

# Built Environment: a multisectoral health issue

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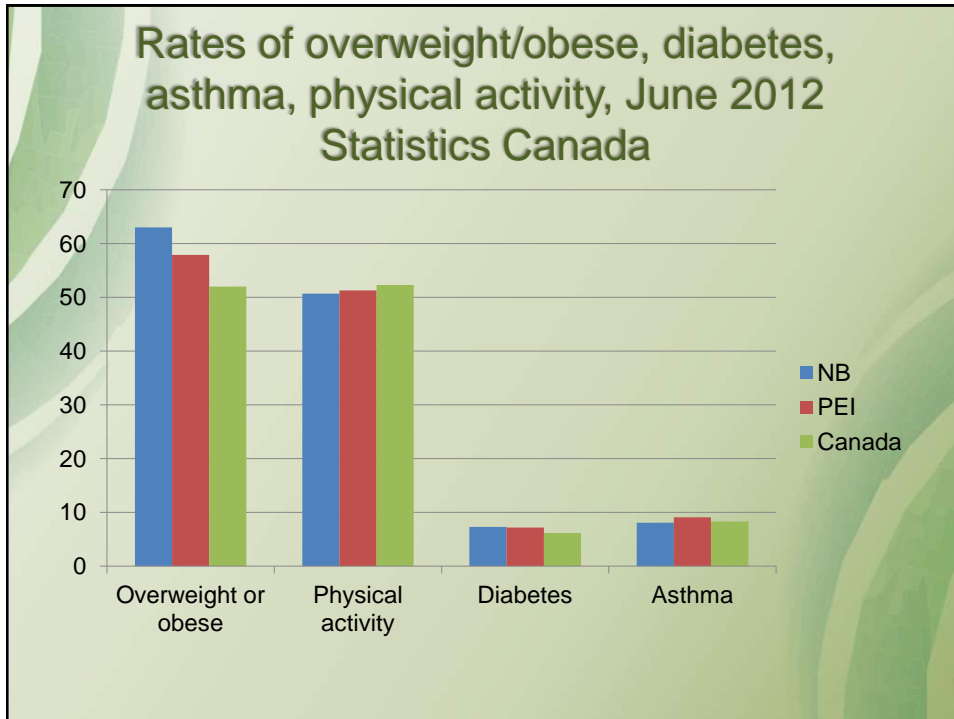
## Outline

1. NB Wellness Strategy 2009-2013; PEI
2. What is *the built environment* and why should public health professionals care about it?
3. Health effects of *the built environment*
4. Look beyond change in individual behaviour
5. Why public health professionals should collaborate with planners and others

## New Brunswick's Wellness Strategy – Live Well Be Well 2009-2013

- Emotional
- Mental/Intellectual
- Physical
- Social
- Spiritual
- Occupational
- Environmental





### Other NB statistics (Ref: NB Wellness Strategy, 2012)

- 34% of 2-17 year olds are overweight or obese vs. 26% in Canada
- Only 21% of Atlantic children (4-18 years) eat recommended servings of fruits and vegetables vs. 38% nationally
- Most in NB not active enough to reap health benefits
- Obesity costs the New Brunswick economy an estimated \$200M a year or 1.4% of GDP (2001)

## Other PEI statistics

(PEI CPHO report, 2012)

