



Brownfield Sites:

**An Option Paper for the
Halifax Regional Municipality**

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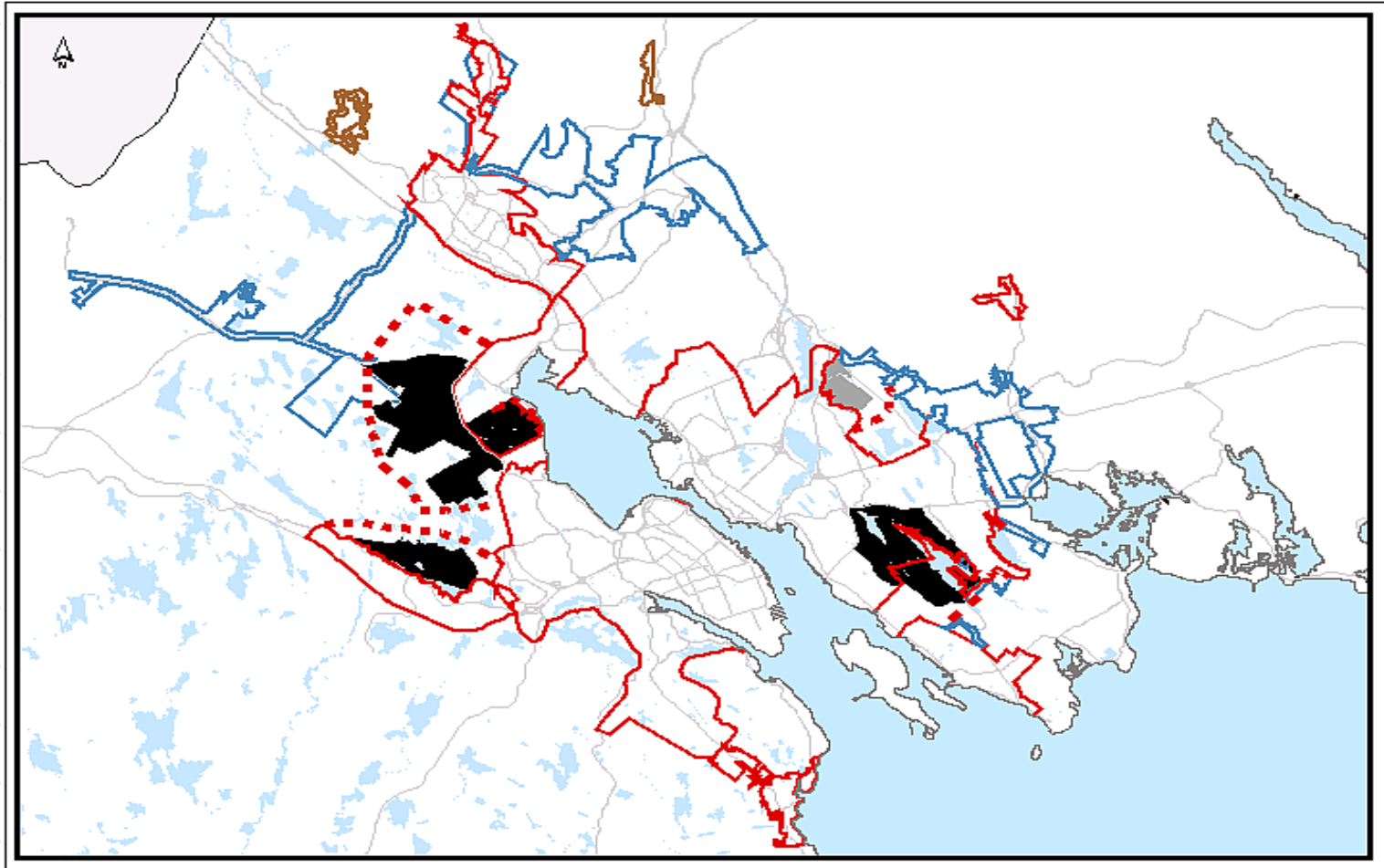
Introduction

