SUSAN: Welcome and thanks for joining us today for the Heathcote Road bridge information session. My name is Susan. I'm the Senior Communications Manager with Transport, and I'm here to facilitate today. I'd like to acknowledge the traditional owners of the land we are gathered on, the Gadigal people of the Eora nation. I pay my respects to elders past, present and emerging and to any other Aboriginal people joining us online today. We celebrate the diversity of all Aboriginal people and their ongoing culture and connection to our lands and waters in New South Wales.

Now, I know we have a lot of interest in the Heathcote Road bridge widening project, and that's what we're here obviously to discuss today. To talk about the project with me I have Dylan, who is our Director of Network Development. Welcome Dylan.

DYLAN: Hi, everyone.

SUSAN: We have Cameron, who is our Project Manager.

CAMERON: Good morning.

SUSAN: And behind the camera we also have Richard and Manju, who will be monitoring your questions coming in. And Hannah, who is our Environmental Officer, who I'll introduce onto camera shortly.

So, today's session will be run in three parts. The first will focus on construction. The second part will focus on environment, and then we'll move onto answering your questions. So, we welcome all of your input today. This is really your opportunity to have your say on this project, and the review of environmental factors. If you'd like to know something about the project, please post your comments in the - in - please post your questions in the comments section. We'll certainly aim to get through as many as we can this morning. If we're not able to answer your question, we will email you and follow up. And we'll also publish your question and our answer on our website.

So, Dylan, one key issue that does keep popping up is around bridge duplication versus bridge widening. Can you tell us about the long-term plan for the project and how it ties in with that particular issue?

DYLAN: Sure. Thanks, Susan. So, Transport for New South Wales is planning for growth in the southern suburbs and looking into roads for current and future traffic volumes. We're at \$35,000,000 in funding and investigation into duplicating Heathcote Road between Voyager Point and Engadine. Other improvements we're working on include Heathcote Road between Holsworthy and Voyager Point.

SUSAN: Okay. Thank you for that. We have a question that also comes up around the growth in the southern part of Sydney. Has Transport considered this growth in terms of these future traffic needs?

DYLAN: We sure have. As I said, we're looking at the growth in the southern parts of Sydney. We've got close to \$300,000,000 worth the work happening on Heathcote Road at the moment, and we continue to invest in the future.

SUSAN: Okay. Thanks. How will these improvements be funded?

DYLAN: Well, the funding is coming out of the Gateway to the South Program, which was a program of work to look at the roads in the southern part of Sydney. As I said, we've also got other money that's been allocated by the State Government. Once the investigations have been complete, business cases will be developed for future works and hopefully funded.

SUSAN: Okay. Thanks for that. I'll now turn to Cameron as our Project Manager. Cameron, would you mind giving everyone a quick overview of the project and tell us where it's all at the moment.

CAMERON: Yeah. Absolutely. Thanks Susan, and thanks everyone for joining us this morning. So, the bridge was built in 1943 by the military on Heathcote Road there, winding through that narrow and steep terrain. So, yeah, it was built during the Second World War, and it sits over the Woronora River, and adjacent to the Heathcote National Park, and in close proximity to the Royal National Park. So, Transport for New South Wales is making improvements to the bridge as it is now, and there is a – a crash rate, which is more than the average for the Sydney area. So, we're looking after that issue there by widening the bridge. Now, we've developed a proposal for safety improvements to the community, which was communicated last year in May, and happy to say that more than 1000 people got back to us, letting us know that bridge safety was one of their primary concerns.

SUSAN: Okay. So, the REF is currently on display and people can have their say at the moment?

CAMERON: Yeah. That's right, Susan. So, the REF, that stands for Review of Environmental Factors, and it's on public display, and we're currently receiving a fair bit of valuable feedback from the community and project stakeholders.

We also want to invite everyone, as part of this livestream, to – to take a look at the REF and provide some feedback on that – that submission before the end of the month when consult – when submissions are closed.

SUSAN: Okay, great. A common question that, again, does keep coming up, "Why widen the bridge?"

