# Making the case for more green infrastructure
## Planning tools for practitioners

Camille Lefrançois

Diamond Head Consulting

DIAMOND HEAD

# Green infrastructure

# The urban forest



- Role of trees, vegetation & soil
- Opportunity to grow the urban forest
- Climate change adaptation

**DIAMOND HEAD**

# Planning for the space + conditions



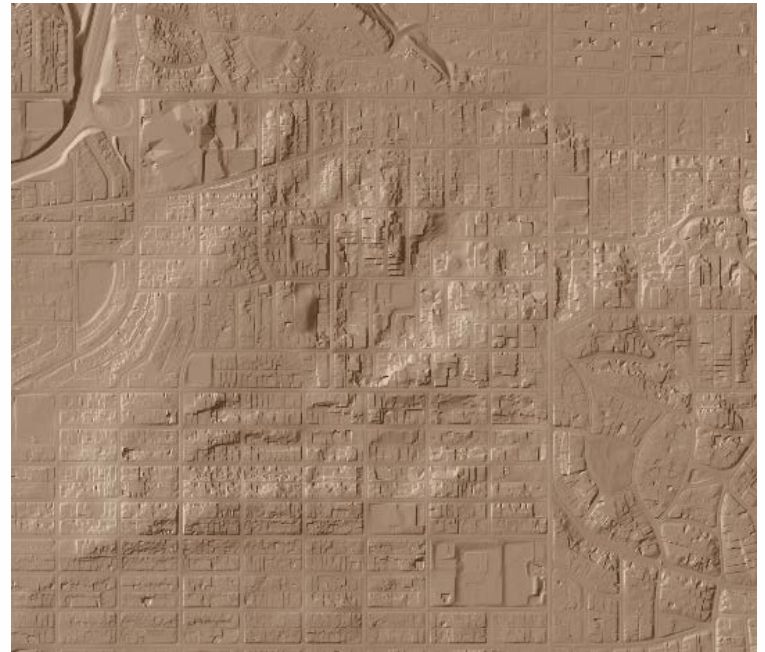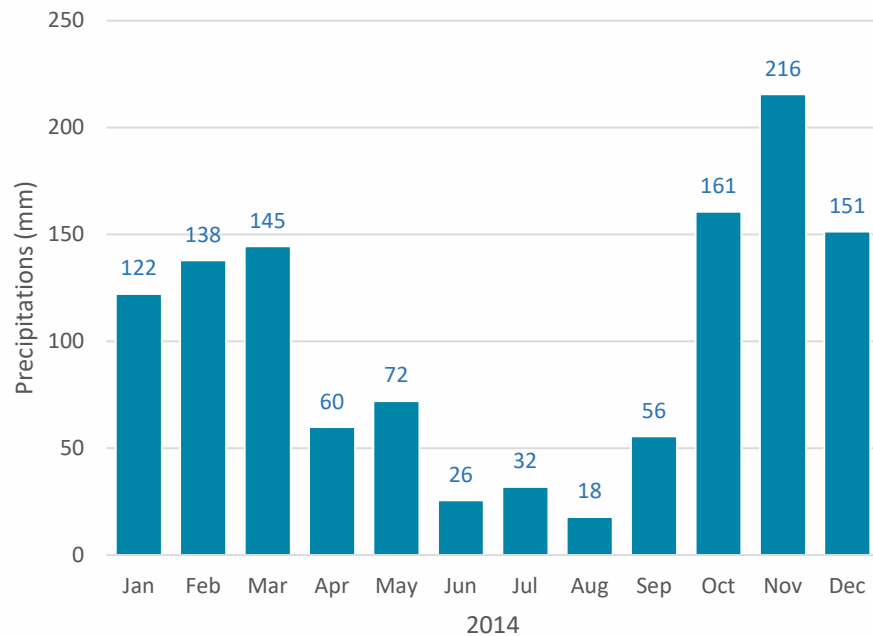Credit: City of Vancouver