HRM's Regional Planning Process

Anticipates a population increase of 100,000 over the next 25 years

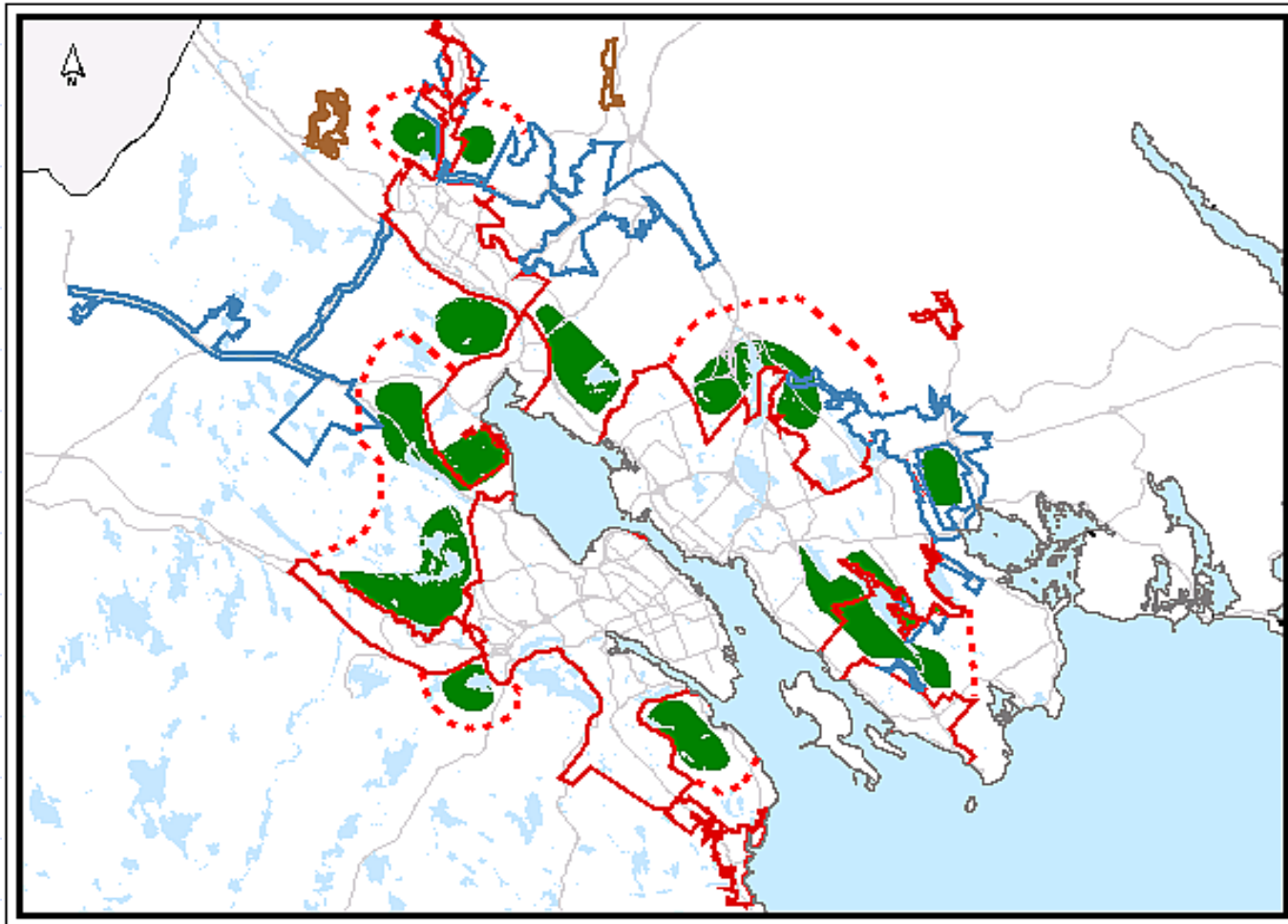
Where should this additional population settle over the next 25 years?

An Urban Oriented Growth Model For HRM?



Urban Growth Boundary-Urban Focus

A Suburban Oriented Growth Model For HRM?



Urban Growth Boundary-Suburban Focus

Presentation Outline

- **What is a brownfield ?**
- **What's wrong with the way we are growing?**
- **Are brownfields the solution to our growth problems?**
- **What do the experts contend?**
- **Why haven't more brownfields been redeveloped?**

