

Appendix E

Engagement Summary

Throughout the process of developing the Rain City Strategy, residents, businesses, and industry professionals provided insights through a variety of engagement opportunities, including open houses, workshops, surveys, educational events, and expert panel meetings. The following appendix outlines these engagement events and what we learned through the engagement process.

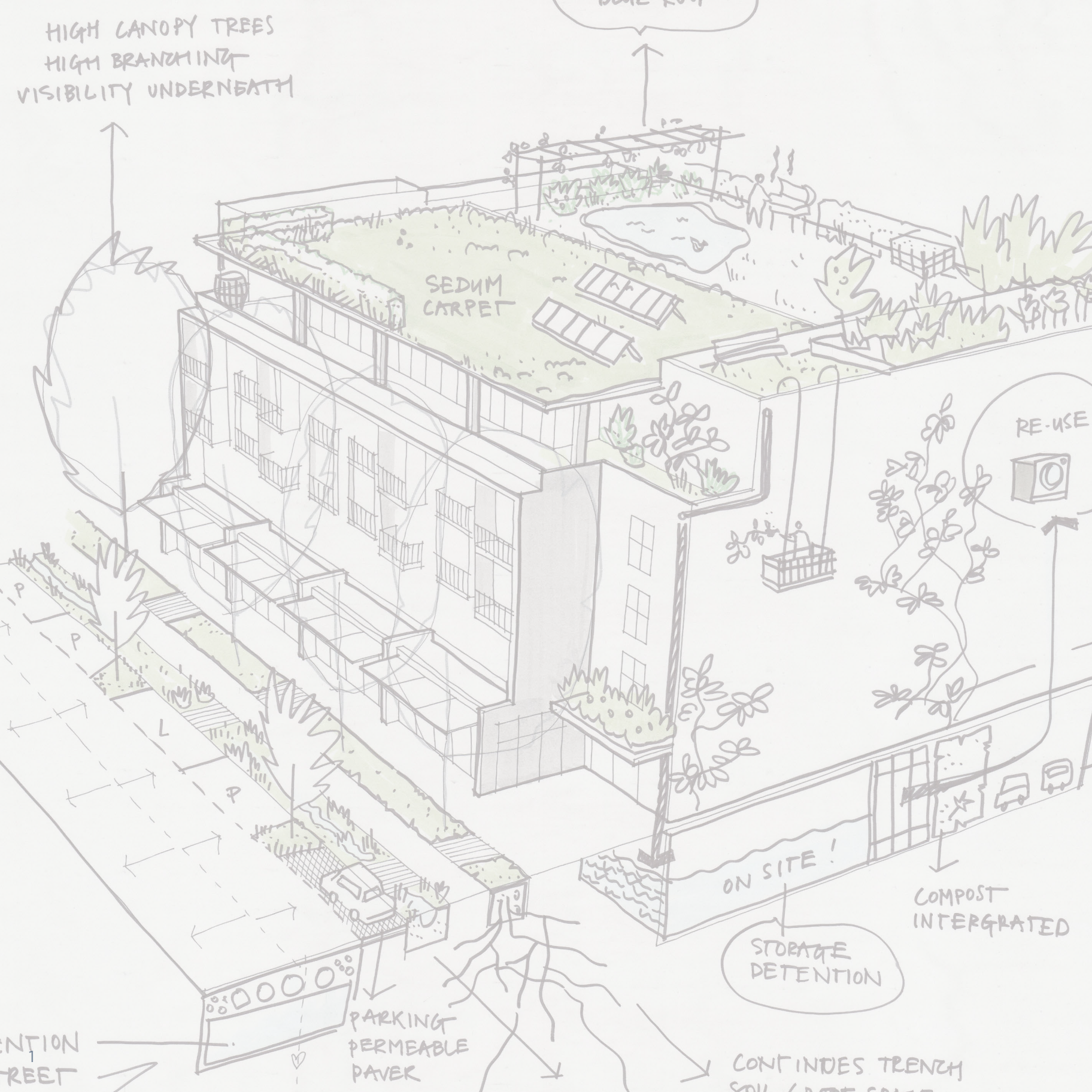
RAIN CITY STRATEGY

Engagement Summary Report

2017 - 2019



HIGH CANOPY TREES
HIGH BRANCHING
VISIBILITY UNDERNEATH



SEDUM
CARPET

RE-USE

ON SITE!

