Ep 6 - Mid Oreti Marshalling the Best

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Rachael Halder: Catchment Convos with Thriving Southland. Your link to Southland catchment groups and their impactful projects. Each episode we'll dive into grassroot effort by local farmers and communities that are driving change and sustainability in our regions. Listen in for inspiring stories and insight. Real people, real change, the Southland way.

Welcome back to Catchment Convos. I'm your host, Rachael Halder, and today we're exploring a fantastic initiative by the Mid Oreti Catchment Group. Their current project, Marshalling the Best, is putting cutting edge technology into the hands of local landowners. This brand new online mapping tool helps pinpoint best spots on farm for wetlands, runoff detainment bunds, sediment traps, and more.

This tool combines science and local knowledge giving farmers valuable insights into critical source areas, flow pathways, and a better land use understanding, [00:01:00] all through an easy to use platform. To talk with us today more about this game changing project, I'm joined by three incredible guests. Tom Nation, Director of Collaborations and Spatial Specialist with an expertise in environmental spatial analysis.

Tom's here to explain the tech side of this tool and how it brings data to life for landowners. James Blythe, also Director of Collaborations, is a water resource scientist with international experience. He'll share his perspective on the broader impacts of this tool on catchment health and water management.

And last, but certainly not least, Ainsley Adams, who is a member and the current chair of the Mid Oreti Catchment Group who'll bring us the on the ground insights and how this tool is making a difference in their community, how the project came about and what they're doing with it. So let's get started and learn more about this Marshalling the Best project and how it is helping landowners make informed decisions.

So [00:02:00] Ainsley I thought we'd just start this off with the obvious question.

So we've got this cool project called marshalling the best that the Mid Oreti catchment group has done. So do you want to give our listeners today a little bit of an idea about how did this project come about? And if you were to give us the elevator pitch of what it is. What is it?

Ainsley Adams: Yeah. Thanks, Rachael. So, originally, the Mid Oreti Catchment Group, the project kind of, developed out of our core values. Two of the group's core values is to look after our water quality or make some improvements in our water quality in our region. And then also, the other one is to improve or increase our biodiversity or native biodiversity across our space.

A couple of years ago the group is, really keen and I've seen them attending a lot of meetings, a lot of talks, and field days on exciting projects such as wetlands, runoff detainment bunds, and also sediment traps. One of the questions that kept coming up is, I really want to do this on my farm, on my property, but I don't know where to begin. I don't [00:03:00] know where to put it. I don't really have the confidence to go and do that yet. So , that's where the project kind of come from. It fits with what the catchment group was interested in the time and then those sort of things they were interested in, the wetlands, runoff detainment bunds and sediment traps, all fit with our core values.

So what we thought is, hey, there's been some awesome mapping done. There's always resources that's sit there out there and about could we in some way give that little bit of a confidence for landowners to take that next step or first step into looking into these mitigations or can it provide some sort of spatial data to indicate where on some properties these things might go.

Rachael Halder: There is a lot of things happening in the mapping space around conversations, around needing it for your farm planning journey, around, proof of placement, all that sort of stuff. And this is just going into a whole other level, isn't it?

Ainsley Adams: One of the things we wanted to do was we didn't really want to go out and create anything new. We didn't want to create any new data or new mapping. [00:04:00] We kind of wanted to see what was available out there and see if we could pull that into something that everyday people can understand.

So you don't need to have a background in the mapping space or the water quality space to have a wee bit, more of an understanding on some of these issues or some of these topics.

Rachael Halder: And so I guess you started digging and started looking at finding some organizations that might be able to help you.

And is this how you found the team at Collaborations?

Ainsley Adams: It is, it is. I'd seen some work from Tom, through my workplace. He had shown me some awesome sort of mapping that they've done with the Taranaki catchment communities. With some of the mapping that we were actually looking at the background maps that were used.

So, that's where we engaged Collaborations to see if they were interested in a project with us.