Credit: Payton Chung

DIAMOND HEAD

# Today

- Tools to showcase the importance of green infrastructure & target setting
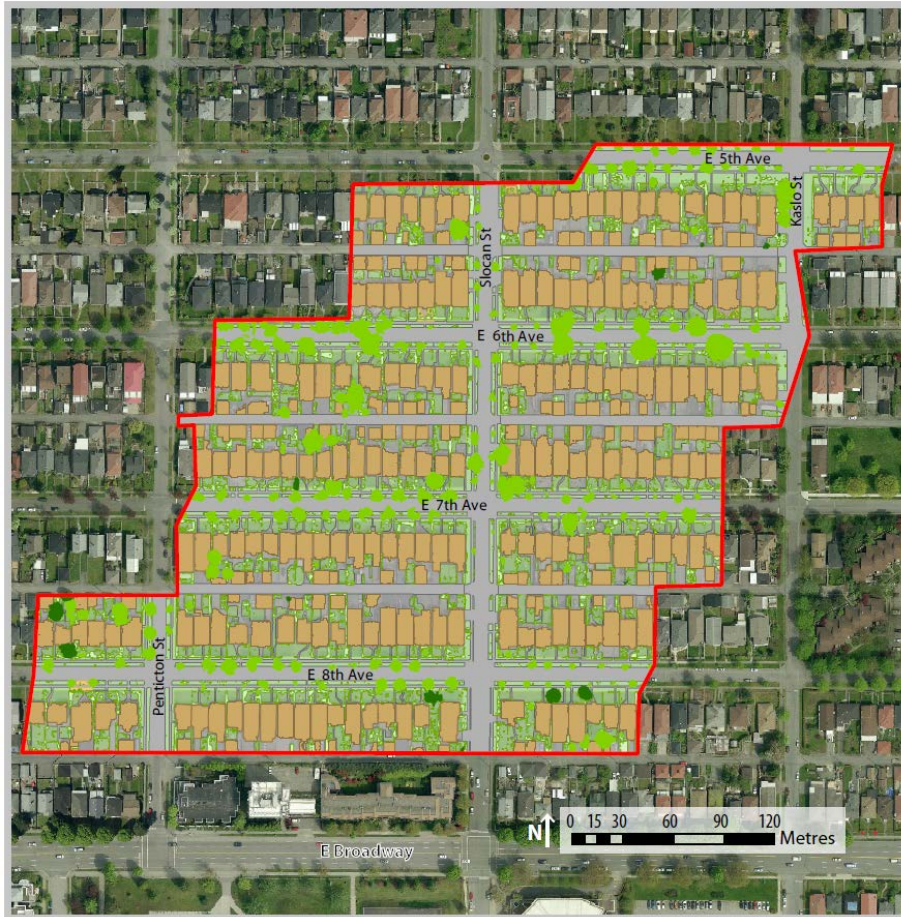  - Neighbourhood densification
  - Neighbourhood redevelopment



i-Tree Hydro

DIAMOND HEAD

# Local conditions

## Climate    +    Topography





DIAMOND HEAD

# Neighbourhood densification



**Pre-development scenarios**
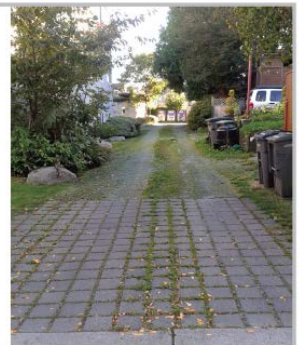
- Forested
- Cleared

**Business-as-usual scenarios**

- Current
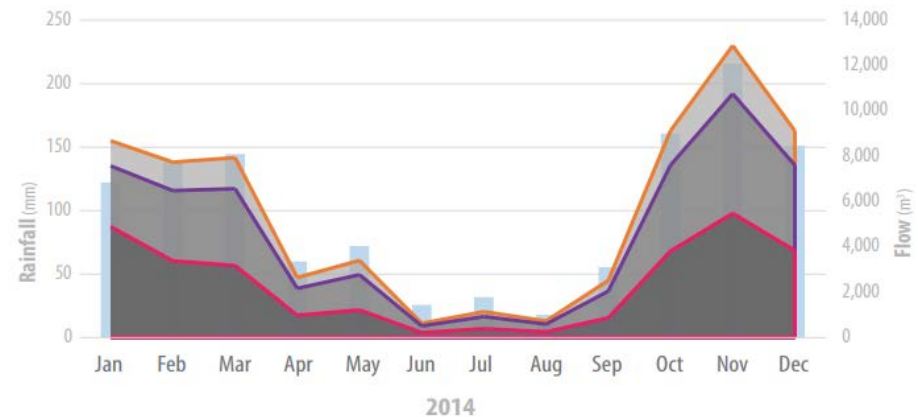- Infill development
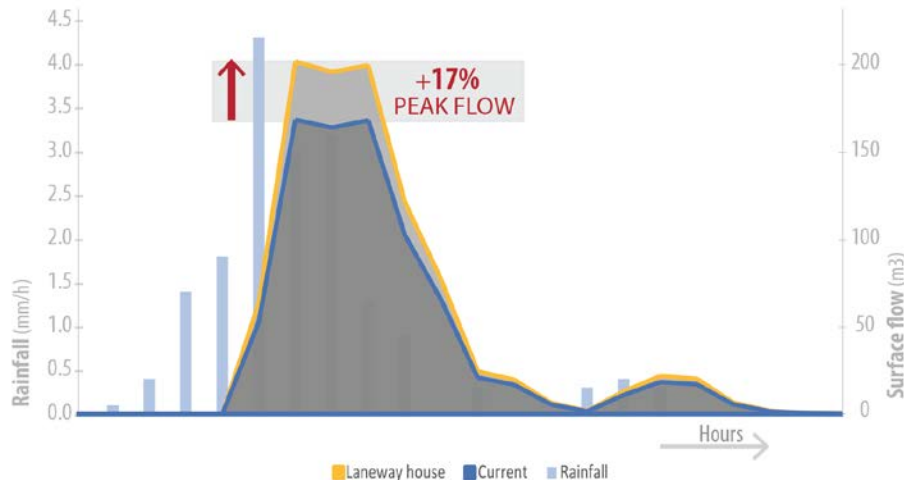- Mature trees

