

HALIFAX GREEN NETWORK PLAN

Halifax Green Network Plan Primer

March 2017

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Prepared for
Halifax Regional Municipality

HALIFAX

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Introduction

Halifax Regional Municipality (HRM) benefits from the full spectrum of open spaces ranging from local neighbourhood parks to regional parks to wilderness areas. These open spaces function as the foundation for a sustainable HRM. The Halifax Green Network Plan (HGNP) will build upon these incredible natural assets to promote long-term sustainability and to meet present and future ecological and community needs.

The HGNP expands on the traditional approach to open space planning, which tends to focus primarily on recreation and ecology, to include working landscapes, community shaping and cultural landscapes. These five theme areas underpin the following document by informing the analysis, core concepts and direction that will be refined further in the final HGNP.

PLAN PURPOSE

Open spaces are interconnected and interdependent. Actions in one area can have multiple impacts in others. Open spaces offer multiple benefits when they are planned for, well-managed and considered holistically but these benefits can degrade or disappear if spaces are not maintained or protected from development. The HGNP will define an interconnected open space system, highlight ecosystem functions and benefits, and outline strategies to manage open space. Specifically, the HGNP will propose land management and community design directions to:

- » Maintain ecologically and culturally important land and aquatic systems
- » Assist in the sustainable use of natural resource land and economically important open space
- » Study, define and plan for lands suited for parks, corridors and greenspaces

This document is structured in the following manner:

- » **Introduction:** provides the planning context and a description of the process creating the plan, including a landscape value analysis and a summary of key issues and challenges
- » **Vision, Principles + Core Concepts:** provides the foundational statements and concepts that guide the HGNP
- » **The Green Network:** provides the objectives, direction and maps to plan, manage and sustain the Green Network
- » **Implementation:** Summarizes initial implementation directions that will be expanded in the final HGNP (e.g. municipal planning strategy policies, land use bylaw requirements, parks planning and resource planning)

PLANNING CONTEXT

The Regional Plan

The Regional Plan's vision, principles and policies provide overarching guidance and direction for the HGNP. This guidance emphasizes the need to preserve and protect open space, wild areas, natural beauty and sensitive environmental areas as well as cultural, historic and natural resources. This is accomplished by supporting development patterns that promote a vigorous economy and public investment, while making effective use of land, energy, infrastructure, public services and facilities.

Municipal Interests

Halifax Regional Municipality's open space management interests relate to three key aspects of municipal responsibility – public service delivery, resource conservation and community shaping.

- » **Public Service Delivery:** HRM delivers multiple services, including transportation and recreational infrastructure, to meet the diverse needs of its citizens
- » **Resource Conservation:** The many tools available to a municipality, including planning strategies, zoning, subdivision regulations, development agreements, public ownership, collaboration and stewardship, all help HRM manage land and influence open space conservation.
- » **Community Shaping:** Land-use planning, together with strategic investments in open space, promote healthy communities with clear identities that lead to sustainable growth management

Jurisdictional Considerations

The HGNP is fundamentally based on an ecosystems-based approach to landscape planning and open space management. The sustainability of Halifax's open space system relies on essential natural and community-based flows and connections across the green network, and across land types and tenures. The implementation of the HGNP will require a deliberate set of voluntary and regulatory mechanisms working together to advance objectives for open space conservation, sustainable growth management and land-use, and integrated resource management. The Municipality is committed to this approach as established in the Halifax Regional Plan. Given the complexity of land-ownership and the cross-functional interests in open space use and conservation, integration and collaboration is essential while respecting jurisdictions and cross-sectoral interests.

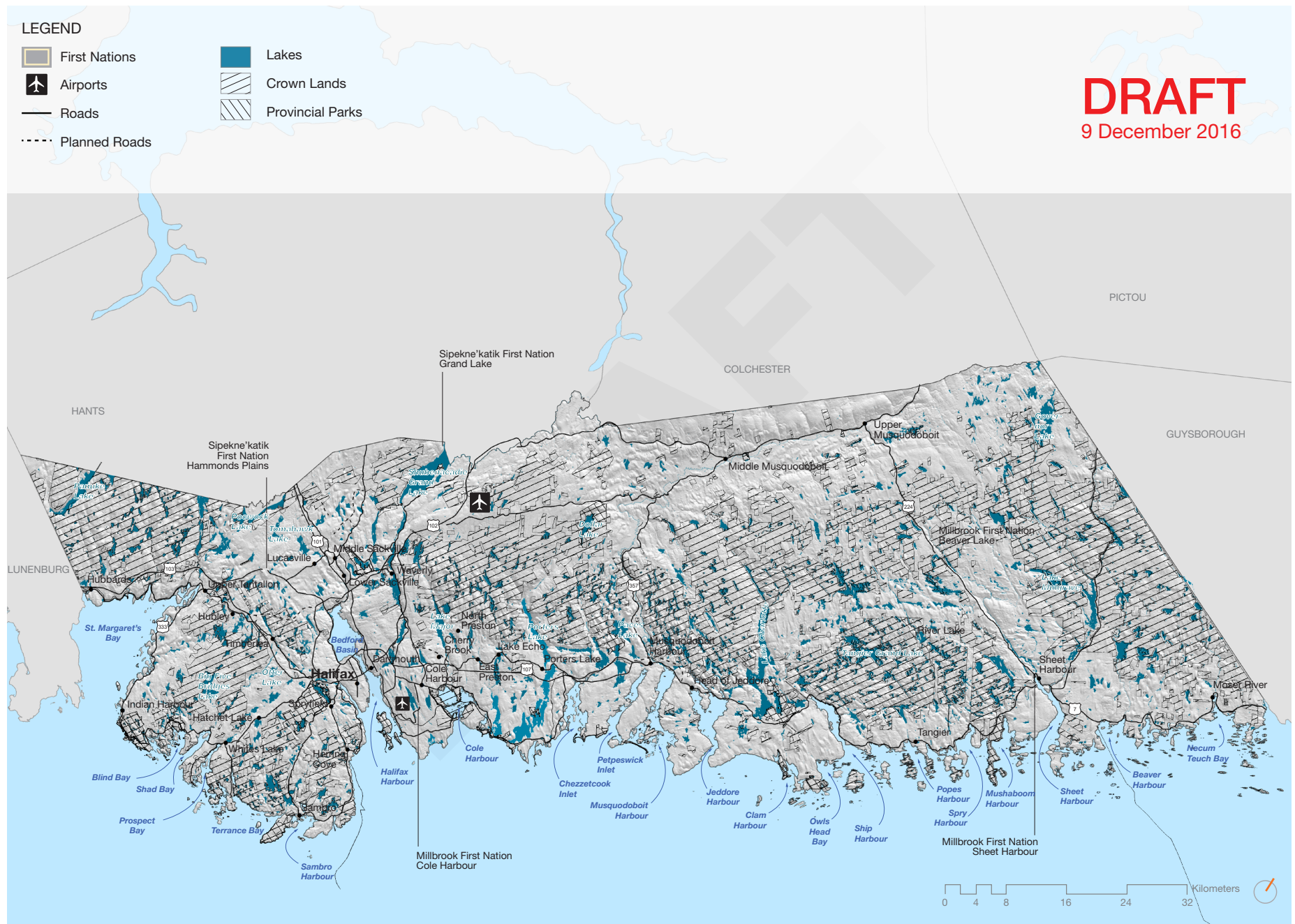
The HGNP shares the vision of the Province of Nova Scotia to ensure the principles of sustainable development are applied to land-use planning and resource management. This includes the Province's eco-systems-based natural resources strategy "The Path We Share" which aligns well with the objectives of the HGNP with respect to restoring a sustainable balance of environmental, economic, and social values through shared-stewardship and collaboration. The objectives and actions under the Province's "Our Parks and Protected Areas" strategy are also important to the overall implementation of the HGNP and play a key role in conserving a region-wide system of open space. With respect to Crown-owned lands the HGNP acknowledges that development activities and management efforts are the exclusive jurisdiction and authority of the Province of Nova Scotia which by law will supercede the HGNP and Municipal interests in conserving broad-scale

ecological systems that pass over Crown-owned lands.

The Provincial Department of Natural Resources (and others) such as Environment, Energy, Agriculture and Fisheries, Communities, Culture and Heritage and Aboriginal Affairs have explicit authorities and mandates that will require voluntary collaboration and partnership between government levels and Departments to participate in the implementation of the HGNP for the advancement of mutual objectives. The HGNP recognizes and respects these jurisdictions and will focus on collaboration, shared stewardship and integrated efforts to implement areas of mutual benefit.

Map 1: Study Region

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9 December 2016



HOW WILL THE PLAN BE USED?

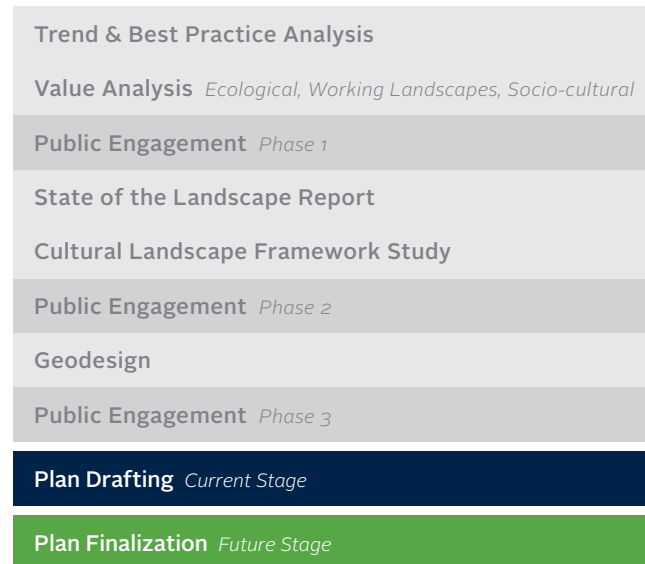
The HGNP will inform regional planning strategies, local municipal planning strategies, other planning initiatives, land use bylaws and park planning to guide decision-making and shape communities. It will also function as a voluntary resource for other levels of government to enable coordinated open space conservation and land management across jurisdictions. In particular, the HGNP will be used by the following organizations and stakeholders to maintain, expand and enhance the region's open space network:

- » **Council:** decision-making and liaising with constituents
- » **Municipal Staff:** Developing policy and recommending regulations to Council; informing conservation design subdivision, and parks, trails and public lands; and negotiating open space through conservation subdivision design.
- » **Other Levels of Government:** informing cooperation and collaboration
- » **Aboriginal Communities:** collaborating and sharing knowledge
- » **Non-Government Organizations:** guiding stewardship, management, partnerships and collaboration
- » **Developers:** accessing data and information to help shape projects
- » **The Public:** informing discussions, partnerships, and stewardship efforts.

HOW DID WE GET HERE?

To begin, the project team examined trends and best practices in open space planning to ensure that the HGNP is current and reflects the latest thinking. The HGNP is also founded on the extensive analysis of the values that the general public attaches to the natural and cultural environment. In addition to this analysis, the plan process also examines the issues that confront the Municipality in the interaction between the natural and built environment which require management action.

Public engagement provided important insight throughout the plan process, including informing the State of the Landscape Report, Cultural Landscape Framework Study and Geodesign. Together, with the public engagement, these studies provide the analysis that functions as a foundation of the draft direction presented here.



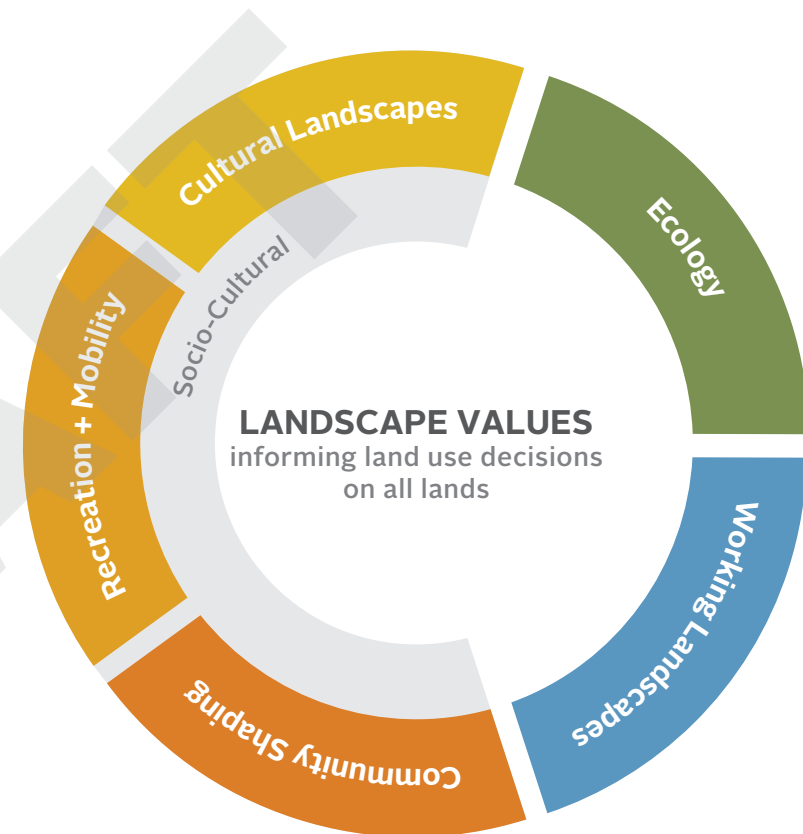
WHAT HAVE WE LEARNED?

