Supplementary material: Smedley et al.

Erosion rates in a wet, temperate climate derived from rock luminescence techniques

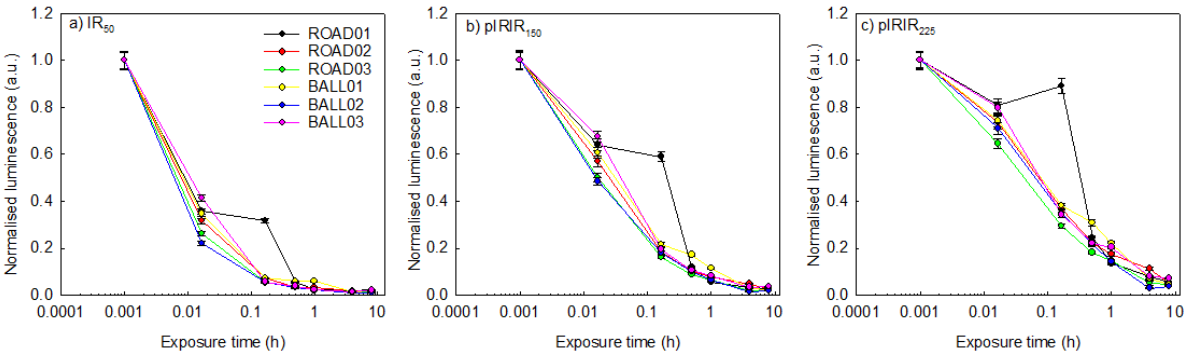

Fig. S1. Normalised luminescence signal remaining for individual discs from each sample after a given dose of 105 Gy and subsequent exposure to the solar simulator (0 m, 1 m, 10 m, 30 m, 1 h, 4 h and 8 h). Note that each disc had already been analysed for the natural luminescence signal.

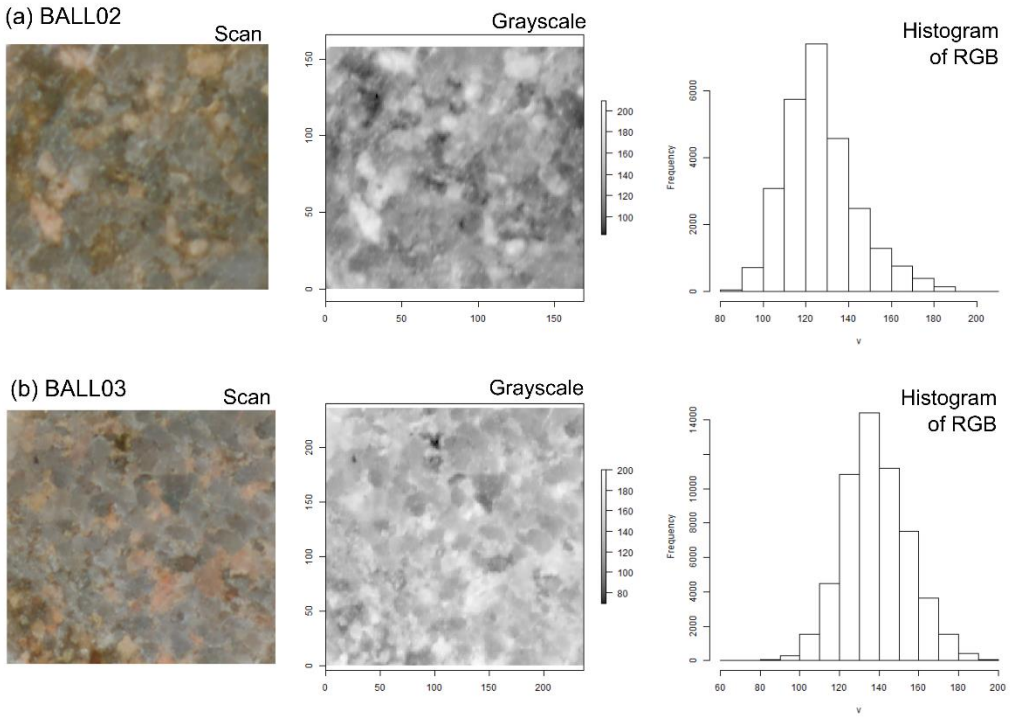

Fig. S2. Examples of true-colour and grayscale images for example slices of samples BALL02 and BALL03 using the EPSON Expression 11000XL flatbed scanner.

