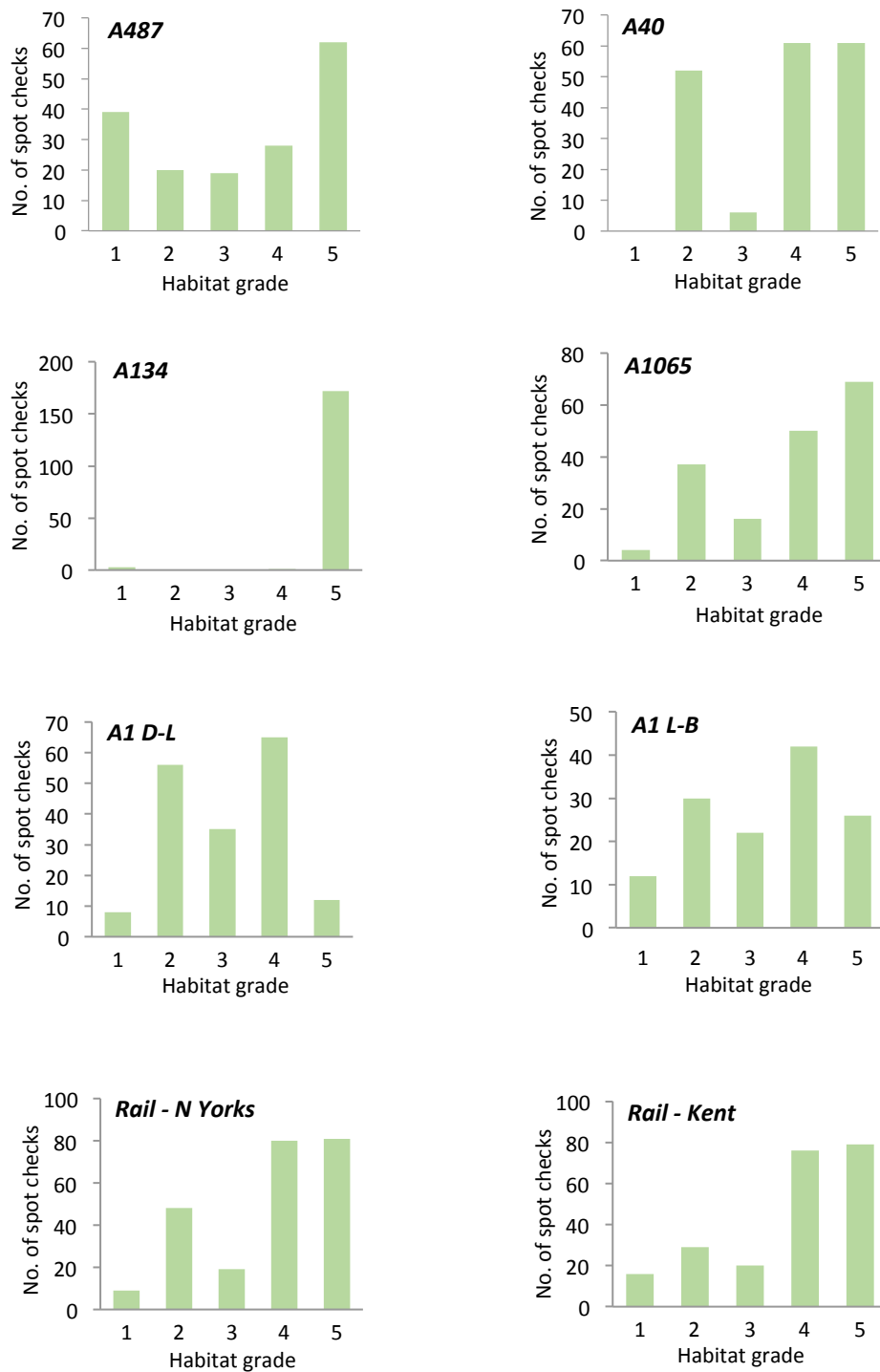


## Appendix H. Habitat and time analyses

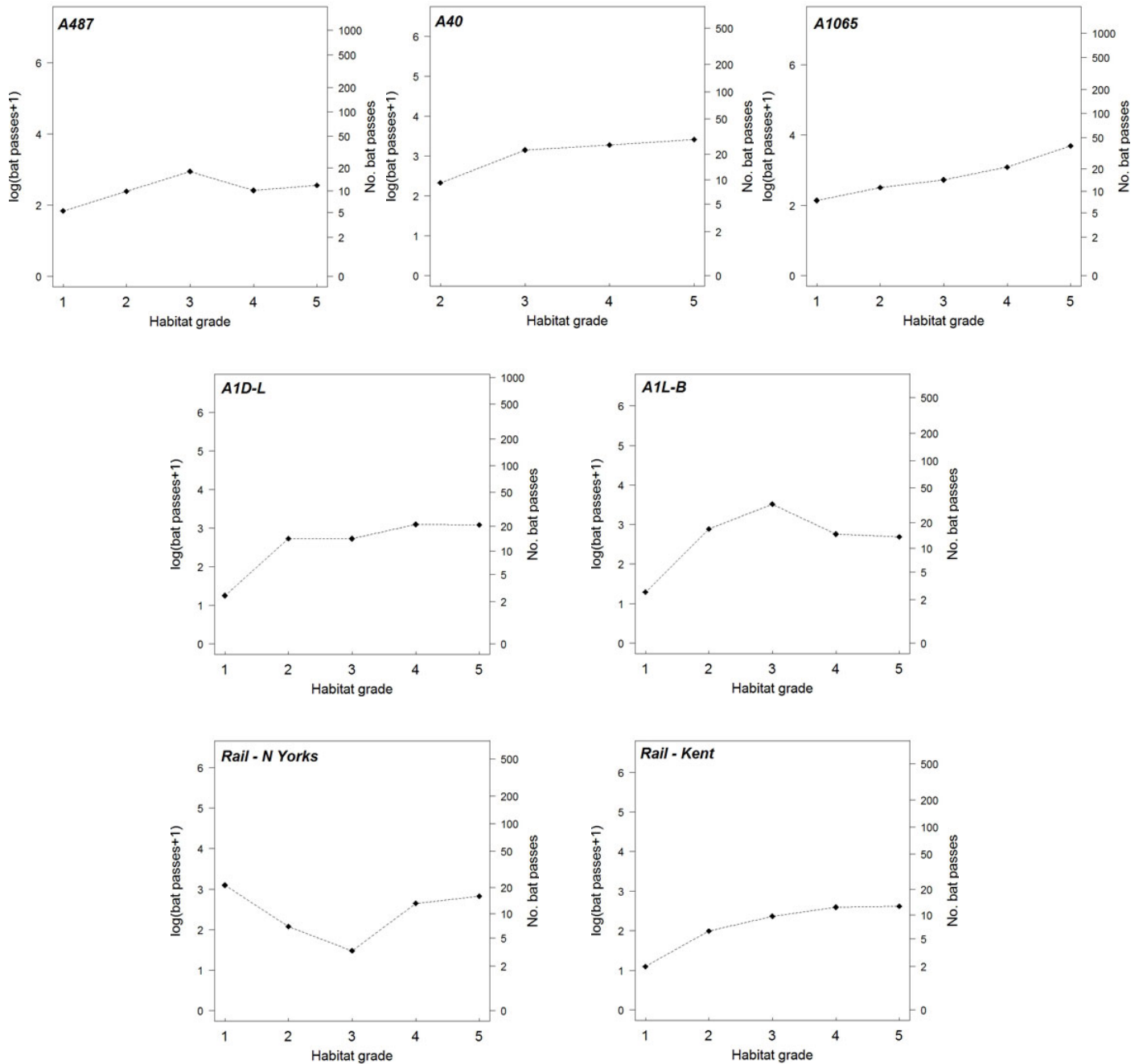


**Figure G1.** The total number of spot checks with each habitat grade at each transect site.

NB. The height and continuity of linear features and vegetation increases with habitat grade (1 = open, poor quality habitat, 5 = continuous tall tree cover, good quality habitat)

