



Planning Inspectorate
Arolygiaeth Gynllunio

Hearing Transcript

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Hearing:	Compulsory Acquisition Hearing 2 (CAH2) – Part 3
Date:	11 February 2025

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00:00:06:15 - 00:00:46:24

Okay, everybody, it's 2:00. It's time for the hearing to, uh, resume. Um, and we're resuming with, uh, item for 4.5. Just looking forward. Uh, to the agenda. I'm conscious that item 4.5, there's quite a lot to, uh, to, to get through. But, uh, I'm also aware that, um, there are other items on the agenda where people may want to speak. Um, so, uh, I think although I've given some indicative, uh, timing, I think, uh, if it looks like item 4.5 is going to take more, more than, uh, than two hours to get to, I will look to everyone's assistance to make sure that we can prioritize things.

00:00:46:26 - 00:01:17:25

But without further ado, um, item 4.5.1. Um, this is the, uh. I call this the need for and size of electrical, uh, switch switchyard. I've got a few questions about this, and then I'm sure the parties may well have some supplementary questions they may want to ask through me. Um, if I can start with, uh, doctor, doctor Edgar, I mean, the applicant says that they need to cater for some sufficient voltage for when a back pressure turbines are not in operation.

00:01:18:00 - 00:01:23:00

So would your suggested lower voltage scheme cater for that? Uh.

00:01:23:09 - 00:01:37:07

Edgar Allen? So, uh, yes. Um, in my view that the alternative electrical scheme would allow all of the power necessary to be supplied, even if they're backed by steam turbines are not operational.

00:01:38:06 - 00:01:42:06

Can you explain a bit more detail how that would why you've reached that conclusion?

00:01:42:19 - 00:02:31:26

Um, well, partly myself, but also, um, my colleague Anna, who's online, um, they've done an independent study on it, but effectively, um, what the applicant has done is they are taking the power across from the Corrie stations at 132 kV and then stepping back down to use it at their voltages. Um, on their carbon capture facility. Um, the alternative proposal is that the distribution would be done at 11 kV and effectively, um, the higher the voltage, the more power you can take across and the longer the distance that you can take that power for.

00:02:32:09 - 00:03:04:14

Which is why we have transmission lines at very high voltages and low voltages locally. So in our view, 11 kV is enough to get all of that power across from the Corrie facility to the, um, new carbon capture plant. And the applicant has chosen to use a higher voltage, which is a point of disagreement between us. Um. I don't know if you want to ask Ana questions on that, because she is an electrical engineer.

00:03:04:16 - 00:03:08:29

I am a chemical engineer. So Ana is very much. This is more her speciality.

00:03:09:20 - 00:03:43:06

And perhaps if I just blame Richard for landfill, um, what you don't have yet, because it was prepared after the last deadline is the Blake Cluff report, which explains or verifies, uh, Doctor Edgar's conclusions. Um, and that's why we've got Doctor Ferguson on the line. The applicant has that report. Um, but it hasn't yet been submitted to the examination or submitted at the next deadline. But in essence, the conclusion there is that 11 kV is the appropriate distribution voltage.

00:03:43:27 - 00:04:08:01

Um, that doing that distribution voltage not only has the space saving that Doctor Edgar has identified, but also a capital cost reduction of something like £7.5 million and a reduction in electrical

system losses. So that's the work that Blake Clough have done. Um, and obviously we'll submit that in writing, but it may be useful to hear from Doctor Ferguson on that now.

00:04:08:26 - 00:04:14:07

Well, yeah, obviously I haven't got, I haven't got this report. You say the the applicants have got the report.

00:04:15:09 - 00:04:19:10

Yes, sir. We have and we can comment on it, albeit in general terms.

00:04:21:02 - 00:04:27:26

If I mean, if uh, if Doctor Ferguson wants to add anything to Doctor Edgar's response, please. Please do.

00:04:29:10 - 00:04:54:05

Hello? Yes, I can say that we have built, um, an independent power systems model, uh, for the 11 kV solution and for the alternatives to the proposed solution where it's stepped up and stepped down. So we've compared the two from a technical perspective. So we've run a load flow to check that, uh, the components can be rated adequately and that the load can be supplied at 11 kbps.

00:04:58:05 - 00:05:21:05

Okay, that sounds like an appropriate point for me to ask the, uh, the applicants in terms of, uh, they've obviously seen this this evidence I have, I haven't, but, uh, um, why this, uh, you know, an alternative using 11 kV isn't something you've pursued or actually, have you changed your mind since you've seen the information from, uh, from landfill? No, sir.

00:05:21:07 - 00:05:41:13

It's the former. Um, there are two people who haven't introduced before who can speak to this. First of all, Mister Andy Cross, who's the engineering? Uh, project manager, Mr. Cross, and then secondly, Simon Rothery. Roth, er, who's the electrical engineering advisor. So if I can hand over to Mr. Cross Festival.

00:05:41:27 - 00:06:29:06

Mr. cross, thank you. That's Andrew Cross on behalf of the applicant. Um, yeah. So we aren't disputing the fact that you could supply power to the carbon capture facility at 11 kV. Um, the reason we've indicated that we need a 132 kV supply in the associated infrastructure, um, is the practicalities of of making the connections within the existing Riverside one and what will be the existing Riverside two facilities to be able to supply 11 kV. Um, there are a number of options. We've looked at, um, to achieve that, including I think has been proposed in the Blake Cluff report that um t into the existing 11 kV export and in the infrastructure, the equipment between the existing steam turbine generator and the step up transformer.

00:06:29:29 - 00:07:06:04

Um, and essentially from that review, looking at existing drawings, uh, looking at photos there, there isn't really a practical means, um, of making those connections. So it's not that it's not desirable, um, or that we've chosen not to, it's that we think it's impractical to do that. Um, there are other alternatives. Um, there is obviously a 11 kV auxiliary power within the existing plant, the existing riverside one, and will be in Riverside two, but that has insufficient capacity to supply, um, the full load that's required to, to provide the electrical demand for the carbon capture facility.

00:07:06:25 - 00:07:44:08

Um, the third alternative that we've looked at for providing 11 kV from the existing plants is to replace the existing step up transformers that have an 11 kV, um, third winding to allow supply of the

auxiliary power to R1 and R2. Um, so you could, in theory, replace those transformers with a higher capacity tertiary winding to supply the 11 kV. Um, but that would inevitably, because of the much higher auxiliary power demand, be a bigger transformer. And the space can the space constraints within the existing 132 kV compounds at Riverside one and Riverside two wouldn't allow you to fit that larger transformer in there.

00:07:44:21 - 00:08:16:24

Um, with that switching out transformers as a proposal, and a number of the other proposals also, um, that would require the existing R1 and R2 plants to be offline for the duration of that work, which could be up to, you know, a number of months in which R1 and R2 wouldn't be able to operate, wouldn't be able to handle, you know, London's waste that comes in and is, you know, its function is to treat London's waste. So, um, you know, that operational disruption, um, to the, to the existing operations of Riverside one, Riverside two is considered to be unacceptable as well.

00:08:17:12 - 00:08:19:09

So in terms of the operation of existing plants.

00:08:22:15 - 00:08:23:14

Um, so

00:08:25:05 - 00:09:00:16

is this is this the issue that was highlighted before where, um, there was going to be a significant voltage drop between the existing generators and transformers in Riverside? Uh, and this is is this the issue, why you're saying you can't go down to 11? No, that's a slightly separate that's a different issue. So I think we did refer in the original note to the practicalities of making the 11 kV connections within the existing plant. And that's sort of what I've just talked to just now. And the work that Mr. Other has been doing with his team, um, to, you know, to consider different alternatives of how that can be achieved.

00:09:00:29 - 00:09:36:28

Um, but also, yes, the, the, uh, power demand of the carbon capture facility is of a magnitude where it's very much at the upper limit of what can be transmitted with the 11 kV. Um, and yes, there are additional inefficiencies in there's obviously a significant capital cost, um, in stepping up and stepping back down, um, from 11 kV 2132 and back down to 11. Um, but uh, and also there are losses in that, but there are also losses within the 11 kV, um, transmission of that, um, amount of electricity.

00:09:37:00 - 00:09:47:16

And essentially the, uh, you know, you're at the upper limit in terms of current on the 11 kV circuit for, um, the transmission of that amount of the full electrical demand of the carbon capture facility.

00:09:49:10 - 00:10:08:17

And on that, I mean, I think another another issue that you highlighted was the, um, um, the number of cables to link into the existing power network as something that could prevent, uh, a lower, lower voltage being used. If I've understood that correctly. What's the issue there? Correct. Yeah. So can I request it? Yeah. Mr. Rothery answers that.

00:10:09:21 - 00:10:12:12

Sound rather on behalf of the applicant. Um, that.

00:10:12:14 - 00:10:43:18

Issue there is, is really the volume of cables required in order to transmit that that amount of power. Um, you know, when you start to bury them down into the ground, you know, there's other issues. Um, and it can increase losses and things like that. I think just to pick up on one of the points that

Andy made, uh, it's the actual practical, um, connection that's been proposed in the cloth report that is, um, is what makes it unfeasible.

00:10:44:00 - 00:11:23:01

Because the connection between the generator and the transformer is kind of in two stages. You've got a buried section with cable for R1, and that's buried under the ground, under an access road that then emerges into a transformer compound. And that area has enough space available to be able to break into that connection, and then put suitable electrical circuit breakers and disconnected in there to, to enable a connection away from that. When you come to the other side of that, there's an actual generator circuit breaker, there's insulated bus stopped, which is in a very confined area.

00:11:23:08 - 00:11:34:03

Again, it would not be practical to then try to break into that, um, into that connection arrangement in order to then derive a suitable supply from it. Um.

00:11:36:25 - 00:12:04:19

I think also in the black cloth, um, proposal. They are not proposing a fully redundant connection, and both supplies that come from R1 and R2 are, in effect, 50% of the power from each side. Um, it's my understanding that Corey's desire is to have a fully redundant connection, so that would be enabling the full load to be, uh, adopted by one, uh, by one circuit that comes in.

00:12:06:16 - 00:12:18:09

So on that thing about, uh, you saying that's how the Blake, um, sorry, I've forgotten the second Rick Cluff, um, scheme was designed. Have I got that correct?

00:12:18:22 - 00:12:34:25

Yeah. At the moment, it looks to me is that only 50% of the power is originated at 11 kV from either R1 and R2, so that isn't a fully redundant connection. So if there was any, um, issues on each one of those circuits, then the carbon capture plant would not be able to run.

00:12:37:18 - 00:12:40:18

Or run at a reduced capacity.

00:12:42:09 - 00:12:45:12

Okay. Thank you. I was going to ask Doctor Ferguson. Doctor?

00:12:45:23 - 00:13:23:22

Yeah. Um, can I just come in on, uh, redundancy? So I think it's. And you will correct me if I'm wrong on this, but I think it's important to look at the operational philosophy for this facility. So the primary source of power for it will be generated from the back pressure steam turbines that are part of the carbon capture development. So when those steam turbines are running and providing steam for the facility and also electricity, then that's how most of the electricity will be provided.

00:13:23:24 - 00:14:01:01

Plus maybe a wee bit of top up from the existing Riverside one and Riverside two facilities. Um, the need for electricity for those facilities will be primarily then driven by an occasion when those back pressure steam turbines aren't able to provide electricity. So the supply, when you're looking at all of it, is effectively that's a backup to the main site. So although Corrie may be looking for redundancy on that effectively it's redundancy on redundancy.