Landscape Values

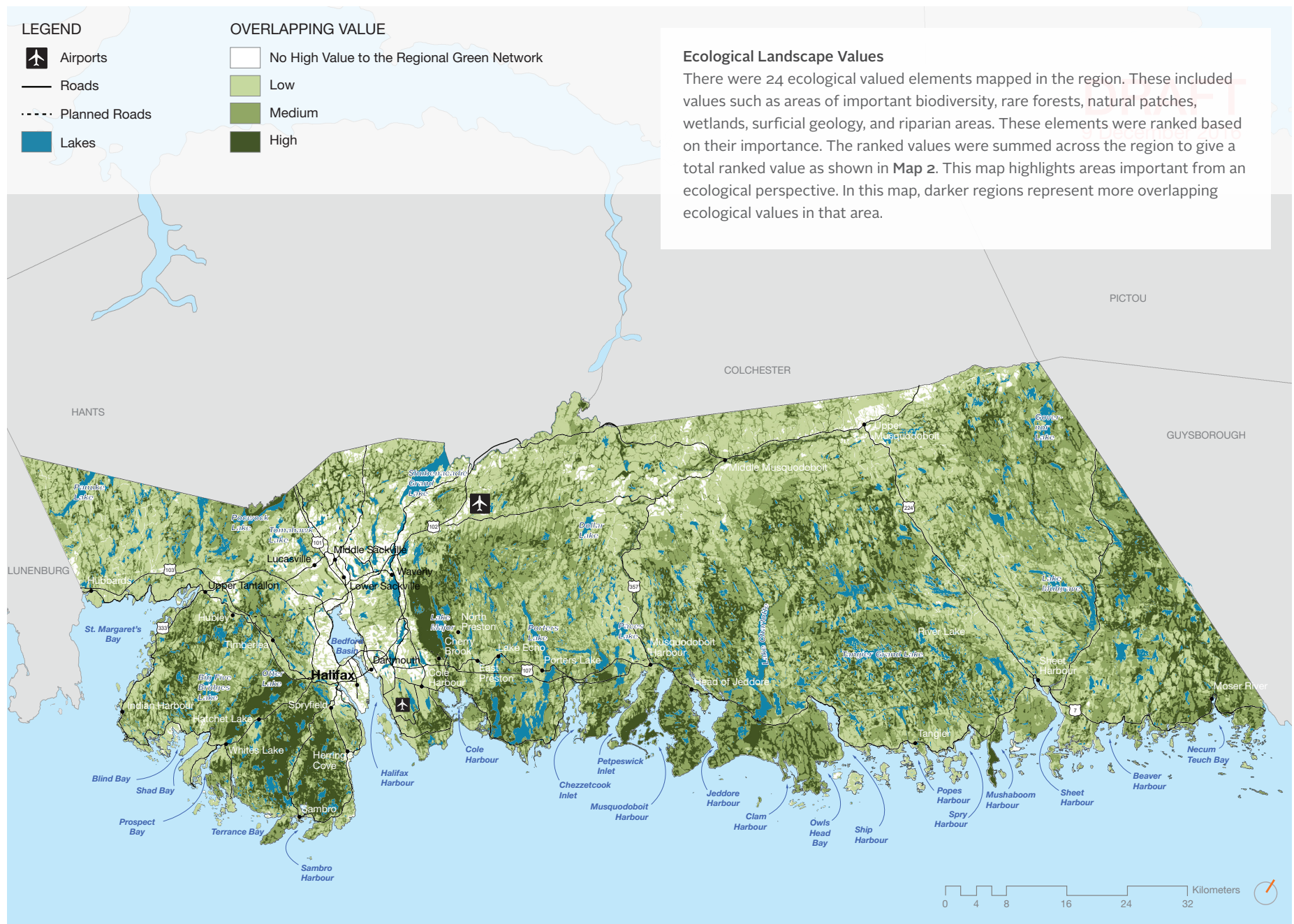
This plan has been developed under the tenet of **keeping healthy areas healthy** while at the same time, allowing and supporting appropriate growth and development.

The HGNP was prepared using a combination of region-wide mapping and analysis, together with public consultation and input. Important ecological, socio-cultural and working landscape values (see **Maps 2-4**) were summed by theme and the cumulative total was also mapped to identify areas of multiple overlapping values (see **Map 5**). Stakeholder workshops were held to review and discuss the results of this analysis and their input is reflected in the mapping.

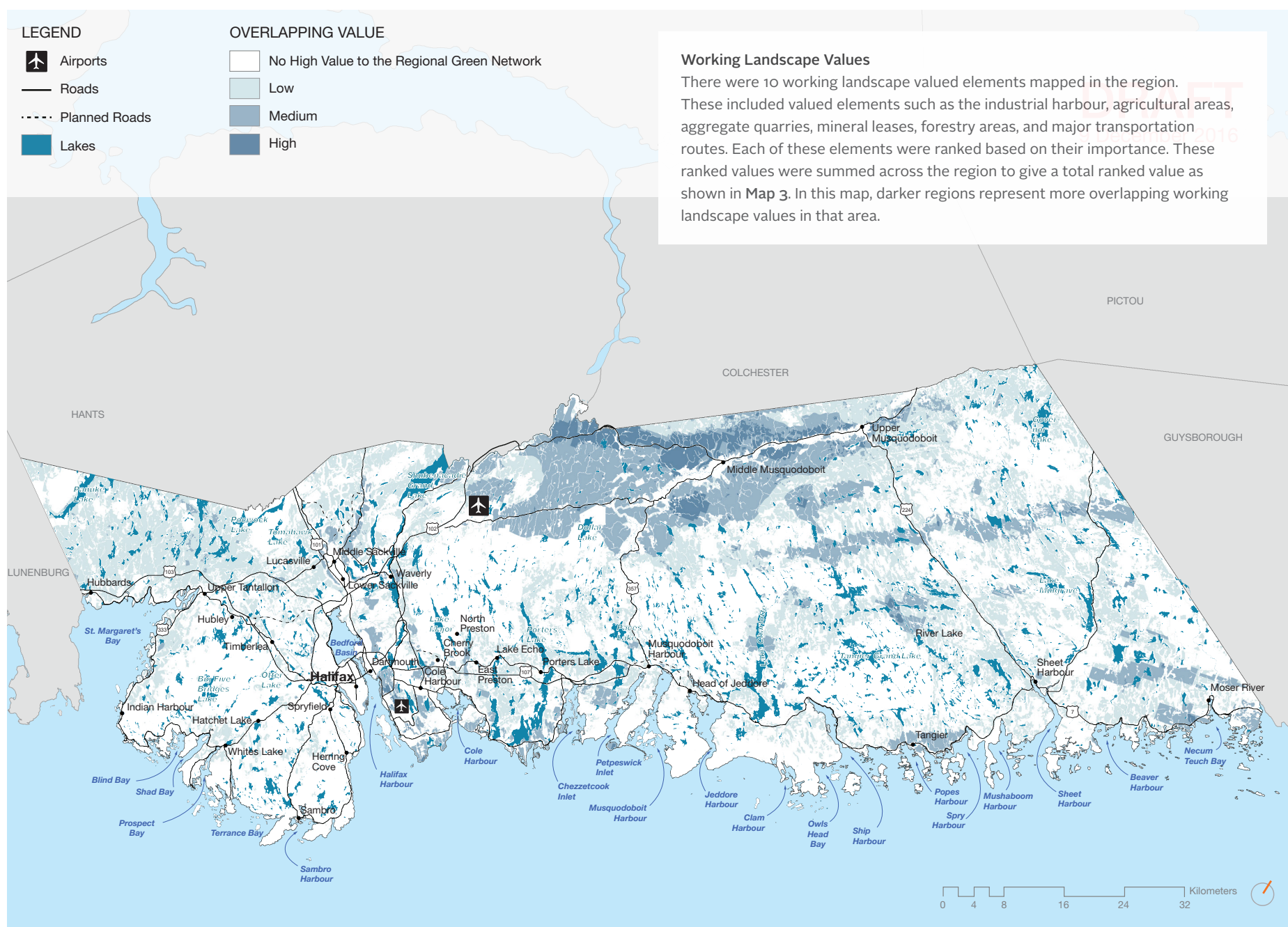
Open space values are mapped across the entire region and are available in GIS format with a high degree of spatial resolution. This information can be referenced by planners, landowners and development proponents to better inform land-use changes, decision-making and design. Wherever feasible, the impacts of development on areas with high open space values should be avoided or mitigated.



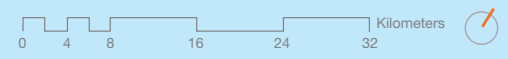
Map 2: Ecological Landscape Values



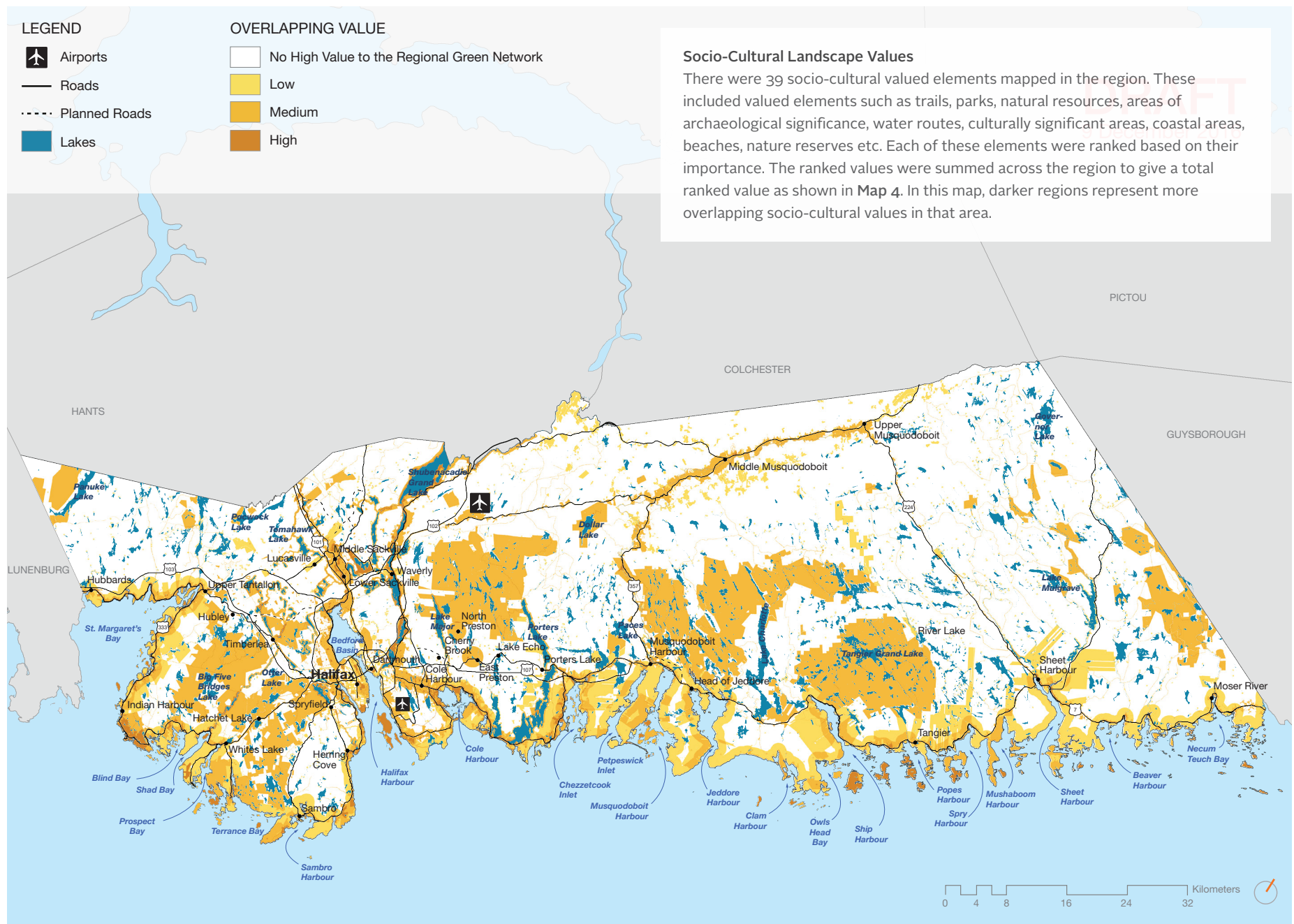
Map 3: Working Landscape Values



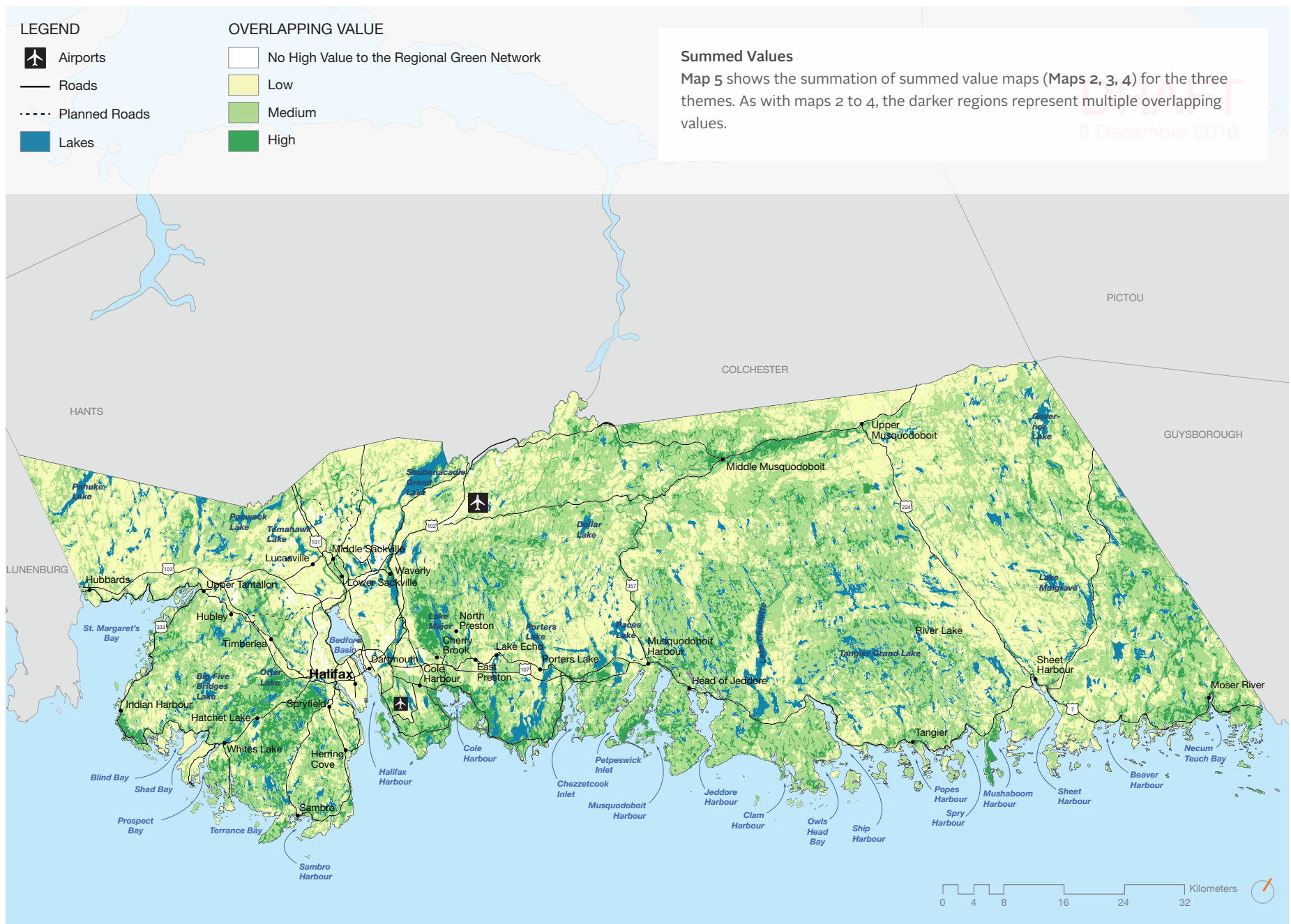
Working Landscape Values
 There were 10 working landscape valued elements mapped in the region. These included valued elements such as the industrial harbour, agricultural areas, aggregate quarries, mineral leases, forestry areas, and major transportation routes. Each of these elements were ranked based on their importance. These ranked values were summed across the region to give a total ranked value as shown in Map 3. In this map, darker regions represent more overlapping working landscape values in that area.



