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TRANSCRIPT OF PROCEEDINGS

TRANSCRIPT IN CONFIDENCE

O/N H-1120746

INDEPENDENT PLANNING COMMISSION

MEETING WITH APPLICANT

RE: NEW ENGLAND SOLAR FARM ARMADALE

PANEL:	**ANDREW HUTTON (CHAIR)** **PROFESSOR ZADA LIPMAN** **PROFESSOR SNOW BARLOW**
ASSISTING PANEL:	**BRAD JAMES** **STEVE BARRY**
APPLICANT:	**KILLIAM WENTRUP** **TIM GREENAWAY** **TIM KIRK** **CLAIRE BURNES**
LOCATION:	**IPC OFFICES** **LEVEL 3, 201 ELIZABETH STREET** **SYDNEY, NEW SOUTH WALES**
DATE:	**11.08 AM, FRIDAY, 24 JANUARY 2020**

MR HUTTON: So we will commence. So, ah, good morning and welcome to everyone. Thanks for coming along today to, um, the meeting. Before we begin, I would just like to acknowledge the traditional owners of the land on which we meet, the Gadigal People. And I would also like to pay my respect to their elders past and present and to the elders of other communities who may be here today. Welcome to the meeting today. Ah, UPC Renewables, the applicant, is seeking to develop a new 720-megabyte solar farm and battery storage facility located six kilometres east of Uralla and eight kilometres south of Armidale in the New England west – northwest region of New South Wales.

Ah, my name is Andrew Hutton. I'm the chair of this IPC panel. Joining me are my fellow commissioners, Professor Zada Lipman and Professor Snow Barlow. Ah, we have Brad James from the Secretariat and on the phone, ah, Stephen Barry, who's joined us remotely today. Ah, both are from the Commission's Secretariat. In the interests of openness and transparency and to ensure the full capture of information, today's meeting will be recorded, and a full transcript will be produced and made available on the Commission's website after the meeting. This meeting is one part of the Commission's decision-making process that is taking place in the preliminary stage of the process that will form one of several source of information upon which the Commission will base its decision.

It is important that the commissioners have the opportunity to ask questions of the attendees and to clarify issues whenever we consider that is it appropriate. If you're asked a question you're not able to answer or not in the position to answer it, please feel free to take the question on notice, and you can provide any additional information in writing, which we will subsequently put up on our website. Um, I do request that all members here today, um, just introduce yourself before we speak the first time, um, just so that we can, um, assist with the transcript. Um, and please try not speak over each other, so we can get an accurate, um, transcript. Um, what I might do before we begin is just have – if you wouldn't mind just introducing your team, each of you, ah, and, I guess, your role in the project. Ah, that will help with, um, starting. So - - -

MR K. WENTRUP: Yeah. Sure.

MR HUTTON: So leave it with you to introduce team. Go.

MR WENTRUP: Great. Thank you very much. And, ah, good morning everyone. So my name is Killian Wentrup. I'm the head of solar development from UPC Renewables Australia. And I've been involved, ah, in this project, New England Solar Farm, ah, since its inception. And, ah, we – we started working on this in, ah, in the second half of, ah, 2017. So I've been involved right from the beginning.

MR HUTTON: Thank you, Killian.

MR T. KIRK: Well, good morning. Tim Kirk. Um, I also work for UPC. I am the project development manager looking after the New England Solar Farm project. Um, similar to Killian, I have been involved, ah, since the early beginnings of the project.

MR HUTTON: Yep.

MR KIRK: Um, and for about two years, we have been working through the development phase of the New England project.

MR HUTTON: Thank you. Welcome, Tim.

MR KIRK: Thank you.

MR T. GREENAWAY: Ah, Tim Greenaway. I'm the project director for New England Solar Farm. And that's assisting through the development approval phase and taking the project right through construction, um, into operations.

MR HUTTON: Thank you, Tim. Welcome.

MS C. BURNES: And Claire Burnes. Hi, everyone. Um, I also have been involved since the very early stages, um, of the development with, um, UPC, right from constraints identification, um, through to the preparation of the EIS, um, and subsequent assessment phases. So, um, been project director on the project throughout that period.

MR HUTTON: Yep. And you're with EMM.

MS BURNES: With EMM. Sorry. Yes.

MR HUTTON: Yep. Thank you.

MR WENTRUP: Yeah. So we – we engaged EMM at what we call, um, the constraints - - -

MR HUTTON: Yep.

MR WENTRUP: - - - assessment stage - - -

MR HUTTON: Yep.

MR WENTRUP: - - - which is when we really do the first sort of proper look at what are the potential constraints.

MR HUTTON: Yep.

MR WENTRUP: Um, that's the – the very first step of engaging planning environment consultants usually - - -

MR HUTTON: Great.

MR WENTRUP: - - - in the way that we do development.

MR HUTTON: Ah, welcome, everyone. Um, what we'll do, I think, is we'll hand over to you to, um, just commence with your presentation. Um, as indicated, we have identified a couple of, um - - -

MR WENTRUP: Yep.

MR HUTTON: - - - key, I guess, interest areas, if you like, as part of the agenda. Ah, I understand you'll pick up those where you can through the process. But, if you don't mind, we'll – we may ask questions as we move through the process.

MR WENTRUP: Yeah. That's fine.

MR HUTTON: And then I guess we'll see where we land after the - - -

MR WENTRUP: Yep.

MR HUTTON: - - - presentation. And then if we got any residual - - -

MR WENTRUP: Yep.

MR HUTTON: - - - issues, we'll just have a conversation about those.

MR WENTRUP: Yeah. Yep.

MR HUTTON: So I'll hand over to you. Um - - -

MR WENTRUP: Thank you.

MR HUTTON: So we've got a, ah, copy of the presentation here, which we'll make available - - -

MR WENTRUP: Excellent.

MR HUTTON: - - - on our website. Um, we'll hand over to you for - - -

MR WENTRUP: All right. Thank you.

MR HUTTON: - - - presentation.

MR WENTRUP: So just to note that I will have to leave in about an hour. But the rest of the team is able to stay and take them through, and whatever questions you've got, we'll - - -

MR HUTTON: Sure.

MR WENTRUP: - - - we'll make sure that we try to answer them or come back on notice .....

MR HUTTON: Great. Thank you.

MR WENTRUP: Okay. So, um, fairly detailed, um, contents, and we're going to try to cover all those agenda items as – as – as stated. And if there's a desire to jump backwards and forwards, then, please, ah, shout out. I won't dwell on the, ah, company background slide too long. But the – the key things that I wanted to highlight is that we are a very experienced developer internationally, and we have an Australian team that has a lot of experience here in Australia and both internationally in the development of, ah, large scale renewable energy projects, primarily wind farms and solar farms, but also hydro. Um, and so, our – our head office in – in Hobart has been – was established in – in late 2016.

Um, we've been pursuing, ah, the Robbins Island, ah, Jim's Plain Wind Farm since that time and – and the New England Solar Farm since the second half of 2017. And we've delivered internationally as a group of UPC. Um, we've delivered more than, ah, 4500 megawatts or 4.5 gigawatts of – of projects. Um, and with that, comes a lot of experience, not only in development, but also in ownership and operation of assets. Ah, we're not, ah, just a pure front-end developer. We – we look to hold an interest in the project right through into its operations phase.

MR HUTTON: What – what split of your assets are wind v solar?

MR WENTRUP: It's been predominantly wind.

MR HUTTON: Yep.

MR WENTRUP: Ah, and that's just through the international experience, ah, because a company that's been around for that long - - -

MR HUTTON: Yep.

MR WENTRUP: - - - and solar was a much more expensive technology for most of that time.

MR HUTTON: Yep.

MR WENTRUP: So in the last few years, there's been a shift towards solar, and we're now developing solar in a lot of other markets aside from Australia - - -

MR HUTTON: Yep.

MR WENTRUP: - - - like India and other places in Asia. Um, and - - -

MR HUTTON: Scale-wise, this one is big?

MR WENTRUP: Well, this – this is certainly one of the bigger, ah, solar projects in – in Australia - - -

MR HUTTON: Yep.

MR WENTRUP: - - - at the moment. And – and certainly, we are seeing a trend now internationally towards larger projects, um, for economies of scale reasons; and also, ah, where there's a need to augment the transmission network, you – you need larger projects to be able to bear the costs of doing so.

MR HUTTON: Yeah. Okay.

MR WENTRUP: Yeah. Those are the main drivers.

MR HUTTON: Yep.

MR WENTRUP: Um, and here in Australia as well, we're seeing – we're seeing the same trend - - -

MR HUTTON: Yep.

MR WENTRUP: - - - as the transmission network becomes, ah, saturated, from a thermal point of view and a systems strength point of view, you need to do augmentation. And you can't do that with small projects - - -

MR HUTTON: Yep.

MR WENTRUP: - - - because they can't bear the costs.

MR HUTTON: Sure. Okay.

MR WENTRUP: And similarly, ah, our business model in Australia in the wind space is also to pursue larger developments. Robbins Island Jim's Plain is a – is a large wind farm development in the northwest of the state, and, ah, it also requires transmission investment. So there's the two things then.

PROF. S. BARLOW: That's northwest Tasmania, is it?

MR WENTRUP: Northwest of Tasmania.

PROF. BARLOW: Okay.

MR WENTRUP: That's right. Um, so, um, I'll keep moving, unless there's any specific questions on this.

MS BURNES: To that, I would just add that, um, certainly, as we've just heard, UPC bought EMM as their lead environmental consultant on quite early in the process. And I would describe that UPC certainly being very motivated right from the outset to identify potential impacts and, um, certainly being willing to, um, take risks and constraints onboard and refine the process. Um, and I think that, um, you know, that is not something that we as consultants see all the time. And I think that, certainly, as we walk through, you know, the process that we've gone through with – with the – the proponent, that, um, yeah, there's been quite a – quite a bit of refinement in response to issues identified and – and with the objective to avoid those wherever possible.

MR HUTTON: Yeah.

MS BURNES: Um - - -

MR HUTTON: And we welcome you pointing those out as we move through - - -

MS BURNES: Yeah. So - - -

MR WENTRUP: We – we will.

MS BURNES: Yep.

MR HUTTON: - - - obviously, with the - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - the southern portion amendment as well.

MR WENTRUP: Absolutely.

MR HUTTON: - - - so that - - -

MS BURNES: Yeah.

MR HUTTON: Yep.

MS BURNES: Yep.

MR WENTRUP: We will do that. And – and I guess, to highlight why we do that, it's – it's primarily because of that long ownership and – and wanting to be part of the community and – and wanting to be seen as a – a good neighbour or a – a, ah – a real investor in a community in a region, as opposed to just developing a project and then somebody else has to go and deal with, ah - - -

MR HUTTON: Yep.

MR WENTRUP: - - - the issues if they haven't been dealt with.

MR HUTTON: Yep.

MR WENTRUP: Yeah. So we'll keep moving. So high level over of the project. As previously noted, it's 720 megawatts, um, solar PV, and it's, ah – we'll go into a bit more detail in terms of the plant configuration in – in the next slides. Um, there's a couple of – of indicators on this slide in terms of capacity factor, which is a – is a – an indication of the efficiency of the – of the project. And that's – that's quite high in – in solar terms. So the – the best sites in Central Queensland, for example, would be just over 30 per cent. So this is – this is getting up there, and I'll go into some reasons for why this is a good location for solar in – in the site selection slides. Um, and those are really just some indicators in terms of the scale of this – this plant. It is a major development.

PROF. BARLOW: Yeah, yeah. What's – what's that unit? GHI? What's - - -

MR WENTRUP: Ah, global horizontal, um, irradiance, I believe it is.

PROF. BARLOW: Okay. Thanks. So, yes.

MR WENTRUP: Yeah. There's different ways you can measure solar irradiance.

PROF. BARLOW: Yeah. That's right. Yeah.

MR WENTRUP: And that's one of the more, I guess, conventional ones. Um, so the – the location, I'm sure, is known, um, to the – to the panelists, ah, and – and I'll go into the details in terms of where it is in the grid in a moment. So a little bit more detail. Um, I mentioned that the – the project is, ah – it's split across two, what we call, arrays or – or areas. And – and it also involves a Battery Energy Storage System. So if – if I refer to the BESS, I'm talking about the Battery Energy Storage System. So it's, ah – it's 720 megawatts split across the northern and central array. Um, and – and you referred earlier to the southern area, and that's – that's the – the part that's been taken out of the project, which is left in that sort of light grey shading there in the figure.

MR HUTTON: Okay.

MR WENTRUP: So that's no longer part of this development application. And what we're seeking approval for, ah, in terms of the BESS is up to 200 megawatts, two hours, which equates to 400 megawatt hours as a – as a, um – an upper limit on that development. So that's indicated there as well. Um, I'll note that the connection is establishing a new substation, which is a so-called cut-in on – in an existing transmission line between Armidale and Tamworth, which is a 330-kilovolt line owned and operate by TransGrid. I'll also note that we're talking about single access

tracking solar PV, photovoltaics, and I'll go into some detail on the solar technology and the battery technology just because that was one of the points that I believe - - -

MR HUTTON: Yes.

MR WENTRUP: - - - ah, the commissioners are interested in.

MR HUTTON: In terms of TransGrid's infrastructure, the 330 V – 330 kV, is there any additional upgrades in the – in the region required to take the offtake from this, um, proposal, or is it simply the substation can just jump straight in with the system?

MR WENTRUP: Yeah. We – we've – we've designed this project and sized it appropriately for this part of the network.

MR HUTTON: Right.

MR WENTRUP: And that's our intention. We're – we're not coming with a project that's – um, ah, that's, ah, too large from a – a network capability point of view.

MR HUTTON: Yep.

MR WENTRUP: That would require major augmentation. It's what we in the industry call deep augmentations in the system.

MR HUTTON: Yeah. Yeah.

MR WENTRUP: So the generator ..... is responsible for paying - - -

MR HUTTON: Yep.

MR WENTRUP: - - - for those augmentations.

MR HUTTON: Yeah.

MR WENTRUP: So we've tried to size this project just right for that reason.

MR HUTTON: Yeah. So to be clear, given – um, given approval and construction, you could turn it on with the current regional infrastructure that's there.

MR WENTRUP: That's right.

MR HUTTON: Yep.

MR WENTRUP: But for having to establish - - -

MR HUTTON: A sub set-in.

MR WENTRUP: - - - our own cut-in and switchyard - - -

MR HUTTON: Yeah.

MR WENTRUP: - - - which will be operated by TransGrid, and then our own substation, which includes the transformers and the switch gear to bring the power from the solar farm into the grid.

MR HUTTON: Yep. Yep. Which we understand is – is subject to subdivision from the existing lots between - - -

MR WENTRUP: Correct. Just for the switchyard. Yeah.

MR HUTTON: Just for the – to enable that to be part of the TransGrid, um, would they take ownership of that asset and manage that as part of their network?

MR WENTRUP: That – that's correct.

MR HUTTON: Yep.

MR WENTRUP: So the switchyard, which brings in and out the 330 kV line, which is part of our - - -

MR HUTTON: Yep.

MR WENTRUP: - - - infrastructure - - -

MR HUTTON: Yep.

MR WENTRUP: - - - that switchyard is going to be on the subdivided land - - -

MR HUTTON: Yes.

MR WENTRUP: - - - which will be owned by TransGrid.

MR HUTTON: Right.

MR WENTRUP: That's correct.

MR HUTTON: Thank you.

MR WENTRUP: Yeah. The substation itself is – is our asset.

MR HUTTON: Right.

MR WENTRUP: Yeah. So there's a - - -

MR HUTTON: Okay.

MR WENTRUP: There's a distinction there.

MR HUTTON: Yep. Okay.

MS BURNES: There is an indicative figure of the subdivision within the package of information - - -

MR HUTTON: Yeah. Yep.

MR WENTRUP: Yeah.

MR HUTTON: Yeah.

MS BURNES: - - - I presume you've found.

MR HUTTON: Yeah.

MS BURNES: Yeah.

MR HUTTON: Yep. Um, along the way, I might just – sidenote, if you don't mind – um, locations to have a look at when we're up on site and - - -

MR WENTRUP: Yeah. Absolutely.

MR HUTTON: So, that – that location will be one that we'd be keen to have a look at, um - - -

MR WENTRUP: Absolutely. And – and this – the reason – I'm just tabling a – an A3-size project refine layout.

MR HUTTON: Yep.

MR WENTRUP: The reason for bringing this along is so that you can actually just look a little bit more in detail as to where that infrastructure is proposed.

MR HUTTON: This is from, ah, the amendment report or from the department's assessment report?

MR WENTRUP: I believe it's from .....

MS BURNES: Ah, that will be - - -

MR WENTRUP: Tim, do you want to confirm.