Rachael Halder: So, Tom and James, us, Southlanders down here, haven't had a lot of exposure to Collaborations. Do you want to, give us the 101 on, what you guys do as core business and, how we Ainsley gave you the conversation, what sort of thoughts came [00:05:00] to mind.

Tom Nation: Yeah, absolutely. Cheers, Rachael. So Collaborations. So we're a small applied science company, and I think our strength is, the kind of relationship between spatial work and all the other kind of good science that we do. So we've got water resource people, we've got contaminated land people, ecology. And I think bridging the gap between some of the data side of things and the science is sort of our strength. So, we've been playing around with some of this work and other catchments, throughout the last sort of 12, 18 months. And when Ainsley contacted us and wanted to find out a little bit more, we thought it would be a cool challenge to, to come and, do some of the baseline background mapping that we've already carried out in other regions, but also kind of take it to another level, and sort of look into that kind of, Detainment bund, constructed wetland. Hey, where could we do something on farm? Where do we start? That kind of thing. So a really cool challenge for us and right in our kind of wheelhouse which is cool. So, yeah, it was exciting. Exciting to [00:06:00] start.

Rachael Halder: James, would you have anything to add at this point?

James Blyth: We used to work at a big corporate consultancy and, decided about five or six years ago that we got a bit sick of that life, so started our own smaller company and that's the way we've stayed, with a few good staff as well, but we're based in Wellington in Christchurch and we haven't done a lot in Southland, since this project,, but happy to grow and happy to keep working around the country.

Rachael Halder: Well, look out you might have just opened up a little, can of worms down here because, we're all a bit jealous of this marshalling the best project. It's a big topic, the wetland mitigation space. You guys, kind of had the initial conversation, the project came about Ainsley, like how did, that next step go, like what did it take to go from this idea, got Collaborations involved and then what?

Ainsley Adams: It was pretty much a lot of, discussing of Collaborations and back and forward. And, we had ideas as we went along, the group did, and then Collaborations also had [00:07:00] ideas. And as the tool kind of progressed, it actually evolved into something that ended up, a lot, more comprehensive and better than we thought it ever would.

Rachael Halder: So you keep referencing a tool, what are we referring to? What do we mean?

Tom Nation: So the tool itself is really an interactive sort of GIS map. And so people can log in to a web page and navigate around what essentially is a 2D map of the Winton Stream catchment. Pretty straightforward. It's sort of a little bit like what people are used to using with, regional council maps, or, other national mapping platforms. So we call it a tool. It really is a sort of a GIS front end, with some other kind of clever like widgets and bits and pieces to help give you, some advice along the way.

Rachael Halder: And so how does it help? We've talked a lot about wetlands, detainment bunds. How does it help in that respect?

Tom Nation: I think the biggest thing we've talked about and the feedback that we've got post, the workshop, and some of the discussions we've had, with the Thriving Southland [00:08:00] group is that it gives, land managers more confidence with kind of what they already knew on site, so it really is a way to focus effort. It sort of says, this is where, at a really fine scale, this is where some of your, wet areas might be, and so therefore, you could look at doing these types of things to help, mitigate some of the potential contaminant pathways, that kind of thing.

So, it really is a helping hand. It's using some science and some the best available data to sort of point people in the right direction.

Rachael Halder: Okay, so once you guys got to, I'm picking a number here, but like 75 percent of the way through kind of the data and the map creation and the

tool creation,, you came down here and you went and sat around some kitchen tables with the farms didn't you.

What was that process or why did you do that?

Ainsley Adams: Yeah, just before , we had Tom and James come down, is that we actually went through like a feedback process. So we had five test farms in the catchment. So the test farms range from dairy through to sheep and beef through to a runoff block and a deer farm.

So [00:09:00] we went out to those farmers, and went and sat down and had some discussions around the kitchen table and just some days it was a bit too wet and nasty to go out and farm and have a look, but they were actually some of the best days to go out and have a look. We went out and just ground truthed a lot of what the map was showing us.