Map 4: Socio-Cultural Landscape Values



Map 5: Summed Values





Issues + Challenges

In addition to understanding regional values, the HGNP process includes extensive research into the current issues and challenges facing the region from multiple perspectives: **Ecology**, **Working Landscapes**, **Recreation + Mobility**, **Community Shaping** and **Cultural Landscapes**.

The issues and challenges highlighted in this section helped to frame the HGNP and provide important background information and insight to inform the draft objectives and directions for each theme area. This level of analysis and understanding of the local context is an essential step in creating a strong, multifunctional and connected green network throughout HRM.

ECOLOGY: Issues + Challenges

From an ecological perspective, HRM is facing the following issues and challenges:

Ecological and Wildlife Connectivity

- » Fragmented wildlife populations, lost or degraded habitats and restricted movement
- » Development perforating and disturbing intact native vegetation and leading to invasive species
- » A lack of comprehensive habitat and biodiversity inventory data and few monitoring programs
- » Highways, developed areas, a growing urban population and transportation systems disrupting wildlife and ecosystem connectivity

Climate Change

- » Potential increased flood risk as storm intensity and frequency increases due to climate change
- » A robust green network resilient to climate change impacts (e.g. species' range shifts, natural disturbance increases, like fires, pest outbreaks)
- » Isostatic rebound (rising land that was initially sunken as a result of ice sheets during the last glacial period) along the coastline
- » Maintaining natural carbon sinks (e.g. green spaces, coastal wetlands)

Landform Risk

- » Steep slope instability due to development and disturbances on or near the slope

Coastal Development

- » Competing uses along coastlines
- » The need to support healthy coastal ecology

Growing and Maintaining the Urban Forest

- » Urban streets with few or no trees and an aging canopy
- » Wildlife populations in urban areas rely on the food, shelter, space and connectivity provided by small patches of urban forest, which are disappearing
- » Tree maintenance and planting to improve air quality, regulate surface temperatures and improve well-being

Water Quality

- » Contamination risks to overall water quality
- » Contamination of aquifers and groundwater due to permeable soils and a shallow depth
- » Drinking water sourced from unprotected lakes
- » Water table depletion when demand exceeds sustainable yield
- » Salt water intrusion along parts of the coast

Wetlands and Riparian Area Pressures

- » Narrowed, damaged or lost riparian zones
- » Provincial protection omits smaller or constructed wetlands
- » Some development in wetland areas (e.g. small linear development, emergency measures) may not require Provincial approval
- » Damaged or lost wetlands during development

Species at Risk and Sensitive Wildlife

- » Lack of a detailed habitat inventory to locate the habitats of species at risk.



WORKING LANDSCAPES: Issues + Challenges

From a working landscape perspective, HRM is facing the following issues and challenges:

Mining Impacts

- » Further gold mining can create environmental challenges
- » Can be incompatible with other land uses and unwelcome close to settlements
- » Can alter the visual character of the area and generate conflicts with other land uses
- » Can have adverse impacts on waterways and ecosystems

Forestry Management

- » Forestry remains important to rural areas and this industries future requires consideration
- » Negative perceptions of clear cutting
- » Potential climate change impacts causing disturbance (e.g. pests, fire, storm impacts) and impacting composition and productivity

Agricultural Sustainability

- » Much of the food consumed within HRM comes from distant sources
- » Local food production has declined since the 1960s due to urban development
- » Last remaining concentration of productive soils in the Region, located in the Musquodoboit Valley, remains vulnerable due to the demand for other uses and climate change impacts

Tourism Potential

- » Visually degraded landscapes (e.g. industrial uses, sprawl development)
- » Underdeveloped rural tourism infrastructure
- » Balance between resource extraction and tourism

Harbour Industry Preservation

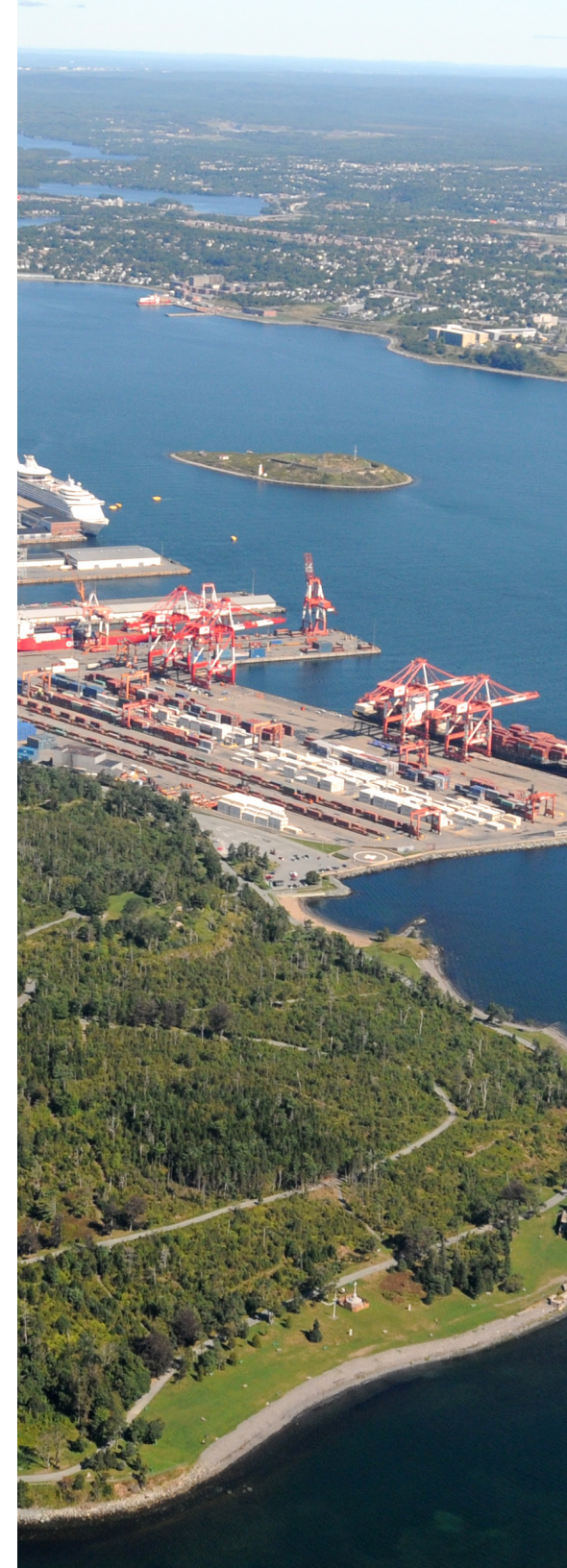
- » Vulnerability of the working harbour to the impacts of climate change
- » A compromised function for industrial harbours as a result of recreational uses (e.g. sea kayaking), mixed-use developments, parks and trails

Industrial Areas and Business Park Expansion

- » Limited consideration for landscape ecological priorities in industrial and business park design

Linear Infrastructure Potential

- » Vehicle focus instead of multiple modes and open space considerations
- » Conflict between large transportation hubs and open space priorities (e.g. noise impacts)
- » Single-purpose utility corridors
- » Creates unintended corridors for the movement of wildlife and invasive species



RECREATION + MOBILITY: Issues + Challenges

From a recreation and mobility perspective, HRM is facing the following issues and challenges:

Land Inventory

- » Some small and isolated parks with limited recreation and conservation functionality
- » Limited opportunities to acquire parks beyond acquisition or subdivision
- » Lack of methods to prioritize land acquisitions, which leads to competition for limited resources when purchasing land
- » Some communities are under-served while others are well-served
- » Lack of legislative authority to acquire park dedications or cash-in-lieu outside of the subdivision process
- » HRM can't obtain additional park land or improvements for development such as multi-unit buildings that do not include subdivisions or consolidations because of a lack of legislative authority
- » Need for increased municipal and provincial collaboration on open space planning and legislative amendments.

Limited Public Access and Network Gaps

- » Limited access to coastal and inland waters
- » Gaps in access to the open space network
- » Partnerships needed to increase access to strategic Provincially-owned land

Development Impacts and Trends

- » Connections are often lost to development
- » Growing demand for new facilities and reduced resources
- » Aging park infrastructure

Programming Challenges

- » Limited resources to manage current assets
- » Difficulty developing and managing multiple small and isolated parks
- » Providing all residents with equitable opportunities to connect with nature
- » A lack of awareness of existing connections to natural areas at a regional or community scale
- » Over used community and regional scale parks stresses the natural ecosystem, creates traffic congestion and reduces program effectiveness
- » Balancing competing priorities for the function and design of parks (e.g. dog parks vs. outdoor play structures vs. natural areas)
- » A lack of comprehensive planning and management of regional parks
- » The existing parks classification system does not place enough emphasis on network connectivity, ecological conservation, access to outdoor recreation opportunities and access to nature
- » The existing park land classification system does not place enough emphasis on service levels based on park type, density and access/distance

Mobility Challenges

- » Integration between the green network and the transportation network
- » Creating a complete active transportation network for commuting and recreation



COMMUNITY SHAPING: Issues + Challenges

From a community perspective, HRM is facing the following issues and challenges:

Creating Community Character

- » A loss of community identity when growth occurs without responding to the landscape

Limited Connectivity

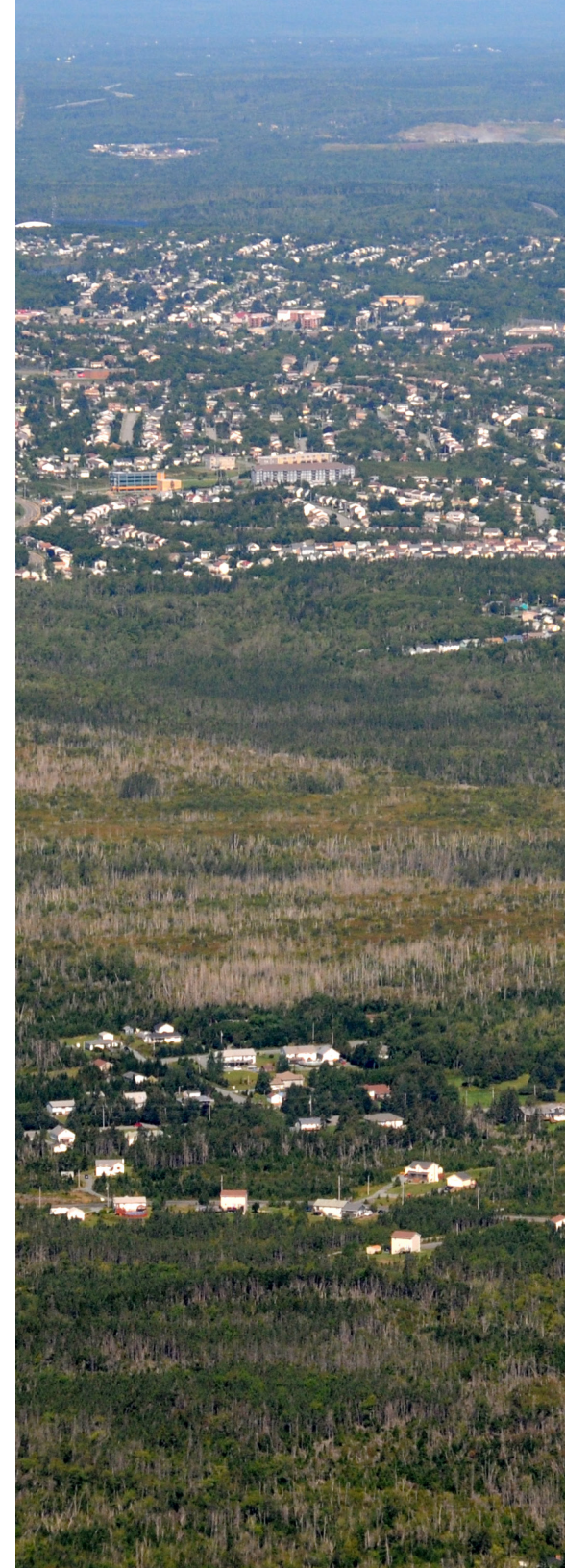
- » A disconnected, incomplete or insufficient network
- » New development may inhibit public access to recreational amenities, such as shorelines and lakes
- » Some communities lack comfortable, well-connected trails, internal sidewalks and walkways

Planning Challenges

- » Lack of information and analysis at a regional level has impeded efforts to protect natural corridors, retain recreational corridors and conserve heritage resources from development
- » Need more focused secondary planning to guide the growth of rural growth centres
- » Lack of rural planning focus and community shaping in rural growth centres
- » Need for integrated regional landscape planning and local planning for open space connectivity and ecosystems conservation

Growth Pressures

- » Additional demand and stretched resources as a result of growth and densification
- » Increased amount of hard and impermeable surfaces
- » Conflicts between environmental sustainability and recreational amenities
- » Some small rural communities are growing whereas others are declining
- » In rural areas, environmental functions may be vulnerable to land development practices



CULTURAL LANDSCAPES: Issues + Challenges

From a cultural landscape perspective, HRM is facing the following issues and challenges:

A Multi-faceted and Complex History

- » A unique and diverse landscape with a multi-faceted history of human habitation dating back over 10,000 years
- » Difficulty in proving title to traditional settlement lands

Lack of a Process to Preserve Cultural Landscapes

- » Lack of a comprehensive inventory of cultural assets
- » Lack of a targeted research program to understand the significance and character of urban and rural cultural landscapes
- » Conservation policy currently focuses on built heritage with a lack of consideration for broader cultural landscapes
- » Rural-to-urban and urban-to-rural migration can result in a lack of knowledge about how people inhabited and shaped rural landscapes
- » Sporadic identification of significant landscapes
- » Need for better engagement and involvement with founding cultures, including Mi'kmaq and African Nova Scotians

Preservation of Intangible Culture

- » Aging population and loss of traditional skills and practices

Development Impacts and Pressures

- » Residential and commercial development and redevelopment pressures
- » Development and/or alterations to shorelines
- » Impact on heritage sites and cultural landscapes by incompatible neighbouring development
- » Loss of open space to urban institutional development including parking (e.g. Dartmouth Commons)

Threats to Shorelines and Coasts

- » Climate change threatening coastal resources
- » Loss of traditional access points to the shoreline
- » Undermining of recreation and heritage resources along urban lakes and waterways through degradation

Built Heritage Preservation

- » Closure and/or abandonment of significant buildings or sites
- » Preservation and/or improvements needed for significant built resources
- » Loss of historic building stock and heritage districts
- » Loss of historic infrastructure connecting communities to the environment (e.g. fishing weirs, community docks)
- » Declining rural economies threaten significant landmarks

What is a “Cultural Landscape”?