**Green Infrastructure scenarios**

- Country lanes
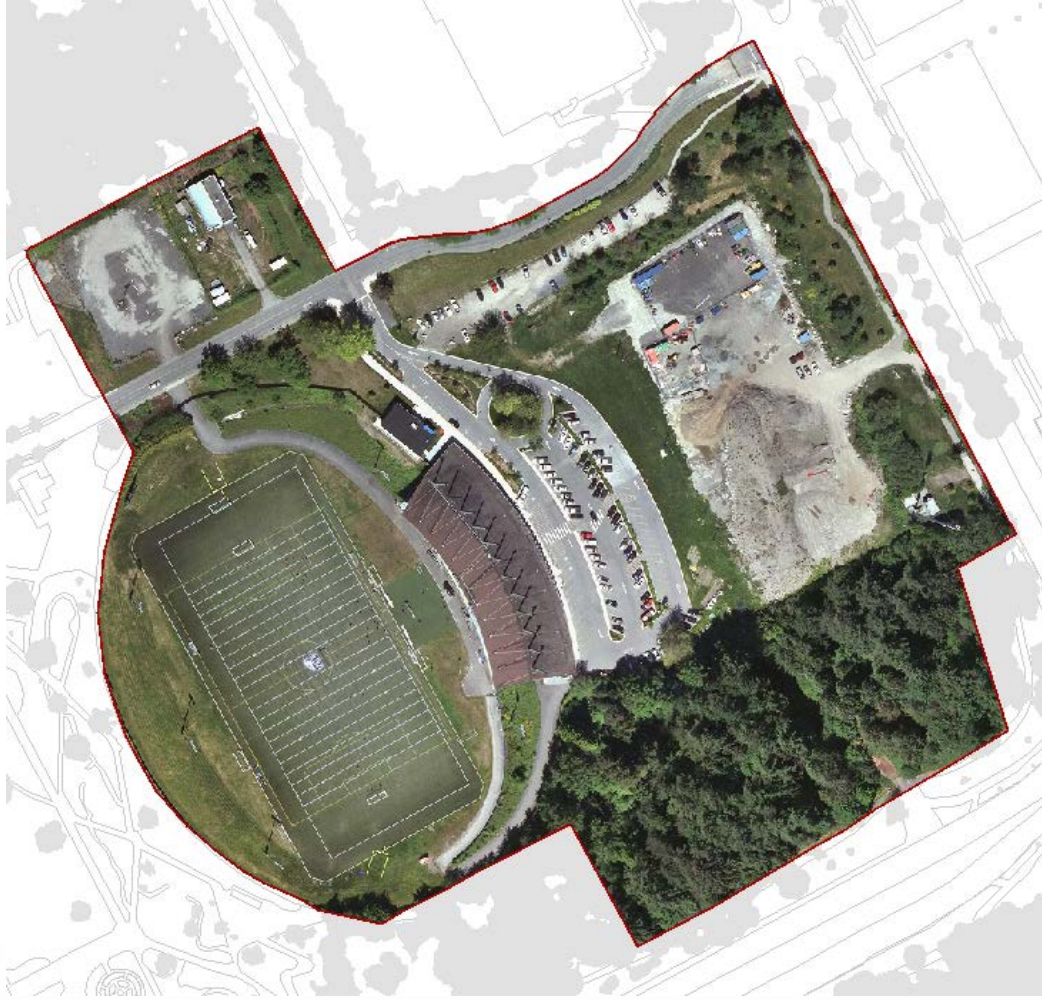- Downspout disconnections