00:14:01:13 - 00:14:13:27

And I would argue that the amount of time that that will actually make a difference to the operation will actually be a very small number of hours in the year.

00:14:15:02 - 00:14:22:06

So if you're advising a client, you know, putting yourself in a position of.

00:14:22:08 - 00:14:22:23

Corey.

00:14:22:25 - 00:14:35:14

Would you be confident to say that, um, uh, you know, having having the what you call the sort of a, you know, backup on a backup wouldn't be necessary? Would you be able to sort of sign that off.

00:14:35:26 - 00:15:08:09

Um, I think what you would need to do is you'd need to have a look at effectively, you do a reliability and maintenance study, and you'd work out how many hours a year you would be out for in addition to what you would think you would be out without it. And there'll be a cost to being offline for those number of hours. And then there'll be a capital cost for putting in additional infrastructure and cable. And you would compare the two and you would get your answer from that way.

00:15:08:11 - 00:15:27:13

So you couldn't just say, yes, I want redundancy or no, I don't. You'd have to go through, or at least I certainly would, I'm sure. Um, the gentleman across the table would do a similar exercise, um, where you, you'd look at the, the impact of doing it and the impact of not doing it. And an answer would be arrived at.

00:15:28:09 - 00:16:02:00

And so obviously this is coming back to um, the, the amount of land Take that a proposal. And your argument, as I understand, is that with an 11 kilovolt approach, you'd need a much smaller area for for switchgear. But at the end of the day, is it not up to you to decide what what level of power they want and what their attitude to risk of when things shut down is? And does that not then have a consequential impact on, uh, on land take and space requirement for land?

00:16:02:02 - 00:16:38:13

So, um, I think that's where maybe it departs a wee bit from the, the technical side. Um, if you had an infinite amount of land, I would entirely agree that it is for whoever's developing it to make that decision. Um, at some point, you know, those decisions end up meaning that more land is required. And the consequential impact of that is that the land will join with business is affected. And I guess somebody probably Yourself needs to make a decision on whether the benefit of being able to operate.

00:16:38:20 - 00:16:49:27

In this case, maybe a few more hours a year is worth the benefit to Lancelot. And. Having the compulsory purchase and that's that's not something I can comment on from a technical standpoint.

00:16:50:14 - 00:16:50:29

Okay.

00:16:51:16 - 00:16:54:25

I think I'll just say Doctor Ferguson had said, I don't want to.

00:16:55:04 - 00:16:57:20

Thank you for joining my attention to that Doctor Ferguson.

00:16:58:20 - 00:17:12:06

Yes. I just had a couple of points. So one is on the redundancy. So at the moment we only have 211 kV cables six 30mm squared. So they're not huge cables. Um, hello? You still hear me?

00:17:12:25 - 00:17:13:12

I can hear.

00:17:13:14 - 00:17:43:17

You. Okay, great. Thank you. Uh, so to add redundancy, we could use a third cable. It's quite a small distance for the 11 kV. Um, so I don't think, you know, if we did require more redundancy, I don't think that would be a, you know, a huge concern. Um, certainly. I think it could be looked at, um, in terms of further feasibility. Um, I think the losses, um, we've done a lot of calculation between the two, um, proposals or the original proposal. And this alternative, 11 kV.

00:17:43:19 - 00:18:20:17

We believe the losses are lower because we don't have an existing transformer and we're not going as far. Um, if we take 11 KB directly. Um, Simon made a third point around the actual practicalities of it. Um, we haven't really seen sufficient information to be able to comment on on the practicalities of getting the 11 kV out, but in these circumstances, there is normally a way, even if that means some upgrades of existing equipment or extensions to existing equipment, which again, we would have believed would be more cost effective and also requiring less space than the um, than the existing option.

00:18:21:12 - 00:18:22:29

So I just wanted to add those points.

00:18:24:07 - 00:18:28:12

Thank you. I think I'll ask Mr. Cross if he can respond to those.

00:18:28:17 - 00:18:58:09

So sorry, I interrupted. Sorry. Um, Richard attorney for Lance. So could I just also say that on as Doctor Ferguson said on the practicalities point, we so far have only been told before today the practicalities of connection is literally that phrase, and the further detail that's just been supplied has come to us for the first time orally. So, um, it is something that we would want to investigate further and put further submissions in on, um, because the applicant has never provided that.

00:18:58:11 - 00:19:29:20

Yeah. And I mean, you've already explained that there's a subsequent report which I haven't seen. So, um, I'm, I'm sort of expecting that even after this session, there'll be some further, further exchanges on this. Um, so so, Mr.. Mr. cross, thank you. Yes. Andrew Cross for the applicant. Um, yes. I think on a number of points there which you want to respond on, um, on Doctor Edgar's reference to a reliability and availability study. Yes, I think we would you know, obviously a project like this, we would always expect around the study to be carried out at a later stage in the design.

00:19:30:12 - 00:20:03:12

But it is Corey's philosophy to, you know, provide as much resilience and redundancy as possible because in this instance that maximises their opportunity to capture CO2. So that's very much been the philosophy behind the design. Um, in terms of the practicalities of making the connection and Doctor Ferguson, obviously, yes, there potentially is a way. But at the moment, from our initial review or not from from a fairly detailed review of the existing infrastructure, we believe that's quite a high risk to assume that we can make a connection, because from what we've seen, it is impractical.

00:20:03:14 - 00:20:41:06

And whether it's two cables, three cables or 6 or 7 cables to provide a redundant supply, which we would still maintain, you know, we would recommend that that that Corey, provide that. Um, you know, we we believe that's an impractical approach. So maintaining the flexibility within the layout to have A13, two kV supply, um, with the 132 kV step down infrastructure within the footprint of the CCF, I think is an essential part of making sure that as the design develops and when the Ram study is done at a later stage, there is the flexibility to provide a one through two kV connection if that's required, because.

00:20:41:08 - 00:21:18:19

On further detailed, further detailed review, you know that it does prove to be genuinely impractical to, um, to make those connections to the 11 kV network. And yeah, acknowledging that, yes, the 132 kV, um, option is more expensive and potentially has higher losses. But, you know, that's not it's not a necessarily a cost balance. It's about redundancy and resilience and having the flexibility to make sure that we don't reduce that flexibility by assuming that we can gain a acquire 11 kV connection, and then that, you know, the the whole project becomes unfeasible because that connection can't be made.

00:21:18:25 - 00:21:22:07

And we, you know, we haven't got the room for the for the fallback to one, three, two kV.

00:21:23:16 - 00:22:06:05

Sir Richard, attorney for Lansdale. Um, I think in a sense that's exposes the point as as was just said by Mr. Cross, there potentially is a way to provide that connection. That's something that we will want to scrutinise. And he talks then about flexibility. And we understand that, uh, he wants to keep his options open on, on all of these items that we're going to deal with. And we understand that. And, you know, we maybe if we run the other side of the room, we might be in the same position. But when faced with a compulsory acquisition, Corey are going to have to show that it is not possible to avoid the landfill, and not that it would be better for them to have the flexibility.

00:22:06:29 - 00:22:41:27

That's really not any part of it. So what, um, we would need to see and I respectfully, yes, you would need to see is evidence that it is not feasible to provide those 11 kV connections because if it is feasible, then the land saving is in the region of 4000m² or half of the landfill site. So it's a very significant item. And at the moment, the way Mr. Crawford is, is potentially there is a way to do it, but it's impractical.

00:22:41:29 - 00:23:13:15

But that's not good enough for for compulsory acquisition. So I think it's an area where perhaps if we take the detailed review that, um, has been done, if that could be supplied at the next deadline, then we'll have a chance through our consultants to review this, this review document which we haven't seen. And then maybe we can comment on whether we agree with the conclusion. But I think even on the way Mr. Cross put it, he says that there potentially is a way to do it.

00:23:13:17 - 00:23:21:28

And in my submission, that's enough for you to say they don't need the land for the, um, Substation switchyard.

00:23:24:01 - 00:23:57:02

Okay, let's come back, then I shall. I've just got a couple of general questions I want to ask, which I was going to ask at the end of this, but it's come to mind now. So, Mr. Cross. So yeah, just to respond on that specific point then. Yeah, I think it's slightly slight misinterpretation of what I said. Um, you know, all the evidence we've seen so far shows that it's impractical to make that connection. I was just acknowledging Doctor Ferguson's point that, you know, you can't. It's difficult to prove a negative at this stage. But, you know, we have not yet from the evidence we've seen, seen in a way that it is practical to make an 11 kV connection.

00:23:59:18 - 00:24:33:25

This is a question it's not not really for Mr. Cross. I think it's the applicant in general. It is in terms of, you know, as Mr. Tierney pointed out, the high bar that needs to be demonstrated to compulsory acquire land. Is it the case that, you know, your scheme is still to, uh, to to outline and to unrefined to actually be able to make a convincing case for compulsory acquisition. Given the amount of detailed design that needs to carry on, and that that detailed design may well result in efficiencies in land.

00:24:40:18 - 00:24:44:07

Um, given the policy context. Oh.

00:24:44:16 - 00:24:45:05

Sorry to interrupt.

00:24:45:22 - 00:24:46:17

So I should say who I am.

00:24:46:19 - 00:24:54:04

I know it's just because I'm on the recording. Sometimes faces aren't shown, so it just means that anyone hearing it knows who's talking. Thank you.

00:24:54:23 - 00:25:32:26

What's this Andrew type for the applicant. Um, this, um, question falls to be considered in the light of the the policy context, um, that there's an urgent need to bring forward these proposals. Um, and, um, therefore, we need to proceed with the development consent order now to enable it as early as possible to have the requisite consents to tie in with the effort, the financial investment decision and anticipated to tie in with tracker two potentially as well.

00:25:33:05 - 00:26:02:28

So, um, uh, it, um, uh, needs to proceed now at pace. Um, if it has to go through a long, detailed design, um, position, um, uh, assessment at this stage that inevitably defers the whole, um, the whole process. Um, and, um, in addition, um, there is the.

00:26:05:11 - 00:26:09:02

Um, uh.

00:26:11:06 - 00:26:12:06

Just check.

00:26:59:19 - 00:27:24:21

Sorry, sir, I'm on analog, so I've been turning the pages of my DCO. But article 28, um, also provides that the the land that is ultimately acquired is only such as is required for the authorized development. So if it transpires at a later stage, which we don't think is likely for reasons, we'll explain, that less land can be taken, then that kicks in.

00:27:24:27 - 00:27:25:15

Yes.

00:27:25:17 - 00:27:31:29

Well, that's that's a slight that's slightly different to the actual test that I need to make a recommendation to the Secretary of State on it.

00:27:32:01 - 00:27:32:20

That's understood.

00:27:32:22 - 00:27:37:08

Yes. That's the sort of the I won't call it a fallback, but that's a.

00:27:37:10 - 00:28:07:24

That's a second. That's a secondary stage. I appreciate that. Yes. So it's really the question of, um, uh, not, uh, being in a position to progress rapidly now with this DCO at this stage, um, to enable the detailed designs to come forward with the input from experts as well. Um, and to be in a position then to go forward as swiftly as possible with capturing carbon.

00:28:09:17 - 00:28:10:02

So if I.