The HGPN utilizes the Parks Canada, National Historic Sites Directorate definition that identifies Cultural Landscapes as “geographical terrains which exhibit characteristics of or which represent the values of a society as a result of human interaction with the environment. A Cultural Landscape is any geographical area that has been modified, influenced, or given special cultural meaning by people.”



2

Vision, Principles, and Core Concepts

This section provides the foundational statements that guide the objectives and directions to advance the HGNP.

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VISION FOR THE GREEN NETWORK

- ① HRM will build an **interconnected open space network** with multiple ecological, recreational, socio-cultural and economic functions to shape sustainable, resilient human and ecological communities.
- ② HRM's open space success is rooted in **public involvement and multi-sector collaboration** to ensure long-term enjoyment, ecological stewardship and regional vitality.
- ③ HRM's open space will continue to offer citizens **healthy, productive, beautiful and enjoyable spaces** for future generations.

GUIDING PRINCIPLES

Interconnected

- » To link open spaces, physically and visually, across land and water to sustain ecological functions, regional identity, recreational opportunities and quality of life

Grounded in Science

- » To anchor decisions in science, including conservation biology, landscape ecology and the social sciences.

Sustainable

- » To guide, shape and support complete communities.
- » To protect important ecological, cultural, recreational and working landscapes.
- » To conserve the unique landscape characteristics of the region that support the economy.

Context Sensitive

- » To supply a diversity of open spaces to meet current and future demand.
- » To provide access to land and water tailored to local conditions.
- » To offer recreation and active transportation service that respects the unique cultural and ecological context while meeting specific citizen needs.

Coordinated

- » To collaborate with citizens, organizations, private investors and landholders for more coordinated management and investment in public and private land.
- » To align with and shape plans and policies to ensure the HGNP is supportive, complementary and impactful.
- » To engage with citizens, including Aboriginal communities, on green network planning locally and regionally.

Versatile

- » To manage an open space network with multiple environmental, ecological, recreational, cultural and economic opportunities and benefits.
- » To create a flexible and adaptable open space network that supports:
 - » Complete Streets and Greenways
 - » Trends in Green infrastructure e.g. LEED
 - » Natural Habitats and Capital
 - » Recreation and Leisure
 - » The Economy
 - » Agriculture
 - » Storm water management
 - » Source water protection
- » To use the open space network to strengthen the Region's resiliency and adaptability to climate change, flooding, economic fluctuations and other changing conditions.

Stewardship

- » To ensure the long-term stewardship of open space as a vital community and regional asset.
- » To work with other levels of government, including First Nations governments and Aboriginal organizations, to help advance matters of common open space interest.

Inclusive

- » To distribute and manage public open spaces in an effort to provide opportunities for all residents to enjoy nature and the outdoors within easy access of their homes and workplaces.

Equitable

- » To balance the public interest with those of land owners.

CORE PLANNING CONCEPTS AND FUNCTIONS

The HGNP integrates several key open space functions to provide a balanced approach to conservation, growth and development. The following core concepts form the framework to achieve this balance. Each core concept provides a lens to guide decision making and anchors the objectives and directions outlined in this document in a consistent approach.

Concept 1: Regional Landscape Planning

By defining the regional green network in the HGNP, further local planning exercises and initiatives can define and conceptualize their contribution to that larger regional network.

Concept 2: Landscape Patterns Shaping Ecology

Richard Forman (1995) established this language and approach to describe landscape patterns at a regional level to ensure healthy ecological processes.

Concept 3: Landscape Patterns Shaping Communities

This core concept involves the identification of important local landscape features and cultural landscapes to shape community development in a manner that respects these features and landscapes.

Concept 4: Community Resilience

Adaptation to climate change and community resilience is an important function of the open space system and requires consideration at every stage of the open space planning process.

Concept 5: Interconnected and Multifunctional Spaces

Open spaces can serve multiple functions related to the five theme areas. This multi-functionality is important in creating an interconnected network that meets the needs of HRM, its citizens and the environment.



Concept 1: Regional Landscape Planning

HRM is a complex area with multiple interacting elements and processes; because of this, analysis must consider not only the local scale, but also the broader regional landscape context. To recognize this complexity and provide direction for the plan, valued landscape elements were mapped (see Maps 2 -5) and analyzed at the regional scale under five themes: **Ecology**, **Working Landscapes**, **Recreation + Mobility**, **Community Shaping** and **Cultural Landscapes**.

Concept 2: Landscape Patterns Shaping Ecology

At a regional level, Richard Forman's (1995) "Indispensable Landscape Patterns" provides a structure to support an ecologically viable landscape and is a core underlying concept of the HGNP. The following landscape patterns are closely linked to important ecological processes and should be maintained throughout HRM:

- » **Large Patches of Natural Vegetation:** These areas are separate from human settlement and support habitat and species diversity as well as natural processes, such as: the hydrological (movement of water on, above and below the Earth's surface), biogeochemical (chemical movement through the earth and air) or nutrient-cycling (movement of matter into living organisms) processes
- » **Corridors:** These connect large patches and other landscape patterns in the form of wide corridors to support natural processes and wildlife movement
- » **Riparian/Coastal Areas:** These are vegetated corridors, which also function as buffers along major streams, rivers and coastal environments, to support species movement, erosion control, water quality, habitat and natural processes
- » **Stepping Stones:** These are small natural vegetation patches through altered landscapes to support habitat and animal movement and natural processes

Landscape Patterns Shaping Ecology: Regional Scale



Concept 3: Landscape Patterns Shaping Communities

At a local level, landscape patterns provide the foundational structure for the sustainable growth and enhancement of settlement and developed areas (communities, business parks, etc.). Many of these elements have similar names to Concept 2 and as a result demonstrate how regional landscape patterns apply locally to shape communities. These elements include:

- » **Edges:** Large naturally vegetated areas and shorelines that contain and separate settlement areas
- » **Wedges:** Large naturally vegetated lands that penetrate settled areas and connect communities to the broader natural landscape and ecosystem
- » **Patches:** Important patches of open space and water (e.g. parks) distributed within communities that can function as 'stepping stones' for wildlife across developed areas
- » **Corridors:** Linear open spaces that provide essential pedestrian and cycling connections and recreation opportunities throughout communities
- » **Cultural Landscapes:** Areas with a distinct landscape, that can take any shape, that provide a recognizable character and cultural identity reflecting the human interaction with the land over time

Concept 4: Community Resilience

Open space will play an increasingly important role as we adapt to changing climate and take measures to mitigate its impact. Climate change management is an important outcome of the HGNP because it supports behaviours that limit environmental impact and provide an open space conservation solution for adapting to and mitigating climate change effects.

Open spaces help build economic resilience both directly and indirectly. Directly, by providing working landscapes, as addressed in this plan, most notably for resource extraction and tourism. They also create spaces for local commerce, such as markets, and their programming, planning, and maintenance result in increased jobs and opportunities. Indirectly, open spaces create attractive and healthy communities to live, invest and work in.

Open spaces also improve a community's physical, psychological and social health. They provide areas of respite, public gathering and celebration, in addition to connecting citizens with their history and culture while improving public health. Overall, open spaces improve liveability, contribute to social cohesion and increase local pride, which improves overall community resilience.

Landscape Patterns Shaping Communities: Local Scale



Concept 5: Interconnected and Multifunctional Spaces – Open Space Functions

The HGNP provides an interconnected network of open spaces across the region. The development of the plan leverages the integrated and multifunctional nature of many areas, since there are few instances where open spaces do not provide multiple functions. For example, open spaces can provide wildlife habitat and landscape connectivity, help shape communities, provide recreational opportunities and protect important water resources.

The chart to the right outlines the multitude of functions that open spaces provide organized by the five themes: **Ecology**, **Working Landscapes**, **Recreation + Mobility**, **Community Shaping** and **Cultural Landscapes**.

ECOLOGY

Natural systems that support plant, animal and human life.



Biodiversity: Open space includes habitats for terrestrial and aquatic native plants and animals to help ensure regional biodiversity is maintained.



Landscape Connectivity: The connectivity of habitat and ecological flows throughout the region (large patches of natural vegetation, linear corridors and stepping stones) is critical to the long-term viability of species and ecosystems.



Water Management: Open space helps protect source waters, reduce flood risk and encourage the recharge of aquifers by providing water storage, purification and infiltration opportunities.



Climate Change Adaptation and Mitigation: Open space helps reduce the impacts of floods by regulating storm water runoff, stabilizing micro-climates, reducing wind effects, limiting the urban heat island effect (hard surfaces in urban areas retain heat and causes air temperatures to rise) and mitigating other effects of climate change.



Air Quality: Open space improves air quality, reduces pollutants and reduces noise levels by providing buffers between activities.



Risk Mitigation: Open space can minimize environmental risks (e.g. through slope stabilization, floodway protection and repurposing contaminated sites).



Urban Forests: The tree canopy contributes to a healthy and attractive community. Benefits include shade, pollution mitigation, habitats and beauty.

WORKING LANDSCAPES

Open spaces that support economic activity.



Food Production: Open space provides opportunities for food production through rural agriculture and urban agriculture (e.g. community gardens, vegetable plots, bee keeping).



Fibre Production: Large areas of the region provide important fibre and woodlot opportunities.



Natural Resource Production: Aggregate and minerals are essential to the regional economy and are extracted in select locations.



Tourism: Scenic landscapes, recreational spaces, trails and scenic byways support an economically important tourism sector. Open space also functions as tourism destinations.



Waste Management: Open space waste management includes landfills, brownfield site reclamation and composting, recycling and biofuel facilities.

RECREATION + MOBILITY

Places we go for fun, engagement with nature and active living/mobility.



Recreation: Open spaces can accommodate active and passive sport and exercise, as well as outdoor recreational pursuits, such as running, cycling, canoeing/kayaking and walking.



Health + Wellbeing: Open spaces provide active living opportunities, access to fresh air and fosters spiritual wellbeing through outdoor contemplation and social connections for people of all ages and abilities.



Active Transportation: Well-connected, high quality trails and pathways encourage active transportation modes and provide for more sustainable transportation choices.



Learn and Play: Open space provides unique opportunities to learn about environmental processes and cultural and heritage features in addition to being integral to the mental and physical development of children.

COMMUNITY SHAPING

Places we live, work and play.



Community Shaping and Identity:

Open spaces and landscapes can define community edges, shape desired/sustainable settlement and development patterns and contribute to a sense of place.



Community Building and Celebration:

Open spaces acts as gathering spaces that facilitate social interaction. Spaces created and/or managed in partnership with citizens and organizations to foster a sense of identity and ownership. Public open space also provides opportunities for festivals, fairs and civic celebrations of all sizes.



Asset Quality: Well-designed parks, greenways and public spaces together with natural scenery create stimulating and beautiful communities and contribute to both cultural and natural heritage.



Public Comfort and Safety: Green spaces and green streets moderate temperatures and provide shelter. Trees and open spaces also support public safety by contributing to a vibrant public realm, instilling a sense of ownership and providing transitions between land uses. Well-designed open spaces can help create safer streets for pedestrians and drivers.

CULTURAL LANDSCAPES

Places that connect us to history and help define HRM's diverse culture.



Cultural and Historical Significance:

Cultural landscapes create a sense of identity and place. They connect the past with the present, help us understand cultural evolution and natural heritage, provide community character and represent a resource for economic development through tourism.



Aboriginal Significance: The First Nations and Aboriginal communities have had a fundamental role in the evolution of HRM's cultural landscapes from the numerous Mi'kmaq names, to the sites and artifacts that allow us to understand pre-contact unwritten history. The Mi'kmaq concept of Netukulimk, which celebrates the cultural and spiritual connection between the natural and human environment provides a valuable perspective through which to view the balance between conservation and development.

3

The Green Network

Halifax Regional Municipality is fortunate to have extensive, well connected, naturally vegetated and biodiverse landscapes. In comparison with other jurisdictions of comparable size and population, HRM is one of the most ecologically intact areas in the country. To maintain and enhance this open space network, this section defines objectives and provides direction. These directions will guide the application of the HGNP together with the implementation tools summarized in section 4.

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The final HGNP will refine the directions provided in this section to guide the planning, procedures, partnerships and decision-making processes to manage, improve and expand HRM's open space network. This direction is provided by theme area:

Ecology, Working Landscapes, Recreation + Mobility, Community Shaping and Cultural Landscapes.

Each of these theme areas contain the following:

Objectives: These are a series of directive statements tailored to the theme area that links the plan's vision and guiding principles with the directions. These objectives respect the Regional Plan's direction and reflect the results of the analysis, research and public engagement undertaken to create the HGNP.

Directions: This section provides initial directions tied to the objectives for each theme area. Each of these directions falls into one of the following categories:

- E** Elaborated in HGNP
- IPP** Informs policy and planning
- IEP** Informs existing processes
- DW** Direct future project work
- SI** Supports initiatives
- GD** Guides data

Maps: The maps provided in this section and their supporting data bases, work with the directions to inform the planning of the green network. **Map 6: Ecological Areas** highlights key directions for implementation as well as the significant areas to maintain and manage. Using map 6 as a foundation, **Map 7: Water Security Area, Map 8: Recreation Network** and **Map 9: Cultural Landscapes** highlight additional important areas and connections to define and manage.

Taken together, these objectives, directions, and maps will form the Green Network.

THE GREEN NETWORK



ECOLOGY

The interplay of ecosystems and human activity requires careful planning and management to balance competing uses. The HGNP will provide an implementation strategy to manage this balance, protect the health of critical ecosystems and ensure the long-term sustainability and health of HRM's open space network.

