We will discuss the modelling of the evolution of the large scale field on the solar surface. This type of modelling is most useful for studying the evolution of the field on time scales from several months to several hundreds years. After describing the model we will briefly outline the properties of the historic sunspot records which are available to provide input into the model. The results of the model can be extrapolated to determine the interplanetary magnetic field strength, which is found to be comparable to that inferred from the geomagnetic aa index. We will conclude by discussing how this sheds some light on the solar dynamo.