

AUDIO_ISH6_SESSION1_29092023

Fri, Sep 29, 2023 2:14PM • 1:45:49

00:05

Good morning. Before I begin Can I confirm that I can be seen and heard clearly by obviously by everyone in the room hopefully. And everyone online?

00:16

Yes, we can hear the

00:19

can I confirm with Sean Evans at the lines streaming, this event has commenced, thank you.

00:26

There's no fire tests planned for today should an alarm sound it is an emergency event and we will need to vacate the building. Emergency exits are located in each corner of the room and you can also exit through the main doors that you entered through the fire assembly point is in the main carpark. And if anyone would need assistance in the event of needing to evacuate the building, can you please let the Keith case team has sat to the side of the room? No.

00:50

So the time is now 9:30am. And this issue specific hearing which is the last set of the set of hearings this week, in relation to the London Luton Airport Expansion Project is now open. At today's issue specific hearing we will be considering matters in relation to biodiversity, water, land use landscape and visual design and heritage and any other matters. My name is Joe Dowling. I am a planning inspector and a chartered town planner. And I've been appointed by the Secretary of State to be the lead member of the panel. Today I will be going through the management of the event and introductions. I'd now just like to ask my colleagues to introduce themselves.

01:31

Good morning. My name is Andrew Robinson. I'm a planning inspector and a charter town planner.

01:37

Good morning. My name is Beth Davis. I'm a planning inspector and a charter geologists.

01:43

Good morning. My name is Dr. Richard Hunt. I'm a planning inspector and chartered environmentalist.

01:48

Together with Sara Holmes, we form the examining authority. I can confirm that all members of the examining authority have made a formal declaration of interests and that there are no known conflicts of interest with regard to as examining this application.

02:02

There are two more colleagues that have been planning Inspectorate with us today. For those of you who are present in the room, you may have already spoken to, to or heard from Sean Evans, who is the case manager of this project. For those of you who have joined us virtually then you're spoken to our case officer Emil Burnie. Together they are the case team for this project. If you have any questions regarding the application process in general, I would ask that you please email these the case team who will be happy to help.

02:29

Before we consider the items on the agenda today, we just need to deal with a few housekeeping matters. I'll try to get through these as quickly as possible, if only for the sake that most of us heard them five times this week. So can everyone attending please make sure that your phone is switched off or turned to silent? toilet facilities, including disabled facilities can be found in the lobby. As far as I'm aware, no requests to be made for any special measures or arrangements to enable participation in this meeting? If anyone needs any special measures or arrangements, please can you speak to the case team in the first instance.

03:02

For the purposes of identification, and for the benefit of those who may listen to the digital recording later, I would ask that at every point at which you speak you please keep your name. And if you're representing an organization or individual who it is to represent those attending virtually Can I repeat the request spending arrangements conference that in order to minimize background noise, you also make sure that all audible notifications are turned off, and you stay muted with your camera turned off unless you're speaking as this is a blended event it has been structured in such a way that questions or points that you may wish to raise can be done so at the relevant point in the proceedings. When we get to those points. I would ask that if you want to speak you switch your camera on and either use the raise of hand function in MS teams, or ask to speak at the appropriate time. Please be aware that there may sometimes be a delay before we can acknowledge this, but your patience while waiting to be heard is appreciated. Can I also remind people that the chat function on teams will not work. So do not try to use this to ask any questions or post any comments. Do we have any members of the press in attendance?

04:10

We will adjourn for a short break is convenient point in the agenda ideally no more than every 90 minutes or so. If for medical or other reasons anyone requires a break at specific time. Could you please let the case team know and we can if possible adjust the program to meet your needs. Are there any comments or questions regarding the general management of today's event in the room?

04:31

Online.

04:35

There is a digital recording being made of this hearing and this will be made available on the project page of the national infrastructure website. If you take part in the hearing, it is important that you understand that your comments will be recorded and that the digital recording will be published and retained usually prepared to five years from Secretary of State's decision. As such the planning inspectorate is subject to the General Data Protection Regulation. It is very unlikely that examining authority will ask you to

05:00

But sensitive personal information such as email addresses and economic, financial, cultural or health related matters in the public domain. Indeed, we would actively encourage you not to do that. However, if for some reason you feel that it's necessary for you to refer to sensitive personal information, we would encourage you to speak to our case team in the first instance, we will then explore with you whether the information can be provided in a written format, which can then be appropriately redacted before being published.

05:28

Please bear in mind that the only official record of the proceedings is the digital recording that will be placed on the product page of the website, tweets, blogs, and similar communications arising out of this meeting will not be accepted as evidence in the examination of this application. So I'm going to move on to the purpose of holding today's meeting. Today's issue specifically hearing is being held at the request of examining authority will wish to explore a number of matters orally in relation to the topics that are outlined earlier. I would like to take this opportunity to remind you that the examination is a predominantly written process. In addition to today's hearing, you will have seen from examination timetable, that there are opportunities for the examining authorities to ask written questions and to hold further hearings if needed. The purpose of this examination is for the examining authority to examine the information submitted both by the applicant and also by interested parties, other persons and affected persons. As a result, I'd like to reassure you that we are familiar with the documents that you've sent in. So when answering a question you do not need to repeat at length, something that has already been submitted. If you want to refer to information already submitted, we will be very grateful if you could please use x appropriate examination and IP reference. Furthermore, could I ask that the first time that you use an abbreviation or an acronym, that you give the full title as there will be people here today or listening to the digital recording, who may not be as familiar with the application or the documents as you are?

06:53

Whilst we accept that the majority of the discussions will be undertaken by those parties that have requested to speak this is a public examination. And therefore, if there is a point that you want to make, please feel free to raise your hand and switch on your camera at the relevant time that you wish to contribute. Today's hearing will be a structured discussion of which Miss Davies and Mr. Robinson will lead based on the agenda that has already been published. The purpose of this discussion is for us to ask questions and seek clarification on the matters listed in the agenda. With the aim of ensuring that we have all the information that we need to make our report to the Secretary of State. The questions

that we're going to ask today will be focused on those areas where we need further information or where we think that the issues would benefit from examination orally. I would therefore like to take this opportunity to reassure you that whilst we may not be asking a specific question, or covering a particular topic that you were expecting, it's not necessarily the case that we believe the matter has been fully addressed. It merely indicates that we consider that we have the information that we need at this point in time on that topic, or that we are proposing to examination later here and or through further written questions. Finally, I'd like to remind everyone this is not an inquiry and therefore unless the examining authority has specifically requested or agreed to it, there will be no formal presentation of cases or cross examination. As such, any questions that you have for other parties need to be asked you as the examining authority.

08:19

Rule 14 Two of the examination procedures rules requires that at the start of the hearing, the examining authority shall identify matters to be considered in the hearing. The agenda for this hearing was placed on the inspectorate inspectorates website on the 19th of September 2023. And for expediency, I do not intend to repeat the items it covers now. Please note that today's agenda is for guidance only. We may add other issues consideration as we progress, and we will seek to allocate sufficient time to each issue to allow for proper consideration. Should the consideration of the issues take longer than anticipated, it may be necessary to prioritize matters and refer others to further written questions. As I've mentioned, because this is a blended event, we will adjourn short breaks at convenient points. Those attending virtually you can stay logged into teams throughout the break, but please ensure you switch off your cameras and mute your microphones. If you do lose a connection, use the same link that you use to log on this morning, and the case team will endeavor to reconnect to you as soon as possible. For those people watching the live stream, we will have to stop the live stream in order to give us clear recording files. As a result at the point we recommence the meeting and restart the live stream, you will need to refresh your browser page to be restarted screen. Finally, I just like to emphasize it's really important that we get the right answers to the questions that my colleagues are going to ask. At this stage. It is worth reiterating that this is a predominant predominantly written process. Therefore, if you can't answer the questions that are being asked or do require time to get the information requested, and rather than giving a restricted or potentially incorrect answer, please indicate that you need to respond in writing and then we can defer the response either to an action point to

10:00

submitted at deadline three, which is the fifth of October 2023, alteration crisis questions or even too late to hearing. So before we move on to deal with items detailed in the agenda, are there any questions at this stage about the procedural side of today's hearing in the room?

10:18

Online? Now,

10:21

the case team had provided me with a list of those interested in other parties who have expressed a wish to be heard today. Those persons are people representing a number of organizations. Can I just check out so I'm going to now ask those of you who are participating in today's hearing to introduce

yourselves to the examining authority and the people who are watching the livestream of this event. When I say your name or organization, can you please introduce yourself including how you'd like to be referred to for example, Dr. Mrs. Mas, or if you're representing someone who it is you represent, if you are attending virtually then when I call your name, can you please switch on your camera and microphone? So I'm going to start off by asking the applicant, Miss Clinton to introduce herself and the rest of her team who are attending this morning. And good morning, madam, as you say, I'm Miss Rebecca Clutton. I'm I've counsel. I'm accompanied by my instructing solicitor. Mr. Tom Henderson is a partner at BDB Pitman's legal adviser to the applicant. I'll introduce just the witnesses for the first agenda item this morning. To my immediate left I've got Dr. Paul Clack. Dr. Clack is an associate director with Arup and he's our biodiversity lead. And then to Dr. Clack's left is Dr. James Riley. Dr. Riley is a technical director with a calm for ecology and he we're dealing with the air quality, air quality and ecology this morning.