ECOLOGY: Objectives

Area	Objectives
Habitat, Biodiversity, Landscape Connectivity & Corridors	<ul style="list-style-type: none"> » To maintain existing landscape patterns, including large natural vegetation patches, well-vegetated riparian areas, regional corridors and habitat stepping stones » To recognize landscape and watershed connectivity that extends beyond jurisdictional boundaries through collaboration, inter-jurisdictional partnerships, integrated planning and land management » To minimize conflicts between wildlife and human uses of open space » To sustain habitats for rare species and at-risk species » To reconnect landscapes fragmented by development by identifying and maintaining the remaining green corridors and open space links and also by filling in critical gaps through remediation measures, if necessary » To preserve large vegetated patches from development encroachment, including remnant patches where continuous corridors no longer exist » To maintain important habitat connections » To facilitate wildlife movement throughout the region » To ensure HRM has a healthy and abundant forest
Sensitive Landforms	<ul style="list-style-type: none"> » To avoid development on steep slopes and easily disturbed soils that are sensitive and potentially hazardous » To reclaim disturbed slopes and pits, when appropriate » To identify and manage landforms which are susceptible to groundwater contamination and vulnerable to erosion and degradation » To identify and protect caves, cliffs, coastal dunes, barrens and flats and vernal pools
Water Quality & Quantity	<ul style="list-style-type: none"> » To consider groundwater carrying capacity when managing growth » To protect the quality and quantity of HRM's drinking water supply and quality » To preserve lake water quality for recreational activity
Riparian Areas & Wetlands	<ul style="list-style-type: none"> » To tailor riparian buffer setbacks to local conditions (wildlife corridors, headwater areas, slopes, ecological features etc.) based on their function, vulnerability, and importance » To restore connectivity by strategically reclaiming disturbed riparian areas and managing these areas as open spaces » To maintain the functional value of wetlands using the management principles of avoidance, minimization and replacement » To protect riparian areas and their ecological function from land loss, nutrient loading, harm to plant and animal life, and other threats
Flood & Sea-Level Rise Protection	<ul style="list-style-type: none"> » To prepare for the changing intensity and frequency of storm events and the associated risk of flooding » To limit the impact of sea level rise and storm surges on coastal areas » To regulate development to prevent land alteration and development in flood-prone areas and lands which are impacted by sea-level rise and erosion

ECOLOGY: Directions

The following section describes initial directions to apply the objectives described previously that will be further developed and refined in the HGNP.

Jurisdiction

- IPP** The Municipality does not have the jurisdiction to regulate provincial land but will collaborate with the province in ensuring a healthy and connected green network in HRM

Water Quality

- IPP** Develop source water protection strategies, as outlined in the Regional Plan. This can include establishing population thresholds in accordance with the carrying capacity of groundwater resources and collaborating with the Province on source water protection zones
- IEP** Implement a more comprehensive water quality monitoring as part of the watershed management program

Waterbody, Flooding and Riparian Area Protection

- DW** Update setback buffers and controls for wetlands, source waters, coasts and other riparian areas based on function, vulnerability and importance
- GD** Work with the Province and Federal government to update flood area mapping
- IPP** Manage development activity around lakes to preserve recreational activity

Landform Protection

- GD** Use the information available on vulnerable and rare landforms and apply it during the decision-making and land use planning processes; ensure it is kept up-to-date
- IPP** Investigate options and determine the feasibility of different approaches to manage, treat and potentially reclaim disturbed slopes and pits, if possible
- IEP** Restrict development on steep slopes and easily disturbed soils

Landscape Connectivity (see Map 6)

- E** Continue to identify important landscape and wildlife corridors through data collection, analysis and consultation with the province to inform secondary planning, master planning and transportation corridor planning processes
- IPP** Ensure the width of landscape corridors is related to their function and importance and that these corridors are respected during the planning process
- IPP** Preserve large patches of intact natural vegetation by focusing development on the edges of patches, without eroding the patches, promoting a compact form and clustering settlements to preserve animal movement and habitat
- IEP** Partner and collaborate with other orders of government to consider wildlife connectivity in the location and design of roadways, bridges and interchanges and avoid penetrating or bisecting large patches of intact vegetation with roads
- DW** Collaborate with land owners to reconnect fragmented landscapes with crossing structures (wildlife overpasses and underpasses)
- IPP** Enhance the ability of landscapes to adapt to climate change by promoting the connectivity of wildlife and ecological flows over time (e.g. species' range shifts)

Urban Forest

- SI** Prioritize and implement the Urban Forest Master Plan and expand it to cover the urban service area
- SI** Increase and improve the urban forest canopy through planting and maintenance regimes
- SI** Develop supplementary Urban Forest Master Plans for priority areas outside of the Regional Centre and consider mechanisms to retain trees on private property

Further Planning

- IPP** Manage development and land use in areas with a high overlap of ecological values
- IPP** Ensure master planning and site planning account for the larger ecological network
- IPP** Incorporate landscape and wildlife corridor analyses, such as moose movement, into planning initiatives

Partnerships

- GD** Collaborate with other regional municipalities, the province and other organizations on data sharing, research and mitigation techniques (e.g. setbacks, climate adaptation policies and biodiversity)
- SI** Look for opportunities to engage and collaborate with land conservation organizations on planning, stewardship and management of open spaces
- IPP** Collaborate with non-government organizations, other orders of government and Aboriginal communities on open space planning and management.
- IPP** Collaborate with the Department of Natural Resources to identify and implement local biodiversity actions
- IPP** Support the Department of Natural Resources in implementing The Path we Share, Our Parks and Protected Areas and other legislation
- IPP** Align population and habitat priorities with the province

Legend:

- E** Elaborated in HGNP
- IPP** Informs policy and planning
- IEP** Informs existing processes
- DW** Direct future project work
- SI** Supports initiatives
- GD** Guides data

ECOLOGY: Ecological Areas Map

The **Green Network Component: Ecological Areas** (see **Map 6**) identifies several key components that are central to the regional open space system and need careful management to preserve the health of HRM's ecosystems. These include:

- » **Parks and other Managed Areas:** Lands formally designated for open space management by the Municipality, the Province, or by the Federal Government.
- » **Other Regulated Lands:** Include riparian buffer areas, large wetlands and wetland complexes, salmon habitat buffers and other lands protected from development by regulation.
- » **Areas of High Environmental Overlap:** High value areas where their loss would have a detrimental impact on the natural functioning of the land.
- » **Core Areas and Corridors:** Include very large well connected patches of natural vegetation and wildlife corridors through more altered landscapes. These provide essential functions including protecting biodiversity, soils and water. Reduction in these core areas and corridors could lead to substantial impacts and loss of overall regional landscape function. Corridors listed as essential are critical to the maintenance of connectivity both within the HRM and to adjacent municipalities. Those listed as important provide more localized connectivity and redundancy. The functionality of all corridors should to be maintained and considered in future development.

Conflicts and Opportunities

Also noted on the map are locations of potential conflict between development and ecologically important areas, indicated as a red circle. In these locations, future development and ecological open space functioning need to be considered and evaluated together to determine the best outcome. The size of the red circle indicates the general size of the area impacted. In contrast, the blue circles indicate areas of opportunity where ecologically important open spaces can offer passive recreational opportunities close to settlement areas. Like the red circles, the size of the blue circles indicates the general overall size of the opportunity area.

All areas on the Green Network have considerable value and should be maintained wherever feasible. The following are some of the major ecological strategies of the network. Refer to **Map 6** for key strategic locations, indicated with a number where appropriate.

Biodiversity and Landscape Connectivity Strategies:

- 1 Ensure landscape matrix connectivity by working with The Province and other landowners to maintain essential elements within large unfragmented patches of natural vegetation
- 2 Work with The Province and other land owners to link protected areas with secure corridors of natural vegetation
- 3 Maintain regional wildlife corridors from the HRM to adjacent municipalities
- 4 Maintain and enhance connectivity to peninsulas
- 5 Maintain stepping stones and corridors of natural vegetation across and around developed areas
- 6 Maintain and enhance the remaining connectivity to the Chebucto Peninsula through voluntary/collaborative tools or land acquisition outside of the development process
- 7 Look to provide wildlife crossings in key locations
- 8 Maintain and enhance the urban forest and natural urban corridors
- 9 Work with the Province to coordinate mutual objectives for biodiversity, connectivity and visual quality through regional landscape planning and land management

Water Quality Strategies:

- 10 Protect and enhance riparian corridors throughout the region
- 11 Maintain large patches of natural cover in source water protection areas
- 12 Protect wetlands throughout the region

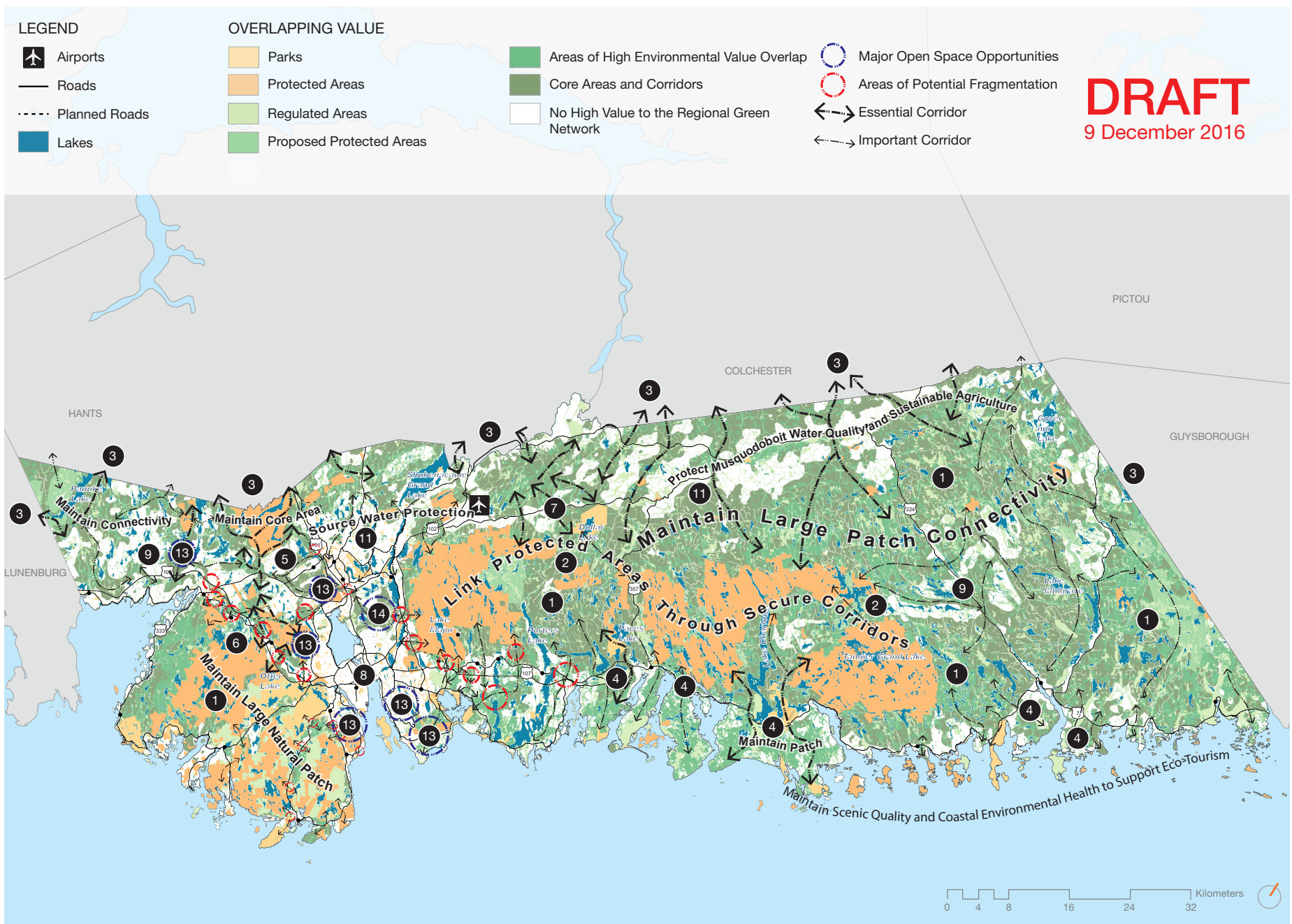
Eco-Recreational Strategies:

- 13 Manage important locations with both ecological importance and passive recreational opportunities close to settlement areas
- 14 Designate open spaces that shape and provide character to communities

Community Resilience Strategies:

- 15 Protect wetlands, floodplains, shorelines, forests and other areas that provide flood and sea rise resilience

Map 6: Green Network Component: Ecological Areas



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ECOLOGY: Water Security Areas Map

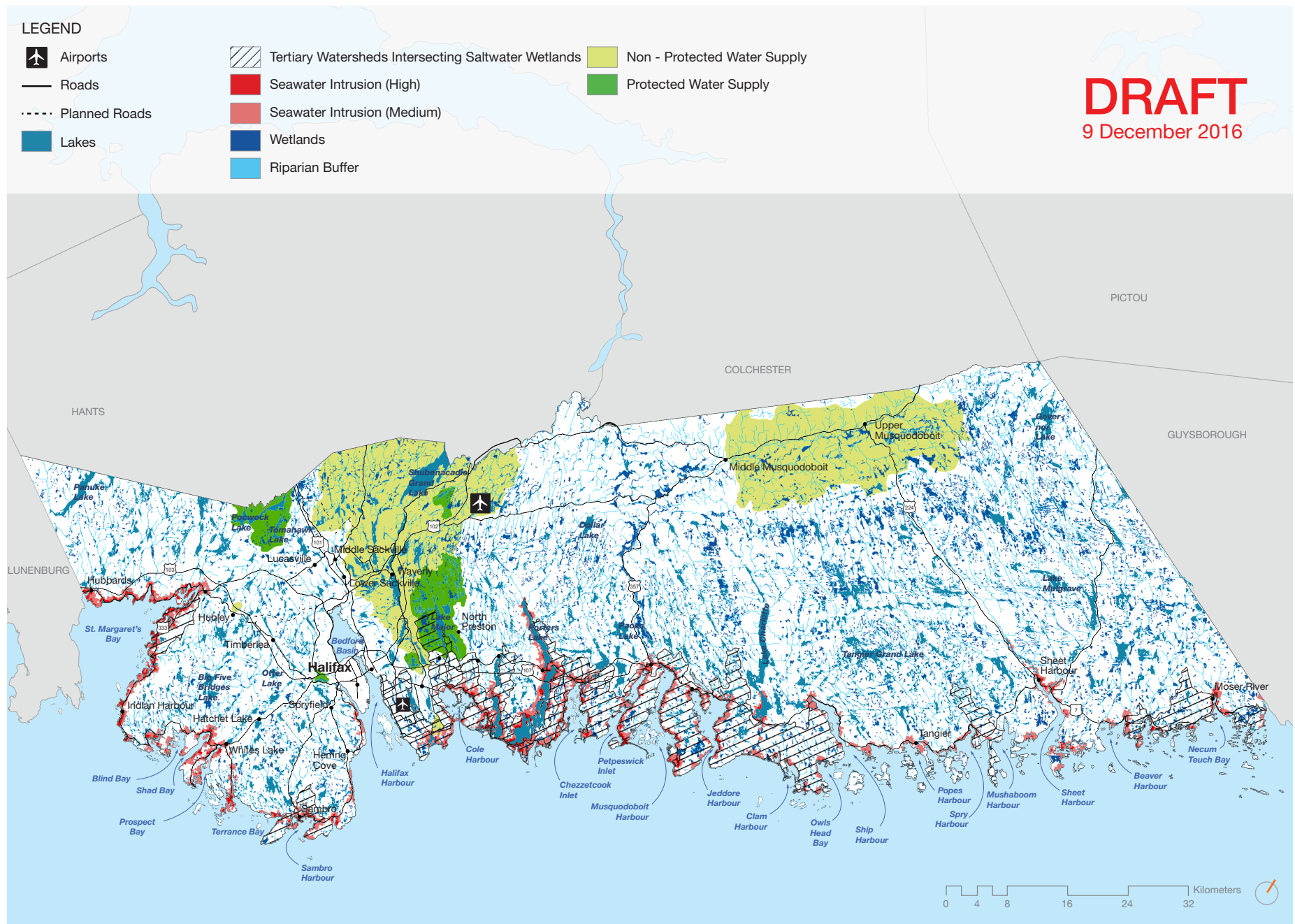
The protection of drinking water sources is essential to the health of residents. While some source water areas are formally protected, others are not. The Regional Plan emphasizes the importance of protecting water resources to preserve the potable water supply, wildlife habitats, recreational enjoyment and aesthetic value. Specifically, the Regional Plan directs further watershed studies and a water quality monitoring protocol.