MS BURNES: There will be a date on it, um, just on the side. I'll check for you.

MR GREENAWAY: Sorry .....

MR WENTRUP: The one that .....

MR HUTTON: Just so we can reference it.

MS BURNES: Yeah. That's from 23.10. So that will be from our assessment report.

MR HUTTON: Okay.

MR WENTRUP: Amendment .....

MR HUTTON: Okay.

MS BURNES: Amendment report. Sorry.

MR HUTTON: Amendment report. Okay.

MS BURNES: Yes.

MR HUTTON: So it's the - - -

MS BURNES: Of our – our - - -

MR HUTTON: - - - layout figure from, ah, the - - -

MS BURNES: The - - -

MR HUTTON: - - - amendment report. Thank you.

MR WENTRUP: Yep. Okay. So I'll keep moving through this slide. Um, we're hoping to start building this project, ah, once we get, ah, hopefully, the consent, and then we'll go into what we call our financial close process, which – which is where we make a financial commitment, along with our financiers. And then we have some, ah, what we call, um, secondary approvals. So getting management plans approved and – and doing some – some other detailed, ah, construction ready work, ah, which – which Tim can talk about, ah, a bit later. Um, and then once we're in construction, which we hope will be this year, um, we anticipate that to build the full 720 megawatts, ah, will take approximately 36 months.

And as we've outlined in the EIS and in the amendment report in – in some detail, um, we think that the best way of delivering this project from the point of view of balancing, um, time, number of workers, managing the potential for local impacts, is to build it in two overlapping phases over 36 months. So we could condense that with more workers and more impacts, or we could drag it out longer with fewer workers, but more time. And we think that that's balance.

MR HUTTON: Yep.

PROF. BARLOW: From the point of view of five hundred ..... how long .....

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MR HUTTON: ..... change. And the reason I asked that question is you've – the application is asking for a 30-year project life. One might say that there could be a number of - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - um, technology upgrades - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - in that 30 years - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - or – or are we near the point where solar technology is probably not going to change too much, and, therefore, that technology is going to run the full 30 years.

MR WENTRUP: Yeah.

MR HUTTON: And again, that then suggests that, um, you may upgrade.

MR WENTRUP: Yeah.

MR HUTTON: And you've got provision for that in your – in the draft conditions - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - to upgrade without increasing footprint.

MR WENTRUP: Yeah.

MR HUTTON: But – but you could upgrade three, four times - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - if the technology – you see where I'm going? So - - -

MR WENTRUP: Yeah. Absolutely.

MR HUTTON: And – and then - - -

MR WENTRUP: I – I see the question.

MR HUTTON: And then, effectively, you're having a decommissioning process, in my mind, three or four time, which is - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - equivalent to the construction phase.

MR WENTRUP: So there – there's a couple of aspects to, ah, I – I guess, the comprehensive answer - - -

MR HUTTON: Yep.

MR WENTRUP: - - - to the question which - - -

MR HUTTON: Yeah.

MR WENTRUP: It's not just about technology developments and technology improvements. It – it's always going to be a commercial decision.

MR HUTTON: Right.

MR WENTRUP: And – and – and what I mean by that is, um – there – there's – you would see in the media, there's constantly new technologies - - -

MR HUTTON: Yep.

MR WENTRUP: - - - being announced, discovered - - -

MR HUTTON: Yep.

MR WENTRUP: - - - pilot phase - - -

MR HUTTON: Yep.

MR WENTRUP: - - - lab testing, shows greater efficiencies.

MR HUTTON: Yep.

MR WENTRUP: Now, that – that's something that, obviously, we watch very closely. Um, but as an industry, to deliver a – a project of this scale that has to be able to make a commercial return, um, you're not using pilot scale, latest lab tested, you know, university spin-off type technology. You're using bankable technology - - -

MR HUTTON: Yep.

MR WENTRUP: - - - that financiers are comfortable with - - -

MR HUTTON: Yep.

MR WENTRUP: - - - that's proven.

MR HUTTON: Yep.

MR WENTRUP: And it's always a balance about being at the cutting edge of things, but using technology that's very much proven and – and – and can be relied upon. And the panels typically have a 25-year warranted life. That's what we're looking at from a – ah, parties that we're talking to.

MR GREENAWAY: At – at least, yes.

MR WENTRUP: At least. And – and so, we're not anticipating having to – ah, to – to use your language, completely decommission and – and – and revamp the plant with a – with a completely different type of technology within that 30 years.

MR HUTTON: Right.

MR WENTRUP: We're not anticipating that.

MR HUTTON: Yep.

MR WENTRUP: Yeah. Now, um, I'll – I'll just go through this very quickly and then flick to the next slide because I did put some points on the next slide about, you know, some of the things that the industry is watching.

MR HUTTON: Yep.

MR WENTRUP: And – and so, certainly, if there was a commercial decision towards the end of that 30 years about – we call it re-powering. So you can re-power a wind farm, you can re-power a - - -

MR HUTTON: Yep.

MR WENTRUP: - - - solar farm.

MR HUTTON: Yep.

MR WENTRUP: Some of those technologies, um, that – that the industry is watching, which are not yet mature - - -

MR HUTTON: Yep.

MR WENTRUP: - - - those sorts of things might become relevant over that longer term or – or something else. But as we sit here today, we're only looking at bankable technologies - - -

MR HUTTON: Yeah.

MR WENTRUP: - - - that come with warranties, which financiers and – and UPC can rely upon for – for the long term.

MR HUTTON: Yep. Yep. Because just to pick up on that decommissioning point, but, you can – you can understand, for example, that the – the waste material or whatever - - -

MR WENTRUP: Yep.

MR HUTTON: - - - else in a decommissioning phase, be that at the end of the 30 years or at key steps throughout - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - is something we need to give regard to.

MR WENTRUP: Absolutely. Yeah.

MR HUTTON: And maybe we'll pick it a bit up in the decommissioning - - -

MR WENTRUP: There is a slide on that. Yeah.

MR HUTTON: - - - um, point. Ah - - -

MR WENTRUP: I – I would also make the observation that, um, the types of panels that, ah, we would be looking to install in a project like this are – are a fair bit more advanced and efficient and – ah, and different to what you would typically see on rooftops, for example.

MR HUTTON: Ah, no. Exactly. Yeah.

MR WENTRUP: So – so even if you fast-forwarded many years into the future, and there was a need to recycle the materials, there may still be a market, ah, for – for let – you know, what I would describe as - - -

MR HUTTON: Yep.

MR WENTRUP: - - - used, um, products that are advanced today and that in future may have - - -

MR HUTTON: Right. So it's like someone buying an iPhone 6 - - -

MR GREENAWAY: Yeah.

MR WENTRUP: Correct.

MR HUTTON: - - - today.

MR GREENAWAY: Yeah.

MR HUTTON: Yeah.

MR WENTRUP: Exactly right.

MR HUTTON: Yep.

MR WENTRUP: So – so we talk about the same thing, for example - - -

MR HUTTON: Yep.

MR WENTRUP: - - - with, um – with the electric vehicle batteries.

MR HUTTON: Yep.

MR WENTRUP: There may be a secondary market for those - - -

MR HUTTON: Yep.

MR WENTRUP: - - - in other applications where you don't need the same sort of - - -

MR HUTTON: Yep.

MR WENTRUP: - - - performance - - -

MR HUTTON: Yep.

MR WENTRUP: - - - in – in 10 years in the future. So - - -

MR HUTTON: Yeah. Okay.

MR WENTRUP: Yeah.

PROF. BARLOW: The question that may be – may be a bit difficult – what – what sort of advance in, ah, as you say, the bankable technologies would cause you to change these panels over earlier? You know?

MR WENTRUP: It's very hard to crystal ball gaze on – on things like that.

PROF. BARLOW: Yeah. Yeah.

MR WENTRUP: Yeah.

PROF. BARLOW: Yeah. Okay.

MR WENTRUP: Yeah. I – I'll flick to the next slide because I try to, sort of, at least, give you a little bit of a flavour - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - on what might be coming in the future. And - - -

MR HUTTON: Yep.

MR WENTRUP: And again, I just want to be clear. We're not saying that we're looking at that for this project. It's just, I guess, more for your information, seeing as you're interested.

PROF. BARLOW: Yeah.

MR HUTTON: Yeah. But - - -

PROF. BARLOW: Yep.

MR HUTTON: Just to acknowledge, but there is a – there is a draft condition proposed - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - where upgrading is - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - permissible - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - um, without - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - re-approving, if you like.

MR WENTRUP: Yeah.

MR HUTTON: So we need to understand the potential - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - for that - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - and what that looks like - - -

MR WENTRUP: Yeah. For sure.

MR HUTTON: - - - um, if every second year, you - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - "upgraded" in inverted commas.

MR WENTRUP: So if you have a look at the – the photograph on that slide, and we'll give you a – a – a larger version of it, um, which shows the tracker being, ah, without the panels on it.

MR HUTTON: Ah yeah.

MR WENTRUP: So that's this one.

PROF. BARLOW: Yeah, yeah. Yep.

MR HUTTON: Yep.

MR WENTRUP: So that – I guess that - - -

MR HUTTON: So how high are they?

MR WENTRUP: That gives you an idea of how, um, you could, in theory, remove all the panels and put new panels on it, and adjust, ah, accordingly. So I think the idea that we would be looking at some vastly different technology, ah, to your point around, you know, the – the DA condition - - -

MR HUTTON: Yep.

MR WENTRUP: - - - permitting a – a – a – a sort of a – a – a – a modification of the plant, the idea that we would be looking at some vastly different technology which is – which is not, um, broadly compatible with this project and this development and, ah, approval and – and this type of infrastructure, I think is – is fairly fanciful. That would be my reaction to that. We're not going to be looking at, ah, you know, a solar thermal tower system or something like that.

PROF. BARLOW: No, no, no.

MR WENTRUP: We're not talking about that.

PROF. BARLOW: Totally different. Yeah.

MR WENTRUP: We're – we're talking about solar .....

MR HUTTON: Yep.

MR WENTRUP: Yeah.

MR HUTTON: In which case, if you were to replace the panels, you'd simply just remove them off this – this structure and, effectively - - -

MR WENTRUP: Yeah. There – there might be some modifications required.

MR HUTTON: Yep.

MR WENTRUP: But I – I just don't foresee a future in the next, sort of, 10 - - -

MR HUTTON: Yep.

MR WENTRUP: - - - 10 years plus where we'd be - - -

MR HUTTON: Yep.

MR WENTRUP: - - - looking at some completely different technology.

MR HUTTON: Yep.

PROF. BARLOW: In a - - -

MR WENTRUP: I struggle to see that.

MR HUTTON: Yeah. Okay.

PROF. BARLOW: In a commercial operation like this, is that 2.1 times 1-metre panel a standard size? Is that a - - -

MR WENTRUP: Yeah. They – they're only – they've only increased very marginally in size.

PROF. BARLOW: Yeah.

MR WENTRUP: So two – two by one is a fairly standard size.

PROF. BARLOW: Yeah.

MR WENTRUP: Exactly right. Yeah. And the – the – the figure on the right, next to that panel, is showing bifacial panel. So we are looking at - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - bifacial panels as an option.

PROF. BARLOW: Yeah.

MR WENTRUP: And they just pick up some of the diffuse irradiance. So the - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - the albedo effect from the ground and the diffuse light, and you get a bit of extra energy out of it.

MR HUTTON: Two, um – one for the site inspection, is it possible for you, ahead of our site inspection, to using just bits of timbre, if you like, build a structure on the ground that shows the height and the panels in - - -

MR WENTRUP: We - - -

MR HUTTON: - - - the context of - - -

MR WENTRUP: We – we have some piles in the ground for pile testing reasons.

MR HUTTON: Okay.

MR WENTRUP: So we can probably show you relative to those piles.

MR HUTTON: Yeah.

MR WENTRUP: I – I'm not sure we could go so far as building a structure and that sort of time for that.

MR HUTTON: I won't – I don't mean it – nothing elaborate - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - that somebody would knock up at home.

MR WENTRUP: Yeah. Yeah.

MR HUTTON: But it's just a – a two – two posts with a – just to, sort of, get a sense of the height of these structures, I guess.

MR WENTRUP: Can we take that question on - - -

MR HUTTON: Yeah.

MR WENTRUP: - - - that request on notice?

MR HUTTON: Yeah. Sure.

PROF. BARLOW: Yeah.

MR WENTRUP: Thank you.

MR HUTTON: And – and when – all we – we don't expect more than one. No. It's just - - -

MR WENTRUP: Sure.

MR HUTTON: Yeah.

MR WENTRUP: I understand.

MR HUTTON: Yep.

MR WENTRUP: Okay. We'll – we'll keep moving, if that's okay.

MR HUTTON: Yeah. Please do.

PROF. LIPMAN: Can I just ask you? You mentioned the two options A and B. Do you contemplate, ah, using option B or - - -

MR WENTRUP: Right. We're on the next slide.

PROF. LIPMAN: Yep.

MR WENTRUP: So option B is what I would describe as a – a single panel in portrait on the tracker tube. And that is the dominant - - -

MR HUTTON: Yep.

MR WENTRUP: - - - configuration for single access tracking in the industry today.

MR HUTTON: Yep.

MR WENTRUP: Option A, which is two panels in portrait, and it could alternatively be four panels in landscape, which gives you the same dimensions, effectively, that is a less common, but it is also one of the options that we are considering. So that's why we're seeking the approval for either or - - -

MR HUTTON: Yep.

MR WENTRUP: - - - because in the industry, you can see both. In Australia today, the vast majority of single access tracking solar farms installed use the one panel configuration, which is the lower height option B. But our assessment report – sorry, our – our, ah, environmental impact statement and all of the assessments that we've conducted is based on the higher impact, which is the higher panel.

MR HUTTON: Option A.

MR WENTRUP: Yeah.

MR HUTTON: Okay. Thank you.

PROF. LIPMAN: Thank you.

MR WENTRUP: So we've taken a conservative approach with that.

MR HUTTON: Yeah.

MR WENTRUP: Um, so the – the – the few dot points on the right-hand side of the slide, you can see that I've just listed in dot points some of the things that are going on in the industry. So there some developments in panel technology. Um, I'm not an expert on the real detailed engineering side of the panels. But, certainly, there are some things happening which would see even more efficient panels.

PROF. BARLOW: Yeah.

MR WENTRUP: And we'll just have to watch that space, I think, is the easiest answer to that. Um, there are also some trends going on, sometimes, in opposite directions. Ah, so we're seeing some of the inverter suppliers offering, ah, larger power capacities for the inverter power stations, so grouping of inverters with a – a – an external transformer, which gives you a bigger, ah, capacity, ah, inverter, which is all the DC cabling comes in - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - from the solar field. Ah, but we're also seeing other things like string inverters, which are common in the residential and commercial space, being used in solar farms. So that – that's also, ah, something to watch. But again, what we're – what we're looking at here is – is what I would describe as very bankable and proven technology.

MR HUTTON: Yep.

PROF. BARLOW: Just a question on option A and option B. You've asked for both, which is fine. What would be the impact on your footprint if you went to option A, where you stack them two – would your actual footprint for 720 megawatts decrease?

MR WENTRUP: Um, before we answer that specifically, I'll just note that, obviously, because of the larger table in terms of the panels as a table - - -

PROF. BARLOW: Yes. That's right. Yeah.

MR WENTRUP: - - - you also then need to increase in between the space - - -

PROF. BARLOW: Yes. Yeah.

MR WENTRUP: - - - in between the rows - - -

PROF. BARLOW: Sure.

MR WENTRUP: - - - to avoid the shading. Tim, I think we've – we've had a little bit of analysis done around this. Do – do you want to comment on that at all, or would – would you rather, ah, take it on notice?

MR GREENAWAY: We – we can take it on notice. But the analysis so far, there – there's not a distinct difference .....

PROF. BARLOW: Yeah. I wondered about that - - -

MR WENTRUP: Yeah.

PROF. BARLOW: - - - because of the shadowing. Yeah.

MR GREENAWAY: Correct. And so - - -

MR WENTRUP: Yeah. We – we - - -

MR GREENAWAY: You – you, effectively – it's double the size, it's almost double the spacing.

PROF. BARLOW: Yeah.

MR GREENAWAY: So they balance.

PROF. BARLOW: Yeah. Yeah.

MR HUTTON: But regardless of option A or B, you're still only proposing the same footprint spatially.

MR WENTRUP: Correct.

MR HUTTON: Yep.

MR GREENAWAY: Yep.

MR WENTRUP: It – it shouldn't matter from the planning assessment point of view.

MR HUTTON: Yep.

PROF. BARLOW: Yep.

MR WENTRUP: Okay.

