

A Management Plan for Bois des Esprits

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The City of Winnipeg

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1.0 Introduction & Background

1.1 Bois des Esprits: A Special Place

The Bois des Esprits forest in south-east Winnipeg is truly a special place. Comprising 117 acres of City of Winnipeg parkland adjacent to the Seine River, the forest and waterway exists as the largest contiguous riverbottom and upland forest environments in the City. Diverse in habitats that support a wide range of wildlife and fish species, Bois des Esprits has for many years been regarded by citizens as a special place – one to appreciate, enjoy and protect. Surrounded by dense urban developments, primarily existing or newly developed residential areas, the forest and waterway provide a refuge in the city, a place that stirs the senses with a multitude of natural landscape experiences perhaps unique only to this place in the City.

The present configuration of the forest took shape in 2006 with Winnipeg City Council approving the acquisition of a final 14.91 acres of forest land east of the Seine River from Grandin Developments – A joint venture between Ladco Developments Inc. (Ladco) and the Province of Manitoba. The acquisition process involved the fundraising efforts of the Save our Seine River Inc. (SOS), working to support the City.

The City Administration report prepared to outline the acquisition, recommended a Management Planning Process be undertaken by the City, including stakeholder consultation to determine future development and preservation strategies. This directive also outlined Management Plan objectives focused on:

- protecting biodiversity, habitat and important physical and biological features;
- developing trail and river access plans, with defined permitted and prohibited activities;
- promoting environmental education, awareness and maintenance programs;
- defining the interface between private and public lands;
- supporting active transportation and healthy communities.



The Bois des Esprits forest and waterway in south-east Winnipeg.



Essentially, a Plan for the forest is to provide management direction for the City of Winnipeg, stakeholders and citizens alike in working together, cooperating and collaborating to conserve and preserve this special place.

This document *A Management Plan for Bois des Esprits*, presents the key outcomes of a management planning process working to achieve the above mentioned objectives, and includes the following:

- Vision Principles and Objectives: **What do we need to achieve? What are the principles and objectives to guide us?**
- Situation analysis: *What are the values that make Bois des Esprits a special place and require ongoing management and conservation?*
- Key issues and observations: *What are the issues and opportunities associated with the forest and waterway? What do we need to consider in working to manage Bois des Esprits in the future?*
- Master Plan: *What will future management and use of the forest look like on the ground?*
- Management guidelines: *This is what we need to consider and follow in working to manage Bois des Esprits in the future.*
- Implementation: *Who is to do what, when? Responsibilities and actions and strategies moving forward.*



Bois des Esprits river-bottom forest environment.
(Photo by Denis DePape)



2.0 Planning Process

In January 2007, the City of Winnipeg, cooperating with key stakeholders involved in the 2006 acquisition process – including SOS, Ladco and the Province of Manitoba – initiated a Management Plan Process for Bois des Esprits. The four parties together, agreeing on a draft of a common Vision, Key Objectives, Principles and Process for completing a Management Plan, came to form an Advisory Group to oversee the study.

A Consultant Team was retained by the City of Winnipeg to work with the Advisory Group and process stakeholders and to lead the management planning process. The consultants and their roles consisted of:

- SLMcLeod Consulting as process facilitator
- Hilderman Thomas Frank Cram • Landscape Architecture & Planning, charged with;
- Stakeholder communications and consultations including coordinating and facilitating planning and design workshops to assist with Plan development
 - Engaging “Technical Experts” or professionals specializing in, landscape ecology and natural vegetation, wildlife (mammals and birds), fisheries, amphibians and hydrologic processes, to address terrestrial and aquatic management issues with regard to Bois des Esprits
 - Preparation of a Management Plan and guidelines to assist with future plan implementation

Appendix 1 includes text and graphics illustrating *Bois des Esprits – Management Plan Development*, consisting of major process steps taken to complete the plan as well as *Vision, Principles and Objectives*, commonly agreed to by the Advisory Group, stakeholders and Consultant Team as key statements to guide the planning process.



2.1 Stakeholder Consultations

The process involved consultations with various stakeholder groups and individuals all with interests in the Bois des Esprits forest and waterway. Groups included local area residents, adjacent condominium association and neighbourhood association representatives, recreational groups (e.g. trail and hiking / walking association representatives), environmental non-government organizations (ENGO's) and adjacent Royalwood subdivision new home builders.

An introductory session led by the Consulting Team was held with invited stakeholders and Advisory Group representatives on March 29th 2007, to introduce the management planning process, including draft materials presenting the *Bois des Esprits – Management Plan Development, and Vision, Principles and Objectives* and to explain the requirements for stakeholder involvement in the planning process, to assist with preparing a management plan for Bois des Esprits. Feedback obtained from stakeholders and Advisory group representatives at the meeting was used by the Consulting Team to revise and finalize the *Bois des Esprits – Management Plan Development, and Vision, Principles and Objectives* and to establish a process for conducting stakeholder planning and design workshops.

2.2 Vision, Principles & Objectives

The following *Vision, Principles and Objectives* reflect the common goals arrived at by the Advisory Group and Stakeholders to direct the planning process:

Vision for the Forest:

- *In 10, 25 or 50 years, the Bois des Esprits will not be noticeably different, in appearance or ecological function than it is in 2006.*

Principles to Guide the Management Plan:

- ***Protection*** – The unique features, the biodiversity and general character of the forest and the landforms, and thus the habitat, will be maintained.
- ***Métis Tradition*** – Respect and enhance appreciation of the Métis' historic use of the area and of Metis culture.



Cottonwood trees.



- **Use and Access** – providing opportunities for area residents and the general public to access and enjoy the forest through low impact, non-motorized uses.
- **Understanding, Education and Appreciation** - enhanced understanding and knowledge of the forest and how it functions, the sharing of that knowledge and understanding with others and encouragement to all to appreciate the forest and its diverse facets. The formal education system should be encouraged as partners in this initiative.
- **Informed, Adaptive and Active Management** – encouragement of research which will inform adaptive planning and management, and a strong commitment to ongoing maintenance and enforcement.
- **Public Safety** – management, maintenance and enforcement decisions will reflect a recognition of the importance of public safety.
- **Cooperation** – recognition that the need to engage all legitimately interested parties in decision-making with respect to the forest is ongoing and long-term and does not end with the development of the management plan.



Canoeing on the Seine River. (Photo by Dave Danyluk)

Objectives of the Project:

- To develop a management plan for the Bois des Esprits for the consideration and approval of the Winnipeg City Council.
- To ensure all legitimately interested parties have had an opportunity to have input into the development of the plan and to demonstrate to those parties that they have had meaningful involvement.
- To seek agreement or acceptance from all legitimately interested parties of the vision and principles to which the Management Plan is to adhere.

2.3 Planning and Design Workshops

Two separate planning and design workshops led by the consulting Team were conducted with members of the Advisory Group, stakeholder representatives and technical experts. The workshops were intended to introduce the planning process in more detail to participants, to review existing natural and cultural values and conditions within and adjacent to the forest and waterway. To identify issues observations for consideration in the planning process and to provide opportunity for participants to provide input into how



the forest and waterway should be used, managed and conserved in future. Stakeholder input and direction gained from workshop participants was instrumental in working to shape and define an overall management approach for Bois des Esprits.



3.0 Situation Analysis: Bois des Esprits Natural and Cultural Values

Working to achieve our future *Vision* for Bois des Esprits requires knowledge and understating of the rich natural and cultural values associated with the forest and waterway. These are the values that make Bois des Esprits a “special place”. What are the elements that represent the ecological function of the forest, present use of the forest, it’s history and heritage? An awareness of these elements and associated management issues is necessary to then formulate a management approach for the forest that works to conserve, preserve and restore key forest and waterway values.

3.1 Existing Context and Zoning

The natural environments of Bois des Esprits forest and waterway comprises 2 separate parcels of City of Winnipeg Park land, totaling 117 acres (Map 1). Located south of Bishop Grandin Boulevard and east of St. Anne’s Road in south St. Vital, the forest and waterway are bounded to the west and south by the local, established residential neighbourhoods of Meadowood Park, Dakota Crossing, and the newly developed Royalwood housing subdivision to the east and north. The Roadways of John Bruce Road form the northern boundary of the forest, with Shorehill Drive bisecting the Bois des Esprits into 2 parcels at the south end of the forest. The majority of Bois des Esprits lands are found to the east of the Seine River. However, small pockets of City Park lands make up Bois des Esprits on the west side of the River, isolated for the most part by the west bank of the river and private properties along St. Anne’s Road and John Bruce Road.

For many years, in most recent history, the forest and waterway have been surrounded by adjacent land use consisting of residential developments and farmland (See Map 2). In the last 50 years, the extent of the forest, and footprint of Bois des Esprits has remained much the same as it’s present configuration. Over the years, adjacent land developments have gone from low residential densities and open farm lands to more densely developed residential developments right to the edge of the forest.



Spring waters on the Seine River.





