Abstract: We review the fundamental connection between centre vortices, quark confinement, and dynamical chiral symmetry breaking. Calculations are performed in pure SU(3) lattice gauge theory. Starting from the original Monte Carlo gauge fields, a vortex identification procedure yields vortex-removed and vortex-only backgrounds. The original, vortex-removed, and vortex-only ensembles are compared by examining a number of different quantities, including the gluon propagator, quark mass function, and the topological charge density. The removal of vortices consistently results in the removal of the corresponding feature associated with confinement or dynamical chiral symmetry breaking. Remarkably, we observe that after some smoothing, the vortex-only degrees of freedom are able to encapsulate the pertinent features of the original gauge fields. Novel visualisation techniques enable us to create direct representations of the centre vortex fields, providing additional insight into these structures.