11:47

Thank you.

11:48

I'm now going to turn to Luke Borough Council and ask them to introduce themselves.

11:55

Good morning, madam Michael Fry of Council, Luton Borough Council. To my left sits Mr. David Gertler is a planner at Luton Borough Council. I have other officers available to me who will introduce to the examination if required. Madam if I could also like up for today, Luton Borough Council is acting on its own. Great.

12:17

Thank you. Just to explain. For people who've maybe only tuned in for today, there are price points at Luton Borough Council has joined with the joint host authorities and at various other points. They've acted on their own behalf. If I could then ask the joint host authorities to introduce themselves. Thank you. Good morning. I'm Fiona Pines representing the Hertfordshire host authority, so that is Hertfordshire county council, North Arts Council and Quorum Borough Council. And we will nominate excuse me making representations today on landscaping visual and on heritage. And I have Mr. David Stock online for landscape conditional subject matter expert. Thank you. Thank you. And then I have Do we have anyone from Central Bedfordshire here.

13:02

Morning Caroline Mico Teaching, principal Planning Officer of central Bedfordshire. I'm joined today by my colleague, Carol Newell, who's our landscape officer. And online we have Jonathan Prosser, who's our conservation officer. Thank you very much.

13:15

Buckinghamshire Councillor haven't turned up today, so they're not not going to continue. So I'm now just

13:21

Mr. Smith, sorry, I do apologize. No problem at all. Mark Westmoreland Smith for Buckinghamshire Council. And to make it clear, I'm online today because we don't anticipate participating actively our interest was initially landscape. And we've had some fruitful discussions with the applicant that's led to a draft socg in relation to landscape with which we are content. And so for that reason, I don't anticipate will have to interrupt you further. Thank you, Mr. Westman Smith, and if you do need to interrupt me, please do remind me that you're there.

14:02

And now we're just going to move on to other interested parties. In the room. I note we have a representative from the Children's Conservation Board.

14:12

Yes, good morning, madam. I'm Dr. Michael Stubbs stcu. BBs. I'm a planning advisor on behalf of the board and children's Conservation Board. Predominantly, we have points to raise on your item five landscaping visual, if we can assist in any others. We're happy to, to try to do so. But that's our predominant focus today. This morning. Thank you. Thank you. Is there just yourself here because there was an indication that maybe one of your colleagues, yes, Dr. Matt Thompson, who's head of strategy, unfortunately has been called away so he cannot join us today. But I spoke with him yesterday and he said that's absolutely false probably wants to call his name and him not to turn to me. Thank you. So we then have a couple of representatives from me environmental and see if they'd like to put their cat there online if they'd like to put their cameras on and introduce themselves.

14:56

Good morning. My name is Dr. Keith Spence. I'm here on behalf of the

15:00

about an agency. We're primarily interested in the hydrogeological aspects of proposal. Thank you. And I'm Stephanie upgrader environmental agency

15:11

with the same issue on hydrological issues, problems. Thank you. Do I have any representatives from affinity water online?

15:24

You do, madam. Good morning, Keith Foley from

15:28

Project Director. Our interests also is in the hydrological aspects but also in the potable water water use.

15:36

Thank you.

15:37

And Thames Water. Do I have some representatives from Thames Water here today?

15:43

Yes. So there's three of us. There's myself Robert Ashley. I'm a chartered civil engineer and a design manager for major projects. We are interested in drainage, predominantly fall water, and surface water runoff. I'll allow my two colleagues Zack and Matt to introduce themselves as well, please. Thank you.

16:07

Hello, I'm Zack saloom. I am the asset planner for the region that covers Luton Airport. And I'll be here to support Rob

16:17

and Keith and Mark Dickinson on the development planning manager at Thames Water. And again, I'm here to provide support to Robert.

16:26

Thank you very much. Can I just check now that I've heard from everyone who wishes to participate in today's meeting?

16:33

No one in the room. No one else online. Okay, then.

16:39

Before I hand over to Mr. Davies, and Mr. Robinson, to lead us through the rest of the items on the agenda. I've been advised by the case team that this morning the applicant has advised they have a number of questions regarding the action points that have been published in relation to issue specific hearings 123, and the compulsory acquisition hearing. And as you'll see, we have a fairly full agenda today. And so what I just want to ascertain at this point in time is the scope of these queries. If it's few items, we would possibly be able to go through them either briefly now, or you can give these to the case team and we can review them in the break and come back with a response or if it's a significant number, and I'm afraid I'm going to have to ask you to submit them in writing. And we will then be able to review them against the notes that we've taken of meetings and advise accordingly. Rebecca, Clampett, the applicant, madam, I was, we were just going through the exercise of checking the deadlines that are set out and we thought we've noted one or two discrepancies. We haven't actually completed that exercise yet. I was going to raise it this afternoon, but possibly your suggestion of maybe as once we've completed the exercise of providing those to the case officer. And we can see if we can just resolve it outside of the examination that might be sensible, absolutely happy for that to take all and just to advise you. We're hoping to get the action points from yesterday up today. If we can Fantastic. Well, we could try and incorporate those two. Thank you.

17:56

I'm now going to hand over to my colleague, Miss Davies to deal with the first item on the agenda.

18:01

Thank you, Miss Dowling. And we'll start with biodiversity.

18:05

So first of all, I'd like to explore whether the proposals for the mitigation of Whitmore Valley County wildlife site should actually be regarded as compensation.

18:16

So section 8.8 of chapter eight, which is as zero to seven, which deals with mitigation measures, lists, habitat creation as mitigation. And similarly mitigation and section 8.9 also refers to establishment of replacement and habitat as compensation. So applicant, would you like to comment on there?

18:59

Good morning, madam Dr. Paul Clark on behalf of the applicant.

19:03

Regarding that point, I think we'll come back to you specifically with a written response as well. But the some of the mitigation includes compensation and genuine enhancement measures as well for the for the county wildlife site. It's a slightly complicated picture, given the fact that the wildlife site

19:19

is compensated for by and mitigated by habitats within the open space and the areas to the east and southeast as well. But well, I think I'll give you a more coherent written response. If that's acceptable.

19:32

That's fine. A written response would be useful, it is important to separate out the two I know it might be the same endpoint through the sausage machine. But actually, we need to be clear in that report, because compensation is barely mentioned. And I'm not convinced that what's being done is strictly mitigation. It's certainly not embedded mitigation because it's not mitigating against the losses in the park. It's compensating for the losses, and why

20:00

That's potentially important. Apart from just getting it correct. The airport NPS states that for compensation, the application should be on a two to one ratio as a minimum. So we need to have a look at that NPS and make sure that if it is compensation that we're meeting that test. And if we're not, why not?

20:22

Rebecca clump of the applicant, madam, we can address that point in that out as well.

20:31

So related to this section, eight point 11 on residual effects days that there would be a temporary minor adverse residual effect until the new habitat creation areas are established, higher up in the report at section eight, point 9.3. It's described as a significant adverse effect,

20:49

though I'm putting on spot a bit there, because it's just two phrases in the report. But there does appear to be a disconnect there. So did you want to expand on that? Which one do you consider to be correct?

21:00

Dr. Paul black on behalf of the applicant, I think the former again, more responded, just in writing just to confirm confirm that I think we're going

21:09

to focus on there is the habitats we will take a time to mature. And we were predicted predicting a more significant effect initially, until such time as that maturation has happened has happened. And we've reached the no significant effect or the the lower of the two predicted predictions, as you've outlined in your statement. So it's probably a matter of timing. And that's the difference between those two sections, I believe. So

21:36

given that Wigmore county wide like site is being almost entirely lost,

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is it appropriate to still describe that as negligible effect? At the end? It probably comes back to my question about compensation.

21:53

Is it possible it should be described as a significant adverse effect, but that that's being compensated against with the proposals for the replacement open space, the new habitat creation protocol deck on behalf of the applicant? And I think it's important to mention that the county wildlife site, as you will have read is established on a former landfill is a habitat that's that's come come about

22:18

almost naturally,

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quite a lot of colonization. So when we come to the

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the fullness of the the management plan, and the fact that the the area will be specifically managed for biodiversity? I think the answer is it will be fully compensated for or mitigated for, depending on how we're phrasing the point. But will will again, we'll respond to as part of that. But first, I think it's in purely county wildlife sight terms, it will be last winter. That's correct. And that's noted in the application. And there's no guarantee that what's replacing it is going to meet the standard for a county wildlife site. Although that might well be your aspiration, I appreciate that. But there's no guarantee of that, in which case,

23:09

if you're describing the effects on that county wildlife site, then I don't see that they can be anything other than significantly adverse.