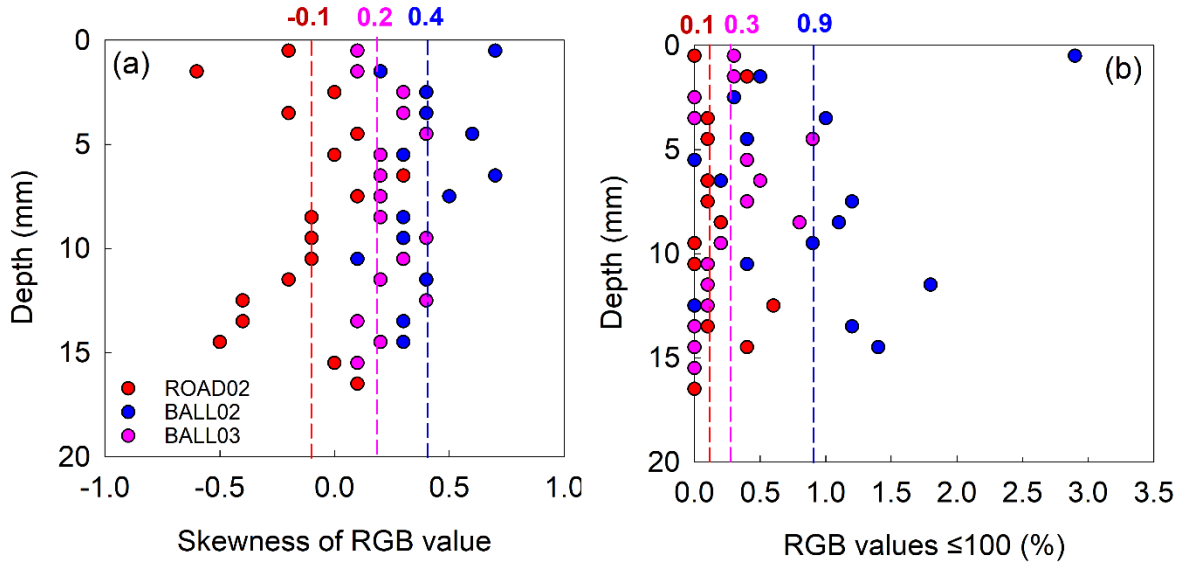

Fig. S3. Analysis of RGB values with depth for samples ROAD02, BALL02 and BALL03: (a) skewness of the pixel values for each images; (b) percentage of RGB values that are ≤100 (i.e. dark coloured).

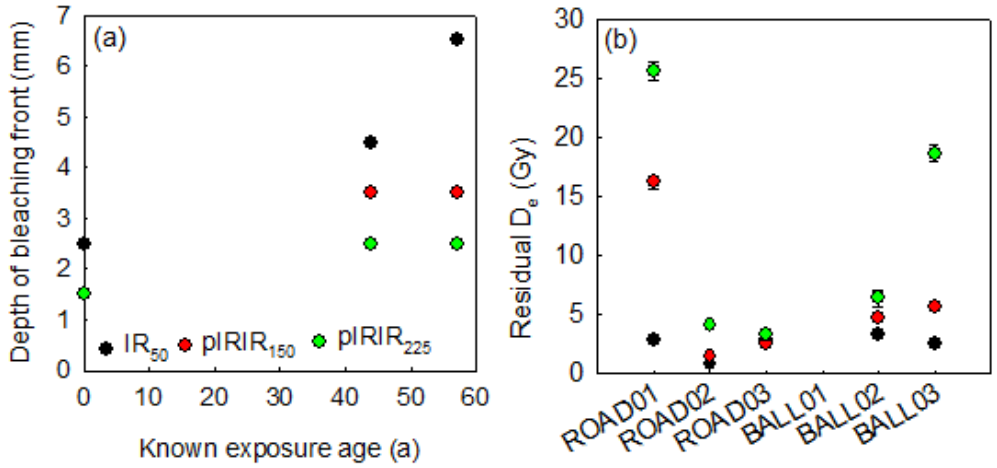

Fig. S4. (a) Depth of bleaching fronts for the known-age samples (ROAD01, ROAD02 and ROAD03). Note that the depth of the $pIRIR_{150}$ and $pIRIR_{225}$ bleaching fronts were identical. (b) Residual D_e values determined for the surface slice (0-1 mm depth) of each sample. Note that sample BALL01 is not plotted on this figure as the residual D_e values were large for all the IRSL signals: IR_{50} (477.5 ± 20.7 Gy), $pIRIR_{150}$ (574.6 ± 36.5 Gy) and $pIRIR_{225}$ (could not be interpolated on to the dose-response curve).

Table S1. Multi-elevated temperature post- IR IRSL sequence used for analysis.

Step	Procedure
1	Natural or regenerative dose
2	Preheat 250 °C for 100 s
3	IR LEDs 50 °C for 200 s
4	IR LEDs 150 °C for 200 s
5	IR LEDs 225 °C for 200 s
6	Test-dose 53 Gy
7	Preheat 250 °C for 100 s
8	IR LEDs 50 °C for 200 s

9	IR LEDs 150 °C for 200 s
10	IR LEDs 225 °C for 200 s
11	IR LEDs 290 °C for 200 s