MR HUTTON: Yep. That's clear.

MR WENTRUP: I'll keep moving, if that's all right.

MR HUTTON: Yep. Yeah, that's fine.

MR WENTRUP: Ah, just one slide just quickly on the battery technology. Um, so again, the battery technology that we're contemplating is the most proven for utility scale batteries, which is the lithium ion technology, which is the same sort of technology that's installed at the, ah, Hornsdale Power Reserve that you would have heard of, which is often referred to as the Big Battery in South Australia. Um, and we're – we're seeking approval for a system of up to 200 megawatts, two hours, which is the 400 megawatt hours. Um, again, it's something that we would probably, ah, phase, the installation of. It's – it's unlikely we would start building, ah, something of that scale on day 1.

Um, we, as you noted earlier, um – we are seeking approval for some flexibility around the siting of the Battery Energy Storage System. So one option is that it would all go right next to the good connection substation. Um, another option is that we might spread it out across those, ah, sections of the solar farm so that it's split, um, according to where the – the collection - - -

MR HUTTON: Ah. So it's not - - -

MR WENTRUP: - - - the collection point is.

MR HUTTON: It's not or; it could be and.

PROF. BARLOW: Yeah.

MR WENTRUP: Correct.

MR HUTTON: So it could be one and - - -

MR WENTRUP: Yeah. That - - -

MR HUTTON: - - - two - - -

MR WENTRUP: That's right.

MR HUTTON: - - - or one and three or one - - -

PROF. BARLOW: Yeah.

MR WENTRUP: Correct.

PROF. BARLOW: By definition, it's – it's a – it's a DC setup, so it can be there. Doesn't have to go through an inverter, does it?

MR WENTRUP: Well, that – that's a very good point. So again, the dominant bankable solution today is AC coupled - - -

PROF. BARLOW: Is it?

MR WENTRUP: - - - which means the batteries need their own inverters before they go into the system, into the grid.

PROF. BARLOW: Yeah.

MR WENTRUP: Um, now, that is, in all likelihood, what we would go with. However, DC coupled battery systems are starting to emerge.

PROF. BARLOW: Yeah. No.

MR WENTRUP: Yeah. Which, as you rightly point out, removes the need for that additional inverter - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - which would reduce your costs.

PROF. BARLOW: Yeah.

MR HUTTON: Yep.

MR WENTRUP: So in terms of what does it look like, we've give you some illustrations there for the three different, um, options that are the main options.

MR HUTTON: Yep.

MR WENTRUP: So, ah, the one on the left, the bottom one, ah, on the left is – is a, ah – a Tesla system, ah, which is, ah, kind of a, ah – a containerised type solution. Um, the one, ah, on the, ah, bottom right is, ah, what you could all a – a large battery building or shed, ah, which needs to be air-conditioned inside for – for cooling purposes. And then the one on the top, um, it's a little bit smaller, but – ah, actually,

the one on the top right is probably the more containerised one, and the Tesla one down the bottom is probably more a – a prefabricated, ah, cabinet style system.

MR HUTTON: Yeah.

MR WENTRUP: Yeah.

MR HUTTON: So these are several hectares or a hectare.

MR WENTRUP: They don't have a huge footprint.

MR HUTTON: Yep.

MR WENTRUP: Um, I can't remember off the top of my head what our footprint in the - - -

MS BURNES: No.

MR WENTRUP: - - - in the EIS is. We'd have to come back to you on that, if you want. But I'm sure you'll – you'll find that there fairly is ..... Yeah.

PROF. BARLOW: The only question is if it's a shed, how high is the shed?

MR WENTRUP: I think we have that information - - -

MS BURNES: Considered that.

MR WENTRUP: - - - in the EIS.

MS BURNES: Yeah.

MR WENTRUP: It's - - -

MS BURNES: Yes.

MR WENTRUP: It's all been assessed - - -

MS BURNES: Yeah.

MR WENTRUP: - - - from that point of view.

PROF. BARLOW: Yeah. All right.

MR WENTRUP: Yeah.

PROF. BARLOW: Okay.

MR WENTRUP: Again, we tried to give ourselves a bit of flexibility there because - - -

PROF. BARLOW: Yep.

MR WENTRUP: - - - we know that there's different options - - -

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR WENTRUP: - - - and depending on which supplier you go with, they've got - - -

MR HUTTON: Yep.

MR WENTRUP: - - - their sort of preferred approach. But that's all been considered in the impact assessment.

MR HUTTON: Yep.

MR WENTRUP: Um, is it okay if I move on to site selection?

MR HUTTON: Yeah. Please do.

PROF. BARLOW: Yep. Sure.

MR WENTRUP: Okay.

MR HUTTON: That – appreciate that, um, briefing on the technology.

MR WENTRUP: No worries. Okay. Um, so we started thinking about a – a large scale solar farm project in this region in the second half of 2017. And the main reasons for looking in this region are, well, firstly, New South Wales needs megawatts, as we all know. Um, it's the state where the – the greatest need for new capacity is – has been identified because of the closure of old – older coal plants in the coming years. And this region in particular is where we started looking because of the available capacity in the 330 kV network, and the fact that it's a very robust part of the network, compared with some of the end of line type locations down at the end of the line in the Riverina and places like that.

PROF. BARLOW: Ah, just so I understand, robust thermal capacity means a bit cooler, is it?

MR WENTRUP: No. That means available capacity on the lines themselves to put - - -

PROF. BARLOW: All right.

MR WENTRUP: - - - to put additional energy through the lines.

PROF. BARLOW: Okay. Thanks.

MR WENTRUP: Um, another reason that we decided to pursue this option is that right from the beginning, when I very first approached landholders with the concept, there was a strong interest shown from the landholders to the point where after the very first conversations, landholders started to approach me because they had spoken with a neighbour, for example.

PROF. BARLOW: Yeah.

MR WENTRUP: And there was a very high level of education of renewables in the area because of the wind farms up around Glen Innes, and there was a real awareness of the potential in the region for large scale renewables. And so, this was not a situation where in some other projects, you might have to go into an area and – and – and really tell people what's renewable energy all about and – and there's, kind of – sometimes, you can – you can find that there's a bit of a scepticism about the – yeah, the potential or the role or the – or the appropriateness, whereas I'd say that this was the opposite in this case. There was a real interest from a very large number of landholders in the area.

And that was encouraging. And so, we decided to – to, I guess, go forward with the project, um, development in it – in its early stages and – and, ah – and really start engaging with planning consultants and doing early stage grid feasibility assessment and so on to convince ourselves that there was a potential project there.

MR HUTTON: Yep.

MR WENTRUP: Um, so why this particular site and – and why, ah, did we pursue this particular development? So, as I mentioned, it's a strong part of the electricity transmission network. It's a 330 kV connection, which is a high voltage connection, which means it's expensive, but which also means that there's adequate, ah, capacity, and it's more robust from the point of view of losses and so on. Um, I want to note that the Australian energy market operator, TransGrid, and the New South Wales government have all agreed and have all published reports stating that the New England region is an appropriate location for doing large scale renewables.

And, in fact, it's seen as a renewable energy zone. So it has the potential to develop into, ah, a – a real hotspot and a real exporter of energy, clean energy, for the rest of the State and the – and the east coast of Australia. Um, although the irradiance isn't quite as high as – as I mentioned earlier, places like Central Queensland, it does have lower temperatures, to your point.

PROF. BARLOW: Yeah.

MR WENTRUP: Absolutely right. And the high altitude also helps. And as a result, that net capacity factor is almost on par with – with some of those hotter, sunnier areas.

MR HUTTON: Ah, yep.

PROF. BARLOW: Yeah.

MR HUTTON: Okay.

MR WENTRUP: And we're – we're currently looking at numbers which are on par with, say, the southwest of Queensland, which is another area where there's been a lot of solar development. So the altitude and the lower temperature helps the efficiency because you have less heat losses - - -

MR HUTTON: Yep.

PROF. BARLOW: Yep. Yeah.

MR WENTRUP: - - - and less – less atmosphere for electrons of sunlight to pass through.

MR HUTTON: Yep.

MR WENTRUP: Another reason that we decided, ah, this was a – a project worth pursuing is that, ah, you'll see when you go to site that the vast majority of the site is actually quite well-hidden away. And it's – it's primarily due to the nature of the topography. This is a not a dead flat, you know, Nyngan or Moree style plain. It's gentle rolling sheep country. And so, we've, ah, adapted our plans where we – we had to, and we've had to leave, um, areas outside of our footprint. You can see from the map that it's – it's quite in an irregular shape. So it's – it's not a dream site from a solar constructability point of view.

But we've – we've tried to work with the landscape and the constraints. And – and – and part of the benefit of that is that it's – it's very much hidden away for – for the vast majority of any of the surrounding residences. We'll – we'll g to that in a – in a little bit more detail later on. Um - - -

MR HUTTON: So – so in the end, with the layout you're putting forward, how many, um, properties or host properties are there to make up the project area? Is it one single - - -

MR WENTRUP: I've got a slide - - -

MR HUTTON: Okay.

MR WENTRUP: - - - specifically on that.

MR HUTTON: Okay.

MR WENTRUP: That's another aspect that we see is a real benefit of this - - -

PROF. BARLOW: Sure.

MR WENTRUP: - - - because it's spread around quite a large number of landholders.

MR HUTTON: Right. Okay.

MR WENTRUP: Okay. Um, I'll just quickly try and move through these – these other site selection criteria. So I'm onto, um, site selection continued. So there's been, um, a lot of clearing done by previous, um, land – land users, farmers, primarily. There's also phenomena in the area for what the locals call dieback, where there's been a – a lot of, um, death, unfortunately, of the – of the trees in the area. There's been a lot of studies done into it, no clear scientific answers, unfortunately. But, um, certainly, um, we think that relative to the size of the development footprint, which is around 2000 hectares, there's very minimal clearing of native vegetation required.

And our – our, ah, biodiversity assessment report obviously goes into a lot of detail on this – on this point. Um, the site is quite high up in the catchment. So compared with some of the other sites that you may have seen, ah, flooding risk is – is much less of an issue. And in terms of the – the water courses that are in with – within the development footprint, ah, we've left carveouts and appropriate buffers around, ah, anything other than – ah, anything from a level 3 ..... order water course or above. And we'll try to minimise the impact on – on anything, ah, below that, which is really what we're talking about there is ephemeral drainage lines that are in very poor condition.

And again, our environmental impact statement goes into quite a lot of detail on that. Um, it's also an appropriate area for developing renewable energy because of, ah, the good regional connections and infrastructure and the availability of workforce and also accommodation for workforce. So, um, in the region, there's – there's something probably close to 200,000 people residing in the New England. Ah, that number, 180,000 is from a 2006 census, I believe. So that's probably – ah, should be, ah, adjusted. It's also - - -

PROF. BARLOW: And clearly, that includes Tamworth, does it?

MR WENTRUP: That's right.

PROF. BARLOW: Yes.

MR WENTRUP: In the New England region.

PROF. BARLOW: Yeah.

MR WENTRUP: So what we're talking about here is a project that would employ upwards of 500 people at its peak. And we obviously want to see as many locals from the region getting a job. But that means people would have to come from the – the surrounding towns and – and – and regional cities. They're not all going to come from – from Uralla, although we'd like to, obviously, see anybody in Uralla that – that's – want employment and that's able to – to, ah, get a job on the project.

MR HUTTON: And certainly, Armidale is not far either.

MR WENTRUP: Exactly. Armidale is only 20 minutes up the highway. Tamworth is only an hour and 20 down the highway. So, yeah, it's a very well-serviced area. And there's airports at both Armidale and – and Tamworth as well. Um, and a lot of, ah, obviously, the – the relevant infrastructure that you'd need to have a workforce, ah, such as, you know, medical services, and accommodation, food, ah, trades, ah, contractors, suppliers, etcetera in the area. Um, another point there, just obviously because, ah, bushfire is – is a very topical issue at the moment. Um, because it's heavily cleared, um, and also because of the mapping that's been done of the area, um, this is not a – you know, what you would describe as a – a bushfire prone site. It – it is only a very, very small part of the – the footprint is mapped as bushfire prone. And we've done a full bushfire hazard assessment, and we'll have to have management plans in place.

PROF. BARLOW: And is that the vegetated part, is it, or - - -

MR WENTRUP: It's, ah – I think it's one of the very small corners of the central array - - -

MS BURNES: Yeah, it is. Yeah.

MR WENTRUP: - - - from memory, isn't it?

MS BURNES: The corner.

MR WENTRUP: Yeah. Yeah.

MS BURNES: Yeah. It would be, again, on a figure which we can point you to in the EIS.

PROF. BARLOW: We can find it.

MR HUTTON: Yeah.

MR WENTRUP: Yeah. Yeah.

MS BURNES: Um - - -

PROF. BARLOW: We'll find it.

MR WENTRUP: It – it certainly is referenced in the – in the - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - bushfire hazard assessment report.

MR HUTTON: Yeah. And we – and we note the draft conditions requiring - - -

MR WENTRUP: Exactly.

MR HUTTON: - - - um, ah - - -

MR WENTRUP: We just wanted to highlight that we've considered it, and we don't actually believe it's a - - -

MR HUTTON: Yep.

MR WENTRUP: - - - particular issue for this – this project.

MR HUTTON: Thank you.

MR WENTRUP: Okay. We've – we've got a few site photos for you. Um, I've put the dates in because this region is one that, ah, historically, was not particularly, ah, drought affected when – when other parts of the State were. But in the last couple of years, it's – it's been really bad up there. And – and you'll see that from some of the figures. So, um, you can see that, um, the September 2017 images are not – not too bad. There's still some – some greenery. There's still a bit of growth on – on the – on the ground. Um, after winter last year was – was really, ah, quite appalling how – how bad the area was hit by the drought. So if you have a look at the central area photos there from August 2019, those two that are side by side, um, that's fairly illustrative of – of how most of the site was looking, um, after the – because the wind there tends to be very dry.

So if – basically, if there's not a good summer rain, then going through winter, it's cold, it's hard, it's dry, nothing grows. And it – it really was quite awful last year. There's a lot of stress in the community as a result of it. Um, they have had a couple of good rains in the last fortnight or so. So the next figure, which is the March 2018, which is after the summer period, it's looking a lot, ah – a lot better at the moment. You'll see when you go to site that there is definitely a bit of greenery in the area now, and it certainly has lifted the – the spirits of the – of the locals.

PROF. BARLOW: Just a question, if I might just – those 71 paddock trees or something that are in the site, they're the ones that are alive, are they? Ah, because there's a lot of dead .....

MR WENTRUP: Yeah. They're the higher – higher value - - -

PROF. BARLOW: Ah.

MR WENTRUP: Correct.

MS BURNES: Yeah. I believe that would be the number.

MR WENTRUP: Yeah.

PROF. BARLOW: Yeah.

MS BURNES: Yeah. But there – there certainly were – as Killian said, there certainly were a lot of, um, dead stump – tree stumps - - -

PROF. BARLOW: Yeah.

MS BURNES: - - - remaining that we - - -

PROF. BARLOW: Well, and - - -

MS BURNES: - - - identified as well.

PROF. BARLOW: - - - standing trees. Yeah. That's – that - - -

MS BURNES: Standing trees. Yeah.

PROF. BARLOW: That's what I was just - - -

MS BURNES: Yeah.

MR WENTRUP: Yep.

MS BURNES: So - - -

PROF. BARLOW: - - - want delineate that.

MS BURNES: Once again, they – look, they will be mapped and tagged in - - -

PROF. BARLOW: Yeah.

MS BURNES: - - - the figures within the – the ecology impact assessment.

MR WENTRUP: Okay. We might move to the next slide, if that's all right.

MR HUTTON: Please do.

MR WENTRUP: Ah, you asked about the landholders.

MR HUTTON: Yep.

MR WENTRUP: Okay. Um, so there are 10 involved landholders across the northern and central arrays. And one thing to note is that I think 9 out of the 10 of them have got, um, ongoing farming operations on land not involved in the project. So in most cases, those – those farmers have either got, um, properties which are immediately adjacent to the proposed development footprint or elsewhere in the region nearby which they intend to – to continue farming. Um, we believe that, um, having the project, ah, footprint spread across multiple landholders is actually a positive for the community in the area. Um, I've seen projects in the past where it tends to be the one landholder who's the wealthiest in the area and has the biggest landholding, ah, that the project goes 100 per cent on their land.