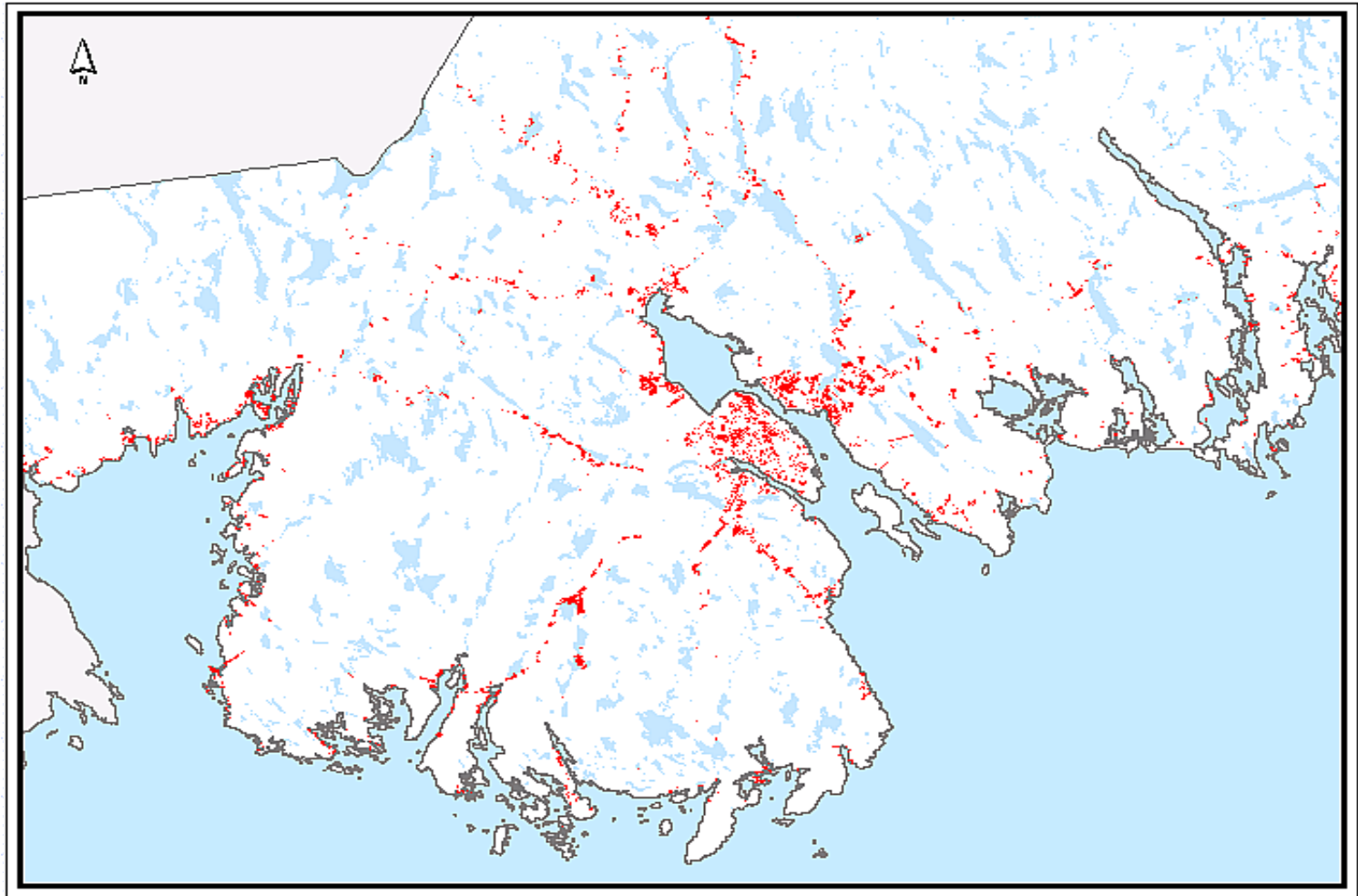
What is a Brownfield?



What is a Brownfield?

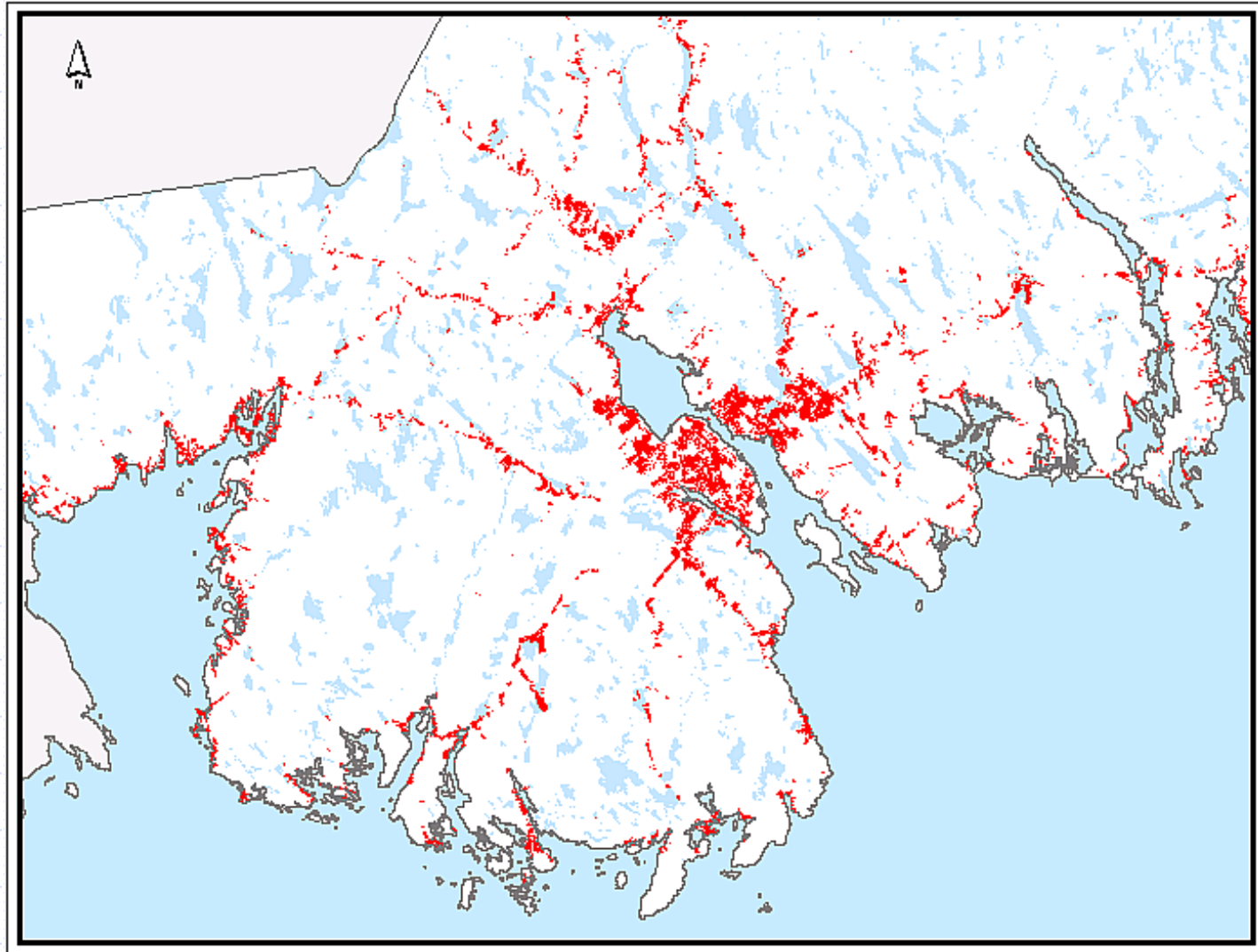
Brownfields are abandoned or under-used properties where past actions have caused real or suspected environmental contamination. Although they are classified as a sub-set of contaminated sites, they exhibit good potential for other uses and usually provide economically viable business opportunities. They are mainly located in established urban areas, where existing municipal services are readily available, or along transportation corridors. They may include decommissioned refineries, railway yards, dilapidated warehouses, abandoned gas stations, former dry cleaners, and other commercial properties where toxic substances may have been stored or used.