23:19

Sorry, not to pull back on behalf of the applicant. I think we will draw the attention to the fact that the the outline landscape and Biodiversity Management Plan that's examination referenced as a zero to nine indicates the fiscal 50 year management plan. And whilst you're correct, in terms of the future is unknown, there's are enough controls and

23:41

measures in there already, that will give us some confidence that the habitat will be effectively managed with biodiversity and and reached a standard at some point that will be at least as good as county wildlife standard or better, obviously, 50 years is a long period. And there there are some key actions and monitoring to happen as part of the plan. That requirement 10 of the draft DCO means that that plan will be further developed design stage and in discussion with the local authorities to to make sure that the the prescriptions are as good as they can be. And the management is as strong as it can be.

24:17

A landscape management plan is that, can you can you tell me Is there

24:24

an ambition in that to make this site the equivalent of a county wildlife site? Because that's not my reading of it?

24:33

I think that it doesn't specifically say that you're correct. And county wildlife sight criteria will change over time, especially considering the changes of climate over 50 years, potentially. But yes, that is the ambition to make it at least as good if not better than the current county wildlife criteria. And we've been working with Luton Borough Council and Hertfordshire authorities to make that plan as good as it can be. And we

25:00

signaling that that's a live document and will be updated as we as we move forward. And I think it's appropriate to add that as a as an objective and plan. Okay. Well, as you could take away my question about whether or not it can be viewed as a negligible effect if you've lost a whole county wildlife site, I appreciate that. Thank you. Do anybody else wants to come in on that point, local authorities,

25:23

or microprocessor Luton Borough Council, I'm gonna hand over to Mr. Garre, who's got a point to make.

25:29

David Gertler Luton Borough Council, I dealt with the new central park planning application that we're seeing the loss of about five hectares of the county wildlife site. This sees the loss of 15 hectares, although except that 2%. So we would see it as compensation.

25:48

For the new central park planning application, we were looking for significant sums of money in Section 106, because it could not be replicated. I'm sorry, I'm not an ecologist. We do have an ecologist but he's not here. But as the applicant stated, it's a former landfill site. So that is one reason why you have got these diverse issues on the site, whereas the site that they're looking at using is formerly intensively farmed agricultural land.

26:20

Also, I would want clarification probably from the applicant, although it says 50 years in the management plan, it talks about the first five years really being the bit that they concentrate on.

26:32

And just to give you some of the figures, we were looking at compensation in terms of 250,000 pounds for the five hectares to improve an A site, which is now a site of scientific SSSI special scientific interest. That was for five hectares, we were looking at biodiversity contribution of 30,000. And we were looking at replacement trees as well, because there was about two hectares of trees being lost with the new Central Park application. So we haven't had discussions with them on the section 106 To date, but we will be looking at it as compensation.

27:10

Thank you, that's very helpful.

27:13

So you don't consider or you do consider that the landscape management plan does that produce the equivalent of what you had under that section 106 will be it this is for 15 hectares last night five.

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I can't remember seeing

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bigger set out saying how much additional land is being created to replace the CWs. You've also got the dairy barn scarp is a district wildlife site. That's where the airport access road comes in from airport way that we always used to call new Central Park access road. But that is not dissimilar to what the new Central Park access road was proposed. The landscape might be slightly different there. They are trying to replicate a district wildlife site with scrub planting and things there. But I haven't seen the figures of how much

28:03

I tried to work out how much additional CWS equivalent they were trying to create. They are obviously creating a much bigger Park much bigger open space. They've got different types of

28:16

landscaping and biodiversity type habitats there creating. But I didn't have a handy figure. And we were also we were talking about 20% Bng, as well, which I think you'll have seen in our FLIR and possibly in the socg as well.

28:32

We were basing that on the aspirations in the Cambridge Ark

28:36

proposal as opposed to the 10% in the NPS have worked for insert sorry. Yes, thank you. I saw that and your rep. And applicant. I won't ask you to respond to all of that now, but when you do put a note into his can you make sure you do respond to all of these points. There you go. Thank you, Madeline. Dr. Paul Clark, on behalf applicant, we certainly well, can I just take the point about the 50 versus five year it's quite normal practice to focus on the fact that the first initial period because that's your

29:06

period, where you have most confidence on and then you put in a review your regular reviews, those periods and you can put in adaptive management. If something is working well, it's not working so well you can then change rather than setting up for measures for 10 2050 years now. So it's not a case that it's a five year plan. And then 45 years of inaction. It's very much a case of review that review at five years understood. Was there anybody else that wanted to comment on the loss of Wigmore Park and the significance of that

29:42

Madam just before we move on Rebecca clutton for the applicant could I ask through you that the Luton Borough Council make those points in writing a deadline three and then we can respond to those when we have them in full Would that be okay?

29:59

Yes, it appears

30:00

That's fine.

30:05

Moving on to winter Hill wood, it's a in itself. It's a county wildlife site and a local wildlife site. And the ancient woodland itself has a habitat of principal importance under Section 141 of the NERC act 2006. The standards of broadleaf semi natural woodland being retained at the site, which are listed in table 813 of chapter eight are also a habitat of principle importance. And they're all also referenced in the local Biodiversity Action Plans.

30:33

I'd appreciate it if I could have a single clear path plan of the location of these important habitats. As at the moment, the plans I've got written enormous scale, and they don't put the trees in the context of what's being proposed. So I'm finding them very difficult to access. They're the size of bedsheets that have fallen six, and it's really, really hard to follow what's going on. So if you could do that, that'd be if we can get them on one or two sheets, it's all the ones that are to the east. So it's not as though it's covering the whole main application site. So what I'd really like to see is where they are and how that relates to the detail of what's being proposed as well, rather than just having yellow blobs or green blobs as an outline, because we do need to understand in detail what the proposed development could do

31:21

to those habitats, and species of principal importance.

31:28

Rebecca, come for the applicant, noted, madam and we'll take that point away. Thank you.

31:33

So zooming in a bit section eight point 9.7 states that nearby earthworks will change the topography close to the protected habitat of winch Hill woods. Taking this one as a bit of an example. It applies to the other protected areas and habitats and species as well. I realized that there'd be

31:51

at least a 50 meter buffer between winter Hill woods and the construction works, but they appear to be close from the drawings that I do have.

32:03

So the report states, these works have the potential to result in changes to the hydrological conditions within the woodland. However, the implementation of the drainage strategy, be in Appendix 20.4 will avoid substantial changes to the hydrology. But when you go to appendix 20.4, there's no mention of winch Hillwood, or trees.

32:23

The code of construction practice also doesn't specifically reference these important habitats beyond standard predictions and rules around felling in the landscape and visual section. So taking high geology, just as an example, can you direct me to where you undertake a specific assessment of the changes in hydrology on these protected habitats and species?

32:46

Dr. Paul Clark on behalf of the applicant, yes, we certainly the design team has been working closely with with the other other disciplines, I think will probably give you a signpost or a little written response there. But we're, we're confident that the drainage strategy will indeed not have a significant effect on the ancient woodlands. So we'll give you a short response in writing, if that's okay, so I designed post it and if it hasn't been done in detail, if you could get the detail of that, to me, that'd be appreciated. And

it's not just the hydrology as the other effects from construction and operation that are going on near those sites as well.

33:24

Though turning to creation of habitats and the new open space provision,

33:29

orchids, phase one will result in the loss of most of with more Park County wildlife site, including the population of orchids. It stated that the embedded mitigation to manage the orchids within the provision of open space will reduce this to a minor adverse effect when the vegetation matures.

33:50

To begin with, my understanding is that you're relying on orchid populations that are already there within the set aside area of arable fields that will be used to create the open space.

34:01

Long term management might encourage viability that's what it stated in the report, but how is it mitigation? If they're already there?

34:13

Again, I think we probably in terms of a short written note will explain explain that but we have prepared the meta statement for the translocation and you may be coming onto the translocation your next point, but it will be I think, a composite of the population that's already there. Those that will come in via wind or wind blend seed and the transit track on the translocation, which which we can probably discuss shortly, I suspect.

34:41

Okay, TV, because we will go through those strands, but if you can

34:48

give me an idea how much mitigation is coming from an existing population of all kids in the site in the open area because I need to know how much weight I can give that in terms of it being gay.

35:00

isn't all compensation for the lost or kid that with more county wildlife, so thank you

35:10

Natural England who unfortunately here today has raised concerns about people using the new open space and how this would affect the success of reestablishment of the more fragile species.

35:22

This seems to be addressed in Section 8.9 point 88 of chapter eight, where it is acknowledged that increased public use of this area will have an impact on the success of this. And a similar question, given all that at how much weight can I therefore give to what you're proposing as mitigation for what's

being lost? Dr. Paul Clark on behalf of the applicant. This comes back to the point we've been in some discussion with Natural England and they've given us some feedback on the orchid Method Statement, which is application referenced as 035. Specifically, we've been included hydrological as well as soil testing in advance of Trent translocation.

