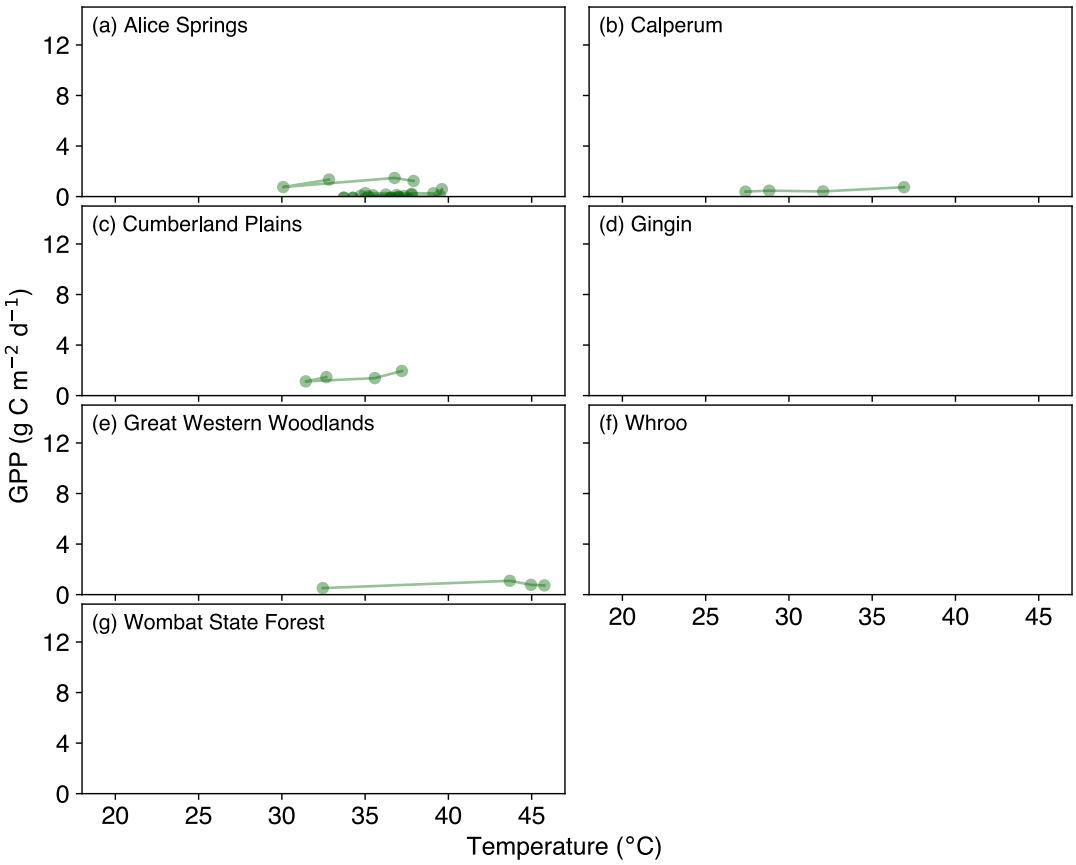

Figure S1: Evolution of GPP in the three days prior to and including a hot temperature extreme (daily maximum temperature exceeded 37°C). Dark blue lines represent events in which a fitted linear regression indicated a significant positive slope, whilst dark green lines represent events where the fitted slope was positive but not significant. Empty panels for Gingin, Whroo and Wombat State Forest indicate that we did not find any concomitant positive GPP and negative LE slopes. Events where the fitted slope was negative are shown in Figure 1.

