This paper reports a study of the colour, compressive strength and workability of mortar when cement is partly replaced by sewage sludge ash (SSA). In the study, an iron rich SSA was dry milled into six different fractions. The results showed that the colour, compressive strength and workability parallel to one another gradually changed when the particle sizes of the SSA decreased. The milling of the SSA altered the performance of mortars to the extent that the compressive strength and workability were comparable to the performance of ordinary mortar. At the same time, the colour also changed from grey to a reddish colour. As the change in colour may be of importance for application, it is suggested to include colour as experimental parameter in future work.