Origin of Brownfields – 1950s

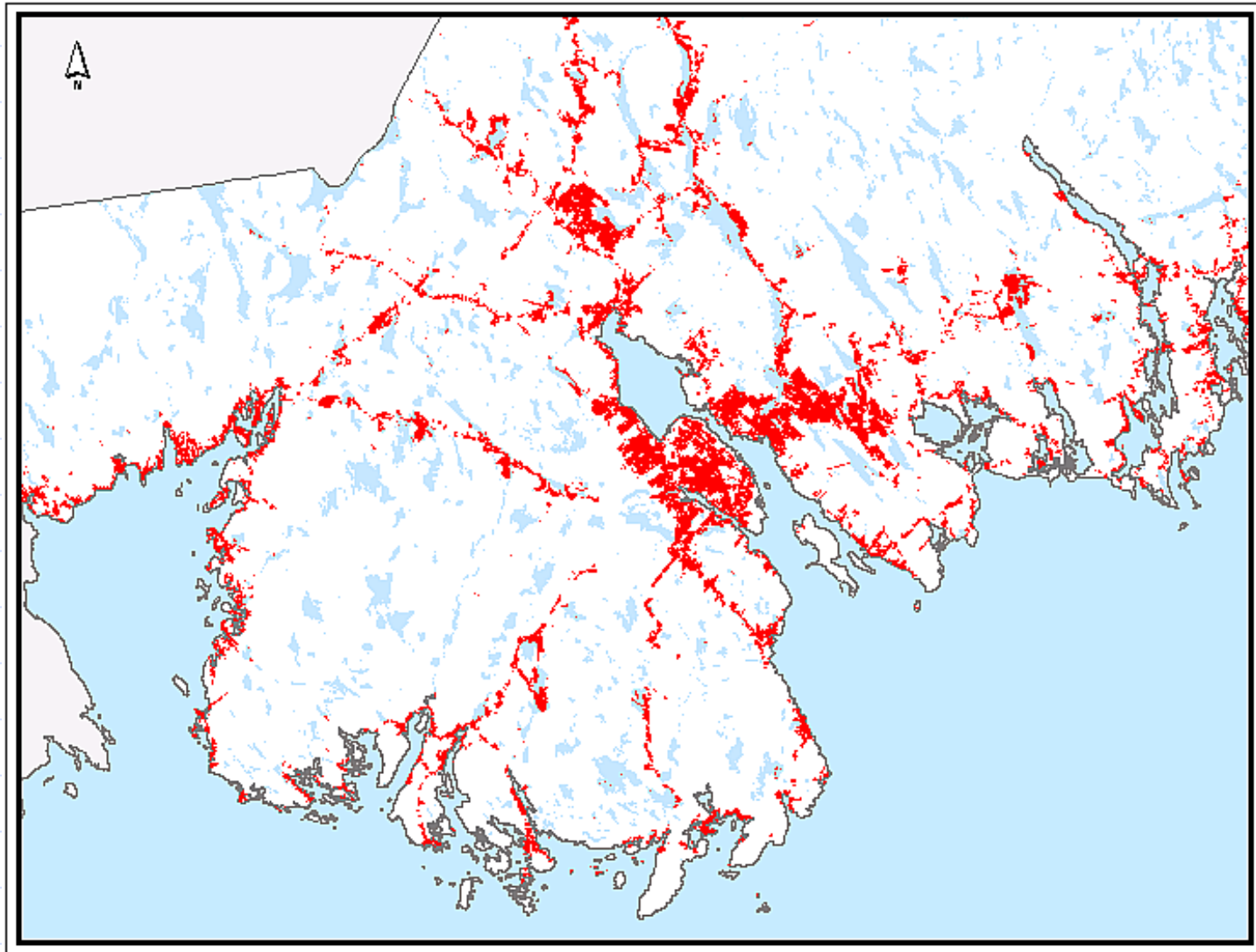


1950's

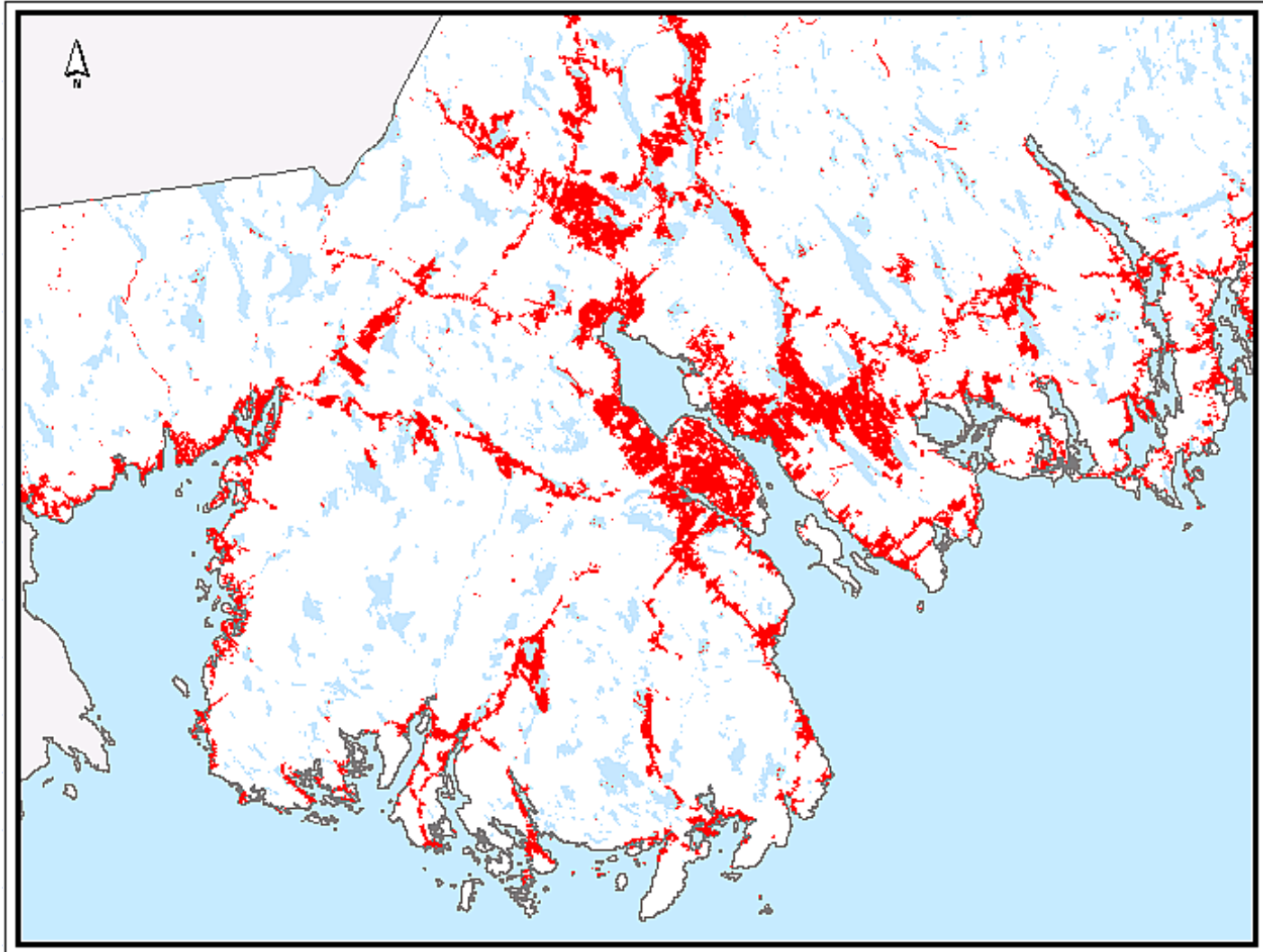
Origin of Brownfields – 1960s



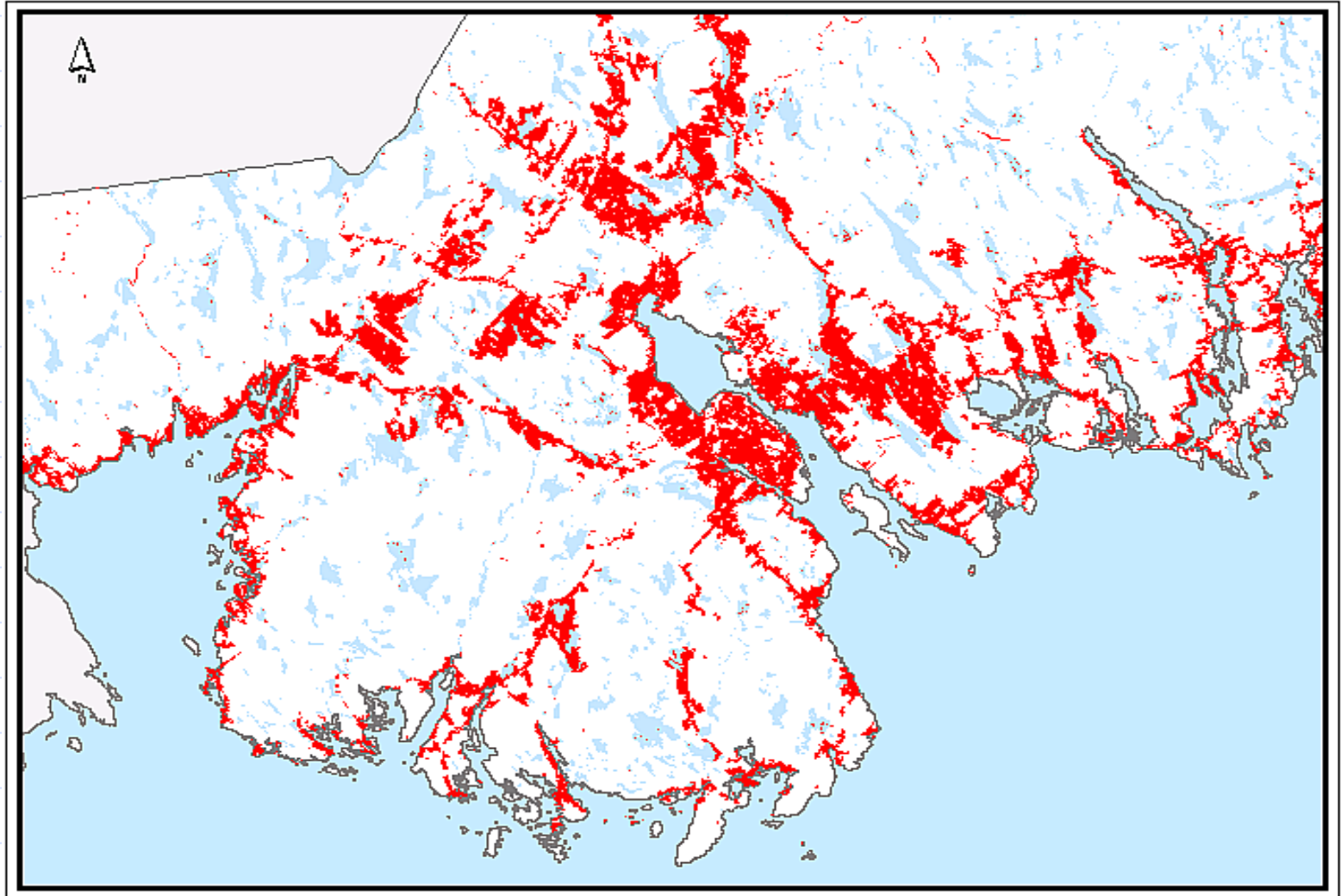
Origin of Brownfields –1970s



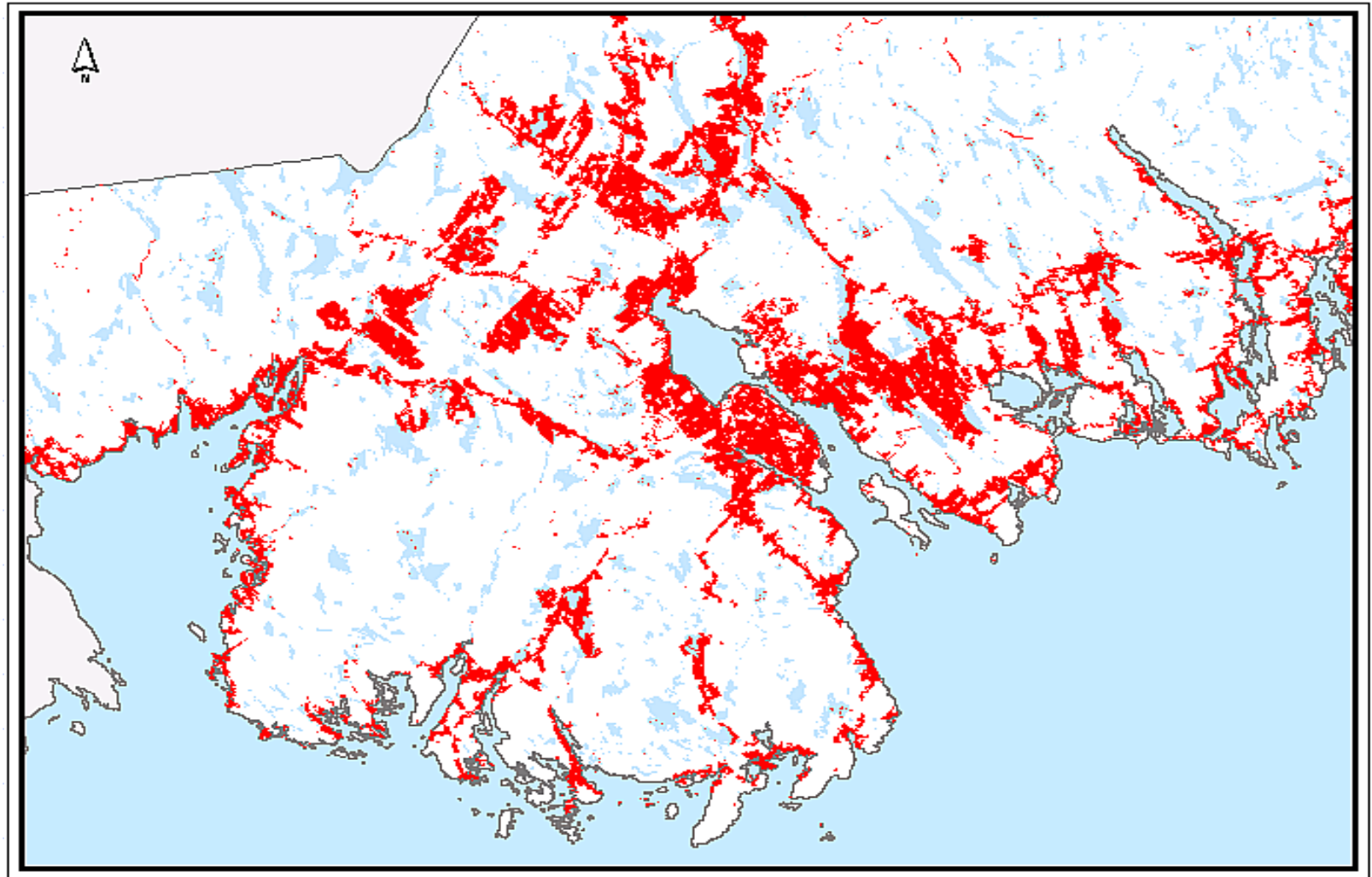
Origin of Brownfields 1980s



Origin of Brownfields 1990s

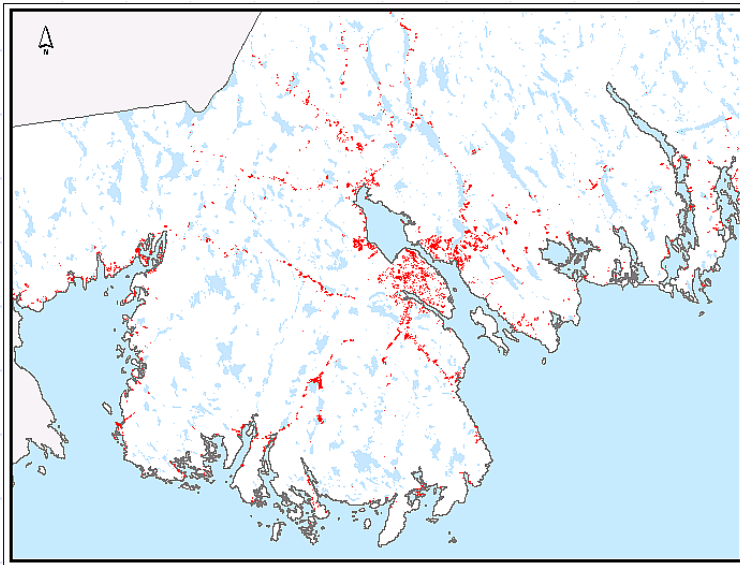


Origin of Brownfields- 2000s

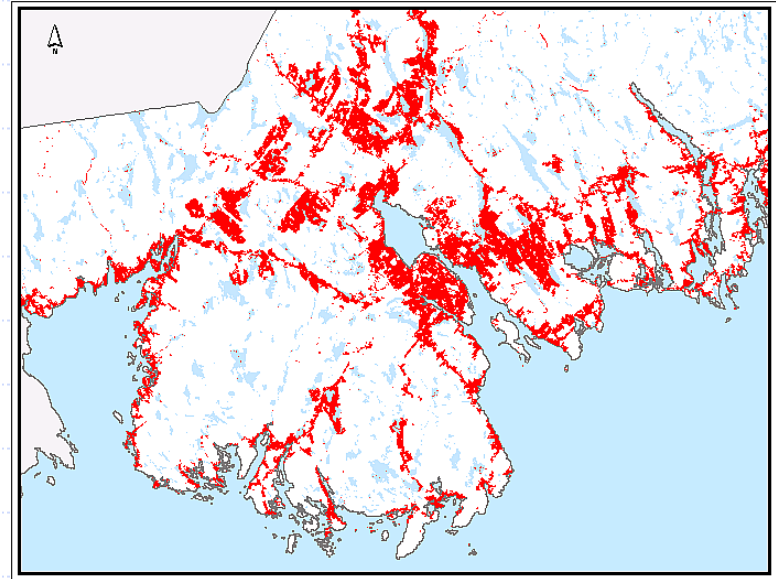


Origin of Brownfields

1950s



2000s



This is Suburban Sprawl!



The Problems of Sprawl

A sprawling suburban development pattern is:

- Overly Land Consumptive
- Expensive
- Inefficient
- Environmental degrading

Overly Land Consumptive

- Cities are adding urbanized lands at a much faster rate than adding population.
- Even in communities where there is only a small population increase
- Urbanized land increased by 46.9% in Maine

Expensive

- urban infrastructure costs 7.5 % less than a conventional subdivision
- urban areas require 4.5 metres of road/person vs. 6.8 metres in suburbs or 19.4 metres in rural areas
- Urban areas have an annual road maintenance under \$12 vs. over \$50 in rural areas

Inefficient Pattern of Growth

- increases our reliance on private automobile
