area kind of shows the radius that we're looking at in terms of the point of connection. So you can see that the development site is in a relatively low flood risk zone. There is, you can see there, if you look more south west from that center point of that circle, there is what looks to be a lower flood zone. But those are areas which already, they're already allocated for other other solar farm development. So, and I would say that the site is quite, it's quite a low flood risk zone, essentially, okay, so the flood risk assessment goes through that describes that process and then, so that's applications, a sequential test on a regional level. But. Then also applying the sequential test approach within the site as well to ensure that the panel areas are in the lower flood risk zones within the site. Albeit it's a relatively low flood risk zone site anyway, except for course, panel zone D 02 which I've mentioned, and for which we've done the detailed modeling for Okay, so does that? Does that describe the sequential test process in the context of the question?

25:27
Yeah, the exception test also. Okay. Thank

25:30
you. Yes. So the exception test, so once you've demonstrated the sequential test, then the exception test requires you to demonstrate that one the development is safe for its lifetime. So once you've accepted that you need to develop within that particular flood zone and that you're not making flood risk worse elsewhere. So those are the two parts of exception tests, which we've proven through the modeling, which we've done, which we'll be submitting in in, you know, in due course, and we have agreed with the Environment Agency, there's a third part of the exception test as well, which is about wider community benefits and sustainability benefits as well, which isn't so much sort of flood risk technical issue, it's more, more of a wider sort of sustainability issue.

26:21
Thanks, Mr. Blackman, I'm just wondering whether this is still with Environment Agency to comment on. Is this still with Environment Agency, or are they happy with it now?

26:34
Yes, so the SIR, the updated flow work assessment with the sequential test, again, I believe that the Environment Agency are happy with that. I believe the council is happy with that. I think the council had a comment on part A of the exception test, which we have had certain communications on. But perhaps Darlington, would you later

26:57
comment? Please, sir, yes. Thank

26:58
you. Lisa Hutchinson, Darlington Borough Council. Yes, it was just as the applicant had pointed out, there are three strands, the exception test, the technical matters had been set out quite clearly in the in the report, in front risk assessment, but it was the wider community, community benefits, which hadn't been mentioned. And I did flag that up and asked that it be reissued with that information set out that one would comment on,

27:25
thanks, Hodkinson, now move on to

27:38
I will now refer the applicant to hear comments on responses to Esq one, rev 301,

27:47
Mr. Robot. Can I just ask before we move on, if the Environment Agency would like to comment on this specific point, since the applicant have mentioned conversations with the Environment Agency, and I believe that we still have the Environment Agency with us online?

28:05

Yes. Lewis bamberton, the Environment Agency, yeah, just to touch on what we've discussed. So we received the flood risk assessment earlier in September, which has not yet been submitted, but we do agree with the conclusion of that. So where the panel areas encroach into flood zones. So for example, panel Area D 02 on the little state and Beck, which is a non main river, as we know, we asked the applicant to undertake detailed hydraulic modeling to provide a better understanding of flood depths in these areas to ensure the panels would be raised above the one in 100 year plus higher Central Climate Change level, with an allowance of an issue of an additional 300 millimeters of freeboard. In addition to this, we asked the applicant to undertake detailed hydraulic modeling so we could better understand the impacts that the solar panel support frames themselves would have on flood risk, as they could impede flood flow and result in increased water levels. So we reviewed the hydraulic modeling and the associated outputs, and we are happy that the solar panel support frames would not increase flood risk off site, where they are placed in areas that flood, which is Area D 02 we are also happy that these solar panels would be raised sufficiently to be above the one in 100 year plus higher Central Climate Change level. The higher central climate change in this case, was assessed for the 2080s epoch, which is for the period from years 2070 to 2125 and no other infrastructure other than solar panels in Area D or two is placed in flood zones. So the FRA has been updated to reflect the. Changes.

30:02
Thank you very much. Over to you. Mr. Weber, thank you.

30:05
Thank you. Mr. Pinto, can I have an action from the applicant? Because it doesn't seem we've got updated documents. These two updated documents.

30:20
So Alex Minh Hanukkah, for the applicant, absolutely, we're grateful for the comments of the parties that are engaging on this assessment work with the applicant. The applicant is aiming to submit an updated flood risk assessment as soon as all matters within it are agreed. It sounds like the only point outstanding is an explanation of the third limb of the exceptions test, which just needs to be fleshed out within the document, but we can do that and take a view on whether we circulate that or simply submit it into examination for final comments. So yes, we will submit a revised flood risk assessment at the earliest opportunity. We will also aim to have statements of common ground updated with the relevant parties to reflect that position.