COMPOST
INTEGRATED

STORAGE
DETENTION

PARKING
PERMEABLE
PAVER

CONTINUES TRENCH
SOIL / ROOT CANAL

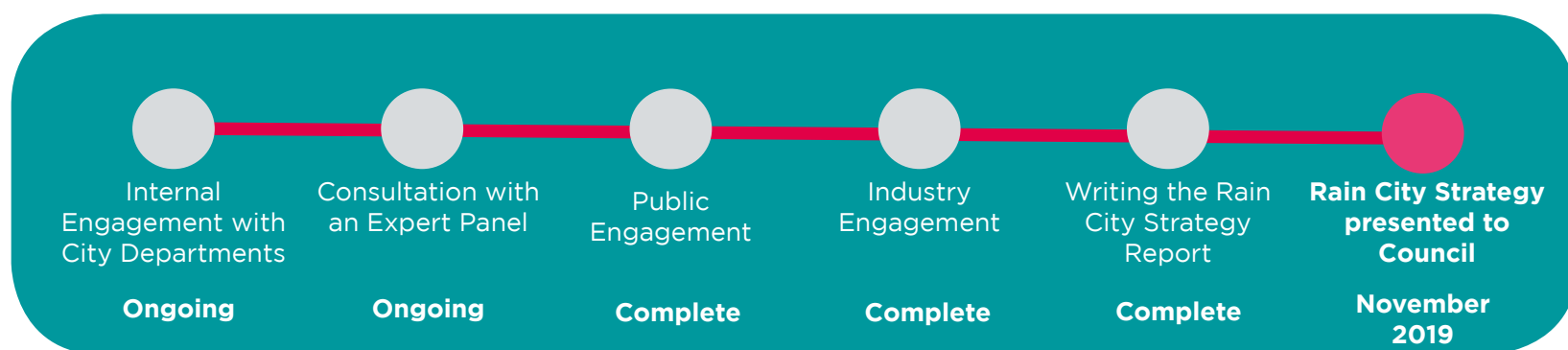
ENTION
REET

EXTERNAL ENGAGEMENT

The Rain City Strategy is a high-level strategic plan, which could lead to changes in policy or regulations around the management of rainwater on private and public property, to improve water quality, increase resilience, and enhance the livability of our natural and urban ecosystems. Throughout the process of developing the Rain City Strategy, the City of Vancouver invited residents, businesses, and industry professionals to participate and provide insights through a variety of engagement opportunities, including open houses, workshops, surveys, educational events, and expert panel meetings.

The goal of the public and industry engagement for the Rain City Strategy is to inform the public on the potential of green infrastructure, and to collect input on particular goals, opportunities or barriers that should be addressed by implementation plans and programs.

Engagement Process



Promotion



Photo: Robert Pennings

Public and industry engagement workshops and surveys were promoted through the Rain City Strategy mailing list, the City of Vancouver website, the Greenest City newsletter, and through the newsletters and event calendars of professional associations for the various sectors of the development industry. Staff gave presentations to several key groups such as the Urban Development Institute and the Greater Vancouver Homebuilders Association to inform them on the project and invite their members to attend the workshops. The community open house and workshop was additionally promoted through environmental not-for-profit mailing lists, social media, business improvement associations, and posters in community centres, libraries, and plant nurseries. The events were further promoted through word of mouth by members of our expert panel and staff.

EVENTS WE HELD...

