

Ravenhall and Derrimut Fields drainage workshop

Transcript

Ava Rafatnejad

We would like to begin by acknowledging the Traditional Owners of the land on which the Ravenhall and Derrimut Fields study area are located, Wurundjeri Woi Wurrung and Bunurong, and pay our respects to their Elders, past, present and emerging.

So as part of introduction, I would like to introduce in high level people who are here today and just using this plan which is the overall Ravenhall, Derrimut Fields and Laverton Creek plan and letting everyone know that most of the property owners, stakeholders who you can see on this plan are here today, including Boral and Dexu developers and their consultants.

We also have Derrimut Fields PSP and Hopkins Road landowners and their consultants here today. And there are some of the properties on this area which are owned by authorities and utilities or being managed by them. So we have them here today as well. And the key public stakeholders are Melbourne Water, Department of Transport and Planning and Melton City Council.

That was a high level introduction and I hand over to David Reginato, our senior manager.

David Reginato

Thanks, Ava, and welcome everyone. So my name's David Reginato. I'm the senior manager here at Melbourne Water who looks after the creation of our development services schemes across Melbourne that help with facilitating new development in the area.

So I just want to thank, I'm just looking at the numbers, there's 69 people attending and that's a massive effort for Ava and the team. I think we reached out late December, uh, to all of the stakeholders to say, can you please come along? So for 69 to come along, we just want to thank you all for making the time and effort.

And this workshop is something new that we're trying. So if it's a bit ad hoc and a bit informal, it's because we haven't done these before. In this manner, we generally rely on the DTP sort of PSP process to sort of incorporate drainage.

But in this case, and you'll see why when DTP present, we are in a bit of a unique situation where we've got four different areas I think, looking to rezone and looking at different timeframes to rezone over the next few years. And that creates a bit of a complication for Melbourne Water as the Drainage Authority, is: how do you make sure you get a unified drainage sort of assumptions across those three or four planning scheme amendment areas?

So this is the first workshop of what we think of many, in relation to helping get the right drainage and flood aspects for those areas. We're doing this workshop in around boundary conditions because there are a lot of interface between these planning scheme amendments and we're trying to make sure that what happens across one PSP or other planning scheme amendment then gets captured in the others as they work through that process going forward.

So we're here to make sure all the landowners across those areas have the same understanding of what Melbourne Water and DTP are trying to do. So it's a bit of an information session of trying to explain where we're going to head, what we're trying to do, what are the issues, what are the sort of risks we're trying to manage.

And then hopefully we get consistency across those boundaries and then landowners and stakeholders and utilities can then go and work through as they as they go and look at those planning scheme amendments at different timeframes and DTP can talk to those.

If you go back to the goal, so today's purpose is really around process and giving a bit of a setting of the scene. It is not to resolve anything today at all. It is really to explain what we're going to do over the coming weeks and months as we work through with DTP.

The goal is to get as much feedback from stakeholders as we can to then make an informed decision. It is not to get a consensus. We never generally can get a consensus across landowners given that we're looking at major drainage infrastructure and we generally place those in the logical locations to deal with flood mitigation and water flowing downhill, but we want to get feedback from all landowners around any critical aspects that we need to make before making any sort of decisions.

So we have not made any decisions at all around boundary conditions. At this point we are seeking your feedback so that uh, before we do that in setting conditions that we have got as much information as we can and that's where all the stakeholders here today are really important in providing any local knowledge or other information that we need before making decisions.

So the goal at the end of these workshops is to set drainage assumptions at those boundaries. And what I mean by drainage assumptions is flow conditions. Are we returning back to pre-development conditions? Are we

retarding or not retarding to a set of flows that is agreed across boundaries. We need to understand what the asset mix are at those boundaries. Are they waterways? Are they pipelines? Are they roads that are interfacing between one PSP to another? And we need to get the levels right so that the levels from upstream can then be catered for downstream.

So they're the things we're trying to get to. We're not looking to design actual assets and land take and things that they're to be done through the PSP and other processes and generally.

Yeah, we'll be supporting that whether it's proponent lead or Melbourne Water led sort of drainage work. So that's the goal of these workshops that will then free up those PSAs, those planning scheme amendments, to be done independently of each other, because we know what's happening at the boundaries.

So today we're going to explain the critical risk at those boundaries. You've seen the plan, you might want to bring that back up, either that we have a number of interfaces you can see hopefully on the map. It's very small for those some of you around where we're moving from one property owner to another or across Hopkins Rd or others where there's interface where we need to get the drainage assumptions correct to then inform what happens downstream and upstream.

So we're going to be working through all of those today and explain what are we trying to resolve and why, so that when we move forward, people are understanding when we're asking questions of landowners and asking for their, you know, feedback or suggestions, we're looking at this plan and these critical interface issues.

So hopefully that makes sense. We've got a lot of stakeholders here as well in relation to you know VicTrack, DTP, council and others and they're here to sort of understand those interfaces as well and bring in their input over the coming process.

So the agenda today, I might run through that as well, is for DTP to give an update of the planning for the area that we're in question. We've actually got Boral here for 5 minutes. They're a key player because they are at the top of the catchment, and they drain into all the four areas that we're going to look at.

So we're giving them a bit of a chance to explain what they what they're looking to do at a high level, um, because they impact on everyone else in in the catchment because they're right at the top of the catchment and drain into different schemes as they sit at this point in time.

And then we'll go through all of the various issues we've got around environmental, where are we environmental and other planning and the different catchments and the different risks. Each catchment has a different risk and we will try and explain that at a higher level.