And – and that basically means that that one person gets all of the – the value from the pint of – of view of either the rental income or the – or the purchase, ah, value. This is quite different in that sense. So we think that this actually will, over the 30 years, support, ah, a more resilient, ah, town because, ah, I guess, one of the sayings in the area is, ah, you know, what's – what's good for the farm is good for the town. And we – we certainly think that with that, ah, number of landholders involved in the project, that that would be a – a positive over the life of the project. Ah, we are talking about leases for 30 years. Ah, we're not purchasing any of the land other than that small parcel of land that you referred to earlier, Mr Chairman, in relation to the – the switchyard. Um - - -

MR HUTTON: There's two parcels of land in the – in – in the area that aren't coloured in. Does that represent owners who weren't prepared to - - -

MR WENTRUP: Which – which area are you talking to?

MR HUTTON: The – this area here, I think.

MR WENTRUP: Ah no. That – that's – that's actually just – that's owned by the same landholders. It's just not part of the actual development footprint, what you're pointing out there.

MR HUTTON: Okay.

MR WENTRUP: Yeah. It's the same involved landholders. It's just – it's just not part of the - - -

MR HUTTON: Ah. So they're – they're not new landholders. They're – they're - - -

MR WENTRUP: Correct.

MR HUTTON: - - - landholders that have, um, some project on that site, but that particular parcel is not necessary.

PROF. BARLOW: Yeah.

MR WENTRUP: It's just not necessary for this project.

MR HUTTON: Yep.

MR WENTRUP: There's no impact on it.

MR HUTTON: Yep.

MR WENTRUP: It's not part of our footprint. There's no easement - - -

MR HUTTON: Yeah.

MR WENTRUP: - - - required for a transmission line. There's no access track proposed. So that – that's what you're pointing out there.

PROF. BARLOW: Are they the grey – the light shaded areas we see?

MR WENTRUP: Yeah. That's right.

PROF. BARLOW: Yeah.

MR WENTRUP: Yeah.

PROF. BARLOW: Yeah.

MR WENTRUP: So the development footprint is consistent with the EIS, which is the dark purple line that you've seen. Um, in some cases, you know, we – we are – we're also, um, looking at families that have been in the region for, you know, four or five generations. And – and in some cases, there's success on planning going on at the moment. Um, and – and this has really become quite a, you know, big part of – of these people's lives.

PROF. BARLOW: Yeah.

MR WENTRUP: And – and they've been incredibly supportive throughout it. I – I can really say that, um, we've – we've been – we've been shown a – a very very strong level of support from our landholder group throughout this process - - -

PROF. BARLOW: Yep.

MR WENTRUP: - - - over the last two and a half years.

MR HUTTON: Without treading on commercial sensitivities, how advanced are the lease discussions with the 10 property owners?

MR WENTRUP: We have, um, what I would call, um, full contractual agreements in place - - -

MR HUTTON: With all of them?

MR WENTRUP: - - - with all of the landholders.

MR HUTTON: Yep.

MR WENTRUP: The leases won't commence until the construction of the solar farm is – is ready to go, basically.

MR HUTTON: Yeah. One of the – the issues I would like to explore – and it might be jumping head slightly, but it's relevant to the lease-holding arrangements – is that the development consent is linked to the land. And so, therefore any commitment effectively to decommissioning the site sits with the landholder.

MR WENTRUP: Yeah. We have obligations in our lease agreements.

MR HUTTON: Right.

MR WENTRUP: Yeah. I will get to that in a moment. Yeah.

MR HUTTON: Okay.

PROF. BARLOW: Yeah. Just have one quick, um, minor question going to .....

MR WENTRUP: Sure.

PROF. BARLOW: Have you – the problem with – and this and wind farms, ah, is the people who – not the people who are in, the people who are out, ah, have – is there any angst for the people that didn't get a guernsey in this?

MR WENTRUP: So I – I certainly won't comment on, um, you know – speculate on specific, you know, ah, neighbour - - -

MR HUTTON: Ah, certainly. Yeah.

MR WENTRUP: - - - neighbour, ah, relationships.

MS BURNES: Relations.

PROF. BARLOW: Yeah.

MR WENTRUP: I don't think that would be appropriate. But what I will say is that, um, we're very, um, attuned to that potential. Ah, we're experienced in – in development. And – and certainly, with wind farms, as you know, there are companies very experienced internationally with wind farms in Australia. And we – we have consulted – ah, the second dot point on this slide I wanted to highlight, we've consulted very widely with the community, and – and we started that process, um, in earnest, ah, at the beginning of 2018. Yeah, so two years ago. And one of the things that we made a decision to do, ah, quite early on was to create what we call a community benefit sharing initiative - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - which is a fund that is available to support, ah, community initiatives that are really for the benefit of – of everyone in the Uralla - - -

MR HUTTON: Yep.

MR WENTRUP: - - - shire. Ah, so not - - -

MR HUTTON: Is that a fixed figure top arrangement or is a - - -

MR WENTRUP: It – it's linked to the capacity of the project.

MR HUTTON: Yep.

MR WENTRUP: And so, we intend to start it off at the very beginning of construction for the first year at $100,000 and then to ramp it up as the project is - - -

MR HUTTON: Yeah.

MR WENTRUP: - - - is being built. Um, and it will get up to something like $180,000 per annum - - -

MR HUTTON: Right. So - - -

MR WENTRUP: - - - by the time we've built the full project.

MR HUTTON: Presumably, interested stakeholders would, at a nominated time, make application to that fund - - -

MR WENTRUP: That's right. Yeah.

MR HUTTON: - - - and their project - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - or initiative would be supported and - - -

MR WENTRUP: Correct.

MR HUTTON: Yep.

MR WENTRUP: That's exactly right.

MR HUTTON: Yep.

MR WENTRUP: So we're putting a governance framework in place and eligibility criteria. And it - - -

MR HUTTON: Yep.

MR WENTRUP: And we've been consulting with the community. We had a community reference group through that process - - -

MR HUTTON: Yep.

MR WENTRUP: - - - of deciding how to do this.

MR HUTTON: Yep.

MR WENTRUP: And it was – it was open to anyone to nominate, and they came up with some really good ideas. And – and we're looking at, um, getting ready for the first round of that to be ready in time for construction starting.

MR HUTTON: Okay.

MR WENTRUP: Yeah.

PROF. BARLOW: But that will be the relationship between you and the community. The council won't be involved in that.

MR WENTRUP: The council would most likely be involved.

PROF. BARLOW: Yeah.

MR WENTRUP: Yes. And we've – we've consulted with the council on this. Um, so if – for example, if we put a – a steering committee or a – ah, a trust type structure in place – I'm – I'm speculating a little bit here. But if we put something like that in place, then, it – it is conceivable that council may have a representative on that sort of a committee.

PROF. LIPMAN: Can I just ask a question. Um, a number of companies have, um, voluntary planning agreements, ah, instead of these, ah - - -

MR WENTRUP: Yes.

PROF. LIPMAN: - - - community benefits, which they administer. Is there any reason why you chose to go this route, rather than the VPA?

MR WENTRUP: Yes. We understand that the New South Wales Department of Planning, ah, Industry and Environment, ah, doesn't prefer that – doesn't like that approach particularly, and they – they prefer to see us, ah, doing things via direct consultation with council in relation to infrastructure and impacts and mitigating those impacts, and which is what we've done. And we'll – we'll get into that in a little bit. And – and then if we want to do things to help the community, um, to do it more in – in this kind of way on a voluntary basis, as opposed to through that sort of approach. That – that's our understanding, and that's been communicated to us by the department.

PROF. LIPMAN: Right. Thank you.

MR WENTRUP: I'll move on then, if that's okay.

MR HUTTON: Please do.

MR WENTRUP: Um, I believe there's a – a particular interest in V sale and agricultural land.

MR HUTTON: Yep.

MR WENTRUP: Um, so, Claire, feel free to – free – feel free to jump in at – at – at – at any moment here. But the things that I would like to highlight are – um, what we're talking about is – is a site which is, um, the vast majority of it, the real dominant land users, Merino sheep grazing on this site. There is some cattle grazing as well. As you know, probably most farmers tend to have a mixture of – of sheep and cattle. Um, most of these farmers are predominantly grazing sheep. However, one of the farmers in the northern array is – is the opposite. They're predominantly cattle. Ah, and that's the, ah – the – the sort of training ..... shape block right up and then north of – of the – the – the layout that you can see there.

Um, and in terms of any kind of, ah, cropping going on, um, the only cropping is – is some of the farmers grow small – they cultivate just small areas, ah, primarily for feed. So, ah, that – that's certainly not a dominant land use. Um, and one of the key things to highlight is that, ah, right from the very beginning, it was an important, um, ah, feature for both UPC as the developer and for the landholders as the landholders that we explore sheep grazing within the solar farm once the construction period is out of the way. So that's something that we've been discussing right from the very first meetings that we had with the landholders, and it's something that, um, all of the landholders are interested in.

Ah, it's going to be very much a – a trial and error approach. And we're going to have to, ah, come up with a detailed protocol, ah, once we're into construction. And – and – and that's something that we're committed to – to, ah – to implementing.

Um, and that's partly because we do think that, you know, an ongoing utilisation of the land for agriculture is feasible and – and a positive: positive for the landholder, they get some additional income; positive for us, we help manage vegetation; and – and, obviously, it's also positive from a sort of a more of a high level point of view in terms of keeping that agricultural involvement in – in the land.

MR HUTTON: Presumably, at carrying capacities that are less than the current land carrying capacity without the solar farms, I guess.

MR WENTRUP: Yeah. So each of the landholders is different.

MR HUTTON: Yeah.

MR WENTRUP: So we're talking about, you know, GSCs and so on.

MR HUTTON: Yep.

MR WENTRUP: They – they've all got a different attitude - - -

MR HUTTON: Yep.

MR WENTRUP: - - - and approach themselves.

MR HUTTON: Yep.

MR WENTRUP: Some of them push it a lot harder than – than others.

MR HUTTON: Yep. Yep.

MR WENTRUP: Um, but your observation, I'd say, on a – on an averaged level is probably correct. Um, we would anticipate that there would be a need, ah, to adapt the grazing to the solar farm, ah - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - not the – not the other way around.

MR HUTTON: Yep.

MR WENTRUP: And we've been very clear with the landholders on that point.

PROF. BARLOW: Yeah.

MR HUTTON: Yep.

PROF. BARLOW: Clearly, you're intercepting a lot of the radiation so you won't – the same productive capacity in the land because you'll be grabbing the sun on the way through.

MR WENTRUP: Yeah. I – I'm not sure that that's a given. Um, the – there's a couple of factors there where I know that there is some research going on at the moment. Um, I'm – I'm certainly not an expert on the – on the science behind this. But, certainly, the – the diffuse light and the spacing between the rows and the fact that, um, we're also looking at bifacial panels, which allow, obviously, a lot of the light to go through and – and bounce back off the ground - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - we – we – we think that that will certainly mean that we're not talking about, um, you know, a ground cover that's completely inhibited from being exposed to sunlight. We're not – we're not just talking about the direct irradiance. We're also talking about diffuse light and - - -

PROF. BARLOW: Yeah. Yeah. Yeah.

MR WENTRUP: - - - and the reflection. And, ah, I also think that the fact that – um, to your point, that we will most likely be resting the land relative to how it's currently being run - - -

PROF. BARLOW: How?

MR WENTRUP: - - - over the longer term. That may actually have a positive effect. So there – there's quite a few factors there to consider. Yeah.

PROF. BARLOW: What's the clearance, um - - -

MR WENTRUP: We've – we've actually been talking with – with some of the research bodies in the area who were quite interested in this. So there might be some opportunity there for – for a research project to look at these sorts of things.

MR HUTTON: Who is that .....

MR WENTRUP: Well, there's a university, obviously - - -

MR HUTTON: Yeah, yeah.

MR WENTRUP: - - - the University of New England. There's also CSIRO in the area.

PROF. BARLOW: Yeah, just down the road.

MR WENTRUP: Yeah. Yeah, that's right.

MR HUTTON: I think the industry more broadly would be interested in that type of research too.

MR WENTRUP: Yeah.

MR HUTTON: Yeah .....

MR WENTRUP: Yeah. So - - -

MR HUTTON: Um, quick question on the BSAL. Did – you – so you've sampled, um, and verified the BSAL mapping, or – or – or just relied on mapping?

MR WENTRUP: No.

MS BURNES: Yeah. So we've – we have undertaken some sampling across the site.

MR HUTTON: Yeah.

MS BURNES: Yeah, across 40 sites which did include a couple within the regionally mapped BSAL.

MR HUTTON: Yeah.

MS BURNES: However, the – the primary objective around that sampling was not to verify the BSAL. It was to, um, I guess, verify soil conditions for the – for erosion potential - - -

MR WENTRUP: They – they've all got one of these.

MS BURNES: Um - - -

MR WENTRUP: Can – can we just point out that - - -

MS BURNES: Okay. Yeah.

MR WENTRUP: - - - within your pack, which we handed out - - -

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR WENTRUP: - - - there's a soil capability map there as well - - -

MR HUTTON: Oh, thank you.

PROF. BARLOW: Yeah, yeah.

MR WENTRUP: - - - which has got the sampling locations on it.

MS BURNES: Yeah. So I guess, um – yep. So – so we have undertaken that soil sampling, but – yeah. The purpose is – ah, or primary purpose was to, um, inform erosion potential, ah, and therefore management – soil management during construction - - -

MR HUTTON: Yeah.

MS BURNES: - - - processes. Um, I guess there's – there's a couple of reasons, well, why we didn't necessarily undertake BSAL verification mapping. Um, I guess, first and foremost is, um, that that whole, um, you know, verification protocol doesn't actually apply to solar farms. Um, and so, in that context, along with, um, the context of the broader site in that – you know, generally, I think it's, ah, of the order of 90 per cent of the site is – is class 4 or 5. Um, and the remnant, um, areas of – well, the isolated areas of BSAL, um, that exist on the site that we will potentially impact, um, are really limited to these long narrow fingers that coincide with, um, the high-order creeks that exist – or that are matched. Um, and so, you know, in – in that context, um, as – as well as what Killian has just described, the – the – the existing operations on the site, um, you know, are not, um, that high-value agricultural operation that is the focus for protection under the BSAL protocol. Um, so in considering all of that, um, we – we didn't go down a verification process to – to verify that those regionally mapped areas are, in fact, displaying characteristics of BSAL. Um, and you will see on that – on that plan with, um, broken down – just for your further information from what was provided previously, that the – the individual areas of those fingers that we're talking about, um, impacts to, um – so of the – the 100 hectares that's divided out into a portion of 21, 31, 7, 5, and 22 hectares in different areas of the site. Um, and each of those coincide with, um, a – a mapped watercourse, first and second order. Um, so, um - - -

MR WENTRUP: Yeah. That – that's actually an important point to clarify. So the BSAL fingers, as Claire described them, that are within the development footprint where we propose impact, that we're only talking about first and second order - - -

MS BURNES: That's right.

MR WENTRUP: - - - watercourse. We're not talking about - - -

MS BURNES: Yeah.

MR WENTRUP: - - - higher order watercourses - - -

MS BURNES: Yeah.

MR WENTRUP: - - - just to be clear.

MS BURNES: Yeah.

MR WENTRUP: As I said earlier, we've allowed for buffers and avoidance around level 3 or above. So I just wanted to clarify that point.

MS BURNES: Yeah.

MR HUTTON: Yeah. That – my experience has been that, um, map BSAL and actual BSAL can be different lines depending on - - -

MR WENTRUP: Yeah.

MR HUTTON: So there's potential that there could be more BSAL on the site or, in fact, less BSAL - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - on the site.

MR WENTRUP: Yeah.

MR HUTTON: Um, so we just need to acknowledge that - - -

MS BURNES: Sure.

MR WENTRUP: I – I think the lab results – Claire, if you want to comment on this – um, probably suggested, um – I think the wording that we've taken from the EIS there is moderate to poorly fertile soils.

MR HUTTON: Yep.

MS BURNES: Yeah. So - - -

MR WENTRUP: So I think there was more of a tendency towards less BSAL than perhaps what had been mapped. And I think that anecdotally, the farmers that own this land would agree with that.

MR HUTTON: Yep.

MS BURNES: Yep.

MR WENTRUP: That – that would be my comment on – on that point.

MR HUTTON: Yep.

MS BURNES: And I – I guess layer over the top of that is that, um, you know, we are – we're not talking about a mining project here. We're – we're not talking about a construction activity that will go through and, you know, disrupt the integrity of these – the soil across this site. Um, the – the type of construction is, um – you

know, there will be, obviously, some penetrations of the ground for the installation of the poles and – and, um, you know, some of the pads for infrastructure. Um, but, you know, fundamentally, what we're proposing as part of this activity, ah, this construction, won't, um, disrupt the integrity and inherent agricultural capacity of these soils, um, in that, you know, at the end of the life of this, that infrastructure could be removed, and these areas could then be – resume, ah, being used for agricultural purposes. Um, so - - -

MR WENTRUP: I might actually, um, jump to that point because you asked that question earlier, ah, Tim, and about the decommissioning .....