Map 3 presents existing zoning classifications for Bois des Esprits and adjacent land areas. The mapping illustrates the majority of Bois des Esprits as City of Winnipeg "Parks and Recreation" lands surrounded by land areas designated "Residential" and "Commercial". Lands within Bois des Esprits designated "Agricultural" reflect lands acquired by the City of Winnipeg in 2006, providing the current configuration of the forest. Future re-zoning of these lands should include the full designation of Bois des Esprits as "Parks and Recreation" lands.

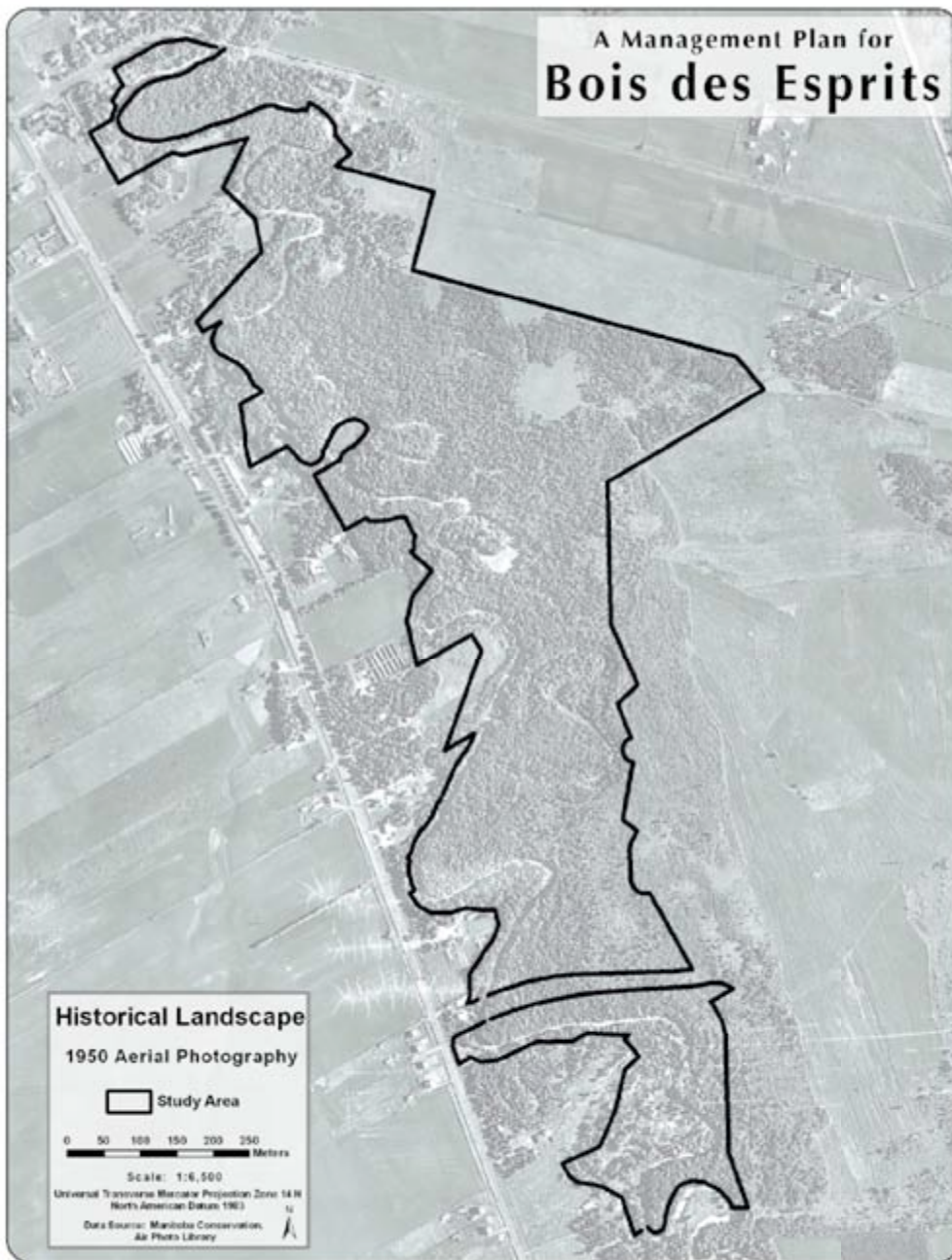
Maps 4 & 5 reveal the character of development adjacent to the forest and natural conditions and patterns of existing recreational trail access and use throughout the forest and adjacent to the waterway.

