



Figure 34. Pupuke Golf Course. Charlotte Grieve, 2016.

7.0 Case Studies

Hibiscus and Bays Greenways

A2. Overseas examples

Central Valley Greenway, Vancouver (Canada)

The Central Valley Greenway (CVG) is a direct, scenic network of walking and cycling connections, totalling 24km. It is a very pleasant commute connecting Vancouver, Burnaby, and downtown New Westminster:

The CVG is *"a scenic, direct, comfortable and relatively flat route for people of all ages to cycle and walk around their neighbourhoods, commute to important destinations, and connect to transit"*.

The City of Vancouver takes pride in the CVG, in that it is more than just a transport route, delivering citizens efficiently around the city.

"The Greenway is more than just a path from A to B; it's a destination in its own right. Whether you're going to work, shopping, or just out for a ride, it is a chance to enjoy some of Metro Vancouver's most beautiful urban and natural spaces".

Similar to the Hibiscus and Bays area, the greenways of Central Valley traverse through a range of landscapes and topography, including open spaces with hills, valleys and incised streams, residential neighbourhoods and shopping areas.



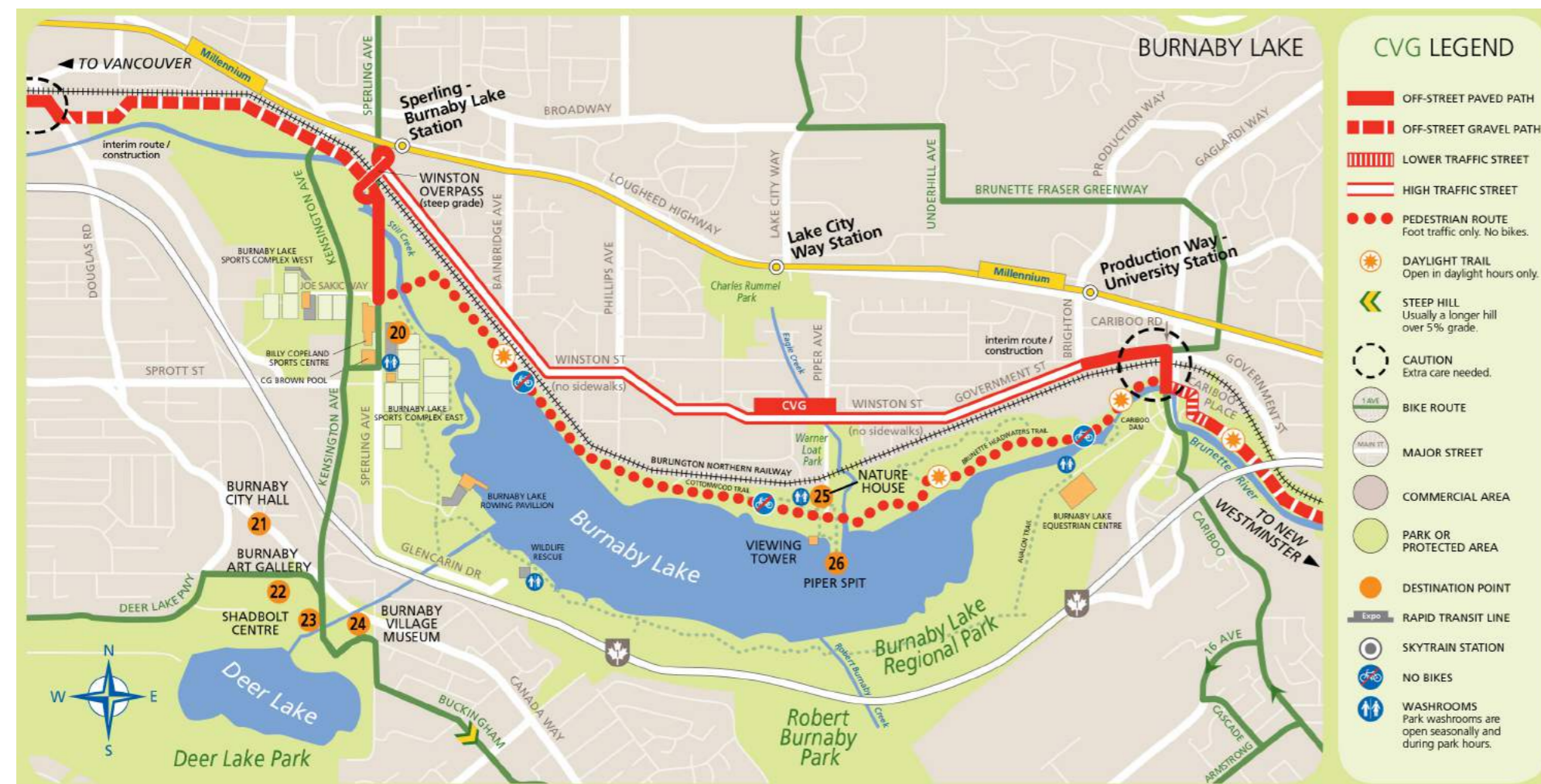
OFF-STREET PAVED PATH
multi-use, running through natural areas or beside a road, railway or water.