31:07
Yeah, just to remind you, Mister may he neck about the community benefits element of that exception test that Darlington Borough Council mentioned, would that be part of what you've been submitting to us?

31:27
So yes, I appreciate Mr. Backman referred to wider community benefit. I think, strictly speaking, the language of the policy speaks to the sustainability of the proposals and the wider benefits of the scheme? Yes, that is something that will be addressed in the documents.

31:45
Okay, thanks, Mr. Mehn.

32:05
So I will now ask my fellow panel members if they have any questions they would like to ask for me. Thank you, Mr. Abadi, that's Mr. Pinto.

32:16
Nothing for me. Thank you.

32:18
Thank you. Mr. Awasha, it's okay, now that we have finished the exam authorities questions on this item, I will now ask if any of the local authorities present today will like to ask questions or clarify any issues on this item.

32:42
Lee, Hutchinson, Darlington Borough Council. No, we don't. Thank you.

32:46
Thank you, Mrs. Hodkinson, let's see we got comment from here. I will now ask the interested parties with us today who have elected to speak to come forward as their names are announced, starting with Councilor Phillip Watson, Bishop temporary Council Mr.

33:15
Watson hasn't appeared. He's not in a good state of health.

33:22
Sorry, I didn't get that, please. Mr. Watson is not well. Oh, sorry, okay. Thank you very much for confirming that. So any other interested parties that would like to speak? Okay,

33:39
thank you. My name is Peter wood. I'm a resident of bishopton. I'd like to speak about the flood risk and drainage issues that we suffer from, particularly around the village of bishopton, as we've heard so far. RWE the applicant, have only carried out a desktop assessment, computer modeling and a brief visit to assess the flooding issues in our immediate area. They've also said that they've relied on environmental agency maps and have estimated, I emphasize, estimated, the surface water flooding problem. They have concluded that our area is a low risk zone. They have concluded that we are there will be no significant impact. We the local residents, are fully aware of the actuality of the drainage and flood flooding issues around our village for many, many years, even before climate change became an issue, flooding has been a severe problem on the roads into and out of. Our village. The village is served by six public highways, and four of these flood on a very regular basis. I know I'm not allowed to show these, but I have photographs of the latest flooding on October the ninth. I will upload these onto the website in due course, when the when these flood, three or four of them will flood at the same time

and often become impassable to vehicles. They have flooded already several times over this summer and last week, on October the ninth, they were the first rain rain storms of the winter we have yet to face the winter. This is all happening long before we get into the depths of November and December. It is a regular sight to non locals having to abandon their cars in the floods or to have them towed out by local farmers sons earning pocket money on their tractors, the village is in a low lying ball only 150 200 140 250 feet above sea level, therefore much of the land naturally drains down onto the roads and over them into the water Meadows. The water Meadows wrap around the village on the southern and western sides. I'll attend to the flooding roads individually, mill lane leading west from bishopton, past the local school. This is regularly impassable to flooding due to flooding, and when I say regularly, I'm not exaggerating this in the slightest, the field proposed to be part of area f at the rear of the school rises up gradually from the village. I gather it about 11 meters. It therefore naturally drains down to the lowest field corner, which is where the school group playground meets mill lane. That corner of the field and the road of a catchment area for all of the floodwater. Darlington Borough Council, our local authority, have tried to cure this problem over many years without any success. The problem being that that part of the road is very low lying compared to the surrounding fields, and water cannot flow uphill. It is that very corner of the field in area f that the applicant, as part of their community benefit package, wish to construct a new car park for the school with access from Mill lane. Local residents think this is a joke, as that very part of mill lane where the access would be is regularly flooded, as would the car park itself. It would therefore be inaccessible for long periods of time, a typical crazy idea made from a distance by a consultant doing a desktop review in this last winter, the road was often impassable for up to a week at a time. And we have residents here who can confirm that if the scheme goes ahead and area f is constructed, the drainage and the flooding problems will only worsen as the degree of runoff from the glazed areas will be accelerated into the flood basin. This cannot be allowed to happen the second area, folly bank, leading south south west, from the west of bishopton towards little Stanton. This floods regularly at the junction between the West and end of the green in the village and folly bank road near to bishopton Beck. When water levels rise in the Beck up to the adjacent water meadows, the road drainage system backs up as it is unable to flow into the Beck. The field forming area e rises sharply from that junction. Water, again, naturally drains down from it onto the road for about a quarter of a mile towards down the hill towards the junction, and until the road itself rises sufficiently to be the same level of the field, large rivulets of water flow down folly bank along the road, accumulating in the drain road drains near the junction. Again, Darlington BC have tried to deal with this problem for many years without success. As the road is approximately the same level of the Beck and the water Meadows. When the bike water rises, there is no way for the drains to flow, and they back up onto the road until it eventually subsides. Once again, if area e goes ahead, the panel area will act to exacerbate the flooding problem due to accelerated runoff from the glazed areas. Again, this cannot be allowed to happen. Number three, the junction south, south east of bishopton, where Red Marshall road meets the road to Winnie Hill. Again, this area, this area floods regularly becoming impassable to vehicles for long periods, it is another very low lying area surrounded by fields that being higher naturally drain into this basin. Once again, Darlington Borough Council have tried to alleviate this problem over many years, without success. The latest episode being within the last month or so, the low line topography, when compared with Bishop and Beck, creates the water backup. It is this very junction where RWE proposed to excavate for caveling when they leave the fields south of bishopton near the motham Bailey Castle, to follow the red Marshall road towards the Norton substations. These excavations can only worsen an already bad flooding problem once again, please, this cannot be allowed to happen.