Community Open House and Workshop

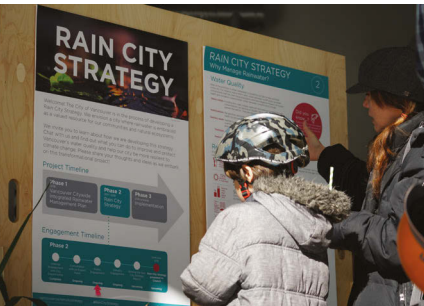


Photo: Robert Pennings

Saturday, March 3, 2018

Large-Site Developments Industry Workshop



Photo: Alexandra Couillard

Tuesday, March 6, 2018

Small-Site Developments Industry Workshop



Photo: Alexandra Couillard

Tuesday, March 6, 2018

Three workshops and an open house in March 2018 made up the bulk of the public and industry engagement for the Rain City Strategy. The workshops explored how green infrastructure could be applied to a variety of building typologies and discussed possible opportunities and barriers for implementation. The open house provided opportunities for the public to learn more about green rainwater infrastructure (GRI) and the Rain City Strategy. A promotional video introduced the project, and information boards went into greater detail with staff on hand to answer questions. Sample green roofs, permeable pavers, and reading materials were set up in a small lounge area decorated with plants allowing visitors opportunities for further exploration.

1,250
people attended
our **Open House**

55 industry professionals
and
19 community members
participated in
a **workshop**

Industry Sectors Represented

- | | |
|------------------------|--------------------|
| Architecture | Engineering |
| Planning | Project Management |
| Landscape Architecture | Development |
| Horticulture | Student |
| Construction | Other |
| Research | |



Public Talks and Conferences

Through 2018 and 2019, other opportunities for engagement and education offered include walking tours of the Olympic Village GRI features, lectures at conferences, pop-up events in collaboration with groups such as the Museum of Vancouver and the Places for People public space initiative, and partnerships with university classes, including Urban Forestry, Civil Engineering, Planning, Marketing, and Landscape Architecture.

Presented at
17 speaking
engagements



Participated in
28
public events



12 partnerships
with universities



Surveys

To widen the reach of the Rain City Strategy engagement, two surveys were administered in April 2018, one for industry professionals, and one for members of the general public. The goal of the surveys was to determine levels of familiarity with green rainwater infrastructure, and to understand the priorities of the public when it comes to sustainable rainwater management.

 **1,419**
Responses
to surveys



Photo: Places for People

WHAT WE HEARD...

Overall, there was broad support for the concept of green rainwater infrastructure as a rainwater management tool. Through discussion, several key ideas emerged around how to execute it well.

Key Ideas

Environmental Benefits

Of the co-benefits associated with GRI, community members responding to our survey identified protecting **water quality** along our shoreline, and providing **habitat** for wildlife as the two most important.

To that end, **greenery** used in GRI needs to be carefully selected. Each species of plant has particular capacity for filtering water and providing habitat, and particular needs in terms of **soil** depth and quality, **moisture**, and **sun** exposure. It is important to select plants that will survive well and create **resilient habitat**, while also providing the water retention and filtering **functionality** essential to GRI.

Through the many plants and green spaces that are added to an area when we build GRI, more habitat is provided for all sorts of wildlife, enhancing biodiversity. A greater variety or biodiversity of plants in the city will also help our green spaces adapt and survive in the context of climate change.

Economics

Costs were a major concern in workshops and surveys, with industry professionals worried about increases to building costs, and residents worried those costs would be passed on to them, making housing even less affordable.

Stewardship and maintenance of GRI tools were also identified as an essential consideration including who bears responsibility and who pays for it. However, participants also discussed how GRI can be positive for the economy. **Green jobs** in a wide variety of fields, from engineering, construction, design, and landscaping to tourism and environmental education could develop from an increase in the demand for GRI. Support to training programs and professional development opportunities could lead to a strong water management industry in Vancouver.

Education

The most common reasons industry professionals who responded to our survey hadn't built GRI on their projects were that **clients hadn't asked for it**, it wasn't required, and it **hadn't occurred to them**.