CAMERON: Yeah. It's a – it's a good question. Thanks, Susan. So, the bridge is obviously narrow, and that's the reason why we're widening it. So, to illustrate that point, the bridge lanes are currently three metres wide. Now, you can have trucks that are two and a half metres wide, and if there are revision mirrors which protrude more than 250 millimetres off the body of the vehicle, then there is a potential for a – a collision of the mirrors. So, that's obviously something that we want to look after, and we want to upgrade that the three and a half metres wide, which is in line with the current standards. So, the bridge shoulders at the moment, they're another issue that we have that have – that can be improved to improve the safety. So, at the moment, they're basically of a negligible width. They're only 300 millimetres wide. Now, we want to widen those to 1.2 metres. So, this is really important because we have over 22,000 vehicles per day crossing the bridge, and around 15% of that traffic is made up of heavy vehicles, and Heathcote Road is part of a major frout - freight route. So, obviously we want to get on top of this issue and make that route safer for everyone.

SUSAN: Okay. Thank you, Cameron. Look, I'd now like to introduce Hannah, our Environmental Manager. Hannah, welcome.

HANNAH: Thanks, Susan.

SUSAN: Can you tell us a bit about the REF, or Review of Environmental Factors, for those that may not be familiar with it? What is it? And what does it mean?

HANNAH: Sure. Thanks, Susan. So, the REF describes Transport's proposal to widen the bridge. It's main function is to really outline the – and provide the thorough assessment of all the potential environmental impacts that could occur during the construction or the operation phase, and to demonstrate what we've done in an effort to mitigate the impacts. And it also provides a detail on all the key features of the proposal, and tells a story about the options evolution of how we got to this point. The public exhibition of the REF is really a key opportunity for the community to be informed about the details of the environmental assessment, and share your views and feedback.

SUSAN: Excellent. And are these reports publicly available?

HANNAH: Yes, definitely. The REF and all the supporting specialist reports are available through the links on the website. We sought feedback from a number of specialists and external agencies in their development. They include: noise and water – noise and vibration assessments, soil and water, biodiversity, Aboriginal cultural heritage, non-Aboriginal heritage, and urban design, and visual impacts assessments. And for – I know myself, in my role as an Environmental Officer, I'm really keen to hear your feedback. Take a look. And if you like the idea of the koala crossings, let us know. I really encourage you to take the time to have a look, and let us know your thoughts and feedback.

SUSAN: Okay. I guess – how – in terms of environmental impacts, what are the two key issues that you think people should be generally aware of?

HANNAH: Sure. Well, during the environmental assessment process two environment aspects which presented a challenge were the cultural – presence of cultural heritage. There's both land and items in the vicinity that have Aboriginal cultural heritage significance and outstanding cultural significance. There's also the bridge itself and its historic value and heritage significance. And we have worked throughout the design development in such a way to identify opportunities where we could avoid impacts to the – for example, Aboriginal cultural heritage items, and avoid impacts altogether. Or where we've worked together with key stakeholders, like Heritage New South Wales, to look at what we could do to mitigate the aesthetic impacts recognising the significance of the bridge.

SUSAN: Okay. Thanks, Hannah, for those comments. We might now just launch into some more of your questions that you've been posting. Gavin is the first person that's asking: "Why aren't we adding more lanes?"

CAMERON: Yeah. So, I can probably answer that one for Gavin. So, there's a good reason why we aren't adding more lanes. And the reason for that is, we are adding all of these additional elements to it an already old bridge. So, there's only a certain amount of additional steel and concrete that the bridge can support. And that, at this point in time, our structural analysis has told us that that is limited to only one lane in each direction with the

increased lane width and shoulders that we've just spoken about earlier. So, it's a – it's a simple engineering response that simply the bridge cannot – cannot have an extra lane installed on it.

SUSAN: Okay. Thanks, Cameron. Bruce is asking: "It will still be a bottleneck, won't it, after widening?"

CAMERON: So, I would say that it – any sort of bottleneck effects will be – will be reduced as a result of the widening because the narrow bridge has, what we call, a speed-timing effect which can make motorists travel slower. So, the wider lanes and shoulders will give motorists a more sense of a safer journey that they're taking, and allow them to travel at the – the posted speed limit.