As you can see, we're going to try and run through them very, very quickly. And then after the break, we want to get your feedback around future process and future engagement. Because we have got a lot of people, landowners, I think it's 70 now. It keeps moving up, Ava, so well done. Uh, we've got 70 and we think we're going to explain that we would like to potentially split future workshops into a more logical smaller group to make it more efficient and the timing risk and pressures are slightly different in different parts of the catchment.

So hopefully that makes sense. I just want to make sure Ian or Ali or anyone else want to bring anything up before we move on to having DTP explain the planning of the area.

So, before I do move on to Akla, sorry Akla, setting of drainage assumptions is generally what Melbourne Water does, through our DSS work. And for those developers and landowners and authorities that work in in other PSPs, it's generally we would set the drainage assumptions as the responsible authority and then seek feedback during the PSP and their standalone engagement and standalone processes that the DTP and you know VPA, you know used to be known, VPA would run through public consultation and agency validation and those things.

The reason why this is different is because we've got 4 PSPs. I'll call them four, but there could be other PSPs happening at different times and we need to set drainage now to be able to do that planning work and so we've brought forward a lot of the consultation for landowners in particular earlier than we normally would because of that separation of planning scheme sort of amendments. So that's the only difference. How we propose to engage with all the landowners in those PSPs or other areas, it will be the same and will continue to happen.

I think David, David has sent me from David Lee from my own team. Um, we will be seeking feedback at the end today around the process, how you want to do it. So if you want to have a think about how you want to be engaged, that session at Item 7 is for your opportunity to say how would you like to be engaged. There'll be opportunities to engage with us separately around technical matters. So this is not about technical, it's about process, but you'll be able to engage with us.

Going forward, technically we'll provide, you know, email and other addresses where you can send submissions on technical matters, and we'll work through that in ongoing workshops in in more of a technical manner. But, just want to

reinforce that and that's similar to the PSP process that we have generally across other areas. So the only reason why this is slightly different, as I said and I'll summarise, is because of this fragmentation of planning and we want to make sure that we are getting a whole of catchment benefit.

We do not want one area to go ahead early and that has a detrimental impact on NDA or others in other precincts because we haven't got the right assumptions and made the most efficient design across the whole catchment.

So that's our goal is to hopefully maximize NDA and maximise efficiency across all of these PSPs and to do that, we want everyone on board to sort of help with providing the best robust decision we can before we start going into more detailed design as we work through those processes.

So I'll leave it there. And Akla, please come and share your thoughts around the DTP process.

Ava Rafatnejad

If you go to the next slide, it's here, yeah.

Sam J Gordon (DTP)

Thank you.

Thank you, Ava and David. I hope everyone on the other side can hear me OK. We're in a meeting room, so I just want to check in.

Ava Rafatnejad

Yes, it's all good.

Sam J Gordon (DTP)

Fantastic. Thank you Ava. So I want to thank David Reginato and the team for leading this workshop on the part of Melbourne Water to take a proactive approach to responding to some of the challenges to do with drainage in the sub-region like David was saying.

We're looking at quite a few PSPs here. So we have the Warrawee Precinct to the north, which is in horizon 2 in the 10 year plan for Melbourne's Greenfields. So the preparation of that PSP is expected to commence 2026 to 2029. Further south on the south side of the Melbourne Bower railway line, we have the Ravenhall PSP, which is currently one of the unprogrammed PSPs.

So the planning for this area based on the 10 year plan for Melbourne Greenfields is expected to commence 2034, 35. So I'm just noting some key land uses in this Ravenhall PSP.

Where we have #1 marked on the slide there, that's the location of the Deer Park Quarry and also the borrow land holding, which we'll go into separately in this presentation and on the other side on the east side of Christies Road there's a separate proposal from Dexus, which is going through the development facilitation program for a proposed rezoning.

On South of Riding Boundary Rd where we have #3 is a state significant landfill, which is a key use here and where we have #4 there on the east side of the regional rail link is an existing corrections facility all within the Ravenhall PSP.

Further south of Ravenhall PSP on the other side of Middle Road we have the Derrimut Fields precinct which is a horizon 2 PSP and the planning for this precinct has commenced. So the work that Melbourne Water is leading today will help inform the drainage in Derrimut Fields, Ravenhall and potentially Chartwell East PSP, which is one of the PSP's further down the track for us. So Chartwell East PSP is on the west side of Hopkins Road and it's a horizon 3 PSP which is planned to commence between 2029 to 2034.

Thank you, David.

Ava Rafatnejad

Thank you, Akla.

David Reginato

Before we move on, I'm going back to that slide and I think, yeah, thanks DTP for some really clear guidance around current timeframes. We know that they move and can move. So we work together with DTP on that. But as you can see why we're here is we've got various areas of planning that are in a 10-year horizon and so the drainage is really critical when you go upstream to downstream.

We need to under- and a lot of these PSPs, particularly Derrimut Fields and Dexus as an example are downstream of future changing of use. We need to get the assumptions right so that we're not creating unwanted, uh, negative impacts by not getting the right assumptions now for something that might be planned in 10 years' time.

So hopefully that gives you an idea why we're here from a urgency perspective is, yeah, some things are getting planned now and we want to make sure that we're planning the right things and sizing the right things to facilitate good planning for the next 10 years. Thanks, Ava.

Ava Rafatnejad

Thank you, David. On this section I would like to ask Cameron from Crossweb to have a presentation for us. Just asking which account do I need to make presenter?