So we went and looked at some of the flow pathways the map was showing, and the wet areas, and the potential for where wetlands and bunds could actually go. And we were actually, with the farmer on the ground, having a look. And then what they were saying is, oh yeah, that bit's notoriously wet, six, nine months out of the year, I can't even graze that, that makes sense.

So what we were actually being shown on farm, like Tom just said before, is that people actually knew that these areas were wet, but to have that and see that in the mapping, it was actually giving them that bit of confidence, that bit of extra information that they might not have had before. And one of the biggest things about sitting around the kitchen table was actually sitting down and going, right, it's usability. Like, do you understand what this is [00:10:00] showing you and can you use it? Once we kind of went through that process, and we also sent the map for feedback through to a few environmental and rural professionals as well, for a bit of feedback on mainly around that usability sort of, bits and pieces.

Uh, we came back with some feedback. , I wanna say one of the biggest bits of the feedback was that, people wanted something smaller or, some of them weren't interested in the wetland or the bund, but they were like, Oh, actually there's a flow pathway there. Is there something else I could do?

So that's where the kind of, the second part of the mapping or the second map came from. So there's also a freshwater farm planning map that sits alongside the marshalling the best, the wetland and bund map, which then has smaller mitigations for some of those flow pathways. We had a lot of farmers who had

just attended a cultivation workshop down here. MPI run a series of great cultivation workshops around the rules. one of the new rules is, around not being able to graze a critical source area. Those areas definitely need to [00:11:00] be fenced now for winter grazing. And this tool actually shows those potential critical source areas and flow pathways. So that was something that a lot of the test farmers and the feedback was that, Hey, how hard is it to incorporate something around this?

Rachael Halder: And a lot of data and hey, everyone who's listening, like once you see it on your computer and on the webpage, it all makes sense. The team at Collaborations have done a great job of kind of splitting it up. So it is easy to navigate. Uh, it's just got a lot in. So we're trying to give you a snippet of it, so James, is it true that we had to create some sort of new data to sort of build in to the marshalling the best project and the data set tool.

James Blyth: Yeah, that's probably fair to say. I mean, it's all based off LiDAR data, which is, collected usually by flying a plane. A lot of that's been funded for the country through the provincial growth fund. So they're collecting millions of points of ground, terrain and elevation across the a large area, and that's the [00:12:00] basis of the data that we then use to assess in GIS and produce sort of where flow would accumulate and travel across a catchment down to very, you know, detailed vertical resolution. From that data, you then start creating catchments and flow path lines and, those are the new layers. But essentially it's all based off publicly available information. We've just used a bunch of smarts to, I guess, produce the outputs and then integrate in science to bring in things like, well, how, What's the appropriate size of a catchment to build a detainment bund, or where would you optimize and place a constructive wetland if water was pooling in that area?

So we tried to bring in national science and international science in that respect. But probably the one thing I want to point out is, It may not always reflect reality on the ground in terms of where flow may happen, because while we've tried to integrate in soils, it's not representing a full hydrological model.

So let's [00:13:00] say you have a very high infiltration rate in the soil, But the terrain is showing that there's a flow path there that might happen under, a hundred mils of rain it might not be the optimal place to put a mitigation depending on local ground conditions. So it's something to keep in mind.

Rachael Halder: So yeah, common sense does still prevail, the data and the science is there to give you, some good guidelines. The Southland plains

everywhere in Southland has got all of these lovely tile drains and overflow, open ditches. How did you map those or how did you take those into account?

Tom Nation: I'll just jump in there quickly. So, from a spatial point of view, yeah, we, a lot of that was quite manual because as you can imagine, as James was alluding to the LIDAR data or the elevation model that is publicly available, although very powerful and very detailed and had just been completed for Southland, it doesn't capture anything underground.