The **Green Network Component: Water Security Areas** (see **Map 7**) shows areas where water management is a high priority and relates to the Water Quality section under Ecology Directions (page 29):

- » **Water Supply Areas:** Provide the source drinking water for a variety of communities throughout the region (of which only the Protected Water Supply Areas have existing formal protection)
- » **Wetlands and Riparian Buffers:** Identifying areas which are most sensitive to groundwater contamination and runoff.
- » **Seawater Intrusion Areas:** Regions of coastal aquifers where the connection between groundwater and seawater lead to an increased likelihood of contamination of drinking water sources with salt water.
- » **Tertiary Watersheds:** Intersect Saltwater Wetland Estuaries (highly sensitive regions which support great biodiversity)

This map helps to define areas that may require a more focused approach to watershed planning, additional regulations and further consideration and analysis for land-use and development applications to limit impacts on water quality and sustainability.

Map 7: Green Network Component: Water Security Areas



WORKING LANDSCAPES

Natural resource development remains a foundation of HRM's economy, especially in rural areas. The Regional Plan (2014) recognizes that the region's economy is multifaceted and requires the balancing of competing land-use interests. This includes balancing economic interests with ecological interests, especially considering the importance of industries including mining, forestry, agriculture, industrial development and tourism that form part of the green network.

It is also important to note that a large amount of the region's working landscapes are provincially-owned land and as a result, are outside of Municipal jurisdiction. HRM will work with the Province to support these industries while advancing mutual, interconnected ecosystems-based planning objectives. Collaboration and data sharing across all orders of government is important in ensuring the economic and ecological health of the green network.

WORKING LANDSCAPES: Objectives

Area	Objectives
Mining	<ul style="list-style-type: none"> » To support the ability of the mineral resource extraction industries to access source materials for aggregate and mining operations » To promote site development, operation and closure/decommissioning practices that respect ecological, cultural, recreational and community values » To maintain a suitable separation distance from incompatible land uses
Forestry	<ul style="list-style-type: none"> » To support the development of sustainable forestry and agroforestry activities that provide economic benefits in rural areas and function as part of the open space network through sensitive land-use planning and integration » To collaborate with the Province on areas of mutual interest to encourage forestry management and harvesting practices that consider biodiversity, landscape connectivity, watershed management, recreation and the maintenance of visual resources
Agriculture & Food Security	<ul style="list-style-type: none"> » To strengthen the local food system » To manage natural systems which support food production » To support the growth of a strong and diverse agricultural sector » To promote urban agriculture » To reinforce sustainable wild food harvesting practices » To collaborate with the province to promote sustainable agricultural practices that consider biodiversity, landscape connectivity, watershed management and recreation
Tourism & Scenic Resources	<ul style="list-style-type: none"> » To support scenic resources, cultural landscapes and traditional land-uses that underpin a thriving tourism industry » To promote a green network of natural, recreational, cultural and agrarian landscapes that provide a range of tourism opportunities
Harbours, Land Extensive Industries & Linear Infrastructure	<ul style="list-style-type: none"> » To manage the long-term viability of efficient working harbours » To incorporate green network objectives into the design of industrial and commercial parks to improve the balance between economic development and conservation » To integrate green network objectives into the design of major transportation corridors » To allow for uses that meet HGNP objectives within utility corridors so long as they do not interfere with the utility corridor functioning

WORKING LANDSCAPES: Directions

The following section describes initial directions to apply the objectives described previously that will be further developed and refined in the HGNP.

Jurisdiction

IPP The Municipality does not have the jurisdiction to regulate provincial land but will collaborate with the province in ensuring viable and productive working landscapes

Mineral and Aggregate Extraction

IPP Direct residential uses away from mineral and aggregate extraction sites

DW Work with other orders of government to update siting and approval processes for new mining operations

Forestry

IPP Collaborate with the Department of Natural Resources to discuss collaborative planning methods and processes to support the forestry industry and to plan for its long-term sustainability

Food Security

DW Remove barriers to growing, selling and processing food in public open spaces

IPP Encourage urban agriculture, including community gardening, farmers' markets, edible landscaping, etc.

Agriculture

DW Work with the Department of Agriculture to promote farming activities and wild food harvesting

IPP Update land-use plans and regulations to ensure agriculture uses are able to develop, expand and adapt to changing market opportunities, such as agri-tourism, alternative products or innovative techniques.

IPP Retain prime farmland, when possible, from conflicting/infringing uses and institute conservation measures to ensure continued use.

Agriculture (continued)

DW Explore other opportunity sites for food production such as rooftops, community gardens, edible landscaping, etc.

IPP Manage natural ecosystems that sustain plant and animal life and contain important components of the local food system such as pollinator, fishing and wild food habitats.

IPP Protect fishing areas from conflicting/infringing uses, particularly those related to fisheries infrastructure (e.g., processing, distribution, storage) and activities that could negatively impact coastal and marine ecosystems.

DW Encourage the protection of coastal and marine ecosystem health, including encouraging sustainable fishing practices.

IPP Consider impacts on food production and supporting natural systems when reviewing proposed uses or changes in the green network through new policies and standards.

DW Strengthen the local food system by enabling and promoting food related activities in the green network from production to retail to composting. Factor opportunities for food production and food access into the design of new and updated parks and open spaces.

Tourism

DW Support nature-based tourism through an improved trail, park and water route network

DW Minimize the visual impacts of new developments and forest harvesting on scenic resources

IPP Preserve important cultural landscapes

Harbours

IPP Ensure working harbours are buffered from surrounding land uses

IPP Consider climate change impacts to working harbours

Land Extensive Industries

IPP Ensure commercial and industrial parks respect HGNP objectives during the planning and design process

Linear Infrastructure

IEP Integrate green network priorities into the design of major roads through their design standards

SI Work with utility companies to accommodate green network functions in utility corridors, including the urban forest

SI Align with HRM's Integrated Mobility Plan to ensure that the transportation network contributes to the green network

Legend:

- E** Elaborated in HGNP
- IPP** Informs policy and planning
- IEP** Informs existing processes
- DW** Direct future project work
- SI** Supports initiatives
- GD** Guides data

RECREATION + MOBILITY

Open spaces are critical to the ecological, community and economic health of the Region. The public desires an increased emphasis on nature-based park and open space experiences along with ecological conservation. Connected parks, wilderness areas, trails, greenways (a strip of land near/within an urban area set aside as an important recreation and/or environmental connection) and street corridors provide a wide range of interconnected recreational and active transportation opportunities within reach of HRM's communities. Parks system planning is needed to ensure this space continues to meet the recreational needs of the current and future population of HRM's urban, suburban and rural areas.

RECREATION + MOBILITY: Objectives

Area	Objectives
Multifunctional & Connected Parks & Open Space	<ul style="list-style-type: none"> » To improve access to a range of active and passive outdoor recreation and mobility opportunities, include waterways, that reflect the distinct needs and settlement patterns of urban, suburban and rural communities » To improve the connectivity and sustainability of HRM's network of parks, corridors and natural areas as a more integrated, higher-functioning system » To improve access to nature-based recreation and wilderness areas according to Provincial strategies near major settlements with appropriate amenities that complement conservation
Natural Areas & Ecosystem Integration	<ul style="list-style-type: none"> » To manage environmentally sensitive areas and natural systems of high ecological value, through a system of parks, lands and waters that support and sustain biodiversity and habitats » To provide a high degree of stewardship for public open spaces to realize multiple ecological service benefits » To enhance parks and greenways that reinforce and shape the character and identity of communities by providing spaces that build social cohesion and cultural identity » To promote resiliency to climate change impacts by promoting adaptation and mitigation opportunities » To sustain areas of natural heritage, rural and coastal character and identity
Public Realm Programming, Management and Planning	<ul style="list-style-type: none"> » To establish affordable levels of service with the highest impact in meeting resident needs and conservation objectives » To plan HRM's multi-year parks program strategically to ensure investment and priorities are tied to clear planning outcomes » To achieve multiple open space and regional planning objectives through parks and open space investment and public land management

RECREATION + MOBILITY: Directions

The following section describes initial directions to apply the objectives described previously that will be further developed and refined in the HGNP.

Jurisdiction

IPP The Municipality does not have the jurisdiction to regulate provincial land but will collaborate with the province in ensuring a connected recreation and mobility network,

Parks Planning Process

IPP Support decision-making through an improved park and open space classification system, acquisition guidelines, service level standards, community needs assessments and parks catchment area mapping and analysis

IPP Prepare detailed parks system plans for sub-areas within the HRM that highlight community and local park priorities. Ensure and demonstrate the alignment of these park system plans with the HGNP and other priority plans

DW Review poorly functioning or low scoring open spaces to determine whether to repurpose or release

IPP Develop a consistent and integrated approach to corridor planning that coordinates recreational trails with active transportation to create a system that considers both recreation and mobility needs.

E Promote, celebrate and enhance HRM's waterways given their importance in relation to recreation, culture and transportation

DW Maximize under functioning beaches and waterfronts through park design and infrastructure investment

IPP Develop Master Plans for all regional-scale parks and greenways and other significant parks and open spaces to guide land management, programming and conservation as well as the multi-year planning and investment strategies for the HRM Regional Parks program

Parks Planning Process (continued)

IPP Define and consider natural heritage, rural and coastal character and identity in future local municipal planning strategies that follows the direction of the future Culture and Heritage Priorities Plan

E Collaborate with the provincial and federal governments on parks system planning

IPP Collaborate with the province's planning effort for protected areas and parks

Connectivity

DW Improve connectivity between Municipal parks and greenways with Provincial parks and appropriate wilderness areas to enhance access to nature and work with the Province to identify areas with the highest opportunity to access by foot, bike, or transit.

IPP Prepare a comprehensive Corridor Plan that includes:

- » An inventory and mapping of existing formal and informal recreation trails and active transportation corridors
- » Priorities for corridor connections to link residential areas with key destinations
- » The integration with major regional trail systems
- » A promotional program for the regional parks and corridor system.

DW Focus investment on filling gaps in the park system by acquiring new connections at strategic points with the greatest service delivery, conservation and/or community-shaping impact

DW Focus on key corridor links within and between major settlement areas and within the regional greenway system to connect more people by foot and bicycle to major destinations

Connectivity (continued)

SI Ensure the HRM Integrated Mobility Plan addresses active transportation as a key component of the green network in addition to the transportation network

IEP Establish requirements for greenway connectivity in development agreements and subdivision plans and revise the quality of land and usable land definitions accordingly

DW Identify and prioritize regionally significant high-value open space lands and waters for their potential as regional parkland or for greenway connectivity

DW Consider shoreline access and trails along water routes, if appropriate

Legend:

- E** Elaborated in HGNP
- IPP** Informs policy and planning
- IEP** Informs existing processes
- DW** Direct future project work
- SI** Supports initiatives
- GD** Guides data

Investment

- E** Adopt a strategic decision-making approach to prioritize park and open space assets
- IEP** Acquire adaptable and multipurpose lands to meet the evolving needs of residents and community life cycles
- IEP** Focus acquisition on filling gaps, creating flexible spaces, conserving representative land and contributing to existing public open space holdings
- DW** Improve public access to lakes, coastal areas, beaches and water routes
- IEP** Acquire new parkland that can replace or consolidate small existing parks that are under-functioning
- IEP** Focus on developing and improving large natural areas and connected parks and open spaces rather than small isolated parcels
- DW** Update the Subdivision Bylaw to implement the objectives of the HGNP
- IEP** Consider mechanisms in addition to subdivision to help fund and improve parkland including any necessary Charter amendments

Integrating Ecology and Parks Planning

- IPP** Manage parks, greenways and other open spaces considering their eco-services function
- IPP** Develop environmental and cultural stewardship criteria for parks and open spaces
- IPP** Protect well-vegetated riparian corridors from development
- IPP** Build a system of stepping stones (patches of suitable habitat to help support core areas and allow species to move between areas) within and surrounding all major settlement areas

Integrating Ecology and Parks Planning (continued)

- E** Recognize the role of parks and natural areas in managing climate change
- DW** Establish ecological standards and priorities for green streets and trails
- DW** Promote the awareness of dark night skies and support dark sky protection efforts
- DW** Collaborate with land conservation organizations on parks planning and potentially operations and maintenance

Open Space Classification

- E** Establish an approach to the organization of open space to shape a network that reflects multiple landscape scales and settlement types as follows:
 - » A region-wide open space system that includes regional scale greenways and parks that provides sustainable public access to natural systems with passive recreation opportunities and serves an important ecological and cultural function.
 - » A community-wide open space system that serves the public with community scale greenways and parks that are independently sustainable but also provide connections to key points in the Regional system
 - » A local and walkable open space system that serves the public with neighbourhood scale greenways and parks that are independently sustainable but also provide connections to key points in the community and region wide system.