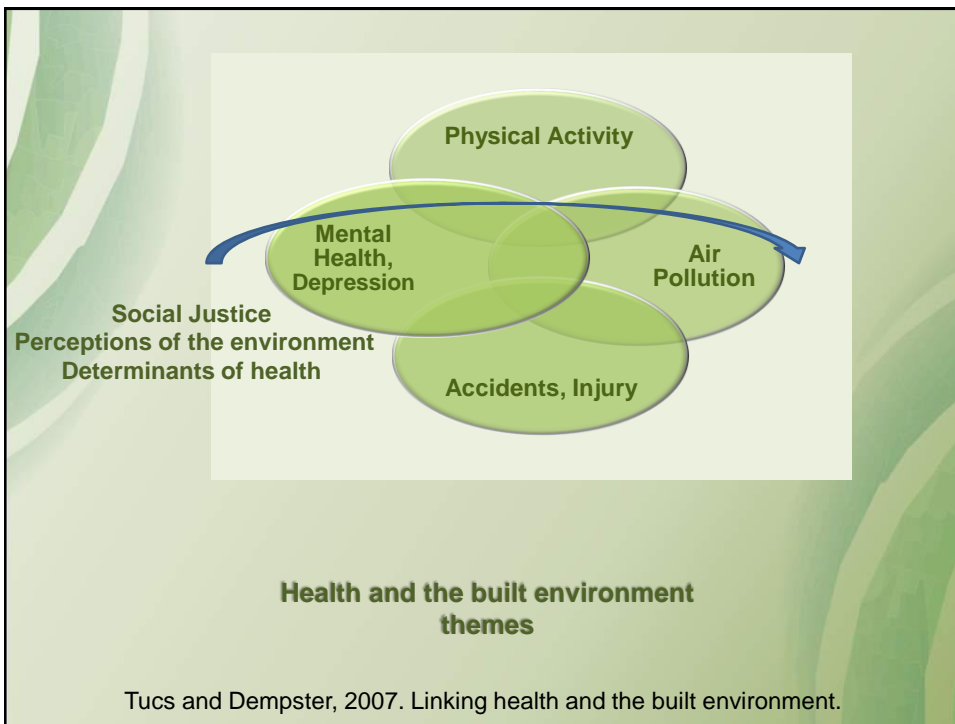
- By 2020, 1 in 5 people will be >65 years
- Cancer, heart disease, stroke leading causes of death
- Islanders less likely to consume 5 servings of fruits and vegetables than Canadians
- 1 in 5 diagnosed with hypertension
- 1 in 10 diagnosed with asthma



## Defining *the Built Environment*

- constructed places, features, and elements that together make our cities, villages, and towns
- varies from large-scale urban areas to rural development and personal space
- includes indoor and outdoor places

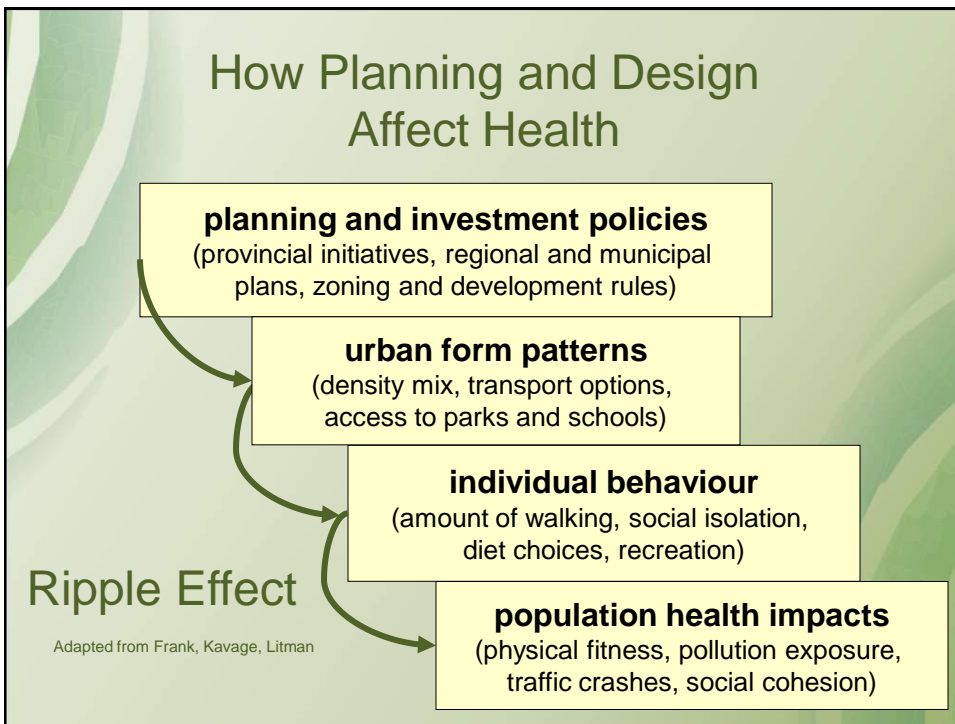
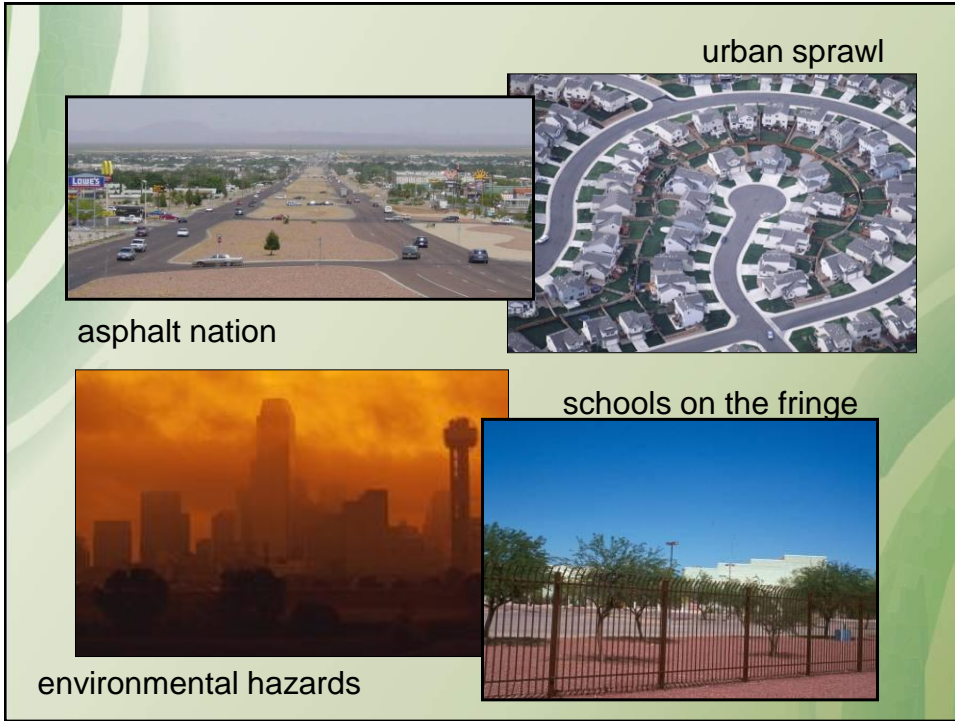