So in order to capture that, you have to really go through a largely manual process to accurately kind of identify where that flow would go [00:14:00] down in the Winton Stream area it is, very flat than a lot of it. And so there was a bit of manual looking through aerial imagery, looking through using the elevation model and just identifying where some of these paths would actually go.

I think that little bit of work was really crucial because what it does is it makes sure the flow paths are correct, and therefore the contributing watershed to those kind of key hot or key wet areas are correct, and that's where we're giving advice around sizing, slope, soil type, and therefore possible mitigation options.

So getting that kind of core base data correct at the start was, it was a little bit of pain there to do the digitization and to get that right, but it was well and truly worth it.

Rachael Halder: And it's done now. So hopefully you'll be able to scale it up going forward, which is exciting. And so Tom and James, you guys actually came down when we were most of, the way through our enjoyable wet spring we've just had. So you got to see where everything was ponding and pooling, in the real flesh, didn't [00:15:00] you?

James Blyth: That's right. And it worked really well. We were landing when you'd had a lot of rain, and even, driving out to catch up with Ainsley, and driving all around the area where the tool was mapped. You could see as we're holding the phone and driving around all the locations with quite good accuracy. Um, took a number of photos and yeah, it was quite impressive how well that sort of pooling and ponding areas were identified.

Rachael Halder: So when these farmers are going to use this tool, we've got these points of interest on each of the farmers we track through the different maps. So, what have you identified and, what are they trying to show us?

Tom Nation: The two couple of main points we've termed interceptive mitigation, on the mapping, for locations where it'd be prime to put a detainment bund or a constructed wetland.

So, as Ainsley pointed out before, there was some feedback around, okay, well, if we're not going to put those interceptive mitigation on the landscape, what else could we do? And added some [00:16:00] commentary around some of the other kind of wetter areas around some of the ephemeral, flow paths to give some advice around what other things you could do, on farm.

But the points, the little, in this case, yellow triangles indicate, detainment bunds and the green sort of, teardrops, for constructed wetland. And so they are based on national literature in terms of contributing catchment size and the soil type and other things, where in the landscape you could put, detainment bunds or constructed wetlands, and they basically are on ideal locations based on the GIS mapping that we've done. So when you click on one of those sites, whether it's a yellow triangle or a green wetland, symbol, it will trace upstream and it will give you some information about that contributing watershed and say, hey, look, this is a great site for this because of this.

Um, and so, that was the idea With that, so we've gone through a process there of sort of filtering out a bunch of sites that may not be appropriate and really honing in on areas that are, [00:17:00] ticking a bunch of boxes. And that's not to say that it's, as James pointed out, it's not a hard and fast, you need to put something here or this is where you would put something. It is just based on that kind of data. This is what it's telling us. And so of course land managers know their farm best and might say, Hey, look, I'm going to be losing productive land here, or I'd rather actually just put it further downstream. Um, but this is the best starting point that we can kind of identify based on the data.

Rachael Halder: And you guys have been able to go as far as showing a predicted, sort of loss from a nutrient point of view as well. Where did that data come from and how does that come into the picture?

James Blyth: So we brought that in from, once again, from the National Science, so NIWA had done quite a lot of work with the Constructive Wetland Guidelines, which I'm sure a lot of people are familiar with, and in that sort of National Guideline, there's tables and charts that predict, I guess, nutrient removal based on the proportionate size of a [00:18:00] wetland, From a catchment.

So usually it's between one and five percent of a catchment and there's increasing removal of, say, nitrogen, phosphorus or sediment if you build a slightly bigger wetland as a proportionate to that catchment size. And then the tool is essentially looking up every one of those possible wetland or mitigation devices.

And when it says, if this is your catchment, it's say, click on it. It's 50 hectares. It's then Predicting what the estimated removal of those contaminants could be from, if you build a wetland to that size from that national literature. And the same thing has been done for detainment bunds from the Phosphorus 120 project, which was, a lot of it was driven out of Bay of Plenty. Some of the science may not be entirely applicable in Southland, but the removal proportions of sediment nitrate phosphorus have also been kind of replicated.