SUSAN: Okay. Thank you. Phillip is asking: "Why are we doing it now? Why didn't we do it 40 years ago?"

DYLAN: I'll take that one, Susan.

SUSAN: Okay.

DYLAN: I guess it's simply that Southern Sydney is growing, and the demand for a improved bridge has increased. And we've also had some crashes upon the bridge in recent times and we'd like to try and rectify that.

SUSAN: Okay, great. Manju, do we have any other questions coming up?

MANJU: Yes, we do.

SUSAN: Okay. Em: "What are the benefits of bridge widening?"

CAMERON: I can – yeah, I can talk about that one. So, we – in – by add – by widening the lanes, we are making it safer because obviously there is more space for – for vehicles to travel on the bridge. And that, in turn, reduces the likelihood of head-on collisions, but also side-swipe – side-swipe collisions, as well with things like bridge barriers, which can lead to injuries for the motel – motor vehicle users. Now, there's also some other benefits in terms of improvements to traffic efficiency by adding the wider lanes and the shoulders. And as well as that, there should be an improvement to the roads network – the road network's ability to service growing commercial vehicle movements as a result of increasing that provision there for the – for the heavy vehicles to move across the bridge.

SUSAN: Thank you, Cameron. Paul is saying: "It's a waste of money. Why can't we have a new bridge?"

DYLAN: I'll take that, Susan. The quick answer at the moment is, this is the first step into looking at the long-term future of Heathcote Road. And until we know what the best option for that is with a strategic investigation, this in the interim will make this bridge safe and the road easier to travel.

SUSAN: Thanks, Dylan. Mick is asking: "How does widening fit into long-term widening to two lanes each way?"

DYLAN: I'll take that again, Susan. As I just mentioned, this is the first step. We're looking in a broader street – into a broader strategy for the entire length of Heathcote Road between Voyager Point and Engadine. We don't know what that looks like yet. The investigation's have only just started. But hopefully over the next year or two, we'll be able to release some information into that.

SUSAN: Okay. Thank you. Em is asking: "What are the benefits of bridge widening?"

CAMERON: Well, I think we – we spoke about that earlier. And mainly it's the – the improved road safety. It's the improvements to freight and heavy vehicles that travel across the bridge. And we're going to also see some improved network resilience. So, in the event of breakdowns, those sort of incidents should have less of an impact on the traffic network.

SUSAN: Okay. Thank you. ESE is asking: "When will the plan break ground once approved?"

CAMERON: So, what we're looking to do is, once the proposal – or once the project has environmental approval, which will be sought after the REF is complete and the submissions are all received and addressed, we're looking at starting construction by – before the end of this year. So, yea, before the end of this year is what we're – what we're aiming to do in terms of breaking ground.

SUSAN: Okay. Grant's asking: "It's a magnificent bridge. Obviously, it has a lot of history to it. Why do we need to change it?"

HANNAH: I'm happy to – to address that one.

SUSAN: Thanks, Hannah.

HANNAH: So, yes, we definitely acknowledge, and in our assessment, we definitely recognised the historic and amenity value of the bridge. And we sought early on to make sure that we developed the heritage assessments and the visual impact assessments in tandem, and apply what we've – internal policy, the bridge aesthetics guideline, to make sure that all the changes possible we could do to mitigate the impacts were developed. And we have sought feedback from Heritage New South Wales as well to make sure that they're happy with what we're proposing because the bridge is State – has State heritage significance, and we want to be able to make sure that it gets listing in the future. So, we have made our assessment that we mitigate our impacts enough so that you can still get formal listing in the future.

SUSAN: Okay. Thank you, Hannah. Will the bridge be closed during construction?

