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We will study the asymptotic behaviour in terms of Γ-convergence of a variational formulation for a phase field model for dislocations. The energy is given by two main terms: the Peierls energy obtained by an infinitely many wells potential and a long range interaction elastic energy modelled by a non local term of $H^{1/2}$ type. To model a forest hardening we add zero boundary condition on a perforated domain. We analyse the asymptotic behaviour for different scales. One of the main tools is the introduction of suitable notion of non local capacity and the corresponding cell problem formula.