Horikawa proved that the universal cover of a general Enriques surface can be constructed as invariant hyperelliptic quartic K3 surface. Via this model one can obtain a GIT compactification of the moduli space of Enriques surfaces carrying a polarisation of degree 2 and its period domain. In this talk, I will discuss the geometry and cohomology of compact moduli spaces of polarised Enriques surfaces related to Horikawa’s model.