## Why do built structures matter to public health professionals?

- Chronic illness and injury are a risk to both public health and our universal health care system.
- Promoting healthy lifestyles is not enough. Effects of *the built environment* must also be addressed.
- Environmental health, planning, and design professionals share the responsibility to promote environments that enhance public health.



## Many Aspects of Planning and Design Affect Short and Long-term Health

- accessibility of buildings, programs, and services
- injuries from poorly maintained or poorly designed built elements
- mental health and social inclusion
- physical activity, transportation, and recreation
- indoor and outdoor air quality
- water quality
- food security
- noise



## Ensure Access and Inclusion to Improve Health

- loneliness and isolation are toxic
- social relationships can promote health
- people with strong social networks:
  - live longer
  - have less heart disease
  - are less depressed; use alcohol and drugs less
  - have fewer teen births
  - are healthier overall





## Prevent Injury Through Design and Maintenance of Built Elements

- activity may be a risky behaviour if *the built environment* is not supportive
- seniors and school children are most vulnerable
- road design - wide arterials in suburban areas are most dangerous
- traffic calming - reducing vehicle speed reduces risk of pedestrian injury



## Promote Activity and Healthy Nutrition in Children and Youth

- rate of overweight Canadian children has nearly tripled since 1981
- obesity is highly predictive – a *conveyor belt* to being overweight or obese as adults
- 1 in 3 will be diabetic





**Physical Activity**

- Walkability
- Active transportation
- Accessibility of stairwells
- Etc.


Su et al, 2010. Designing [a route planner](#) to facilitate and promote cycling in Metro Vancouver, Canada.

## Walkability


- Walkability – good street lighting, continuous sidewalks, a variety of shops, services, parks, schools, and workplaces within walking distance of homes
- People living in more walkable neighbourhoods are more likely to walk more than 10 minutes a day
- Research indicates that risk of obesity can decline by as much as 10% by walking 24 minutes a day




**Fredericton former railway bridge**




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- Asthma
- Respiratory Illness
- LBW babies
- Coronary heart disease
- Premature mortality

Health Canada, 2010. Diseases and health conditions. [Summary tables](#).  
[Body mass index](#), overweight or obese, youth

Health Canada, 2010. [Physical activity levels](#) of Canadians by province.

Public Health Agency of Canada, 2010. Chronic disease infobase maps.  
[Asthma prevalence](#).