CAMERON: Yes. Yes, Susan, it will. So - and there's a good reason for that. We are going to be working at heights. We're going to be working in proximity – close proximity to traffic, and we're also working in a very narrow road corridor. So, there's a number of risks that our construction contractor are going to be working with in order to deliver the project safely, which is obviously important to us because we want everyone to go home safe at the end of the day. So, inevitably there are going to be some road closures required, and we're looking at currently a range of different types of closures. So, I know that there was a six-

month closure talked about last year, and the feedback we got from that – from the community was that they weren't really in favour of that happening. They didn't like that happening but unfortunately, we need to obviously do this safely. So, an alternative to the six-month closure that we're looking at is, doing it under night-time only closures and potentially some daytime closures outside of peak-period travel times, because we've done some traffic modelling and we realise that, you know, there's a – there's a detour at where the traffic has to go if the bridge is closed, and we don't want to, you know, we want to sort of manage the effect on the greater traffic network while also balancing a safe delivery of the project.

SUSAN: Yeah. Okay. Is that still an area where you're working with stakeholders to develop –

CAMERON: That's right. So, as we – as we progress from the concept design, which is the stage that we're at the moment, into the detail design phase, we start getting a contractor on board, who is an expert at delivering this type of works, we're going to have a better idea of the methodology required to deliver the project. And from there we're going to have a better idea of what types of closures are required. So, then we'll be working with our stakeholders, including the Transport Management Centre, in order to manage – manage those detours as they're required.

SUSAN: Okay, great. Just while we're on stakeholders, Hannah, I guess this is something you can answer. But, how have we engaged with stakeholders, like the traditional landowners, in developing this REF?

HANNAH: Sure. In the development for the assessment phase, we've implemented what we call the Procedure for Aboriginal Cultural Heritage Consultation, and sought to first identify key stakeholders relevant to that location. We have engaged and identified that Thirroul, Gandangara and South Coast title claimants had interests in the location and sought to consult with them. We also got representation from those groups in site field work – field effort, survey efforts, to get their input on the proposal. As a result of that, we were able to successfully locate one previously lost AHIMS, or heritage record. And we were able to modify the design such that we could avoid impact to it altogether, which was a good outcome in that instance.

SUSAN: Okay, great. How much notice will we be giving for any work that – or for the work that's going to be undertaken, so people can plan their journeys, etcetera.

CAMERON: So, before any sort of road closures are implemented, we will have – we will have a communications plan, which we will call on. And we're anticipated to have four month – I'm sorry – four weeks notification before any changes are made to the way that people use the road network. So, yeah. People will have about four weeks to – to plan their journeys and plan their lives so that – so that they have a reduced impact on the way that they go about their journeys as a result of the – the bridge project being constructed.

SUSAN: Okay. Thank you, Cameron. That's good news. Have we got any other questions coming in, Manju? While I'm just waiting for advice, what about the construction methodology being used here?

CAMERON: Yeah. Yeah. So, I mean – like – like we talked about earlier, so what we're – what we're looking to do is widen the headstock of the bridge. Now, the headstock is the part of the bridge that is at the top of the piers. And they're the vertical concrete columns that, you know, extend out of the ground to support the – the road deck. So, we're talking a widening those headstocks using – using some - we call them headstock extensions but that's probably a fancy term for a steel bracket. So, it's a fairly large steel bracket. And that's held in place by something called post tensioning, which is steel strands and cables which are – which are under pressure and they hold those brackets against the bridge. Now, there's two of those brackets each side at each of the piers, and then there are four piers. So, each of the brackets will support a new steel girder. And then once the steel girder is installed, then we will – we will construct a new section of the concrete deck. So, we'll be placing into that section there that – which is supported by the girder steel reinforcement, and then obviously concrete around the steel reinforcement. And then on top of that, we're also going to be having new – new road safety barriers along the edge of the bridge. So, those new road safety barriers, they're going to be higher than the existing ones because that's what the current design standard is for bridge barriers.

SUSAN: Okay, great. Thank you. Hannah, just in terms of environmental impacts, I know you've mentioned some of this. But, what are some of the other mitigations that we're taking to reduce any impact on the environment?

