Federal changes imposed on universities, particularly in regards to conduct of research activities, are being progressively implemented through Research Quality Framework (RQF). Spatial Science staffs have been attending various research workshops and research impact seminars as part of the new RQF implementation into universities. Spatial Science research activities will mostly be associated with the Engineering Infrastructure theme/cluster.

Spatial Science Contributes to Samford Ecological Research Facility

Thanks to a generous bequest from the estate of Dr Patricia Marks, researchers associated with the QUT – ISR (Institute for Sustainable Resources) have commenced activities on a 55 hectare property in the middle of Samford Valley. ISR Director Dr Mike Hefferan advised that “much of the site remains in its natural state with five distinct vegetation communities present. This provides an excellent opportunity for comparative analysis of change influenced by rapid urbanisation in the surround area,” Mike said. “Additionally the site is bound by Samford Creek and has significance with regards to ground water and surface flows which have caused both erosion and the introduction of noxious plants because of high nutrient levels. All of this is of considerable long-term research interest.”

Dr Elizabeth Nesta Marks AO (1918-2002), known as Patricia, was an eminent Queensland entomologist whose breakthrough work with mosquitoes and malaria 1940’s and 1950’s was world recognised. Her grandparents Dr Charles Ferdinand and Elizabeth Gray Marks originally acquired the land holding of 457 acres. The current property, on the eastern side of Samford Creek, is about a quarter of what her grandfather had originally owned in 1887. The rest of the property that was sold contained a granite quarry which supplied stone for the foundations of the Brisbane City Hall in the 1920’s.

*Photo 1: 2nd year spatial science students undertaking survey traverses at Samford.*
Dr Marks died a spinster and under the provision of her will, instructed the executors of her estate to identify a suitable beneficiary for this land who would use the property for “ecological purposes”.

Spatial Science/Surveying undergraduate and postgraduate students have embarked on a number of projects at this unique site. Several field-surveying practicals are being gradually transitioned to this Samford site (about 24 minutes from the Brisbane CBD) to assist in providing a semi-rural experiential learning experience. A number of student research focused projects and teaching activities have commenced including:

- Close-range photogrammetric techniques to document and provide measurement information of original slab hut structure that was the district doctors residence in 1910s.
- Aerial survey mapping of the predominantly rural site and surrounding rural-residential land holdings.
- Modern positioning techniques for rural cadastral evidence searching - some boundaries, including a creek traverse, have not been re-visited since 1860s.
- Engineering survey training associated with detailed cross-sections of the water-course structures.
- Assessment of development constraints associated with an “Eco-village” design.
- Research experimentation for ground-target monumentation for digital airborne sensors. This project also combines a Geodetic survey-network.
- Development of a Spatial Information System that will assist with asset management activity and longer term research directions.
- Providing assistance to landscape architecture students in GPS mapping of vegetation districts and weed management data collection.

Photo 2: Final-year surveying student project to use close-range photogrammetry to document the original slab hut on the Samford property.
GeoImage Site Visit
On 23 July 2007, 30 Remote Sensing undergraduate students from the School of Urban Development, QUT, visited Geoimage Pty Ltd and the Queensland Remote Sensing Centre, Department of Natural Resources and Water (both sites located in Brisbane).

Sylvia Michael, Director of GeoImage, gave presentations to two groups of students, describing a range of satellites and sensors, and showing the students examples of images at different resolutions. Alisa Eustace and Craig Shepard from the Queensland Remote Sensing Centre gave presentations describing the State-wide Land-cover and Trees Study (SLATS) and responded to a range of questions including career opportunities.

The students were impressed by the information and enthusiasm of all speakers and found the site visits on day one of semester a good start to their unit on remote sensing.

Survey Measurement Laboratory Relocated to O building
After a few false starts, the Survey measurement laboratory has finally relocated to the ground floor of O building (room O102) in the centre of the Gardens Point Campus. The refurbished facility provides many advantages over and above the previous location, including a useful equipment loading dock for off-campus field practicals. Immediately adjacent to the lab is a partially undercover and landscaped area suitable for localised practicals and equipment demonstrations.
Photo 4: Survey Measurement Lab has relocated to O building providing improvements in survey equipment training and demonstrations.

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