Open Space Classification (continued)

- DW** Revise the Parks Classification System and service standards and guidelines to better reflect the HGNP to guide land acquisition, divestment, park programming and land management with consideration for:
 - » A range of open spaces appropriate to different settlement types, service needs, access (walkability or drive time), population density and ecological and cultural values
 - » Service levels for park distribution that reflect settlement types
 - » A parks system that is linked by greenways, civic open spaces, and natural areas
 - » A comprehensive land analysis process to select and prioritize land based on natural environment conservation, recreation and cultural indicators
- IEP** Prioritize environmental stewardship principles in the siting, design and development of parks, corridors and public lands
- DW** Create Regional Parks, as resources and circumstances allow, by focusing first on those priorities identified in the Regional Plan
- DW** Conduct an open space and service analysis to determine the need for new regional parks and/or greenways based on a gap assessment and high value areas in the following locations:
 - » Purcell's Cove Backlands
 - » Dartmouth Eastern Shore
 - » Halifax Peninsula North





RECREATION + MOBILITY: Recreation + Mobility Network Map

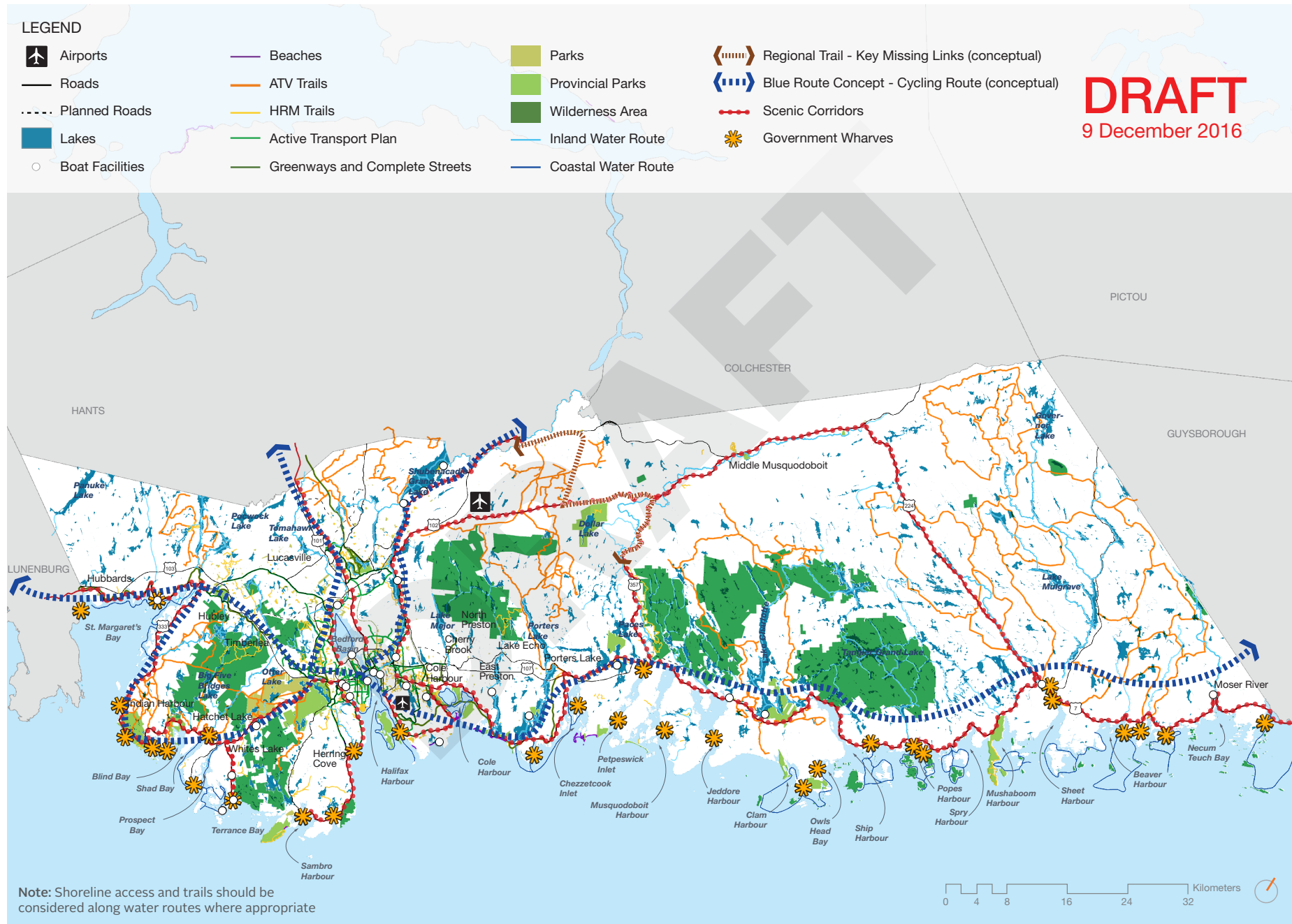
The Regional Plan emphasizes the contribution outdoor recreation provides to citizen's quality of life by offering a diversity of active and passive recreational opportunities and experiences.

The **Green Network Component: Recreation + Mobility Network** (see **Map 8**) will be the basis for a more refined map in the final HGNP that integrates with active transportation planning and highlights additional regional recreation routes, such as water routes. Since the network map consolidates recreation information from multiple HRM plans, policies and datasets, it helps define and highlight the overall recreation network. A recreation network map will allow for future local planning and design initiatives to consider their place within an integrated network to inform their further detailed planning and concept work.

Specifically, this network map illustrates the high-level network and access points in the region. These include greenways, trails, parks, wilderness areas, boating facilities, wharves, beaches, publicly accessible shorelines, active transport plan routes and roads with good scenic views. Water routes are also shown; shoreline access and trails should be considered for water routes where appropriate. The network map also represents a new (high level) conceptual regional trail and (high level) conceptual cycle routes. Land-use decisions must consider this existing and future recreation and mobility network while balancing motorized and non-motorized recreation trails. New opportunities for residents and visitors can be achieved by linking gaps to further build out this network.

Map 8: Green Network Component: Recreation + Mobility Network

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9 December 2016



COMMUNITY SHAPING

Community Shaping refers to the purposeful identification and inclusion of natural and man-made features that provide a community its unique identity and character. These include interconnected residential neighbourhoods; culturally significant sites and landscape features; recreational and conservation open spaces; public destinations and amenities; and places to meet and socialize. Well-shaped communities incorporate connectivity through paths, greenways, bike routes, trails and links to parks and adjacent green spaces. When open spaces shape communities, it creates stronger communities anchored in place and connected with nature.

COMMUNITY SHAPING: Objectives

Area	Objectives
Regional Planning & Urban Growth Management	<ul style="list-style-type: none">» To ensure natural corridors and related connectivity is considered when defining urban boundaries and growth areas» To maintain the character and distinctiveness of rural communities
Serviced Urban Communities	<ul style="list-style-type: none">» To use corridors and other green spaces to give form and boundaries to neighbourhoods» To prioritize the conservation of valuable natural and cultural heritage when planning new neighbourhood development» To incorporate a range of recreational opportunities and connectivity to support healthy, active living» To encourage existing neighbourhoods to maintain and restore natural ecological functions and natural corridors
Rural Centres	<ul style="list-style-type: none">» To ensure that rural centres can develop in harmony with the natural constraints and opportunities afforded by their location» To ensure that the function and form of rural centres meet the needs of residents for recreational opportunities, social interaction, and healthy, active living» To ensure that rural centres retain their unique identity and character and that this is achieved with respect to the cultural and economic history of the area» To cluster rural housing in centres to minimize their impact on the natural environmental function» To support resource-based economic activity while actively conserving natural and scenic resources for tourism and recreation opportunities» To maintain natural corridors and connectivity between natural areas

COMMUNITY SHAPING: Directions

The following section describes initial directions to apply the objectives described previously that will be further developed and refined in the HGNP.

Jurisdiction

IPP The Municipality does not have the jurisdiction to regulate provincial land but will collaborate with the province to realize community shaping objectives throughout the region.

Planning Tools

IPP Review the location and role of existing urban reserves and urban settlement boundaries in concert with the HGNP

DW Explore the feasibility of an environmental reserve zone and the necessary Charter amendments needed to allow HRM to dedicate land for environment conservation during subdivision.

IPP Update the conservation design policies to recognize identified conservation areas and corridors

DW Use conservation-based Land Suitability Assessments for all new greenfield developments

IPP Update rural policies and zoning regulations to reduce conflicts between resource development, housing and tourism while supporting rural development and distinct village character and form

Infrastructure

SI Incorporate the principles of green infrastructure into community, road, infrastructure and open space design

Local Planning

IPP Use the maps in the HGNP to identify and plan for areas of conservation and recreation and to inform land-use planning decisions by identifying important ecosystems, cultural assets, landscape elements and habitats before development commences

IPP Ensure master planning in growth areas considers corridors, environmental and heritage resources, visible community boundaries and public amenity

DW Expand the role of regional parks as a tool for shaping urban boundaries

IPP Consider the green network, parks planning (including acquisition) and conservation planning in local municipal planning strategies or other policy documents

IPP When planning new subdivisions, identify how the proposed development is integrated within the larger recreational network and preserves landscape connectivity.

IPP Locate and design parks and open spaces to connect with complete streets, greenways, active transportation routes and other networks.

IPP Identify and protect strategic parcels, blocks and corridors that increase landscape and/or recreational connectivity, provided opportunities for stormwater control, promote food production and encourage play and learning from development

IPP Integrate undisturbed land in new development to promote biodiversity

IPP Encourage the remediation and redevelopment of brownfield sites

Alignment with The Regional Plan

IPP Review and update policies that encourage development within centres to consider open space objectives identified under the HGNP

IPP When reviewing or revisiting the Regional Plan, ensure it respects areas of ecological importance, water security areas, recreational networks and cultural landscapes, as shown on maps 6 through 9

Legend:

- E** Elaborated in HGNP
- IPP** Informs policy and planning
- IEP** Informs existing processes
- DW** Direct future project work
- SI** Supports initiatives
- GD** Guides data

CULTURAL LANDSCAPES

HRM is characterized by a unique and diverse landscape mosaic of land and water and by a complex and multi-faceted history of human habitation dating back over 10,000 years. This mosaic of land, sea, lakes and rivers contains important cultural landscapes that reflect the land-use and occupancy characteristics of the original Aboriginal peoples of the region and those of the varied ethnicities that settled in the region since the 19th century. Each community of interest has brought distinctive elements to bear upon the land. These elements, often in complex combination, form the cultural landscapes that the citizens of HRM value and wish to maintain for the benefit of future generations.

The protection and conservation of the intrinsic and characteristic value of each of these resources is an important component of the HGNP.

Engagement and research illustrated a strong concern for the conservation of the unique sense of place in communities at all scales across HRM and particularly for the special character of the urban and rural landscapes.

CULTURAL LANDSCAPES: Objectives

Area	Objectives
People and the Land	<ul style="list-style-type: none">» To recognize that culture and identity are intimately connected with our relationship to the land, including members of HRM's Aboriginal communities» To prioritize the conservation and celebration of valued cultural landscapes in the design and management of open spaces and developments» To proactively identify, inventory and evaluate potential cultural landscapes, through an iterative process involving specific studies and land-use planning processes» To ensure that the function and form of the varied components of the green network support and foster a sense of identity and linkage to place» To encourage neighbourhoods to maintain and celebrate their cultural landscapes
All Stories	<ul style="list-style-type: none">» To comprehensively engage and research how landscapes are valued by those associated with them, in recognition that citizens are the experts in this valuation» To ensure that all perspectives and voices are heard when considering cultural landscapes and initiatives that will impact them» To strengthen engagement and connection with Mi'kmaq and other founding cultures to better reflect their traditional use, values and connection to the land
Best Practices	<ul style="list-style-type: none">» To build awareness, understanding and respect for the importance of cultural landscapes through the adoption of best practices in research, education and management» To promote cultural landscapes as a means of strengthening connections to and stewardship of the land and improving the visitor experience
Rural Centres	<ul style="list-style-type: none">» To cluster rural development in definable centres to maintain their historic development form and distinct nature» To identify and maintain landmark cultural landscapes that define rural centres» To foster sustainable rural development through multi-functional open space conservation
Urban Centres	<ul style="list-style-type: none">» To identify and maintain landmark cultural landscapes that contribute to the identity of urban centres and have shaped these communities

CULTURAL LANDSCAPES: Directions

The following section describes initial directions to apply the objectives described previously that will be further developed and refined in the HGNP.

Jurisdiction

IPP The Municipality does not have the jurisdiction to regulate provincial land but will collaborate with the province to manage cultural landscapes.

Cultural Landscape Planning

SI Adopt the Cultural Landscape Framework Study as the basis for future cultural landscape study in HRM and as a key component of the Culture and Heritage Priorities Plan (CHPP).

DW Develop conservation plans for potential cultural landscapes identified through the HGNP by employing best practices for the management of cultural studies contained in the Cultural Landscape Framework Study.

IEP Retain and expand the Experts Working Committee, developed through the Cultural Landscape Framework Study, as a body of expertise and knowledge to inform future cultural landscape work.

SI Utilize the Culture and Heritage Priorities Plan to build upon the Cultural Landscape Framework Study to develop a Cultural Landscape Program.

Partnerships

IEP Strengthen the relationship with representatives of the Mi'kmaq and Aboriginal communities and engage to test and expand on the findings of the Cultural Landscape Framework Study.

IEP Maintain the dialogue with the Provincial Department of Communities, Culture and Heritage as they institute changes to the Heritage Property Act and associated programs affecting cultural landscapes.

Traditional Skills

DW Recognize culturally/historically significant places in relation to food and traditional skills when evaluating cultural landscapes.

Cultural Landscapes Framework

The Cultural Landscapes Framework study discusses the theory and practice for the identification, evaluation and management of cultural landscapes and outlines the methodology used to develop a First Phase Inventory of Potential Landscapes in the HRM.

Legend:

- E** Elaborated in HGNP
- IPP** Informs policy and planning
- IEP** Informs existing processes
- DW** Direct future project work
- SI** Supports initiatives
- GD** Guides data

CULTURAL LANDSCAPES: Cultural Landscape Elements and Priority Areas Map

The Regional Plan emphasizes the importance and diversity of HRM's Cultural Landscapes. Currently, HRM does not have a comprehensive inventory of cultural assets or a program for research into the significance and character of cultural landscapes.

Methodology for Identification of Potential Cultural Landscapes

Criteria for the selection and preliminary prioritization of areas of potential cultural landscape value are drawn from Parks Canada's Standards and Guidelines for the Treatment of Cultural Landscapes and from related Standards developed by English Heritage.

These criteria focus broadly on landscapes that:

- » Reflect or display technologies or social organization typical or representative of the history of the HRM
- » Display an association with works of art, literary or pictorial that enhance an appreciation of the history of the HRM
- » Display an association with a distinctive way of life, prehistoric or modern through evidence that may be visible or invisible
- » Display associations with folklore, events or traditions that define the identity of a community
- » Reflect spiritual and/or religious associations, sometimes related to specific topography

A full description of the Methodology for Preliminary Cultural Landscape Identification together with the Criteria for Prioritization of Selected Sites may be found in the Cultural Landscape Framework Study prepared as an adjunct to the HGNP.

A Cultural Landscape Framework Study was undertaken as part of the HGNP to provide background material on theory and practice, develop baseline data, and make recommendations for next steps for further identification, conservation and management of cultural landscapes. The Culture and Heritage Priorities Plan (CHPP), commencing in 2016, will develop a regional inventory and cultural landscape program. Future secondary planning initiatives will further support and build upon this knowledge and guidance.

