Climate change is likely to influence the water cycle by changing the precipitation patterns, in some cases leading to increased occurrences of precipitation extremes. Urban landscapes are vulnerable to such changes due to the concentrated population and socio-economic values in cities. Feasible adaptation requires better flood risk quantification and assessment of appropriate adaptation actions in term of costs and benefits. This paper presents an economic assessment of three prevailing climate adaptation options for urban drainage design in a Danish case study, Odense. A risk-based evaluation framework is used to give detailed insights of the physical and economic feasibilities of each option. Estimation of marginal benefits of adaptation options are carried out through a step-by-step cost-benefit analysis. The results are aimed at providing important information for decision making on how best to adapt to urban pluvial flooding due to climate impacts in cities.