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## **B.** Case Studies

## B1 Case studies

### B1.1 Lloyds Crossing, Portland (USA)

Lloyds Crossing in Portland is a brownfields redevelopment site in the central city area, with the aim of:

*"Developing a conceptual design for a sustainable, financially feasible, mixed-use development project that will catalyse future private development in the district.. Following conceptual master planning, a stakeholder engagement process is now underway, to create the 'Lloyd Green District'"*

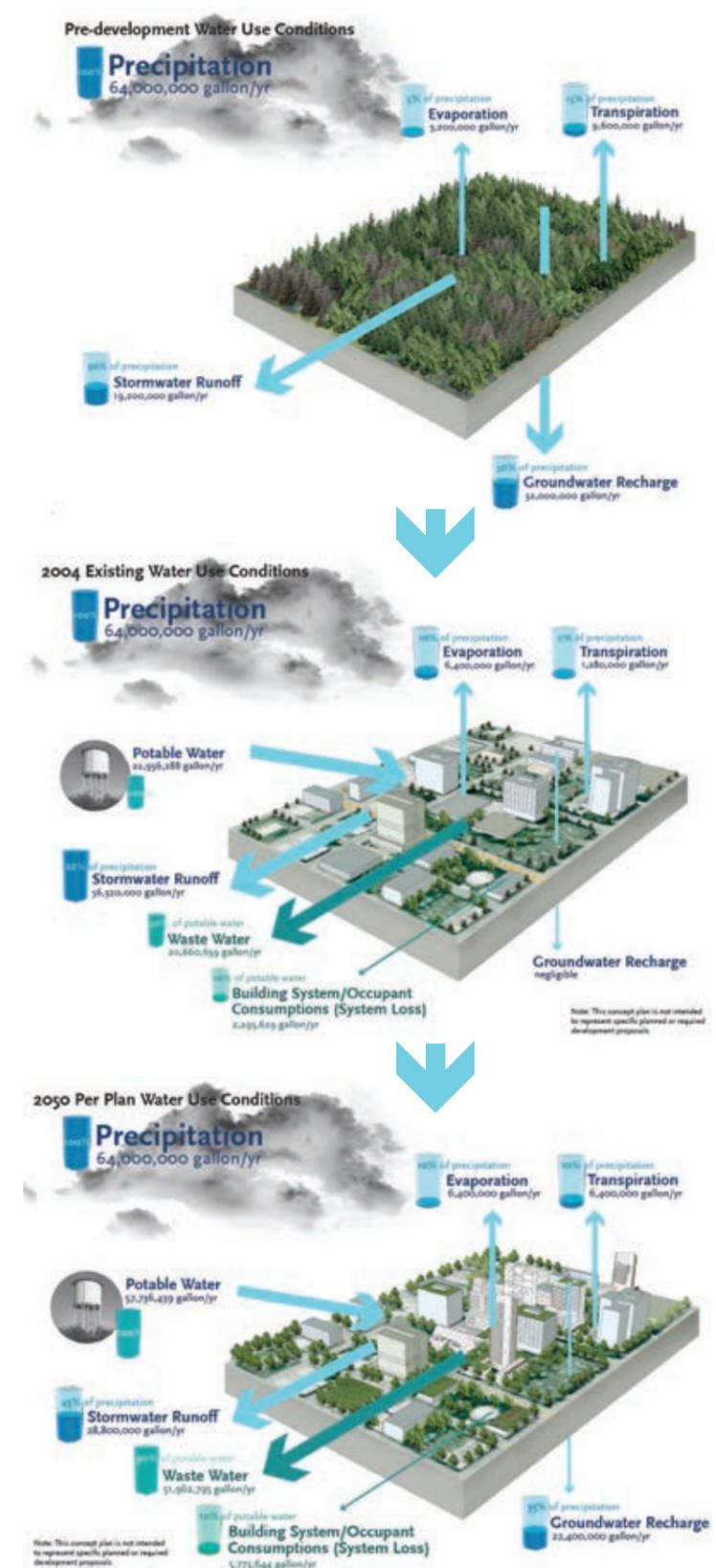
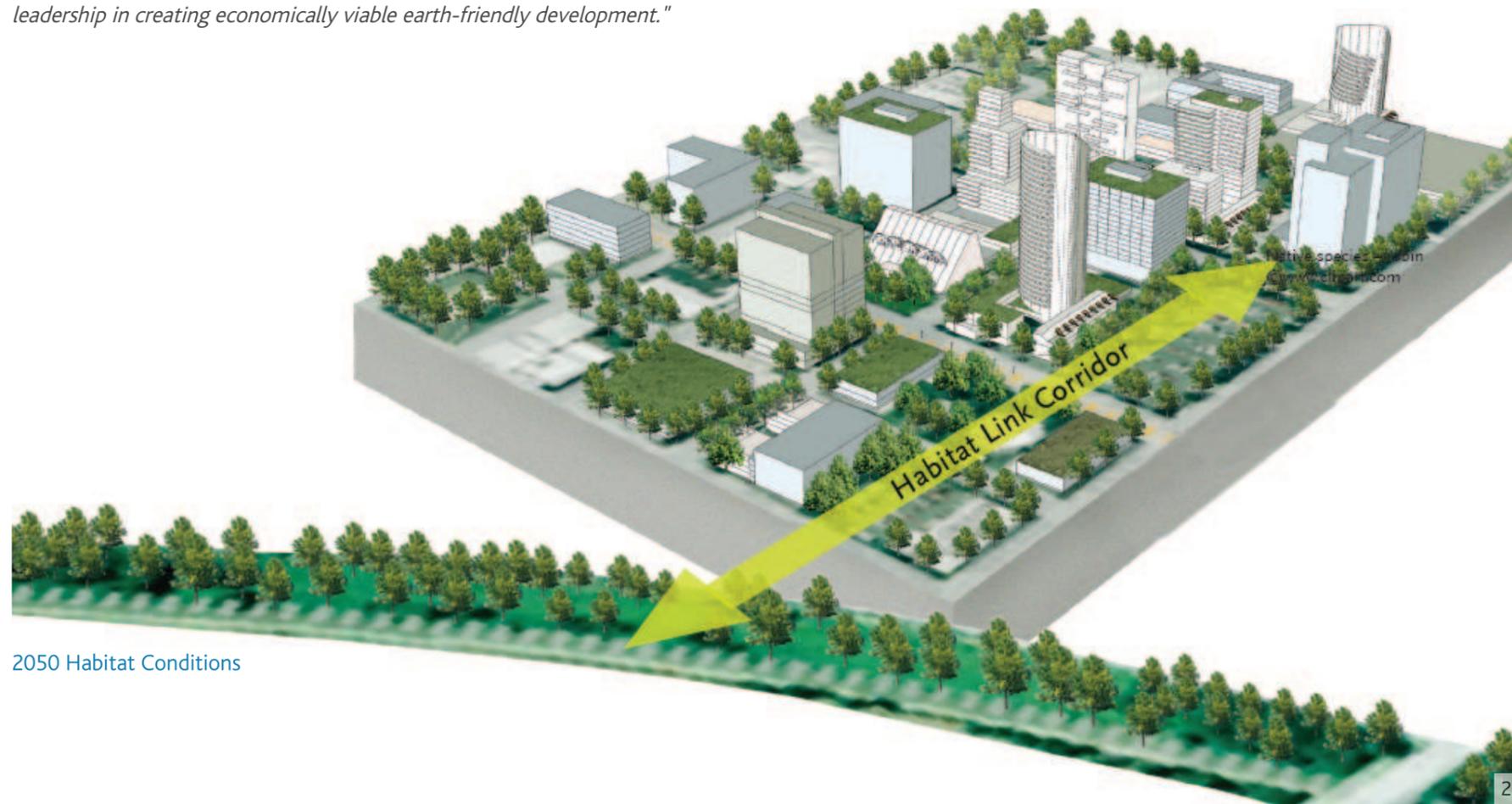
Co-conveners of the stakeholder group are the Mayor of Portland, Council President Metro and Multnomah County Commissioner. Forming the "Lloyd Green District," the group includes sponsors (Portland Development Commission, METRO, City of Portland and Lloyd TMA/ BID), invited property owners, employers and developers in the proposed district area and other local and state agencies and civic organizations.

