

# **Increasing community engagement in NYC's green-space planning with PPGIS and deliberative democracy**

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the Doctor of Philosophy, Sustainable Futures

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# Certificate of Original Authorship

I, Erika Whillas declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in the Institute for Sustainable Futures at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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## **Abstract**

My research explores community engagement in New York City's (NYC) green space planning to understand how urban governance can be more inclusive and accountable to help cities adapt to climate change. Increasing green spaces in cities is a proven strategy to reduce the effects of heat waves and storms, and community participation in urban green space planning is a key attribute for their successful design, maintenance and sustainable development. My research provides recommendations for green space advocates working with communities and local governments, and for decision makers looking for democratic innovations to increase engagement in planning decisions.

This thesis contributes to the knowledge of public participation geographic information systems (PPGIS) as a beneficial tool for community engagement in urban green-space planning. In this case PPGIS proved to be an effective tool for green-space organizations to gather comments at community meetings, capture comments of those who cannot attend meetings and help facilitators direct contributions of shy and dominating meeting participants. This is the first known action research project to develop a PPGIS application for urban green space planning in NYC with an emphasis on co-design.

Recommendations are made to use PPGIS with deliberative discussion focus groups to develop and refine PPGIS web-surveys so as to improve their language, interface design and overall relevance for their target audience.

This dissertation contributes to the understanding of how deliberative systems thinking can be used to improve governance in practice, by applying this framework to NYC's formal community engagement mechanisms, and identifying opportunities to make them more deliberative. Guidance is taken from international democratic innovations to make recommendations for NYC Parks scoping sessions, NYC's Participatory Budgeting and District Service Cabinet Meetings.

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