00:28:10:04 - 00:28:10:19

Could.

00:28:10:27 - 00:28:13:12

I'm sorry, Mr. Fox. Mr. Fox is good to follow.

00:28:14:04 - 00:28:46:14

Yes, sorry. Just one mistake to say, Mr. Fox, and that we can make two additional points. So, firstly, as we've said in writing and orally before, the the scheme has been developed in conversation with technological providers we've produced. Although we don't rely on it, we've produced an indicative equipment layout drawing which if you also take account of the contextual indicative of equipment layout drawing, accounts for all the things that we know that we need in order to develop a carbon capture facility, taking account of all of the constraints.

00:28:47:05 - 00:29:23:07

And I'd also make the point so that the the DCA regime is not set up to consent detailed design, it's to consent a preliminary design. And that's and that's what we we've produced. And every, every scheme has an element of flexibility in it. And it suggests we have to justify the compelling case for the scheme and the flexibility that we need within it. But I would. I would strongly suggest that our our approach is not inconsistent with the approach for, um, DCS for all kinds of schemes to date.

00:29:24:18 - 00:29:27:14

Thank you. Mr. T um.

00:29:27:16 - 00:30:04:08

Richard Turney for Ian. So just just two short points, really. Um, first of all, I take the point that it said there's an urgent need, but if there's an urgent need, then surely Corey's design can advance to reflect that urgency. In other words, if they need to grapple with particular technical issues to see if they can minimize land take, then they can do that. And it sounds as though, from the information we've received today, that that is precisely the kind of thing that is going on because, um, new work is being done by, um, the electrical engineers to decide what can be done.

00:30:04:22 - 00:30:59:20

Various changes have been made along the way. The second point is, um, about this, this broader question of, um, flexibility and whether it's justified. And, um, in essence, there is no case for flexibility when it comes to compulsory acquisition. In other words, the question is one of necessity, is it necessary? And here for thousand square meters of land, for a, uh, substation switchyard, is it required or is it not required, bearing in mind that if it is required, there will be a substantial

interference with land rights? And that's a binary choice on that point, is it required or not? And to say we may or may not require it is not good enough for compulsory acquisition.

00:30:59:22 - 00:31:31:07

It might be for development consent. And that's what the Court of Appeal anticipated in the FCC case, that you may be able to say, I can have that flexibility in my content. That's fine. I have outlined consent for it. But what you can't say is that I also can have the land to decide later whether or not I, in fact, need to construct that piece of infrastructure. So that's the difference. And I think Mr. Fox's submission confuses the two. Yes, flexibility in terms of outline design, etc.

00:31:31:19 - 00:31:39:22

but no, not flexibility for dealing with the question of whether the land is required. Having in mind the high bar.

00:31:40:24 - 00:31:41:10

Thank you. Mr..

00:31:42:29 - 00:32:18:05

Doctor. I was going to ask you the probably a similar question that I asked the applicant there is that. I mean, I mean, and bear in mind what Mr. Attorney said, but given that obviously the design is something that's evolving. I mean, is is your alternative design, again, really being sort of prepared at two earlier a stage with the information you've got and can expect to get from the from the applicant in order to to come up with a feasible, feasible alternative that actually does convincingly demonstrate that the quarry scheme could occupy a smaller, smaller footprint.

00:32:19:15 - 00:32:26:18

Uh, Craig. Edgar. So, um, so if I may answer in, I guess, two parts.

00:32:26:29 - 00:32:27:14

Um, yeah.

00:32:27:16 - 00:32:33:08

Apologies if I. No, no, no. That's fine. So the alternative design.

00:32:35:23 - 00:32:47:24

In many ways, is a tool by which I seek to show that it is possible to accommodate the plant and equipment in a smaller footprint than the applicant has done.

00:32:50:05 - 00:32:59:02

Could I be confident that you could build it at exactly the square footage that I have said? No, because it is a preliminary design. So.

00:33:01:23 - 00:33:34:27

What I think and what I've tried to do in my written submissions is show why and what's driving the difference between the alternative design and the the applicant's design. And there are a number of areas there where I believe that there are opportunities to save, save footprint. And as both designs develop, um, you may find that the overall footprint moves somewhat.

00:33:35:24 - 00:34:12:23

Um, so I'm sorry if this is a slightly long winded response. Um, I'm not saying you can 100% build it on that footprint, but what I'm saying is that footprint that the alternative design comes up with is indicative that there are a significant number of opportunities to reduce the footprint from the applicant's design. And you've got a list there of some of the points of debate, and depending on how

many of them could actually get realized, the footprint will move towards the alternative design rather than the applicants.

00:34:13:11 - 00:34:14:04

Yeah. So

00:34:15:19 - 00:34:51:01

I understand what you've what you said there, but I suppose I'm guessing in terms of sort of your experience in, uh, either working on or advising on or designing similar, similar schemes. Uh, given that given the point that the that the applicants are in the moment, I mean, is it reasonable for you to be flagging up these particular areas? And I think, I think in particular, it's the size of the switchyard. Uh, it's whether there could be co-location with water storage. It's the capacity and number of the, the carbon dioxide tanks and the general sort of efficiencies and layout.

00:34:51:28 - 00:34:57:11

And I think there's an issue about planting, I think some of the other issues with things that you can see that you could perhaps have a huge impact.

00:34:57:13 - 00:35:32:29

Um, yeah. So Craig Cricket. So, um, I guess I've done both sorts of design. Um, I've done the one where you've got a nice big green field or brown field and you don't have any space constraints. And I've done, um, plants where you're putting in into a constrained area. And if you've got that green field, you tend to be quite generous to yourself. And you make assumptions and you, um, you take as much space as you need. When you have a constrained site, you make slightly different design decisions based around those constraints.

00:35:33:25 - 00:35:37:17

And there's a bit of trade off. So.

00:35:40:21 - 00:35:48:08

I don't think there's ah, if you look at, say this, maybe the best example, there would be a single or double line facility. So I don't think.

00:35:48:17 - 00:35:49:02

There.

00:35:49:04 - 00:36:23:18

Was that there was a single or double line. I don't think there's any debate between the two parties. That single line would use less space than a double line. Um, both of us have put in a scheme on the double line for flexibility reasons. But if you absolutely had to fit the facility into a smaller space, you could quite reasonably make that decision to go with a single line and make that decision now. And you would sacrifice a wee bit of flexibility in terms of when you build them and how you build them out.

00:36:24:04 - 00:36:24:19

So

00:36:26:07 - 00:36:44:10

there are measures that can be taken to reduce the space that don't necessarily compromise the end result. Um, but it depends where you start from and how eager you are to reduce the footprint.

00:36:45:04 - 00:37:18:19

Okay. Thank you. So I suppose the follow up to to the applicant, though, is in terms of what Doctor Edgar says about, um, you know, you respond to the constraints that you're you're faced with. Um, uh, I guess this picks up on, uh, Mr. Tierney's point as well. I mean, have have you sort of incorrectly identified what the constraints are in terms of the, the land ownership or the land use in terms of giving yourself more generosity in land to play with the new than you should have done.

00:37:19:12 - 00:37:21:22

If the if that, if that question makes sense.

00:37:24:18 - 00:38:02:08

So that might be a matter. I think that, um, really uh, um, possibly as specific to some of the individual items, um, because there are some, um, as in this instance, um, clearly the applicant's position is that it has a need to ensure there's enough land, um, for a, uh, an efficient, um, and appropriate CCF to be built, and that in itself requires flexibility at this stage.

00:38:03:04 - 00:38:42:06

Um, in relation to the electrical switchyard. The evidence is that, um, uh, it is not feasible, uh, on current evidence, that that could take a smaller footprint. Um, as, um, Mr. Cross said, has not seen any evidence that what is suggested for the 11 kV or additional cable would be practical. Um, there are other instances, um, if we take the single or double line facility, um, where, um, that decision needs to be made in due course.

00:38:42:26 - 00:39:20:21

Um, having regard to a number of factors which um, Mr. Alderson can um, refer to, and it is vital at this stage to ensure that there is sufficient land to enable, um, the, uh, if it is a double loan facility to enable that, um, to be constructed. Having regard to potential issues such as, um, uh, resilience and the like. Um, there is then the question as to whether or not any of those decisions make a difference to the land that take we that we are at at present, um, examining.

00:39:21:06 - 00:39:36:00

And again, that's a matter that Mr. Alderson can explain as he deals with some of these other matters, such as the CO2 tank capacity and some of the factors that need to be built in, but just standing back, um, as matters stand,

00:39:37:21 - 00:39:54:25

um, flexibility is at the heart of this need case, um, so as to ensure that, uh, a contribution can be made the most efficient and productive contribution can be made to capturing carbon.

00:39:56:19 - 00:40:01:24

Thank you. Mr. Fox, just conscious that Doctor Ferguson, I think, said the hand up.

00:40:02:15 - 00:40:35:00

Yeah, it was just just to add to Mr. Tate's point, and part of the applicant was just to say that a building up Mr. Alderson said earlier is that in our position? Is that you you cannot avoid the mantle monster joinery land with the design if you take if you started from having chosen the site, as I said earlier, taking it from north to south or from south to north. Taking into account all of the things that we say are necessary for the scheme, it is not possible to avoid their land, and that's our kind of funding.

00:40:35:11 - 00:40:57:04

I understand that. I understand, Mr. Turning Point that he says it is. So I'm not sure there's much to be explored on that particular thing. Just I realise I zoomed out to ask some general questions. I'm conscious that Doctor Ferguson's got their the hand up. So I'll just listen to what they have to say.

Then I've got another question just so we can scope out the rest of the discussion. So, Doctor Ferguson.

00:40:57:22 - 00:41:33:03

Oh thank you. It's just to quickly add to Doctor Edgar's points. Um, I think from my perspective, from a professional perspective, the 11 kV solution without the step up when it's going such a short distance would be the most obvious choice. So, you know, for such a short distance, you wouldn't expect and for this load to be stepping up and stepping down. So I think it should at least have equal consideration with the with the alternative option. Um, give it all of the other things we've spoken about. But in terms of it is this should this be a viable option at this point? I would have thought that it's the most obvious option.

00:41:35:08 - 00:42:20:26

Thank you. Can I just check with the again, just going back to, uh, the further work that, uh, that Lancet have done, that the applicants have seen that I haven't. And just going to where we sort of got to with the electrical switch switchyard, which I think, um, I don't think there was sort of many, many points of agreement, but obviously there was a desire to go away and look and look at things in more detail. Are we going to be in the same position with all these items on the agenda? I'm just wondering whether, you know, our on all these items, are we going to end up in the same place or actually, how are we going to be able to get get some some value out of the discussion? I just I just want to make sure that, you know, are we just going to be discussing here today and then work out where there's further evidence, which I haven't seen.

00:42:21:10 - 00:42:24:01

Um, that means for further exchanges. So.

00:42:24:25 - 00:42:48:24

Um, Rich attorney for answer. I don't think so. I think, uh, the electrical one, effectively the, um, Blake Cluff report was commissioned, uh, to review what Doctor Edgar had done, which was originally he set out his point on an 11 kV distribution in his original report at deadline. One. Blake Cluff have now worked that up. So so so.

00:42:48:26 - 00:42:49:27

Just on the electrical.