Their goal is to:

*"create a premier sustainable multi-use development district within an urban center." The District "will become a lifestyle community of choice for residents, workers, and visitors, and a showcase demonstrating Portland's leadership in creating economically viable earth-friendly development."*

This will become one of the first redevelopments under Washington State's developing programme of Climate Benefit Districts - a programme which aims to:

- Support the creation of "green jobs".
- Support livable, diverse and affordable urban neighbourhoods.
- Reduce the impact of urban development on the environment
- Capture the innovations and life cycle cost savings for district level energy and infrastructure solutions.
- Rebuild and reinvest in communities in ways that reduce the demand for driving.
- Help public and private interests to work together in developing healthy, vibrant urban communities aimed at achieving carbon reduction goals.
- Send a clear policy signal to attract desirable private investment and coordinate public action from multiple levels of government.
- Give communities the means to meet major environmental and economic challenges while remaining responsive to local conditions and opportunities.



## B1.2 Portland Green Streets (USA)

Portland has been designing and building Green Streets for many years. Their consistent monitoring has proven that they successfully reduced peak stormwater flows and runoff volumes. The images to the right show a variety of Green Streets in Portland that have been successfully implemented.

Green Streets convert impervious street surfaces into green spaces that capture stormwater runoff and allow the water to permeate through the ground as plants and soil remove pollutants. Green Streets help to create attractive open spaces, streetscapes, provide ecological urban habitats, and help to connect neighbourhoods, open spaces, schools and other areas within the city.

The city of Portland is:

*"Committed to green development practices and sustainable stormwater management. Green Streets are an innovative, effective way to restore watershed health. They protect water quality in rivers and streams, manage stormwater from impervious surfaces, and can be more cost efficient than new sewer pipes. Green Streets offer many benefits that sewer pipes can't."*

Greenstreets offer the following benefits:

- Convert stormwater from a waste diverted into a pipe, to a resource that replenishes groundwater supplies
- 80%+ of storm water volume to be infiltrated on site.
- Add urban green space and wildlife habitat
- Reduce stormwater in the sewer system
- Save money on wastewater pumping and treatment costs
- Use plants and soil to slow, filter, cleanse, and infiltrate runoff.
- Design facilities that aesthetically enhance the neighbourhood livability and property values



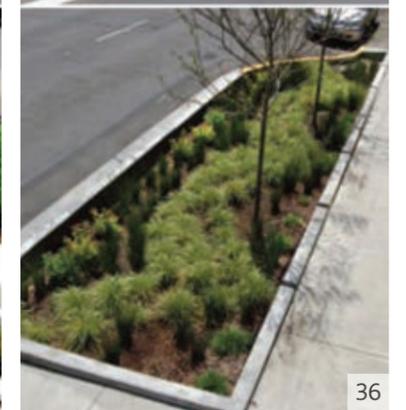
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### B1.3 Jellicoe Street, Auckland (NZ)

Jellicoe street features over 600m<sup>2</sup> of purpose built rain gardens. Rain from over 9000m<sup>2</sup> of the surrounding roads and surfaces flows into the rain gardens.

- integrate Best Practice Stormwater Design and the efficient use of water resources
- re-use existing structures and infrastructure where possible
- generate renewable energy on site
- preserve coastal water quality and protect waterfront ecologies
- protect air quality and reduce traffic congestion
- improve permeability and establish pedestrian priority and safety
- facilitate better access and circulation between transport modes
- enable visual connections through the precinct to the water
- promote pedestrian and cycle activity

This new initiative in a high-use area has proven to be a great way to educate visitors and residents about the merits of low traffic speed, shared space environments and 'green' infrastructure approaches.



## B1.4 Greenpark, Thames Valley (UK)

This new industrial development is an exemplary model of best-practice industrial/commercial development. It is acknowledged that retrofitting an existing industrial zone (such as that found in Maungakiekie-Tamaki) is a significantly more difficult task than greenfield development, but this case study shows a range of solutions which can be employed to improve conditions for workers, visitors and the environment. Solutions employed at Greenpark include:

### Landscaped parkland including:

- a network of cycleways
- nature trails
- paths running around the banks of the stormwater treatment wetlands

### Community life:

- frequent, comfortable buses to bring people into Green Park from Reading station or nearby town centres.
- well-maintained, well-lit walkways make it easy to get around the Park.
- cafés and restaurants
- health club
- a day nursery
- acres of natural parkland



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### Event hosting:

- Events throughout the year, attract workers and nearby residents alike, and these include a range of organised annual events and one off events, including the Reading half-marathon and the Corus Triathlon. Longwater Lake also hosts regular angling competitions.

### Green energy (wind and solar):

- The development generates 2.3 megawatts of clean energy, enough to power around 1200 homes.

### Green Park fast track:

- A fleet of low emission eco-friendly buses. These are among the first in the UK to meet the stringent 'Euro 4' European emission standards and produce significantly lower levels of carbon dioxide and nitrogen oxide than regular fleets.
- Buses include full wireless access and a real time information system for maximum passenger comfort and security.



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