# S1 Appendix – Energy requirement equations

## Maintenance

## Liveweight gain or loss

## Gestation requirement

## Lactation requirement

Daily milk yield was predicted from [21] for days in milk, and number of lambs reared.

Lamb growth was assumed linear from birth to weaning.

## Total daily requirement

## Other assumptions

* Lambs that did not have a birth weight (n=2), and/or date of birth (n=1), were given a birth weight average and/or date of birth average, respectively, for the ewe group for the year they were born.
* Lambs that did not have a weaning weight were assumed to have died. Any lambs that died were assumed to have died at birth, and had no energy requirements from birth to weaning.
* Ewes that died prior to pregnancy detection were assumed to be non-pregnant.
* Ewes that died between pregnancy detection and lambing, and were carrying one or more lambs, were given an average lamb birth weight and date of birth for their ewe group of the year they died to calculate gestational energy requirements prior to death.