MR HUTTON: Before you do - - -

MR WENTRUP: Yeah.

MR HUTTON: The reason we – I raise this is that the – the department's large scale solar energy guidelines nominate BSAL specifically as a key site constraint. And that's why we're just interested in understanding the level of - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - um, rigor - - -

MR WENTRUP: It – it's - - -

MR HUTTON: - - - taking – I take onboard all comments you've made.

MR WENTRUP: Yeah. Yeah, yeah.

MR HUTTON: It's just a case of understanding - - -

MR WENTRUP: It's actually one of the reasons why, um, the removal of the southern area became apparent to us. That, ah, it was not only because of the – ah, the – the feedback we got from – from some of the – the community in relation to that area.

MR HUTTON: Yep.

MR WENTRUP: But the – the vast majority of the BSAL that was in our original footprint was actually in the southern array.

MR HUTTON: Yep.

MR WENTRUP: Yeah.

MR HUTTON: Okay.

MR WENTRUP: Whereas in the northern array, we've only really got these very sort of narrow finger - - -

MR HUTTON: Yep.

MR WENTRUP: - - - fingers of – of BSAL around those low order water courses.

MR HUTTON: Yep. Yep.

MR WENTRUP: Yeah. And, certainly, if you talk to the locals, there's a perception that that sort of southern area, the Salisbury Plains area, is – is the very best of the – the sort of land quality in that area.

PROF. BARLOW: Yeah. Yeah.

MR WENTRUP: Yeah.

PROF. BARLOW: What – just, ah, finishing that off in the decommission sense, what is the grid pattern, ah, for the pylons for the solar panels?

MR WENTRUP: The grid pattern in terms of the spacing?

PROF. BARLOW: Every three – three-metre spacings or four metres or - - -

MR WENTRUP: Ah, Tim, do you want to comment on the – on the single access 1P 90-metre row standard sort of spacing? Or should we take that one on notice.

MR GREENAWAY: I – I think we'll take that on notice, except to say that the grid in one direction is the spacing of the rows, which is 6.3 metres, which was up earlier.

MR HUTTON: Yeah.

PROF. BARLOW: Yeah.

MR GREENAWAY: The spacing along the top tube, we can give you a dimension.

MR HUTTON: Yeah, if you wouldn't mind.

PROF. BARLOW: Yeah.

MR GREENAWAY: Yeah.

MR HUTTON: Just - - -

PROF. BARLOW: That gives us an idea of – yeah - - -

MR GREENAWAY: Yep. And the construction of those - - -

PROF. BARLOW: - - - how many pylons are going to be - - -

MR WENTRUP: I – I think - - -

MR GREENAWAY: Yeah.

MR WENTRUP: I – I may come back and correct this, but I think there's something like 12 or 13 piles per 90-metre row.

MR GREENAWAY: It's in – yeah.

MR WENTRUP: It's in that - - -

PROF. BARLOW: Right.

MR WENTRUP: It's that order.

MR GREENAWAY: It's in that order.

MR WENTRUP: Yeah.

MR HUTTON: And – and they are – the – the classic pylon is, what, a two-metre hole with concrete in it - - -

MR WENTRUP: No. No.

MR HUTTON: Top – no?

MR GREENAWAY: No.

MR HUTTON: What are we - - -

MR GREENAWAY: Majority of them would be driven biles.

MR HUTTON: Yep.

MR GREENAWAY: So there is – there are - - -

MR WENTRUP: Driven straight into the ground is the preferred - - -

MR HUTTON: Yep. Okay.

MR GREENAWAY: They're a steel section, say, 150, um, tall.

MR HUTTON: Yep.

MR GREENAWAY: Steel I section.

MR HUTTON: Yep.

MR GREENAWAY: Driven into the ground.

MR WENTRUP: We've got some photos, actually, if you're interested in what pile driving looks like.

MR HUTTON: Yep. Yep.

MR WENTRUP: Yeah.

MR HUTTON: No. Okay. It's good to - - -

MR WENTRUP: The only exception to that is probably with some pre-drilling, I think, would be the – the exception.

MR GREENAWAY: If we have – I don't – um, across the site, um, an area where we know we may have trouble driving the pile, we may choose to pre – pre-drill, um, and use a sand cement mix to then drive through the sand cement mix.

PROF. BARLOW: So what – um, how deep?

MR WENTRUP: So that is again a function of the geotechnical conditions.

MR GREENAWAY: Yeah.

PROF. BARLOW: Yeah.

MR GREENAWAY: Um, ballpark, and we can come back to you on this, but it's – it's around two metres.

PROF. BARLOW: Okay.

MR WENTRUP: That – that's – that's the sort of a standard type depth. If you - - -

PROF. BARLOW: Ah. Yeah.

MR WENTRUP: If you are in – somewhere in – in Queensland or somewhere else in – in the State of New South Wales with highly reactive soils - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - you would need to go down deeper - - -

PROF. BARLOW: Deeper.

MR WENTRUP: - - - to get through the reactive layer - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - into the part that you can rely on for your foundations. But we're – we're not really dealing - - -

MR GREENAWAY: No.

MR HUTTON: Okay.

MR GREENAWAY: No.

MR WENTRUP: - - - with those sorts of soil types here.

MR HUTTON: That's good.

PROF. BARLOW: Not there. No.

MR HUTTON: Yeah.

MR WENTRUP: Okay. Um, I might get moving - - -

MR HUTTON: Yes. Do.

MR WENTRUP: - - - because I – I'm going to have to leave shortly, and then I – I'd like the team to be able to get through the rest of your – your questions, if possible.

MR HUTTON: Yep. That's fine.

MR WENTRUP: Um, so decommissioning and rehabilitation, as you'd rightly pointed out, um, it does run, ah, with the land, but we have an obligation in our lease agreements to – to decommission and rehabilitate the site and return it, ah, to the landholders, um, in a condition that's suitable for agricultural use. Um, you're aware of the DA condition, presumably, that's been proposed by the department. Um, in terms of decommissioning a solar farm, it's not a, ah, particularly onerous operation, compared with some other assets, like, ah, coal fire power stations or coal mines and – and things like that. So all of the, ah, above ground infrastructure can easily be removed.

I've listed in dot point form there what the key, ah, parts of the – the plant are that can be removed. Um, the only observation I'd like to make is that, um, when we discuss with farmers the – the medium voltage cabling, which tends to be, ah, buried, ah, below a depth of about half a metre, typically – um, it can be – it can be slightly more than that – um, it generally doesn't, ah, interfere with the types of farming operations we're talking about, um, if it's buried below that depth - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - if it's left in situ. And one of the points we highlight is that leaving it in situ once the plant has been decommissioned is actually less disruptive to the land than digging it all back up again. So that's – that's just one point I'd like to highlight, that, um, if there's a – a possibility of being able to leave that medium voltage cabling in the ground, it's safe, it's – it's decommissioned, it's encased in a – in a solid, um, plastic, um, casing, then, it can actually – ah, it can actually be potentially less disruptive than having to excavate all of it back out of the ground at the end of the – the solar farm's life. Um, and again, I think, you know, there – there – there will be some cases – ah, some of our landholder agreements, and, ah – and I'm not going to go into detail about specific people, but some of our landholder agreements, um, you know, have – have, um, obligations on us to – to help, um, re-establish pastures, for example. But that's – that's not an environmental thing. That's just for the landholder's benefit. Um, and – and then, um, there's also, obviously, the question that we were talking about earlier around, you know, what will having a lower utilisation of the land do over 30 years. Ah, if the land is not being, ah, driven as hard with grazing, for example, ah, it may actually help return nutrients to the soil, even, um, despite the solar farm being there. So there's a – there's a few factors to consider there. But – but one thing we can say is that every single one of our lease agreements has that obligation in it to decommission and rehabilitate to a – a condition suitable - - -

MR HUTTON: All right. So that's - - -

MR WENTRUP: - - - for agriculture.

MR HUTTON: - - - good to hear. Um, financial provision for that. So you – it – I'm simple bloke. If – if it costs $10 million to - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - build and construct - - -

MR WENTRUP: Yep.

MR HUTTON: - - - in my mind, if we assume for a second that we are pulling out the – less than 500 metre – millimetre, it costs $10 million to deconstruct - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - because it's just the reverse of the, um – of the construction process.

MR WENTRUP: We – we would expect it to be less than building the plant - - -

MR HUTTON: Okay. So let's say 60 per cent - - -

MR WENTRUP: - - - because you're destroying something, not creating something.

MR HUTTON: Yeah. Okay. So you - - -

MR WENTRUP: By – by definition - - -

MR HUTTON: It's - - -

MR WENTRUP: - - - there's less care involved.

MR HUTTON: - - - time.

MR WENTRUP: Yeah.

MR HUTTON: But you still got the same - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - amount of trucks taking stuff in - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - as out.

MR WENTRUP: Yeah.

MR HUTTON: You've got the same amount of, um - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - bits of – let's assume we can – we can - - -

MR GREENAWAY: But you're not buying the product.

MR WENTRUP: Yeah. That's – that's right.

MR HUTTON: No. Yeah. So – so in my mind, then, there's a significant cost - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - at some point - - -

MR WENTRUP: Yeah.

MR HUTTON: - - - to decommission the - - -

MR WENTRUP: I – I see where you're going with the question.

MR HUTTON: Yep.

MR WENTRUP: And – and the answer is – is that, ah, we – we have obligations to, basically, put money aside for decommission - - -

MR HUTTON: Yep.

MR WENTRUP: - - - as part of our lease agreements.

MR HUTTON: And how does the community get reassurance that that is a sufficient amount of money and that it is made available to the right people at the right time to offset those closure costs?

MR WENTRUP: Well, the obligation sits with us - - -

MR HUTTON: Yep.

MR WENTRUP: - - - ah, the – the owner of the asset to – to decommission. So the money is being put aside to cover those costs. Yeah. And – and that – that obligation for putting money aside is a – is – again, it's – ah, to your point earlier about the DA running with the land, it's in – it's in the lease agreements because that's the – the best way of – of making the owner of the asset, ah, responsible. So that's – that – that's an obligation that kicks in before the end of the lease. Yeah.

PROF. BARLOW: But that – let's take this too far, but that is an – well, it's an obligation in the lease. But it would be a financial transaction within UPC and put it to the side.

MR WENTRUP: There's – I – I'm – I'm a little bit reluctant to go into the real nitty gritty about commercial arrangements with the landholders. But - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - what I can tell you is that it's not just a matter of trust us, we're putting it aside. There's an actual, ah, facility, which means that both parties have got, ah, visibility and oversight of that facility. So - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - an escrow arrangement, that type – that type of - - -

MR HUTTON: Yep. Okay.

MR WENTRUP: - - - yeah, facility.

PROF. BARLOW: Okay.

MR WENTRUP: Does – does that answer your question? I think that's where you were coming from.

PROF. BARLOW: Yeah. That's - - -

MR WENTRUP: Right?

PROF. BARLOW: Yeah. That's where - - -

MR WENTRUP: It's not a matter of trust us, we're – we're doing it.

PROF. BARLOW: Yeah.

MR WENTRUP: There – there's – there's visibility, and there's – there's more than visibility. There's also rights in terms of - - -

PROF. BARLOW: Yeah.

MR WENTRUP: - - - ensuring that the money is there, and it's available to be spent by either party when the appropriate time comes - - -

PROF. BARLOW: Yeah. That's – that's - - -

MR WENTRUP: - - - if – if necessary.

PROF. BARLOW: That's the question.

MR WENTRUP: And that's the key point. Right?

MR HUTTON: To - - -

PROF. BARLOW: Whether the money actually exists.

MR HUTTON: To - - -

MR WENTRUP: Exactly. Yeah.

MR HUTTON: To assist us, I mean, you've - - -

MR WENTRUP: No. We're – we're very confident on – on that point. Yeah.

MR HUTTON: You've nominated, um, I'm sure, a number, or you know what it costs to construct. Then based on the – on assumptions, are you able to provide the panel of an estimate of the cost to decommission? Um, put aside the mechanisms of how that's handled, but to understand a – you know, do we fully understand the – the number? Um, and if - - -

MR WENTRUP: We – we – we could come back to you with something. Ah, I will make the observation that there's obviously, um, value in a lot of the components, steel, copper, etcetera, which - - -

MR HUTTON: Yep.

MR WENTRUP: - - - which can be sold into a - - -

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR WENTRUP: - - - into a market.

MR HUTTON: And, in fact, we would - - -

MR WENTRUP: So we would have to make some – some assumptions around that.

MR HUTTON: Yeah. That's fine.

MR WENTRUP: And that – that's quite hard to do - - -

MR HUTTON: Yep.

MR WENTRUP: - - - because those prices obviously go up and down. But - - -

MR HUTTON: Yep.

MR WENTRUP: - - - we can certainly come back with some, ah, indications if – if that's important.

MR HUTTON: Yeah. That is important.

MR WENTRUP: Yeah. Okay.

MR HUTTON: Um, and with – and to just close that off, we do note the department's draft DA conditions around decommissioning and rehabilitation. So - - -

MR WENTRUP: Yes.

MR HUTTON: - - - um, and the – and the use of some criteria as a measure for - - -

MR WENTRUP: Yes. Yep.

MR HUTTON: - - - determining success or otherwise.

MR WENTRUP: Yep. Those are – those are noted and – and understood.

MR HUTTON: Yep.

MR WENTRUP: Thank you. Okay. Let's, ah, keep moving. Um, I actually will – will exit the meeting now. I've – I've got to go to the airport, unfortunately. And - - -

MR HUTTON: Sure.

MR WENTRUP: - - - I'll leave this, um, for the rest of the team to continue with. Um, Claire and – and Tim, I think you guys are going to move on to community - - -

MR KIRK: Sure.

MR WENTRUP: - - - consultation - - -

MR KIRK: Yep.

MR WENTRUP: - - - and refinement, if I'm - - -

MS BURNES: Thanks, Killian.

MR WENTRUP: - - - if I'm right. Yep.

MR KIRK: Yep.

MR HUTTON: Thank you.

MR WENTRUP: Great.

MR HUTTON: Thanks for your time. Much appreciated.

MR WENTRUP: No. Thank you very much.

MR HUTTON: Yep.

MR WENTRUP: Thank you.

PROF. BARLOW: Thank – thanks.

MR WENTRUP: Thank you.

PROF. BARLOW: Yeah.

PROF. LIPMAN: Thank you very much.

MR WENTRUP: Thank you very much. I might just swap - - -

MR KIRK: Yeah. I might just grab the laptop.

MR WENTRUP: - - - what in – okay.

MR KIRK: Thank you.

MR HUTTON: Trust we'll see you again in a week or two.

MR WENTRUP: I hope so.

MR HUTTON: Yeah.

MR WENTRUP: See you then.

MR HUTTON: Righto. Carry on.

MR KIRK: Great. So what I'll be talking about on this particular slide is, um, the level of community engagement today. Um, some of the tools we've utilised over the life of – of the project and over the development, ah, which has been roughly approximately two years, um, and in – in some respects, how we've been able to react, um, to community feedback in a timely and efficient manner. Um, and for that point, I – I discuss the southern array specifically. So as you heard earlier today, um, UPC is a long-term owner and operator of renewable energy facilities. Um, and with that in consideration, we want to be good neighbours.

We're in the community for the life of the project. Um, and we – we want to ensure that there's benefits attributed to the community and that they are consulted throughout the entire process. So community engagement is a large part of how we develop these types of facilities. I'll just step through some of the tools which you – you can see in front of you, um, as part of the timeline. In early 2018, we set up the New England Solar Farm website. Um, and we've been using the website very actively over the course of the two years. It – its main purpose has been a single source of truth, um, and it's – it's referenced very frequently, um, with complementary media releases and Facebook posts, which I'll get to later.

Ah, we've also set up an email account and, ah, um, a New England Solar Farm email address to allow the public, um, another means of contacting the project team and also as another means of emailing frequent, ah, project updates through the email address. Ah, and lastly, at the onset, we established a community hotline, um, for those who aren't particularly connected online through websites or email. We thought that it would be a good solution, um, to people who still wanted to contact the project team, but, um, didn't necessarily have those skills. So that that's really what we started off with, um, in terms of the tools. We – we progressed to organise community drop-in sessions.

Um, to date, we've had seven drop-in sessions, the latest being last week. Ah, and – and what this is is an opportunity for members of the community to come and talk to a project team, for us to present the latest project facts, um, and to enjoy a few

cupcakes from the CWA ladies. So, ah, that's been – that's been a big success in terms of the drop-in sessions, and we – we get good attendance usually.

