New Zealand Pilot
Corporate Ecosystem Services Review

URS Case Study

December 17, 2012

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Impacts

Which stage of the value chain?

Suppliers | Company | Customers

CASE STUDY QUESTIONS

- What are the **ecosystem services** that our Auckland water Clients **impact on and depended on**?
- What **risks and opportunities** arise to ourselves and our water Clients from the trends in the ability of the natural environment to provide those services and benefits?
- What **actions** can we undertake to better support our clients in understanding, minimising and mitigating their impacts as well as managing dependencies?

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Freshwater

Water supply

Regulation of water timing and flows

Flood protection

Water purification

Wastewater treatment

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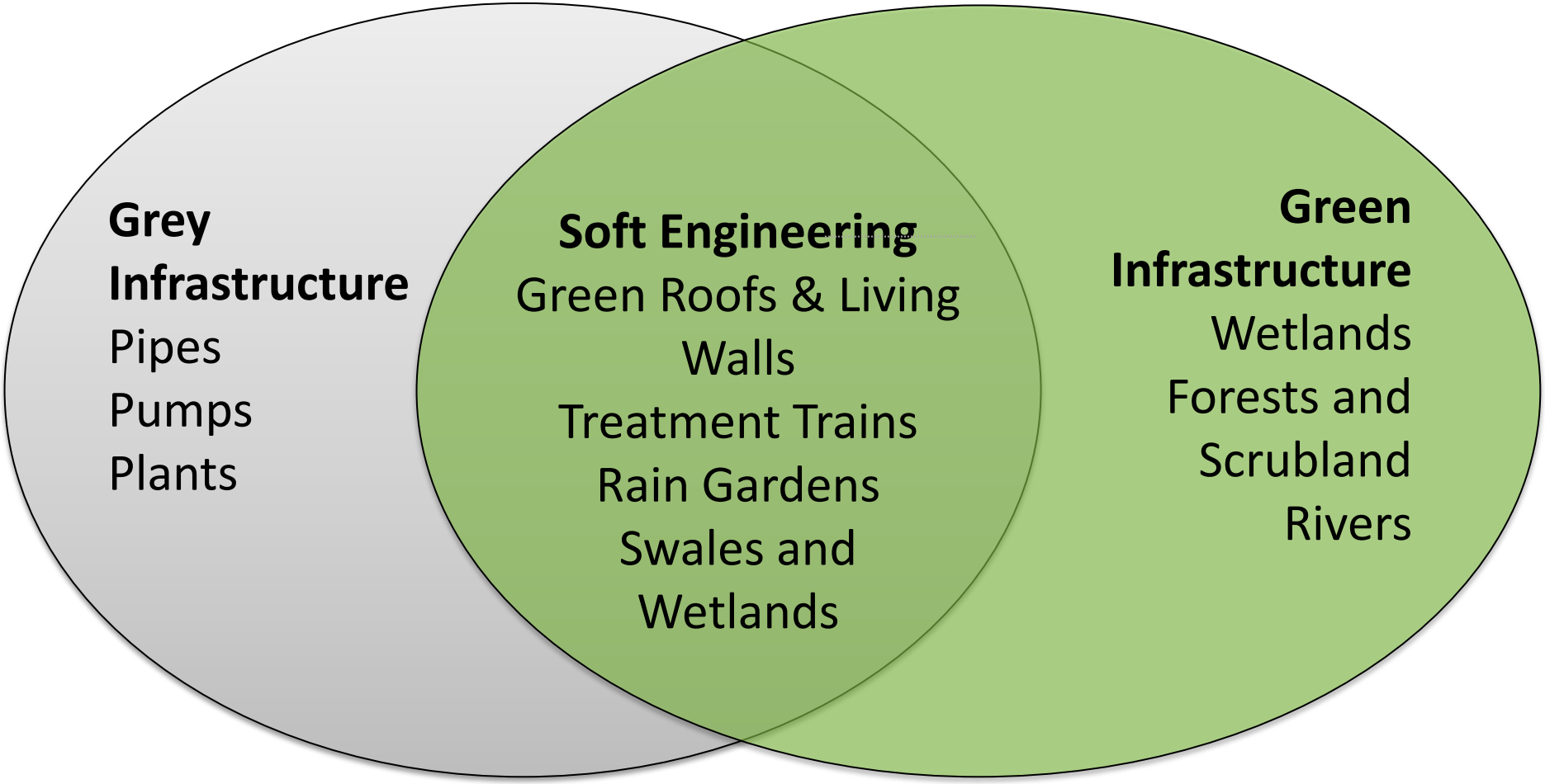
GREEN AND GREY INFRASTRUCTURE SYSTEM



RISKS & OPPORTUNITIES

Flooding
100y flood in the Auckland every 3-5y, significant flood >20 times per year

Population Growth and Liveability
1.3 million people to 2.2 million by 2051

Water Stress
Decrease in precipitation of 2.5-5% between 2030-2049

Urban Heat
Annual temperature increase by 0.94°C by 2040

River Quality
Seawater intrusion, temperature increase, urban runoff and wastewater overflows