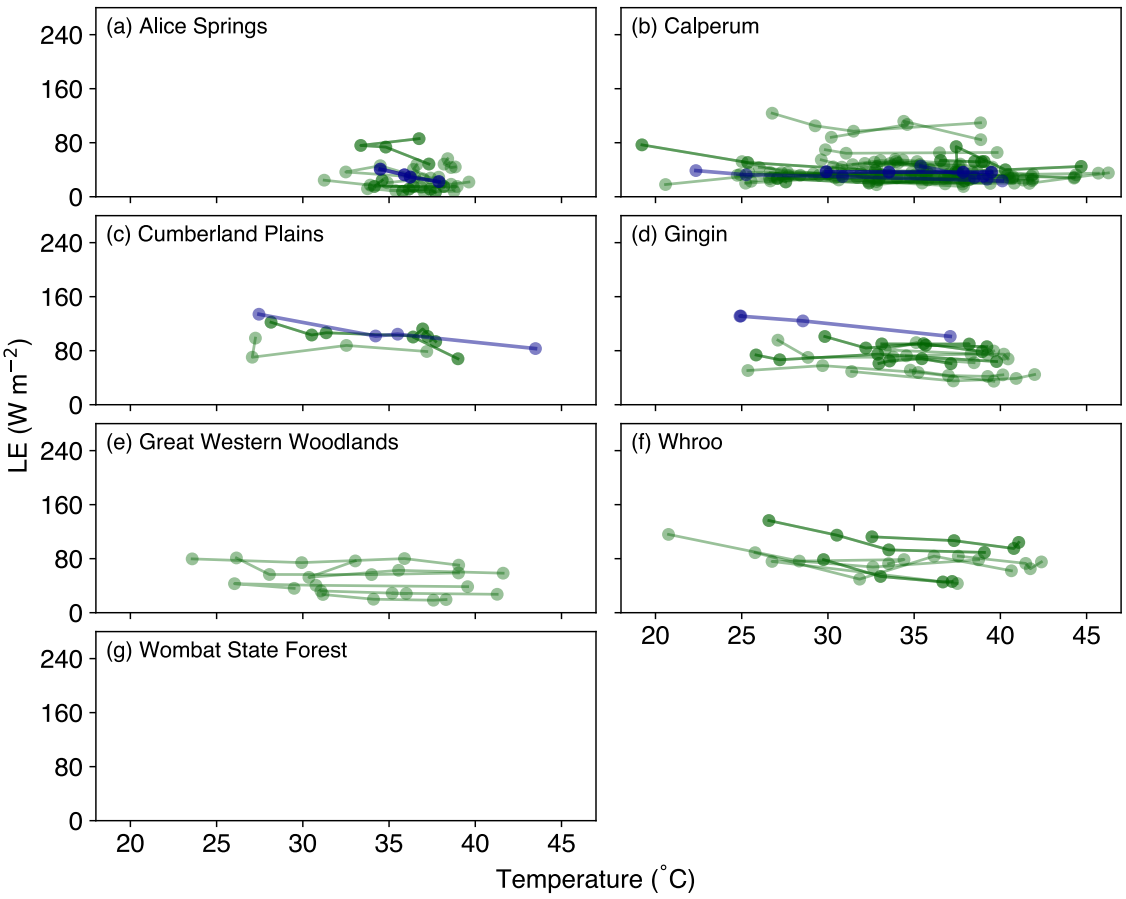

Figure S2: Evolution of LE in the three days prior to and including a hot temperature extreme (daily maximum temperature exceeded 37˚C). Dark blue lines represent events in which a fitted linear regression indicated a significant negative slope, whilst dark green lines represent events where the fitted slope was positive but not significant. The empty panel for Wombat State Forest indicates that we did not find any concomitant negative LE and positive GPP LE slopes. Events where the fitted slope was positive are shown in Figure 2.

