

# Development of a Conceptual Framework for Sustainability Indicators Used in Structure Planning

Hannah Ayres, Pene Burns, Tim Church, Shannon Davis and Simon Swaffield

Implementing sustainability through local scale planning is a relatively recent movement – not only for New Zealand – but for many local and national governments across the world. In New Zealand structure plans are increasingly being used as a key tool in sustainable development. Structure plans can identify both the need and opportunity to improve on current practices, including how to incorporate issues of sustainability in the planning process.

Sustainable Development Indicators are a common tool for monitoring sustainability at a range of scales of development. Indicators are used to give warning signals about current trends of the environment that, if left without response, could have serious effects. They also provide a way to measure performance, and to enable benchmarking of best practice. The ten week 2009/10 Lincoln University Summer Research Scholarship carried out by Hannah Ayres from the School of Landscape Architecture, and in conjunction with Boffa Miskell Ltd, looked at developing a conceptual framework for sustainability indicators used in the preparation, monitoring and benchmarking processes of structure planning in New Zealand.

The report, (<http://hdl.handle.net/10182/2220>) which resulted from the research findings, provides an overview of the current best practice in the use of Sustainable Development Indicator frameworks at the local structure planning scale. The report also identifies a series of important lessons in relation to sustainability indicators based on a review of international literature. It then uses these lessons to develop a conceptual indicator framework that can be applied at different stages in the process of preparing a structure plan in New Zealand.

The research resulted in the proposed ‘Sustainable Development Indicators Framework for Structure Planning’ - termed the SISPlan framework – and is derived predominantly from theme-based frameworks, project-based (input-output-outcome-impact) frameworks, goal-oriented indicators, and the theories behind Pressure-State-Response type frameworks. The main objective of the SISPlan framework is to assist structure plan practitioners in the process of developing successful and sustainable structure plans. This is accomplished through comparing design strategies adopted by and implemented through the plan, with the Performance Goal Indicators which are a measure of progress toward an overall vision established by the community.

Providing a preliminary ‘scoping’ component of a much larger research opportunity, the key features of the proposed SISPlan framework process include:

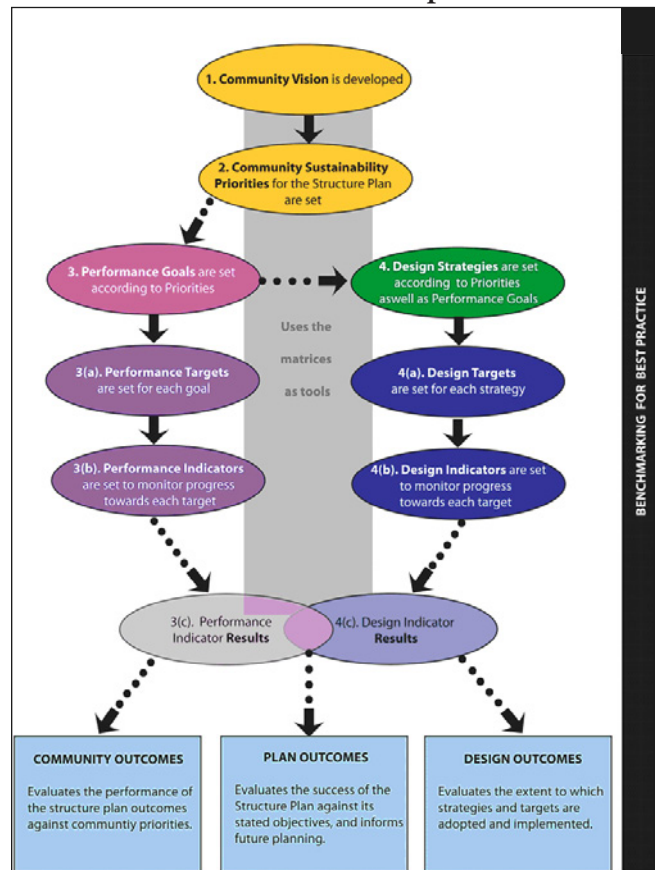
- The development, monitoring and evaluation of two kinds of indicators – Performance Goal Indicators and Design Strategy Indicators.
- The use of matrices to show the cross cutting nature of sustainable development issues and the indicators used to measure them.
- Establishing a community vision that integrates the four

sustainable well-beings – economic, social, environmental, and cultural – that are recognised in New Zealand.

- The capacity to address the place specific sustainability priorities of a community, while providing a system that can be used for benchmarking best practice.
- The ability to adapt to the current structure plan process in New Zealand.

The framework consolidates the findings of a literature review in a way that connects directly to current structure planning practice in New Zealand. Comprising four matrices, two matrices for deriving each of the two indicator types: Performance Goal Indicators and Design Strategy Indicators, the SISPlan framework is specifically designed to adapt to the existing structure plan process. The framework has been distilled from a wide range of planning and Sustainable Development Indicator initiatives, to make sure important aspects of sustainability are addressed in New Zealand structure plans.

## The SISPlan Framework Development Process



The SISPlan framework has the potential to change the way Structure Plans are developed, implemented and monitored in the future, by incorporating sustainable development initiatives that are among international best practice examples. The framework offers Structure Plan practitioners a way to enhance the quality and performance of the Structure Plans they are preparing, and thus contributes to the long term goal of Sustainable Development.