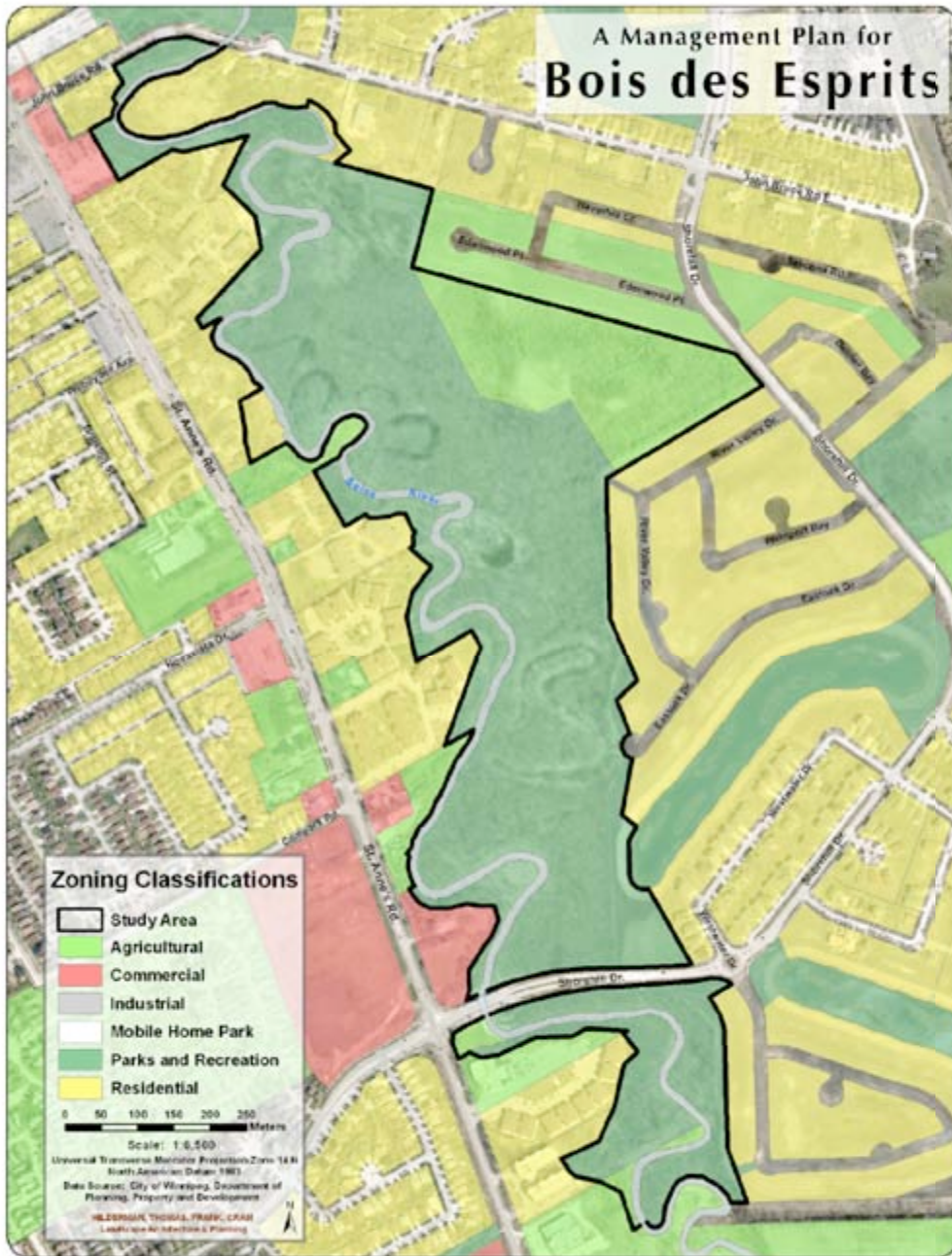
Map 1: Study Area Context



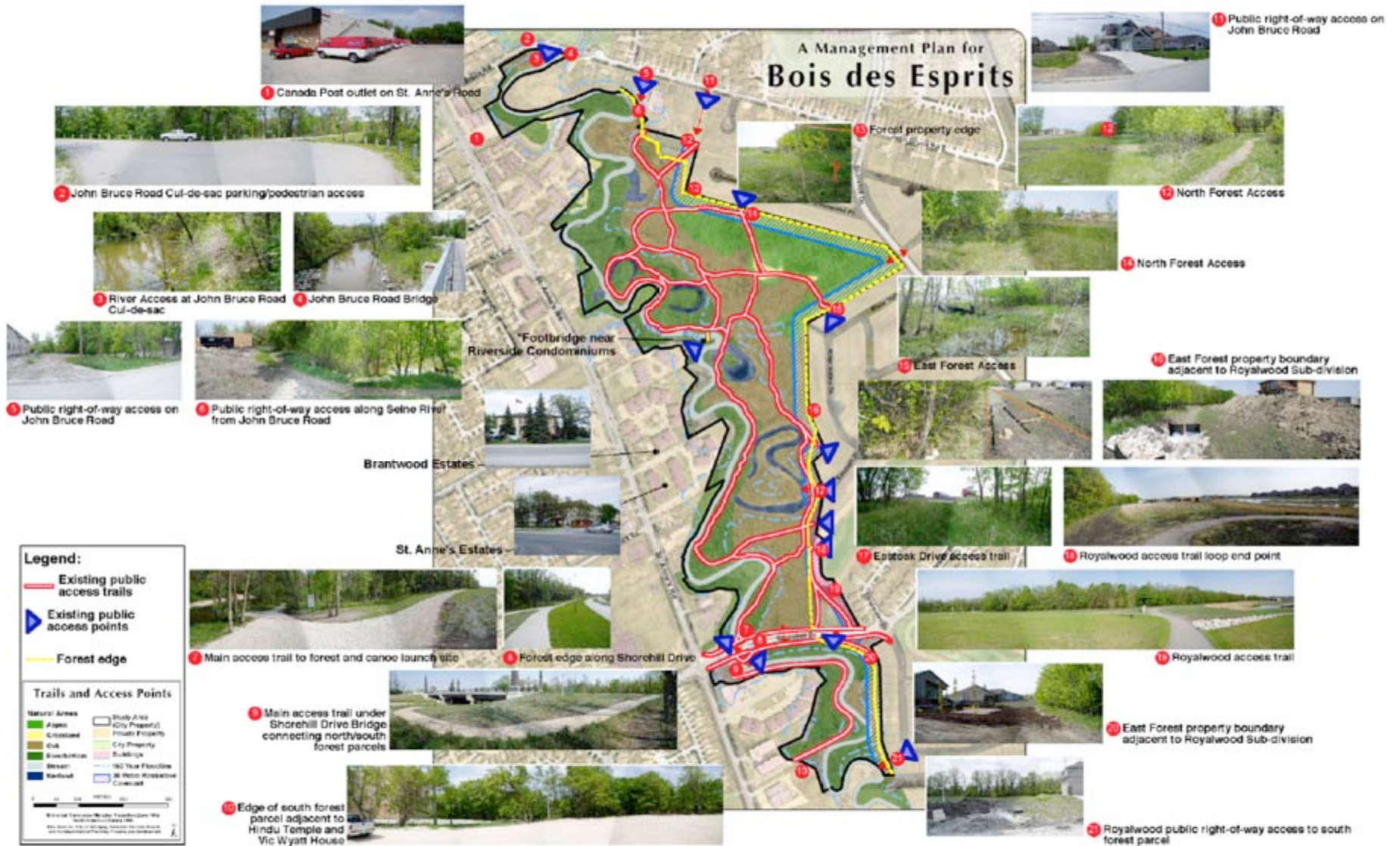
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Map 2: Historical Landscape



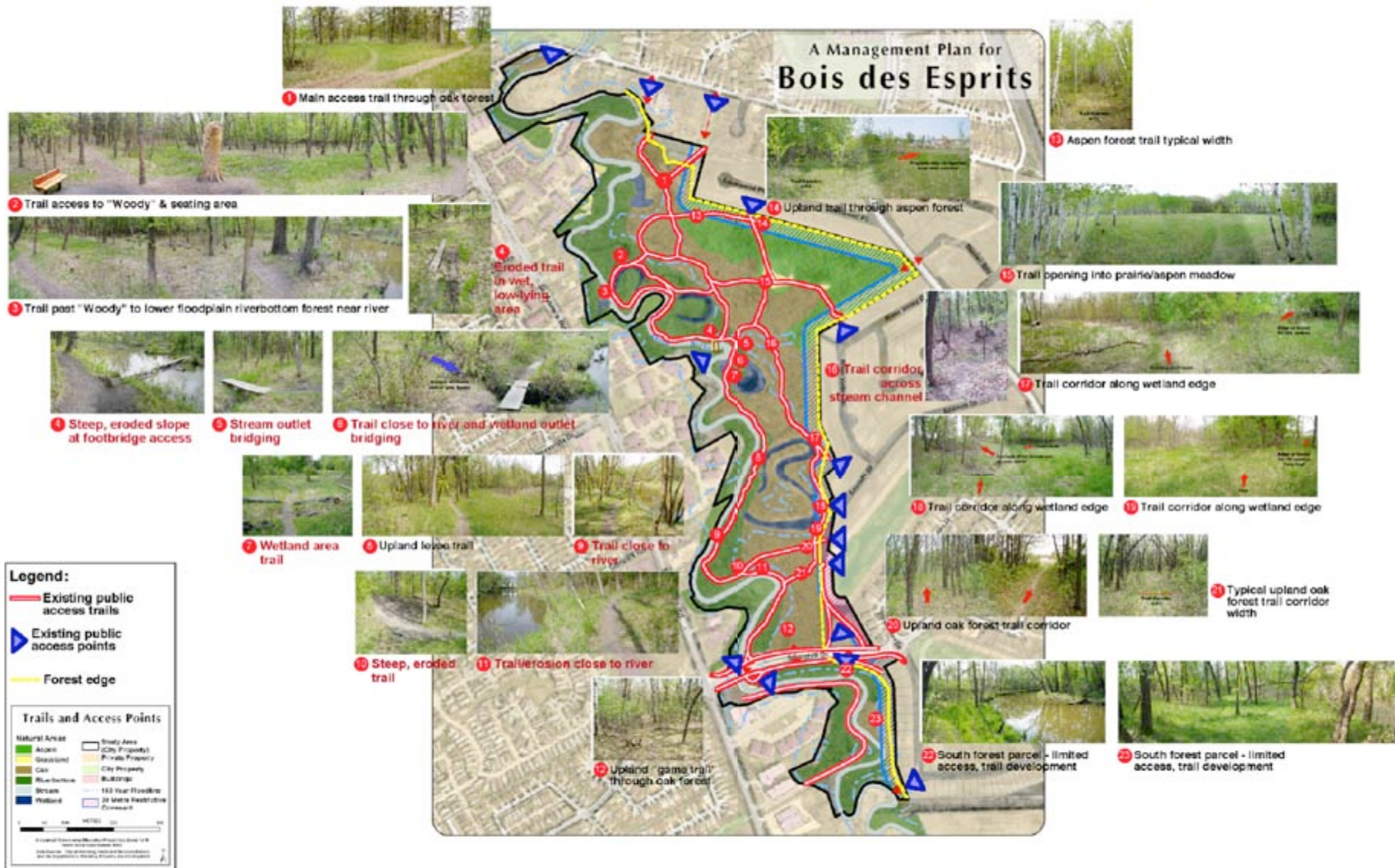


Map 3: Zoning Classifications



Map 4: Existing Area Context and Trails and Access Points





Map 5: Existing Natural Environments and Trails Within Bois des Esprits



3.2 Existing Access and Use

The natural refuge that makes Bois des Esprits a special place is inviting to many local residents as a place to access and enjoy the many values of the forest. Without any formal assessments to determine levels of use, it can be said that the forest sustains moderate useage throughout the year by local residents, primarily involving recreational use - trail walking, hiking and cycling, canoeing / kayaking and nature appreciation.

Map 6 illustrates existing access and use within Bois des Esprits forest. A number of access points along the northern, eastern and south edges of both forest parcels provide connection to a network of trails throughout the forest, within upland environments and the lowland riparian zone and floodplain adjacent to the river. The majority of trails are narrow, informal pathways, some maintained, some not, ranging in width from 2'-12' wide overall and of varying surface condition (earth, woodchip, gravel surface).

The land purchase agreement established between the City of Winnipeg and Ladco in 2006 included a "Restrictive Covenant" where the City agreed not to develop walkways or pathways within the outermost 30 metres of forestlands adjacent to the new Royalwood subdivisions until January 1st, 2011. See Map 6. However, a number of trail sections are found within this 30 metre zone, existing prior to the land purchase agreement and Restrictive Covenant.

Unfortunately, some use does occur in the forest that contravenes existing City By-laws, including bonfires, garbage dumping, off-leash dogs and ATV useage.

Key issues and observations include:

- The primary use of Bois des Esprits by citizens includes encouraged recreational use such as walking, hiking, bicycling, cross-country skiing – illegal use or uses that negatively impact the integrity of the forest (cutting down trees) should be discouraged in future through proper communications (signage, newsletters, etc.).
- Sensitive sites and areas – such as lowland riparian areas and floodplain zones - should be managed in order to prevent negative impacts including riverbank soil erosion caused by excessive human trail access and use.