PROF. BARLOW: Yeah. But - - -

MR HUTTON: Yeah. Rough numbers? 10? 20?

MR KIRK: I – I would say, on average, 30.

MR HUTTON: 30 people.

PROF. BARLOW: 30. Yeah.

MR KIRK: Yeah. I mean, we do have records.

PROF. BARLOW: And presumably, that – that is anyone who wants to come.

MR KIRK: It's advertised - - -

PROF. BARLOW: Yes. Total community - - -

MR KIRK: - - - widely.

PROF. BARLOW: Yes.

MR KIRK: So we – we use the local newspaper, the local newsletter - - -

PROF. BARLOW: Yeah.

MR KIRK: - - - um, Facebook, websites, everything, um, to advertise these drop-in sessions.

PROF. LIPMAN: How, ah, much aware is the community of the amendment that you're making in dropping the southern array? Have you had actual public meetings or - - -

MR KIRK: We – we certainly have. Yeah. And, um, I – I guess I'm getting to that point. But just to short-circuit that a little bit, um, as soon as we did make that decision to remove the southern array, that was quickly by – with, um, a media release. So, um, the – the local newspapers were aware of this. We also advertised through the Wordsworth, which is the note – the local newsletter, um, Facebook. Every tool in our possession, we were using that to let the community know. Um, and/or also a – a – a drop-in sessions to advertise that as well. So, um, we saw that as a very big change to our project and one which the community was actively involved in. Um, and - - -

MR HUTTON: So that's community drop-in session 6 was to coincide with the amendment.

MR GREENAWAY: Yeah.

MR KIRK: Ah, drop-in session 6.

MR GREENAWAY: Yeah. That's - - -

MS BURNES: It was shortly after - - -

MR GREENAWAY: That's correct.

PROF. BARLOW: Yeah, yeah, yeah.

MR KIRK: Yeah.

MS BURNES: - - - the decision to withdraw.

MR HUTTON: No. It's good. Just, I mean, I – you know, I guess we were – we had conversation with the department about the need or otherwise to re-exhibit based on a major change to what was put forward.

MR KIRK: Right.

MR HUTTON: So we're keen to hear about, um - - -

PROF. BARLOW: Yeah. What's been done.

MR HUTTON: - - - yeah, your engagement with - - -

MR KIRK: Yeah.

MR HUTTON: - - - with the community. Yeah.

MR KIRK: And – and to be fair to the department, they made it clear to us that if we were to remove the southern array or, um, you know, any significant project amendment, that they would like us to advertise that, um, and ensure the community were well-informed of those changes.

MR HUTTON: Great.

MR KIRK: So, um, we – we – we also, um – we were aware of some of the members within the community that had a particular interest with the removal of the southern array. So we, um, attempted to have face-to-face time with most of those people.

PROF. BARLOW: I think you almost answered the question. But, you know, have those drop-in sessions, ah, attracted the contrarians of the project, the – the – the objectors to the project?

MR KIRK: It's – it's a bit of a mixed bag. So, um, at the very start, there was, I suppose, a high percentage.

PROF. BARLOW: Yeah.

MR KIRK: Um, ah, but then as we progressed with the projects – and, I mean, the whole purpose is to listen to the feedback and to adapt our – our, ah, project, um, layout or – whatever the issue is, we wanted to hear about it. Um, and – and as we progressed on to – even the last drop-in session, there wasn't a single negative comment in that particular session, which we were very happy with. Um, but it, sort of, progressed. You start off with here's a solar farm, these are the details behind it, and what is your feedback. And, of course, that attracts both positive and perhaps negative attention sometimes.

PROF. BARLOW: Yeah. .....

MR KIRK: But it's – it's our job to listen to those comments, um, and like I said, to adapt the – the plans to cater for – for all feedback.

PROF. LIPMAN: Just on that track, what sort of communication and feedback have you had from the owner of N1, the one that's most impacted within one kilometre of the site?

MR KIRK: Ah, so we have engaged with N1 for quite a while now. Um, and in – in fact, if – if you – um, if you allow me to just move on to, I think it's the next slide where I do talk about some of these key changes - - -

PROF. BARLOW: Yeah.

MR KIRK: - - - um, I can certainly go into a bit of detail there.

PROF. LIPMAN: Okay. Great. Thanks.

MR KIRK: Um, but if I can firstly finish this off - - -

PROF. LIPMAN: Yeah. Sure.

MR KIRK: - - - that'd be great. Um, so I spoke about the community drop-in sessions, um, as a – a main means of communicating with the locals. Um, further to that, we, in early 2019, established a New England Solar Farm Facebook page, ah, and that was from feedback from the local community that a lot of people are quite active on Facebook and not necessarily through websites or email addresses. So we took that onboard and we, um – we engaged, um, a – a local community member to

manage that for us. So that's been a big success for us as well. Ah, very helpful when advertising drop-in sessions and the like. Ah, and probably the last point here, um, in terms of the tools we've used, um, is the establishment of the Uralla office, ah, which was a big step for us. And with that, came a more permanent presence within the community. Um, and we also engaged a – a local, um, well-respected member of the community to manage that office for us.

MR HUTTON: So is that open business hours every day or - - -

MR KIRK: So it's open twice every week - - -

MR HUTTON: Yep.

MR KIRK: - - - from 3 to 6 on Wednesdays and Thursdays.

MR HUTTON: Yep.

MR KIRK: And we're very clear on those advertised open hours - - -

MR HUTTON: Yep.

MR KIRK: - - - um, just so whenever anybody would like to discuss the project face-to-face, they know - - -

MR HUTTON: Yep.

MR KIRK: - - - they can go there in those slots. Cool. Um, so that's really the tools we've, um – we've – we've leveraged off. Ah, and this has really been a positive with respect to how we've communicated the removal of the southern array, which we spoke about earlier. Um, so after receiving some pretty strong public feedback after the public exhibition of the EIS, within a month, we did decide to remove the southern array for – ah, for several reasons, which have been already discussed today. Um, and then furthermore, we – we have advertised, ah, relentlessly that removal and, ah, we – we are confident that the general community is very aware of, um, - of – of this latest refinement. So if there are no more questions, I'd like to move on.

Um, so this particular slide demonstrates some of the key changes, um, we have made since the EIS was lodged with the department, and some of those changes, as they relate to key receptors, N1, of course, being one of them. Um, so just working through this list. There's generally been four big changes, ah, to the development. The first big change has been the removal of the southern array, as we've spoken about, and that resulted in approximately 653 hectares, um, ah, as a reduction to the development envelope. Number 2 is the – the 17 hectares, um, which have since been removed from the development footprint as a direct result of consultation with N1, um, and a couple more neighbours within the Kellys Plains region.

Um, through, ah, view shed analysis, which were supported with photo montages, um, we put a bit of science behind this and established that if we were to remove, um, 17 hectares or thereabouts within that particular area, which is highlighted as number 2, that that would result in a low, if any, visual impacts to N1s view in their – ah, in – in their most, um, ah, precious view, I should say, ah, which is the northwest aspect from their residence. So there – there are, of course, other views from the property, um, which we – we can talk about a bit later. But, essentially, the result of direct communication with N1, we have reduced - - -

PROF. LIPMAN: Are they happy with that?

MR KIRK: They're happy with the refinements we have made. Um, and we continue discussions with N1. Even to this day, we – we are continuing those discussions.

PROF. LIPMAN: Have you contemplated any vegetative screening for N1?

MR KIRK: So we – we have contemplated that. But in line with these refinements we have made since the EIS, ah, the latest, ah, suggestion that we've had is that no vegetation screening will be required, um, especially when considering, um, the – the, ah – the precious views from that particular residence with – which is the northwest aspect. Um, and then moving on to number 3 because this also relates to N1 - - -

PROF. BARLOW: Yeah.

MR KIRK: - - - um, we have introduced a 130-metre development buffer zone from their – from N1s property boundary, where we will exclude all development. So that has again resulted, ah, in minimising any potential views from the property. Um, to get to that point, we conducted a view shed analysis along the property boundary, as opposed from the residence, um, because we understood from N1 in particular that views along the property boundary, um, were also, um, part of his consideration. So as such, we conducted a view shed analysis along the entire boundary from the southern border. Um, and we landed with a 130-metre exclusion zone based on the favourable topography, where it generally drops off within 130 metres from the boundary. Um, and again, that's been supported with view shed analysis.

MR HUTTON: So is that – is that from any activity or it is from the edge of the panels?

MR KIRK: Ah, it's from the development envelope. So the way we've defined development envelope is that can be panels, that can be road.

MR HUTTON: Right.

MR KIRK: That's any project related infrastructure. Um, and we – we went out and spoke with N1 when, um, describing this particular amendment, um, and even

went to the 130 metres and measured it out. And we do acknowledge that there may still be some views along the edge because it is an undulating area. Um, but largely, the 130-metre introduction, um, has reduced a lot of views or potential views from the property boundary, again, not – not from the residence, um, because the visual impact assessment covers off on impacts to the residence.

PROF. BARLOW: Yeah.

MR KIRK: But we went further and described the impacts to the property boundary.

MR HUTTON: I'm just, ah, mindful of time.

MR KIRK: Sure.

MR HUTTON: Um, not that we don't want you to take opportunity to present to us, but if you could move through the slides, picking the - - -

MR KIRK: Okay.

MR HUTTON: - - - the key – key elements for us – but please don't see that as a hurry up.

MR KIRK: A hurry up.

MR HUTTON: It's just - - -

MR KIRK: No.

MR HUTTON: Yeah.

MR KIRK: That's – that's fine.

MR HUTTON: Yeah.

MR KIRK: I respect that. Ah, and – and just the last key amendment we made since the EIS was submitted was the removal of the accommodation village, and that was a really – a result from consultation with the Kellys Plain region, um, as well as some of those received, as we mentioned today, um, around safety concerns. So we – we thought the best approach there was to remove the – um, ah, that as part of the application, ah, to – to give that community peace of mind.

MS BURNES: I guess just to that, um, I would add that what Tim has just described are the key modifications to or refinements to the footprint in – in direct response to feedback from the community. In additional – in addition to those that you will see throughout the EIS is, um, UPCs commitment to avoid other, um, key constraints or values, um, across the property. Ah, so, you know, the – the – um, any valued trees,

um, the, um, archaeologically identified, um, items. Um, you know, there – there's a whole suite of additional commitments that they've made in terms of, um, avoidance of impacts, um, that have fallen out of, um, the impact assessment process, as opposed to directly responding to community feedback, which is what I would describe those key changes as.

MR KIRK: Yeah.

MS BURNES: Sorry, Tim.

MR KIRK: No. Thanks, Claire.

MR HUTTON: No. That's noted.

MR KIRK: Ah, the last slide which I will speak to is with regards to the road upgrades that we are proposing as part of the project. Um, so we have engaged, ah, since the very start a consultant, NCT Consulting, to assist us in this process, ah, because, obviously, we're not traffic experts. Um, they are. Ah, so, essentially, what resulted out of, ah, conducting the investigation into our haulage route, um, was refining the exact route which we would be utilising for the projects. Um, what you see in front of you is, essentially, the final cut of, um, the consolidated haulage route, which utilises – and I'll use a pointer in this.

PROF. BARLOW: Yeah.

MR KIRK: Which utilises Barleyfields Road, which is this purple section here. Um, and that – that road connects to the New England Highway, which is the – the darker, um, road there, which we haven't really pointed out in this particular map. Um, connected to that is the Big Ridge Road, and that is represented by these multiple colours, which extends from that intersection all the way to the project site. So that – that's, essentially, what the consolidated haulage route is. Ah, now, in terms of the upgrades we are proposing and which the department also agrees with, um, in accordance with the assessment report, um, has been to upgrade Barleyfields Road, um, with – in line with AusRoad Standards, which is 7.2 metres wide.

PROF. BARLOW: Close. Yes.

MR KIRK: Ah, which is 7.2 metres wide in terms of a sealed width plus one-metre shoulders of, um – one-metre unsealed shoulders on both sides. So in total, a carriageway of 9.2 metres. Ah, similarly, that particularly, um, condition is relevant for, ah, Big Ridge Road sections 1 and sections 3. So this is section 1 right there, and this is section 3, all the way up here.

MR HUTTON: The green – is that - - -

MR GREENAWAY: Yes.

MR KIRK: A – yeah.

MR GREENAWAY: The green.

MR KIRK: The green. Yeah.

MR HUTTON: Yeah.

MR KIRK: And - - -

MR GREENAWAY: Great.

MR KIRK: - - - segment 2, which is this section here, is already at a satisfactory standard. So no upgrades were proposed for that particular segment. Um, and all of that is in line with AusRoad Standards, um, and we thought it was applicable just because of the residents which utilise this road, as well as the landowners. And this map that I'm pointing to right now identifies the non-project related receivers. So, um, the – these blue icons represent those residents. You can see that they're all clumped within the segments 1 and close to 2. Um, there is an outlier here, which - - -

PROF. BARLOW: Yeah.

MR KIRK: - - - connects to segment 3. Um, but for that entirety, ah, so segments 1, 2, 3 and Barleyfields Road, ah, there will be an upgrade of 7.2 metres plus one metre unsealed width on both sides, um, with the exception of number 2. Apologies.

PROF. LIPMAN: Just to ask you about that last section, that's going to be left unsealed, so, um, would there be a problem with dust from that area?

MR KIRK: Yeah. So that – that's a good question. So, um, what we are proposing for segments 4 and 5, um, in lieu of – um, apology – ah, because it has not been attractive in terms of, ah, residents located within that road network, ah, we thought it was satisfactory to propose an 8.7-metre, um, gravel, unsealed width - - -

PROF. BARLOW: Yeah.

MR KIRK: - - - um, in terms of that entire length. Um, and that was purely for construction purposes. Now, in terms of dust, I would imagine that because of the – the gravel nature of the road, um, that you would mitigate to some extent some of the dust movement. Um, having said that, we – we have applied for an – within the EIS, we have mentioned that the use of water trucks, um, ah, will be used to minimise dust where appropriate. And I would consider that during certain weather conditions, it would be appropriate, um, to utilise water trucks for that particular section of Big Ridge Road.

MR GREENAWAY: It's an interesting point to note that section 4 and 5, um, there is no residences come off that section. It - - -

PROF. BARLOW: Yeah.

MR GREENAWAY: That's currently an unformed track. So it – its only purpose, ah, um, is for access to the site, well, current access to some – the farm land.

MR HUTTON: Yeah.

MR GREENAWAY: But for us - - -

MR KIRK: Correct.

MR GREENAWAY: - - - the access to site.

MR HUTTON: Are – are we able to traverse approximately that route during the site inspection?

MR GREENAWAY: We – we can take you right along that route.

MR HUTTON: Yeah. That'd be great.

PROF. BARLOW: That's good.

MR HUTTON: Just one quick question. Um, the rail load out appears as an option, I – as I understand it, to – to bring, um, ah, construction materials to the site.

MR GREENAWAY: Yes.

MR KIRK: Correct.

MR HUTTON: Um, has that always been in the project description or is that something that's come in through the process?

MR KIRK: We amended the SEARs.

MR HUTTON: Yep.

MR KIRK: So there was – um, there was original set of SEARs. We said – since decided that, um, the rail option could be used.

MR HUTTON: Yep.

MR KIRK: Um, and as such, we amended the SEARs. And from that point onwards, we considered the rail delivery as an option.

MR HUTTON: Right. So that in addition to this haulage route is – is an option, um, that your – got on the table and seeking - - -

MR KIRK: Correct.

MR HUTTON: - - - seeking approval for a rail load out facility, subject to consultation or further consultation with John Holland - - -

MR KIRK: With the relevant providers.

MR GREENAWAY: Correct.

MR HUTTON: - - - and – and understanding train movements and that sort of stuff.

MR GREENAWAY: We – we've – we've already had quite a number of consultations with John Holland - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - and Transport for New South Wales - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - on – on this.

MR HUTTON: Yep.

MR GREENAWAY: There's – it's only a passenger line at the moment.

MR HUTTON: Yes.

MR GREENAWAY: There's two trains a day - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - one in each direction.

MR HUTTON: Yep.

MR GREENAWAY: Um, and they occur in – at about 9 am and about 5 pm. So there's an eight-hour window in .....

MR HUTTON: So you're not proposing a rail spur. You're proposing that you'll pull up at a point on the line - - -

MR GREENAWAY: Correct .

MR HUTTON: - - - you'll discharge your cargo and then - - -

PROF. BARLOW: It'll just be a siding, will it?

MR GREENAWAY: No. We're – we're not proposing to build a siding.

MR HUTTON: No.

MR GREENAWAY: We would unload from the train line.