## Improve Air Quality



- asthma is the most common chronic childhood disease
- 7% more asthma among youth living in neighborhoods with high traffic pollution
- anti-smoking and anti-idling by-laws and congestion charges are examples of local policies that can improve public health

## Improve Water Quality and Quantity

- contamination from runoff creates disease risks and closes public beaches
- water shortages limit recreational options



## New Brunswick's Wellness Strategy Targets for 2013

- Mental – eg., 9 out of 10 children identify as being pro-social, feel connected to school
- Healthy eating – eg., 9 out of 10 children eat fruits and vegetables 5x/day
- Physical activity – eg., 7 out of 10 children and youth take 16,500 steps/day

## PEI – Chief PHO Report 2012

- 58% of islanders planned to improve health in next year, and most often cited by exercising (66%)
- Moving forward, one of CPHO's priorities includes health promotion to address burden of chronic disease, like heart disease, cancer, diabetes.

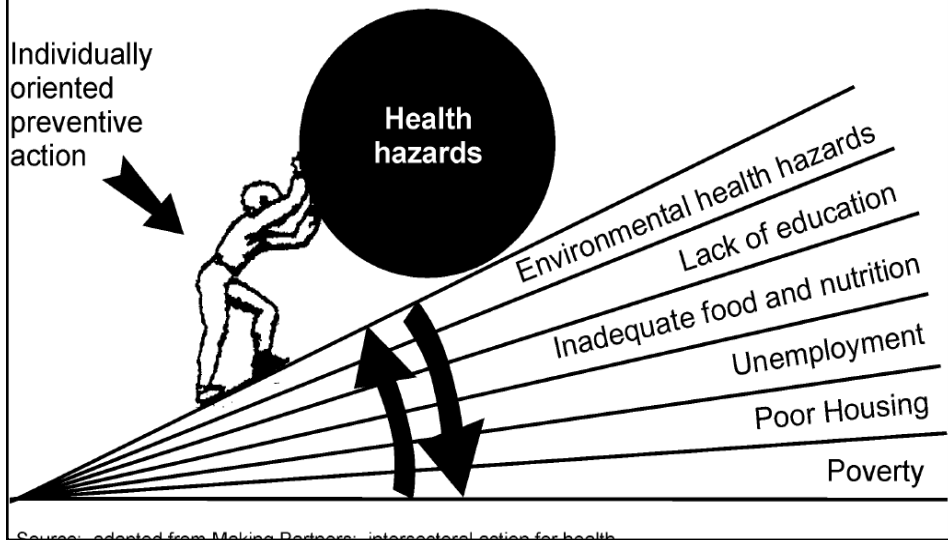
## Recognize that Behavioural Changes Alone will not be Enough



## Why are some people healthy while others are not?

- people with lower income and less education consistently have worse health status than those with higher income and more education
- these inequalities in health are called the socio-economic determinants of health (including occupation, income, education, housing, and access to transportation)
- **good planning and design can help people avoid or change unhealthy physical environments**

Individual action can reduce the impact of health hazards but socio-economic factors make the job harder



Public Health Professionals play a key role in reducing causes of chronic illness and injury

- policy changes at the local level can be most effective
- neighborhood environment is one of the strongest predictors of whether a person will be physically active
- people want to live in places where they can be active



## Urban Planning and Public Health Share Historical Roots

- 19<sup>th</sup> century - public health was part of municipal planning; tackled infectious diseases (e.g., water, sanitation, rodent, mosquito control)
- 20<sup>th</sup> century - injury and disease prevention (e.g., building permits and zoning for ventilation, exposure to toxic substances, development, separating residences from industrial areas)
- 21<sup>st</sup> century - need to consider chronic health problems