Rachael Halder: Awesome. I've had a good play around on the tool now. Some of those, proposed [00:19:00] mitigation spots have got some potential to do some, really good reductions, which is promising. Back to you Ainsley and the catchment group, the conversations you've had with the farmers how are they thinking they're going to integrate it into their farm system or how are they going to use this?

Ainsley Adams: Yeah, so some of the initial sort of conversations we've had, have been around firstly looking at it and using it for something like a freshwater farm plan or a farm environment plan, also note the winter grazing sort of planning as well. So there's some of the initial comments that I've had from local farmers.

The tool's only been out for about a month now, I want to say six weeks, so we're about to start doing some drop in sessions, for local farmers and there's about to be a letter go out in landowners mailbox in the next week or so, inviting landowners that we haven't engaged with yet, to come along and have a play of the tool and a chat to us about how to use it and how people might use it. So really looking forward to getting some more feedback on that there.

Rachael Halder: You guys have [00:20:00] highlighted through the conversation that, a lot of this data is not necessarily new, but you've pulled it all together. And I guess going forward in this mapping space and in the mitigation space, the conversations just keep ramping up and it is hard to navigate some of it.

So from your point of view, Tom and James, what do you see the big benefits for, and what do you see the big wins this tool is providing for our land managers?

James Blyth: We've done quite a lot in the policy space, quite a lot in the community side, and obviously in the science area as well. And I see it, as a tool that ticks a lot of boxes for people on the ground, rather than just a static map, or a map they can't interact with. We've pulled in some modern tools that have only been released this year, for example, in ArcGIS platform. That's what gives it some of its flashiness, I suppose. It's widgets where you can click on a point and summarize data on the fly. But that ability to be able [00:21:00] to go out on the ground and look at Sites and click on it and get information as you're out there, really opens up a ball game that hasn't been seen, in that detail before, because, this tool can constantly be expanded, you could call it a mitigation tool where you could eventually add a whole range of mitigations that are appropriate to different sites and they could integrate in cost estimates based on the size of a mitigation.

You could then even overlay sort of annual load mapping or leaching mapping and start trying to predict what its actual nutrient removal might be by catchment size. The world's your oyster about expanding it for usability for people to do stuff on the ground. I think.

Rachael Halder: Wow. That's cool.

Tom Nation: And I think just adding to that, I think it's a really neat way to, allow people that don't have, either the background or the experience with this, these kinds of spatial data sets to actually interact with them. There has been a lot of talk about LIDAR and we've had a lot of conversations with people on the ground about. [00:22:00] LIDAR in the past. And so I've actually given, some presentations around actually what is LIDAR and how is it come about and why is it useful. And so I think what's great is that this tool finally gets people kind of singing on the same song sheet, so to speak, where you've got regional council or government national government talking about certain data sets, and bits and pieces, but you've got people on the ground now that can actually interact with that same information. They don't need to be a GIS expert to download something and interrogate it. That's, it's right there. It's using the latest information it's connecting it with the science. I think it's just a really nice way to sort of bring, people on the ground up to that level, and being, you able to access and use, some of this great information that has been kind of rattling around, for the last few years.

Rachael Halder: Yes, and I think the information pool out there is just so large and as you said, land managers, they know where things are wet and it's not necessarily we're trying to tell them that, oh yeah, this is going to be [00:23:00] where you're going to get a pond to happen. It's, here's the reason behind it.

I think everybody who's not in this Winton stream catchment is going to be a little bit jealous as they go through their farm planning journeys. Uh, Ainsley, this question's for you. So we've talked lots about needing to potentially look at some mitigation options, wetlands, detainment bunds. Is, this where the wetland directory came from?