# Total bat activity

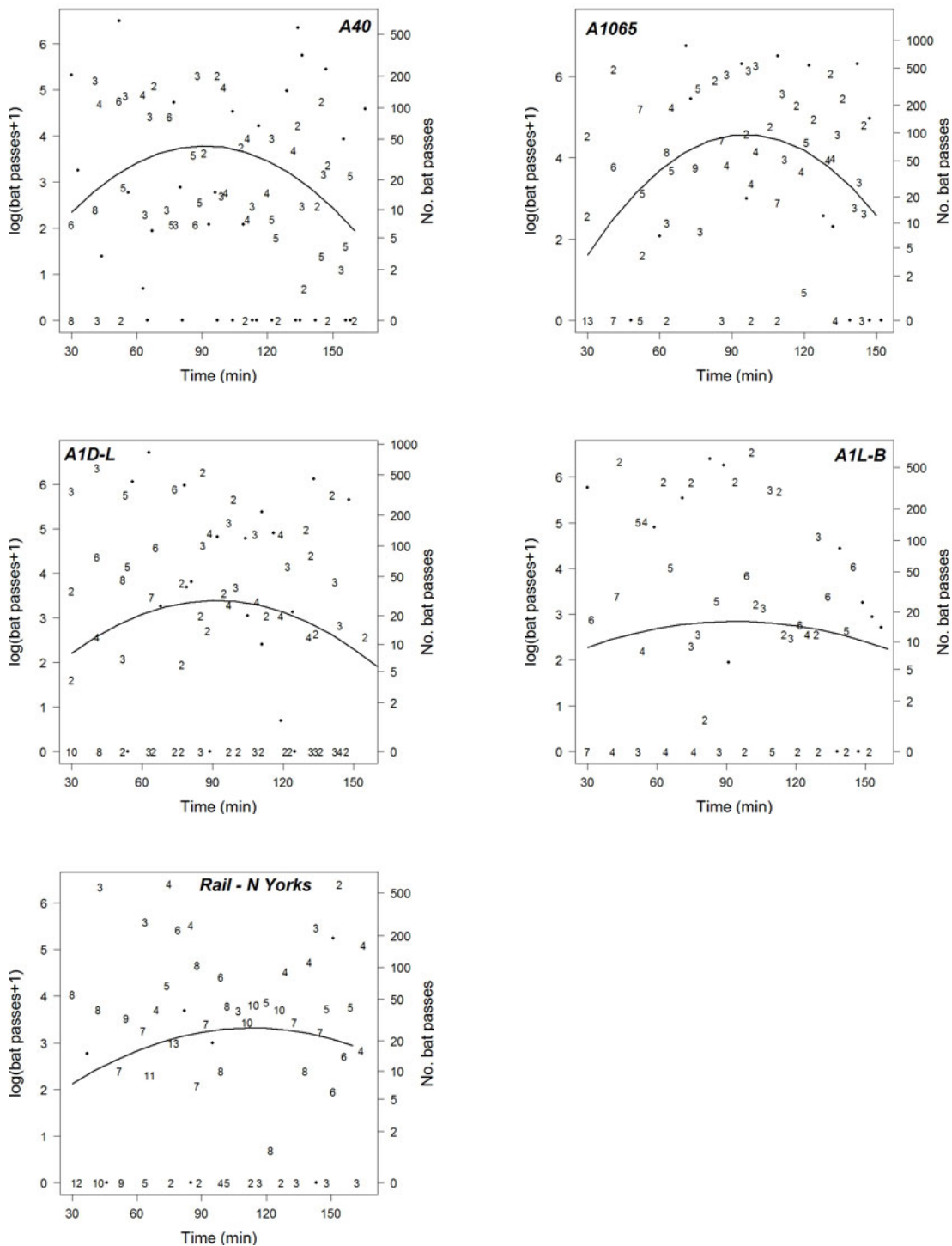
## Habitat



**Figure G1.** The effect of habitat grade on total bat activity for each road/rail site as predicted by the final GEE models (if retained as a significant variable in the model selection process). Plots show model predictions on a log scale (right y axes show the original scale for reference). Other variables (if retained in the final model) are held constant (time after sunset at 60 min and distance from the road/railway at 500 m).

NB. The height and continuity of linear features and vegetation increases with habitat grade (1 = open, poor quality habitat, 5 = continuous tall tree cover, good quality habitat)