- quadruples commuting time
- reduces viability of transportation options such as walking and transit

Environmental Degradation

- natural areas lost to low-density sprawl
- permanently changed drainage patterns and microclimates
- air pollution attributed to private automobile
- deplete groundwater sources

The Benefits of Brownfields?

- utilizes existing infrastructure
- revitalizes and renews urban areas
- restores environment
- reduces need to expand urban development boundaries

Land Consumption - Brownfield vs. Greenfield

Study Purpose:

- to compare land required for brownfield versus greenfield projects

Study Assumption:

- more land is consumed in greenfield development due to conventional zoning regulations

Land Consumption - Brownfield vs. Greenfield

**The five most common land use
planning regulatory factors include:**

1. Building Set back Requirements
2. Parking Requirements
3. Density Requirements (#units/acre)
4. Building Height
5. Landscaping and Buffer Zones (%open space)

Land Consumption - Brownfield vs. Greenfield

Study Findings:

- .68 acres brownfield represents 1.74 to 15 acres greenfield
- 1 acre of brownfield equals 4.5 acres of greenfield

HRM Context

- 1,955 acres of brownfield land
(including a military base at 1,400 acres)

8,798 acres of greenfield land **vs.**

1,955 of redeveloped brownfield land

Comparing Costs & Benefits

Study Purpose:

- to measure the public costs and benefits of brownfield versus greenfield

Measuring Costs & Benefits

Study Assumptions:

- **Redeveloped brownfields reduce:**
 - development pressure on greenfield sites
 - external costs like air pollution, congestion
- **Redeveloped brownfields increase:**
 - amount of property tax collected
 - utilization and efficiency of existing infrastructure and services.

Measuring Costs & Benefits

Study Findings :

- more than doubled the annual benefits of greenfield projects
- health benefits are \$1,750,061, with an annual net benefit per hectare of \$10,811
- annual net benefit of \$5,395 and \$3,756/ha

Measuring Costs and Benefits

Study Conclusions:

- significant benefits in:
 - public capital and operating costs,
 - transportation and travel costs,
 - land and natural habitat preservation,
 - quality of life (air pollution)
 - social issues

Brownfield Barriers

- regulation,
C financing,
C insurance and liability,
C science and technology, and
C land use planning

Brownfield Barriers (Ranked)

Lack of Clean Up Funds	90%
Liability Issues	71%
Environmental Assessment	60%
Environmental Regulation	45%
Market Conditions	45%
High Cost of Demolition	41%
High Land Assembly Costs	39%
High Clean Up Standards	38%
Community Concerns	35%
Neighbourhood Conditions	28%
Inadequate infrastructure	27%

Market Barriers

- the supply of brownfields far outweighs the demand
- market demand is focussed on residential conversion projects

Land Use Planning Barriers

- Sites are unknown
- Pre-zoned greenfields are more attractive
- Greater regulatory controls applied
- Planning controls limit opportunity to offset cost

Land Use Planning Barriers

- Policy does not direct growth to existing serviced areas
- Assembling large parcels is difficult
- Inter governmental/municipal competition
- Public Opposition

Conclusions

- Where should the anticipated 100,000 in future population growth settle over the next 25 years?
- Evidence suggest we should encourage more brownfield redevelopment
- Not all brownfields can or will be redeveloped

Next Steps

- How many brownfields should, or can be redeveloped, and how much population could they support?
- What type of programs and policy should HRM create to ensure brownfields are attractive to developers, and can be readily redeveloped?