

Research context: Built Environment Engineering
Theme: GPS and Satellite Navigation

Scenario

The Global Positioning System, GPS, was developed in the USA as a Military aid. However, since the mid 1990s it has increasingly been used, under licence, as an aid to civilian pursuits such as in civil engineering. Many large recently constructed structures and civil projects, such as the Millau Viaduct in France and the North Downs Rail Tunnel/Medway Crossing Bridge in Kent, owe their success to the system.

- 1 You are to conduct your research into the fundamental principles of GPS and its development over the past twenty years:
 - familiarise yourself with how the system works
 - record the increasing applications of this technology for peaceful use
 - identify the specific uses for civil engineering
 - familiarise yourself with two major projects that have successfully used GPS.
- 2 Research economic costs and benefits:
 - comparison with other conventional positioning methods
 - effects upon people's lives
 - contribution to regional economy, by increasing population.
- 3 Investigate Social and environmental issues:
 - interaction with its environment
 - positive and negative effects
 - the impact upon social and economic development in the UK.



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