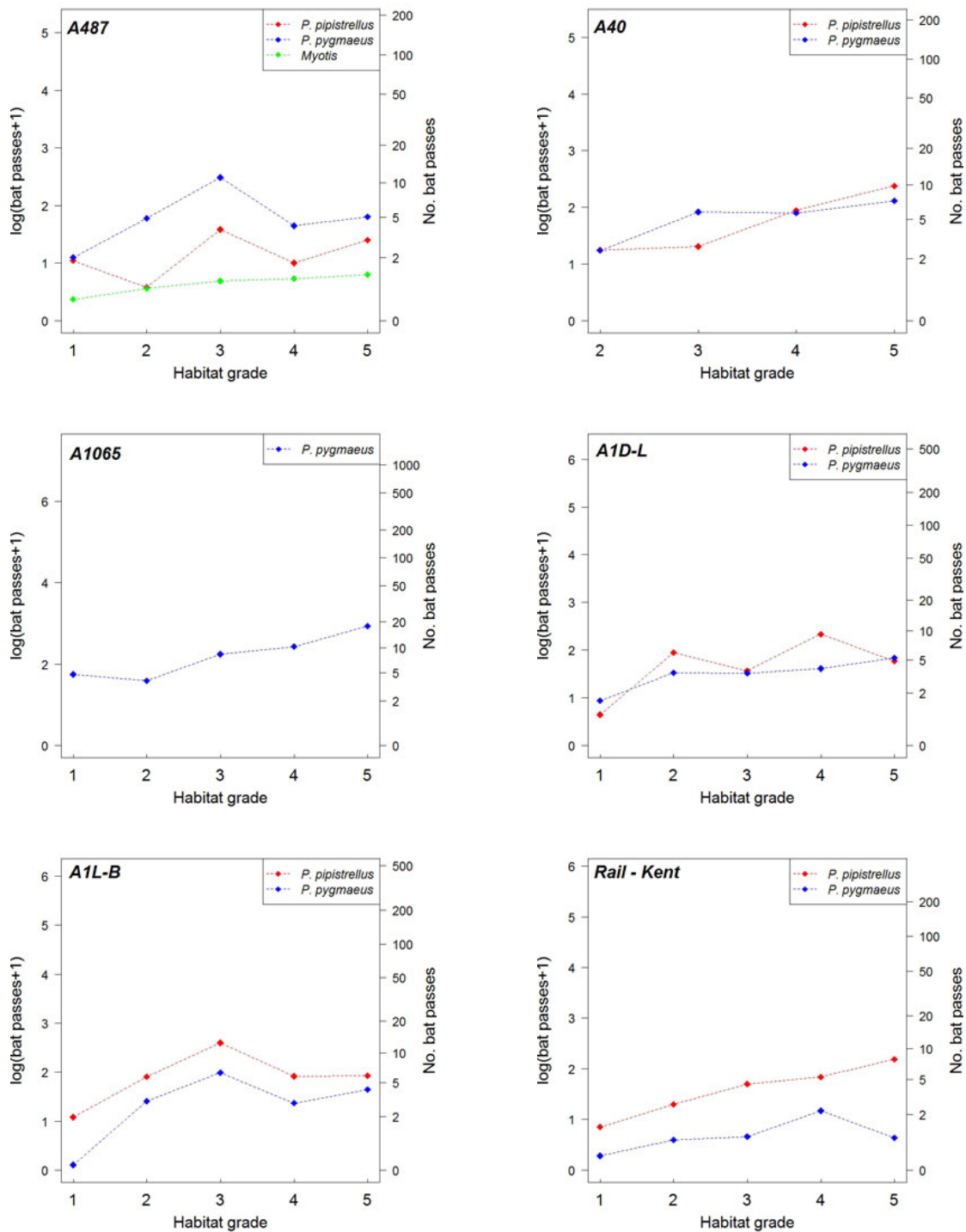
## Time after sunset



**Figure G2.** The effect of time after sunset on total bat activity for each road/rail site as predicted by the final GEE models (if retained as a significant variable in the model selection process). Plots show model predictions with full range of data points on a log scale (numbers represent replicate points, right y axes show the original scale for reference). Other variables (if retained in the final model) are held constant (habitat at grade 5 and distance from the road/railway at 500 m).