## Collaboration between Planners and PH Professionals is Crucial to Create *Healthy Built Environments*

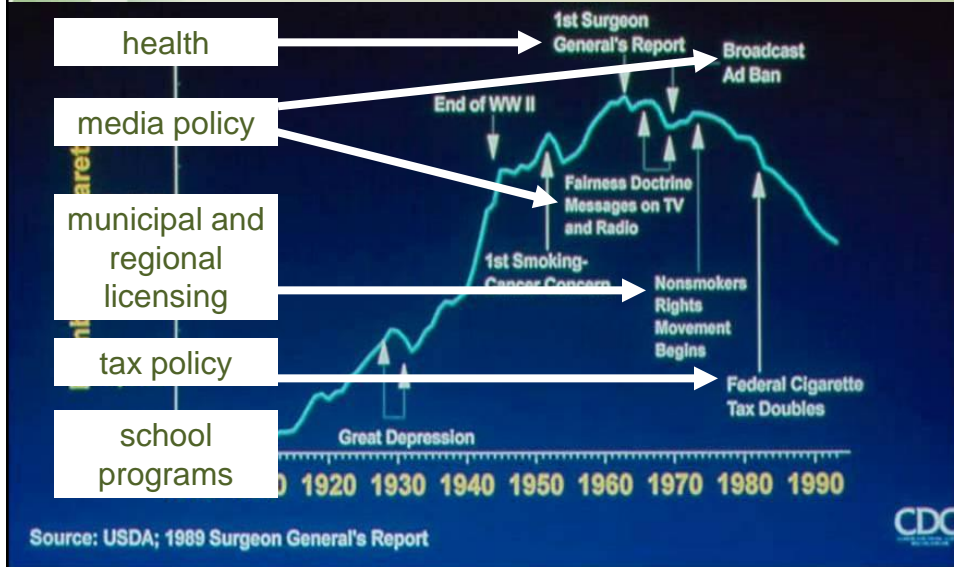
complex problems require leadership by:

- community groups
- planners
- the development industry
- engineers
- design professionals
- elected officials
- Environmental/public health professionals





## Tobacco Control – an example of cross-sector collaboration



## A Multi-focus Approach to Child Obesity

- marketing to children
- childcare
- school environment
- food systems
- enforcement
- built environment



Public Health Professionals  
are natural leaders for collaborative efforts  
with planning and design professionals

- inherently multidisciplinary
- research based on populations, including behavioral, environmental, biologic factors
- equipped with policy tools
- involved in communities at different levels
- track record of accomplishments in public health

## NCCEH Activities in HBE

- Tools and resources that can be used by public health practitioners
  - To familiarize themselves with the HBE
  - To introduce HBE to their bosses or agencies
  - To assess their group's readiness to initiate some built environment projects
  - To access knowledge gained by others working in built environment
  - To review the evidence on health effects and effectiveness of interventions

# NCCEH Tools

## Introductory materials

- Fact Sheets
- Case Studies
- Readiness Assessment Tool
- Workshop Agenda
- HBE Powerpoint Presentation
- Video (DVD)

# Built Environment Inventory

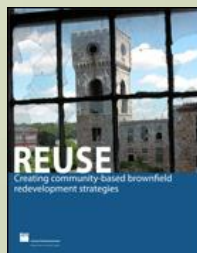


Guidelines for each of Canada's 10 provinces and for rural areas have been developed as tools for achieving transportation and land-use arrangements that meet the needs of children and youth. They are intended for municipal transportation and land use planners.



Look in:

NCCEH's [additional resources](#) repository



The document is designed to help community-based organizations recognize that brownfields are opportunities for neighbourhood revitalization and to help them participate more effectively in the complicated process of brownfield cleanup and redevelopment. The process is illustrated with case studies.

# Methodology

**Themes**

- Planning & design
- Active living
- Greening strategies
- Social determinants
- Nutrition & food
- Indoor environment
- Mental health & perception
- Air quality

**Types**


- Background documents
- Policy
- Case studies
- Evaluation
- Guidelines & tools
- Networks
- Education
- Scientific review

**Population**

- General
- Children
- Seniors
- Aboriginal
- Vulnerable populations

**Criteria**

- Purpose
- Funding source
- Practical/actionable
- Relevant: improves built environment
- Open access



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Text Size +/-

- ▼ Environmental Health Needs & Gaps
  - Assessment Reports
  - Needs Survey
  - Evidence Gaps
- ▼ Evidence-Based Practice & Policy
  - NCCEH Evidence Reviews
  - Evidence Review Process
  - Innovative Practices
  - Journal Article Summaries
- ▼ NCCEH Major Projects
  - Built Environment
  - Drinking Water
  - Heat Advice
  - Outdoor Air
  - Personal Service Establishments
- ▼ Professional Development
  - Degree Programs
  - Practicum Placements
  - Continuing Education
  - NCCEH Workshops
  - Practice Questions
  - Ethical Dilemmas
  - Career Opportunities
- ▼ How Environmental Health is Organized in Canada
  - Programs & Services
  - Legislation

### ADDITIONAL RESOURCES

We are creating lists of additional environmental health resources, including documents and organizations, on topic areas that we have yet to examine in-depth.

