1 11-25 Archaeological Consultant. Self-employed archaeological specialist. 2 1 At the moment I live in [city X]. I do consulting work but not much of it is in 3 [the city where I live]. At the moment I'm looking at a [collection of artefacts] 4 from the X region in [a different state]. [SC: Do you run a sole practitioner 5 consulting business?] Yes but it's not a very big business. I don't do that much 6 7 work. I sub-contract or work as a casual for different companies. Ideally subcontracting. [SC: Is analysis of [artefacts] what you mainly do?]. The work that 8 9 I've mostly been involved in over most of my career as an archaeologist is 10 [artefacts analysis] or mostly [field] survey work in the X region, in the Y region in [a different state] and in other places in Australia. And excavation work 11 12 associated with those subsequent to survey work. 13 14 2 Private business 15 16 3 - 1 17 18 4 - 100% 19 20 5 - Small 21 22 6 – State X 23 24 7 Currently it's [a different state from the place I live now]. 25 26 8 Um - no. Not with the current work that I'm doing. 27 28 9 Heritage management. I guess to some extent it's research as well as I'm 29 looking at new assemblages and doing analyses on them. But it's mostly heritage 30 management. 31 32 10 - n/a 33 34 11. - Sometimes. 35 36 12. - No. I have done in previous jobs but not at the moment. 37 38 13 No 39 40 14 The only experience in teaching would be in a role as manager or supervisor of other archaeologists. So obviously I'm not in that role at the moment, but I 41 42 have been in the past. [SC: Do you want to say more about that? You said you used to work with bigger companies or something?] Yes I worked for [X 43 44 organisation] for a couple of years [consultancy company] which you probably 45 have heard of. After that I worked for about three years with a [different] fairly large environmental consulting company. I was the main archaeologist in the 46 [region Z] office for that company. For quite a while there I was supervising and 47 managing other archaeologists. In that role I guess I was involved in training but 48 49 in a fairly informal way. And I have no qualifications in training.

51 15 N/A

16 Same sort of answer. I worked for [a large minerals company] for about three years in [a different state]. And in that role I did once or twice have media [people coming to visit] and I took them around [an area with a lot of archaeology and Indigenous places]. So I've dealt with them in a large company but no I would never do any of that sort of stuff with work that I do for myself now.

17 Look I think it was a really positive experience when you can talk to the media and try and sort of communicate. In this case it was mostly about heritage management issues but I guess to really get to those issues you need to talk about the significance of the heritage that you're managing. So you're trying to communicate that to media. That's pretty good and I guess it has all its problems about communication and understanding technical aspects and that sort of thing, but generally it's positive. I haven't done it very often but when I've done it communicating about heritage values to people who aren't specialists is generally positive – yes. [SC: And was that TV, radio, newspapers or print media?]. Newspaper. [SC: Was that national, regional, local or?] Was [a major state-based newspaper] – would have come from [state capital city] I think.

19/20

21 Okay – um. [Pause]. In general I communicate in order to explain the results of surveys or excavations or whatever and often or more importantly to try and explain the significance of heritage items or heritage places. That's obviously necessary in terms of the process to manage places. Also for outside of archaeology I guess I'm explaining management strategy things that we are doing to manage sites or salvage them or things that we've put in place I guess if you need to attend to something or not attend to something. Those sorts of things. They are not really archaeological issues, they're management issues but. They're easier to communicate in my experience than communicating archaeological ideas about significance is very hard particularly when your doing it with people with limited knowledge of archaeology or with limited education. so like landowners and Aboriginal people can often be quite challenging. But those sorts of things.

22 All I've got here is "Limited!" with an exclamation mark [laughs]. Yes like archaeology can be hard enough to communicate with other archaeologists sometimes so when we're dealing with other people if it's not really required sometimes I'll just try and avoid it.