# Species-specific effects

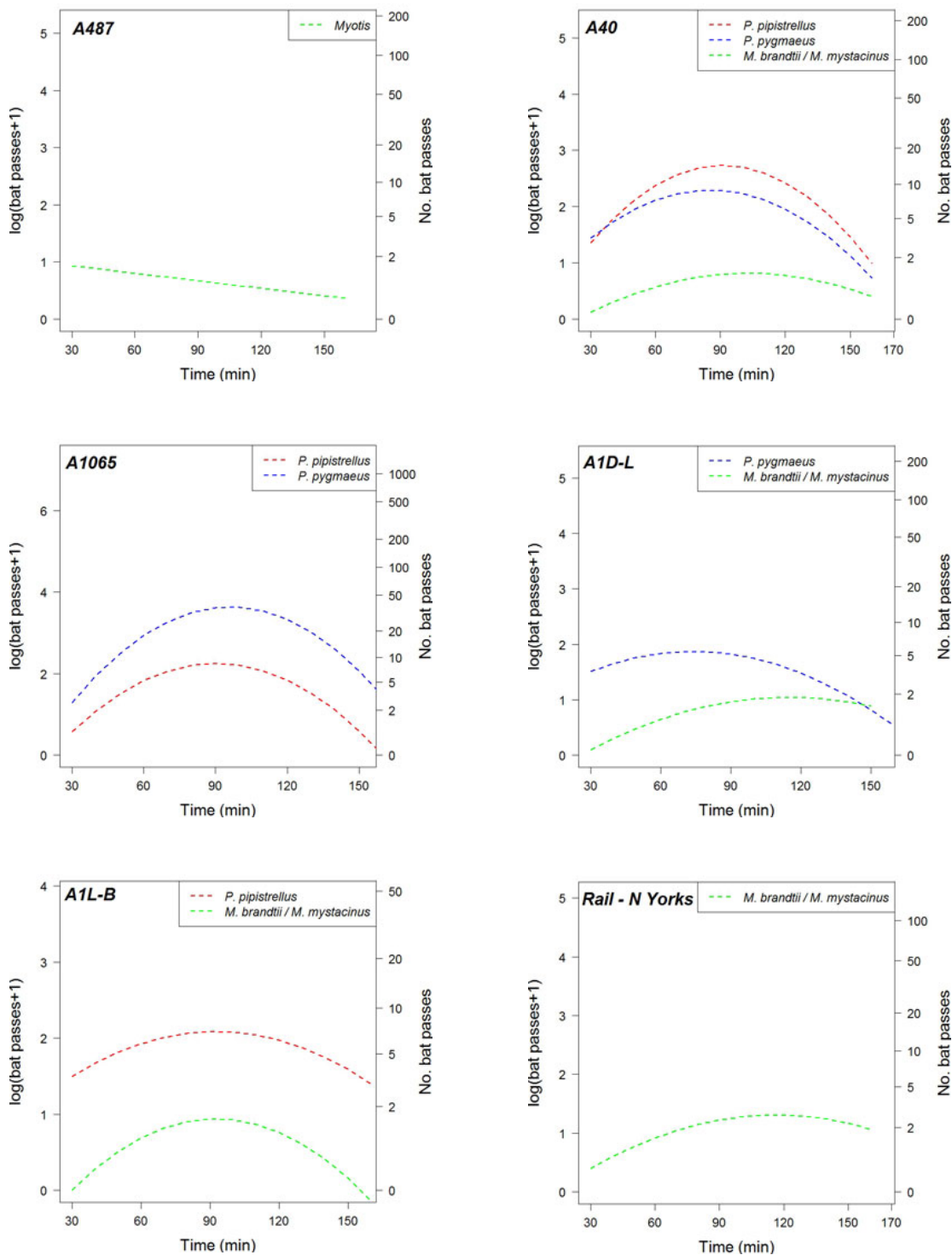
## Habitat



**Figure G3.** The effect of habitat grade on individual bat species for each road/rail site as predicted by the final GEE models (if retained as a significant variable in the model selection process). Plots show model predictions on a log scale (right y axes show the original scale for reference). Other variables (if retained in the final model) are held constant (time after sunset at 60 min and distance from the road/railway at 500 m).

NB. The height and continuity of linear features and vegetation increases with habitat grade (1 = open, poor quality habitat, 5 = continuous tall tree cover, good quality habitat)

## Time after sunset



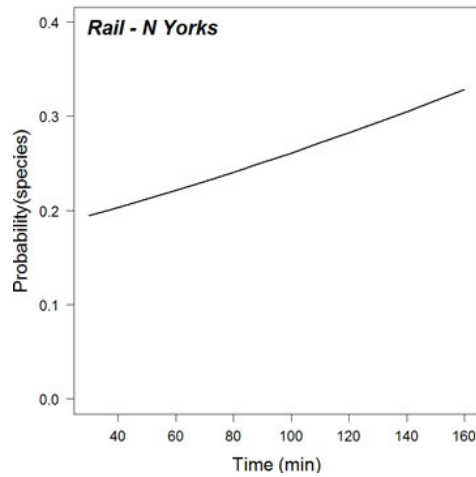
**Figure G4.** The effect of time after sunset on individual bat species for each road/rail site as predicted by the final GEE models (if retained as a significant variable in the model selection process). Plots show model predictions on a log scale (right y axes show the original scale for reference). Other variables (if retained in the final model) are held constant (habitat at grade 5 and distance from the road/railway at 500 m).

## Number of bat species

### Habitat

Habitat grade was not retained in any of the final models as a significant explanatory variable for the number of bat species.

### Time after sunset



**Figure G5.** The effect of time after sunset on bat diversity for the North Yorkshire rail site as predicted by the final GEE model. Plot shows the predicted probability of observing an increase in bat species or species groups with distance from the railway (held constant at 500 m).