Ainsley Adams: Yeah, I guess the wetland directory side of this project, was the second half of this sort of project. So, one was initially when we were looking at this was there's so much good information out there, but we wanted to bring it again, like the mapping wanted to bring it into the same sort of space, and make it understandable for everyone and then direct people in the right direction to some of these really good resources. So the wetland directory is really just, a handbook sort of directory and it shows you where to go. It's mainly based around Southland, but there is some good national information in there as well., right through from where you can hire a digger from, where we can [00:24:00] find some information. Some of the simple steps of how others have done it and then also some case studies and bits and pieces in there as well. So, just another little resource to try and give a bit of confidence to land managers and landowners to, be like, oh, hey, maybe I can go and do that on my farm and, that's not so daunting and hard anymore than it used to be.

Rachael Halder: You guys have done a fantastic job.

Going kind of forward, Tom, maybe this one's for you, a brand new person coming to jump on, having a look at the tool, what is your tips and thoughts around getting the most out of it and how do you use it properly?

Tom Nation: The best thing to do is when you open the tool itself, it's designed to be as easy to use as it can be, and there is a sort of an introduction page in the top left that you go through. I know a lot of people, including myself, don't necessarily read it the splash screens or the introductions that come up on maps. I just want to get in and dive in. So I've sort of thought through that and realized that most people would probably want to do that. But essentially, you just need to start clicking around with your mouse, panning [00:25:00] around as you usually would on a map and start clicking on things.

And on the right hand side of the screen, we'll start popping up some cool information, about, a possible interception mitigation site, and other bits and pieces. So along with other type of mapping products, there's some layers you can tick on and off and so you can start if you want to get into that level, you can start digging in a little bit further and ticking other layers on such as some erosion mapping that we've also included in the tool and that you'll see when you click and you summarize an upstream watershed, it will give you some information about how many tons of sediment might be coming through there based on the erosion sort of modeling we've done.

So there's some neat little, Additions to the tool, if you spend a bit more time in there and click around on some of the layers. We've also put a couple of links into the resources James alluded to earlier in terms of, the NIWA constructed wetland guideline and, the detainment bund information.

And as we talked about before, with Ainslie, there is also, a little toggle, it's a big blue button on the left [00:26:00] that says, okay, click here for a freshwater farm plan map. So what that is, is just wherever you are in the world, wherever, the main screen is located, it might be on your farm, you can hit that button and it will roll over, and have a different series, of mapping options, which is largely, pulling in a lot of the Environment Southland data. So a lot of the stuff that a lot of people would have seen already, but again, it's one of those things, lots of the feedback is, Hey, look, there's lots of mapping tools out there how do I see it all in one place? You know, I don't want to go to this website for this and this great little mitigation tool for this. So we've tried to show that, Hey, look with these kind of ArcGIS tools these days, you can actually pull them all into one place. So there is a way that you can click on your potential mitigation options, but also overlay things like, the topo climate information or, some of the groundwater or natural hazards or rivers, rainfall stuff from, from the Beacon Environment Southland website..

There are a couple of little print widgets to print the screen that you're on. So again, if you wanted to [00:27:00] have a hard copy and go around and visit some sites, there's that option as well, which is really good.

It's designed to basically click and drag and, try and break it. But we've tested it a lot and,, it seems to be relatively intuitive.

Rachael Halder: Cool. I think what everybody wants to hear is having a data set with all of the things that are available to you in one place that you can start clicking on, clicking off.

And that's why, I guess you guys are doing these drop in sessions though. So people can come and have a yarn to you guys and get familiar with it in the first place.

I don't know who can answer this one, but for those people who aren't in the catchment and are looking at this tool, what could they learn from it?

James Blyth: A lot, they've probably seen similar tools,, a lot of people have seen flow path mapping and there's some course layers of that. So there's a national digital elevation model, a terrain model for the whole country, and it's sort of at 15 meter resolution. But with modern LiDAR, you can go down to one meter or even less. that's what we're bringing into this [00:28:00] tool. So it's very accurate sort of flow path mapping, very accurate catchments in wet areas. For anyone outside, they're probably facing similar challenges in Southland. The catchment community groups across the country are trying to do similar things, where do we do things? How do we do it? What Maybe best bang for buck or where's our highest risk areas? Where do we start first? So there's lots of those questions that kind of go round and round and a tool like this can help them in that respect.