23 Okay the first tick is [Aboriginal community organisations] and the second tick is resource extraction companies and their employees. I've also ticked tourism and travel organisations. At [company X where I worked] the same sort of thing I described earlier – I've taken government people from the tourist department or whatever in [city X] Perth around [a region with cultural heritage and archaeology]. I've ticked archaeologists working for government heritage

organisations and in other government organisations. Throughout my sort of career as an archaeologist it's a common thing to have to deal with the government archaeologists or government bureaucracies as often I'm working on behalf of clients to get permission to do things and that sort of stuff. Indigenous or Aboriginal traditional owners of land or cultural property and of course - not all - but almost all of my work in the field will be done with Aboriginal people whether they be considered traditional owners or whether some sort of custodian. It's pretty much an ethical issue but it's also required in a lot of cases. Archaeological consultants or consultancy companies – I've got a number of ticks there so it's obviously a big part of what I do at the moment and I've also ticked other government organisations. [SC: So what would they be – what sort of organisations?]. Don't know what I was thinking when I ticked that. I've worked for the government I suppose and actually some jobs I've got are for different government departments who are actually wanting to...[SC: So they're like the client?]. Yeah – yes. [SC: So no other groups? Do you deal with the public?]. Very rarely. The only time I remember when we were dealing with the public was when I worked at the [x museum] at an Open Day and I was involved with that. But that was quite a while ago now. [SC: Do you deal with non-Aboriginal landowners?]. I have done – yes – but not that often.

24 Aboriginal communities.

25 26 At the moment I'm doing specific work for the company that either can't or don't have the resources to do it at the moment. I do analysis of the artefact assemblage. So there's quite a lot of work. I'm looking at about 10,000 artefacts. And so I'm communicating there with people who understand the issues and may even be able to do the work themselves. And so I'm doing the work and sending off the results to them and – I haven't started doing this yet – but I'll write them an analysis of the digital data. That will be communicating with people who should and I think will totally understand where I'm coming from and what I'm trying to say and there'll be some sort of a discussion and agreement about where the analysis should be heading and the sorts of things they'd like me to talk about. So that's a pretty good example for 26.

25 and or 27. I probably left [company X] a couple of years ago now but a lot of my work was trying to communicate issues about archaeology to people in the company who had no background at all in archaeology. Even though the company is a big company with lots of guidelines and lots of sort of you know 'do the right thing' kind of regulations that they are supposed to follow, a lot of people don't even care about heritage and so it's very – you know - quite challenging sometimes to communicate archaeological significance. And that's the crux of most of what we do as heritage managers is to try and identify what's significant and then explain that and then try and protect it I guess. And that was a big role at [company X]. They have a whole raft of I think they've got maybe ten or twenty archaeologists on at the moment in [places A and B]. So their job is really to well um - a lot of it is just to facilitate the approval processing and that sort of thing and run systems, but essentially they should be trying to communicate what's important for the company and archaeological issues. [SC: And do you have time where you are the expert?] Well all the time! And in that

context we are supposed to be experts in terms of giving advice about what should be done, for instance whether a survey should or shouldn't be done so we are supposed to be experts in heritage management and the legal side of it in a way as well as the typical archaeological side of things. Yes we're often considered the experts like the same as a biologist in the environmental section – we're an expert in heritage.

28 Um that's a pretty tricky sort of question I think [laughs]. In terms of what I've mostly done in my life as an archaeologist and in heritage management I guess you could say that successful communication is when there are good outcomes that result in good outcomes for managing heritage. But I think probably a better way of understanding it is communicating and making other people understand what we are saying, and where the significance comes from and why you are actually doing particular things. And that – as I said before – can be pretty difficult. And I've just written in this box 'Average to Poor' as being typical of my communication generally [laughs]. Like sometimes it's great – you know it's very variable in terms of how successful I think I've been. But often it's difficult because it requires some sort of knowledge of archaeology and Australian prehistory to really get a handle on why something is significant or not. So you can't really expect some landowner or miner or even Aboriginal person who may not have that interest in it to appreciate the sorts of things you are saying. So on that level the communication can be poor but in terms of coming up with a result and people accepting what's going to happen and being happy with it then that's a bit of a different issue but generally I would rate communication a little better if you look at it in those terms. [SC: Yes this is a tricky question. I'm getting some interesting answers to that one anyway.]