The fourth area is Winnie hill road south, south of the junction, which I've just discussed, towards the entrance to bishopton lake surf school. This regularly floods in two places with within 100 meters of each other near the junction, the surrounding fields towards the lake flood at the same time, often affecting and flooding a bungalow at the Safe School. Road, entrance, road, entrance. Again, these floods are deep enough so as to be impassable to most vehicles. The flooding at areas 123, and four I have described usually occur at the same time. This means residents who live in our area who wish to travel east towards Teesside to work or school. Cannot. They must plan their journey, first to travel west uphill to great Stanton and then south to sadverj, which were before turning east towards Teesside. This again happened last week. It cannot be allowed to be made worse by arbitrary desktop assessments with estimates by buyers gills construction, not only will the concentrated glazed areas increase rainwater runoff, the problem will be massively worsened by the random destruction of field drains during the construction process. There are no accurate or reliable maps of the routes of field drains within fields, some of which will be hundreds of years old

43:35
during the piling process. For each leg of the solar panel, the field drains will be randomly hit and damaged or broken. This will considerably add to the drainage and flooding problems I have already mentioned. Our existing flood problem is so regular that Darlington Borough Council leave the flood signs permanently on four roads outside our village. They don't bother removing them. My local my above local analysis of our draining and flooding problems show very clearly the difference between local knowledge and remote desktop reviews undertaken by distantly, remote paid consultants. Consultants will always use the tolerances in reporting systems to counter their findings in line with their desires of their pay masters. Thank you. I

44:46
thank you, Mr. Ward. I just need to clarify a couple of items before I ask the applicant to respond. You did mention a flood map? I think that was. Starting Point and ear rejected, and Darrington Borough Council rejected. Hence why the applicant went by to carry out additional assessments which EA and Darrington Borough Council have not have now agreed to. That's one point. The other point is within this session as well, to do with that road that you mentioned mailing, the applicants consultant actually mentioned that mailing is no longer being used in the New and then they forbid their document accordingly.

45:45
Thank you. I accept that mill lane is not going to be used for construction traffic. That was not my issue. My issue is that area f rises some 11 meters or more from the back hedge of the school, the low point, and whether or not they use mill lane for constructions is irrelevant. It is the natural drainage which will does and always has created flooding. The glazing in area f will only exacerbate that glare, that flooding issue, and again, due respect, they're going to come offer to come back to you with revised documents. Their revised documents will be prepared from a remote location via computer modeling of whichever way the shoes they cannot compare with our local knowledge of people who've been born, bred and lived there, and we suffer these floods regularly. And when I mean regularly, I mean seven or eight times a year, regularly. You know, forget climate change. It always happens. We're not a low risk area. We do not have what was the phrase, the estimated surface water flooding, estimated? Please.

47:15
Thank you, Mr. Ward, can I now ask the applicant to respond? You?