A preliminary mapping of cultural landscape elements and priority areas for further study is shown on **Map 9**. These areas will be further developed and investigated as part of the CHPP including the following features:

Categories of Cultural Landscape Elements

Sites of Worship: Mi'kmaq spiritual sites, cemetery, church, convent

Indigenous Use: Mi'kmaq use and occupancy

Ethnic Settlement, Re-settlement: Acadian, British Isles (American English, Scots, Irish), Afro American United Empire Loyalists, Afro Caribbean Maroon, French Protestant, Islandic

Military Use: Fortifications, docklands, Department of National Defence lands

Transportation: Trail, historic road, canal, railway, bridge, lighthouse

Urban Landscapes: Main street commercial/residential, residential subdivision, CMHC garden residential, park, commons, public square, university, institutional, community centre, community museum

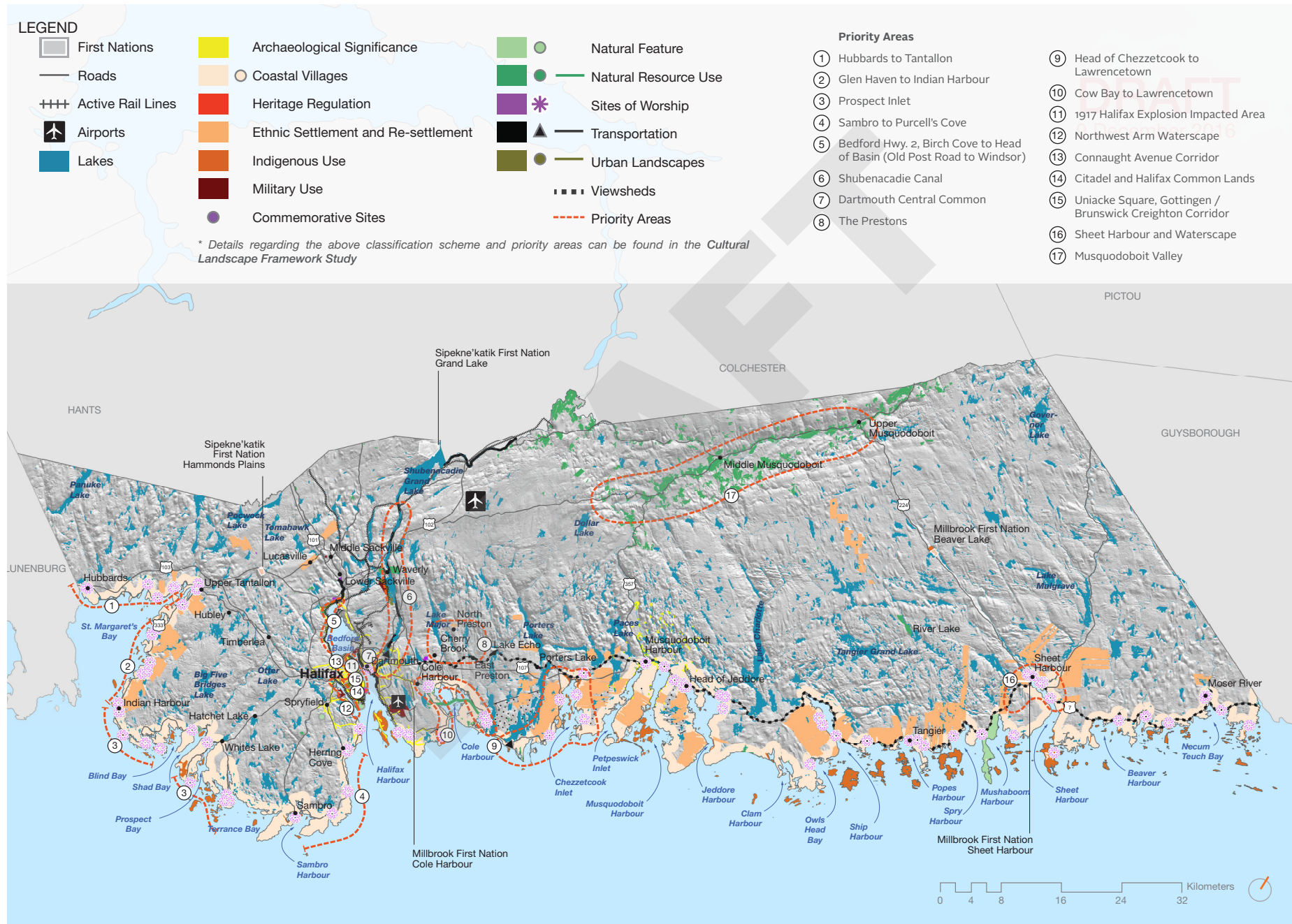
Natural Features: Beach, barriers

Regulated Heritage Sites: Heritage Property Act Site, Heritage Conservation District, Peggy's Cove Preservation Area, Special Places Act Site, Viewsheds

Archaeological Significance: Archaeological site

Commemorative Site: Monument

Map 9: Green Network Component: Cultural Landscape Elements and Priority Areas

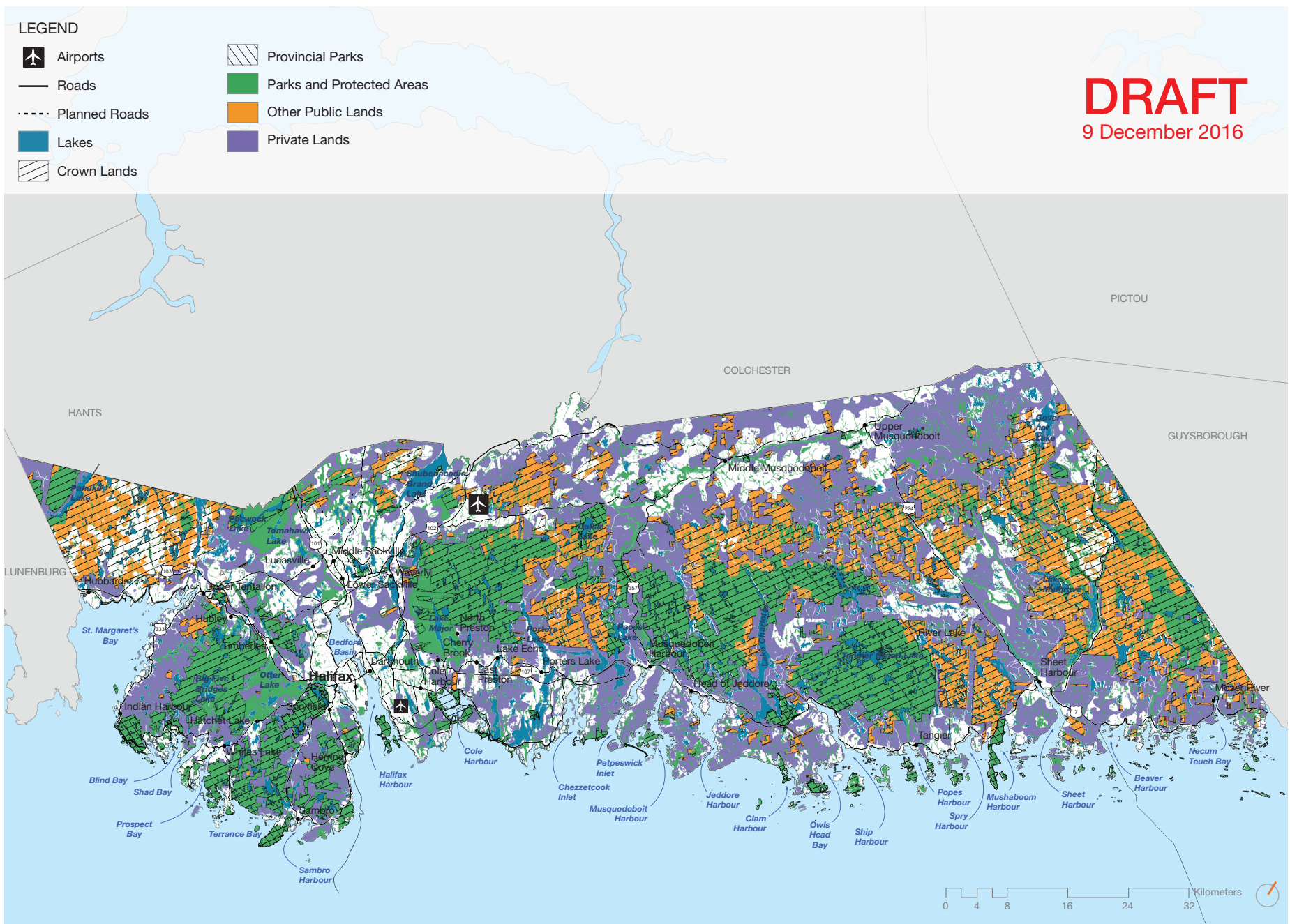


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Implementation

In the final HGNP, the implementation section will define and outline the application of specific tools to create a multifunctional open space network for HRM. At this time, this section provides a high level overview of how the HGNP will be implemented based on land ownership. Open spaces are found on Municipal, Crown and private lands throughout HRM (see **Map 10**). Because of these different owners, coordinated planning and stewardship efforts are required in order to maximize the public and private benefits derived from all land.

Map 10: Green Network Tenure





Publicly Owned Land

Municipal Land Planning and Management

Coordinated decision-making across HRM departments is essential in order to ensure initiatives are complementary and not conflicting with one another. Greater effort is needed to ensure the objectives of each sector are considered in the planning processes that impact open spaces. Land-use planning, transportation planning and open space planning need to be carried out in an integrated manner. Land-use planning at all scales, from broad scale regional planning to subdivision planning to site design, should incorporate HGNP outcomes wherever feasible. A connected green network is far easier and less expensive to achieve if it is considered before development. Both regulatory and voluntary approaches to open space conservation will be needed to implement the HGNP.

Specifically, the HGNP will be implemented through a variety of tools and partnerships. These include local municipal planning strategies to identify and clearly delineate the location, extents, programming and network connections for key components of the green network. In addition to municipal planning strategies, further priority planning can work towards strengthening key components and facets of the open space network. Both types of plans require close collaboration and integrated decision making across departments within HRM. Integrated decision making is also required when planning for capital investment for transportation, utility, conservation, recreation, cultural and other projects to ensure a holistic, cross-disciplinary approach. Lastly, general bylaws that govern specific uses, programs and amenities are another tool for implementation along with guidelines and recommendations for open space programming.

Investment

Acquisition of new parkland and the enhancement of existing parkland can establish a higher quality and more affordable Municipal parks inventory. There are numerous benefits to consolidating small underused parks, providing better connectivity between existing parks, providing more equitable park distribution and investing in amenities that enhance the user experience. Parkland acquired through subdivision or development processes has not always resulted in the most beneficial spaces for local residents or the larger green network. A rational prioritization and acquisition/disposal process is needed in order to best allocate scarce resources and to evaluate potential parkland in a methodical manner that reflects the vision, guiding principles and objectives of the HGPNP.

Coordination with Other Governments

Lands and land uses not under HRM jurisdiction are important considerations when planning open space networks. People and ecosystems cross boundaries. Extensive lands within HRM are managed under the authority of the Provincial and Federal governments. In addition, Aboriginal communities have both rights and interests throughout the region. Recognizing the authority vested in these governments to manage forestry, wildlife, water and other interests as well as continued coordination and dialogue on matters of joint importance will help ensure the objectives of all are supported by individual Government initiatives.

» **Federal Government:** The three primary departments and agencies that the Municipality can connect with regarding open space conservation include The Department of Fisheries and Oceans Canada, The Department of Environment and Climate Change Canada and The Department of National Defense. The Department of Natural Resources and other departments with significant land holdings in HRM may also need to be consulted.

» **Provincial Government:** Opportunities to continue to collaborate with provincial government departments to enhance the open space network and its functions are key to implementing a complete and connected green network that links provincial spaces with municipal spaces. Specific departments to partner and collaborate with include Agriculture, Communities, Culture and Heritage, Environment, Fisheries and Aquaculture, Natural Resources and Transportation and Infrastructure Renewal. Coordination and sharing of important data sets between HRM and all levels of government is essential. Mutual data sharing agreements can advance the efforts of both the Municipality and the Province.

» **First Nations and Aboriginal Communities:** Partnership and consultation with the Mi'kmaq Nation, Aboriginal communities and organizations, is critical to identifying, understanding and managing open spaces of traditional use and interest. Discussions and ongoing collaboration will define the terms, appropriate use, management, necessary partnership agreements and commemoration (if appropriate) of significant lands.

The Mi'kmaq people and Aboriginal communities can offer valuable insight and traditional knowledge about the history and current use of places and landscapes of interest. This insight can be incorporated into planning processes to better understand what makes a specific site unique and important. Traditional use and knowledge is also critical to understand appropriate activities and programming as well as to identify landscapes, locations/sites and features to preserve and/or enhance.

Privately Owned Land

The Municipality has passed regulations that guide the use, development and design of private land. These include direction regarding tree retention, tree planting/landscape requirements, landscape buffers and site disturbance. The following tools are particularly instrumental in implementing the vision, guiding principles and objectives of the HGNP on privately-owned land:

- » Secondary and Priority Plans that provide tailored policy guidance for a defined area or subject matter
- » Zoning regulations to guide permitted land uses throughout the region
- » Development agreements that contain specific landscaping and design provisions
- » Subdivision, including the open space dedication
- » Studies and assessment requirements to understand the nature and value of the land before development
- » Street and public space design guidelines and standards
- » Schedules housed in the Land-Use Bylaw that provide additional development direction for important areas such as cultural landscapes, heritage conservation districts, watershed areas, among others
- » Buffers and setbacks to protect ecologically important features and character

Stewardship agreements and partnerships can also provide opportunities to maintain private open space, often with reduced capital and operating expenses. These include:

- » Tax Incentives for non-governmental organizations
- » Conservation Easements
- » Purchase
- » Non-Purchase Acquisitions
- » Partnerships

All of these tools together will provide the means to implement the green network. The final HGNP will develop and provide direction for their application to realize the vision, guiding principles, objectives and directions outlined in this document.

In summary, the preceding HGNP Primer provides an overview of the content to be further refined and housed in the final Halifax Green Network Plan. Overall, it presents the structure and draft content of the final HGNP that will be completed after a final round of consultation.

The HGNP is anchored in the five key theme areas that provide the overall organizing framework: **Ecology, Working Landscapes, Recreation + Mobility, Community Shaping** and **Cultural Landscapes**. By examining HRM's open space system through these lenses, it ensures a holistic and multi-functional approach to planning and implementing HRM's Green Network.

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