Cameron McMeeken

Uh yeah, so just um Cameron, name@cossillwebley.com.au

Ava Rafatnejad

All good. Yeah, I will just.

Thank you.

All done.

Let me know if you have any issues.

Cameron McMeeken

No worries. Thanks very much. So as Ava mentioned, I'm Cameron McMeeken from Cossill & Webley. So we're the civil engineers representing Boral on the Ravenhall Logistics precinct. I'll just do a quick overview of the project, which is obviously everyone has a bit of an understanding of where it's located.

Um. So yeah, we've been working, um or spending a little bit of time on working through the stormwater investigation alongside with Jonathan McLean from Alluvium. Um. So realistically, I know David Reginato mentioned before that we're, yeah, obviously the land is on the top of the catchments and split in four.

Upon viewing and doing a bit of a detailed look at the actual land, it actually splits into two drainage schemes, kind of ignoring the Neil Road at the top and the Woods Road down the little slither of Woods Road down the south and largely just due to existing and natural constraints of the boundary, it kind of flows into the two, the Laverton Creek going towards the east and the Truganina down towards the southwest. So yeah, using the site survey, we've established that there's six catchments on the site which utilise 4 outfalls.

Currently, the major constraint for this landholding is actually, as I've mentioned before, the state significant landfill to the south, which is Cleanaway's. So as it stands at the moment, majority of the water does flow to the south, or at least to the corners.

Cleanaway being a landfill is going to be filled in its ultimate scenario and largely will be filled above existing ground levels. So it's going to essentially impact on any ability to convey stormwater.

I'm just showing here and you can kind of see the existing drainage schemes and the proposed outlets for those. So largely a majority of the Truganina

drainage scheme was intended to go to the CH9 and the SK8 outfalls. But Cleanaway as you can see is in the way.

The Woods Road slither obviously was intended to go out there, um, impacted as well. And as mentioned, Laverton Creek generally drains out to the east of the site. So that's pretty much going to be the main constraint for the Ravenhall Logistics precinct and um, what we've had to have a look at to try and overcome to ensure that this can eventuate to a development.

So having a look at the developed conditions, largely trying to utilise existing contours and catchments, but at the same time trying to work around the constraint we've had a look at where the developed condition outfalls will be. So trying to work things around the Cleanaway.

So we've generally held the Laverton Creek going to existing stormwater conveyance and that's pretty much like as per the current Laverton Creek drainage screen, which follows natural waterways through to the Eastern Dexus land. And then we've essentially got this portion of land here which does still need to go south and will eventuate to the Laverton, sorry, to the Truganina drainage scheme.

So yeah, there's the five catchments on site. As mentioned with the Cleanaway to the south, the biggest constraint is going to be trying to work out the outfall and get it down to its eventual flow path.

So what we've done here is determined that yeah, there's obviously going to be a wetland and a waterway that is going to need to run down Hopkins Road and eventually connect to the downstream assets of the Truganina drainage scheme. Because essentially this catchment here which was part of the original Truganina it does go to its eventual flow path, although some of it was meant for CH9, the rest of it's going to SK8.

So it is anticipated that some of these assets previously shown would need to increase in size, but at the same time some of the ones at CH9 would need to have the ability to reduce in size. So that's probably the main constraint that the Boral land or the Ravenhall Logistics Precinct is going to face. We largely see that the Laverton Creek is pretty much no changes from current requirements and a pretty easy one to resolve, especially due to the limited land holdings and existing downstream infrastructure being part of a resolved drainage scheme. That's pretty much everything I've got. Thanks.

Ava Rafatnejad

Thank you so much, Cameron.

David Reginato

So.

Ava Rafatnejad

I'll hand over to Cate, our to our planning team, our environmentalist specialist.

Cate Shaw

Thanks, Ava. So, yes, hello, my name is Cate. Um, I'm an environmental specialist with Melbourne Water's Urban Planning and Development team. I've been working with the team on the environmental design planning for these PSP areas.

I'm just going to take a few minutes to walk you through what's currently happening from an environmental perspective and then what you can expect going forward as well.

So firstly, we have consultants currently completing a due diligence report, which is currently being finalised and due to be completed by the end of this month. The due diligence report is essentially a desktop assessment and literature review, which will give us an understanding of the potential values at the site and guide the on-ground field surveys.

The next step will be those on-ground assessments or field surveys. The consultant is anticipated to start those field surveys in late March or early April. These on-ground assessments will initially focus on environmental and geomorphic values with cultural heritage values to be assessed separately at the later stage.

So over the coming weeks landholders will be contacted to seek consent for access to their properties so that those on-ground surveys can be undertaken. The due diligence reports and reports resulting from the on-ground assessments will help to determine the required waterway setbacks, which will ultimately be defined by the hydraulic requirements, cultural heritage considerations and geomorphology and environmental values.

And then lastly, also just noting that there is an MSA grassland reserve located along that northern boundary of the Ravenhall PSP boundary. The reserve is part of the broader conservation network and is recognised for its important conservation values. So its presence will be an important consideration in the overall planning and environmental design process.

So yeah, in summary, we are in the early stages of the environmental assessment process. The assessments have commenced on desktop and are continuing with specialist input and on-ground investigations and those will ultimately inform the design to ensure that all decisions are made based on evidence.

That's all.

Ava Rafatnejad

Thank you so much, Cate. Now that we had also an understanding of the environmental studies on the area, I'm going to talk more about the drainage. So what I'm going to talk on this slide is how the proposed planning is going to affect drainage.

