



PEOPLES WESTCONNEX INQUIRY

NSW PARLIAMENT, JUBILEE ROOM - Friday 6 May, 10am – 2pm

Session 3: Environment - WestConnex ecological impacts and loss of green space

Grant Webster, specialist Green and Golden Bell Frog

GRANT WEBSTER: Hi everyone. I'll just get this presentation up. So today I'm going to talk about the bell frogs at Kogarah that are the population that's threatened by WestConnex. So the Green and Golden Bell Frog are the Lower Cooks River key population, is what this population is known as, and that's what the frog looks like - very pretty frog looking animal.

I'll give a bit of background on the frog first, it's important to know the ecology and behaviour of this species. It's a very aquatic frog and it requires a large area of land to roam across. Most people would associate frogs a pond or something — these frogs love living in ponds but they also need a big area around the pond to forage for food, move away in the time of winter. These frogs have been recorded moving up to one kilometre in one night and up to five kilometres between recapture, so that's a pretty big distance for a frog that size. They'll often bask in day, you can see them by day and over winter they tend to hide away under logs or some kind of debris.

So this frog is an endangered species, it has suffered a massive systematic decline basically across most of its range since the 1970s to around 2000, and continuing to decline to this day but that was the key time when it started disappearing. The reasons started disappearing was a combination of all these effects — habitat loss; habitat degradation; habitat fragmentation; barriers to dispersal which stopped the movement; introduced predators such as foxes; and mosquito fish on the tadpoles; and fungus which causes a bad disease in frogs more widely called Chytrid Fungus so that infects the skin and pretty much kills the frog quite quickly.

So this is the distribution of the Green and Golden Bell Frog, current and historic. If you can see the area in grey, that's where the frog was known from up to about 1970 and the areas in black, the little dots along the coast, that's where the frog is found now. As you can see, it's really contracted and isolated populations along the coast is where this frog is known from.

The current status of this frog — so in NSW it is listed as an endangered species on the Threatened Species Act and a Vulnerable Species Australia-wide on the EPBC Act. So this offers them some protection I guess you could say against some sort of development stuff, or at least it should. In Sydney we had four populations up until a few years ago. Most people might have heard of the Homebush population at Sydney Olympic Park - there's heaps of bell frogs there. They sort of got in the way at the Olympics but they worked



around them and there's quite a lot of frogs there, probably about over one thousand individuals and that population's been stable for a good while now.

Arncliffe, that's the second population, that's the Lower Cooks River population, the one at Kogarah Golf Course. It is also stable but a much lower population, size ranges between 20 and 200 so numbers sort of go up and down always within that sort of number. There's another population at Greenacre that no one's really seen for the last ten years, we don't really know what the status of that population is. And the other population at Kurnell has declined, probably is extinct now. It was since there in 2009. So we are essentially down to two populations of this frog in Sydney that was once found across the entire Sydney Basin so I'd like to think we'd be able to hold onto them but I don't know.

There was a draft recovery plan published by the NSW Office of Environment Heritage, it was called something different in 2005, probably DEC. And this recovery plan aimed to step out the method on how to recover this species from the brink of extinction essentially. The Lower Cooks River key population, this is centred on Kogarah Golf Course and the adjacent lands. Population is small but breeding still occurs yearly in both these manmade RTA ponds which were specifically made for the bell frogs and other ponds on the golf course and little soaky areas. Recent surveys for this species at Kogarah detected six individuals in November 2016 and eight individuals in February 2016. So as you can imagine, these aren't big numbers of frogs, they are quite fragile there. Similar numbers that were detected at this site when I worked here with Cumberland Ecology between 2005 and 2009. I don't think we ever got more than nine frogs on one night but you'd always find some.

So this is the distribution of the population so if you can see here, Kogarah Golf Course is fairly obvious and the yellow dots are where the frogs were recorded - so each of those one of those spots is where we recorded frogs, usually they were around ponds, sometimes just sitting out on fairways. That orange diamond that you can sort of see just outside that space there is where the RTA ponds that they specifically built for bell frog breeding are. This blue star in that other area is where I recorded a breeding pair, so the breeding occurs also on the golf course as well, not just in the RTA ponds. Most recently, breeding occurred between the RTA pond and that red line in a little drainage line on the golf course, so that was where they were breeding this year. That red boundary is the development footprint for Kogarah golf course, so that's where the WestConnex wants to build its smoke stacks and everything else. As you can see, it takes out the middle chunk— [Chiming noise] Is that time?

MODERATOR: You've got another 30 seconds.

GRANT WEBSTER: I'll keep going. That was probably the key figure. You can see they really want to take out the centre of these frogs. They occupy about 12 hectares of land and WestConnex stands to take away about seven hectares of this. So this includes all the supplementary breeding areas and good foraging habitat. Like I said, this is a roaming species that needs a lot of space to go. What do WestConnex want to do? They want to try to mitigate this by captive breeding and building new ponds elsewhere but I'll first start off



by saying the captive breeding rarely works for these frogs. Bell frogs have shown time and time again it has not worked so they tried reintroducing it at Long Reef, Marrickville, a couple other places in Sydney and it has failed miserably every time. Except at Homebush where they expanded the existing population. So I think this will probably not work, it is probably going to drive the population to extinction.

This is their mitigation measure, they want to put in three new ponds on the edge of Marsh St, so this is off to the edge, you have to cross a big road to get here and then they want to fence the frogs in. This is a cannibalistic frog species, the adults will readily prey on the juveniles, that's why they disperse so widely. So if you have all these frogs confined to one area they are just going to eat each other and if they end up getting out, they are just going to end up on the road and get run over. Quite sad, really.

What does the recovery plan say should happen? Well, they should say it should be maintaining existing Green and Golden Bell Frog populations — this recovery plan is a government document. Enhance existing habitat, increase connectivity of population ... So the current habitat has been left to degrade and there's been no effort to restore the connectivity or enhance the habitat — it is hard to see how that is possibly in line with the recovery plan at all and WestConnex isn't going to help. So what else do they want to do? There's other biodiversity costs as well. They want to remove 1.4 hectares of critically endangered Cooks River Castlereagh Ironbark Forest so this is a critically endangered community which has the same protection as the Bell Frog, possibly more. There's a patch 1.8 hectares in size, they want to take 1.4 hectares of that so leaves the remaining patch at 0.4 hectares which is less than 0.5 which is the threshold size for a viable patch. So the remaining area will not even be protected anymore so they are essentially taking 1.8 hectares of this community. And then remove all of 1.8 hectares of threatened swamp sclerophyll forest on Kogarah golf course as well as unspecified biodiversity loss through urban vegetation and the possible extinction of the Green and Golden Bell Frog Lower Cooks Cove key river population. There we go.