OFF-STREET GRAVEL PATH
multi-use, running through natural areas. Accessibility is limited.

LOWER TRAFFIC STREET
where bikes share the road with vehicles. Pedestrians use the sidewalk.

HIGH TRAFFIC STREET
with a painted bike lane for cyclists. Pedestrians use the sidewalk.

The CVG has classifications for the type of greenway connection, which advise the pedestrian or cyclist of the environment they can expect, including likely users, path type, expected traffic and amenity.



CVG LEGEND

- OFF-STREET PAVED PATH
- OFF-STREET GRAVEL PATH
- LOWER TRAFFIC STREET
- HIGH TRAFFIC STREET
- PEDESTRIAN ROUTE
Foot traffic only. No bikes.
- DAYLIGHT TRAIL
Open in daylight hours only.
- STEEP HILL
Usually a longer hill over 5% grade.
- CAUTION
Extra care needed.
- BIKE ROUTE
- MAJOR STREET
- COMMERCIAL AREA
- PARK OR PROTECTED AREA
- DESTINATION POINT
- RAPID TRANSIT LINE
- SKYTRAIN STATION
- NO BIKES
- WASHROOMS
Park washrooms are open seasonally and during park hours.



FIGURE LEGEND:

Figure 35. CVG legend - route typologies

Figure 36. Wayfinding - street signs

Figure 37. Wayfinding - route signage

Figure 38. Burnaby Lake area showing CVG.



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 habitat 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.

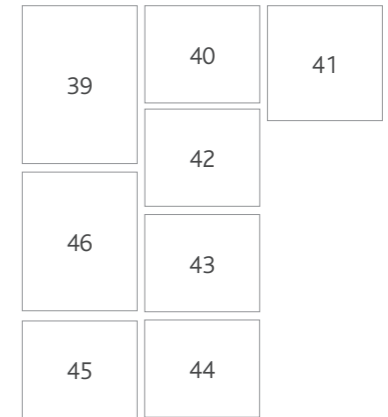


FIGURE LEGEND:

- Figure 39. Stormwater runoff treatment, Portland.
- Figure 40. Planted swales, Portland.
- Figure 41. 'Green Streets' Portland.
- Figure 42. Stormwater runoff treatment, Portland.
- Figure 43. Planted verges, swales, Portland.
- Figure 44. Greenway junction
- Figure 45. 'Green Streets' Portland.
- Figure 46. Permeable paving setout, Portland.

The above images are sourced from: Environmental Services. City of Portland. Green Streets in Portland. Retrieved from URL: <http://www.portlandonline.com/bes/index.cfm?a=209685&c=45379>

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.

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.



47

48

FIGURE LEGEND:

Figure 47. Green Park, Reading

Figure 48. Green Park, Reading.

Retrieved from URL:

http://www.greenpark.co.uk/pdf/pdf/GP_OVERVIEW_BROCHURE.pdf

Jellicoe Street, Auckland (NZ)

Jellicoe street features over 600m2 of purpose-built rain gardens. Rain from over 9000m2 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.



	49
	50
52	51

FIGURE LEGEND:

Figure 49. Waterfront Auckland. (Artists Impression) Auckland.

Figure 50. Waterfront Auckland. (Artist Impression) Auckland.

Figure 51. Tram in shared space streetscape. (Artist Impression) Auckland.

Figure 52. Waterfront Auckland. (Artist Impression) Auckland.