So normally what is really important for us, it is to understand the initial condition and we have to document everything that is originally present on site. If there is going to be any proposed land use change on each site, we have to identify and land use change and be able to compare that with the initial condition.

That's also very important because any land use change could also change the drainage behaviour can also bring catchment condition change, which means the change in flow conveyance would be expected and also the change in flow time.

So if something like this, like a catchment condition change happen, there may be a situation that a drainage asset could be changed or even the DSS could be changed as well. So going to the next slide, I'm now going to explain about the development services schemes.

Regarding the area of this workshop, this plan has these red boundaries of DSSs or development services schemes and I'm just going to name the DSSs on the area neighbourhood. They are Laverton Creek DSS, Truganina DSS, Woods Road DSS, Doherty's Drain and Neil Road. Also, as Akla provided those helpful contexts regarding PSP, there are some future and gazetted PSPs as well, like Ravenhall, Derrimut Fields, Mount Atkinson, Warrawee, Chartwell East and Tarneit Plains.

I'm going to the next slide. I will hand over to David Reginato for further information.

David Reginato

Yeah. So for those, a lot of you in the in this room would probably know what a development services scheme is and the acronym of a DSS. So we apologise for all the acronyms that we may use today for particularly for landowners who may not know. So I'm just going to explain what a DSS is so that.

People understand and how we generally work with DTP in embedding those and the image on the bottom right is an example of how we've undertaken drainage investigations and then incorporated them into land budgets and PSP plans.

So the development services scheme I'm going to try and summarise has two components to it. It's a masterplan where we look to get the most efficient and

most functional design of the whole catchment to service that new development.

So DSSs are generally linked to a change in land use, whether it's rural land going to industrial land, which is a lot of this area that's going to happen, industrial, commercial land or might be going to residential land. And so what we generally do first is we do the master planning work where Cate's work from environmental perspective and then our engineering and modelling works done to size assets for flood protection and water quality.

We generally create a masterplan and we share that with key stakeholders like yourselves to then hopefully get the right asset mix for that catchment to then service development, maximize NDA, you know support development through the provision of these new assets.

We generally comprise of the whole catchment, so it's a bit different. You know we have arrangements with council as the local drainage authority and ourselves as a regional, we design all the assets for the catchment to make sure that each property has an outfall, each property can drain down the catchment.

And so for those who are aware, you'll see plans on our website and plans linked to the PSPs and gazetted ones where we've got a suite of assets, you know, ranging from pipes and roads at the top end of the catchment when flows are less moving into waterways and then we'll have key potentially flood mitigation assets like retarding basins and other assets to make sure that we're not flooding downstream of these areas and then we've got water quality as well, where we try and use land that we already need for retarding and flooding to incorporate water quality assets as well, which is an example of that image that you see on your screen.

So once we get that assets right and the mix right, we then create a costing, what I call the bank arrangement, where we look at how much all of these assets cost and then we divide that by the developable area of the catchment and we create a charge and developers pay a contribution right to the scheme for the provision of those assets.

And so they could be relatively cheap or potentially expensive depending on the complexity of each catchment. Each catchment has its own pricing arrangement and developers then pay those charges when they develop, as they develop.

And it's generally based on the type of development, if residential pays slightly less than industrial because it's based on the amount of flow generated from the development. And then we collect that money and we reimburse developers as they build assets that are in the scheme. So developers, generally 99% of the assets that are in a scheme are generally built by

developers as they develop, and they get reimbursed out of the bank that we collect the money from, from the broader catchment. So, depending on where landowners sit in the catchment, they may or may not be required to build assets, but they will be required to contribute to downstream assets that they get a direct benefit from.

So at this point in the process we are looking at the masterplan component only. We are a long way off of doing funding of any of these areas, but we are looking at getting the right master plan for all of those five schemes that Ava showed on your screen. I just wonder if you can Ava bring back your plan.

So yeah, this one, so any area that has not been gazetted as a PSP, the scheme assets shown on this plan, like I think it's uh Truganina, are subject to change. They are just a concept, they are not finalised.

So you'll see in Derrimut Fields there's assets placed there, they are just concept only. They are not final. The finalisation comes with the gazetting of the PSP, where you see land budgets and plans being formalised through that process.

So for those landowners, you see assets on their land at the moment, they are not set for those areas that haven't been gazetted. They are up for review as part of this process, and then you'll see some of the catchments have no assets, i.e.. Ravenhall and others that Cameron just spoke about at the top of the catchment, they haven't got any assets in there because we are not, you know, we haven't started this process because these parts of the DSS were earmarked for a number of years away.

So we've prioritised other PSPs and other DSSs before this one, but we're now moving into this area as Cate and others have said. So do want to give a bit of reassurance for those people who see assets on their land. If it's not gazetted in the PSP, it is subject to change and these workshops will inform what that means.

As Cameron said, some of the assumptions of scheme boundaries and where they drain will change through this process and therefore the assets may or may not be required because we've changed boundary conditions. So there is flexibility still in this process and I'm aware of others in gazetted PSPs may be looking to change assets and that is something that I it's the right time to explore those as part of this process to make sure we get the right mix across all of these PSPs.

Thanks, Ava.

Ava Rafatnejad

Well, thank you, David. Going back to the plan that I shared with you with the invitation. So this plan is sort of the summary of what we reviewed during the

last few months and we understood the areas of complexities or areas of further discussion.

And that we try to show them in purple dashed boundaries on this plan. So on this presentation, from now on, we are going to focus on these areas in details, starting from Laverton Creek outfall area showing on the right side.

