Associate Professor, Heather Burke

Heather: My name's Heather Burke. I'm an associate professor of archaeology at Flinders University in Adelaide, South Australia, and I teach archaeology and I'm a specialist in historical archaeology, which is the archaeology of the Australian Colonial period, so European stuff in Australia.

Mark: And, today you've had a bit of an adventure?

H: Today I have had a fabulous time in New Norfolk. So, I've been here for two days, nominally to look at Willow Court and the buildings and that, as a site. But in fact, today I spent about an hour and a half down a drain in Burnett St, trying to get to the mystery of whether or not there was a tunnel running between Willow Court and the river, and in fact I can say there's definitely a brick structure running between Willow Court and the river, but it's more likely a sewer than a tunnel.

Lovely word, sewer. Conjures up all sorts of aromatic and delightful things, and I can tell you it's as delightful as that. I had fun, but I don't know that it's somewhere you would want to go for your holidays.

M: No, no. There was obviously a bit of preparation, so we probably should go through that. Before you went down, what were the things that you had to make sure?

H: Well, as archaeologists we often find ourselves in very odd places, and potentially quite dangerous places so we have lots of OH&S requirements just for the normal work that we do on a day to day basis for risk assessment, but particularly when we go into small confined spaces we actually have to have formal OH&S training and a certificate in confined spaces work, and that's for under floors, in ceilings or in places like drains and sewers. So, we have to actually be certified to go into those places, but to actually get there we also have to be very careful in terms of access and how long we stay there.

So today we were suited up in hard hats and with a harness because we were going down in one place probably about 8 meters and in the other place perhaps 4, and that may not sound a lot, but it's quite a steep hole when you're standing at the top looking down it. So, rigged up in a harness, with a ladder, hard hats, and also with a gas meter to test the quality of the air. So the gas meter will tell you if there's noxious gases in the surrounding atmosphere, but it will also tell you how much oxygen is in the surrounding air. So, we knew when we were in one part of the tunnel that there was 29% oxygen, which is OK, it's perfectly fine. But You don't want to stay down there for a long time, and certainly if the gas meter had gone off at all, we would have had to get out of there immediately. So, yeah.

M: What did you find down there, besides the silt? What were the things that made an archaeologist excited?

H: No, I like sewers. I am actually quite happy with sewers. We are very strange people archaeologists. We like toilets, cesspits and sewers because they tell us just as much about the daily needs of ordinary people in the past, as houses or special purpose things. So I was perfectly happy to be down a sewer. So it may not sound exotic, but I was very excited, and partly because it's such a beautiful structure. It was a very old structure.

So, I don't know exactly how old it is, but all the bricks are hand-made and there are convict broad arrows on the ends of the bricks, so they're clearly contemporary with the main buildings and the hall at Willow Court. How old exactly that is, whether that's 1840's or earlier I am not sure, but we're

certainly talking about an old structure. And that's always exciting as an archaeologist. You don't actually have to find anything in the structure to be exciting, the fact that it was built, that it was so extensive, like it's a long drain – going from Willow Court to the Derwent, and the fact that it's beautifully constructed. It's gorgeous. It's flat brick floor, straight sides and a beautiful semi-circular arched roof. And that's all brick, that's all hand-made brick, and that's all hand-dug, hand-formed. Beautiful!

M: Now, you've been contacted and you've come down here, and you've probably found a bit more especially with the site itself. So, we've investigated and done a bit of preliminary work with the tunnel, but the rest of the buildings yesterday we talked a little bit about this and you were quite excited.

H: Well, that's right. So, I only spent an hour and a half down a drain today but the rest of my time I've been at Willow Court in one way or another. Or talking to people about Willow Court trying to just understand enough about that site to see what sort of potential it has for archaeology. And of course the short answer is that the potential is enormous, which is not particularly helpful in terms of direction. The site is incredibly complex. It's large now, it was even larger, obviously in the past but what we've got is, an incredibly complex and densely overlaid set of uses of every space and every building, interior and exterior on that site and all of that has potential archaeological traces, whether that's in the layers of paint on the wall, or the materials that's under the floors or the material that's under the ground or the standing structure itself and all of its's components, the sequence of its construction and the changing story of its use across time. So, all of that is interesting potentially and at this point I am not exactly sure what we are going to focus on. So, I need to work that out between now and next year.

M: So, your intentions are to come back next year?

H: Yeah, so this is the beginning of a long term project, I would say because that site is so complex and special. Very unique. So, I don't know of any other site that is quite like it, like we have lots of other convict sites and we have lots of other old sites and in a sense every old site is complex because the longer it's been in existence the more it's use has changed; the more people who've gone through there, the more things have happened there, but this is particularly complex because it is so early and it had almost, it had continuous use right through to the year 2000. So, we're talking about a really long span of changing people, thoughts, ideas, attitudes, material culture, everything in that one place.

M: The process, where does it start? So, how do you start a process and how do you get to a conclusion? So, can you sort of run through what you would do for someone who doesn't know?