Workshop participants agreed that education about GRI is essential for its success. It's an **emerging field** and is new to many professionals, and unfamiliar to most residents. It is therefore especially important to **raise public awareness** about why rainwater management matters, the many benefits of using GRI tools, what those tools look like, and how people can get involved.

The myth of abundance of water in Vancouver is a barrier for conservation efforts, as residents often don't realize the high seasonal variation of our precipitation patterns. Industry education was also identified as important to ensure proper design, construction, and maintenance of GRI practices.

Suggested educational methods included signage identifying and explaining tools, workshops on how to build and maintain them, and **design and building guides** for industry professionals.

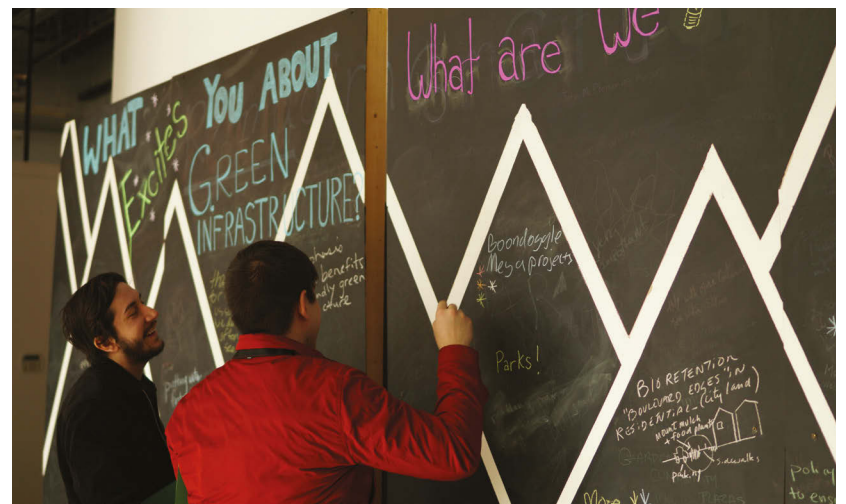


Photo: Robert Pennings



Photo: Alexandra Couillard

Connectivity and Integrated Water Management

Connectivity was a major theme in all discussions. To work with rainwater, a **systems-thinking approach** is needed, as water will flow from one place to another with no regard for property lines or what would be convenient. Each practice should be designed to work within the context of the rest of the property, neighbouring buildings, local streets, and the entire watershed.

From the top of a building to the bottom and beyond, there should be connectivity between GRI practices, allowing water to **overflow in a controlled way** from one practice to the next and ultimately out into the grey pipe system.

GRI requires many different professionals to work together to design and manage functional systems. To this end, connections should be fostered between sectors, **integrating the expertise** of all the professionals involved in a development project, early on in the design process.

Delivery Models and Mechanisms

Participants in both industry workshops and the survey discussed how the City can motivate the use of GRI. There was **no real consensus** on whether motivation through positive incentives or regulatory requirements was a better strategy.

In our survey, a major reason listed for why practitioners did not build GRI was that it was not required. However, regulations can also sometimes be a barrier to innovative new practices, and some industry professionals are concerned about potential over-regulation or requirements they will be unable to meet.

Suggestions for delivery models and mechanisms included exemptions from height restrictions for green roofs, incentive programs for retrofitting existing

buildings, point systems, regulations and fines for non-compliance, and models to share operational costs between developers, owners, residents or possible third parties.

Efficient and Multi-Functional Use of Space

The many **co-benefits** that come from GRI are a reminder that urban spaces can serve **more than one function** for society. Green space added to neighbourhoods for GRI should provide **usable public space**, that serves many functions for residents and visitors. Beyond rainwater management, GRI can provide park space, enhance livability through access to nature, improve water quality, and increase disaster resilience.