And then continuing with Derrimut Fields outfall area, we are going to discuss item A to I, which are those areas of further discussion or areas that we believe may have some issues in further details.

Ian Pham

Uh, yep. So I'm Ian here. So I've been working with the team. So, as it's been previously indicated that there's multiple teams across Melbourne Water working on different regions for this because it's such a large site and different projects are different speeds, and some are active and some are not so active, but we want to get all the assumptions all together.

So this is jumping into more detail to the Laverton Creek side and I'm here to kind of just highlight the main drainage assumptions that we want to highlight to the stakeholders and the technical teams here.

So some of these are pretty straightforward as Cameron had mentioned and some are a little bit more complex. So we're just going to go through them quite briefly, but understanding that there is opportunity to have the more technical discussion with the team when required, but just wanted to go through all of them today on the Laverton Creek side.

So going through discussions on how the area is has existing main drains running through it and so with it in a developed scenario there'll be an increase of volume and like peak, not peak flow per se, but like there'll be more flows running through and the behaviour will be different for these drains.

And then we're going to highlight things that we're aware of. So there was a 490 Christies Road, there was the Transgrid submission that was presented at council, so that will inform our strategy; as well as the Riding Boundary Road which is the Dexu proposal, and from our investigations for the last couple of months we actually highlighted that there is a capacity question of the Laverton Creek downstream, which is an urbanised area with an existing Laverton Creek, which all of these flows to the east will drain to. So we've actually completed internal modelling to kind of help flag how do we approach designing a masterplan for this area, understanding that this development, the Laverton main drain as shown here, capacity does affect how we design the strategy.

So we'll go through from the top and then when it gets to Laverton Creek, I'll actually hand over to my colleague Freda, who's been working in detail of the flood modelling.

So I'll just touch on this here quickly. So again, Boral has already kind of discussed there at the top of the catchment. So that's kind of the foundational item where what happens up here affects the downstream. And so in the plan that we presented, we kind of highlighted the key locations. So at A you've got right Riding Boundary Road, like the outfall assumptions. So how do the flows come out there?

The downstream interface at H. So if Boral was to discharge to the DEXA site, how would that physically happen? So, you know, there's been discussions of flows, but then there's the physical aspect of like, is it going to be a waterway and does it connect to a waterway? Would it be a pipe connected to the waterway?

So we want to determine the process, but also to highlight we can't, you know, we can't propose different things that don't connect to each other. So ultimately at the boundaries, which will be a common theme, will be we have to be working to the same boundaries for a successful from water just to get out from A to B, so from the site to Laverton Creek quite simply.

And then we've got B that and you can see here this has already been discussed but it affects the other areas on the Hopkins Road side as well.

So jumping into the eastern side in more detail, we did mention the conveyance of the Transgrid site. So this is just an example we're not here to solve it today, but you can see here that simply a little like a section of the property has a proposal, that has um, I think the uh our home use, so the batteries and so, but you can see how there's a waterway running through under existing conditions.

So not saying that this should have been fully resolved by this stage, but we're highlighting how the simple drainage infrastructure. Like how's that going to work? How is flows from the Ravenhall logistic precincts going to actually flow through this site if that's the intention and then connect to another point within Riding Boundary Road.

So that's one of the main items we wanted to highlight and also want to get some consensus if that's possible over the next work couple of workshops.

And then we're, I'm kind of going down from the top, so seeing how the change there affects the infrastructure further down. So here once you've got the Boral site, then how is it, how are those flows going to connect to the Riding Boundary Road proposal?

So there's a waterway proposed, but does that mean there needs to be another waterway closer to the south? Because there's quite a magnitude of flow from our understanding of this point. So how do we get to proposals that will just work essentially at the boundaries, and that everyone's designing to the same assumptions.

So that's kind of all the main items which from the developer submissions and then now we're going further down. So while we have all these changes, there's a fundamental downstream item which is the capacity of Laverton Creek.

So once we go from Boundary Road you know, the water just doesn't stop or disappear into some kind of black hole in Interstellar style. So it's like, okay, there's an existing property there which would be ideal for where the water would go, but is there efficiencies there? But then once it gets there, it needs to cross and then go into this floodplain, unmitigated floodplain area, so.

Right now, under existing conditions, there's not a severe flooding issue for the area, but there is an uncontrolled aspect under existing conditions. So once this has been built up, we need to formalise how the flows or how the flood behaviour will act in this area, which triggers the discussions around G, which is there's a proposal for retardation infrastructure as well as how does it connect to C, which is the Laverton capacity.

So put quite simply, the water between the corner at I needs to safely connect to G and get to C and how is that going to happen?

And so one of the main items, is that how do we provide assumptions to all the landowners so they know what to design to, so we know what to design to.

So it's easy to say, oh, there's uncontrolled floodplain, but Melbourne Water wants to provide clear like prescribe objective at C and at G so that you're able to design back through and get a successful masterplan happening. And to do that we need to understand the floodplain analysis or understand the magnitude. Of how of is this potentially going to be a major issue or minor issue? And our goal is to actually say, okay, when we have confirmed a flow capacity at C and then we require some infrastructure at G to capture the water.

And yeah, Melbourne Water's goal is to provide clearer guidance on how to approach this area so that the developments can be serviced. Okay, so I'm going to pass it on to my colleague Freda soon, but just to kind of describe what does that mean? You can see here that under existing conditions, so this is an existing flood map, there is a flooding in this area. And once this area is built then this flooding behaviour will change and will change for all the properties around including any roads, things like that.

And so Melbourne Water has started some analysis to really try to help articulate how this area works and how we will design or how it can be designed so that this area can be built and Laverton Creek can still successfully function.