36:01

I think the point around it, and orchids in publicly accessible land is is noted the orchids that there at the moment are in a site that's publicly accessible. And I think as part of translocation and retention or however we get there, all kids in the new open space, there are ways of using interpretation, routing people away to avoid trampling effects, for example, as well as an educational piece because they are a valued asset locally. So it will, we're confident there are ways that the outline plan outside landscape and Biodiversity Management Plan will be developed through detailed design to to help reduce any kind of trampling effect. It's worth noting that actually a lot of orchids need and broken ground, or certainly a little bit of

36:51

light light, the light pressure to to break up the soil surfaces is is helpful. So we tall grassland is not good for orchid colonization. So

37:02

a composite of, of soil types and areas of background it is helpful to particularly in the early years. And that's something that the applicant has control over and can manage, but either through mechanical management, or routing of paths as the as the park, which was so useful in discussions with Natural England about those issues. We've incorporated, they've given us some feedback, we've incorporated their comments, it's within the statement of common ground. I'll give you the reference in a moment. Three point 5.21 within the statement of common ground with Natural England where we've incorporated their comments that they gave us on that method statement a few weeks ago. Okay, thank you.

37:45

So turning to the new areas, Olga calcaire, has grassland that are described as highly suitable for pyramidal and bee orchids. Section Eight point 10 mentions translocation of orchids and birdsfoot trefoil from Wigmore park to the habitat creation areas. I understand from the IP submissions that this has been tried before without success.

38:06

So how likely is it that they would be successfully established in this case?

38:13

Dr. Paul Clark on behalf of the applicant, I won't get the same reference but the method statement that we that we produced this time is very much with that in mind. We can we've got we've taken comments from from Natural England and I believe the host authorities as well. Certainly Luton Borough Council were involved 2018 2018 was an exceptionally hot summer when that exercise was undertaken prior. And it was it was a bad summer for all markets. So it was it was an unfortunate time in perhaps, but

some of the lessons in terms of irrigation and money management will certainly be taken forward into the new exercise. The other the other point to make is that the cow carriers grassland is likely to although it will have a seed mix or similar to start it off with orchids are windblown, and the seed the seed will come in from neighboring parts of Hartfordshire, particularly and Luton. So it's entirely likely that we'll get natural colonization from those species in surrounding areas. So it's not 100% reliant on a translocation to have pyramid lock, it's in the new carriers grasp. They don't, you wouldn't include them in a seed mix. They don't work like that due to the mycorrhizal Association. But there are lots of examples particularly not far off from here when the 40 was put through the Aston rowant For example, of natural colonization happening very quickly. It's happened on the Weymouth relief relief road to by not putting thick top soils on newly created calcaire soils that those orchids come in very quickly as pioneer species.

39:50

Thank you, that's really helpful.

39:55

But anybody else like to comment on the loss of orchids please

40:00

Do

40:03

you mind if I click my cancel? No, madam.

40:09

So the translocation of ancient and veteran tree t 343. I'd like to make everyone aware that the woodland trusts and topologies because they're unable to attend today, they were hoping to, they provided a short submission, which you can now see on the project website. And note that they say amongst other things, that there are limited examples of success of translocation, and it's a costly process to ensure that success will occur.

40:36

So what is the likely successor translocation of ancient veteran tree t 343. Rebecca clutton for the applicant, Madam on this point, we do have Mr. wooley who is available to deal with this. He's our landscape witness today. However, we don't have our board our Oberg

40:55

put my teeth in arboricultural specialist with us today. And we did wonder therefore, particularly given the tight timetable today, whether this might be a topic where given the absence of the word interest today, it might be more appropriate for us to do a short written response on that. I'm happy to have a written response. And I'll probably still open it up to the floor to see if anyone else has anything to say.

41:16

When you do provide a written response and would be interested in seeing if there is any research or any case studies that you can provide me with demonstrate how likely it is to work? Of course, yep, Madam I think that we had a long floor item low. That's okay. We will struggle to do that by next week. I also had a question about the DCO article 22. On felling or lopping of trees and removal of hedgerows, I wondered how that works with the protection of ancient and veteran genes.

41:43

We can certainly have a look at that. Would that would you? Again, I think would that be suitable if we just provided a response in writing on that one? That's fine.

41:53

Was there anybody else in the room online who wanted to make comments about the translocation of ancient treaty 343.

42:08

Okay,

42:11

so air quality, the dose increases in the woodland at phase two a,

42:19

which are up to one kilogram of nitrogen per hectare per year is well above the guidance, the guideline for a reduction in species richness. However, it's then concluded that as the woodland is already subject to existing sources, the background nitrogen is high and that the damage will have already occurred. That's in Section 8.9 60 of chapter eight.

42:41

I won't trouble you for the math. Today. My question is about

42:49

section 40 of the NERC act, it requires us to conserve and enhance the species. And paragraph 179 of the National Planning Policy Framework states that we should be promoting the conservation, restoration and enhancement of priority habitats, and protection and recovery of priority species.

43:09

So I understand that there's already a heavy dose of nitrogen

43:18

to the surrounding area.

43:22

But how does, it's already suffering and the damage has been done that with the requirements

43:31

of the NIC Act, and the national policies.

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Dr. James Riley on behalf of the applicant. So

43:41

the I won't go into the math. But as you say that the argument essentially there is that the figure of point four, which is the figure we have cited as a threshold, because that is the one used in design manual for roads and bridges for the potential for negative effect in the design manuals and roads and bridges, you then follow that with an investigation of the specific circumstances of the of the site itself and other factors that may impact on that which we've done. So it isn't a hard line. And it's also worth noting that that point four figure is calculated as an average across the various doses of various background levels. And it is what's not the average of the components the minimum of dose so so on the most sensitive habitats, but in the research and the natural and research report, we quote in the paper and ECR 210, which is a reference to the end, the doses that actually result in the effects in species richness, go up to over three kilograms of nitrogen per hectare per year depending on the habitats in question. And effects on species richness does not mean any species are lost. What it means is that if you throw a random quadrat you potentially record one less species then you can that quadrat then you build on another occasion. But all of that, particularly for woodland sites and all sorts of sites is heavily affected by situations like management

45:00

And

45:02

the research generally shows that in a situation where you will have high existing levels of nitrogen deposition, because nitrogen is already in excess, things like competitive growth of other plant species have already occurred to the largest extent they would, because there's a limit to which they will benefit from more and more nitrogen. So adding further nitrogen has relatively little actual ecological effect on the ground. And that's potentially even more the case in Woodland where the woodland canopy and management have a big influence on rainfall, sunlight penetration, and that in itself has a major effect on shaping the ground floor and the epiphyte. In other words, tree communities in the woodland. So that's that's the background. That's the context there

45:48

in terms of achieving so So I suppose the first thing is that that is why we've concluded that though, mathematically, the well no, let me let me put this different way. We've also concluded that although that that dose threshold is exceeded, that dose threshold is not absolute, as I've already explained, and is subject to further investigation. And we've expressed those doses as a percentage in all cases of what the existing nitrogen is. And even in the worst case, affected sites, it's 5%, usually is two or 3%. And most of that is at the very closest edge of the woods to the road network, which is where you would expect the greatest nitrogen to be, which is often the area of the woodland or other habitat that has lower ecological value, because what we call edge effects. In other words, other effects of being on the

edge, whether it's spray from the road, salt from gritting the road, whatever that may be simple, different changes in sunlight penetration.

46:41

So we have a judged that that small change that you might get, but equally might not get is not ecologically significant, and therefore would not contradict the I'm not sure what I'm putting up there would not contradict the NERC Act requirements. In addition, you also have the fact that in this area, we are removing quite a substantial area of land from agricultural production, which is not being it was mentioned earlier about intensive arable land to create the Wigmore Valley Park. And that is not factored into the calculations because the models don't easily talk to one another to be able to do that for emissions from agriculture and emissions from transport related sources. But it's important to bear in mind we do read we do mentioned in the report, because

47:27

agriculture is a significant source of nitrogen, it doesn't just come from development and from traffic and from airports and things like that. And when Sherwood, for example, fully a third of all the nitrogen that's deposited on that site comes from agricultural sources. So removing land from agricultural production, although we're not doing it for the reasons of reducing nitrogen deposition will have an effect in counterbalancing nitrogen deposition across the five kilometer grid square within those within which those sites are situated to it. And I think also, and this was alluded to yesterday by Mr. Behringer, the air quality consultant, he pointed out that our forecasts are very precautionary, because they don't take account of the shift the big shift to electric vehicles that we would expect in the later years of the plan plus years of the scheme from either 20th 2030 or 2035. But either way, so wrong 2030 or 2520 43, you would also expect a significant shift to electric vehicles, which is also being brought into the assessment there. So for all those reasons.

48:32

Our view is that and also with sorry, one more point is a lot of winch Hillwood. Of course, that will be captured by the management plan 50, a management plan that's already been alluded to,

48:42

and that will improve the overall health and resilience of the woodworks that's its purpose, which will include this resilience to nitrogen deposition for atmosphere. So for all those reasons, we are strongly of the view that this does comply with the requirements of the milk act and does not materially conflict or interfere with government objectives to reduce nitrogen deposition, generally, nationally from all sources. So assuming those objectives of the government are successful, and they do manage to bring down background nitrogen or whatever pollutant it might be,

49:20

would you expect species richness to re establish itself?