47:23
And Paul Blackman for the applicant, I completely hear what, what the gentleman has been saying about flood flood risk, is that what? And I can sympathize as well myself. I live in a similar area with country lanes which sunken below clay fields which regularly flood, and indeed, sometimes we haven't had access from our house as well due to flooding. So I can sympathize with those problems. So, but of course, this, this isn't a flood risk management scheme. It's a solar solar park. The gentleman did mention about increased flood risk from the solar panels. So in the flood risk assessment, we do state that vegetation will be enhanced on the site as a key mitigation measure and maintained. So at the moment, a lot of the fields are arable fields, so they will be plowed, or some of the fields will be plowed, so which can can exacerbate flood risk, depending on how the fields are plowed and how the land is managed. So, so the intention would be, is that with the maintenance of the vegetation, ensuring that's vegetated all the time, that that will help to manage the existing flood risk problems at Mill lane, specifically at panel area, F 03, there is a wider buffer there. So I mentioned earlier about a minimum 10 meter buffer. There is a wider buffer, I believe, of about 60 meters there, which runs parallel to mill lane to the east of of bishopton. So of course, that 60 meter buffer will have maintained vegetation in it with the lagoon rich mix that that I mentioned earlier, which should provide a thicker sward than there is currently. So that will help to naturally retain and infiltrate water compared to the existing case. The flood risk assessment does refer to a paper as well, which assesses the impact of solar panels on. On runoff. So with the with the solar panels, there are things called drip lines. So there's a drip line obviously at the end of the panel where the where the surface of water will run off and drip onto the ground below. But there's also a break point halfway along the panel as well. So another drip line, which drip would drip down to the ground underneath the panel. So with maintenance of a grass sword underneath the panel and a thicker grass ward in between the panels, the intention is that you're replicating natural processes there, and it should in the cases where you've got fields which are farm for arable use, it should improve on the existing conditions in that respect. And of course, the FDO three, as I mentioned, we've got a wider buffer there. So there may be scope. If we have, example, if we had details of where the existing flooding problems are, which are being experienced, that are being described, there may be scope to incorporate within those wider buffers, perhaps more, more rigorous sort of measures and maintaining vegetation to ensure that you have got a wider, wider buffer strip to help, to help attenuate and infiltrate flows on those boundaries as well, and certainly In terms of the moving forward to the detailed stage, should this scheme achieve consent, that the contractor will be required to develop a construction stage surface water management plan. So obviously a critical point will be during construction, when there will be works undertaken, potentially, there may be sort of localized areas of bearer Earth where you've got some of the smaller structures which are which are proposed, as I mentioned earlier, the panels will be driven into the ground. There should be minimal excavation, but perhaps construction stages is a key stage where you'd want to ensure you're not increasing flood risk before that vegetation is actually established. So, so the principles of what should be included in that construction service water management plan are outlined in the in the documents, and that that will be a key, key focus there. The gentleman also mentioned the potential for the piled foundations to the panels to disrupt existing land drainage. So I believe there are, there are provisions

to survey any available land drainage. It's true, it is difficult to to understand exactly where existing land drains are. There might be records of them. So that would be something that will be investigated during construction and and avoided where possible, and repaired where, where damages is caused.

52:53
I think Mr. Ward wants to respond. I'd

52:57
just like to take issue as a farmer's son on the last issue about land drains. Land drains can be very haphazardly laid across fields. On historical basis, the panels are going to be laying in straight lines, so I don't get where the tolerance would be to move the panel legs to miss drains. If there's going to be straight avenues of panels, they're just going to be placed to maximize the glass on a given acre, and the drainage, the drain land range under the soil, are just irrelevant. They will be just piled on top of they cannot move them. Otherwise you would get haphazard layout of the glass. It's that is not a statement I can accept. Thank you.

53:46
Thanks, Mr. Watt, can I just ask if the applicant has additional comments on that? So,

53:58
yeah, I understand what Brother gentleman is saying. There is, it is tricky to so there may well be some damage to the local land drains. And of course, it depends on the spacing of those land drains as they're as they're found. I suppose the only other aspect I would highlight is that, you know, the purpose of land drainage is to make the fields more manageable and less less wet, to enable them to be farmed. So the land drainage, I guess, really, is designed to take, to take the surface water, which absorbs into ground away from the site more efficiently to lower lying areas. So actually, you know, suppose you could question, if we do disrupt that that land drainage is that, is that necessarily going to make make flooding worse in the lower lying areas where you've got the roads and etc, which are described as being at flood risk?