HANNAH: Sure. Well, a key – another key challenge has been biodiversity, being the location of the bridge is in a high biodiversity value setting. We have the Woronora River. We have a Commonwealth listed area recognised for its outstanding biodiversity significance, a national park. So, in a very biodiverse, value-high setting, and we undertook specialist ecological investigations. And they identified that the location has value for koalas as a movement corridor. And so we sought to get advice from the Pacific Highway Upgrade Projects, and adopt some of the lessons learnt and connectivity features that have worked well on those projects, and sought to apply them here. And that includes the koala connectivity furniture, that we're proposing under the bridge. The ecological studies also identified the presence of a threatened microbat species in the bridge and – which was living inside the bridge structure. So, we're also looking to mitigate our impacts there by: looking at opportunities where we can apply specialist knowledge, develop a microbat management plan, potentially put temporary habitat in place during construction, but then also get specialist input to see what opportunities there could be to put more permanent habitat on the bridge as well.

SUSAN: Okay, great. So, if someone makes a submission to the REF, what happens to that submission?

HANNAH: I'm happy to take that. So, they – the project team will take a look and extract out quality issues. We – as a team, we've got a field of expertise in: design, Aboriginal heritage, a – the whole suite of environmental impacts and we're happy to take your concerns on board. We will make sure that they've been fully addressed. And if – I guess one of the key opportunities of this feedback process is, you can give us your ideas and innovations on things that we could perhaps build on even more. So, we really invite you to take your time to look at the reports in detail, and give us your thoughts and feedback.

SUSAN: Excellent, very much so. Sue is asking: "I may need some clarification of some of what you've said." Which is completely understandable. This is a short format of a - of a major project. So, Cameron, how can people who want to learn more ...

CAMERON: Yep.

SUSAN: ...or find out more, or clarify things, how can they do that?

CAMERON: Yeah. So, for Sue, I would – I would recommend - for everyone who's looking for some more information on the project, I would highly recommend that you check out the Review of Environmental Factors, because that is written in a plain English manner, which is done on purpose to make it easy to understand for people who aren't involved in the project and who aren't familiar with all of the technical terms. And then further to that, if -you know, should you go and check out the REF and have a read of it, and there's some aspect of it that you're not sure about, or you want to ask some more questions, you're always free to contact the project information line, which is a phone number on the project website, and pers – and a member of the project team will get back to you with a response on that question. The other alternative is that you could send us an email, which is on the project website as well. So, for anyone looking for more information on the project, I would highly recommend you check out the REF. Have a good read of that. Any questions you have, please check out the project website or the information flyers, which were distributed to people's letterboxes in the local area, and you'll find on that flyer and the website a way to get in touch with the project team.

SUSAN: Thank you, Cameron. Another question from Penelope: "How much will this cost the taxpayer?"

CAMERON: So, at the moment we have a total project cost announced of \$73,000,000. So, that is the cost to the taxpayer at the end of the day to deliver the upgrade.

SUSAN: Did you want to comment any more about that, Dylan?

DYLAN: I would. I just wanted to say that we've got close to \$300,000,000 that's been announced to be spent on Heathcote Road between Engadine and Moorebank. And we continue to look at other areas to invest money on Heathcote Road.

SUSAN: And there's a lot going on in the corridor, isn't there?

DYLAN: There is a lot going on. We understand it's an important corridor. It's going to continue to grow, and we have had – part of the \$300,000,000 is \$35,000,000 that's been announced to look at the long-term strategic duplication of Heathcote Road between Voyager Point and Engadine.

SUSAN: Okay. Thank you. Ruth is asking: "Will Heathcote Road be closed?"

CAMERON: Yeah. So, that sort of just expands on another discussion point we had earlier in the session. So, Ruth, in order to deliver this work safely, you know, given that we are working at heights, we're working close to a lot of traffic, we're working over water, you know, it's a – not a – not the safest work environment. So, we have to have measures in place to make it safer. One of those measures...

S: How high is the bridge?

CAMERON: It's about 14 metres above the Woronora River.

SUSAN: Right.

CAMERON: Above the water level of the Woronora River.

SUSAN: Okay.

CAMERON: So – so, yeah. We obviously want to do that as safe as possible. So, to answer your question, Ruth, there will be some closures required of the section of Heathcote Road between New Illawara Road intersection and the Princes Highway. There's no intention to close the northern section of Heathcote Road as part of this project. And it's also important to mention that, you know, we've been developing the concept design last year, which is that headstock extension option we spoke about earlier. And one of the key considerations that we have, you know – had in our minds when we were developing that design solution is, making a solution that is deliverable without having to close the road for an extended period of time. So, that's definitely something that we really want to try and avoid, because obviously that – that would cause a lot of delays in the – in the road network. And we really want to avoid doing that. We want to, you know, inconvenience people as little as possible. And we've come up with a design which we think is achievable and deliverable using the night-time closures and closures that are outside of the peak travel period.