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To increase? So, yes, in the long term, it wouldn't increase over a few years, but it would probably increase in the five to 10 year term. So my follow up question to that is if you're

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dosing for instance winch Hillwood

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with a higher than ideal dose of nitrogen or whatever pollutant

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510 20 years down the line when background levels have come down because of government action and policy is that then going to be problematic is that then

50:00

I'm going to prevent that woodland recovering in the way that it would have been no, no, it wouldn't, because the bulk of the nitrogen that was deposited on this site is from existing sources by followable 95%. On that particular site, it's those sources are reduced significantly over the lifetime. And bear in mind that would adapt if those sources were reduced significantly that would address the nitrogen deposition issue on that site and on all sites. And bear in mind, of course, that that would feed into our scheme because of course, the improvements to vehicle emission factors will affect the traffic that's on the network that's being associated with Aspen, which is part of our forecast impact.

50:36

Okay, does Natural England support the approach that's in the design manual for roads and bridges?

50:44

Natural England are aware of the approach we've used, we it is discussed with them in the discussions we've had on the statement of common grounds the use of the naught point four figure has been discussed. And they have not expressed any concerns with our methodology. And the statement of common ground, which you of course will have read confirms that they are happy that there are no impacts on European sites or triplus. Eyes related to air quality. Yeah, I've seen that it's these more local sites. And the news

51:11

is because that's not their remit, but they have not expressed any concern with the dmr methodology. And it is routinely used by dmr on their D CEOs and other projects and people in national highways, the people who wrote that bottom down, we confirmed to me that Natural England are aware of it and that in their view, they are comfortable with it. And suddenly they've not said to us they're not comfortable with it, okay.

51:41

Understanding is that Natural England and national highways are still debating the point around species richness. And we're developing guidance about that.

51:54

I think there's always room for further discussion around effects on species richness in a variety of habitats. But the design manual for roads and bridges is out there published, published two years.

52:08

You know, it is something that I'm sure the national highways and naturalising law still discussing. But we can only go by the feedback we have from Natural England on this project. And on this project, they have not expressed any concern with the use of that methodology.

52:24

Thank you. Did anybody have anything they wanted to comment on with air quality aspects for biodiversity?

52:36

Thank you. I'll move on to water issues now.

52:41

Rebecca, and for the applicant, Madam in that case, we're just going to have a slight change of personnel costs.

53:27

Rebecca Clinton for the applicant, Madam just before I introduce my colleagues,

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as the first time that's happened this week, we've done well, so far. Sorry, was it full? What it was half full? It's definitely wet. I think we're just

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sorry, I've got some tissue in my back. And there's probably some blue towel around I think.

53:51

Sorry, madam. Just before I introduce my colleagues,

53:57

we note that a lot of the agenda items that were related to water appear to have have come out of obviously the environment agency's position in relation to our drainage strategy. And you'll be aware that there there was a recent change notification in relation to the content of our drainage strategy. And so obviously, completely in your hands as to how you'd like to take this, but we did wonder if it would be of any assistance to you just to have a quick

54:24

introduction to that drainage strategy change and why we've done it and the effect of that because in our view, it is likely probably to assist and inform the discussions that we have once I completely agree with you and I'm going to start with that. Also, the questions are informed in part by what the Environment Agency and all the IPS have come up with and the questions that I've come up with

54:45

right change request yet we were received a change request from the applicant this Monday. These have been published as as 151 and as 152. The proposed changes diversion of foul water and contaminated surface water runoff from assess

55:00

When phases two a and two B of the proposed development to Thames Water Systems. Thames Water has a statutory duty under Section 94 of the water industry act 1991. To use it's meant there sorry, permitted development rights for the necessary sewer network upgrades to accommodate the proposed increase to domestic fowl flows within the Thames Water Network which includes the proposed development.

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However, Thames wat a quoted as saying that they don't currently currently have the capacity and the expansion of this is problematic at East Hyde water treatment works because the site is constrained

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Thames Water I'm grateful for you coming today. Are you in a position to confirm this And while I've got you on Could you provide an indicative timescale for these work?

55:51

Now, yeah, so Robert Ashley Thames Water again, in our discussions with Luton Airport, we have clarified that when it comes to fall water, which we would class as water is coming from toilets, urinals, maybe bathrooms, shops, things like that, we have a statutory duty to collect that and treat that at our receiving treatment works, which for lutenist East Hyde seaway treatment works. However, for trade effluent which we would class as glycol contaminated surface water runoff coming from the you could call it the impermeable aprons. We do not necessarily have that duty. Of course, at the moment, we do take

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glycol contaminated runoff at least hide. But we have clarified that that is landlocked. So in terms of working with Luton to under we need to work with looting we are currently undertaking some design, having some discussions to understand the volumes and the concentrations of what flows are going to come in from a trade effluent point of view. In terms of timescales, it's very likely going to be over the next five years or so.

57:10

Over the next five years, you'd expect to have the capacity that you need, not necessarily the capacity, we would have the moment let me be clear, Madam Chairman, we need to understand what volumes and concentrations are going to arrive at the works for foul water. We will deal with that. We will solve that. But we still don't know the trade effluent element of the flows that are going to come in.

57:37

I don't know if I'm clear enough, you are clear. So is it quality that you're lacking? Or is it volume that you're missing? To understand what it is you need to do?

57:51

I think it's for both. Let's be clear for Fall water. We are working with Luton within the next five years to see what expansions we need at East High. But the surface water element or the glycol contaminated surface water element is quite tricky to pin down because that normally happens during the cold winter months, where we have very high flows coming to the works. So we need to clearly understand that volume as well, we can perhaps put together a fuller response on that written to you. If that would be of help, please.

58:31

Yes, it would be Thank you, I'll be looking for a statement from you to respond to the

58:37

change request.

58:39

And to outline your position on this. So if I've understood you, clearly, you can take the foul water and you do have a duty to do that. Surely you'll be able to do that in five years. Yes. How are we? We normally obviously upgrade our treatment works over a five year asset management period. So now that we are aware of this, it would go into the business plan for the next asset management period. And depending on when

59:08

the works will take maybe the highest flows, we will look at what is going to come in from Luton and ensure that when the time arrives, we have enough capacity to deal in this instance, with a foul water.

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We still need to work with Luton to understand the volumes and concentrations of trade effluent

59:30

and that is the tricky bit of this entire discussion. Do you have a duty to take the trade effluent we do not have a statutory duty to take it. But at the moment because we have we are already taking that. We are still working with Luton to understand what they can maybe attenuate that to and concentrations that are going to come in and see what will achieve it how to deal with that.

1:00:04

Thanks ever so much Mr. rashly, that's really helpful.

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Thank you.

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Though given that Thames waters assessment of network and treatment capacity is ongoing, the applicant stated intention is to retain the proposed infiltration to ground as a reserve option after phase two, in case the preferred option proves not to be viable.

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So given this as far as I can see, the only option, the only change that's being made is the statement that the applicants preferred option is to direct contaminated discharges to the Thames Water drainage and treatment statement systems. So

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a question for you Miss Slaton. This duty on Thames Water hasn't changed since the application. So Doesn't this mean that the option has been available to the applicant right from the start.

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But Rebecca Clutton for the applicant as a matter of law, yes. So I'm going to turn to I'm going to introduce you now to my colleagues who've been dealing with the matter to explain how we've got to where we are. And can I first of all, please introduce Mr. Jason Fer Ben. He's an associate director of hydrology hydrogeology and water for Arup. He's our water resources and flood risk lead. And then to the at the very end of the table. I've got Mr. Fida Choudry, who's the drainage design review of AECOM, and he's been our drainage designer. And I think, is it Mr. Mr. Choudry, is going to address you on that point.

1:01:35

Good morning, madam.

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This is Peter Shell three, four applicant, I think there are two issues here. One is the obviously as you have rightly pointed out, that the Thames Water has the

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strategy duty to take the fall water. But at the same time, we also looked at the SATs for sustainable urban drainage principles, which is we'll establish by Syria and also on the national planning policy to keep and we looked at options to keep the runoff where it is nearer to where it is, so that we are not changing the hydrogeology of the situation and replicate the natural pathway of the water from water into the ground. And we also looked at treatment,

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train and process that we could use now and also look at what can be what is anticipated over the next five to 10 years before the phase two a or phase two b assessment phases are commissioned. And we were confident that we could achieve the water quality

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treatment standard before the water runoff, contaminated surface water runoff or fall water runoff can be infiltrated into the ground. But we also take into account the strong

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position environmental agency has communicated to us during the engagement, pre and post submission. And we are looking at options and finding a balance between the what is the Tim sort of statutory duty and versus SATs principle, and trying to come up with a solution that can take us to a statement of common ground with both the statutory service provider and is aesthetically later.