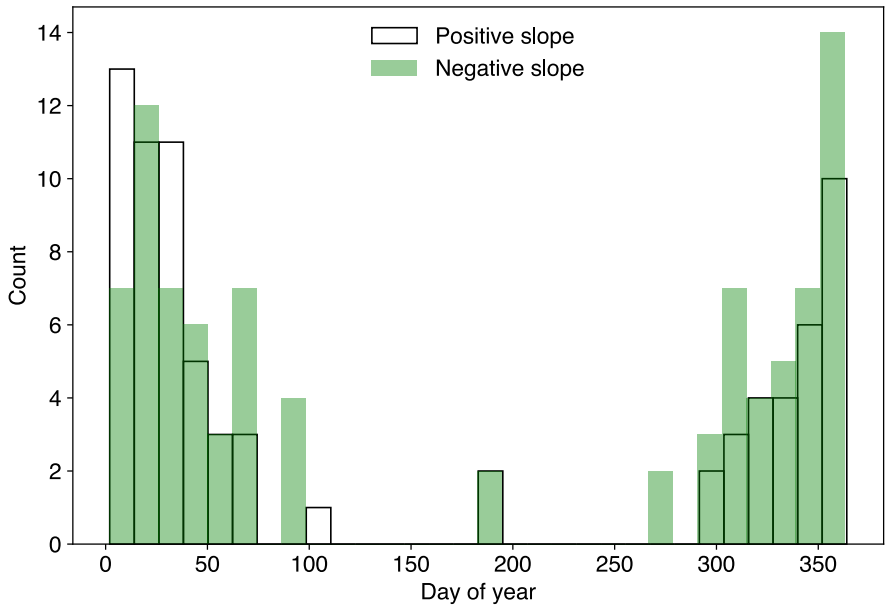

Figure S3: Histogram showing the timing of positive and negative slopes in LE.

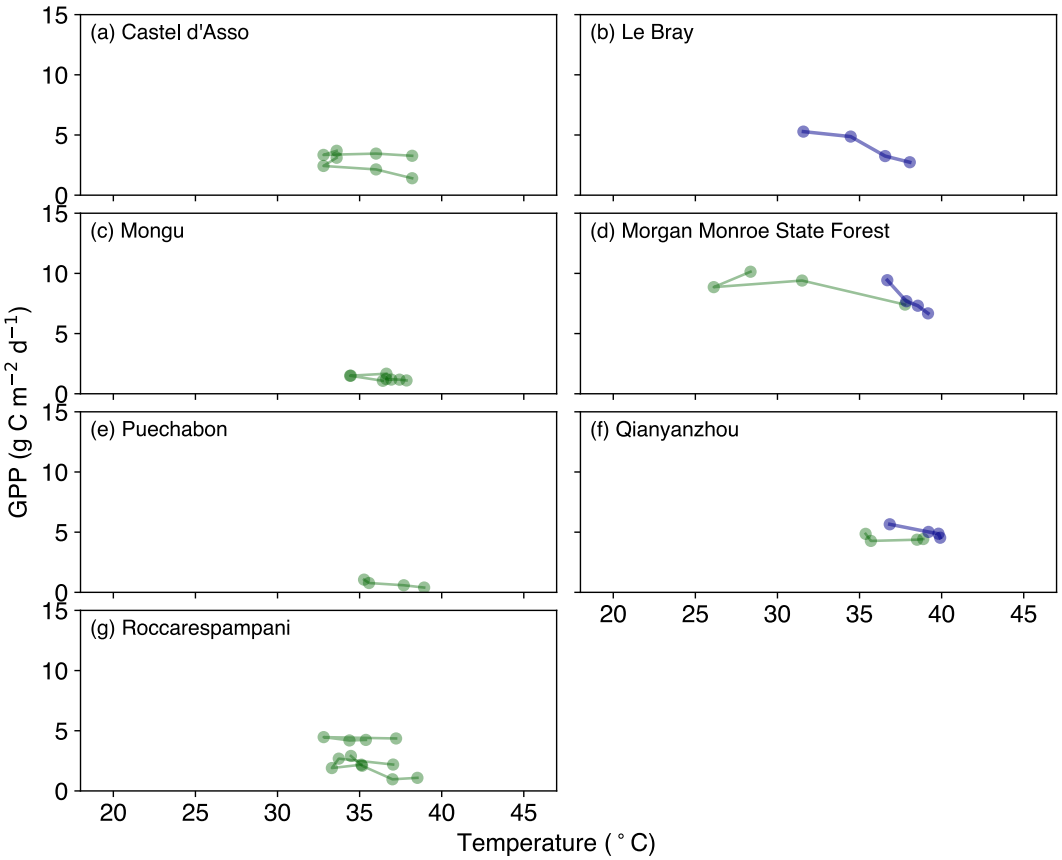

Figure S4: Evolution of GPP in the three days prior to and including a hot temperature extreme (daily maximum temperature exceeded 37˚C) from FLUXNET2015. Dark blue lines represent events in which a fitted linear regression indicated a significant negative slope, whilst dark green lines represent events where the fitted slope was negative but not significant.