00:42:50:00 - 00:43:15:23

So that's on that too. But that you haven't seen that. The response we've had from Mr. Cross and Mr. Rothery today is new information. And they're going to provide their um I don't know what it was called a detailed detailed assessment. I think they called it. Um, so presumably we'll see that detailed assessment at the next deadline and we'll want to comment on that. But I think in respect of other matters, I think.

00:43:18:20 - 00:43:41:25

I perhaps misunderstood the scope of the Blake Cluff report. So that was just dealing with the electrical substation. Okay. Well, in that case, I think, um, unless anybody's got any other points to make on the, uh, the, the the electrical, uh, switch switchgear, I think it's pretty helpful to move on to, uh, the question of whether apparatus could be co-located. Co-located with water storage.

00:43:45:23 - 00:44:17:13

So. Yeah. So again. Uh, and, um, uh, I guess this is a question for Mrs. Alderson, but you can direct it to anyone. Uh, I think the suggestion is why? You know, why? Why can't, uh, water attenuation be stored in an underground tank? Or even for that argument, uh, an elevated an elevated tank, presumably that could still ensure, uh, any contaminant runoff is is not discharged from the site,

which I understand is one of the main, uh, sort of design, uh, things behind the, uh, the water attenuation

00:44:19:01 - 00:44:19:16
just.

00:44:19:18 - 00:44:30:16
Before we live into that. I think the dispute is really about storage of water that's coming into the site from Thames Water Supply, rather than about storage surface water runoff.

00:44:30:19 - 00:44:33:23
I perhaps misunderstood, I thought it was relating. Well, perhaps.

00:44:34:04 - 00:44:34:21
So.

00:44:35:09 - 00:44:37:04
You can enlighten me on that.

00:44:38:17 - 00:45:09:02
So can I take the liberty of sort of saying what I think the points of debate are. So initially, um, in the alternatively, we had suggested an above ground water storage tank. Um, the applicant has suggested that the below ground water storage tank, and we have now adopted that. Um, there is a point of difference in what it would be appropriate to do above the underground water storage tank.

00:45:09:04 - 00:45:33:17
And then the applicant has also raised questions about it's not just the clean water storage tank that needs to be accommodated. It's also what I imagine is an interceptor tank to catch runoff. And it's also around ensuring sustainable urban drainage, etc.. And, um, I think that's the point of difference on this issue.

00:45:34:05 - 00:46:04:15
Yeah. But at the end of the day, the question is could could you use up less space with a different approach to water storage? Is that correct? But what you're saying is there's two aspects there. One is the, uh, the sort of. Yeah. For my non-technical thing, the fresh supply coming into the, the site. And the other one is any, any water that's surplus, whether it's runoff or whatever that, that we want to make. Well, I say we need to make sure it doesn't just get discharged without without being either treated or stored beforehand.

00:46:04:17 - 00:46:05:02
Yeah.

00:46:05:04 - 00:46:46:17
So to take the first point and then I'll let the gentleman there. And so, so my challenge on the applicant's design for the underground water storage isn't the underground water storage tank itself. It's what you've chosen to use the space above the water storage tank for. And the fact that there is no sort of essential infrastructure there, whether that be roads, um, tanks, whatever, there is an opportunity to put Infrastructure above that tank, and in contextually out it's shown as effectively landscaped ground.

00:46:47:00 - 00:46:50:25
And I think quote unquote a better use could have been made for that.

00:46:52:29 - 00:47:00:18

And so I suppose the question to Mr. Olson, why why can't you, uh, co-locate facilities

00:47:02:10 - 00:47:02:25

like that?

00:47:02:27 - 00:47:04:06

Mr. cross, answer this question.

00:47:04:10 - 00:47:35:05

Okay. Sorry, Mr. Cross. Thank you. Andy Cross from representing the applicant. Uh, yeah. So, as you rightly pointed out, um, there have been some discussion about the water storage tank, which is the the buffer for the incoming water supply from Thames Water. Um, and in discussing with Thames Water the, the ability, their ability to provide the required amounts of, you know, the additional supply of surface water. Uh, they indicated the requirement for three days worth of buffer storage due to the potential for diurnal variation in the flow rate that they can provide.

00:47:35:15 - 00:48:13:09

But I think, as you note on the on our indicative layout, it does describe the areas of water management area rather than just for, you know, an incoming water buffer tank. So there are other uses for that. I think there already is a surface water attenuation pond on top of it, which is part of the drainage strategy for the whole site, but also, yes, the potential for um, runoff tanks and fire water runoff holding tanks so that if there is runoff, you know, potentially contaminated runoff from those areas that's stored before being discharged to make sure that you're not discharging any contaminated water off site into the surface water drainage.

00:48:13:29 - 00:48:33:27

Those uses potentially, or, you know, typically that sort of surface water runoff, our water runoff tank would be an open tank. At the very least, you need, you know, access for maintenance, you know, contaminants, silt, solid matter builds up within those tanks. There are also pumps, valves, stocks. So having other equipment on top of it would.

00:48:36:02 - 00:49:12:21

Make it, you know. I mean, you wouldn't be able to carry out the necessary maintenance on those sites on, on, you know, on those facilities. Um, you know, if there was a failure and the plant had to shut down because the, um, you know, there was an issue with, with that needed access to those tanks, if there's another use above it, they know that that extends the downtime of the plant, uh, leads to, you know, additional release of CO₂. So we feel that, um, you know, that it's that, that area where, you know, where that water management area is needs to be a dedicated area and construction of other facilities above it would would have an unacceptable effect on its operation.

00:49:14:04 - 00:49:55:15

If I understand correctly, that you're saying the water management area would have an underground tank and then effectively a pond on top? Have I got the wrong end of the stick, I think? No. In that area there are above ground tanks and below ground tanks. Whether there's one on top of the other or they're next to each other. Again, that's you know, there will be again at the later stages of detailed design. There'll be a containment strategy done. I guess the question is if if they're next to each other, why couldn't the one that's going to be underground be co-located elsewhere on the site with other kit on top, which I think is the the point that Doctor Edgar is making that, you know, that could be a space saver for the the below ground tank still has maintenance requirements.

00:49:55:17 - 00:50:27:29

You know, there will be pumps, valves within that tank. There'll be potential need to access it for cleaning it out, removal of solid material so that those operation maintenance operations on the buried tank would, you know, impact the operation of the facility above it as well. Would that requirement for sort of maintenance precluded? I mean, presumably you get underground or above ground elevated storage tanks, which can still be maintained, which have got other things either on top of them or underneath them. Well, I suppose it depends what you put on top of it, I think in Mr.

00:50:28:01 - 00:51:00:21

Edgar's alternative light. But the, um, outside lay down compound on top of it. Certainly, you know that that land use, um, you know, is flexible land use. It's in continuous use, you know, for significant periods, you know, when there is a major plant outage and major maintenance going on, that's very intense activity on there. So those facilities, there would be temporary accommodation material, equipment storage, um, if the tank if there was a tank below there, then inevitably that would have to be designed for, you know, the loading imposed by that.

00:51:00:23 - 00:51:14:29

And that would inevitably put restrictions and constraints on the use of the laydown. That would be, again, be unacceptable in terms of the, um, the operational flexibility and resilience, um, of the plant as a whole to be able to maintain and operate.

00:51:15:15 - 00:51:49:06

So, so yeah, I think I'd go on. So, um, so just make a couple of points on that. Um, in terms of the access to the, the underground storage tank, you don't And you're going to get access probably through manholes. So what you wouldn't want to put on top of it would be a whole swimming pool where you couldn't get access to any of it. And so what you need to do is you need to have things above it that still allow you to get the sort of periodic.

00:51:49:09 - 00:52:06:01

So they go between the manholes, if you like. That was my thinking with the operation all the way down, in the sense that it would be relatively easy to avoid the manholes while using it for for operational laydown. There's other things that you could put on there, smaller tanks, etc..

00:52:06:18 - 00:52:08:07

In your scheme, what did you have on top of it?

00:52:08:10 - 00:52:28:14

The operational lay down. Right. Okay. Um, and the other point I would make is that, yes, it's going to have a load on it for all of these bats. Um, a good structural designer will comfortably able to accommodate those loads and make it work.

00:52:31:07 - 00:52:53:11

I think the operational laydown, as Mr. Cross indicated, is not an area that's in permanent use. It's an area that will be in use at times when it's required for work to be done to the site. So in other words, most of the time it will appear as a yard. And the suggestion is that it's a yard with some manholes in it and a tank beneath the yard.

00:52:54:19 - 00:53:07:07

Said Mr. Cresswell. You mentioned that there'd be sort of you would talk about maintenance. The tank would call. It would mean that the yard would be out of use. I mean, is that is that really what would happen if you.

00:53:09:06 - 00:53:56:04

Yeah. Andrew Cross for the applicant. Well, there is the potential for that to happen. And that would have an impact on both the operation of the tank and the use of the laydown area above it. And I don't think I did say that it was only an occasionally used. Its use is variable, but it would be in permanent use. There are times when that use is more intense than others. Um, to respond to Doctor Edwards point on the loading. Yes. I wasn't saying that you couldn't design the roof of the tank for the loadings. I think the the the loadings that you'd allowed in the design would be an inevitable constraint on use of the laydown, which, um, you know, is would lead to unacceptable constraints on how it's used, you know, when it's being used for periods of very intense maintenance when.

00:53:58:11 - 00:54:06:03

This cross is I mean, that's the one. Is there anywhere else where you you could sort of co-locate it with something else?

00:54:07:28 - 00:54:38:04

I don't know. Welfare facilities. Gatehouse. Some landscaping. I don't know, we haven't looked at that. We haven't considered that. Our philosophy was to keep it in its own dedicated area, you know, to to provide, you know, the ability to provide all the, the facilities that are needed without constraint, you know from from other. So I think the similar answer to last time that obviously Corey is saying they followed a particular philosophy where they've segregated these these options.

00:54:38:06 - 00:54:42:02

You've identified that there's a potential to to co-locate. Where does this take us?

00:54:44:12 - 00:55:20:14

Um, I think it is. I can't remember the exact numbers, but it's about 2000m². Give or take the sort of area above the tank. And my argument would be there's 2000m² there that could be used for other things. Um, in my proposal, it's operational laydown that there might be other uses for it as well. But I guess my point really is that that's in the applicant, um, scheme, uh, a potential bit of land that hasn't been used as well as it could have been.

00:55:21:16 - 00:55:57:07

So I think from Richard Turney for Lansdale. I think from our perspective, if unless you're, um, you need to be satisfied that that can't happen. In other words, the co-location can't happen. If it can, then there's a 2000 square meter saving that we need to feed into the question of whether the landfill or monster joinery land is needed. So we just to be clear on all of these items. We understand why the applicant is going for more land. The question for compulsory acquisition is could it do it with less? And I think the answer from Mr.

00:55:57:09 - 00:56:30:05

Cross is, well, it would give us less flexibility in terms of what we could do on top of that land, but we might be able to do something on top of that land for my purposes. That's enough for you to say. You don't need both the tank and another 2000m² to do other activities. There is scope for co-location, and Mr. Cross has said we have not looked at whether any other uses can be co-located on that land. Well, the applicant has to look for that because they need to reduce the land, take or show that they've taken to put it in compulsory acquisition terms.

00:56:30:07 - 00:56:34:23

They've taken the minimum land required to deliver the project.