So I'm going to pass on to my colleague Freda now to go through the analysis. And this will be a little bit more technical, so it's probably aimed a bit at the technical staff, but it's important to touch on because it is a critical part of this area.

Freda Mahmoudnasab

Thanks, Ian. Hi everyone. Freda's here from Melbourne Water's DSSs Strategic and Planning team. So I'm going to talk about these slides. So I'll briefly walk through our investigations of flooding behaviour along Laverton Creek and explain why this work is important for planning future development in the area.

These findings are based on preliminary investigations and results are indicative and require a further verification. Our study looks at how stormwater currently moves through the Laverton Creek system during heavy rainfall and how downstream conditions influence flooding risks for surrounding industrial and future development areas.

The important point here is that some drainage works planned in the corridor have not been fully constructed or connected yet. Because of this, during large storm events, water cannot always move downstream efficiently and it begins to accumulate in certain points.

What we see is a system where water progressively backs up and it encounters restrictions downstream. Our preliminary modelling helps us identify where this occurs, how water spreads, and which locations become sensitive.

During storms at this stage, this is still preliminary internal modelling and not final design work, and the aim is to understand current behaviour and highlight where improvement or planning controls may be required.

This early understanding is important because future development will increase runoff entering the system, so we need to understand downstream limitations before setting drainage requirements.

Next slide, please. Thank you.

So what we see in the current situation is that water collects faster than it can leave the system. There are three main places where water backs up, first around the Dexu industrial area. Water coming from upstream reaches a narrow drainage connection and because downstream path cannot carry enough water flow backs up and spreads to the surrounding area.

Second point is at the Robinsons retarding basin location. Once the basin fills during large storms, excess water spills and contributes to the flooding in the further downstream.

And third, we see impacts around freeway and railway crossings, where drainage passes become restricted and water spreads across nearby low areas.

So the key message here is that flooding here is not caused in just one single location. It is a result of several bottlenecks along the creek where water cannot move away fast and freely enough. This tells us that improving just one part of the system will not fully solve the issue. Instead, solutions need to be, we need to improve how water moves through the entire downstream flow path and it should be mentioned that this is an earlier stage analysis and subject to further refinement.

Next slide, please. Thank you. On this slide, the map shows the scenario that we have defined with key drainage works in place. Key drainage works are two options: one Robinsons Road retarding basin being built completely, and the second is adding to the number of 1800 millimetre pipes or maybe building a channel for increasing flow conveyance.

The modelling that we have done represents an initial assessment only, and it shows that when drainage works are included, the flooding footprint reduces and the spill areas become much smaller. However, completely eliminating flooding may not always be feasible due to land, environmental and construction, construction constraints.

So for planning purposes, this means if drainage works are delivered, development areas may be able to operate under less restrictive drainage limits. And if the works are not delivered, the development may need stricter controls so that the flooding downstream is not made worse.

So rather than a single location, solutions here needs to address the entire system. And because of that, our next step is to develop draft options and define preliminary performance criteria for further review and work with stakeholders to develop a practical solution for future planning. Thank you.

Ava Rafatnejad

Thank you so much for that team. So going back again to the overall plan that we had, David, please do you have any comments?

David Reginato

Yeah.

Just for those landowners like Dexus and Boral, to sort of summarise the great work that Freda's done is, we are trying to maximise what occurs in the, what's the retarding basin site called again? Um.

Freda Mahmoudnasab

Robinson's Road.

David Reginato

Robinsons Road retarding basin, but there are a number of known constraints we have to work through, particularly around environmental values that are there that if we cannot fully build as per this example, we may need to push infrastructure upstream which could impact Dexus site and Boral site, because both of those are adding flows into the system.

So our intent is to maximise the intent of what the DSS had, which is this area, but we're just giving you a bit of feedback that if we cannot, other options need to be explored before we can finalise, are those new areas for development?

Thanks, Ava.

Freda Mahmoudnasab

Thanks, David.

Ava Rafatnejad

Thank you all. So far we have provided the details about Laverton Creek outfall area on the right side. You are now going to Derrimut Fields outfall area to discuss Derrimut Fields, PSP and Hopkins Road. I pass it on to David Lee, our colleague, for further information.

David Reginato

Okay.

David Lee

Yeah, hi everybody. I'm David Lee, one of the principal engineers at Melbourne Water. Yeah, you might know me. I can see a lot of familiar faces in the workshop. So, I'm looking after the Derrimut Fields area and I'll be talking a little bit about, I guess, where we are to date and where we're heading in terms of the sort of interfaces that are important to talk about.

I think Cameron's already talked a little bit around the Cleanaway site as well as the rest of Ravenhall to the north, which you know, is part of the catchment to Derrimut Fields. It's important to look at the connection between Hopkins

Road and Derrimut Fields, and also there's a little bit of an area around Middle Road and a Skeleton Creek crossing there.

Yeah, next slide please, Ava. I thought I'd just, can you go back one? Just show a little image of Skeleton Creek from Boundary Road for that little local appreciation. I know the first slide in the whole pack was an arbitrary waterway, but this is what we're talking about at Skeleton Creek. Decent grade to it, roughly 1 in 200, so it drains pretty well.

There are a lot of, I guess, environmental values around Skeleton Creek, so you can kind of see what it looks like here. You can move to the next slide now, Ava.

I guess in terms of background where we're up to, we're commencing background investigations to inform the development for the PSP. I guess our key objectives are to update Truganina, Woods Road and Doherty Drain Development Services scheme to guide future development and infrastructure delivery.