Resiliency is the capacity to recover from difficulty or disaster. For the City of Vancouver, building the ability to recover from the impacts of climate change and disasters like earthquakes is very important. GRI tools can help provide water in post-disaster scenarios through rainwater harvest and reuse and can mitigate climate change impacts such as flooding and drought, thus boosting the resilience of the city.

Every space on a property can be designed to serve a GRI and livability function, including all horizontal, vertical, and underground space.



Photo: Robert Pennings

VISIONS YOU SHARED...

Workshop participants were asked to imagine what Vancouver could look like if all rainwater is managed where it falls. These images show some of the ideas shared on four different building typologies that are common in Vancouver.

Single-family with Laneway House



Illustration: Sam Khany

Townhouses

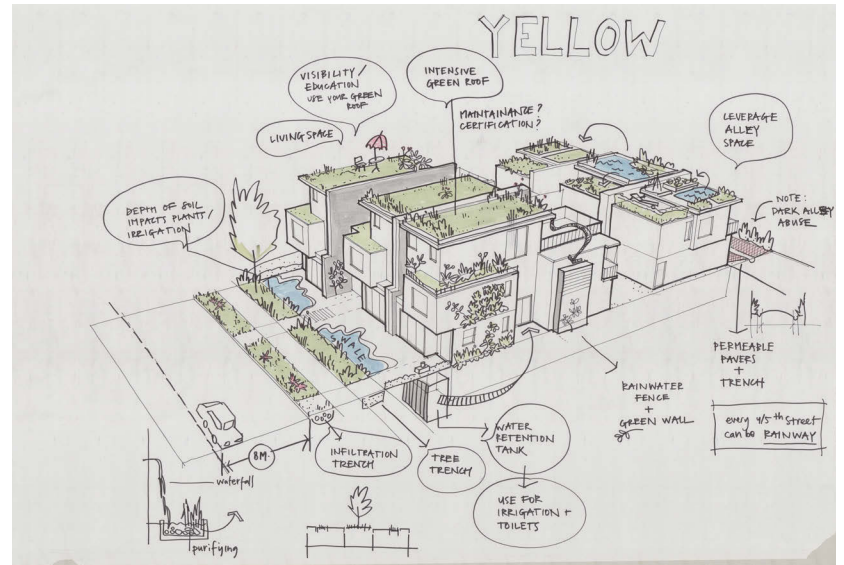


Illustration: Manon Garritsen

Townhouses



Illustration: Olusha Susan Milley

Townhouses

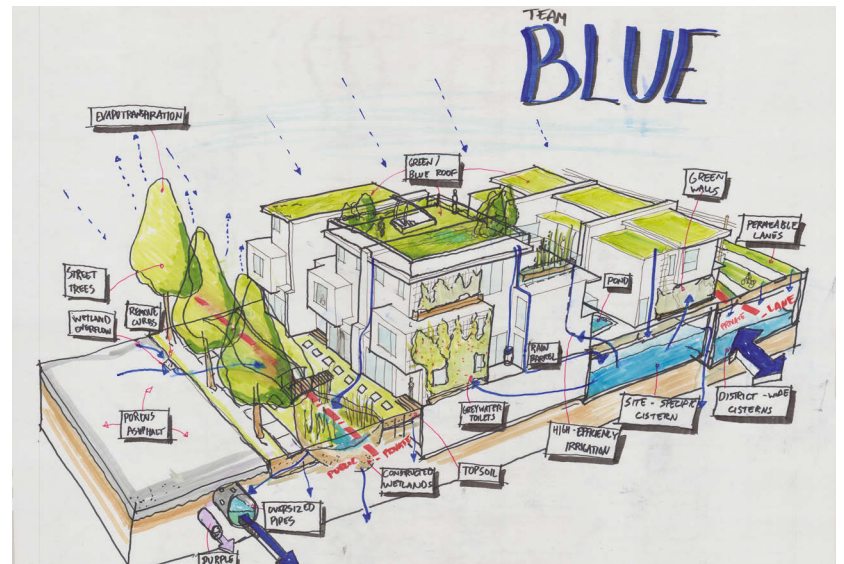


Illustration: Gavin Schaefer

LANDSCAPE ARCHITECTS
EARLY IN PROCESS

HIGH CANOPY TREES
HIGH BRANCHED -
VISIBILITY UNDERPATH

SEDUM
CARPET

OPENED
COMMUNITY
HIGH MAINTENANCE

VEGETIC/
GREEN
WALL

PARKING
MAX.