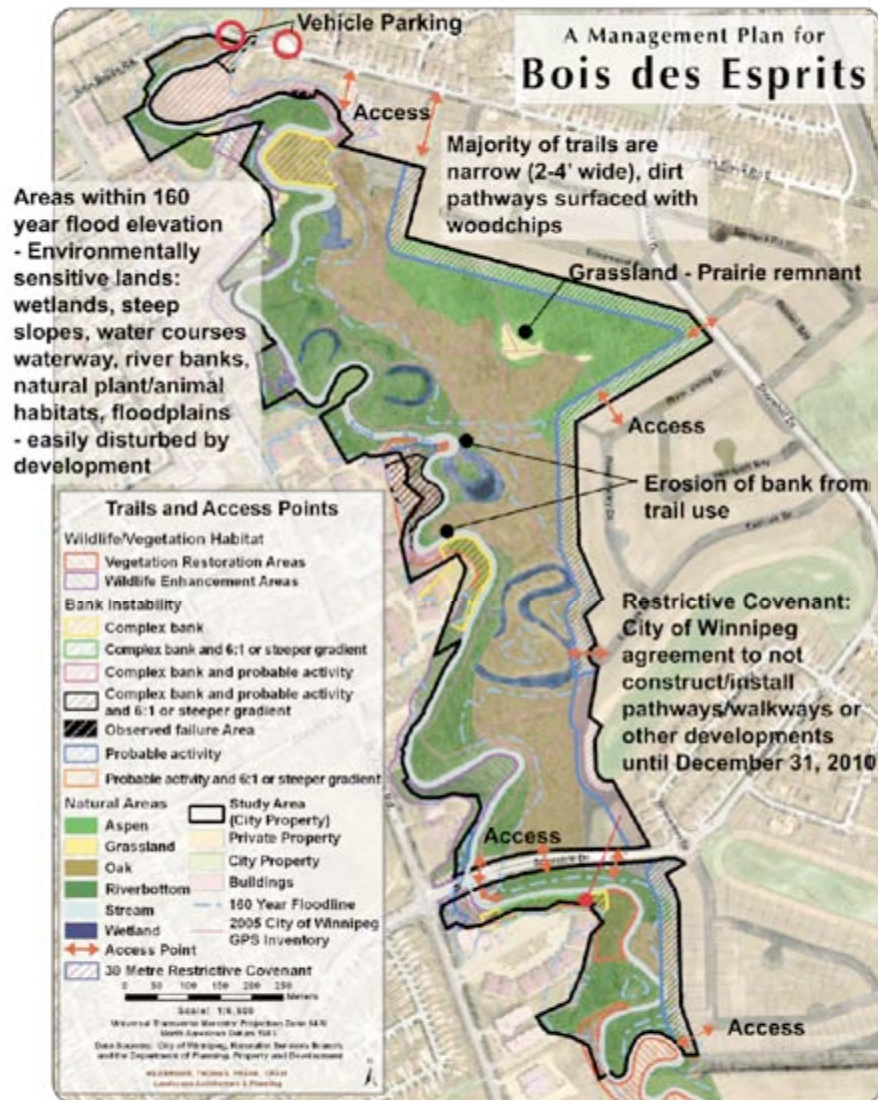


Undeveloped access point on the eastern edge of Bois des Esprit.



- Future access and use of the forest and waterway should be managed to occur in ways that are consistent with and conserve our Vision for the forest.
- The Restrictive Covenant that prevents the City of Winnipeg from developing pathways or walkways within the outermost 30 metres of forest land until January 1st, 2011.





Primary Use



Other Use



Map 6: Existing Access and Use



3.3 Natural Habitat Areas and Grades

Recent studies by the City of Winnipeg Naturalist Services Department have assessed habitats and habitat grades (relating to sensitivity to disturbance) found within Bois des Esprits. The habitats typify riparian or river oriented lowland and upland forest landscapes typical of the Canadian prairie ecozone within south-central Manitoba.

Map 7 illustrates the varied natural habitat areas, conditions and forest vegetation species composition included within:

- Lowland or floodplain riverbottom forest environments
- Upland oak and aspen forest and grassland environments

Map 8 again illustrates habitat areas, and a profile of the forest and waterway that provides a sense of the lowland/upland nature of the habitat areas and associated ecology with these sites – including drainage characteristics and associated vegetation. Habitat grades provide an assessment of current habitat conditions and the sensitivity of those habitats to human disturbance through various land use, development and the encroachment or presence of weedy or non-native species. Habitat grades for Bois des Esprits are presented on Map 9.

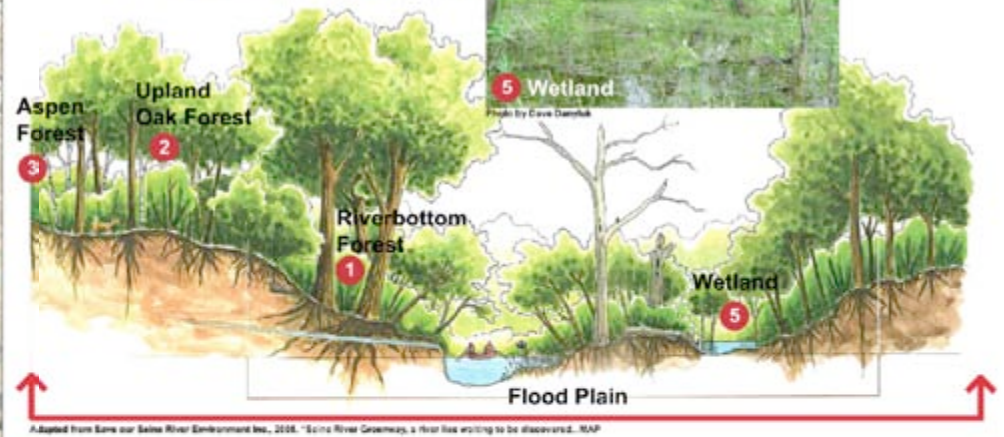
Key issues and observations include:

- The majority of the forest consists of grade A habitat – areas virtually undisturbed by human activities with a maximum sensitivity to disturbance. Future use and management of the forest should work to maintain the extent of Grade A habitats and restore Grade “B”, “C” and “D” lands to Grade A status.
- A large area of Bois des Esprits forest include Oak forest stands. Oak trees are extremely sensitive to site disturbance, e.g. excavation, filling and compaction beneath the tree canopy, which can result in canopy dieback or “decline”. Future use and developments within and adjacent to the forest should avoid such disturbances as oak forest stands are important to the ongoing ecological function of the forest.
- Prairie grassland and wetland environments are rare or diminished in southern Manitoba as a result of extensive agricultural land use or sprawling urban developments. The remnant prairie grassland and wetland environments within Bois des Esprits are not



Aspen forest.





Map 7: Bois des Esprits Natural Areas





1 Riverbottom

- Diverse habitats - attractive to many different wildlife species, providing a variety of food and shelter, and are close to water.
- Habitats located along waterways are also called riparian habitats.
- Riverbottom forests can generally be divided into three sections: the channel shelf or **riverbank**, the **floodplain**, and the **terrace**.

Riverbank: gently sloping area right next to the edge of a river, stream or creek. Dominated by trees such as willow and cottonwood. Few shrub species dominate in the riverbank area because of yearly flooding and damage from spring ice breakup. Instead, this part of the forest has more grasses and annual wildflowers.

Floodplain: Dominated by trees such as green ash, American elm, and Manitoba maple. The greatest variety of species is usually found on the floodplain, containing flood-tolerant perennial species. Common shrub species include: American hazelnut, beaked hazelnut, downy arrowwood, and chokecherry. Many flowers and grasses, as well as woody and non-woody vines also exist in the floodplain.

Terrace: Areas above the floodplain, on the highest elevation within the riverbottom forest, farthest from the river. As this area is not flooded as often, this part of the forest is dominated by plants which prefer a drier habitat such as bur oak. Many of the plants found in the floodplain may also grow on the terrace.

2 Wetland

- Remnant ox-bow lakes or depressions containing water for all or most of the year
- Maintain water from surface run-off or flooding
- Rich marsh-wetland habitats with plants that are adapted to growing in wet or saturated soils.
- Habitat for various mammals, birds, amphibians, reptiles, insects

Source: City of Winnipeg, Natural Services Branch

3 Oak

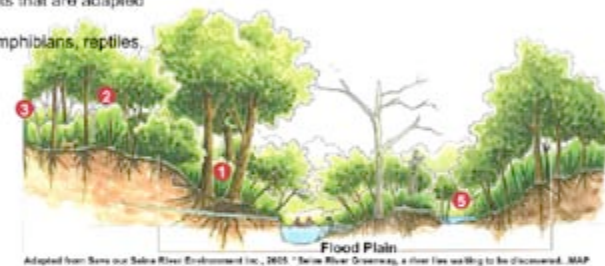
- Oak forest: canopy of bur oak trees with an understory of shrubs such as hazel, hawthorn, poison ivy, snowberry and wild rose.
- Dominates upper terrace within a riverbottom forest where flooding rarely occurs.
- Bur oak trees are found mixed in with aspen trees, and most of the aspen forest habitat sites inventoried in Winnipeg also contain some oak trees.
- In the tall-grass prairie region of southern Manitoba, small stands of oak can be found mixed with openings of native prairie, creating a blend of plant communities referred to as "oak savannah".

