

As a group we were instructed to survey the Trinity Gardens area at UWTSD, to produce an accurate A3 drawing showing the layout of key features. We were tasked to establish the positions of site elements such as kerb lines, boundaries, street furniture, manholes, lamp post, drains and represent these clearly. Using GNSS (Global Navigation Satellite System) equipment, which allows precise positioning and elevation data to be obtained through satellite signals referenced to a global coordinate system satellite, geometry and correction techniques such as RTK, to achieve accuracies in the range of 10–20 mm under suitable conditions.

Several limitations were encountered during the survey. Due to time constraints within the allocated session, it was not possible to collect as many survey points as initially planned. The close proximity of surrounding buildings effected the satellite visibility, causing signal interference and multipath errors. This negatively impacted positional accuracy, as satellite geometry (GDOP/PDOP) came in and out of signal in the built-up environments. This lead to reduced reliability of measurements .

To overcome these limitations, survey data was supplemented using information collected by other student groups. This allowed for a more complete dataset and ensured that key features could still be represented within the final drawing. Despite the challenges, the survey demonstrates an understanding of GNSS surveying principles, including the importance of satellite visibility, environmental conditions, and data accuracy. The final output is an A3 AutoCAD drawing that presents the surveyed features in a clear and professional format, including appropriate layers, annotations, scale and title information.