00:56:36:19 - 00:56:38:21

If I can ask the applicant to respond to that.

00:56:39:18 - 00:57:10:29

So on this, the suggestion has been that operational laydown area can be put on top of, um, underground tanks. And um, you've heard the answer as to why that would not be acceptable in terms of the constraints that put on a combination of needing to maintain and also the use of the laydown, which is in continuing continuous use, albeit with different levels of intensity.

00:57:11:04 - 00:57:50:05

So that suggestion is not considered to be an appropriate one to adopt. Um, so That's the suggestion that we were responding to. There isn't any other specific suggestion as to anything else. And that's what the 2000m², as I understand it, relates to. Um, there isn't any other specific, uh, co-location, um, suggestion, um, that we've heard that would be, um, that we're being asked to consider.

00:57:50:29 - 00:58:19:19

But isn't that Mr. Taylor's point that you haven't looked at potential for co-location across the scheme? So maybe it's not a a laydown area. Maybe there's something something else. And I think that that's what's the argument that there could be space efficiencies which haven't been haven't been investigated, which if I understand this attorney's, uh, case means that perhaps you're asking for more land than you you might actually need.

00:58:20:07 - 00:58:47:13

I'm in final position. As Mr. Cross explained, is that there is a need for a dedicated area to provide those facilities. And that's our position. However, we can go and look to see if there is anything else that you could put on top of that tank. But, um, my my understanding is that that is not the case, but we will come back and respond to that. Specifically, if the focus is shifting from that specific to a more general point.

00:58:47:29 - 00:59:35:17

I think I know because of the way that Mr. Turner sort of arranges his argument. There are some very specific things there, and I think it has sort of identified he's identified some some things which he thinks would have the biggest space implication and therefore potentially the biggest, the biggest savings. So I suppose in some respects, whilst these are very specific things, and we got to look at things in terms of looking at feasibility, I think that that question has got to be looked at Looked across across the piece. Um, because as I understand it, that's the argument from land soldiers that, uh, their land isn't required and that they think they can demonstrate that your facility can be provided on a more compact site using some of these elements as a way of trying to, uh, to save space.

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But I also understand your argument. Again, I don't want to keep rehearsing the two positions because I don't think the positions of the parties are going to.

00:59:44:15 - 00:59:51:15

I mean, if it's attorney for Lansdale, I think if I can just, um, sort of slightly draw the folks in,

00:59:53:13 - 01:00:25:26

we have been surprised that over the course of the conversations with Doctor Edgar, the applicant has given no ground at all. In other words, it hasn't found a saving of any of one square meter, notwithstanding Doctor Edgar's technical input. Now, I think from Mr. Tate's answers, I think the examination will start to start to understand why. And that's because they're not willing to do this. Now what? On this particular issue about putting about Co-locating with a storage tank.

01:00:27:18 - 01:01:01:26

The the activities for the applicant to show that it needs the land. It is not for us to redesign the scheme. We try to interrogate the applicant's design. We weren't able to because of insufficient information, which is why Doctor Baker then set out on a bottom up design to say, here is my

proposition as to how you can arrange a solution, because you haven't told me how you arrange your equipment. We've then had some information in a couple of tranches since then, which has been helpful, but this is not a binary choice for you between Doctor Edgar's layout and the applicant's layout.

01:01:01:28 - 01:01:32:14

It may be that these points expose that both layouts are wrong in the sense that they're not the optimised layout, but there might be a third layout that the applicant can have, which does, for example, co-locate the storage tank with another piece of infrastructure or a welfare building or gatehouse, as you suggested. Those things may well be capable of being co-located. And the applicant's position, Mr. Cross says, is we have not looked at that now. Well, that's what he said.

01:01:32:20 - 01:02:09:27

It might not be true, but it's what the witness said. He said, we have not looked at that. Um, and just quoting um is what he said. Mr. Tate, it might not be true, but it's what your colleague said. We have not looked at it. So that's why I'm putting it in those terms. Um, I think if it sounds as though on your point about whether we do go around in circles in this, it does sound as though we are in a bit of a trap here because, um, whatever we say, the applicant says, um, offers up a reason for for, um, disputing it.

01:02:09:29 - 01:02:40:25

Partially. Um, but then says we haven't looked at any other other possibility. And I think we need to be in a position where we can really put this through the lens of compulsory acquisition, which is this is for the applicant to prove it's not for us to disprove. It's for the applicant to prove. And the threshold that, that they have to cross is a high one for them. The threshold that we have to cross is a low one. It's a low one. It is our land. It is only if there is a compelling case that it can be taken.

01:02:41:19 - 01:03:14:17

And that's why I think we're going around in circles. And as I say, it is surprising that in the course of this, the applicant has not been able to produce any item of process planned for equipment, despite the extensive evidence that it's received from this side. No change whatsoever. Um, and, um, I think, you know, if Doctor Edgar wants to come in on the specifics of the laydown. Um, then that might be helpful, but but we do really need the applicant. I think Mr. Tate needs to see this in a different way, which is what can the applicant do to minimize its land take.

01:03:16:20 - 01:03:28:17

Mr. Tate. So I think there's also a question about good clarification about what somebody said. I mean, obviously we do have the advantage of recording if there is actually a genuine dispute. But yes.

01:03:28:24 - 01:03:35:18

So I think that the context of what you're saying is that there needs to be a dedicated area to provide those specific facilities. So

01:03:37:12 - 01:04:12:12

he wasn't suggesting, sir, he was saying that there wasn't a position that there should be a non dedicated area to provide the facilities needed. So I think it relates to that particular, that particular point. Um, and um, so that's, that's the main response. The primary response in relation to um, this area of land, we've sought to respond to a specific suggestion to see whether that, um, philosophy still applies Uh, to a specific, uh, proposal.

01:04:12:21 - 01:04:47:19

And it does. And then I indicated that, um, we will come back to you and say whether there was anything else that could go into that or notwithstanding the philosophy of one, sets that philosophy to one side. So I did indicate that that we would, although the specific point relates to the operational

leader, which doesn't, which he's given an answer to, which I won't repeat. Um, I did indicate that we'll go away and look to see if there's anything else going on on that. Ignoring the philosophical approach we've taken as to the importance of having a dedicated area.

01:04:48:14 - 01:04:54:20

Thank you. I, I'm conscious we probably do need to move on very briefly, doctor.

01:04:55:21 - 01:05:14:25

I think so. Yeah. Sorry. It was very brief. Just, um, not on the general point, but just for the record, um, I don't actually agree that you couldn't put, um, some porta cabins and some spare equipment, whilst avoiding the manholes and maintaining the structural integrity. I do think that is feasible.

01:05:15:09 - 01:05:48:14

Okay. Thank you. I'd like to move on now to the, uh, to to the query about, uh, liquid, uh, carbon dioxide tank capacity in a number. Um, again, start off, Mister Alderson, about, um, uh, you know why it's not possible to determine that three tanks wouldn't be sufficient if they could have a similar, similar capacity. I think there was in in your, uh, evidence, there was something about the the ability to determine at this stage whether a three tank solution would actually be possible or not.

01:05:48:16 - 01:05:49:17

Have I got that correct?

01:05:51:21 - 01:06:26:21

On behalf of the applicant. From a from a technical basis. Then we agreed three tanks providing 24,000m³ of capacity would be technically possible. As with four tanks, five tanks, six tanks, 16 tanks or 16 vertical vessels, as we've considered. However, one of the overriding concerns in determining the number and size of individual tanks is health and safety considerations, and the the consequence of a potential release of liquid CO₂. And the two factors that come into play are the potential frequency of a release and the consequence of a release were to occur.

01:06:27:01 - 01:06:59:21

So if you have a smaller number of larger tanks, then the frequency of release will be lower because there are a few potential points of failure, but the consequence will be greater. And the the extent of impact on neighboring receptors will extend over a larger geographical area. You know, on the on the other side of that, a large number of smaller tanks, the the frequency of release will be potentially greater because the more points of failure, but the the impact would be would be lessened because the spread of CO₂ would be reduced because of a reduced volume of CO₂ being released.

01:06:59:23 - 01:07:35:27

So those are the two the two factors that come into play when you're looking at the safety considerations and potential impact of a of a release event. And while you've done a preliminary analysis of this, that is too early to determine where the optimum point would lie in terms of the the number and size of tanks. Therefore, we've, you know, to provide flexibility for all possible options. We've determined a footprint based on the on the six tank configuration and provided sufficient space for that so that if that is determined to be the preferred option from a safety perspective, then we can accommodate that on site.

01:07:36:12 - 01:07:58:03

But if it's determined that a smaller number of larger tanks, or indeed a large number of smaller tanks is deemed to be the preferred option from from a safety perspective, and that would be the the design that's selected at a future stage in the design development. So at this stage, you know, we've we've taken the an approach to accommodate all possible configurations and provide sufficient space for that.

01:07:59:12 - 01:08:24:02

And in terms of the Your risk assessment. I mean, was that a specific one about the related to the risk of, uh, of CO₂ release? And did that, did that risk assessment actually come up with a, uh, a sort of a either a figure for how how much you should spread it out in different vessels? Or was that something that that was sort of was more of a sort of an iterative process?

01:08:26:14 - 01:09:02:07

On behalf of the applicant. So the the, the risk assessment was specifically looking at CO₂ release and the, the likelihood and consequence of different release scenarios. And the results are such that there is no obvious preferred solution at this time. And sort of further, more detailed quantitative risk assessment is required as the design develops in order to determine a preferred configuration of the storage tanks. And the other thing to bear in mind is that while at the moment we've assumed 24,000m³ of storage based on the likely largest ship capacity of 20,000, with a 20% margin above that.

01:09:02:15 - 01:09:36:11

Then that's not necessarily going to be the finalized storage volume. You know what further work is going to be required in terms of the more detailed shipping study to determine the potential for delayed ships, ship failure, etc., resulting in a scenario where the buffer storage becomes full and you can no longer capture and buffer store CO₂, resulting in increased emissions to the environment and reduce capture. And so optimizing that that storage volume is something which has to be done first before the detailed quantitative risk assessment is then performed on that finalized required volume.

01:09:36:13 - 01:09:42:21

So it's very much a sort of an iterative sort of process as the design progresses before finalizing a preferred configuration.

01:09:44:12 - 01:09:45:27

Okay. Thank you. And

01:09:47:17 - 01:10:22:02

as for your response on that, but also in terms of this issue about risk assessment, I mean, if the if the applicant has carried out a risk assessment and they've needed to make this this choice between sort of, you know, larger capacity. Fewer. Smaller capacity, more in terms of the risk of release, you know, is how have you approached that? And again, you know, how would you use that to advise clients here? Is it if a risk assessment said that you should have six rather than than three, would that not be something you'd need to follow?

01:10:22:19 - 01:11:04:29

Uh, Craig. Edgar. Uh, so, um, in terms of responding to the point made by the applicant there, from a technical standpoint, I don't think there's any disagreement between us on what's required technically here. Um, I think what I have done is I have sought to accommodate the CO₂ in a small a number of tanks as possible. That is the most space efficient manner. Um, like the applicant, I have not carried out the full consequence analysis to work out where the three would be slightly more safe than sex, or vice versa.

