**Introduction – Chapter 1**

**1st Report**

consistency presenting both common name and scientific name for all species at first mention.

Numerous typos/application of scientific name issues ‐ please check *Tadarida* (spelling and

application to Australian species), *Chalinolobus*, *Scotorepens*, *M. schreibersii* (subspecies spelling and

application to Australian species), *Mormopterus* (application to Australian species), et al.

Consider using subsections in the general background section as it is long and multi‐faceted.

**2nd Report**

The aims and objectives of the thesis are mostly appropriate and can be achieved, with the

exception of an objective of Chapter 4 - Understanding the utilisation of the surrounding

environment by bats in the tunnel. I comment on this below in my review of Chapter 4. Overall,

I really enjoyed reading this chapter. It was structured really well in that, it started with quite a

general focus on topics pertinent to bats and their ecology before narrowing in to the more

local context that was the focus of the thesis. I have provided a few suggested revisions to

this chapter, including some key literature that may be worth considering. Since the thesis was

presented without line numbers, I have included these suggestions in an annotated copy of

the thesis.

***Chapter 2***

**1st Report**

How do you identify species during fly outs? Or do you just get total number of bats exiting? It

seems the latter (based on discussion) but I think you could state up front. How does this relate to

the data from the recorders ‐ how are they married up?

Assuming here that all entering or exiting bats on recorders will call ‐ otherwise they will be missed.

Is this a fair assumption?

Sometimes on flyouts many individuals exit at once ‐ how is this accounted for in the counts?

How do you avoid missing or double counting bats that fly around in the tunnel as you disturb them

on your walk‐throughs?

You identified twelve species ‐ how accurate is the recorder ID work for achieving this ‐ what scope is

there for error?

Discussion has some repetition of results in places at the start of each section that could be

tightened up a bit, esp. given the discussion is 15+ pages long; it could be condensed.

**2nd Report**

In Chapter 2 of the thesis, the first data component is presented. This chapter focused on

which species used the Yugar tunnel, what the relative abundances of these species were in

the tunnel and patterns of within-night activity. Importantly, this component of the thesis made

seasonal comparisons for each of these aspects. The findings of this component of the thesis

confirmed use of the tunnel for roosting by three species that were previously recorded using

the site. The relative abundances of each species remained either similar or varied between

seasons (summer/winter). Within-night peaks in activity provided novel insights into probable

patterns of emergence and return for the three bat species. Overall, I feel that this chapter

was very lengthy and could be made more concise. This will help to ensure that key outcomes

from this study are not lost or diluted. As indicated in my annotations of the thesis, some

important detail regarding the methods will help – for example, what if any approaches were

taken to determine what a peak in activity was? Or was this done simply by interpreting plots

of activity. Either way, this detail is needed. More information about the weather conditions

during surveys will help to put some results into context – for example, did bats return to roosts

earlier in summer because there was heavy rainfall at that time? Nevertheless, this chapter

provides very interesting patterns for each of the bat species roosting in the tunnel and this

information will be of importance for management of the site. More can be made about the

implications of these findings for management in the discussion – e.g., for rehabilitation works,

which time of night should be prioritised to limit any impacts on bats.

***Chapter 3***

**1st Report**

Solid chapter dealing with an important topic.

Like chapter 2, this chapter could be condensed a bit. The results feel a little overlong, although they

were detailed.

The discussion could also be edited/reduced in places – the summary reads like the introductory

segment and could be omitted. Some introductions to various subsections read as too lit‐review‐like

and in other places too much result material was reiterated and then the discussion of this was a

little too light I think. Overall, more concise interpretation would have helped in the reading.

**2nd Report**

Chapter 3 addresses the microclimates of roosting sites within the Yugar tunnel. I found this

chapter very interesting. Temperature and relative humidity loggers were deployed near

roosting sites, at other sites within the tunnel where bats were not roosting and outside the

tunnel. The findings from this component of the thesis revealed that microclimates at roosting

sites varied by species. The tunnel provides buffered temperature and relative humidity

compared to the external conditions outside the tunnel. Difference in microclimate between

tunnel locations and outside the tunnel varied with season. I think the analysis that has been

provided for the data is appropriate but I also believe that more sophisticated analyses could

be undertaken to look at habitat selection (use vs availability) of the different bat species. This

may be worth considering for publication of this work. I have provided detailed comments in

the annotated copy of the thesis.

***Chapter 4***

**1st Report**

You identified 21 (of 34 SEQ) species, which is amazing in a 3km radius ‐ how accurate is the recorder

ID work for achieving this ‐ what scope is there for error?

Results – 3rd para. X%?

Fig 4.2 and 4.3 ‐ which species is which?

**2nd Report**

Chapter 4 provided an assessment of commuting and foraging activity in the landscape

surrounding the Yugar tunnel roost. Selected vegetation types and habitats within these (edge

vs. interior) were assessed in summer and winter. I think this chapter would benefit from more

discussion of factors that may have contributed to certain differences between seasons. In

particular, I wonder what effect sampling only part of a night had on the conclusions that were

made. For example, if sampling was undertaken throughout the entire night in summer and

winter, would differences between summer and winter be greater? An objective of this chapter

is to assess movements of bats roosting in the Yugar tunnel, but this is not possible using

acoustics as acoustic activity recorded in the surrounding landscape may represent bats from

other roosting sites – this is acknowledged in the discussion. I think it would be better to make

this point upfront.

***Chapter 5***

**1st Report**

This chapter is not really a general discussion in the traditional sense, at least to my reading. It is

more of a summary of findings (5.1), implications (5.2) and future directions (5.3).

That said, amongst the three data chapters, I feel there was enough depth of discussion, and the

student has deeply appraised the literature on each topic, which is the primary goal. However, there

was also some repetition in the discussion (of results) and then in the general discussion there was

further repetition of discussion material (via a summary of each topic) without too much extension

on the chapter material (or at least not referenced in light of literature). Implications and future

directions sections are fine and add new material here.

It is quite possible that after the detailed discussions (cumulatively 30+ pages) in each of the

chapters, there was little left to add in terms of interpretation here.

Overall, I certainly don’t feel that the work was under‐interpreted. The depth of interpretation was

there. It is just that I feel I have read some of the same or similar material several times in the course

of results, discussions and general discussion.

This might be solved in part by some editing of discussion sections in each chapter I think to excise

some results preceding interpretive material and perhaps also remove the summary sections (since

they come in the general discussion anyway). I am happy to leave this up to the supervisory team in

discussion with the student as to how best approach it.

**2nd Report**

Chapter 5 is a short chapter (but appropriate length) that brings together the key findings from

chapters 2-4. It also includes a section on the implications of these findings for management

of the Yugar tunnel and surrounding landscape by Moreton Bay Regional Council. The chapter

concludes with a list of ideas for future research. I really enjoyed this chapter and think this

will be valuable to land managers. I have included a few comments/suggested revisions in an

annotated copy of the thesis.