1:03:40

Thank you, I appreciate that. But coming to the change request, I can't see that anything's really changing apartment emphasis that your preferred option would be to extend the foul water to Thames Water. But the duty on them hasn't changed since the application was put on. And you're still reserving the right to send

1:04:05

effluent to ground. So the environment agency's concerns I assume will still stand although I'll speak to them in a minute. And slightly separate section about that. My question for you is, is this really a change request? Rebecca clutton for the applicant? Yes, we think it is because there is a the drainage design strategy does have to change that drainage design strategy does not include as a proposal at the moment discharged to the Thames Water Network. And so that is a change to that strategy.

1:04:38

And that's why we consider it to be a change it is obviously minor. And that's one of the reasons why we consider it to be an acceptable change to be made. But we do regard it as a change because minor changes do happen throughout the course of an examination without needing to go through a change request and is this large enough that you consider it material

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Rebecca and for the applicant, we have considered to be sufficiently significant that we that we thought that it was necessary to take make the actual change requests and we

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we are happy to take that point where and consider it it's obviously only change notification that's been made at this stage

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Rebecca clutton for the applicant obviously, yes.

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As Mr. Anderson, she just said, if if the excess view when it responds to that change notification is that they will be contempt for this change to be made to the draining strategy without following that process, then obviously, we would accept that as well. Okay, we'll take that away. And we've heard everything you said thank you and take that on board.

1:05:56

Turning to the hydro geological conceptual model,

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including groundwater flooding and the risks to groundwater quality, I'm mainly focusing on Appendix 20.3, which is the hydrogeological characterization report, which is a pp 004, Appendix 20.6, which is the hydro geological risk assessment report drainage, a PP 139 and chapter 20, a PP 046 which is on water resources and flood risk. Further information can also be found in the figures attached to chapter 20 in as 045 and the drainage design statement, which was a pp 137. So I'm interested today in discussing assessment of the highest groundwater levels, because these have a bearing on first of all the thickness of the unsaturated zones or attenuating the effluent and preventing pollution and to the risk of groundwater flooding.

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So turning to the applicant first, please can you explain to me how you've assessed the highest groundwater levels, and I'd particularly like to focus on the area beneath the proposed southern and northern infiltration tanks to the east of the development which are works number four, the

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Thank you, Madam Jason Ferb in behalf of the applicant. So as you say, the hydrogeological conceptual model is described in the hydrogeological characterization report. The consideration of flood risk is then reported within the flood risk assessment document as oh four six, I'll talk through flood risk first, and then water quality in terms of the hydrogeological modeling the

1:07:31

assessment of potential impacts. So with respect to groundwater flooding, and this sort of proposed southern drainage infiltration feature, we're aware of the historical flooding downstream at Kimpton back in 2001, which was, hadn't been observed those sorts of levels in the previous 50 years of environmental agency, or to monitoring in terms of characterizing the water levels on site. We've in terms of building the hydrogeological conceptual model, we've looked at literature, PGS publications, Environment Agency data, we've taken account of the Environment Agency Hartfordshire groundwater model, which has been recently updated in the last few years. And that's the strategic tool used by the Environment Agency for water resource management and characterization. We've been augmented that with a period of site investigation. So within the

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assessment, we've got groundwater monitoring groundwater quality across the site within the landfill, but also within the proximity of the two proposed soakaways To the north and into the south. And we've extrapolated between the model, which can be used to look at the and try and re simulate the 2001 peak level that has been observed, a Kimpton but what does that look across the site, and then we've been able to it's detailed in the methodology, apply the site specific information to characterize because it's certainly within the site. The existing influence on groundwater levels is yes, regional flow, regional groundwater divides, but also the existing arrangements associated with soakaways and kind of localized mounting around those. And so we've, in terms of the maximum design level, we've looked at the end use the model applied the uplift from the site monitoring, and then that gives us a maximum

level based on those simulations. Those levels within the model are about 10 meters different to observe data, say they're very rare, very infrequent events. It's only been observed once in the historical monitoring record.

1:09:35

Within the different soakaway locations, we've looked at the Unsaturated Zone for the groundwater flooding is particularly the southern soakaway proximity to dry valleys downgradient of the site and villages of Kimpton and elsewhere, about half a kilometer down.

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We've got the soakaways. We've looked at the Unsaturated Zone, we've maintaining that there's no direct discharge

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So we've the maximum level is below the inverse of the proposed soakaway location. And in terms of the impact assessment for that we recognize within the proposed scheme that there's going to be upstream storage so that the, and that's the mitigation that's insecured within the works as the upstream storage will be used to throttle and manage the discharge to that soakaway, so that it doesn't exceed the historical observation and therefore, the amount of water going back into the or going into the aquifer in that location is going to be no more than has occurred before. And that is also without the benefit as we're where from the end, we'll come on to the water cycle strategy and the design strategy with respect to water supply, but we are envisaging increased rainwater harvesting and water efficiency, which again will be use water that would potentially discharged historically into the into the aquifer, and therefore, again, reduce the amount of flooding potential. That's the flooding, if you want on the quality, or any questions on the flooding component.

1:11:09

Before we move on to quality, I think I'll give the Environment Agency a chance to come in before I give you a chance to talk about quality, then I'll come on to my own questions.

1:11:19

This is Ben's.

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Do you like to comment? Yeah, Doctor responds to the environment. I'd say. Just to clarify, myself and Stefan, you're actually groundwater quality specialists will not necessarily involved in hydro geological side of things. As far as my whereby hydro geological colleagues haven't actually raised specific concerns about this. But if you had a question you'd like clarification on, I'll certainly forward it on to them.

1:11:47

Thank you, Mr. Spence.

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Mr. Fairbairn, if you'd like to move on to quality, yep, so groundwater quality, there's two aspects, I guess of the scheme looking at groundwater quality, there's the construction and the potential pollution from earthworks and others. And that's covered and covered by CSEP. mitigation. I think we're particularly focusing here on the effluent risk from discharges to the aquifer. So I guess at the moment, there is surface water discharge into the current Central soakaways. That's been a long standing ongoing activity within the proposed works in phase one and phase two, there'll be we've got within the drainage design strategy changes to the arrangements of that discharge, particularly then the northern infiltration would be for the treated foul and treated surface water and the southern would be for the surface water discharge on to cite

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both of those locations. So we've got characterization on water levels and hydrogeological properties.

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We understand the sensitivity of the chalk aquifer is a regional water supply up for those affinity water abstractions three kilometers to the east and other abstractions locally.

1:13:04

We have

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looked at in within the drainage drainage design strategy, we've looked at the

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characteristics of the potential effluent that could be treated the drainage design strategy in presents a number of treatment solutions that could destroy remove the amount of potential contaminants into the discharge arrangement. And then we've used the hydrogeological conceptual model using a tiered approach. So the result from the characterization of the foul and surface was that actually some of the

1:13:42

contaminants were below drinking water standards. So not not a concern, but there are some that have been carried forward. And so we've, in terms of a tiered approach was a typical approach to proportionate risk assessment, we've used the Environment Agency infiltration risk assessment, which is an analytical approach to parameterize and look at the potential effect of the discharges on the file system under the aquifer. We're still in discussion. We've had comments from the Obama agency on that HRA approach and the options in terms of the tiered approach going to a more numerical comes in type model. But so the analytical approach that we've produced results in essentially no significant effect. And so I think those those conversations are ongoing in terms of the HRA method methodology, they would be substantially kind of influenced in terms of how far we go with the HRA with the change notification requests, which could obviously remove the foul component.

1:14:44

Thank you. Thank you, Mr. Fairburn. Mr. Spence, did you want to make your comments about groundwater quality now?

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Yes, thanks darksky Spencer government agency. There are a few aspects Mr. Ferber and did mention that

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They have done actual quality monitor modeling, and risk assessments. But at the stage that we reviewed them, they're all very kind of preliminary and we're lacking detail. And that was really our the main thrust of our, our issues with the proposal. Overall, we were uncomfortable about the the quantity and potential quality of the discharge because there was a lot of uncertainty with respect to the pod C volumes, specifically,

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contaminants that may be within the effluent input into a treatment plant and then discharged to ground after treatment.

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So yes, generally, we were uncomfortable with the level of uncertainty and the limited amount of detail that was provided.

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You touched previously about the conversations with Thames Water.

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The Environment Agency, were obviously quite precautionary, this is an aquifer which supplies drinking water to a wider area.

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And realistically, discharge to Grand Rounds should be the final option to consider in the process.

1:16:04

There are other specific details that we were uncomfortable with, we touched upon potential groundwater flooding, I did say that I'm not the expert in groundwater flooding, an issue from a quality side is the input level, particularly on the southern side of Kuwait was very, it was very, very close to the elevated the high level groundwater table. And for a discharge to ground, we'd like to get as much unsaturated zone as thickness as possible

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to maximize the benefit of the natural geology, the natural bio degradation that can occur within the Unsaturated Zone.

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Thank you, Mr. Spence.

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In your reps, the Environment Agency have implied that it's going to be very difficult for the applicant to get a permit for this discharge. Is that still your position? Well, the conversations have developed further when we do except that there's been more detailed conversations are providing as much more confidence, it's very difficult for us to really provide a, you know, a solid comment on environmental permitting, because it's based on the information of the actual discharge as it is. So a concern that we actually have a right now, we don't even have a kind of

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a sense of a baseline to even start to sort that conversation with.