54:58
Yes. And. Thank you very much.

55:02
Can I just ask a couple of clarification questions following your answer so you have described as part of your answer a series of mitigating measures, embedded mitigating measures that you have considered as part of the overall flood risk assessment, taking those embedded mitigating measures into consideration. Have you modeled what the impact is going to be after those measures have been taken into account of and will it exacerbate the situation at the moment in terms of risk of flooding, particularly of your flooding.

55:47
Sir Paul Blackman, for the applicant, no, that hasn't been modeled using any mathematical modeling at all, but the key principle is that maintain the vegetation under the panels and around the panel as a

form of mitigation, but that hasn't been modeled explicitly, although the paper that is referred to in the flood risk assessment that does describe modeling that was undertaken to assess the impact of solar panels on hydrological response.

56:20
So in terms of the model that was carried out, how were the mitigating measures, the embedded mitigating measures, taken into consideration as part of that modeling?

56:33
So, so the modeling was untaken as part of the papers. This is a paper. This is modeling was untaken some 1010, years ago and referred to in the flood risk assessment. So that was essentially looking at modeled rainfall, different types of land, land cover underneath the solar panels, and the potential sort of hydrological response to those scenarios. Essentially so that that that study found that if you're maintaining vegetation under and around the panels, then there won't be any significant increase in in runoff rates. There

57:07
won't be any significant increase in runoff rates. Yes, yes. Okay, that's

57:13
correct, yeah. Okay. Thank you.

57:16
Thank you. Mr. Thank

57:17
you. Mr. Weber, thank you.

57:18
Thank you. Mr. Pinto, um, into, I know, you know, from you did mention this vegetation. I'm just thinking that you know, vegetation can vary in terms of quality, the type of vegetation, and so on. If Mr. Ward has pointed to a specific area, could it be that the type of vegetation that we use for that area to address the problem will be slightly different or more concentrated than others? Is that something you the applicant, can look into? I Sir Paul

58:04
Blackman, for the applicants, yes. So if we have details of those flood risk areas, then certainly where we've got the buffers available, we could look at what additional measures could be put into place to try and help with the problem. But as I said earlier, no, it is. The gentleman has described the difficulties in managing flood risk in the area for and Darlington have looked into it. So this isn't a flood risk scheme, but certainly where, where we've got, where we can match the buffers available around the solar panels with the existing flood problems. We can look at what, measures, what additional vegetation measures can be applied there to provide some additional reassurance?

58:45
Yeah, I think Thanks, Mr. Blackman. I think that would be very useful, because it's where an area has been identified. Even if you got certain mitigation measures across the board, there might be the intensity of that mitigation measure for that particular area in terms of vegetation, the type, the quality of the vegetation for that particular area. So if you can put it as an action, that you will look at those specific areas that had been identified, and then if the intensity needs to change, then you do that. If the quality of the vegetation needs to change as well, you apply that accordingly. Can we hold you to that one,

59:32
please? So yes, you can. What sort of time scales are you? You thinking there? So in terms of the the deadline process. See deadline

59:43
for the review when you update the documents, relevant documents, if you can just identify that area, area that mister Ward is talking about, so the quality of the vegetation at the time. Up of the vegetation, and if there's any additional measures that can at least reinforce, mitigate against flooding, then that will be extremely useful. Okay,

1:00:12
thanks, yeah, and if Mr. Wall could provide details of those locations and descriptions he's provided, I'm not sure whether that's been part of the submission so far. Thank

1:00:21
you. Can you please comment, Mr. Ward,

1:00:23
thank you. Perhaps I'm being rather dim here, but have I just been asked by the flood and drainage expert of the applicant to provide them with details of the flood zone problems that we have in our area? Hasn't that already being supposedly addressed.

1:00:44
Sorry, mister Ward, that is not the issue. I put it to the applicants to investigate additional measures. The applicant had identified measures that will mitigate the the flood problem across the board, including area f, owing to your presentation today, the examining authority as as the applicant to look into providing extra measures on Top of the embedded measures, additional measures for that those specific areas where, including the one you've pointed to, Mr. Ward. Thank you. Yes.