RE-USE

ON SITE

STORAGE
DETENTION

COMPOST
INTEGRATED

SMART
BIG RETENTION
UNDER STREET

CITY AS SYSTEM

PARKING
PERMEABLE
PAVEMENT

CENTER
LINE

WATER
BUFFER
TREE TRENCH

[illegible][illegible]

3

ADVICE FROM THE EXPERTS...

The Rain City Strategy Expert Panel is made up of experts from a variety of fields, including academics and researchers; industry professionals in engineering, landscape architecture and ecology; and directors and staff of environmental not-for-profit associations. Their advice and knowledge is being collected on an ongoing basis. To date, five panel meetings have been held providing guidance in the following areas.

Sharing Resources is an important function of the expert panel, keeping the green infrastructure team up to date on the most recent research, innovations, and new practices.

Key players identified by the expert panel formed a starting point from which to build a list of organizations and interested parties to reach out to as a part of the engagement and consultation events.

Giving feedback on the transformative directions, action plans, and structure of the report has been an essential contribution of the expert panel. Their input has helped further develop, clarify, and explore the inter-relationship of the proposed programs and sample actions of the Rain City Strategy.



Photo: Alexandra Couillard

Priorities for green infrastructure programs as identified by the experts, have been important in understanding the relative importance of the many potential actions and programs identified through internal and external engagement processes.

Discussion of green infrastructure tools and the land use types where they would be most appropriate provided an overview against which to calibrate later suggestions from community and industry stakeholder groups.

Public awareness and education was emphasized as a key strategy for successful implementation, as water management and infrastructure problems tend to be fairly unseen by the public.

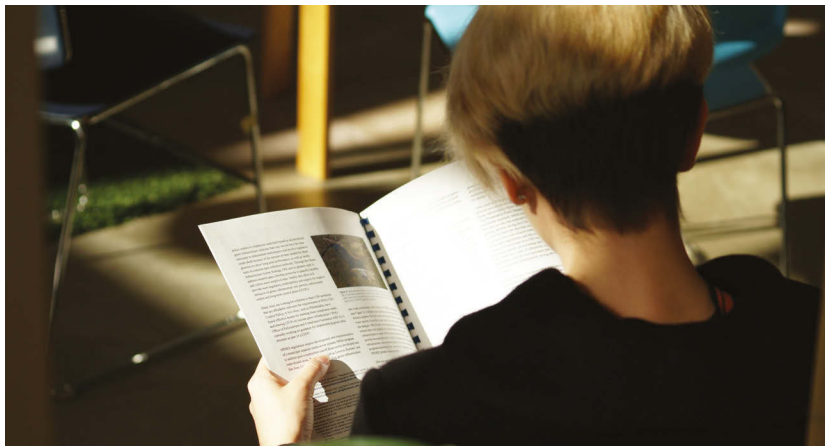


Photo: Robert Pennings



Photo: Yette Gram



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Rob Larson
Sarah Gergel
Ted van der Gulik
Vicky Marlatt

Workshop Illustrators:

Gavin Schaefer
Manon Garritsen
Olusha Susan Milley
Sam Khany

Photographers:

Alexandra Couillard
Robert Pennings

Bruce McDonald at Sunset Nursery

Rain City Strategy

resilient by nature

vancouver.ca/raincitystrategy
rainwater@vancouver.ca
[#raincitystrategy](https://twitter.com/raincitystrategy)

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Inside Back Cover Illustration: Olusha Susan Milley