These are existing schemes as they are, but as David Reginato has said earlier, preliminary and subject to review because the PSP has never been, you know, amended until now. And so as that progresses to detail, we're now dedicating more resources to looking to that at a higher level.

We're looking to identify priority areas and land tech implications at a strategic level essentially, but given the level of detail in the PSP, you know that will eventually lead to, you know, determining land tech estimates and a lot of those background studies that will inform the drainage works will be in areas of, you know, engineering around drainage, flooding, water quality management such as wetlands.

Cate's given an update on the environmental. We'll be working with other cultural heritage stakeholders and the and you know VPA or DTP through the PSP process.

I guess where we're at the moment is really at that data collection phase. So we've acknowledged that there's a large gap in data available for this area and which probably isn't surprising given it's never developed. So we have a very big gap in the survey information available, in particular around existing drainage crossings and infrastructure.

So we don't know the size and levels of certain crossings and we do think that a lot of the GIS data that we have available is questionable. You can see this plan outlines a number of crossings that we are interested in in blue little stars.

And at the moment, particularly around Hopkins Road we have a lot of concerns around how much water is able to cross it. A lot of water seems to

just keep going south rather than cross Hopkins Road. And so that's a very key priority for us to determine that information upfront.

There are also a tremendous number of constraints affecting this area. You can see there's these blue and white lines going east-west and one going north-south up to Mill Road. These are major gas mains and they impose significant constraints to things like, you know, infrastructure crossings of Hopkins Road.

And so they really restrain what can be done. Can we move water, for example, across Hopkins Road? Should we? And so proposals such as the one Cameron showed earlier where the water was moving through the Cleanaway site seem a lot easier when you take those into account.

So we are doing gas main improving at certain specific locations like crossings of Skeleton Creek and where potential drainage crossings of Hopkins Road would occur. And there's also a major water main that where St Albans to Werribee water main crossing of Skeleton Creek, which you can also see them midway in the map.

There are a lot of, you know, unknowns and so we're collecting them not just at Hopkins Road but down south at Boundary Road to the east where the railway line is and even to the northeast where Ravenhall somewhat discharges towards the other sites. But yeah, those major crossings, drainage crossings towards the north, northeast from Mount Atkinson's estate are major areas of interest to us.

So as the crossing somewhere you can see sort of midway, there's a lot of vegetation entering Derrimut Fields. That is the largest known crossing that we know at the moment. But yeah, we have looked at LiDAR. We are in the process of procuring this survey through our suppliers and responding to their responses. So do you want to go to the next one now, Ava?

Here's a few images just from last month. Skeleton Creek crossing in Middle Road. Absolutely crushed, like nothing there. We've got a more formalised coral crossing under Hopkins Road but not too big. Again, as I said earlier, there's one very large crossing where the vegetation is That is actually South of the gas main. So these are major constraints we need to understand to inform what options we develop moving forwards. Yeah, next slide, Ava.

Here's a bit of an image, just a very basic look at where the major overland flow paths are. Again, we haven't assigned asset types just yet. You can probably notice that there is a quite significant difference to the existing scheme and what is shown here.

This high level sort of path kind of shows that a lot of the water from the catchment to the west just continues going south, just doesn't cross Hopkins Road. And we sort of question the capacity of existing drainage under

infrastructure beneath Hopkins Road. We're also aware of drainage and flooding issues to the west of Hopkins Road with some property owners, as well as you know the development progress with Mount Atkinson's estate, which is at a different state of development to the, you know strategic planning happening at Derrimut Fields. Yeah again significant constraints.

So we really need to know what that survey information is before we plan where water should cross Hopkins Road and Skelton Creek is a priority waterway under Melbourne Water's Healthy Waterway Strategy. So that will also inform what can be done. For example, you know whether or not we need to retain Skeleton Creek in its existing condition or whether there are any potential upgrades to it, but again, like at the very start, as I noted, it is quite a steep site, so we are not sort of anticipating that there will be capacity issues even in its natural state, yeah.

This is a bit of an image of the broader catchment leading to Derrimut Fields. Again, it's rough and indicative and it's based on a range of assumptions. You can see that the, for example, the flow lines just cross right past Cleanaway site and we know that doesn't happen because it's a quarry dash landfill, but at the same time we have to acknowledge that the Cleanaway site is a landfill and as Cameron said earlier, eventually it will be filled above existing levels. It will be a high point and so we need to consider that the assumptions do we need to facilitate the drainage of that site in the future and you know, understanding that landfill hydrology is quite complex.

You can see that Ravenhall's blue because again, a lot of uncertainties. Does that go south, you know, somehow or does it go east towards, you know, Laverton Creek. So that's part of the discussions and the importance of collecting the feedback today in the workshop so that we can find an arrangement that works for everyone, essentially, or you know as best as it can for the broader catchment, you can see the issue with Hopkins Road and why we're concerned about water crossing Hopkins Road because there is so much catchment to the to the west of it that really needs to cross and go to the east of it.

And so yeah, that's these are the main areas of interest for us at the moment. I think the quarry site is probably a major one, Hopkins Road, and again future drainage outlets. I think a lot probably a bit easier in terms of once it hits Boundary Road where it goes as opposed to necessarily, you know, Ravenhall, which has some other issues downstream. So that's a summary of Derrimut Fields to me. I'll hand it back to Ava.