1:01:36
Colin Taylor, great state and parish meeting the applicant, when addressing the issues of field drains, talked about, if they were damaged, then the water would stay within the fields. But on fields where there's runoff into into fields owned by people who don't have panels on them, the runoff will not go into the water courses where it's traditionally gone into it will drain into the lower lying fields. And there are concerns from some of the farming members of our community that the their fields will become flooded

as a result of damage to the field drains in those that are higher up. The second point I want to make is that one of the issues you shouldn't assume all the culverts on the road surfaces maintained by Darlington Borough Council will be effective. We get problems even in great stain on the hill, on all four roads with surface water. And when I tried to get the drains in the village emptied, it took six months to get the council to come out and empty the drains, and I was informed that the schedule for emptying drains and maintenance them is one every once, every 18 months. So don't assume that they're effective.

1:02:57
Tells Mr. Tayloe, would the applicant responded, sorry,

1:03:05
Alex, the applicant, I think the position on field drains has already been addressed, sir, there are measures within the management plans which the applicant's case will address the potential interference with field drains and remedy anything that happens. So the point that I just wanted to summarize, or perhaps rehearse, the applicant's position on runoff from fields into existing affected flood areas, I think so you've actually just summarized it fairly well in one of your recent comments, which is the applicant's position, is that with the embedded mitigation, which is part of the scheme, it doesn't consider that it's its scheme is exacerbating those existing flood situations. If anything, I understand, runoff with all of the mitigation in place is likely to decrease. So it's making the position better, as you've identified. Notwithstanding that position, the applicant is happy to look at additional measures, enhancement measures, that could be carried out as part of its planting, principally to see if there is anything more that can be done. But I just want to be clear, sir, that the applicant is not accepting that its scheme is exacerbating those problems, but it is willing to try and reduce surface water runoff from those identified areas, if it's possible to do that within the planting regime. Thanks,

1:04:38
Mr. Mahini, that's very useful. Yes,

1:04:43
thank you. Sean Anderson, I appreciate that you've asked the applicant to look at ways of coping with potential additional runoff. There's a couple of things that were said about the drainage and the fields that I'd like to point out. And the drainage that's installed currently behaves in a certain way. If you damage those drains as they stand now, you can affect a repair. When the panels are over the top of the field, those drains will behave differently, because as the rain currently, as rainfall hits the field, it percolates across the whole area of the field and seeps into the drainage. When you introduce the glass, you'll get runoff in various areas, and that runoff will be concentrated in an area of percolation that won't be able to cope so that so the drainage will behave very, very differently. Also, the applicant mentioned that the fields that the vegetation after the after the panels have got any and they referenced it as an arable field, would point out that it will no longer be an arable field. An arable field gets worked every year. It gets turned over. It gets aerated, allowing the field, allowing the soil, to be disturbed, where the water percolates a lot more a lot more quickly. Once the rain repeat repetitively, sits on or drips onto this land for a period of 40 years, it consolidates every time. It won't get turned over and it won't behave in its current state. And I think that would need to be taken into consideration. Thank you.

1:06:27
As the applicant got any comment on on that statement, because the way I understood from the document is the area underneath the panels will be available for gracing, if I get that when you plan there, there be gracing during once the development is up and running, that's why I read from your Can you clarify? Please,

1:06:53
sir, Alex menick, from the applicant, when Mr. Blackman referred to arable land previously, I think he was comparing the existing position being arable land to the future position being a solar farm with the planting underneath that he has described. I think noting what Mr. Anderson has said, there is a difference of opinion between the applicant and Mr. Anderson as to what the effect of the project would be on drainage. I think the applicant's position has been explained, and there's, there's nothing further that I think we would propose to say at this stage. Okay,

1:07:30
thanks, Mr. McKinney, I'll now call on Mel Turner was elected to speak. I Melanie

1:07:44
Turner, great. Stanton, I just want to point out, obviously el stop Lane did flood last week, as well as long as well as brafferton. So it's not just localized to the lower the lower areas. Also, there's been several comments made that it's going to be to the contractors to sort out the water that's going to be sat on the surface. It kind of feels like the applicant's passing the book on that one.

1:08:15
Can I ask the applicant to comment on that? Please?

1:08:20
I appreciate the comment, the applicant isn't passing the buck. It's, it's, it's recognizing the way in which the scheme will be delivered, which is through the appointment of a contractor. There are management plans which will be in place under the terms of the development consent order, which is the mechanism by which the local planning authorities can hold the applicant and its contractor to account in the planning regime. Should they not do so?

1:08:52
Thanks, Mr. Mahinik, anyone else who in the audience want to speak? You?

