The effects of Moffat PSFs on Sérsic profiles are extensively studied using a Moffat function. This analytical approximation to the point spread function (PSF) is shown to provide the best fit to the PSF predicted from atmospheric turbulence theory when $\beta \sim 4.765$. The Moffat PSF is additionally shown to contain the Gaussian PSF as a limiting case ($\beta \to \infty$). The Moffat function is also shown to be numerically well behaved when modelling narrow PSFs in *HST* images. Seeing effects are computed for elliptically symmetric surface brightness distributions. The widely used assumption of circular symmetry when studying the effects of seeing on intrinsically elliptical sources is shown to produce significant discrepancies with respect to the true effects of seeing on these sources. A prescription to correct raw (observed) central intensities, effective radii, index $n$ and mean effective surface brightness is given.