29 [SC: We won't do 29 – unless you want to (sorry I'm rushing through).]. Well I have written a little comment here..[SC: Sorry! – please go ahead.] I was just going to look back to my [company X] experience and that was that the organisation judges the effectiveness based on access to land and the ability to go ahead and do the work and that would apply to developers generally and other people who want approval to do something. So there was a little bit of a – it's not quite the same kind of idea of what's effective or what's good from the archaeologist's perspective..[SC: Yes that's a very good point you made there as it depends on the aims of the communication where an archaeologist at one level might want to make people understand better about the past and why it's important and how archaeology can contribute to it – that thing about the process you're right in the heritage management process. Sorry – I'm just.. that's a really useful comment cos you've clarified that for me. Other people have brought that up a lot. It's not – I mean – yeah – so that's really.. yep – thank you for that.]

30/31 [SC: So do you use digital technologies?] Yes to a varying extent to do with different jobs but currently I don't think an archaeologist would get by without using some computer or something either [laughs]. [SC: Yes I think it would be hard, wouldn't it?]. So at the moment with the current specific job that I'm doing I'm using – the only thing I'm using is Excel. And I've actually given advice to the people I'm working for that that's not the appropriate programme to be using.

But - so using Excel. And obviously I'm mostly communicating via email or Skype or whatever to people in [a different state]. [SC: Or phone? as somebody said "I'm using"]. [SC: Can I just ask – you said you are using Excel but you would prefer to be using something else? Can you say more about that?] Oh yeah. Excel – it's a kind of a database I guess but it's really a spreadsheet and when you are inputting data that data is not really protected in the same way as if you'd used a full blown database like Access for example. Or you could even use some GIS software as a database. So what you would do is you basically have a much better dataset which is protected because each entry can be corrupted. You can sort a field in Excel and destroy your whole data in a couple of minutes really. [SC [laughs] – I know!]. When you've got 10,000 artefacts you want to make sure the data are protected in a way that you can't really do in Excel. Well I've used Access before and because Excel is so much easier to use sometimes I've transferred all the data into an Excel spreadsheet and then you can do stuff with it – or with some other programme – but generally I'd put it into Excel. But I don't think it's good practice to be having large amounts of data and putting it into Excel. I think it should be put into a database - a proper database. [SC: So can I ask you - why has that arisen? Why are you having to do that?]. That's just their preferred way of doing it and they've actually - you know - I haven't designed their form so they've asked me to follow their standard method of recording artefacts. Which is fine – I've had that same sort of thing happen to me before. It wouldn't be how I would do it exactly but it's a good idea to be consistent within a company. So they're giving me a template and that template is in Excel. [SC: What would vou change about it – sorry – do you mind me asking you that? I do faunal materials sometimes and shell and I'm often - well I've actually written about data standards for that type of material and often the consultant wants you to record something which is nonsense. I guess with lithics people probably have a better understanding of it, but. Do you think it's not going to help you with research questions or?] No I don't mind. I'm not going to tell you say who the client is. [SC: No, no and also I'm protecting everybody I won't mention anybody's names or the company or the state – I'll change your gender or something.] Well I don't think it's well put together. It needs to be - well it's not too bad. I wouldn't do it if it was really bad but - with stone artefacts and I assume with other types of analysis in archaeology you need to do – to have – variables which are replicable. If another archaeologist comes in they would produce something that's quite similar to me and some of the variables - some of the fields that they have in their template – I just think are really without careful definitions for what they mean, which they don't have. It's problematic so that's one of the general issues with what they're using.. um.. There's a few sort of things but I think with a lot of things you'll never get two archaeologists agreeing on how to record things – so there's a lot of it's that as well [laughs]. [SC: Well I've spent a lot of time in the past discussing data standardisation – mainly in historical archaeology but it's...]. [SC: Do you use GIS? You mentioned GIS software.] I don't have it on my computer at the moment. I used to use it every day when I worked at [company Z]. That was their database. I wasn't a particularly proficient user. Well I was good enough to use it how I needed it so I could use it but I wasn't an expert in GIS or anything like that.

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32. No. [SC: Do you want to say why not?]. Actually – that's not true as I found your thing on the OzArch which you could call social media. [SC: Well yes – that's like a discussion list.] Apart from that no – like I don't use Facebook or Twitter or anything like that and never have for archaeology. [SC: Do you use them for non archaeology?] Yep. [SC: Alright.]. [SC: Can I ask why you don't use them for work – apart from OzArch.]. Um. I've just got no reason to use them I don't think. I can't think of a reason – particularly with what I'm doing now – doing small jobs as a sole trader – I wouldn't really need to use them.