1:09:05
Yeah, Robert Bos resident in Bishop Jordan, so yeah, just the applicant mentioned they're going to be put in the fields that where the panels are going to go, it's going to be in a better position that it currently is in terms of vegetation. So currently, the fields were adjacent to where it's flooding. Now it is technically class desirable land, but it's been in grassland for the past four years. It's a very rigorous grass lay surrounding these flood plains around the flooded areas. So in my opinion, I don't think you're going to be able to get a higher level of vegetation than what's currently there. So the farmers currently

have to adopt a legal buffer strip all the way around the field anyway. So there's existing buffer strips there. And. So when the panels are placed on the fields, you're going to be reducing some of the thoughts and fossil synthetic area for the vegetation to establish. So in my opinion, the legume grasses that the applicant suggested they're going to establish, they're not going to be as well established as what's currently there, because the solar panels are going to be taking some of that sunlight away. In terms of a root and structure in the different plant families, grasses provide the largest route in mass, in terms of water holding capacity. I do apologize. I've got a very sort of thought. So when the Africans talk about putting a legume, a legume mix, into the underneath the solar panel, so the legumes are probably one of the weakest looting plants in the the entire plant kingdom. So I would argue it's probably the weakest form of flood mitigation by using a legume, a legume mix. I'd like to see where the the applicant work is in terms of the vegetation choices underneath these panels. Also, how is this going to be managed? How's the vegetation going to be managed? Are we going to be there's a lot of Japanese knotweed, Himalayan Balsam in the local area. How are these injurious weeds going to be managed? Obviously, underneath the panels, are people going to be expected to go underneath? How you're going to see an increased use of of localized pesticides being used to try and control these injurious weeds, which are currently being controlled by the farming rotation, good agricultural batteries, which is using different arable crops within the rotation and not relying on pesticides, which is going to be I can only see that is the only option for The attic in to manage this in this area. Yeah, that's all the other points I've got for that. Really, I just want to see what work they've got, what work has been done in the background there, for the vegetation choices underneath the solar panels.

1:12:17
Thank you. Can I ask the applicant to comment on

1:12:20
that certainly so yes, I think that thank you to the speaker for his comments. I think the fundamental point that the applicant would like to relay to all interested parties is that there are a comprehensive series of management plans which would be imposed to control the way in which this development comes forward. They include measures like planting proposals around under the panels. They include planting of buffer areas, which is, is what the first area that the last speaker we heard from was, was referring to where there's an existing swathe of grassland that would be looked at and incorporated into those planting proposals. He also mentioned invasive species, and again, that is something that is provided for through the construction environmental management plan as a provision in there to deal with non native plant species, invasive ones. These measures would be their legitimate concerns. They would be managed through the portfolio, the suite of management plans, which would be imposed on the consent, should it come forward and be regulated by the local planning authority?

1:13:48
Yes, can I ask a follow up question on that specific point? Mr. Minighan, you have mentioned several documents where that management of the flood risk will be, will be set out, and the applicant's responsibilities towards that. Could you considering not not the construction, but actually considering the operational stage of development? Could you actually point out where those measures would be set out in which documents should we actually be looking at?

1:14:30
So of course, during the operational stage of the development the we're talking principally about planting measures in relation to maintenance of vegetation. The controls for that are found in what is currently the outline landscape and ecological management plan. Forgive me, I don't have the reference.

1:14:48
No, no, no, it's fine. I have the reference. That's the plan that I was looking at in this person overall. So I was expecting to say that that will be a PP, 118, I believe, for. Follow up question that I have is that actually looking at this document now, although I can see measures that clearly relate to landscape management, I can't easily see an obligation or a requirement for the applicant to react to flooding issues. So I think that my concern and my situation would be, if the landscape management as proposed now is found to not actually meet the standards or function as well as it is expected, will the applicant be able to reconsider the mix that they are having, that they are proposing as part of landscape management, and how that will be triggered for the applicant.

1:15:53
So yes, it's a good question. I'm afraid I can't answer it immediately, but we'll take the point away and have a look at

1:15:59
what have an action then, for the applicant to clarify how that will be managed for the operational stage in relation to flooding, and how the landscape, the outline, landscape and ecology management Plan, will react to flooding risk issues. Thank you.

1:16:32
Is there any Mr. Ward?