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I certainly accept that the conversation has developed much further than from the position that was in the the application documents. So there is a conversation going ahead, which means that you do think that it's

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there's potential for this to happen. It's not an absolute, it's not an option to discharge at this location. I wouldn't say it's not an absolute no. But we still need to have a lot more further detail. And it really does depend on the outcome of the discussions with Thames Water, and how much the nature and quantity of effluent they can actually receive and sign.

1:18:18

Thank you. While I've got you here, Mr. Spence, there are a lot of effluent tanks being proposed or tanks that would temporarily hold effluent

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under the ground, what's the environment agency's position on those and not not tanks that would have an outlet that were discharged to the ground, but tanks there would be invisible?

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Obviously, that there is a concern about potential leakage from from such tanks, we would we would want

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confidence that the high high level of engineering was involved in the site, isn't it within our in a source protection zone. So we wouldn't object strictly just on tanks, but we would certainly need

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a high level confidence that best engineering practices actually have been adopted, and that the content and potential leakage from these tanks is monitored.

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Thank you, Mr. Spence.

1:19:15

I have quite a lot of questions about the hydrogeological conceptual model. I think they're probably going to go into too much detail for this session and looking at the time that we've got left. So I'll roll those on to the written questions, but I think there is a chance that we'll be revisiting this

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at later hearings.

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Before I finish this item, I did want to raise a question with you about the groundwater dependent terrestrial ecosystems. They're mentioned in your chapter as probably being present, and including one associated with never, never field spring which is not far from infiltration tax at all. And I can see that you've done

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an assessment of the potential effects on these but I can't see that there's a

1:20:00

Need detail provided? Have I missed it somewhere? Or is that something that you can provide me? Sorry? Sorry. Sorry. So, talk review. I'm not an expert in that particular aspects of the assessment. But again, if there's a question you'd like to take forward, we'll certainly address that. And the response. Thank you, Mr. Spence,

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Mr. Fairbairn.

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All right.

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Jason Furman for the applicant, we responded to the issue of Netherfield in one of the written representations to hearts, give you the reference, and we or we can follow up with the particular schedule within that section, I've seen your response, I'm missing the detail, I don't really understand what's in the groundwater dependent terrestrial ecosystem. From an ecological point of view, I don't understand the hydrology of it. And I don't understand how the potential hydrological hydrogeological changes that we'll be making from this infiltration, how that could affect that groundwater dependent terrestrial ecosystem. I don't have any maps or plans, or cross sections, thank you, Jason Furman for the outcome. I think if we can get back to on that, we can get that out to you. Yeah.

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And I'm saying that the fields bring because that's the closest, but if you could

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write it for the others that you've identified or explain why you're not providing it for the others, that would be appreciated. Thank you.

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The drainage design statement,

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I won't ask you to give us an overview of how it's going to work now. But a couple of questions that I have got, there'll be very long drainage runs across the site.

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And the monitoring that I've seen is associated with the tanks, what happens if one of these drains, runs, breaks?

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How would we know about it,

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if you don't care for that applicant. So, the monitoring system, we have mentioned in the drainage design statement, particularly are for the pollution or potential contaminate contaminant detection, and how we separate it into cleaner surface water and potentially contaminated surface water. And those are, as we have said, in our drainage strategy. And also in the

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design, the intention for the detailed design, those are the minimum, we will provide those to satisfy that to know to minimize that is to groundwater. So those are not the only monitoring system, we'll have to, that's the minimum we'll have. And we'll consider other monitoring system for leaks throughout the network system. And also, there'll be measurements of flows and volumes as we do in good practice in Genesis design, to detect, prevent, and repair leaks in the system. So the Genesis design statement, monitoring system is the absolute minimum that we'll do, but that's not the only one we're doing.

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Thank you.

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I'll take that away. And I think it's possible that I'll be following it up with a written question. Thank you.

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Though one more question on the drainage strategy. And that's how long contaminated water could enter the surface water discharge system until it's picked up through the monitoring. So it wasn't clear from what I had before for me how frequent that monitoring would be. And then when it does pick up that there's an issue because the surface water has got contaminated with something, how long is it until that gets diverted away from the surface water discharge

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for the job for the applicant. So we'll have

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three

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levels of

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mitigation measures. The first one is just to explain that we are working in a controlled environment in the airport. So the most significant contaminant will come from de icing or anti icing activities and which are pre planned. So it's not just done. The operator will look at the weather forecast, temperature and rainfall and plan it ahead. So that is the that's the first step will be taking at that stage. There's an option to divert manually, everything, all the surface water contributed away from the groundwater infiltration manually even without depending on the monitoring system.

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And then on the second one, we'll have a passive

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treatment systems like oil interceptors, and others in the system or rubbers on the gullies. So those will be in place before the contaminant goes into the system. And the third line of defense will be the monitoring system. Tim, while we are looking at different options of monitoring and looking at the proposal is to have an online system.

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So that's molecules of water all the time. And for that reason, we have selected Total Organic Carbon monitors, which there are different products on the market. And their response time can vary between 60 seconds to 1515 minutes. So there's almost real time and we're also allowing sufficient distance between the monitoring and the actuated valve that will divert the diversion chamber that will divert

1:26:04

potentially contaminated water out from the groundwater. So that it gives us a time, reaction time for the pulse to operate or manual intervention when the contaminants are picked up by the monitoring system.

1:26:17

Okay, thank you. That was very helpful.

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Mr. Spence, I can see the environment agencies made some comments about low level hazardous compounds getting into this water I surely applicant will be responding to you in time. So if, if there's anything you want to add, then you're very welcome.

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Yes, thank you. We we do have a I mean, obviously,

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whatever treatment that is proposed, we'll have to be able to treat to be very fancy standard. And obviously, the government agency, one of our duties is to prevent the entry of hazardous substances to groundwater. So we'd need absolute confidence that whatever treatment that is available, and there's online monitoring that has been discussed, cannot allow hazardous substances to actually enter the groundwater table. Within our written comments, we have expressed some concern about the detail provided about the inline monitoring systems.

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A detection level of one milligram per liter has been proposed for Total Organic Carbon,

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we would like additional clarity about what that could potentially mean at the discharge point, should we have a accidental, or what a routine release via the system given the fact that there will be a delay between a detection and system a diversion of flows. So so just the overlying message as we do need further detail about the the monitoring system and how sensitive it really will be, and how they can ensure there won't be a discharge of hazardous substances off. So

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thank you, Mr. Spence.

1:28:01

Applicants, I don't think I need to want you to answer that in detail. Now. I assume you already preparing a written response to it from the environment agencies? Rep.

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Yes, we have. Thank you. Thank you.

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And future site investigation. This is particularly with a view to the hydrogeology because of the sensitivity of what's going on underneath the large infiltration

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tanks.

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I wasn't clear from what I've got before me that there has been very much investigation in that area. And the modeling that you're doing is going to be very sensitive

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to the porosity and permeability, and I'm not clear that you have it for the area underneath the infiltration tanks. That was something I was going to talk about earlier.

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In light of that, is there any proposal to do more site investigation in that area?

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Madam Jason Fairburn on behalf of the applicant. So as you say, there is investigation carried out across the site, which provides a broad characterization of the site that's supplemented by the kind of long standing historical understanding of the chalk aquifer. We have got the boreholes around the northern soakaway. And the ones say about 5060 meters away from this southern soak away. So there is information to be aware of the general sort of characteristics of the chalk, which is discussed in the hydrogeological characterization report. We got in precautionary in terms of the parameterization. That hydraulic conductivity is from site versus the regional. We've been precautionary in how we've considered those. But in terms of the suite that we think there is investigation that's been used to inform the water levels that hydraulic characteristics across the site, but we do point out that within the DCO although site further site investigation isn't explicitly required, there is an implicit

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requirement for that, within the design principles in the drainage design statement, AP 137. And then other secured documents such as the outline remediation strategy, there will be further site an additional site investigation that would be required. And similarly, that would be required as part of the detailed design off token so quays ahead of the requirements in the 2030s. I think the other thing I'd say is that the existing soakaways on site, brick line chambers with material, these replacement soakaways would be sort of engineered with known conditions and with slight vestigation at the time as well. And then the infiltration characteristics around each would be detailed note. And then if there was requirements to kind of manage the infiltration, there's opportunities within storage, or also sort of ground improvement locally. Yes, I appreciate that. The detail will come later on, I think I'm interested in the fundamentals of what's going on at that end of the site, which because it's a series of dry valleys is potentially quite different to the other areas that you've investigated in quite a lot of detail, not least because it looks like there could be some fracture flow under there. So I need to understand in principle, whether or not what you're proposing will even work. What I suggest I do is put those in first written questions which aren't far away anyway. And we can have that discussion there and perhaps pick this up again, further down the line. Start again.

1:31:32

Water Framework Directive. Just a very quick question. The River Basin Management Plan is produced every six years. And the assessment at the moment relies on the February 2016 reporting round. And I was wondering if the Water Framework Directive assessment should be updated in light of those dates.