The documents in the lists are relevant to environmental health practice or policy. Scientific articles are from peer-reviewed journals and grey literature (reports, etc.) has been evaluated using our [Evidence Review Process](#). Some documents, websites, and other media do not meet all evaluation criteria. The organizations listed are chosen based on their relevance, their credibility and authority in the field, and the quality of material they produce.

To access the listings, click on the links below. If you have suggested resources, please [send them](#) to us.

Search results for: **Environmental Planning, Built Environment**

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[Abelata, M Emerging issues in improving food and physical activity environments: Strategies for addressing land use, transportation and safety in 3 California-wide initiatives, Oakland, CA: American Journal of Public Health, 2010 November](#)  
*Theme(s): Physical Activity/Active Transportation, Active Living*

[Active Living Research: Resources for policy makers and advocates San Diego, CA: Robert Wood Johnson Foundation; 2010.](#)  
*Theme(s): Active Living*

[Active Living research is a U.S. program that contributes to the prevention of childhood obesity in low-income and high-risk communities. The website contains tools and literature databases about the relationship of environment and policy with physical activity and obesity.](#)

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## Limitations

- 
- Not comprehensive
  - No outcome evaluation

- Limited quality assessment
- Dependent on what's posted

- Open access
- Budget: 40-word summaries
- Does not address all public health issues

## Evidence Reviews

- [Community Planning with a Health Equity Lens: Promising Directions and Strategies](#)
- [Minimizing Children's Non-residential Exposure to Traffic-related Pollution](#)
- [Active Transportation in Urban Areas: Exploring Health Benefits and Risks](#)
- [Are Naturally Ventilated LEED Buildings Healthier?](#)
- [Intersection Between Built and Social Environments and Older Adult's Mobility](#)

# NCC Health Public Policy – Built Environment

Internet Explorer - Windows Internet Explorer  
 http://www.ncchpp.ca/59/Built\_Environment.aspx

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Home > Projects > Built Environment

**Built Environment**

In the public health sector, we occasionally hear the expression "making the healthy choice the easy choice". This statement goes to the heart of the debate over structural determinants of health versus personal choice as causes for ill health. Making the healthy choice the easy choice effectively re-frames the debate by pointing to the importance of structural elements in individual decision-making, and it points to the role of not just the public health sector but all citizens in influencing the way in which our society builds itself.

Indeed, it is not always the easiest, most readily available, lowest cost, most advertised, or most subsidized choice that is the most favourable to health. In many sectors, we find that making the healthy choice is increasingly difficult.

Many are now asking how and why things came to be that way, and are looking at how structural factors influence people's choices.

It is possible for public policies to take the potential or likely health effects of different options into account, thereby bringing health as a value into the equation. We could continue to focus on personal choice as the focus of health promotion, but we would be missing an important dimension.

This kind of thinking applies to the built environment, or the ensemble of buildings, transportation systems, access to healthy food, housing, how we spatially organize our lives around home, recreation, workplaces, shopping, schools, and so on. The way in which our spaces have come to be structured (both literally, in terms of the buildings

**Don't Miss**  
[Urban Traffic Calming and Health: A Literature Review](#)  
 12/3/10

**Traffic Calming, Pedical Crossings**  
 1/8/11

**Links**  
**Readings**  
[Built Environment](#): A long list of readings on the site of the National Collaborating Centre for Environmental Health.  
[Public Health and Land Use Planning: How Two Public Health Goals are Working to Create Health and Sustainable Communities \(2011\)](#): On the site of The Clean Air Partnership.  
**Periodicals**  
[Built Environment](#), Periodical, published quarterly. On the site of the Association Press.  
[Environment and Planning: Journals](#): Four journals available on the Environment and Planning website.  
**Media/Best Practices/Summaries**  
[Planning By Design: a healthy](#)

## Conclusion

- Built environment plays a key role in meeting health and wellness objectives
- Public health professionals are well-suited to collaborate with planners and others on built environment issues
- NCCEH and NCCHPP have some tools and resources that may assist you

# Thank You

Questions?  
Comments?

[www.ncceh.ca](http://www.ncceh.ca) | [www.ccnse.ca](http://www.ccnse.ca)

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