01:11:05:11 - 01:11:36:05

Um, and like the applicant, I do not know whether 6 or 3 is better at this stage. I think this one falls into the category of where the applicant is, um, looking to retain flexibility, um, and looking to be able to make a choice later on in the design. And I think the question really is, um, is that right? Or could that sort of quantitative analysis be done now? I would argue probably could, because you don't need to do too much of the detailed design in order to do it effectively.

01:11:36:07 - 01:12:05:28

You just need the sort of storage volume. Then you do your, um, dispersion modelling and your quantitative analysis of who's going to be in the areas. So my argument here would be that it is possible, if you were doing the design for this, to have done sufficient work to make the decision on 3 or 6 tanks, and at the moment they are effectively. Keeping the options open for reasons as more sensible explained.

01:12:06:09 - 01:12:13:23

But do you accept that actually having done that, it may well actually indicate that you might need more space because you might need more tanks?

01:12:13:25 - 01:12:19:29

Yes, it's entirely possible. The answer comes out to be six tanks. It's entirely possible the answer comes out to be three.

01:12:21:03 - 01:12:49:18

Okay, so I think just to reach to any answer, just to I think you the way you put the question to Mr. Doctor was if the applicant has done that assessment, but I think just to for the record and he'll correct me if I'm wrong, but I think what Mr. Alderson said was that the results of the work done to date as such, that, no, there is no obvious preferred solution at this time. In other words, they do not indicate six rather than three, and further work would need to be done.

01:12:50:09 - 01:12:54:28

Yeah, I think that was my my understanding. I mean, Mr. this whole thing to just clarify that point.

01:12:55:15 - 01:13:28:24

Yeah. On behalf of the applicant. Yes. There's no sort of clear sort of preferred solution at this stage, but I'll just pick up on on a point that Doctor Edgar made. We can't finalize the risk assessment at the moment for the reason I mentioned that we have not yet finalised the volume required, which has to be informed by the finalised shipping study, which can't be done until we finalised the shipping routes, the shipping vessel sizes, etc., to determine the required storage volumes. So 24,000 is the is the the figure that we've used at the moment for analysis purposes.

01:13:28:29 - 01:14:03:09

But it may not be 24,000. Ultimately, it may be a larger figure if we if we determine that a larger buffer is required to take into account the potential of of delayed ships, etc., because the state we wish to avoid a scenario where the buffer storage is full, we can no longer capture CO₂ and and reduce the quantity of CO₂ that the facility captures. And I'd also just mentioned that we have considered the scenario of three tanks that were located within the area on our indicative layout, where we currently show the six tanks, and where there is some reduction in the overall footprint, because obviously each of the three is larger than the current six.

01:14:03:20 - 01:14:11:12

The reduction of footprint is somewhat minimal and not sufficient to accommodate any other processing facilities within that part of the site.

01:14:13:22 - 01:14:15:16

So if you'd like to add to that.

01:14:16:22 - 01:14:24:01

No, I think we have explained my my position on it. So yeah, I think okay.

01:14:24:03 - 01:14:47:19

I think again that I have got some more questions, but I think again, I understand that the positioning of anticipated I think what the, the, the issue about sort of the level of certainty that uh is required for compulsory areas. Is there anything yet the applicant wants to add on that particular one? Mr. Turner, do you want to be on average?

01:14:47:21 - 01:15:07:05

Certainly. I suppose just the question really for the applicant is although it might require further CO2 storage volume once it's done, it's shipping study. Why could it not carry out the risk analysis, the consequence assessment, etc. based on 24,000 for the purposes of the design at this stage?

01:15:09:27 - 01:15:52:22

Tony Allison, on behalf of the applicant, well, that has been the best of the preliminary study that we've done, which, as I said, hasn't shown a clear preferred solution in terms of the number of tanks because of the the relative performance in terms of the the frequency of a release and the consequence of release and the trade off between those two factors for for different numbers and sizes of tanks. Um, when we finalize the overall volume and therefore the size of each individual tank for each of those scenarios, then the results may, may, may differ because the, you know, the extent of release may impact different receptors for different cases and and make one solution, the standard preferred option from from a safety perspective at that point.

01:15:52:27 - 01:16:02:03

But without doing that on the on the finalized volume, you're you're not analyzing the the overall sort of consequence of a release for each of the cases.

01:16:02:23 - 01:16:34:03

So I think the point I was making was you could do that assessment based on 24,000. It may be that then you'd have to impose that as a parameter, a requirement in the development consent order. But you could do that assessment based on 24,000 and it hasn't been done. What the applicant is saying is that it wants to decide later what volume of storage it needs, then carry out the risk assessment at that stage, and then reach a conclusion about how much land it will need for that storage. And we say that's the wrong approach.

01:16:34:17 - 01:16:50:12

So it says 24,000. Now it could assess risk, assess 24,000, come to a conclusion as to whether it's three tanks or six tanks or a different number of tanks. And then we could resolve the point and, um, fix it for present purposes.

01:16:53:03 - 01:16:56:26

Okay. Thank you, Mr. Tierney. Is there anything the applicant would like to add on that particular.

01:16:58:27 - 01:17:33:20

On behalf of the applicant. Just to reiterate, on that basis, of 24,006 tanks versus three tanks. There's no obvious preference for one or the other from a safety perspective, and therefore the more detailed analysis will be required in order to determine which is the safer configuration when we finalize the storage requirements. Therefore, we wish to retain the flexibility to have three 4 or 5 six greater than six. If anyone is determined to be the preferred solution, and I stress it is very much driven by safety, not by other sort of your cost or the other considerations.

01:17:33:22 - 01:17:36:01

At this stage, it is a safety driven consideration.

01:17:41:03 - 01:18:08:23

Uh, I think in terms of the storage, I've got no further further questions on that. And then the next item is about, uh, I think I've just talked I've called it efficiency in in layout. So I'm Doctor Edgar, the, the African advisors that you've sort of agreed particular process footprint areas. But they have suggested that your alternative layout actually shows smaller, smaller areas. Is is that correct?

01:18:08:29 - 01:18:48:03

Uh, Craig Edgar line. So I think that's a bit of a misunderstanding. Um, I don't know if you've seen it, but we asked for a bit of clarification on what they meant by that, and then they sort of took groups of equipment and said that the footprint was different. So with the exceptions of switchyard, heat transfer station and the CO2 storage that we're just talking about, um, I do not disagree with the footprint of any of the actual main items of equipment. Um, the total amount of area that I believe I can fit those items of equipment into is smaller than the applicants.

01:18:48:05 - 01:19:01:10

But in terms of the footprint of those individual items of equipment, I do not disagree. And the alternative layout adopts those same footprints. So, for instance, since the

01:19:02:28 - 01:19:24:07

first hearing when we presented the initial layout, at that stage I had a different footprint for cooling, for instance. Since then, I've now adopted the same footprint for cooling as the applicant. So the individual items of equipment that form the plant should have the same footprint, both in the applicant's design and mine.

01:19:25:12 - 01:19:31:21

Okay, perhaps I got the wrong end of the stick from reading the, uh, the applicant's comments there.

01:19:33:03 - 01:19:52:25

Um, no, sir, because there still appear to be, um, uh, differences in the in the area, even though the circle shown may be similarly sized. So I'm going to ask Mr. Alderson just to explain what the difference is and whether there should be a difference.

01:19:54:03 - 01:20:37:08

Tony Alderson on behalf of the applicant. So if, for example, we take items three through to eight on our indicative layout, which are the main carbon capture process facilities, where as I mentioned earlier, that our layout there has been informed by their provision supplied by leading carbon capture technology providers who are well versed in the design and construction of such projects. Therefore, take full account of the of the space requirements for these considering both the main process equipment, also secondary process equipment such as pumps and heat exchangers, coolers, the interconnecting large diameter ductwork, pipework access requirements for operation and maintenance.

01:20:37:13 - 01:21:12:23

Provision for vehicles to deliver chemicals into storage on the site. So that's the basis of our plot area for that facility. So well informed by experts in the field in the design of the layout of these facilities. And for those items, we have a fully for the two train configuration, which is our base design. We have an area of around 11,000m² for those facilities. If we contrast that with with Doctor Edgar's layout that has only 7000m² for the current facilities, I suspect because his layout, you know, takes into consideration those those main process elements, you know, the the absorber column, regenerator column, etc.

01:21:12:25 - 01:21:43:23

it doesn't take into account all those other requirements for secondary facilities, the interconnections, etc., which technology providers who are well versed in this area take into account in their layout?

Um, also, if we look at elements 11 and 14, in our indicative layout, CO2 liquefaction and the associated refrigeration package, um, Doctor Edgar has combined these two areas into a single area, but with a smaller footprint than either of those two individually. So that's clearly well.

01:21:44:00 - 01:22:25:11

Well, he sort of stated that he agrees with the footprint we have for these areas is layout. So it has reduced the footprint. So there are a number of areas where the footprints have been reduced, sometimes for the packages themselves, sometimes because you're the secondary equipment and requirement for for paperwork, interconnection, maintenance, access etc. has not been taken into consideration. And so we believe that while our layout is based on sort of, you know, information supplied by, you know, expert technology providers, by work we've done ourselves information from other equipment suppliers that layout developed into a three dimensional model to ensure your access is available for for operators, for vehicular access around the site, etc..

01:22:25:19 - 01:22:38:28

Now that's been obviously done to a much more greater level of detail than the work Doctor Edgar has done to provide his alternative layout, which doesn't stand up to scrutiny and doesn't provide sufficient space for all of the equipment required within the carbon capture facility.

01:22:40:06 - 01:23:01:22

Thank you. Thank you, Mr. Doctor. Well, I was going to come back and say, given you've explained the exercise that you carried out and the limitations to that, it is Mr. Olsen, right, that actually once you do some more detailed work, that actually there is there will be sort of ancillary other equipment connections, which actually mean the space around things is going to inevitably increase.

01:23:03:10 - 01:23:33:10

And so it wouldn't surprise anyone to know that I don't agree with what Mr. Nelson has just said. Um, just for your information, um, my own layout has also been informed by information from probably similar suppliers to the as well been in terms of previous projects that I've worked on, and I've had that information to extrapolate into this one. I have not reached out to those suppliers as part of this, this process.

01:23:33:12 - 01:24:04:18

I think, um, in terms of the two specific examples, um, that Mr. Watson raises, I think it's useful to look at them separately because they're slightly different issues. So the second one, in terms of the storage, um, mildly out there, is actually quite different from the applicant's lay out in terms of just where the different items of equipment are arranged next to each other. I've also got three tanks rather than six tanks.

01:24:05:05 - 01:24:43:11

And the way that the applicant's layout works with the six tanks and the terms water access road coming through it, that actually ends up putting quite a bit of space. And I don't think the difference there is anything like as large. If you just looked at like for like equipment, um, because the footprint of the individual equipment items will be the same with the exception of the storage tanks. and I think it's more just because I've got less tanks and because I've arranged it differently, I'm able to accommodate it in a smaller place for the carbon capture facility.

01:24:43:21 - 01:25:15:05

That should be similar. I have also believed that I have accommodated all the ancillary plant and access that's required. The big difference between the two designs in terms of the carbon capture facility is if you look at the applicant's design, we've both gone through training for the main process equipment, but they've got effectively two buildings, one at the east side of the site and one at the west side of the site that accommodates, um, additional plant like heat exchangers, compressors, etc.