Ava Rafatnejad

Thank you so much, David. So as David explained, I'm just going to quickly summarise the critical items on Derrimut Fields PSP and Hopkins Road. It was discussed about item A. As you could see on Riding Boundary Road we need to

have a better understanding of the boundary condition between Boral site and existing quarry about the flow and outfall points and the same question is what we have on item F. We need to have a better understanding of the Middle Roads outfall locations and also flow quantities regarding item B located on Hopkins Road. There may be an update with the asset type and also the flows that could happen.

I'm going to the next slide. I pass it on to David Reginato.

David Reginato

Yeah. So hopefully we haven't, we should have been speaking in just over an hour now, we haven't bamboozled everyone, there's 70-odd people and gone into drainage overload.

So hopefully you can understand why we think it's really important to get all the stakeholders in the room. There's a number of interfaces here that affect all of you in a different in a different way, whether you're infrastructure providers or landowners. And so what we're trying to do is hopefully the maps can explain that we're not looking to resolve all things within each area for rezoning.

We're only looking for resolution of how they how they interface with each other and then we can isolate the timing as per DTP and allow for those areas to be progressed from a planning perspective in small chunks in more manageable areas and move expediently with agreement of how things are crossed.

So this slide is really about the summary of what we're trying to do and I'll try and summarise it again. It's really around flow conditions, in and out of those areas. So example for Dexus and Boral, it's really outfall conditions. What are the flow constraints that we need to retard back to then make sure Laverton Creek doesn't create flooding downstream.

So for Boral and Ravenhall and Dexus in Laverton Creek, it's really outfall conditions and boundary conditions between themselves. For Derrimut Field, it's what's coming in at the top. We know what's coming down the bottom. We've got assets, we've got schemes down the bottom, we've got capacity downstream, but the catchments within Derrimut Fields are going to change because of the quarry constraints, those red boundaries you see over these quarries will change because we cannot have water going north and south because of David and Cameron's comments is the land's going to be actually higher than natural surface and we have to go around it.

And then you've got Hopkins Road, where, how do you drain that large western catchment across into the existing outfalls that exist in the gazetted PSPs to the south. So we've got a lot of work to do, a lot of our landowners

and other stakeholders affected and today is the first session in sort of explaining how we're trying to work through those complexities, with a hope of getting as much information from yourselves to help inform those decisions and setting those assumptions. So if you want to go to the next slide.

So in summary, the next step is it's not really this workshop cause we're already, you know, well advanced, but the goal of the a series of workshop is to determine those key assumptions with all the stakeholders and get as much feedback as we can.

And we're working through we want to get your feedback, which is the next bit of the meeting of how you all see the process to help determine and finalise those assumptions. So we haven't got a set way we want to go about it.

Because we want to get feedback from all the key stakeholders of constraints and other information that can help us make the decision. So we need to set a process of collaboration around the setting of assumptions and how the key players in the room can help us do that.

So we would like to receive feedback both technical and process, but today is around process so that we're creating an environment that gets the best outcome. And we're trying to do that for getting that feedback as quickly as we can because of the time pressures of a number of these areas already in active planning.

We are looking at additional workshops, we are looking at and this is something we want to discuss after the break, is we are looking at potentially splitting this group into two: a Laverton Creek group and a Derrimut Fields group, if you want to use that maps Ava, because Boral is the key player that that sort of links the two of what happened on Ravenhall dictates how much catchment goes to Laverton Creek and how much goes to Derrimut Fields. But once that's set the two different stakeholder groups because the waters do not interact after that point.

So we are looking at setting up sub work groups out of the stakeholders in the in the room based on the impact of, yeah are you are you in Laverton Creek or not interested in Laverton Creek or are you in Derrimut Fields area around Hopkins Road and those other PSPs and Mount Atkinson and having smaller groups where we're refining the technical matters to those areas that we've spoken about to limit the number of people in the group to make it more of a more of a collaborative rather information session.

We won't rather have people presenting their key thoughts around what they would like to see, what impacts they've seen, all those things and having smaller groups we think will be a better way of getting more information and more feedback and ability to discuss issues rather than try to join everyone together so.

That's the plan moving forward from the summary of we're at. Can you please, please go back up?

The other summary is we are continuing to do background work that will help inform the asset mix that'll ultimately occur once we work out these assumptions. So as Cate and others have said and David, we're doing what we normally would need to do anyway to set up the infrastructure mix. We'll continue to do that outside of the workshop process to make sure we continue to progress the DSS process and the PSP process as required.

So and any sort of feedback comes in. Through these workshops would then, we may change scope of those work depending on stakeholder feedback around any other information that we may get. So, they're not limited to or not fixed. So if there's critical stakeholder feedback that we should be doing more investigations around certain aspects we will look to do that as part of the next steps.

So I think what we're hoping for is a bit of a break for everyone to sort of decompress on all the drainage and flood information they've heard for 10 minutes, and have a think about if you can have a think about how do you want to be engaged, do you support a separation of this group into two smaller groups, where we would do similar sort of things we've done today, but seek actual more feedback, more engagement with the landowners and stakeholders.

Is there any other way you would like to be engaged? You think we'll work to help Melbourne Water and DTP with setting those assumptions? We are open to your feedback, so we will open up the floor after the break.

So if you have got feedback, you've got one or two minutes to be able to say, hey, we would like to be engaged this way or any questions around the process, we're happy for you to ask questions in that session after the break. Thanks all.

Ava, back to you.

Ava Rafatnejad

Thank you so much. Probably going to the break for 10 minutes and go back at 11:25 for the discussion with landowners and stakeholders. I'm going to stop the recording now and probably turn off my camera. Enjoy your break. Thanks everyone.