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Thank you, Madam Jason Fairburn for the applicant. Yes, we're aware during the development of the proposal, the River Basin Management Plan cycle three, where would you put publication, we were tracking those they were due during 2021. They were obviously delayed by COVID. And then published

in late 2022. We've done a check at the time of submission in terms of reworking the thing we don't envisage that's required in that the conditions of the water bodies of concern, are either the same or better. So it doesn't undermine the credibility or accuracy of the assessment presented. Thank you Miss Feb, and has that been confirmed with Environment Agency.

1:32:30

We've discussed the approach sorry that Jason hadn't but the applicant. So we've discussed the approach and agreed that back in 2018, on the actual approach for screening and working through the updates, we have gotten regular ongoing so we can kind of discuss that with them. capture that in the socg Thank you.

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So turning to water supply, almost the entire site is under lane by source protection zones associated with public water supply. And these are associated with Finiti waters supply and the area is defined as being under serious water stress

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applicant, I'm assuming that it's still the case that you're not anticipating any additional water would be required as part of the development. That's still the case jacent around the applicant, yes, that is the case and set out in the trench design statement principles which which are then further expanded in the water cycle strategy, which

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is phase one and phase two. Yes, passenger numbers increased but the actual potable water increase would be minimized by water reuse rainwater harvesting, water efficiency measures.

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Thank you. So it's in the drainage strategy, is it secure elsewhere in the DCO that you won't go above a certain

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or to use?

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Madam, I probably just need to check and get back to you on where that would be within the rest of the document. So the reason I'm asking is given how tight the resources are out there, if due to unforeseen circumstances, it turns out that you do need more water. I'm going to turn to affinity water now. But my impression is that they're concerned that they won't be able to provide that to you.

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Madam, I think from the water cycle strategy, you'll see the conversation with affinity water in terms of using the 2019 baseline which was provided the site at 7.5 liters per second. We've been using that within the water cycle study to

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show how we could kind of make sure that the incremental increase in phase one and phase two NTB will not increase that particular requirement through substitution, reuse and efficiency and affinity have been involved in those conversations. Thank you, Mr. Fabian.

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Finish affinity water.

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Mr. Farley?

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Do you want to respond the

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same as in Jane case, Farley.

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Yes, as Jason said, we've been involved in looking at the assessments and dissatisfied that what they're predicting would be reasonable. I think our concern is the same as yours is, we can't find that there is a strong commitment elsewhere other than in the trench design statement that this will actually be delivered. Obviously, for us the the key point on that is that we need to make sure that we're taking that into account in our future demand cycle assessments, and putting into our 25 year plan. So for us, it's quite a key point. That is a strong commitment to

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thank you, Mr. Foley.

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applicant, did you want to respond to that? I'm just saying, madam and Rebecca, and for the applicant, we've heard what's been said, and we'll take that point away and see what kind of thing can be done about it. Thank you.

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Mr. Farley, was there anything else you wanted to add from affinity waters point of view on any of the other things that you've heard today? No, thank you. It's been a very useful debate. And I think the discussion has gone exactly along the lines of the concerns that we've had. We are aware that Environment Agency is very much on the case on many of these matters, and content to leave it there.

1:36:11

Thank you, Mr. Farley. That's the end of my questions on water. Was there anything else? Anybody wanted to contribute to that discussion before I move on to land use?

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And you'll be glad to know that land use is quick. I don't have very many questions. So I suggest that although it's 11 o'clock, we run through these and then break after that.

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So Natural England has raised several concerns. And

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last, sorry, madam Rebecca, plan for the applicant. I do just need to get the right people into the room. Sorry. They're over here. So we've just had a change of personnel. Thank you.

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whilst they're setting up, hold on, I'll introduce Rebecca to the applicant. I'll introduce him to you, Madam, I'm going to have to my immediate left

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is Heather Iapu. Digital. She's a senior geotechnical engineer with Arup, she's OGN. She is our geotechnical and earthworks lead.

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And she'll be assisting you with land use.

1:37:14

Thank you. Natural England have raised several concerns and requests in respect of soils and best and most versatile land. And I note from your response that discussions are ongoing. Can I get you to give us an update on those please.

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Rebecca Clutton for the applicant. I'm just going to see whether we've got the right person here for that.

1:37:42

Rebecca, clap for the applicant? I think we've got Mr. Ask you online who should be able to assist with that? I'm afraid I haven't got my strategies qualifications to hand. So I'm going to ask him to introduce himself when he does come on.

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Yes, good morning. My name is Robert ASCII. I'm a chartered soil scientist, and I'm acting for the applicant.

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Did you want me to repeat the question Mr. Ask you?

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Yes, please. It was asking for an update on the conversations with Natural England given the concerns that they raised in respect of soils and best and most versatile land.

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From my understanding, Natural England specifically wanted

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some clarification on the magnitude, quantum of areas of best, most versatile land that was required permanently.

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And that was to be summarized in a short, small table. And as I contributed to the production of that table, and I believe that's been shared with Natural England. That's been my

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involvement with

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liaison with Natural England and thus far, whether colleagues have had separate

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liaison or correspondence with Natural England on these matters. Perhaps there may be other colleagues within the team that can assist but that's been my involvement.

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Rebecca clutton for the applicant, Madam I'm just being told that we actually haven't shared that document with Natural England yet, but it will be. I'm sensing that this perhaps might be best if we gave you an update in writing for deadline three.

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Yes, it sounds like it probably is.

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The airport's NPS states that poor quality land should be used in preference to loss of best most valuable agricultural land.

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And I can't see before me that I've got an assessment of that has that something that's been investigated as an option

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Rebecca clutton for the applicant I'm just going to ask Mr. ASCII to go he's just come back

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Yes, hello, Rob Eskew, soil scientist for the applicant,

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the amount of best the most versatile land within the main site area has been investigated through agriculture and identification surveys, both by Ministry of Agriculture, and where areas of land weren't surveyed by math. We've carried out our own surveys, we have identified where the best and most versatile land is. And it's roughly well all the proportions the BMV land, which in this case is all sub grade three a at the lowest end of the best or most versatile scale, we've identified where that is on maps, etc.

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With regard to the identification of the least, or the poorest quality land first, then the whole plateau on which the airport is located.

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Wood

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has been shown from wider math surveys and predictions carried out by ourselves that it is effectively a chalk plateau overlain by

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clay with Flints. And that gives rise to a mixture of primarily subgrade, three A and three B land. And we would have expected that quality of land to be widespread over the wider plateau area. So effectively effectively

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that that land quality could be expected elsewhere, no matter however, the extent to the airport was perhaps slightly modified. So effectively some best most fertile land could not be avoided, due to the proximity unnecessary engineering requirements.

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Yes, I appreciate that. And I don't think I have a full picture of what has to go where it is and what could be avoided. So as an example, not saying that this is the case, but something like the compensation land for the loss of Wigmore Park, where we're losing potentially best and most versatile land. Is it possible that that could go somewhere else? I'm not saying it is. But I think that that airports NPS requires me to explore whether or not that's being considered.

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I think that's something that we would consider further as a team. I mean, it's technically possible. And I think we could provide more information on that.

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On that particular issue. Thank you. I think that would be helpful. Rebecca Clinton for the applicant, madam, you'll recall that we're already providing you for deadline for with a note on how alternative locations and the replacement land have been considered. So we can wrap that up in that note, if that

would be of assistance. Yep, that'd be great. Thank you, the fewer documents, the better. We've got plenty already.

1:43:02

Last question then.

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Last very quick question. For the applicant, please, can you provide an update on the status of the application for a deposit for recovery permit and the waste recovery plan, Rebecca Clutton for the applicant, madam? Yes, the waste recovery plan has now been produced. And it's in the final stages of our internal review. We're anticipating that that's going to be submitted to the Environment Agency using their online submission service in the very near future. And we'll provide an further update when that's been done. Great. Have you had any feedback from them yet?

1:44:01

Not as yet, madam. Okay. Mr. Spence, as a groundwater specialist, I'm assuming you don't want to comment on waste. But I'd like to give you the opportunity, just in case someone's briefed you before you came on.

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Sorry, no, I can't provide any specific answers. I'm aware that there's a deposit for recovery, a discussion about God on background with bond my colleagues.

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Thanks, Mr. Spence. That the end of my comments, was there anything anybody wanted to add to

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the issues of biodiversity, water or land use before I break for a cup of tea, Matt and Rebecca Klein for the applicants or there is just one point of clarification that I wanted to make and it relates to a question that was asked yesterday that we felt was more appropriately dealt here. You'll recall that in the air quality session yesterday, there was a query about whether we assess the use of a static conveyor belt for contaminated material. And so Dr. Hunt we can come

1:45:00

firm that there is no proposal to transport contaminated material across the site using a static conveyor belt. And so it hasn't been assessed for that reason. To be clear conveyors may be used within control processing sites, but that would obviously be subject to its own permitting. But there's no proposal as part of the general development. That's helpful. Thank you.

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Any other questions from anyone in the room?

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And I can't see anyone online. The time now is

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1115. I suggest we take 15 minutes and resume at half past 11