DIAMOND HEAD

# Neighbourhood densification

- Evaluating the impact of densification & local green infrastructure policies

# Stadium Road Neighbourhood



**Stormwater runoff:**
Can UBC achieve a net zero target?

DIAMOND HEAD

# Stadium Road Neighbourhood
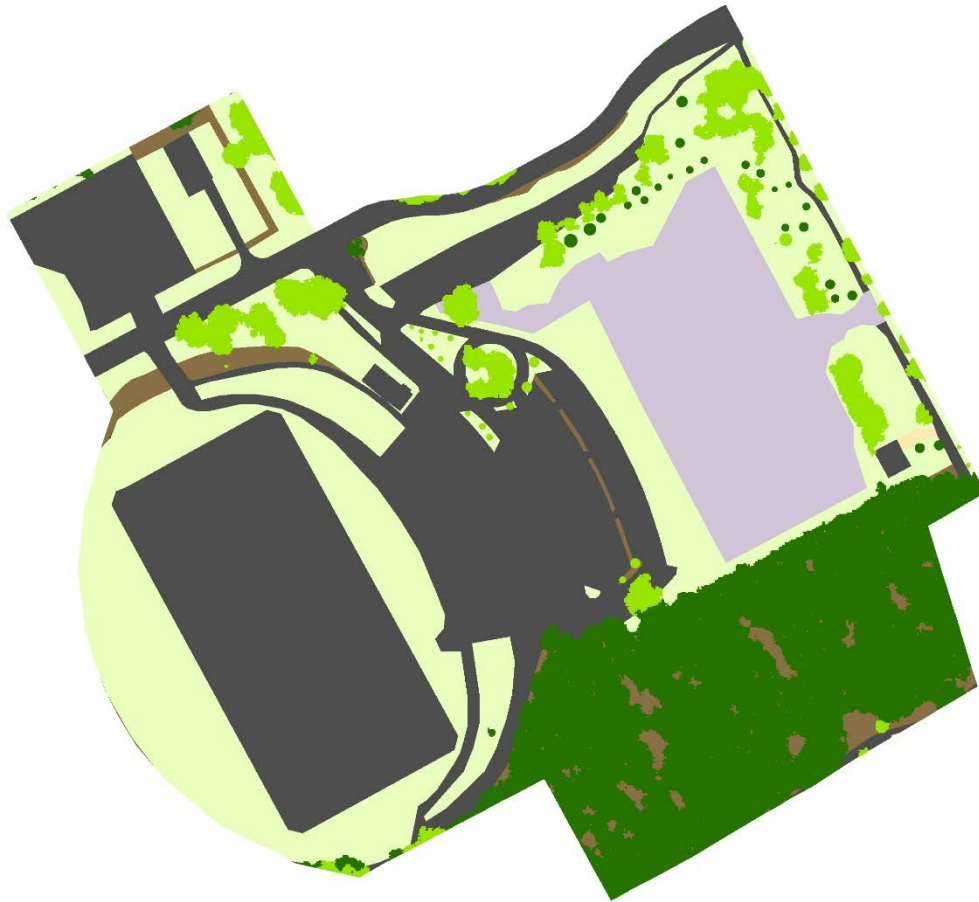


**Stormwater runoff:**
Can UBC achieve a net zero target?

Surface

- Canopy
- Canopy
- Herbaceous
- Impervious - Directly Connected
- Impervious - Disconnected
- Shrubs
- Bare soil

DIAMOND HEAD

# Green infrastructure in the future neighbourhood

- How much relative impact do different types of green infrastructure have on neighbourhood stormwater runoff?
  - Cisterns
  - Rain gardens
  - Green roofs



DIAMOND HEAD

# Next steps: the right mix


Credit: Hewitt


Credit: UBC


Credit: Kevin Robert Perry/ASLA

DIAMOND HEAD

# Other tools



the partnership
for water sustainability in bc



GRAY 2 GREEN (G2G)

A decision support tool for transitioning to vegetation-based stormwater management

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

USF UNIVERSITY OF SOUTH FLORIDA

UF UNIVERSITY of FLORIDA

Thomas L. Singleton Consulting, Inc.

DIAMOND HEAD

# In the world of urban forestry

- Opportunity to bring forward the importance of green space early in the process

- Incorporating the multiple values associated with the options