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR GREENAWAY: Um - - -

MR HUTTON: Onto a pad somewhere - - -

MR GREENAWAY: On – onto a pad we would construct - - -

MR HUTTON: Adjacent.

PROF. BARLOW: There'll be a pad. Yeah.

MR GREENAWAY: - - - adjacent. Yeah.

MR HUTTON: Yep.

MR GREENAWAY: Which we've proposed a location in - - -

PROF. BARLOW: Yes. Saw that.

MR GREENAWAY: - - - the report.

PROF. BARLOW: Yeah. What's – just what's the alternative to doing that? You would transport all your materials from wherever they come by BW – B double presumably?

MR GREENAWAY: B double or flatbed truck.

PROF. BARLOW: Yeah.

MR GREENAWAY: There's a number of options we're looking at. So there's potential that we could unload containers at the port, which then allows us to remove some of the packaging associated onto a flatbed truck, which can then – has better access to the site.

PROF. BARLOW: Yeah.

MR HUTTON: Is it Port Brisbane, Port Newcastle, Port Sydney or a mixture?

MR GREENAWAY: At the moment, more than likely, Port of Brisbane. But it's, um - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - a rail solution would be more than likely, ah - - -

MR HUTTON: New South - - -

MR GREENAWAY: - - - um, Port Botany.

MR HUTTON: Right.

MR GREENAWAY: - - - just because of the – the, um - - -

MR HUTTON: The connectivity.

MR GREENAWAY: - - - the connections of the rail lines - - -

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR GREENAWAY: - - - and the – there's no connection through to Queensland - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - in that area.

MR HUTTON: Okay.

MR KIRK: And just to be clear in terms of the impacts, which have been assessed to this – and Claire, perhaps you can speak to this.

MS BURNES: Yeah. But you jumped in.

MR KIRK: But, um, we have considered worst case scenario. So - - -

MR GREENAWAY: Yeah.

MR KIRK: - - - what that means in terms of traffic movements is we have assumed, when considering the road movements, that we won't be utilising rail deliveries to offset some of those - - -

MR HUTTON: Yep.

MR KIRK: - - - numbers.

MR HUTTON: Yep.

MR KIRK: And similarly, with rail.

PROF. BARLOW: Yeah.

MR HUTTON: Yep.

PROF. LIPMAN: Yeah.

PROF. BARLOW: Ah, maybe we're pushing over another question we're going to ask anyway, Andrew. Ah, from the point of view of unwrapping the – the packaging, ah, are – what are your plans with the packaging and presently – for packaging disposal and - - -

MR GREENAWAY: Yeah.

PROF. BARLOW: - - - waste disposal?

MR GREENAWAY: We have a slide later, but I – I'm happy to answer that now. Um, there's – there's a few elements to that, and that's, ah, important issue. And we've spent quite a bit of time thinking that through, and it does impact on the – the logistics solution, as I was - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - just suggesting. Um, the first step is avoidance of packaging where we can. So we have actually been talking to the suppliers of the different, um, components - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - about how they package. Um, some of them previously used plastic wrapping and now are willing to not do plastic wrapping. Um, so we're avoiding where we can.

PROF. BARLOW: Yeah.

MR GREENAWAY: Um, but careful not to then put the components at risk and warranty issues and – and the like. Ah, the second is the logistics solution. So where do we unpack and managing the waste and, ah, instead of bringing all that waste material to site? The third component, um, is how we manage it on site.

PROF. BARLOW: Yeah.

MR GREENAWAY: Ah, there are significant volumes, um, which, I think, ah – volumes are spoken about in the EIS. But the vast majority of that is pallets and cardboard, um, and we've been in consultation, and we have some documentation from a – one of the major recycling organisations, um, based up in the New England region. And they have said that they can cope with the volumes of the packaging that we're doing.

MR HUTTON: So you – you would – you could simply compact that on site and - - -

MR GREENAWAY: Correct.

MR HUTTON: - - - and backload that to a recycler.

MR GREENAWAY: Correct.

MR HUTTON: Yep.

PROF. BARLOW: So it would be - - -

MR GREENAWAY: And we – we - - -

PROF. BARLOW: - - - a recycler, rather than the council - - -

MR GREENAWAY: Yeah. The Uralla Council, their ability to take these volumes – well, um, they just wouldn't be able to do that.

PROF. BARLOW: No, no.

MR GREENAWAY: So we are managing that external to the – to the council.

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR GREENAWAY: Um, yeah.

MR HUTTON: Okay. Thank you.

PROF. BARLOW: Thank you.

MR KIRK: Ah, and sorry, just to finish off here, ah, the next slide is just a – just to demonstrate the sort of condition of Big Ridge Road as it currently is. Um, so the left photo here is Big Ridge Road segment 4 - - -

MR HUTTON: Yep.

MR KIRK: - - - ah, which leads towards the site. And, ah, the photo on the right, um, is still of segment 4, but segment 5 is in the distance. It's a paper road. The public currently cannot access it just because it is fenced off, and there's a row of pine trees within it. So, um, these photos just demonstrate the current condition of 4 and 5 specifically.

MR GREENAWAY: Ah, I was going to then move on to construction matters. We've got the slide there about waste. And I – I've just gone through those. The – the picture shows how – traditionally, how the packaging come to site. Ah, water, we thought, is an important issue in – in the region. We'll have – we have two main requirements for water. One is a potable water supply for the workforce - - -

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR GREENAWAY: - - - um, which is a small volume in the overall, um, requirement for – for water. Ah, the large component is for dust suppression, um, and road construction and – and the like. We've been looking at quite a number of different sources of recycled water to not put pressure on the potable water supply in – in the region where we can. Ah, and we're in discussions with Uralla Council. We're – it's an action with us at the moment to continue, um, some design work. But we're, ah, talking to them about accessing recycled water from within the – the Uralla shire, which the council is very supportive of and potentially, then, leaves a lasting benefit to the – to the community as well.

MR HUTTON: So, ah, you're ..... 220, ah, megalitres during construction. When we get to an operation phase, um, that would be substantially less. But - - -

MR GREENAWAY: Significantly less.

MR HUTTON: - - - um, is there still washing of panels or is there still – is there still some water?

MR GREENAWAY: Washing of panels will only occur when there's significant impact on the, um, performance of the panels - - -

MR HUTTON: Yep.

PROF. BARLOW: Yeah.

MR GREENAWAY: - - - ah, that's attributed to dust.

MR HUTTON: Yep.

MR GREENAWAY: The panels are, obviously, ah, moving. And with rainfall - - -

MR HUTTON: Yep.

MR GREENAWAY: - - - they will be cleaning themselves, effectively.

MR HUTTON: Yep.

MR GREENAWAY: Ah, so requirements for washing are very low. Um, the numbers of – of washes are – are very small.

PROF. BARLOW: How do you wash them?

MR GREENAWAY: There's a few different ways. Um, a lot of people, um, is always a good one. There's a lot of technology now with, ah, tracked demountant, um - - -

MR HUTTON: Pressure washers.

MR GREENAWAY: - - - basically, a big pressure washer going across. There's a robot that clips on top and bottom of the panels and will drive along. So we haven't settled on the - - -

PROF. BARLOW: Ah yeah.

MR GREENAWAY: - - - the methodology.

PROF. BARLOW: But they're water – all water-based, are they? Yeah.

MR GREENAWAY: They're – they're water-based, but the volumes are – are lower.

MR HUTTON: So would you say you'd go back to 20 megalitres a year or - - -

MR GREENAWAY: Ah.

MR KIRK: You'd have to refer to the EIS - - -

MR GREENAWAY: Yeah.

MR KIRK: - - - because that is when we - - -

MR HUTTON: Okay.

MR KIRK: - - - drilled down at that point.

MR HUTTON: Okay.

PROF. LIPMAN: They've said five megalitres .....

MR HUTTON: Five. Okay. Thank you.

MR GREENAWAY: Thank you.

MR KIRK: Five megalitres. That sounds right.

MR HUTTON: Yeah. Okay. Thank you. That addresses the water question for us.

MR GREENAWAY: Great. The next slide. Ah, the rail siding, as we – as we said - - -

MR HUTTON: Spoken - - -

MR GREENAWAY: - - - it's mainline loading.

MR HUTTON: Yep.

MR GREENAWAY: Um, I also wanted to touch on bushfire protection, which I know Killian touched on earlier. Um, just one point to add to that is we've met with the local rural fire service.

PROF. BARLOW: Yeah.

MR GREENAWAY: And we presented the project to them, explained the project, um, and talked to them how they would access the site. And we agreed a protocol around how we would do that. And as we go into construction, we'll further cement that. So, ah, the local area command in Armidale is aware of the project.

PROF. BARLOW: And, presumably, there must be, you know, the – the really high voltages areas, there must be protocols for how you protect that from fire, isn't it? Because the - - -

MR GREENAWAY: The substation location?

PROF. BARLOW: Yeah. The substation and the connections.

MR HUTTON: Fencing and .....

PROF. BARLOW: Yeah.

MR GREENAWAY: Yeah.

PROF. BARLOW: Fencing, but also, you know, that's a thing the CFA wouldn't want to go near or anything.

MR KIRK: It is a dangerous facility at the end of the day. It's - - -

PROF. BARLOW: Yeah.

MR KIRK: - - - live electricity. So, yeah, certainly, there will be protocols.

MR GREENAWAY: And I think we really touched on the workforce and accommodation earlier. But a couple of points to note. We did remove the workers, um, camp off – off the site, and that was in conjunction with the community and council and opportunities. We – we really wanted to encourage local employment. The local employment – obviously, you're already living in the region, um, but then any additional workforce we have to cater for living within the communities and spending money in the community as well. So we say we will benefit in that. Um - - -

MR HUTTON: The department in their draft conditions has put a management strategy or a management plan in, um, which is something not relatively new from what I – my experience. Um, and we spoke to them about their expectations around that broadly. Um, the other thing we raised with them was there is the potential that there are other solar farm developments that may, um, ah, seek approval in the same period, and, therefore, there could be a – a conflict, um, over construction periods, which will put extra pressure. So we're interested in understanding, um, given that draft condition and your understanding of it, the strategy behind how you might deal with cumulative impacts – not just your own development, but cumulative impacts of other developers and engaging with them and those sorts of things, whether you've already turned your mind to thinking about that strategy or – or maybe you haven't, but - - -

MR GREENAWAY: I – I think might actually get Claire to - - -

MS BURNES: Yeah.

MR GREENAWAY: - - - answer that one.

MR HUTTON: Yep.

MS BURNES: So I guess there's a couple of what I see key pieces to that. In terms of the – the strategy, um, I think there's, certainly, through the process, been acknowledgement from our team that it – it, obviously, is not a static position that it would – we – and – and so, therefore, a key piece in that management strategy will be the adaptive sort of processes and – and how we can respond to make sure that we're getting the right balance between the benefits to the community, um, but then still ensuring we're not having an impact on other, you know – tourism or other activities, um, you know, whatever other negative, um, outcomes might come of that.

Um, so, certainly, I think you don't see that sort of plan in – in consent conditions, ah, generally. Um, we have thought somewhat about what it might need to include and the level of assessment. And, obviously, that will come, you know, soon after, um, we – assuming we get a – a determination on it. So, um, that – that adaptive sort of nature is also what Tim is, on site, gearing up for, is to what the options are so that we have a full understanding of how we might able to move things around. Um, and as Killian said before, um, in reference to the peak workforce, um, you know, there – there is some ability to – to change that strategy in response depending on, you know, how it plays out. So, um, certainly, there's a commitment from UPC to make sure that that is balanced, and – and we get the best outcomes that we can in the community.

MR HUTTON: Yeah. But - - -

MS BURNES: Um, and that will be reflected in the processes in that plan.

MR HUTTON: Your expectation is, but, that the – the skilled workforce that you need is in the region currently and, therefore, for example, pressures on housing, if – people bringing families to Uralla or whatever else. I'm not sure of the situation there. But - - -

MS BURNES: Yep.

MR HUTTON: - - - your expectation is that you'll get the skills you need in the region, um - - -

MS BURNES: Yeah. Well, I think broadly, because it is such a – a – a – a large base – you know, we're not talking about a – an isolated sort of very small community.

MR HUTTON: No.

MS BURNES: Uralla is very small. But in the broader context of the New England noting that we've got Armidale only 20 minutes away and, um, Tamworth as well that we can draw those resources for services and, you know, trades and all those other skills - - -

PROF. BARLOW: Within – yeah.

MS BURNES: - - - that are going to be required.

PROF. BARLOW: Within the workforce, what proportion is unskilled and skilled? What are you, you know – you know, just in a ballpark.

MR HUTTON: Obviously, lots of electricians, but .....

MR GREENAWAY: Yeah. That's not the case. The majority is unskilled, putting panels - - -

MR HUTTON: Yeah.

MR GREENAWAY: - - - into place.

PROF. BARLOW: That's what I thought. Yes.

MR GREENAWAY: Um, there is a - - -

PROF. BARLOW: And you got to wire them.

MR GREENAWAY: - - - requirement for – for electricians, obviously, doing all that – all – all the electrical work and the – and the wiring. But an actual proportion ..... I think we'd have to take on notice and - - -

PROF. BARLOW: Yeah.

MR HUTTON: Yeah. I think it'd be useful, if you wouldn't mind, just providing, um, just some - - -

MR GREENAWAY: Yep.

MR HUTTON: - - - indications on, that'd be great.

PROF. BARLOW: Yeah. Yeah.

MR HUTTON: All right. Well - - -

PROF. BARLOW: Just one – just, well - - -

MR GREENAWAY: Sorry. .....

PROF. BARLOW: Do you – do you mind just, um, I saw at the bottom you've got the sort of – the option, the UNE student housing.

MR GREENAWAY: Yeah.

PROF. BARLOW: But the other component to that option is I don't know whether you can work on a part-time basis. There's part time – you know, there's a large student population - - -

MR GREENAWAY: There is.

PROF. BARLOW: - - - might be potentially part of the workforce in an unskilled sense.

MR GREENAWAY: Absolutely.

PROF. BARLOW: Yeah.

MR GREENAWAY: Um, there – there will be opportunities. And during the longer student breaks, there's potential for student, um, work. And it actually came up in our conversations with UNE. They – they said because of the numbers of students, the availability of part time or consistent work for the – for the student population, um, is – is an issue. So, ah, this does potentially help – does potentially provide them an option.

PROF. BARLOW: Yeah.

MS BURNES: And back to your point, um, Andrew, about, um, cumulative impacts. Um, so, certainly, the EIS did identify, um, a number of other projects and develop – potential developments in the area that we considered at the time. Um, I think at least one of those in the construction at the uni, um, is wrapping up. Um, in terms of other solar farm developments that are, sort of, um, in the planning system at the moment, the New England is the most advanced. Um, and assuming the timelines, um, you know, for this process play out as we anticipate, um, you know, these projects will be getting into construction, um, in the next quarter, beyond - - -

MR KIRK: Six months.

MS BURNES: - - - towards the end - - -

MR KIRK: Quarter.

MS BURNES: - - - of the next quarter perhaps. Um, so in terms of a cumulative impact, yeah, we – we believe that, um, there won't be too many other – certainly other solar developments that are going to play into that construction period - - -

MR HUTTON: Okay.

MS BURNES: - - - that we're looking at. Um - - -

MR HUTTON: All right. We should keep pressing on.

MR KIRK: You're done with - - -

MR GREENAWAY: I think I'm done.

MR KIRK: Yeah. Okay. Over to you, Claire.

MR HUTTON: Thank you, Tim.

MS BURNES: Okay. So just to – a piece on consent conditions, um, I guess it's important to note we were, um – UPC and EMM engaged, um, or part of the process, um – and DPI – DPI engaged with us during their drafting of the initial draft conditions, um, which we were able to review. Um, that is – that is actually now being superseded by a – a amended version that now forms part of their, ah, assessment package, um, and they did actually make some subsequent amendments to our reviewed, ah, version. Um, the initial, ah, draft was generally consistent with our expectations, um, and aligned with the commitments that we've made in the EIS and the amendment report.

Um, they generally also are, sort of, aligned with, um, what the department indicated was, sort of, the contemporary standard for conditions of consent for solar farms in the most recent, ah, ... ah, conditions that were released in August last year. Um, so I guess just in the – the interim period that we've now had to review the recommended conditions that are now in the assessment package, um, and focusing, I guess, on preparation for construction, there area a number of items that we're just seeking clarification or amendment on, um, if you can flick to the next one. Um, so I apologise. This is a bit wordy. Um, but I just did want to make specific reference to the – ah, the actual conditions.

