

Spoken statement by Riverlea Environment Society, Inc.

Part 2: Dr Andrea Graves

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The SNAs of Hammond bush

There are several things about Hammond Park that make it so special, but one of them is the fact that it's home to the long-tailed bat. That's one of the reasons that two of its three Significant Natural Areas are ranked as such.

We note with great concern several statements from experts, not only our own, outlining serious possibility of adverse effects from urbanisation at the proposed Amberfield site on the Hammond bats.

We were relieved to note, though, that the district plan protects SNAs from the adverse effects of developments. We hope we can rely on those provisions being given proper weight.

Because this is what's at stake:

If Hammond bats currently cross Amberfield to either forage there or to travel to a more distant foraging site, then urbanisation there is a real risk to them. If they have to take a longer route to get to a foraging ground as a result of avoiding urbanisation across the river, that imposes an energetic cost on them – they are burning off more energy and have to eat even more to make up for it – and when energy is scarce in animals, that can make a difference between succeeding or failing at reproduction.

When we are considering how to stop a threatened species sliding into extinction – and these bats are well down that road already – success or failure at raising their offspring means everything. It takes a lot of physical energy to grow and feed babies. The only way to pull a species back from extinction is for it to have more live babies that grow up to have their own offspring. Baby bats are called pups.

We would like to make something very clear – and I don't think any expert would disagree that this is a fact: if there is a species just clinging on to survival, anything that imposes extra energetic costs on those animals will have adverse effects on them. It will push them further towards extinction.

The need for reliable baseline data

We are fortunate that the monitoring requirements for the Southern Links have fed into this consent hearing. We wouldn't know nearly as much as we do without it. That's because the applicant didn't provide nearly as much information as would be expected – and then it presented its absence of evidence as evidence of absence!

We are concerned at the prospect of the applicant being responsible for identifying roost trees, for example if consent is granted. It had failed to do so, but when someone else looked, there they were.

We do not know what type of monitoring they propose to do. We know they propose to do it two-yearly to be in line with the Southern Links project, but we cannot find a Southern Links condition proposing to do it two-yearly. The condition appears to state that it is done every year.¹

How can the Commissioners tell how much loss there will be if they aren't sure what's there to start with? How can they know what has to be avoided? How can the Applicant consider adaptive management without a clear provision for constant, careful monitoring so that when things go wrong, we have immediate feedback about that fact?

Riverside Reserves Provision

Our society was involved submissions regarding the PSP back in 2007, and our submission was about providing habitat complementary to Hammond bush on the Peacocke side of the river. We proposed an enlargement of what was being called Riverside Terrace 2 back then, which is now being called the northern bend that is directly opposite Hammond Park (see diagrams page 8 of our evidence). We proposed for it to be revegetated to allow for an extension of habitat.

This submission was accepted and incorporated into the PSP. So, last September, we were very surprised when we saw the Applicant's proposal to have just seven metres of vegetation along the riverbank opposite Hammond Park, especially when we could see that the large reserve was still part of the PSP.

RESI was not consulted, certainly not in the true sense of the word.

In February, we learnt of the proposed expansion of the riverside reserve to a width that is something closer to what is expected by the PSP. We do not accept that this was done for bats or is additional mitigation for bats. It is merely what has been expected by the PSP for many years.

Appendix B of our evidence compares the PSP reserve expectations with the Applicant's proposal. (Appendix B starts on page 18 of the RESI evidence.)

Applicant's Riverside Reserve Proposal

Instead of revegetation for overall ecological purposes, the Applicant is suggesting something quite different. Instead it focuses on an artificially constructed bat habitat that

¹ Condition 15.5(h): *Monitoring shall be carried out over the long-tailed bat breeding season and peak activity period (beginning of November to the end of April), first commencing two (2) years prior to Construction Works starting, and continuing during construction and five (5) years post construction for the first stage of the Project, and shall ensure adequate site coverage incorporating all potential roosting and foraging habitats as well as suitable control sites. The timeframes for the monitoring in accordance with this condition shall only be triggered with respect to the first stage of Construction Works for any part of the Project.*

may – or may not – effectively preserve bats’ use of the area as it becomes hemmed in by urbanisation.

We wonder if the meadow was put in place at least partly because it would be a convenient place to put storm water infrastructure and a shared path.

We’re concerned that we’re at this stage of the hearing and still don’t know what the meadow will look like. Will it be mown grass? We think that’s unlikely to generate many insects for bats to eat. Or will it be a wilderness of various grasses? If it’s unmown, it will undoubtedly be a magnet for weed infestation– we know that from the years of work we’ve done in Hammond Park. We are not talking easy-to-pull weeds like puha. We are talking noxious, invasive weeds that are very hard to control. So if it’s not mown to start with, our guess is that it will either have to be mown in future – thus sacrificing the insects – or densely planted, quite possibly at the cost of the ratepayer.

As Dr Stirnemann has explained, narrow paths on the interior of a forest are heavily used by bats. The Hammond bush boardwalk is an example of this. You do not need a meadow and exotic trees to get edges. Paths inside forests work.

Indigenous forests vs. meadow and exotic trees

The reason bats are using features like shelterbelts and stands of exotic trees in Hamilton is because that’s all we’ve left them with. But we also know they live in indigenous forests and use paths and natural clearings in as edges. I always think about things in terms of evolutionary biology, and the indigenous forest is what they evolved in.

Four-metre high buffer enough? Scale cross sections needed.

We’re also concerned that we’re meant to accept that a four-metre high buffer of vegetation would screen light from houses and cars – and we point out that there is no mention from the Applicant of lights from the upper floor of two-storey houses, or car headlights.