But just before I finish I just wanted to point out It's probably better that people view the tool on a desktop or a tablet Due to the complexity of all the GIS layers, you can use it on your phone when you're walking around your farm, but it's not as intuitive because there's so much information being produced.

Rachael Halder: Cool. I think that is, A really cool summary. Maybe we'll just finish with something that, all three of you think is the highlight, or like maybe your favorite thing from [00:29:00] the project.

Ainsley, start with you.

Ainsley Adams: I think the highlight of the project was actually how it evolved over time, like how we worked with Collaborations and, worked with each other and then also the feedback from the farmers and the engagement that we've had with the catchment community.

We've had, some new people come aboard that weren't so engaged with the catchment group beforehand and now they're well on their journey along with us. So yeah, that's been really great outcome for this project.

Tom Nation: I think for me it's, the sort of the problem solving aspect, because for us, we've done similar work before, particularly with the baseline mapping

and using the same national data sets, but the challenge of, okay, this is what Ainsley and the Mid Oreti Catchment Group wanted, and this is where we think we might go, and to put our heads together and our Collaborations team to kind of develop a solution using all of The tools and expertise that we have in house, and then hitting the kind of product that we hit at the end, and really making the group, happy, with a really good outcome.

So, I think it was [00:30:00] that, for me being a technical person, the challenge, and being able to problem solve on the fly to, to make something useful.

James Blyth: Nice. My one's the fact that it's actually something usable and practical for people on the ground. It's pulling in good science and technology and data, but actually making it functional. And because there's so much talk in the policy space and the regulation space, but in the end, everything happens on the ground. And to make that. affordable and easy to do. Hopefully a tool like this helps people get there.

Rachael Halder: That's a great way to finish and I 100 percent agree. So Ainsley, from the Catchment Group point of view, what is the call to action? How do they access the tool?

Ainsley Adams: Yeah, so, accessing the tool,, if you Google Mid Oreti Catchment Group and click on any one of the either Mid Oreti or Thriving Southland links and jump through to the Thriving Southland Projects page under Mid Oreti, you'll see the links through to the tool there. it comes up pretty easy in a wee Google [00:31:00] search, and also you'll find the Wetland Directory on the same page as well.

Rachael Halder: Awesome, and so these drop in sessions that you've got coming up, you'll find those advertised on the website, Facebook?

Ainsley Adams: You'll find them advertised on our Facebook page, on Thriving Southland's events pages . all the local landowner of a Winton Stream, you're going to receive a wee letter in the mail in the next couple of weeks, just with those drop in sessions and a wee two pager information on that, mapping system as well and where you can find it.

On the 18th of December from 11 till 12pm, we'll be down at Bailey's Cafe, which is just on the main street at Winton. So come down, have a coffee with us, we'll just simply pull up the tool, we'll zoom into your farm and have a wee look and a play with some stuff, you're welcome to come along and ask any questions you like.

Rachael Halder: Awesome. That draws us to the end of this episode. So thank you, Ainsley. Thank you, Tom and James from Collaborations.

And that's a wrap for another episode of Catchment Convos brought to you by Thriving Southland, a big thanks to our guests for being a part of the conversation [00:32:00] on today's episode. And for you guys for tuning in, we appreciate your support. Don't forget to like subscribe and follow us wherever you get your podcasts from, so you can stay up to date with all the latest episodes as they're released.

For more information on this episode, check out the show notes or head to the Thriving Southland website, where you can also learn more about the awesome work happening across the catchment groups here in Southland. And if you've got a project or an idea you want to share, don't be shy, reach out. So until next time, keep up the good work out there on the land, and as always, stay connected and keep driving those changes for a Thriving Southland.