Um, so that first one, if you've got the consent conditions in front of you, um, is just relating – it's actually in the – in the environmental, um, management schedule. But it's relating to the ability for the proponent to stage any of the plans or, ah, other things that are required under the consent. Um, historically, conditions for, um, secondary approval – so all of the suite of management plans have been linked to – ah, been prior to commencement of construction. In this set of plans, they are now linked to, um, the commencement of development. Because it, sort of, sounds insignificant, but it's not, in that, historically, construction or even in this consent, construction excludes road upgrade, ah, works, whereas development includes everything within the EIS.

So, therefore, the road upgrade works that – um, that, ah, UPC are required to do along the – the road corridor. Um, so the implication of that is that, um, as it currently reads, unless we are – we are confident that we can utilise the staging of plans, um, condition, um, we would be forced into a situation where the full suite of management plans that are required for the full development would need to be prepared before the road upgrades could commence. Um, now, the - - -

MR HUTTON: Sorry, Claire. That's because of the reference to development, rather than construction.

MS BURNES: Yeah. That's right - - -

MR GREENAWAY: Yeah.

MS BURNES: - - - because it – it – construction excludes that. Um, and so, for each of those plans that I've referenced, um - - -

MR GREENAWAY: Yeah.

MS BURNES: - - - in those condition 6, 10, 18, 22, 25 and 27, in each of those management plans, it refers to the development. And so, um, I guess we are – we – we did – we, um – we did seek clarification from the department as part of the draft that they would be allowed – that UPC would be allowed to undertake those roadworks without the need to go through the process to prepare all of those plans upfront. Um, and we didn't actually, um – we didn't get any feedback on that from them. Um, so, um, I think – obviously, that's going to have – there – there's a period of time that it's going to take for us to – or for UPC to actually prepare that suite of management plans. Um, and the task for that process is, um, more substantial if we're considering the entire development - - -

MR HUTTON: Yeah.

MS BURNES: - - - rather than just the road upgrades.

MR HUTTON: Yeah. So – so to be - - -

MS BURNES: So - - -

MR HUTTON: So to be clear, subject to a positive determination, you – you would like the flexibility to commence road upgrades before having to have had finalised all the management plans.

MS BURNES: Yeah, that's right. So I think that either we are able to rely on that staging of plans and that, you know, that's confirmed, and everyone is comfortable that that does actually stand, um, in which case, we envisage, um, preparing, you know, a standalone construction management plan for that road upgrade package that would obviously incorporate any of the commitments or management measures that are required by that suite of plans as they relate to the road upgrades, um, get that – you know, get that logged in and be able to commence that phase of works. And while that's happening, we would be developing the – the rest of the management plans for the – the remainder of the – the construction.

Um, the alternative option would be – and I – I – I anticipate it's an – it's an intended change in the way the consent conditions have been drafted by the department, but replacing reference to development, um, to reference to construction in all of those management plans would achieve that end. Um - - -

MR HUTTON: The – and – but you're – you're comfortable with the definition of construction and development as defined by the consent - - -

MS BURNES: Yes.

MR HUTTON: - - - current draft of consent.

MS BURNES: That's right. Yes.

MR HUTTON: Okay.

MS BURNES: Yep.

MR HUTTON: All right. Noted.

MS BURNES: Um, and I guess just – just further to that, the – the – I guess the reason for the request is, obviously, a timing issue. Um, but generally, the – you know, the level of impact and the issues that need to be managed through the road upgrade, um, activity is – are minor and, certainly, you know, not at the scale that we – we have, ah, associated with the - the overall solar farm development. So - - -

MR HUTTON: How long would the road upgrade - - -

MS BURNES: Um - - -

MR HUTTON: - - - work take? Is that a one-year piece of work? A six-month piece of work? .....

MR GREENAWAY: No. Less than six months.

MR HUTTON: Less than six months.

PROF. BARLOW: Yeah.

MR HUTTON: Yeah. Okay.

MS BURNES: Um, so the next one, um, schedule 3, condition 1 relates to, um, some specific limitations that the department have put in place over – or proposed over – um, over dimensional vehicles. Um, so the current – the draft condition as presented limits to six movements of that type of vehicle over the duration of the project, so including construction, operation and decommissioning. Um, that limitation is actually inconsistent with what was presented and, um, considered within the EIS, which outlined that, um, we would also need a similar number of movements for decommissioning. Um, and it's also restrictive in the event of any sort of maintenance or emergency, um, movement that might be required.

Um, and an example of that might be if, you know, there was a – a transformer failure or, um, some larger component that needed to be, um, replaced. Um, so we'd be seeking flexibility in that condition, um, to allow for additional movements associated with emergency operational sort of aspects and in decommissioning. Ah, I suspect it might have just been an oversight in the drafting of – in terms of the decommissioning aspect.

MR HUTTON: Okay.

MS BURNES: Um, and the last one is just relating to the timing, um, of the requirement for retirement of biodiversity offsets. Um, so this is the one, this is the key – the key aspect that changed between the set of conditions that we saw, um, in draft and the ones that are now part of their assessment package. Um, so previously, in the version we saw, it was consistent with, um, contemporary, um, conditions around these aspects of biodiversity credit retirements, in that, um, it was within two years of commencement of construction. Um, what isn't in the consent at the moment is prior to commencement of development.

And so, obviously, you know, that – that then would require that those credits are all retired, um, prior to commencement of road upgrade works as well because it's referring to that development component. Um, so we would be – we're requesting that that, um, be reverted back to, um, within two years of commencement to allow UPC time to review the market, um, you know, find the available credits or put in place whatever appropriate mechanism, um - - -

PROF. BARLOW: It's commencement of construction.

PROF. LIPMAN: No. Changing that to construction rather than development.

MS BURNES: Is it construction? I'm - - -

PROF. LIPMAN: No. What I'm saying is - - -

MS BURNES: Ah, sorry.

PROF. BARLOW: Yeah.

PROF. LIPMAN: Yes, yes.

MS BURNES: Well, um, I mean, even that, um, you know, ah, the road upgrades package might be of the order of six months, and then construction would commence after that. Um, so if – depending on the options, um, you know, that might be most feasible, um, with retirement, there may be an opportunity to find sites and establish a framework for, um, those, um, alternatively, the purchase of credits or – or, um, payment into the fund. So I guess post-determination, you know, we acknowledge there's a process that we will have to go through, um, to determine what the – the best, um, outcome is in terms of the retirement of those credits.

Um, and, um, I guess there – you know, there – there's not been any justification, um, to us or, you know, communication to us as to why that expectation on timing has now changed because as far as I'm aware, um, this is the first time that we've seen that condition, um, requirement. Um, and it is, um, quite limiting in terms of how we would - - -

MR HUTTON: So – so the question then comes to mind – how – how advanced are you with your thinking around your offsetting strategy?

MS BURNES: Yeah. So there – there's been work ongoing. Um, so, I guess in terms of the actual credit requirements, um, that need to be retired, um, it's likely to be quite difficult to find available sites, um, that that would be suitable, um, and provide conditions that, you know, we could – ah, UPC could, um, you know, improve and – and – and get a good, um, outcome in return from a – a site. Um, notwithstanding that, they, recently, over the last couple of months, have been looking at, um, a potential site that we were alerted to, um, by one of the, ah, landowners in the area. So, um, EMMs ecologists have been out only recently to investigate that. Um, but it is – is been determined as not suitable for what is required.

MR HUTTON: Okay.

MS BURNES: Um, so, certainly, we're continuing to consider it. Um, and, yeah, the – the market will change as well - - -

MR HUTTON: Yep.

MS BURNES: - - - over the next period, once we, um, you know – assuming we get to a determination. So - - -

MR KIRK: I – I think just on that, Claire, as well, if I could just add a few things. Um, absolutely right. We – we are still considering potential stewardship sites.

PROF. BARLOW: Yeah.

MR KIRK: Um, the example which you were alluding to, we – we have investigated a site within the Hill Grove region.

PROF. BARLOW: Yeah.

MR KIRK: Um, and unfortunately, it's not suitable. It doesn't have the – the required PCTs - - -

MR GREENAWAY: The required number of credits. Yeah.

MR KIRK: - - - and the required numbers. Um, but that's not to say that we won't continue investigating. And we have been in discussions with several members from Armidale and Uralla to see where other opportunities perhaps lie. Um, but our understanding is for us to establish that stewardship site, um, takes a bit of time, and time is really - - -

MR HUTTON: Okay.

MR KIRK: - - - the issue we're raising here.

PROF. LIPMAN: Yeah. You also have the option to pay into the fund, of course, if you can't come - - -

MR KIRK: We understand that. Yeah. .....

MS BURNES: Yeah. That's right. Yep.

PROF. LIPMAN: Yeah.

MR HUTTON: Yeah. I think – I think I understand your – your points.

MS BURNES: Yep.

MR HUTTON: Um, um, but is it fair to say that in – outside of those – that feedback, you're generally happy with the way - - -

MS BURNES: Yeah.

MR HUTTON: - - - the draft conditions have been .....

MS BURNES: Yeah. Look, yep. The – very few of the remainder of them changed since the version that we saw previously. Um, and, as I said, most of them are consistent with what's been committed and – and contemporary conditions. So as expected.

MR HUTTON: Okay.

MS BURNES: Yep.

MR HUTTON: All right. Thank you.

MS BURNES: I think we're at the end. Is that - - -

MR KIRK: Yeah. Is that it?

MR GREENAWAY: That's it.

MS BURNES: - - - the last slide?

MR KIRK: Yep. Questions.

MR HUTTON: And, ah, just quickly check our list. It – it's been a very comprehensive presentation and apologies for going over time. But I think it was useful - - -

MR KIRK: No. We apologise for that .....

MR HUTTON: - - - useful to, um – to have that opportunity to – to go over some issues. Um - - -

PROF. BARLOW: The only thing we didn't discuss, and maybe we don't have to, is the noise issue, actually. The - - -

MR HUTTON: Ah, yeah. No. You see, you put a proposal to the department for, ah, an – an allowance for some, ah – an hour or so outside – I think it was outside the standard timing for – for construction noise. And the argument as I understand it was to facilitate quicker construction.

MS BURNES: Yep.

MR KIRK: Yep.

MR HUTTON: The department is in – in the draft and in their assessment report as indicating that – that they've prefer that the standard hours, um, stay. Um, did you want to talk to your initial argument around that and the opportunities or otherwise, given that opportunity?

MR KIRK: Sure. Well - - -

MS BURNES: Yeah.

MR KIRK: - - - perhaps just to clarify what the current conditions say because my understanding is, um, we do have that flexibility. They've used the word inaudible, I believe - - -

MS BURNES: Yeah. ..... inaudible. Yep. That's right.

MR KIRK: - - - um, outside of the normal construction standard hours.

MR HUTTON: That could be one way to interpret that. Um, ah, yeah.

MS BURNES: So - - -

MR HUTTON: So currently, condition 11 talks about – um, it nominates 7 am to 6 pm, ah, Monday to Friday, 8 to 1 on Saturdays and no works, ah, Sunday to – and on New South Wales public holidays.

MR KIRK: Yep.

MR HUTTON: But then it does put in a – an additional note or condition, an element to that condition, which talks about activities are inaudible at non-associated receivers.

MR KIRK: Yeah. I – I mean perhaps that was another point. We sought clarity from the department in terms of defining inaudible, and we even proposed a mechanism behind how that was defined and metrics to use. Um, and that obviously didn't make its way into the final conditions or draft conditions. Um, so perhaps that is another element of, ah, changes we'd like incorporated in the – the next round of potential draft conditions because - - -

MR HUTTON: But what – what is the opportunity there? About an extra hour of - - -

MR KIRK: Well, it's – Tim, perhaps you can speak to this, but it – it won't just be an extra hour. It will be, um, Saturday and Sunday as well. It's, essentially, seven days a week - - -

MR HUTTON: Right.

MR KIRK: - - - is what we were proposing.

MR HUTTON: Which has the potential to take a 36-month construction period to 24 months or to 30 months.

MR GREENAWAY: We actually responded to that, when we - - -

MS BURNES: Yeah.

MR GREENAWAY: - - - when that amendment - - -

MS BURNES: We did have some formal correspondence around that. So perhaps, um, we can take that on notice.

MR KIRK: We can take that on notice. Yeah.

MS BURNES: And get back to you.

MR HUTTON: Yeah. Think so.

MS BURNES: Um, it was considered in some level of detail. Um - - -

MR KIRK: It – it - - -

MS BURNES: And it – and it was largely around, um, I guess, rostering, workforce rostering, and how you might be able to maximise that process.

MR GREENAWAY: Yeah. And I think that's particularly relevant to the Saturday where it's a half day.

MS BURNES: A shorter day.

MR GREENAWAY: And that – that's not ideal with a workforce. So then you – you need full roster.

MR HUTTON: Yeah.

MR KIRK: Yeah.

MS BURNES: Yeah. Sure.

MR HUTTON: Okay. Well, well, take that one on notice - - -

MS BURNES: Yep.

MR HUTTON: - - - for us. Um - - -

MS BURNES: Yep.

MR HUTTON: Um, that was just another issue that .....

PROF. LIPMAN: That – also the issue with, ah, your metrics in relation to measuring what is an audible noise, if you would give us - - -

PROF. BARLOW: What is inaudible. Yep.

PROF. LIPMAN: - - - give us some information on that as well.

PROF. BARLOW: If you can give us your - - -

MR KIRK: Perfect.

PROF. BARLOW: - - - proposal in that.

MR KIRK: Yeah.

PROF. BARLOW: Yeah.

MS BURNES: Yeah.

MR KIRK: Absolutely. And we also propose conducting noise modelling if we were to work outside of that nominated period as well. So there was quite an elaborate scheme which we proposed to the department. And - - -

PROF. BARLOW: Yeah.

MR KIRK: And we can certainly share that with you.

PROF. BARLOW: Okay.

PROF. LIPMAN: Thank you.

MR HUTTON: Um, the last matter, then, just, ah, before we close the meeting, is the upcoming site inspection, ah, on the – around on the 11th.

MR GREENAWAY: 11th.

MR KIRK: Ah, yes.

MR GREENAWAY: It's the 12th, isn't it?

MR KIRK: Yeah. It's the 12th.

MR HUTTON: I'm sorry. Correct.

MR KIRK: Yeah. The day after.

PROF. BARLOW: But we're – we're going to have a small thing on the 11th before the public meeting. Ah, we're – it's not a complete – we just didn't - - -

MR HUTTON: We planned to do a drive-by.

PROF. BARLOW: Yeah. We just thought - - -

MR HUTTON: We'll – we'll make – would make our own observations ahead of the public .....

PROF. BARLOW: Yeah. It's - - -

MR HUTTON: But the formal – the formal with you - - -

MR KIRK: Right.

MR HUTTON: Yep. Um, are there any particular safety matters we need to be aware of in terms of, ah, dress code or various things? Again, take it on notice, if you like, to get back to us, to make sure we don't - - -

MR GREENAWAY: Yeah.

MR HUTTON: Um - - -

MR GREENAWAY: Um, just very broadly, it's, um, currently, farming land.

MR HUTTON: Yep.

MR GREENAWAY: So appropriate footwear, walking on uneven ground, etcetera.

MR HUTTON: Yep.

MR GREENAWAY: Ah, there's no current requirement for safety vests of - - -

MR HUTTON: Okay.

MR GREENAWAY: - - - or hardhats or anything like that.

MR HUTTON: Okay. Well, what we might do is leave it with, um, Brad at the Secretariat to liaise with you around any of those - - -

MR GREENAWAY: Yeah.

MR HUTTON: - - - requirements. And - - -

MR KIRK: Yep.

MR HUTTON: - - - we'll put forward a – um, ah, sort of a request in terms of a route.

MR GREENAWAY: Yep.

MR HUTTON: Now, we don't understand whether it takes 10 minutes to get from point A to B or 10 hours because of access and things. So we would, ah – we would seek your advice on – on that.

MR KIRK: Certainly. And I received a request yesterday. So we will assess it tomorrow.

MR HUTTON: Okay.

MR KIRK: Ah, sorry, next week.

PROF. BARLOW: Yeah. .....

MR HUTTON: Yep.

MR GREENAWAY: We'll work on the itinery.

MR HUTTON: Yep. Okay. Well, thank you for that. Um, unless there's any other questions from the commissioners, we might, um, wrap up the meeting. Thank you very much for your time.

MR KIRK: Thank you.

MR HUTTON: Again, apologies for overrun. But I think it's very beneficial to, ah, have these conversations, ah, this end of the project. So thanks again for coming down, and, um, I'll call the meeting closed. Thank you.

MS BURNES: Thank you.

MR KIRK: Thank you.

PROF. BARLOW: Thank you.

PROF. LIPMAN: Thank you.

MR HUTTON: Yeah.

RECORDING CONCLUDED **[1.11 pm]**