SUSAN: Okay. I think Mick was asking a question along the lines of: "Why wasn't this money spent on developing a strategy?"

DYLAN: I'll step back in then.

SUSAN: Dylan?

DYLAN: Sorry about that. So, the \$73,000,000 was allocated to improve safety for the bridge in that section of road. Since that has happened, we've had more money allocated to look at the entire route, which is close to 22 kilometres.

SUSAN: Thank you, Dylan. Hannah, we do have a question around the environment here. Patricia is asking: "Will the koala crossings include floppy-top fencing?"

HANNAH: Okay.

SUSAN: And maybe you can explain what that is for everyone.

HANNAH: Yeah. Great question. Floppy-top fencing is just fencing with a really loose top, and the idea is to stop koalas climbing over the fence and onto our road corridor and risk a vehicle strike. So, as part of the commitments in the biodiversity mitigation measures, we haven't detailed the final solution, but what we are looking at is getting a ecologist on board to review the detailed design. And we'll base it off what has worked and proven effective on the Pacific Highway projects. And the idea is to look at the terrain, and potentially tying

fencing on the edges to make sure that it does direct the koalas to use the – the crossing provided under the bridge, as well as supplementary planting and things that have shown to have been resulting in successful koala use at the connectivity features on other transport projects. So, we don't know whether it will be say a steel-top or a floppy-top at the moment, but we do have plans to make sure that there is some provision to make sure that the koalas are fed into and use the crossing.

SUSAN: Fantastic. Thank you, Hannah. Dylan, I might call you up again. But Nick is asking: "Will Heathcote Road closure be after the Linden Street upgrade?"

DYLAN: Yeah. Thanks, Susan. Thanks, Nick. That's right. We're hoping to have the Linden Street upgrade complete before any closures of Heathcote Road bridge⁽¹⁾

SUSAN: Okay. That's great. "Isn't this where the traffic will be diverted?", he's asking.

DYLAN: Yes. Spot on again. That is part of the designated bypass route. And as I said, we hope to have the Linden Street upgrade completed before the Heathcote Road bridge is closed.(1)

SUSAN: Okay, great. Thank you. So, I guess just generally, what do you see as the next steps in this process so people know where we're – where we are and where we're headed to?

CAMERON: Yeah. I guess, so, right now we're in the REF of consultation phase, and we've finished our concept design. So, the next step is the, you know – we receive all of our submissions from the public, and from the community, and from all of our stakeholders to inform the REF. And then we have to then address those submissions, and maybe there's some changes that are made to the project, maybe the way it's delivered. There's some changes there potentially. And then – so then, after that we get environmental approval once the REF is determined. Now, while this is happening, in the background the project team are working on the detailed design of the bridge-widening proposals. So we have the concept design at the moment, which is high-level. Something that we can, you know, look into the detail of. We can – we know that it's – that it's achievable. But detailed design takes it that next step further, and to really examine those fine details. And that's the design that is then given to the contractor to go and build. So, those are the next steps. And like I said, that'll be happening this year.

SUSAN: Okay, great. Well, I guess that just about wraps things up today. Thank you so much for being involved and engaged in this discussion around Heathcote Road bridge, its widening, and the Review of Environmental Factors. So, there's still time to let us know what you think, and ask questions of the team as Cameron has mentioned earlier. Submissions are actually open until the 24th of February. So, don't forget. You can also register your details for any future updates on this project on our website, and we'll put the link in the comments' section so that you have that to hand. If we weren't able to answer your questions today, we do apologise. We will get in touch with you, or you can private message us, or email us with any questions that you think about later and we'll contact you with an answer. But thank you so much for joining us and goodbye. Have a great day, and thank you.

CAMERON: Thanks for joining us.

DYLAN: Thanks everyone.

HANNAH: Thanks everyone.