Green Roofs and Walls
Reduce runoff

Water Feature Storage
Prevent flooding, create amenity

Sustainable Urban Drainage
Reduce flooding, water quality, irrigation, amenity

Daylighting Water Courses
Water quality, reduce flooding, amenity

Rainwater Recycling
Reduce water demand, in-situ rain water use

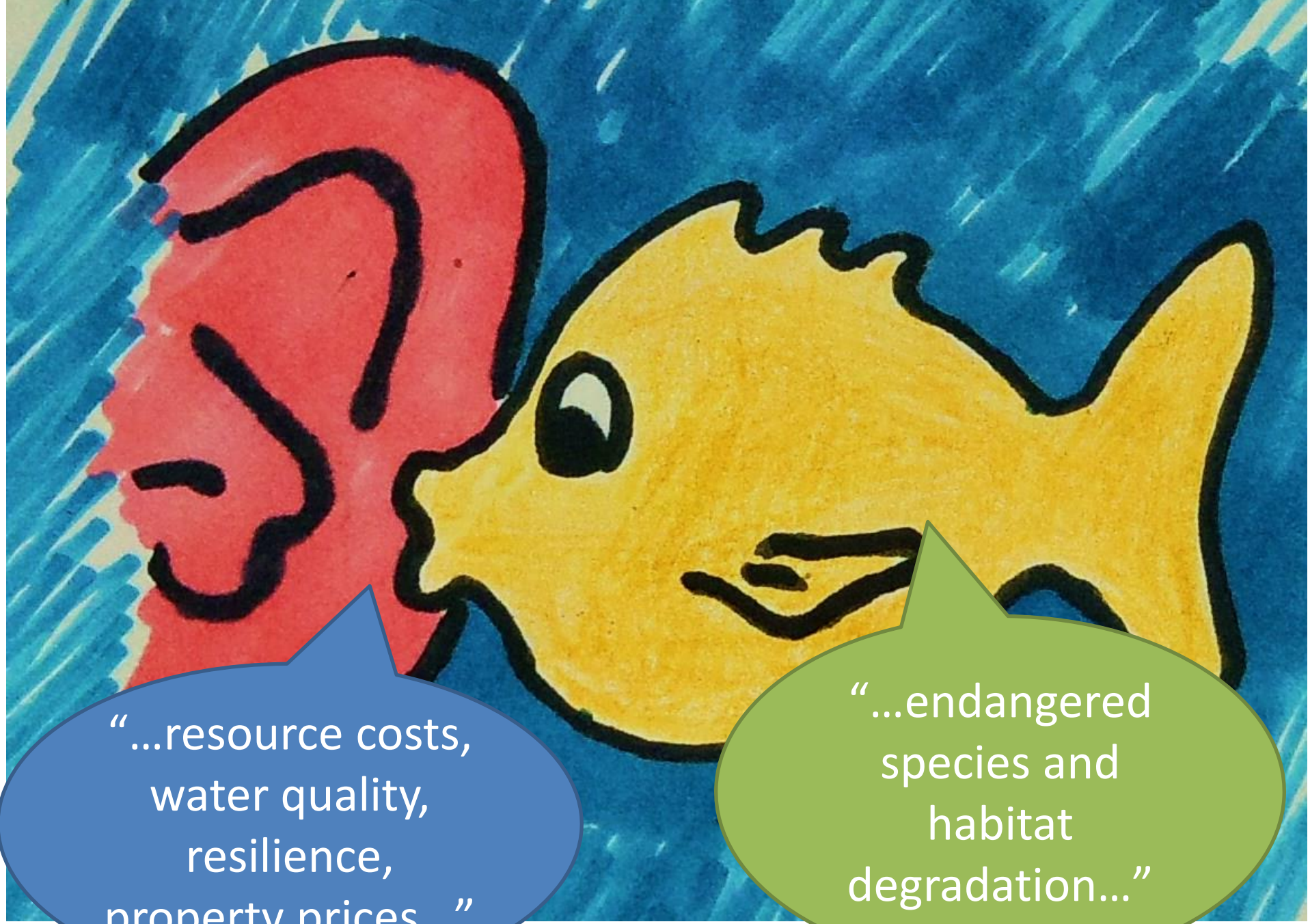
Wastewater Recycling
Reduce water demand, reduce wastewater overflows

THE RIPPLE EFFECT PROJECT

6 Green streets retrofit: Stoney Road before intervention

Green streets retrofit: Stoney Road after intervention

- **Environment Agency** – improved river quality , groundwater recharge and rainwater reuse
- **Severn Trent Water** – alleviating sewer flooding, less wastewater to manage
- **Property owners** – property values, energy cost, drainage bills
- **Council** – carbon sequestration, air quality, biodiversity, human health, urban heat, job creation


"…resource costs, water quality, resilience, property prices…"
"…endangered species and habitat degradation…"

Thank You

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