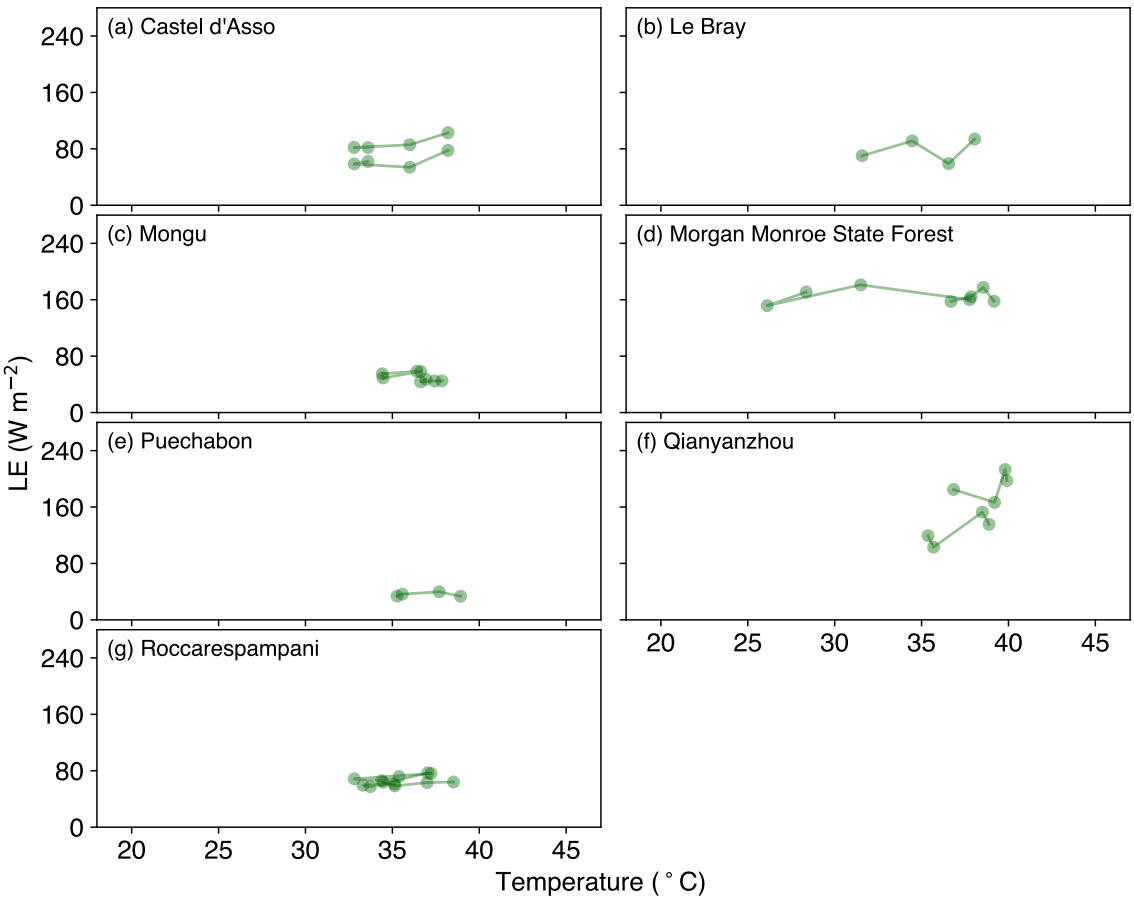

Figure S5: Evolution of LE in the three days prior to and including a hot temperature extreme (daily maximum temperature exceeded 37°C) from FLUXNET2015. Dark green lines represent events where the fitted slope was positive but not significant.