Patronage of a commuter railway station can be increased by improving the design of the station environment. Literature on the subject of public transit and the built environment showed that three factors of the built environment impact on transit patronage: station access, land use density, and land use intensity. An analysis of the built environment surrounding Jeppe Station, Johannesburg showed that the part of the station environment located east of the commuter railway line was generally less supportive of the station regarding the three mentioned factors. The station environment located east of the railway line has a lower density and a lesser intensity. Access was found to be limited in a north-south direction across the railway line, thus affecting access to the station from both sides of the railway line. The design proposal largely focused on improving access, density and intensity east of the railway line. This involved increasing densities through infill development and increasing intensity by encouraging mixed-use development east of the railway line. Access to Jeppe Station was improved by creating a north-south pedestrian spine that crossed the railway line.