



## **CENTRE FOR URBAN ECOSYSTEM SUSTAINABILITY (CUES)**

### **Our research themes are:**

- Defining more sustainable settlement form and urban futures.
- Low impact urban design and development: making it mainstream.
- Demonstrating the technical performance of sustainable buildings and green architecture.
- Determining and reducing the impacts of urban pollutants and waste.

Our programmes are interdisciplinary involving architects, planners, engineers, social scientists, ecologists, hydrologists, toxicologists, social scientists and economists.

### **Context:**

- Rapidly growing urban populations.
- Infrastructure costs escalating.
- Intensification the main platform of Auckland regional growth strategy.
- Opportunity to implement sustainability principles in urban expansion and redevelopment.
- Centre is a joint venture between Landcare Research and University of Auckland.

### **Purpose:**

- Provide a link between science, practice and practitioners.
- Inform policy development at local and central level.
- Integrate science and planning perspectives on urban issues.
- Produce leading edge team of social scientists, economists, planners, architects, engineers and environmental researchers and practitioners capable of providing solutions to seemingly intractable urban development problems.
- Promote research-teaching-practice links.

### **Our Target Outcomes**

- Transforming urban development.
- Designing sustainable settlement form for 21st century.
- Sustainable buildings with reduced environmental impact, water and energy needs.
- Reduced stormwater infrastructure, energy demands and urban wastes
- Measured improvement in urban freshwater, native, terrestrial environments.
- Urban communities embracing nature and low impact development in cities
- Sustainable development – making an economic return

# Low-impact Urban Design and Development: MAKING IT MAINSTREAM

Rapid urban expansion in New Zealand towns and cities is one of the drivers behind a 6-year research programme funded by the Foundation for Research, Science and Technology (FRST) striving to develop a wide range of urban design improvements.

LIUDD focuses on stormwater, engineering, architecture and development practises that minimise the environmental impacts of development.

We have designed a 4 pronged approach to develop a wide range of urban design improvements that will deliver economic, environmental and social benefits.

## 4 pronged urban research approach to facilitate change in urban design and development

- Getting buy-in to LIUDD – Objective 1
- Demonstrate ecological + technical efficiency of LIUDD – Objective 2, 3
- Financial analysis of LIUDD – Objective 4
- Influencing plans, codes of practice – Objective 5

To be effective LIUDD must operate across spacial scales from the individual engineering device or ecosystem service, to the dwelling, to the neighbourhood and catchment scale.

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