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33 I've got a question mark on 33.

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34 On 34 I've got um – there aren't. Look the challenges are just general challenges that everyone has using programmes that they've not got specific training in. I've actually had training in Access and in GIS as a part of my work as an archaeologist. Various companies I worked for sent me off to do training. But sometimes you don't have any training in a specific programme and you just have to work it out yourself. So that's sometimes a bit challenging but that's just the way the world is these days with computers. You just have to get in there and work out how to use them. I think that's - I guess maybe another challenge I'm just thinking of now is that to really communicate and to deal with issues as a group or with other people you need other people to understand the programmes as well. So if they don't – that can be a challenge. [SC: Yeah – well that example that you just gave about Excel which is about people not understanding that it's not a database which I think is a very common misunderstanding. I mean our students go out into the world and.. ves..the same thing. Do you have other examples of that?]. The other example I have is not that serious it's for example – not that Excel is that serious – but with using MapInfo which is a GIS software that I used we were often within the company we would swap data – we'd make maps for ourselves with using the software. And some people were better at using it than others and some people were just hopeless. So they couldn't really - you'd have to do things for them. It's an example that you've got some software there that you could use and it's not being used so it would be more effective for a team if everyone you had used it. So it's a challenge in a way that not everyone can use it well. [SC: Good comment – it's about computer literacies.] I'm maybe getting a bit old. Like I think everyone is computer illiterate now. [SC: A lot of people have said that to me – they said you should have asked people their age which I haven't done by the way. But a lot of people have said 'I'm too old to use FB'. I don't know that it's that straight forward.] [SC: Do you like anything about using computers or was it all just a question mark? (Q 33)]. Yes - look. Yes - I guess so. It's good to use in a lot of ways. It enables – I don't know if I'm going to - probably not. One of the issues I've got particularly with GIS - because archaeologists are constantly saying that they use it – and they do use it – but they don't really use it anywhere near the extent that they could or should. Often it's only being used as a way of plotting points on a map or producing maps which we could do with a bit more difficulty but without that programme. The strength of those things is to use it as a database and to use it work out queries and come up with information which would be almost impossible to do without it. I've never really seen GIS - I've read a few GIS books on archaeology and there are examples out there particularly in

universities but in a heritage management context in the industry I've not really seen it used in the way that it could or should. But having said that it's really useful to be able to pop things into and make little maps yourself in a pretty - in a very accurate way if the data's accurate of course. But I don't feel that it's added anything in the general field of heritage management – what I've been involved in. It hasn't added anything to archaeological analysis or report writing or understanding the archaeology. [SC: That's a good point – I think that's coming out. I was just thinking about that this morning – the way technologies can enhance what you do – actually add value – rather than obviously doing things more efficiently – though maybe not always – but exactly taking that next step to be able to visualise things or do statistical analyses or something which you couldn't do if you didn't have the computer. So you've actually just said that – that's good! Thank you for that.]

35 I've just said 'Average'

36 Well at the moment I obviously don't have any support so that would come through online support with anything that I might have. I'll just work it out myself. Previously obviously there have been IT people in the companies that I've worked for who would deal with problems, but at the moment I don't have any. [SC: Do you think that's a problem like as a smaller company or on your own?]. GIS for example I know how to use to some extent but if I wanted to produce something nice to put in reports – so it's a bit of a superficial aspect of what we do – but it's also important for consultants. It was very easy to give all the information to a specialist and they would produce a map for me and it would fit nicely into a report. But now I can't do that so I've got to sort of work that out myself. In terms of support and working out how to use programmes it hasn't effected me as I haven't really needed to produce anything.

37 Is there a real purpose for having done this – will it add to a specific area or? [SC: Well I'm interested in the impact that technologies are having on archaeological practice mainly in the area of communication but also in data sharing. It's looking at how is that transforming our practice – if it is. It has a lot of potential to communicate with the public and with clients. Also I'm mapping out where is the 'coalface' of the communication. I mean all archaeology is about communicating and a lot of archaeology is undertaken in the heritage context so people like yourself are constantly talking to the public and professionals. Where is it happening and how does technology sit on top of that. So that's really what it is about and it's got some data – rather than just anecdotal. And I'm also involved in developing digital archives – we got a grant for that.] Good luck with it.