Electronic Supplementary Material (ESI) for Soft Matter.

Fig S1. Additional repeats of the experiments corresponding to the following conditions: 1/4 of biofilm cut at t=24 h and healing (total 34 repeats), 1/4 of biofilm cut at t=48 h and healing (total 12 repeats), 1/2 of biofilm cut at t=24 h and healing (total 36 repeats), 1/2 cut at t=24 h and transferred to a fresh agar plate and healing (total of 36 repeats). n=4 representative images per condition are shown. Scale bar is 0,5 cm on all images.

Fig S2. One simulation realization of healing process of 1/2 cut biofilm with no residual cells and refreshed nutrients. A colony shows a pronounced croissant shape for t=36 and 60 h.

Fig S3. Comparison of simulations and experiments quantifying active cells in the healed vs normal growth areas. Experimental data is the same as in main text Fig.7A but rescaled by a constant numerical value with respect to the y-axis for a better match with simulations.

Fig S4. Ratio of the number of the matrix species to active cells species in the 1/4 area of the healing and normally growing biofilm. Both curves start from zero as initially there is no matrix in inoculation drop and in the cut. However, then the matrix production is ramped up faster in the wound and its level is maintained higher through the whole observation time.

Fig S5. Schematics of the gating strategy used in the FACS analysis. Definition of the gates A) to determine cells and B) further to split them into cell subtypes: dead, vegetative, and spores. A representative image of the gate application with actual data for a normal growing biofilm to sort cells D) and their subtypes E).

Fig S6. A selection of the biofilm growth patterns at t=48 h with parameters perturbed with the respect to the one used in the simulations in the main text. For each image set only one parameter is altered and their values are provided in the Materials and Methods section.