4 Aspen

- Trembling aspen stands, often with grassland openings - "aspen parkland".
- May contain native tall-grass or mixed-grass prairie plants - in lowlying areas, they are home to wet meadow species or may contain small wetlands.
- Aspen forest also may contain bur oak trees in dry areas and balsam poplar trees in lowlying, wet areas. Manitoba maple and green ash trees may also be present.
- Aspen stands contain a rich variety of shrubs, grasses and wildflowers to grow in its understory - red-osier dogwood, roses, chokecherry, pincherry and saskatoon occur on the edges of the aspen forest. Disturbed areas are often occupied by wild raspberry.
- Many of the shrubs provide food (seeds, berries or nuts) for wildlife - White-tailed deer, red squirrels, eastern chipmunks, eastern cottontail rabbits and many birds all take refuge in aspen forest.

Grassland

- Grassland areas containing remnant species typical to tall-grass or mixed-grass prairie environments including a variety of grasses, flowers and wildlife.



Map 8: Bois des Esprits Natural Areas and Profile





Map 9: Bois des Esprits Natural Areas and Grades

Habitat Grading

"A" Quality Habitat (Maximum sensitivity to disturbance): Virtually undisturbed by man or recovered to an extent where community structure and composition is intact and reflects historical natural vegetation and wildlife habitat. Other factors include soil disturbance, a high degree of native vegetation present and conversely, a lack of weedy or non-native plant species.

"B" Quality Habitat (High sensitivity to disturbance): Light to moderate disturbance, for example, encroachment of non-native species, may have a minimal amount of weeds but maintains a more natural condition where native species are still the major vegetation community.

"C" Quality Habitat (Low sensitivity to disturbance): Moderate disturbance, a significant number of weed species which have replaced native species, few native species present. For example, an old agricultural clearing that has not been used in recent times and native plant species are slowly returning, or an area that is occasionally mowed.

"D" Quality Habitat (Minimum sensitivity to disturbance): Heavily disturbed site, the vegetation is dominated by weed species or absent all together. None or very few native species present.

Source: City of Winnipeg, Natural Services Branch



only unique but also important to the overall ecology of the forest.

- In localized areas throughout the forest, understory shrubs appear to be challenged or declining as a result of over-browsing by deer populations or human access and use throughout the forest. It is important that integrity of understory conditions be maintained.
- A number of dead standing or fallen trees exist throughout the forest. These trees are important to the ecology of the forest and should not be removed or cut down as they provide habitats for various wildlife (e.g. cavity nesting bird species) and are also important in the retention of biomass.

3.4 Wildlife and Fish Species

The forest and waterway of Bois des Esprits support rich, healthy and diverse populations of wildlife and fish. The following identifies the total number of known wildlife species common to the Seine River Corridor and a representative list of species found in Bois des Esprits (Save our Seine River Environment Inc., 2005):

Twenty-four mammal species, including (Map 10):

- Gray Squirrel
- Red Fox
- Raccoon
- White-tailed Deer
- Little Brown Bat
- Red Squirrel
- Beaver
- Cottontail Rabbit
- Muskrat

One-hundred and forty-nine bird species, including (Map 11):

- Wood Duck
- Downy Woodpecker
- Great Crested Flycatcher
- Rose Breasted Grosbeak
- Eastern Screech Owl
- Great-horned Owl
- Pileated Woodpecker
- American Robin
- Red-winged Blackbird





Mammals - 24 Species Common to the Seine River Greenway including:

- Gray Squirrel
- Red Squirrel
- Least Weasel
- Skunk
- Raccoon
- Cottontail Rabbit
- Red Fox
- Beaver
- Snowshoe Hare
- White-tailed Jack Rabbit
- White-footed Dear Mouse
- Field Mouse
- Gapper's Red-backed Voie
- White-tailed Deer
- Muskrat
- Little Brown Bat



White-tailed deer are adaptable and forage and "bed" down throughout the forest, in different habitat areas.

- Fall: oak stands, acorns
- Spring: grazing near river, outside of forest in open areas (hay meadows, grasslands)
- Favoured browse species:
 - Saskatoon
 - Chokecherry
 - Hazel
 - Willow leaves
 - Oak and Balsam buds
 - Green Ash suckers

Map 10: Bois des Esprits - Mammal Species



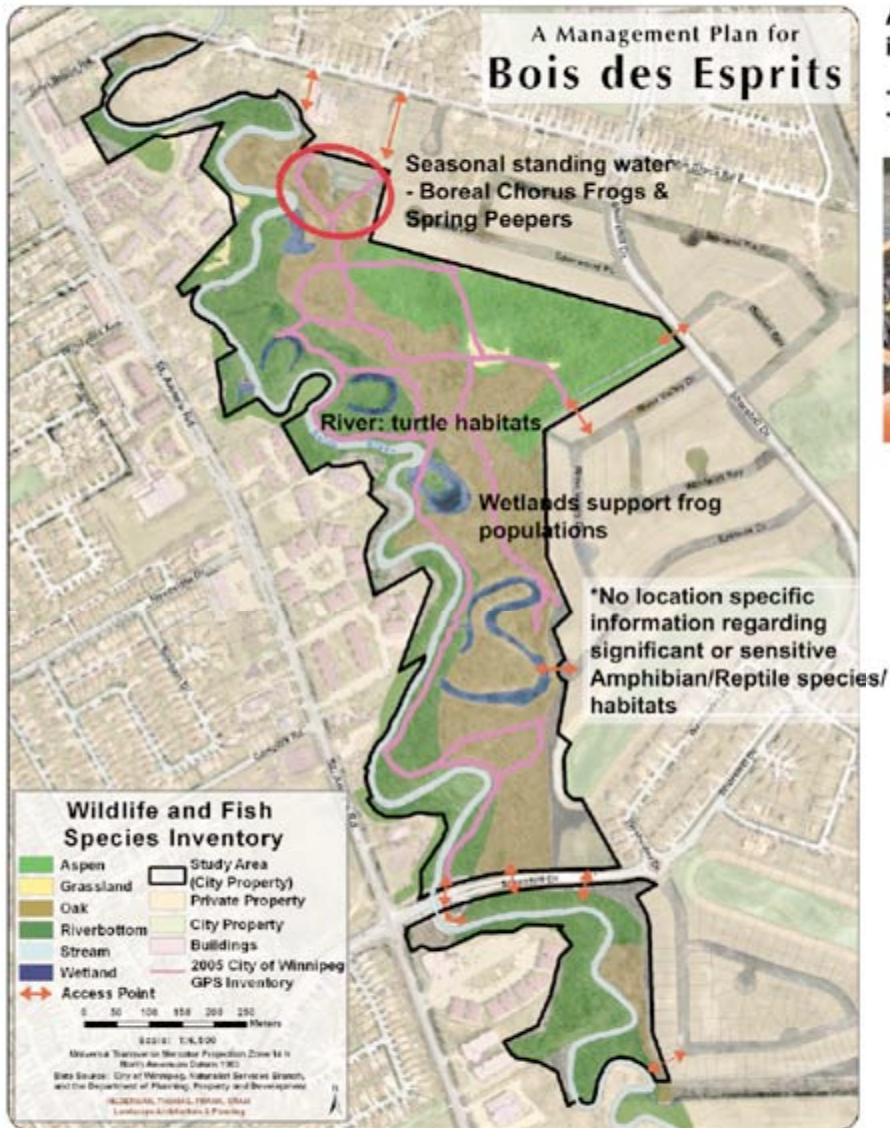


Birds - 149 Species Common to the Seine River Greenway including:

- Wood Duck
- Great-horned Owl
- Downy Woodpecker
- Pileated Woodpecker
- Great Crested Flycatcher
- American Robin
- Rose-breasted Grosbeak
- Red-winged Blackbird
- Eastern Screech-Owl



Map 11: Bois des Esprits - Bird Species



**Amphibians and Reptiles - Species Common to the Seine River Greenway
including:**

- Western Painted Turtle
- Spring Peepers
- Snapping Turtle
- Wood Frogs
- Boreal Chorus Frogs



Map 12: Bois des Esprits - Amphibian and Reptile Species





Fish - Species Common to the Urban Reach of the Seine River Greenway including:

- Common Carp
- Longnose Dace
- Quillback
- Bigmouth Buffalo
- Black Bullhead
- Northern Pike

• Bigmouth Buffalo



• Northern Pike



• Longnose Dace



• Black Bullhead

Map 13: Bois des Esprits - Fish Species



Amphibians and reptiles, including (Map 12 - total numbers not known through inventory):

- Western Painted Turtle
- Boreal Chorus Frog
- Wood Frog
- Snapping Turtle
- Spring Peeper Frog

Twenty-five fish species, including (Map 13):

- Common Carp
- Quillback
- Black Bullhead
- Longnose Dace
- Bigmouth Buffalo
- Northern Pike

Records obtained from the Manitoba Conservation Data Centre Rare Species Database indicates no location specific information for Bois des Esprits regarding significant or sensitive mammal species/habitats requiring focused management attention.