For anyone to know if four metres would be high enough, we’d need to see cross-sections of the slope at different points of Amberfield – because much of it is on a slope down to the river – with scale images of houses and 4-m high trees. [SHOW WITH ARM/HAND] Perhaps the applicant came up with four metres as a suitable height after examining such cross sections, but if so, we have not seen them.

Optimal Reserve Design

We want to see a riverside reserve strip that will grow into a reconstructed, fully-functioning indigenous forest ecosystem that is 125 metres wide. It will cater for biodiversity in the fullest sense, possessing all the interactions and feedback effects of a food web and a complex community of plants, invertebrates, lizards, birds and bats. Hamilton is rich with the expertise to achieve that.

We believe this is the best way to buffer and protect the bat, bird and insect life we have in Hammond bush from urban development. And all that biodiversity will eventually spill over and expand into Amberfield.

Like Professor Clarkson, we support the shelterbelt retention, whilst acknowledging that as urbanisation springs up all around it, nobody's sure if bats will keep using it, even the applicant.

We strongly encourage the gully restoration to be prioritised – in terms of timing or staging and design expertise – so that it will eventually contain the shaded, incised, sheltered old-growth indigenous forest that is true bat habitat.

Why are bats persisting in other urbanised parts of Hamilton?

Bat activity has been measured at other sites in Hamilton that are right next to urban areas. The reason they can persist there is because they do so in parks and gullies that are incised into the landscape and have big, old trees. This creates darkened areas that are shaded from light from houses and cars, and protected from wind (wind keeps the insects away).

This is a key reason Professor Clarkson stated that the north-south or “minor” gully has the potential in future to be a good ecological corridor between the Waikato River and the Mangakotukutuku gully; it is incised into the landscape and therefore will be more shaded and protected.

Staging of the Development

We don't understand the Applicant's insistence on starting its development at the northern end opposite Hammond Park. Surely that most critical area, adjacent to the river corridor and right opposite the “jumping off” point for bats that Hammond Park is, should be developed last in order to allow the buffer to grow as much as possible?

The timing of the staging in terms of years must allow for sufficient time for buffer, gully and corridor planting to be established to a height that experts agree will provide sufficient habitat.

Given the potential for the north-south (minor) gully as a refuge and starting point for an ecological corridor with the Mangakotukutuku gully, the restoration planting of the gully should also be part of stage 1.

Consent conditions

The commissioners are being asked to grant consent without knowing what would be in the bat management plan. The detail required to allow them to assess the effectiveness of the plan is simply not there.

We are also intrigued by the suggestion of adaptive management. It means, we think, that if the local bat population shows signs of decline, steps will be taken. But we have many questions:

1. How far afield will bats be monitored?

2. How will they be monitored?
3. Will the applicant monitor frequently and intensely enough to detect a decline?
3. At what point of decline will steps be taken?
4. What steps can be taken?
5. Will they be effective?

AND MOSTLY:

6. If there are steps that can be taken to reverse the decline, why aren't they doing those things from the start?

This is a species at critical risk of extinction! Given that the plan is to urbanise an environment they are using, and we know they avoid urbanisation, why aren't those steps proposed right from the start?

7. The intervention in this case is irreversible. It is roads and cars and houses and streetlights. You cannot rip those out if you realise it's not going well for the bats.

Adaptive management might work for fisheries, where fish stocks can be monitored and fishing intensity reduced if stocks are declining. We are not talking about windmills that can be turned off at crucial times. We are not talking about a method of intervention that can be changed if it's not working. In other cases, the underlying ecosystem is intact, the intervention can be eased off or modified, giving the species a chance to recover. How can that possibly happen with an irreversible and massive change in habitat?

In addition, the Applicant in the conditions is asking for free range to decide all this itself, without review from an external party! We heard on Monday reassuring words that the Hamilton City Council could, of course, tweak things – however, the suggested condition that allows the Council review the plan has been deleted!

The contents of those plans are key components on which to judge this consent application. The fact that they are not available means that it is impossible for the Commissioners and independent experts to decide whether they are sufficient.

This needs to be available in writing and NOT in reassuring spoken words.

Protection of Peacocks bat habitat

Finally, although we know the commissioners cannot decide it, we asked for relevant Peacocks sites to be recorded as Significant Natural Areas due to their use by bats. This would protect the bat habitat regardless of whether consent proceeds or not.

What do we want for Amberfield?

We have seen that the commissioners want solutions. We are willing to work with the Applicant and DOC to achieve those solutions.

We believe that mitigation over and above the expectations of the PSP is required.

This because of:

1. The increased extinction risk for the long-tailed bat since the Structure Plan was developed,
2. The bats' use of Amberfield itself;

3. The need to protect the values of the SNAs opposite it.

SO, our suggestions are:

1. Further enlargement of these reserves and corridors in alignment with calls from DOC.
2. Careful reconstruction of the indigenous forest that once clothed the land, acting as a buffer to the urban areas and eventually providing a complete forest ecosystem. Genuine ecosourcing.
3. Well-protected, dark corridors between the Waikato River and the Mangakotukutuku gully consisting of broad swathes of reconstructed indigenous forest.
4. Staging the buffer and corridor planting first, followed by the western part of the development. The north-eastern part must be developed last.
5. Gathering reliable baseline data using survey techniques agreed to collaboratively by all bat experts.
6. Annual monitoring using survey techniques agreed to collaboratively by all bat experts.
7. Every condition and plan must be unambiguously documented in advance of consent.
8. A bond is essential to guarantee that consent conditions are met, and with the Adare Company's offer to provide a guarantee, they may wish to underwrite the bond.

These are our proposals to achieve no net loss, and preferably gain, in the long-tailed bat population.

If urbanisation is coming, there will still be uncertainty as to whether the bats will continue to use the habitat, but the uncertainty can be massively reduced compared to the existing proposal.