H: See, this is the beginning of a long term project but I am not sure where it will end up, that's the beauty of it. Because, I can see that you could work, not just me, many archeologists, many students, many people could work on that site for decades, no problem. There's more than enough information there to keep any number of archaeologists in seventh heaven for years and years and years. So, part of my problem in the next 12 months certainly, is to work out what I would like to do with that site and how that would unfold across 10 years, and that's quite a big undertaking really because you don't want to be just doing something short term here, and something short term there and something short term there. You really want a long term plan that everything fits into.

M: So, you break it down into the different aspects?

H: But it all depends on what questions you want to ask, see? It all depends on what you want to know and at this point, I don't know what I want to know, I just know that there is a lot of potential out there for almost any direction to take off. So, in part I think it will depend on what other people think is interesting, or what other people want from that site. So, what we want to achieve there. What we would like to do there in the long term and the short term. It might also depend on just generating really interesting research questions, that are interesting to me as well, as an archaeologist, because I think if you dug almost anywhere on that site you would find something and it would be interesting and it would tell you a story. So, it is a rare site, in that it really has unlimited potential. I think it doesn't matter what you did, where you did it, there would be something that would come out of that that would tell you a story about that site. It's not the case with all sites, like I have to tell you that you can excavate a lot at sites and not find very much. I don't think that's true of this site. So, at this point it is all a bit vague in my head because I don't know where we are going but I know that wherever we end up, it's going to be interesting.

M: So what are the mechanics of it? I mean, what timetable…

H: Do you mean the mechanics of archaeology or the mechanics of this project?

M: Yeah, I think so, of this –

Well, archaeology is recording all the material traces of past people. That could be the artefacts, that could be buildings. That can also be traces of things that aren't there anymore, so that can be traces of post holes or timber that are no longer there but has left a stain in the ground. And It can be things you can no longer see until you excavate. Those things we locate through geophysics. So geophysics is a means that doesn't disturb the ground but lets us see below the ground to see if there is anything there. It's not perfect and its not magic. So it won't always give you the answer that you need, and it won't always be able to resolve the questions that you ask, but we use techniques like geophysics to see for example, if their might be foundations in an area, or if there was disturbance in the soil like digging or excavation for trenches in a place. You would still have to excavate to find it and you might find that the results from the geophysics are completely opposite to what you expected. You might find something completely different.

So, in terms of the mechanics of archaeology, you can start at any point along that spectrum. Like there's no set order for how you do things. So, I think next year what we'll actually just do is start looking at the movable artefacts that are already associated with that site, because there are several collections of movable objects that have come from that place, and just try and catalogue those and work out what we have. We'll do geophysics in some of the open areas, to see where we think there were buildings, to see if we can find traces of those buildings, but in the end we are going to have to excavate if we want to find more, or find data, or resolve questions about the construction sequence of those buildings. So, it's not an easy question to answer because we don't always do it in a particular order, and you don't have to do all parts of that in order to collect evidence.

So, one thing you could do is just look at the building itself in forensic detail. So look at the walls, look at the timber, look at the joists, look at the ceiling, look at the stumps, look at the floorboards, look at every part of that. The shell, the framework, the decorative treatments, the paint, everything, the nails and understand the sequence in which it was constructed and that would actually be really useful because we don't necessarily know that all those buildings, well we know they weren't all constructed at the same time. But the ones that even do look like they were constructed in the same period, may have been constructed in a sequence themselves. So, I don't know where I'm going to start with that. But something will happen, I can tell you.

M: It's all a mystery.

H: Well, it is at this point to me. Yeah.

M: So, if you were going to do a dig in one particular area, say a, in one room – so we've got some places in the barracks in particular that haven't got floors, and they are ideal, they tend to lend themselves to something like that, bit hard to get something in there to get the ground up –

H: No, because we do it by hand.

M: It's all by hand.

H: Easy to get people in there, working by hand. I know in time team they use back hoes, but the problem with back hoes is they remove an entire bucket of dirt at the same time. What as archaeologists we really need is a much finer grained resolution to the information we get out of it. So I really want to know where each object came from. And not just that it came from that area of the room, or that bucket of dirt. I want to know exactly what layer and exactly to a centimeter precision where that artefact came from. So for us we would go hand excavation at that site because it's so complicated.

If you think of a place that's had over a hundred years, a hundred and sixty whatever it is, a hundred and ninety years of use, all of that contributing to the material signature, your finding under the ground. You have to be very careful trying to separate out any of those different activities or different periods from each other. If you collect the data at too coarse a level, you've already collapsed all of that information. You can't separate it. So once you've collected it at that coarse level you can't pull it out. So you really need to collect it at this fine, forensic level to even try and say something about the complexity of use of that space, otherwise you've just got a whole lot of information from a room, you know it all came from that room, that doesn't help you to resolve more interesting questions about who, what, when, or how.

M: We do know from historical documents that there was a wooden structure there prior to that, do we know the location of that or is that going to be the exciting find?

H: Well, it's one of the questions. I don't know where that structure was. We don't know how much of that may have been built over, and it's certainly resolving the sequence of construction of that site as a whole. So each individual part of it, but again each part of the complex would be one of the long term goals to try and understand how it was built across time, yeah. So, I don't know where that building was. I don't know if we will find where that building was but it's obviously – people are always interested in the earliest or the oldest, or the first of anything. So I think inevitably we would want to know that, but whether we can actually find the answer to that I don't know.

M: Thank you very much.

H: You're welcome.