1:16:35
Thank you. I would just like if I could expand on Mr. Rob Bose comments about grassland surrounding some of the floods at the moment. Rob is an agronomist. I'm a farmer's son, so we know a little bit about this. When you have your site walk on Thursday, you will walk up Milan, I would urge you to cast your eyes left and right, and you will see that the field site F is now a lush grass field. If you look to the sorry to the to the left, it's permanent grass, so it's surrounded by grass. Vegetation is the most lush Swan you will get because once you cover, say, 50% of it in glass, 50% of it by simple biology is not going to get sufficient sunlight to photosynthesize adequately. So what you see now is the best of the best on October the ninth, and regularly before then, we were flooded. So again, how much grass are you going to sow to improve what we already have? Thank you.

1:17:54
Thanks, Mr. Ward. I think the applicant has noted to look at extra measures that can be carried out to allay your fears on that. So, I mean that could even involve an culture is to actually look into other planting. It will include certain specialists anyway. So hopefully we can rely on the applicants to look

into those specific areas to see any extra measures. It gets other specialists engaged to look at how you're going to address that, sir,

1:18:38
Mr. Manhone, actually, applicant, yes, we've, we've agreed to take the planting measures in that area away and have a look at them, referring particularly to the area immediately to the north of mill lane that Mr. Ward is referring to, Mr. Blackwood. And his commentary on that section noticed that, noted that there is approximately 60 meter standoff between mill lane and the area of that field in pan area that would be covered in solar panels. Okay?

1:19:16
Thank you, Mr. Mahinik, I have somebody pressing his honor. I

1:19:20
thank you. I'm Paul Brown. I'm a resident of bishopton for years and years now, Darlington Borough Council have been trying to solve the problem of the flooding in bishopton. Unfortunately, they they haven't been successful in that despite their best efforts. The difference between what Darlington Borough Council have done and what the applicant is proposing is the applicant is proposing to pile 1000s of posts in the ag. Cultural land, which has its own natural drainage channels and water flows. And the consequence of doing that is completely and utterly unknown. How planting some thick vegetation when you don't know how far down these water channels are or what damage may or may not have been caused. How are they going to alleviate this problem, when Darlington Borough Council has been trying for years, numerous different things and numerous different methods, and to this day, we still suffer the same problems.

1:20:42
Mr. Brown, just to remind you, we need to consider the impact of this development, how significant the impact is on the existing situation. So that's what we're looking at. So the applicant has some certain measures, embedded measures, and then additional mitigation measures, and where it's insufficient, we look at that to see what other measures that the applicant can can use to address local concerns as well. So I just thought, I'll point that out. Now I will ask the applicant to respond to Mr. Brown's comments,

1:21:32
sir, thank you. I think the applicant's response to Mr. Brown's comments are echoing ones that we've made before, which is that we understand and we hear the level of local concern with potential flooding issues, existing flooding issues in the area. The applicant's position is that its project is not making those flooding issues worse, if anything, it thinks it's exacerbating. Sorry, it's reducing slightly the potential runoff from the fields that will have the solar panels in them. That's the applicant's position on the matter. We've explored some additional enhancements, or additional measures that the applicant will look to incorporate if they're able to. And we'll take that point away and come back to the examination when we can.

1:22:25

Thanks. Mr. Mayhem, any other person who would like to talk in the audience or virtually no, I think the next item on the agenda is to reveal issues and actions arising from today's hearings, starting from I've been informed the applicant have been taking notes of the actions we have requested today, as well as the case team. Can I ask if the applicant feels that it might be beneficial to go through those actions now? If not, we will be writing those up and publishing them as soon as it's practicable.

1:23:21
So we we have been keeping a note of all of the actions that have arisen. I think the vast majority are with the applicant. I would suggest, sir, that the most practicable way of dealing with them would be for us to submit a written list of actions to the examining authority. You'll have your own notes. If you disagree with any of them, obviously, you'll be able to amend them, but we're reasonably confident we've got a good list that we can submit in writing. I'm not sure there's much to be gained by me scrabbling around through my notes, listing them out for you over the course of the next five to 10 minutes.

1:23:56
Okay, thanks, Mr. Mihimi, that clears that one. So we'll be expecting your notes, and then we can comment accordingly. I have had no other matters notified to me under this the next agenda AOB, item that people wish to raise at this meeting. Is there any other AOB? Now, okay. Thank you very much. The time is now 1711 this hearing is now closed. Thank you. Applause.