Key issues and observations include:

- The richness and diversity of wildlife and fish species within Bois des Esprits, and along the entire Seine River corridor, are important natural resources to be conserved, appreciated and interpreted. Land and water habitat conditions must be maintained or restored/refurbished to preserve healthy wildlife and fish populations in the future.
- Excessive and uncharacteristically large urban White-tailed Deer populations have been recorded in Bois des Esprits – 57 deer or approximately 359 deer/sq. mile. The forest sustains the highest location point total of White-tailed Deer recorded in Winnipeg during a 2006 aerial survey by Manitoba Conservation.
- Excessive deer populations can negatively affect the integrity of the forest through over-browsing favoured tree and shrub species, e.g. Red-osier Dogwood, Hazel, Saskatoon.
- A number of bird species not common to the Winnipeg area are found within Bois des Esprits, including: Great-crested Flycatcher, Rose-breasted Grosbeak, and Eastern Screech Owl



- Understory shrub species provide important nesting habitats for many bird species common to the forest. These habitats should be maintained.
- Cavity nesting species such as the Screech Owl require dead, standing trees for nesting. Dead standing trees are not to be removed or felled.
- Manitoba Conservation Data Centre "Species of Conservation Concern": Seven species ranked rare/uncommon, 2 ranked "COSEWIC" (Committee on the Status Endangered Wildlife in Canada), Candidate and Special Concern under the Canada Species at Risk Act (SARA), 2 listed as both Endangered/Threatened (SARA) and Endangered/Candidate (MB ESA).
- Riparian (River) areas and wetlands away from the river – oxbows, depression areas – are important habitat areas for amphibians, as well as certain birds (Mallard Ducks for nesting, Wood Ducks for maintaining broods)
- Consistent water flows on the Seine River are important to sustaining water depths and seasonal habitats for fish species throughout the year. The Seine River Siphon, constructed to allow the Seine River to flow beneath the Winnipeg Floodway in south-east Winnipeg, reduces natural flow volumes on the River through Bois des Esprits and is a recognized issue.
- Shoreline erosion and sedimentation resulting from various adjacent land uses and developments is common along the Seine River Corridor. These effects should be reduced or eliminated as they are harmful to fish habitat, especially spawning areas.
- Future studies should be conducted to determine the complete extent of wildlife and fish species populations and occurrences, including rare and sensitive species and habitats not already known through broader, more detailed inventories for the Bois des Esprits forest and waterway.

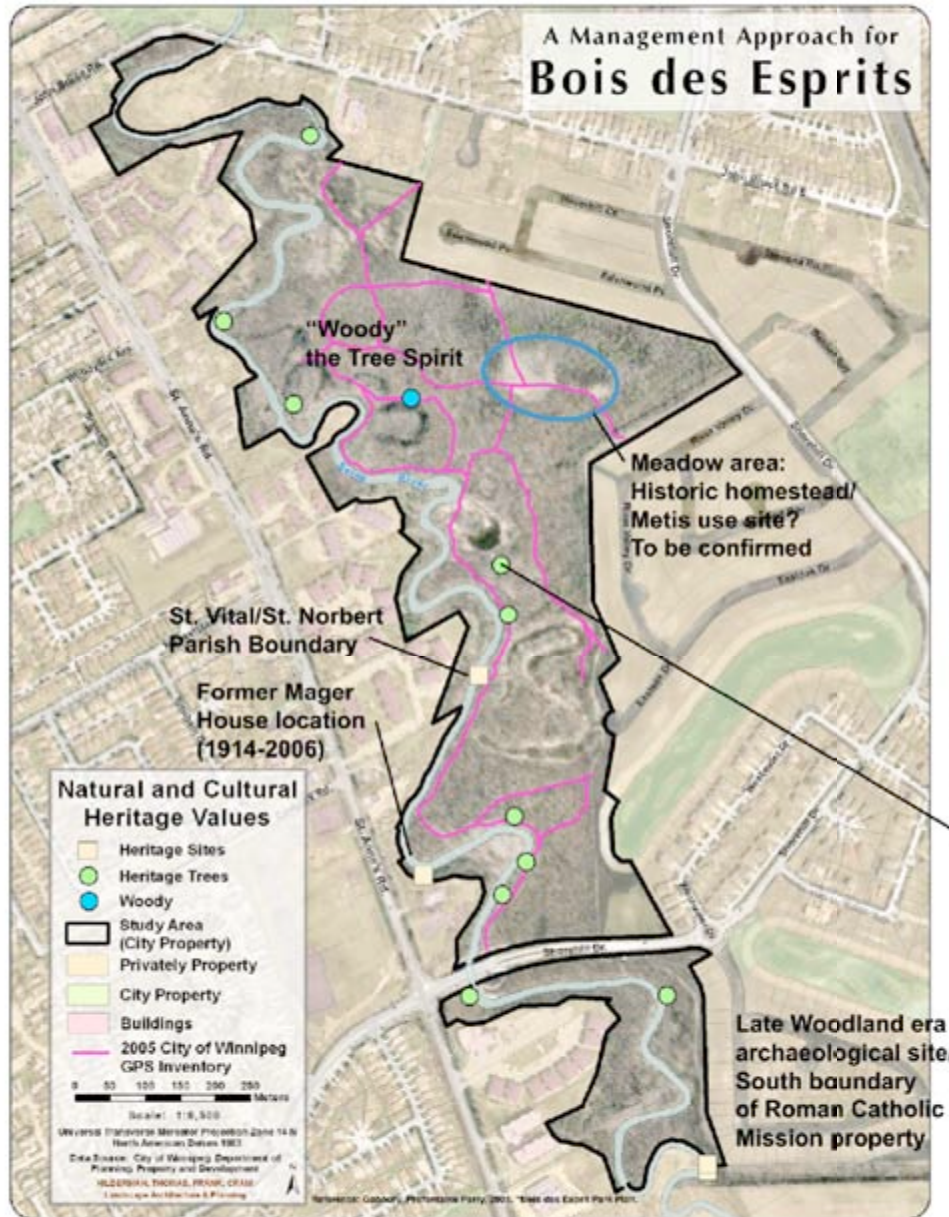


3.5 Natural and Cultural Heritage

Bois des Esprits possesses many natural and cultural heritage values that are a testimony to the long standing presence of the forest and reliance on the forest as a refuge and source of food and water by past peoples and cultures (Map 14).

Giant Cottonwood trees, present for more than a century, are testimony to the long standing existence of this river oriented forest community, once common in prehistory to the landscapes of the Red River Valley region of Manitoba.





Map 14: Bois des Esprits Natural and Cultural Heritage Values



Examples of cultural heritage also reflect the broader historical cultural landscape and settlement history of the Red River region over the last 200 years. Boundary points reflecting past Red River lot parish boundaries are terminating at or extending through Bois des Esprits such as the St. Vital/St. Norbert Parish boundary or the south boundary of the Roman Catholic mission property.

Many local residents familiar with Bois des Esprits provide anecdotal information suggesting the past use of the forest and grassland area as a settlement site or homestead by Metis peoples during the 1800's through to the early 1900's. A "Late Woodland Culture" (1,000 – 1,700 AD) archaeological site has been confirmed to exist in the south parcel of the forest adjacent to the River by Manitoba Historic Resources Branch. No broader archaeological investigations have been undertaken in the forest to confirm the presence of a Metis settlement site or to confirm the broader presence of other past cultures through history.

Key Issue and observations include:

- Future archaeological studies or inventories should be conducted within the forest to confirm cultural and heritage resources within the forest
- The natural and cultural values associated with the forest are an important testimony to the site and should be recognized, preserved and interpreted

3.6 Surface Water Flows and Hydrology

The flow of surface waters over land through Bois des Esprits to the Seine River once occurred as part of a natural undisturbed system of small channels, creeks and subtle depressions, on both the west and east side of the river. Agricultural and residential land use and developments over the last century, occurring thorough time in ever greater densities within adjacent landscapes, imposed local drainage improvement (ditching, catch-basins and stormwater sewers) and removal of native vegetation including grassland and forest stands. As a result, area land use and developments have slowly altered this natural surface water system and it's original pre-settlement integrity of over 200 years ago. Over time, the forest and its ecological function has adapted to these changes, as reflected by the present extent of the forest similar to what existed over fifty years ago (Map 2).



The present regime of surface water flows is illustrated in Maps 15 & 16, showing firstly a broader, more generalized surface flow regime leading to the Seine based on elevational gradients (uplands to lowlands), and more detailed topography illustrating drainage regimes from higher to lower elevations throughout the forest.

Adjacent residential or commercial developments around the forest have altered natural surface drainage through lot grading and placement of roadside catch basins. Recent development of the Royalwood phase II subdivision, adjacent to the east side of the forest, includes placement of a perimeter swale and catch-basins collecting surface waters from residential lots along the edge of the forest. Collected surface waters are piped underground to naturalized retention pods within the subdivisions for release through further underground piping into the Seine near Shorehill Drive (Map 16). Although this study does not include detailed assessments to quantify surface water flows within and adjacent to the forest, it can be assumed that adjacent land use and developments, particularly to the east of Bois des Esprits, will further reduce the amount of surface water flows into the forest in near future. The effects of this are uncertain. Perhaps most impacted will be the seasonal recharge of wetland areas within the forest. Future studies may be required to assess surface water flows within the forest and potential effects to ecological function of certain forest features, e.g. wetland areas.