01:25:15:19 - 01:25:47:09

I've put all of that into one larger building that runs down the eastern side, and that's allowed me to be more efficient in terms of the total use of land, because I've got one building rather than two. To um, as I say, um, the overall footprint is different. Um, but in my view, I've attempted to accommodate the ancillary plant.

01:25:47:12 - 01:26:03:08

And, um, yeah, I think that that's that's part of what the whole novelty argument is, is that I do believe that you can accommodate the same individual item footprint in a smaller overall footprint than the applicant has.

01:26:04:12 - 01:26:20:08

And just, just you mentioned, obviously, again, the limitations of your, uh, of your study, but do you use a particular sort of formula or standard to work out, uh, spaces, the amount of areas, or is this something that's done on a case by case basis?

01:26:20:18 - 01:26:48:13

Um, yeah. So I don't know what the applicants used. I've used five metres effectively between any sort of significant bits of processed plant. I have insured at least five meters in detailed design. You might have to look. There might be some items of equipment to see if they are particularly long. They need a longer or reach out than that. Um, but that's the broad assumption I've used for, for as obviously a preliminary exercise.

01:26:50:02 - 01:27:17:21

So. Mr.. Mr.. Olsen or perhaps Mr. Cross, I don't know the most appropriate person. I think there's two things there. One, one is, um. Yeah, I guess why couldn't you use one building rather than two, which is such a good suggestion. But also, did you know what were your parameters? What sort of was there a particular standard or, or basis for how you sort of, uh, sort of distribute your kit across the site in terms of minimum separation distances, etc.?

01:27:19:12 - 01:27:50:14

Tony Olsen, on behalf of the applicant, uh, as I mentioned earlier, in terms of the main sort of process plant within the capture area itself, we were informed by layouts provided by technology providers and using their. Knowledge and experience of how to accommodate the facilities within it, within a practical and working layout. You know for the for those facilities for all and other elements of the site, then, you know, we considered, you know, the specific constraints of the site itself and where we could accommodate within that.

01:27:50:16 - 01:28:08:00

And. Mr.. Mr. cross will, you know, discuss some of those site specific issues in a moment. Um, you know, the, the, the separation around around equipment. You know, based on, on the specific needs of individual equipment items and packages with.

01:28:08:17 - 01:28:12:21

So, so sorry, the separation distances. I didn't catch what you said afterwards.

01:28:13:02 - 01:28:56:09

Yeah. On, on a on a specific basis for each each item of equipment based on on the design considerations such as those that the doctor had mentioned where you may require additional space if you're having to withdraw a large piece of equipment, such as a heat exchanger bundle. And which would require some additional additional space for for maintenance provision. Plus, of course, the requirement for road access around the site and the ability for, for for vehicular vehicular access for

cranes, for maintenance, etc.. And that informed some of those your design solution decisions in terms of the location and spatial arrangement of different plant and equipment, is picking up on a couple of the the earlier points from from Doctor Edgar.

01:28:56:11 - 01:29:32:04

Firstly, you know, going back to the point I made, if we look at Doctor Edgar's layout, then his item ten would appear to be a single facility, which which combines the liquefaction and refrigeration areas in in our layout, in our sort of indicative layout, um, which are our areas, um, 11 and 14 And clearly the footprint that has been provided for area ten is considerably less than those two areas that we have.

01:29:32:09 - 01:30:05:07

So clearly, he hasn't provided the same footprint for that block as our two blocks. Um, the point of integrating all the heat exchangers into a single unit on one side of the site, that takes no account of the the requirement for the streams to be supplied and returned from the process trends of the two carbon capture trains to the heat exchangers. So we have the heat exchangers as close to where they need to be for the streams that their heating or cooling not removed from them on one side of the site, requiring an increased amount of sort of process pipework, additional pipe bridges, etc..

01:30:05:10 - 01:30:13:08

So it doesn't appear to be a practical consideration. Rather, it is just sort of allocating a space because there's a space there on the site. Oh.

01:30:13:28 - 01:30:22:18

Can I just come back on those. So first point. Um, I think if you're going to compare effectively The

01:30:24:06 - 01:31:01:20

compression and refrigeration of the carbon dioxide. You should look at both my items nine and ten together, not just ten. Um, so that that would be the valid comparison between the two footprints. Um, in terms of the question of one building or two. Um, I didn't invent the one building myself. I basically copied a design for another carbon capture plant that I'd been working on smaller. Um, that effectively had two chains, but used one building for the the dehydration now for the compressors and the heat exchangers.

01:31:01:26 - 01:31:25:12

Um, I'm not saying that a separate building on that site, on that side of it wouldn't reduce their, their runs, but I would disagree with the fact that a single building is not feasible. Um, I as I say, I Lifted it from a similar design elsewhere that used one building for two trains.

01:31:27:00 - 01:32:10:27

Okay. Thank you. I'm just. I'm just conscious of the time. Uh, I'm conscious that, uh, you know, I've tried to structure this, this item to pick up the main areas of disagreement. Um, but in order to make sure that we can be fair to everybody, I think we're going to need to sort of prioritize things. I'm going to ask Mr. Turner these things. It's, uh, you're representing the affected, uh, the affected, the affected persons. Um, in terms of, um, you know, how you want to prioritize things that you want to raise and you want me to be, uh, be aware of? Um, there's further questions I think I can ask in, in writing about this, but obviously, this is your opportunity to, uh, to to advise me of things that that I need to know.

01:32:10:29 - 01:32:26:14

So I'm conscious that that there is a question about planning and environmental impact where I think the, the, the, You know, the, the cases, the, the applicant saying, well, they needed extra space within their site to provide that. And the question was, well, does Doctor Edwards.

01:32:28:24 - 01:32:58:22

Do that in terms of the single or double line facility, the heat transfer station, and sort of the contiguous, uh, contiguous sites? I think that those are ones which perhaps had less of an implication in terms of, uh, the actual, um, site amount that was required if I've understood Doctor Edwards position correctly. But so I'm sort of asking you what you'd like to what you'd like to bring to our attention.

01:33:00:07 - 01:33:31:00

So can I, uh, just briefly make some comments on item five without going into asking Doctor Edgar? But then on I think item six, I think you have the point. The applicant has, uh, that single or double the applicant has both options. Yeah. Um, you know, that broadly land would be saved if it committed a single at the moment on our analysis. That is not the straw that breaks the camel's back. But if it came to it, they could do single. They say it's feasible. So I didn't really say more on that.

01:33:31:02 - 01:33:56:21

I think it would be worth spending a little bit of time on the need for the heat transfer station and the contiguous site. Uh, those are the two areas that I think would benefit from, um, a bit of time, if you're happy with that. Could I have five minutes on planting and environmental impacts just to set out our position? Maybe not even that. And then we move on to heat transfer and contiguous site.

01:33:57:18 - 01:34:06:14

Yeah, I'm just just conscious of time. I think we probably will need a break up shortly. Shortly. Just for everyone's, uh, everyone's benefits. So, uh, do you want.

01:34:06:16 - 01:34:13:23

To briefly deal with the planting? So I think I think the position, uh, is this, um, I'll try and capture it.

01:34:16:18 - 01:34:47:28

There's a couple of points made by the applicant. One of them is about retention of ditches. And the other one is about availability of land for planting. Now, in terms of retention of ditches, the applicant proposal is that it will not retain ditches within the footprint of the carbon capture facility. It will infill those because it's creating, as you note in your agenda, a raised platform across the site. Um, Doctor Edgar's plan will show that there is space to retain the ditches around the edge of the site.

01:34:49:01 - 01:35:22:11

Um, the applicant's most recent drawing, which it submitted, which shows a stand off area for those ditches on the edge of the site, shows what I think is about a 14, maybe 16 metre stand off its own guidance in its, um, both in its design approach document and in the labour is to seek a five metre stand off, but at one side only. Um, and as we've explained, that can be delivered on the, um, the side that is, um, by the nature reserve. And I think if you want a reference for that, um, design approach.

01:35:22:13 - 01:35:54:24

Document volume two, page 136, which has a helpful cross section explaining the applicant's approach. So that's on that's on ditches. Um, for for completeness on that in the northeast corner of Doctor Edgar's layout, it gets it appears to get very close to the main river, which is the, uh, Norman road stream. And in light of the applicant's point, he's going to revisit that after the hearing. So that's ditches and streams.

01:35:55:18 - 01:36:44:00

Um, in terms of planting, um, for me or for us, the fundamental point is this is it the applicant's position that the alternative layout would have an unacceptable townscape and visual impact? And if no, then its point about less land for planting is not a good one. And I just again, I'll give a few references. First of all, in respect of, um, landscape matters or townscape matters put in the es, uh,

chapter ten of the ES, um, paragraph ten .7.54 confirms that, um, the effect of planting does not change the assessment of significance of any landscape impacts.

01:36:44:09 - 01:37:15:18

So in other words, planting doesn't lead to a significant effect becoming not a significant effect or indeed any change in assessment at all. It's slight moderate adverse with and without planting in terms of visual effects. The first point I'd make is to sort of stand back and look approach, which is if you look through the photo montages, none of the areas of planting which are said to be missing from Doctor Edgar's drawing Are featured in any of the photographic material that you've seen now.

01:37:16:00 - 01:37:30:23

That's an indicator that they are not of importance in terms of mitigating visual impacts of the scheme. You simply cannot see them on any material that the applicant has prepared. When you dig into the relevant parts of the environmental statement,

01:37:32:11 - 01:38:08:03

you will see again. I'll just give the references on visual effects. Uh ten .7. 63. Um, there is a large adverse effect which with planting becomes a moderate large adverse effect in respect of users of the open space. But that mitigation is provided by the planting to the west of the scheme, uh, which is already, uh, which is retained in Doctor Edgar's revised layout in um terms of other receptors.

01:38:08:05 - 01:39:04:23

Chapters ten .7.72 uh footpath users no effect on significance or assessment from planting. In other words, a slight moderate adverse effect remains a slight moderate adverse effect with planting. Uh. The same is true at ten .7.76. A moderate adverse effect on other receptors unaffected by planting. So. On the applicant's own assessment, the planting, which is noted to be missing from Doctor Edgar's layout in certain locations and their shown on Doctor Edgar's drawing in his second report, do that planting does not make any difference to the assessment of likely significant environmental effects, and in my submission, that is a strong indicator that if that planting can't be provided, then that would not lead to development consent being refused.

01:39:05:24 - 01:39:39:16

So that's the point I wanted to emphasize on on planting. Um, and really, it's for the applicant to say and given the significant reduction in built form in terms of the expanse of built form in this proposal, we think it would be surprising contention. But if it would be for the applicant to say that in landscape and visual terms or townscape and visual terms, that the alternative layout is not consented. And I think if you read the environmental statement in chapter ten, such a, such a submission would, would just not be viable, because that's not what they've assessed so far.

01:39:40:04 - 01:39:43:12

So that's all I wanted to say on landscape. And um, so.

01:39:43:20 - 01:40:05:11

Thank you, Mr. Lee. Well, I'll let the applicant come back to that, essentially saying that, uh, that the way that you've assessed visual, uh, visual and townscape impact, um, means that actually the, the landscaping isn't going to be essential to deal with likely significant effects. And therefore, why is it in why is it on your side?