Key issues and observations include:

- Adjacent land use and developments have localized area surface drainage within the forest
- Lowland areas in Map 16 are significant as they represent environmentally sensitive lands: wetlands, floodplains, riverbanks, watercourses and steep slopes between lowland/upland areas
- Future studies may be required to assess surface water flows within the forest and potential associated effects from reduced surface water flows such as forest edge or wetland habitat area vegetation decline

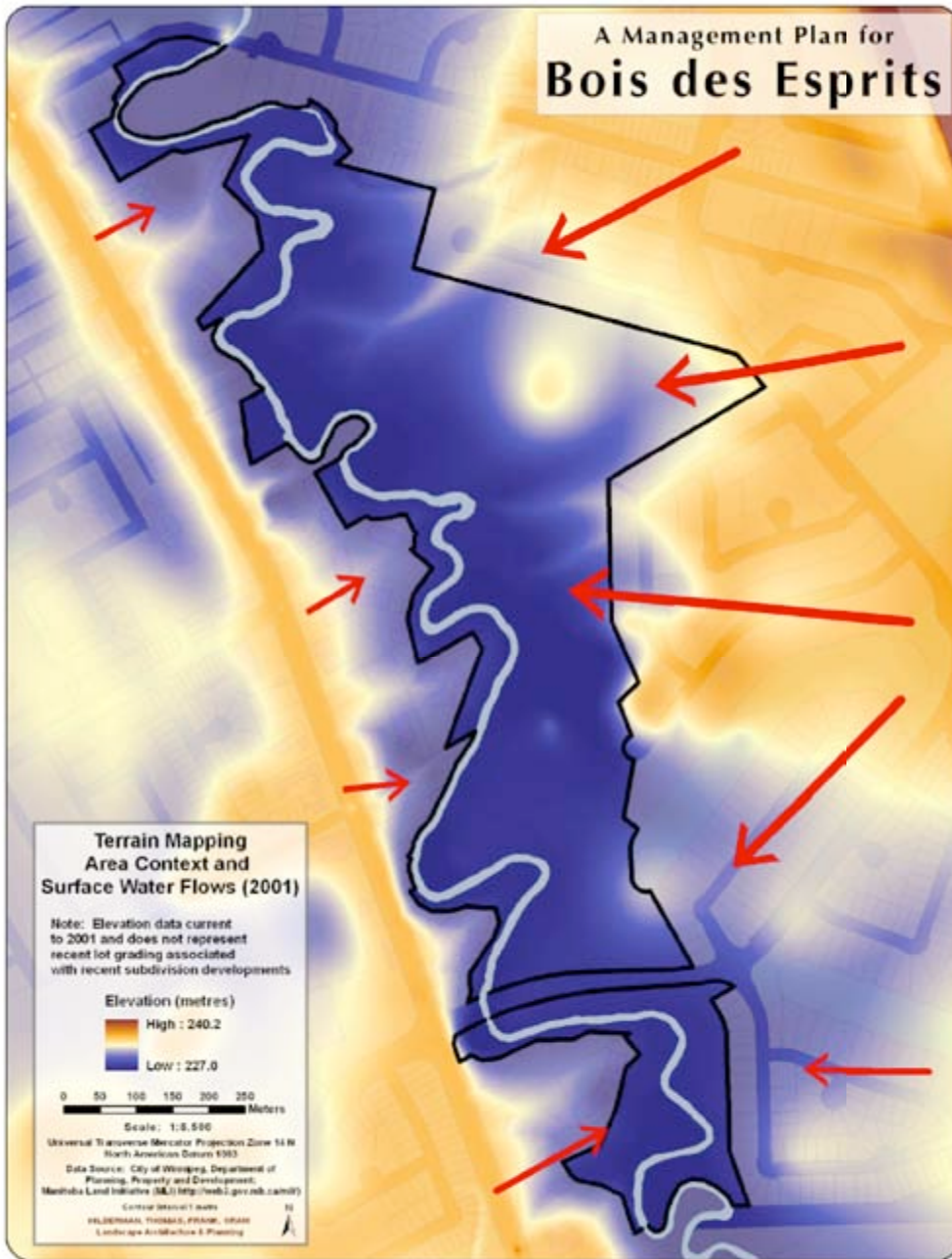


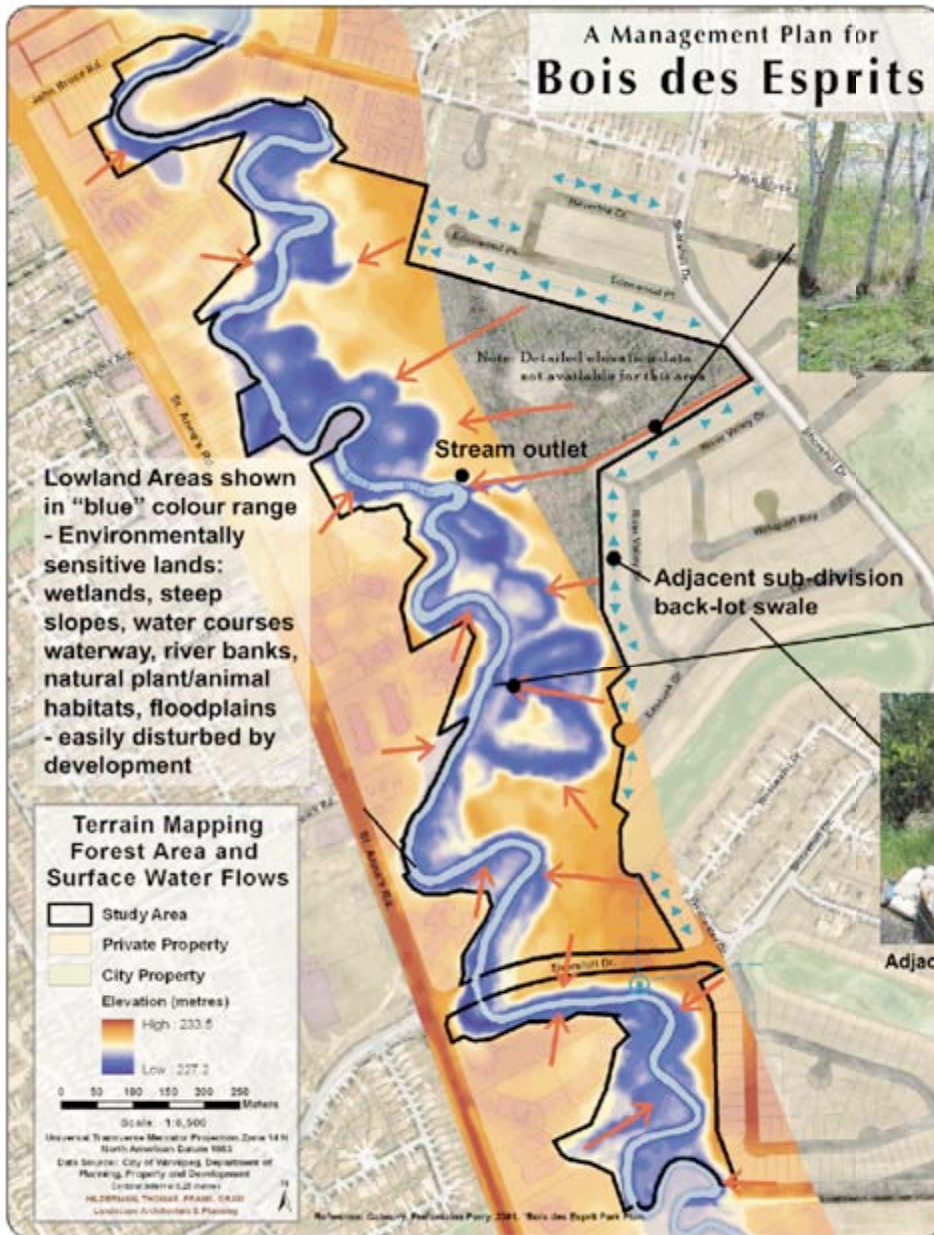
Naturalized retention pond adjacent to the eastern edge of Bois des Esprit.



A Management Plan for
Bois des Esprits

Map 15: Terrain Mapping - Area Context and Surface Flows (2001)





Former agricultural ditching inside of forest



Stream outlet point into Seine



Large oxbow lake outlet channel into Seine



Adjacent sub-division swale

Map 16: Terrain Mapping - Forest Area and Surface Water Flows



3.7 Sensitive Habitat Sites and Areas

Bois des Esprits is a special place by virtue of the natural features and values that have been described to define the ecological function of the forest and waterway. The land, forest, waters, wildlife and cultural heritage are all values that are significant yet sensitive resources that require ongoing protection, conservation and management.