01:40:06:07 - 01:40:39:11

So very briefly, because I know we've pushed for time. Um, uh, looking at mister, um, Doctor Eggers, uh, second report at three, um, 45. Figure seven. The largest difference between the two layouts is said to be 12,000m², um, which is attributable to difference in area for planting. So that's identified as the main difference in terms of land area. And uh, in that I wonder if I could just very briefly bring in Mr.

01:40:39:13 - 01:40:49:05

Alistair Craft, who is the master plan design. I don't want to ask him to spend too long on it. Um, but he's online. And if he could join, please.

01:40:54:11 - 01:40:54:26

Mr..

01:40:55:19 - 01:40:56:11

Good afternoon.

01:41:02:08 - 01:41:20:27

Um, I wonder if you could indicate what the extent to which the planting that is proposed is, um, uh, as part of the proposal. To the extent to which that is, um, uh, an important part of the proposal or otherwise.

01:41:21:23 - 01:41:22:08

Surely.

01:41:22:14 - 01:42:05:28

Um, uh, Mr. Kraft. Um, on behalf of the applicant, um, yes, I think, uh, reference has been made to the Townscape and visual impact assessment in relation to effects arising as a result of the scheme and the difference, quite correctly, in relation to judgments on changes in landscape character and, uh, changes in the visual environment. I would say that, um, the importance of the planting in achieving outcomes, um, isn't necessarily recorded in the relatively, uh, narrow sphere of the narrative associated with visual effects.

01:42:06:00 - 01:43:07:18

But there is no doubt that in terms of good design and an appreciation of amenity, um, in relation to public rights of way users and or indeed users of the local nature reserve, that the contribution of planting of the right character, um, is intended to provide mitigation and integration of the proposal into that local landscape. So it does form part of good design, and to the extent that has underpinned the design principles that we've drafted and worked with my colleague Tony Alderson, um, on the technical layout, uh, it has been an important principle to apply to demonstrate a proportionate response to integrating the scheme and similarly carrying that commitment through in design code such that as the scheme settles, that planting of that nature and typical scale would comprise part of the response.

01:43:07:20 - 01:43:41:03

So I think there is definitely a need to recognise its contribution to good design and to integration. Um, it isn't necessarily the case that the landscape and or the townscape and Visual impact assessment would record those um, perhaps more localised um, effects and judgments. Um, just because, um, the effect of, uh, a scheme of this scale is not identified as reducing over time as a result of planting, given the duration of, uh, staged effects.

01:43:41:09 - 01:43:54:19

It doesn't mean to say that it's not having an effect, even though the relative rawness of the assessment methodology may indicate no change, the effect would change and be a betterment over time.

01:43:58:03 - 01:44:30:01

Thank You got one other. Sorry. Got one other point just for Mr. Craft to respond to. Um, if that's possible. Uh, there's a reference to the, um, buffers, um, from watercourses and, um, recognised, um, by Mr. Turney that I'll need to be some adjustments, um, uh, to the alternative layout that's been

proposed, but so far is the philosophy of those, uh, were taken to the design principles and design code.

01:44:30:17 - 01:44:38:18

Um, but could you just explain what the, um, the general widths are and what the purposes are for those, um, buffers?

01:44:39:17 - 01:45:27:20

Surely. Um, Mr. Kraft, on behalf of the applicant, um, I think reference was made previously to the uh, design approach document, uh, which is one location where the design principles and design code is referred to. But perhaps usefully, uh, if we refer to page 98 of the document, uh, design approach document, um, part two of three. And there are four figures, uh, on the facing pages 98 and 99 and figure 510 and figure 512, um, illustrates the location of proposed maintenance tracks in relation to, uh, wetland ditches.

01:45:28:16 - 01:45:36:26

Uh, the design principle that I think has been previously referred to, uh, and for reference is, uh, let me just double check.

01:45:38:14 - 01:46:13:12

Uh, DC underscore LNR 1.5 refers to, um, a 1.5m width offset, um, on the working zone from an embankment that would be to one side only. And essentially that's to allow for, um, a bucket, um, mounted vehicle to clear ditches and matters arising. And the principal, for example, would be the park would be open ground to the west side of the western ditch within the local nature reserve.

01:46:14:08 - 01:46:47:07

The point being that in terms of the ease of accessing vegetation removal and making one's way around the boundary of the site, that would be the preferred location to do that. So it would be to one side, we would expect. And the cross section, just for illustrative purposes in 5.1, shows that with potential raised ground levels, the embankment again that is, would arise as a result of that elevated level and is subject to a design code of a one inch three.

01:46:47:09 - 01:47:26:19

Maximum slope would again have a toe to that slope to meet normal structural civil engineering requirements, and that would normally have an offset from the edge of the ditch, um, to allow for that, uh, slope and planting to be maintained. But it would be to maintain the edge planting associated with the boundary of the site rather than the wetland ditch itself. So a degree of clearance on either side, but for the purposes of formal offsets, in the order of five metres to accord with consultation outcomes with the relevant authorities on management is the prescription.

01:47:29:01 - 01:48:01:16

Abby Smith, the applicant. I think it will probably be helpful if we commit to doing a note in writing on the approach to buffer zones and to deal also with Mr. Tony's point about he measured it as approximately 14m. Given what Mr. Crouch just said. So I think we can follow up in writing on that. I just wanted to make two quick other points. Firstly, to build on what Mr. Kraft said before I would just draw people's attention to section 4.7 of the National Policy Statement, which obviously has a policy imperative for the delivery of good design.

01:48:01:18 - 01:48:20:12

So it's not just something we chose to do. It's something directed by policy and advice. Now, there was reference to the fact that I think it was said that his alternative layout had accounted for planting. I have to admit, looking at the drawing in the last three submissions, I can't see any reference to planting. Um, and.

01:48:22:10 - 01:48:42:15

I pick one, so I'm sorry if I gave that impression, but, um, I can clarify that my. Alternatively, I did not consider planting in it. There may be opportunities for planting around it, but that is coincidental. It was not part of the exercise that I undertook, so apologies to have given you the wrong impression.

01:48:42:23 - 01:49:13:04

So I think if obviously you want to wrap this up and I'm keen that obviously we, we get to make. Okay. So I think on, um, on this point, I think, can I just show you? Can I ask you two things? One of them is to look at page 136 of the design approach document. You see. So now but that shows an illustration of DC LNR 1.5. So that's what we're talking about. 813 page 136 is in section three of it of that document.

01:49:15:08 - 01:49:49:17

The other point just to note whilst whilst that's being brought up, is that whilst the applicant has shown um in banks, embankments, um, it also suggests in various places that it may construct retaining walls for the raised platform. So in terms of squeezing out space on the site, uh, yes, a more relaxed approach, if there was large amounts of land available, might mean that you had bigger buffer zones, but that's not actually what you're being invited to.

01:49:49:19 - 01:49:50:04

Consent.

01:49:52:01 - 01:50:38:00

You're being invited to consent. An approach which could allow also provisions of retaining walls, no embankments, but just those five metre clearances which, as Mr. Crap rightly says, are on the nature reserve side and are unaffected by the change of layout. I think the other point is just really, sir, if you would, um, if I was allowed to ask Mr. Krauss a question and whether you or, you know, through you now whether it is the applicant's position that, uh, having looked at the alternative layout that that should be refused development consent on landscape and visual grounds, having regard to the tests in national policy, and if that is its position, then we can make submissions on that and address that.

01:50:38:11 - 01:51:11:04

But for me, that's the critical question, because if, um, the applicant's design is better in landscape and visual terms, that doesn't much matter. The question will be is the alternative which avoids using the land sale land? Is that one which could obtain development consent? Mr.. Crap, notwithstanding what he says about not agreeing with the conclusions and the environmental statement, is it his position that that development should be refused?

01:51:12:02 - 01:51:20:17

Well, I think it's reasonable. We can ask Mr.. That did you did you hear and understand that? Um. Mr.. Turnings question. Mr..

01:51:22:26 - 01:51:30:23

Yes. I'm Mr. Croft on behalf of the applicant. I think there are two questions, if I may, that I, I took away and wrote down.

01:51:31:14 - 01:51:54:26

Um, I think the key one was in, do you think? And again, obviously with caveats around your position on the team, that development consent should be refused on the basis of, Uh, uh, the the the, uh, lentils alternative alternative scheme because of the absence of, uh, of landscaping. Uh, if I've paraphrased that correctly.

01:51:56:15 - 01:52:28:18

My my judgment, I, um, I didn't undertake the townscape and visual impact assessment, but in terms of, um, the alternative representing good design, um, policy is very clear about the process of establishing good design, both as a process as well as a deliverable outcome. I don't believe there's sufficient information in front of the examination to determine, um, that question. The response to that question I my perspective would be there is insufficient information to demonstrate that good design process has been followed.

01:52:28:20 - 01:53:02:24

And therefore, to the extent that, um, the alternative is presented as a reasonable alternative representing good design, I don't believe it would be considered to represent good design on the basis that it has been looked at through a relatively narrow lens in relation to optimization of a technical layout. That is not my area of specialism, but to the extent that it is, it should reflect an iterative process, balancing a number of considerations in the round, and that relates to ecological impact, visual presence, um, and various other things.

01:53:03:05 - 01:53:11:23

It doesn't do that. And therefore I think it doesn't comply with good design as policy would accept would expect. And that would be my position.

01:53:13:12 - 01:53:25:26

Thank you. Right. I think we do need to have a we do need to have a break. Um, uh, I'm very conscious that, uh, Mr. Turner has still got some points to to make. That's correct, isn't it?

01:53:26:17 - 01:53:58:08

I think I think the transfer station, there's a really there's a couple of really important points. And I think we need to also deal with the contiguous site point, but, but, um, uh, I should say that I would say more about those answers. Uh, but we are being pushed for time on on. I did say at the preliminary meeting that I thought this this issue would take day. Um, and it is looking like it, it should be given a day of examination time. I appreciate um, uh, you've chosen not to, but it does look as though we do need that full day.

01:53:59:12 - 01:54:13:24

Uh, I'm also conscious, uh, Mr. McFeely, uh, at the start of the, uh, the hearing, you've indicated you'd have a listen, but obviously, uh, as things stand at other points you want to make and how long do you think you need?

01:54:16:03 - 01:54:16:18

That.

01:54:19:21 - 01:54:20:06

Uh.

01:54:22:04 - 01:54:27:11

Oh, sorry. I should I should have said wait for the microphone. Even though I could hear you. Well, other people might not be able to.

01:54:28:29 - 01:54:46:27

Change that fairly. Actually, for Mr. Gannon and Creekside. Um, I'm quite happy just to have a few minutes later on just to run through some points, picking up on what Lance had said. What members of the public have said as well. But I don't think we need to take an awful long time to do that, so we can do that after the break.

01:54:47:18 - 01:54:50:21

Okay. Thank you. Well, Mr. Ackland.

01:54:51:28 - 01:55:09:24

I'm very grateful. Sir Alan Bryant, on behalf of this nature reserve, and I know in the timetable it provides for some time for us, potentially subject to your approval. Just the flag. Now, I've got maybe three points, very brief ones. Should time permit a new permit as well.

01:55:10:10 - 01:55:32:22

Yeah. Obviously, as you're aware, the purpose of the hearing is for affected persons to make representations. But if we do have some time, time at the end that we should do that. So anyway, I suggest it's 5 to 4. I think if we have a brief break of ten minutes, um, and then we'll resume at uh, five minutes past, uh, past four. So the hearings adjourn. Thank you.