In 2007, the City of Winnipeg completed an *Ecologically Significant Natural Lands Strategy & Policy* document. The Document illustrates the City's commitment to being a leader in protecting the environment and making the community a better place to live and work, reflected through various environmental management activities including, but not limited to: Wastewater management, urban forestry, river bank stabilization, and the identification and assessment and possible protection of natural areas as ecologically significant natural lands. However the document focuses on procedures for the identification, assessment, management and protection of sensitive natural areas as ecologically significant natural lands. The Document provides the following definitions for sensitive areas and practices for managing ESNL:

Sensitive areas are defined based on the following criteria:

- Lands / water representing the natural ecology of the region
- Significant wildlife communities; cultural historic significance
- Natural area connectivity – wildlife/humans, and
- Riparian or riverbank areas – flood zones, unstable banks.

Practices for managing ESNL include:

- Weed control
- Controlling non-native plants
- Managing habitat integrity
- Removal of trash/prevent garbage dumping
- Making the site a better place to visit
- Trail construction and maintenance, and
- Signage and promotional materials.



Trail coursing through a low-land floodplain adjacent to the Seine River.

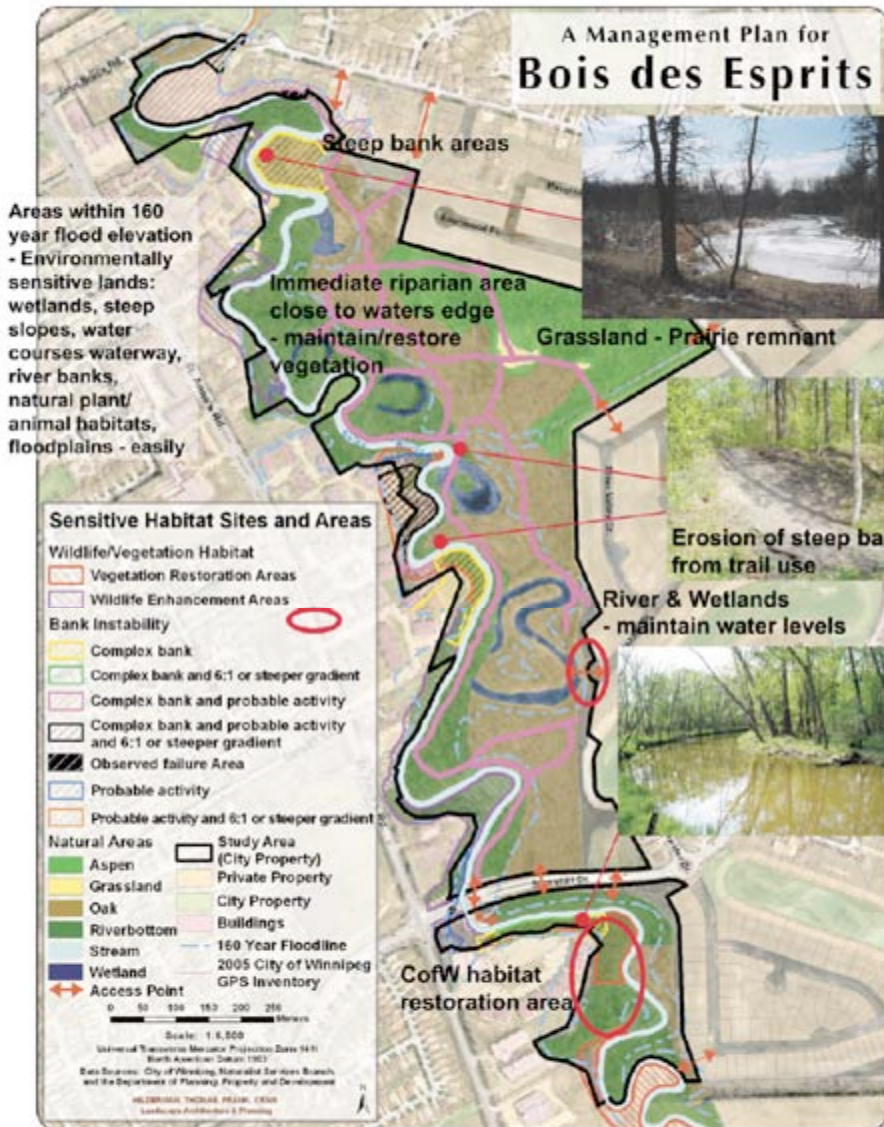


Bois des Esprits - Ecologically Significant Natural Lands (ESNL)

Sensitive Lands Include:

- Lands/water representing natural ecology of region
- Significant wildlife communities
- Cultural historic significance
- Natural area connectivity - wildlife/humans
- Riparian or riverbank areas - flood zones, unstable banks

Source: City of Winnipeg, Naturalist Services Branch



Management Practices:

- Weed Control
- Controlling Non-native Plants
- Managing Habitat Integrity
- Prevent Dumping/Removal of Trash
- Making the Site a better place to visit
- Trail Construction & Maintenance
- Signage & Promotional Materials

Source: City of Winnipeg, Naturalist Services Branch



Immediate riparian area - close to waters edge: Trail, no shrub or tree growth

Map 17: Sensitive Habitat Sites and Areas



As Bois des Esprits can be classified a “sensitive area” according to the above criteria, this Management Plan document directly acknowledges and incorporates the existing ESNL policy adopted by the City of Winnipeg as a current management approach being applied to the forest and waterway by the City. Management Guidelines outlined in section 4.3 of this report refer to the *Ecologically Significant Natural Lands Strategy & Policy* to assist with guiding future management approaches for Bois des Esprits.

Key issues and observations include:

- Developing and implementing a management plan / approach for Bois des Esprits must work to identify and manage sensitive areas appropriately, e.g. floodplain zones, wetland areas.
- Future access and use of the site by citizens must occur in ways that do not negatively affect sensitive sites and areas, e.g. eroding riverbank slopes, vegetation and habitat areas adjacent to the river (riparian vegetation areas).
- Future management of the forest must include strategies to restore or rehabilitate areas of native vegetation assessed as impacted by human access/use or wildlife (e.g. over-browsing by White-tailed Deer).
- A management approach for Bois des Esprits must include a “prevention first approach”. Prevention and protection from further impacts to habitat integrity or ecological function of the forest and waterway will be important to maintaining environments for citizens to continue to experience and enjoy.



4.0 A Management Plan for Bois des Esprits

A Management Plan for Bois des Esprits must outline an approach for us all to follow, including City of Winnipeg staff, stakeholders, interest groups and citizens, in working to achieve our *Vision* for the forest and waterway.

The previous section of the report provides a description of Bois des Esprits features and values and identified issues and observations that need to be considered in a management approach – *What are the features and values that we need to conserve, protect, restore and manage, to ensure the ongoing ecological function of the forest and waterway into the future?*

This section of the report presents the following in outlining a Management Plan for Bois des Esprits:

- *What you told us:* Feedback from planning workshop participants that outlines preferred management approaches for: Access to Bois des Esprits; defining encouraged/discouraged use of the forest and waterway; natural and cultural heritage values conservation and restoration.
- *Master Plan:* Illustrating what certain preferred management approaches will look like in working to achieve the Vision and Principles for Bois des Esprits. *What will future access, use and management of the forest look like on the ground?*
- *Management Guidelines:* Management actions, strategies and responsibilities required to implement the Master Plan and conserve Bois des Esprits features and values.
- *Implementation:* A process and schedule for implementing the Bois des Esprits management plan. *What is going to be done? By whom? How? When? What are the financial implications?*



Signage communicating City of Winnipeg natural area conservation and management approaches.



4.1 Preferred Approaches to Managing Bois des Esprits

The planning and design workshops conducted during the management planning process provided the various Advisory Group representatives, stakeholders and expert advisors the opportunity to review and consider background and analysis information for the forest and waterway.

Workshop participants were then asked to assist with defining preferred approaches for managing future use and conservation of the forest and waterway. The preferred management approaches are important as they ultimately set the framework for the overall Management Plan, defining both the Master Plan and Management Guidelines.

The preferred approaches to managing Bois des Esprits, as identified in the management planning process, include the following:

Encouraged Use:

- Responsible use that respects the natural environment of the forest and waterway
- Low impact modes of access - walking, hiking, cycling, canoeing / kayaking, cross-country skiing
- Natural features and cultural heritage appreciation, interpretation & environmental education
- Ongoing research and monitoring to better determine natural features, processes and cultural heritage associated with Bois des Esprits

Discouraged Use:

- Campfires or bonfires
- Makeshift shelter structures, tree houses or forts
- Off-leash dogs
- Cutting down or vandalizing trees
- Feeding deer
- Off-trail walking or hiking
- Motorized use including ATV's or snowmobiles



Natural features appreciation.



Vandalized Seine River Greenway sign near John Bruce Road.



- Garbage dumping
- Accessing and negatively impacting sensitive habitat areas and/or wildlife and fish species

Natural & Cultural Values Conservation & Restoration:

Natural Habitats, Species and Ecological Processes - Integrity, Character and Experiences:

- New or ongoing research: Environmental / ecological baseline studies, to better determine and inventory terrestrial / aquatic vegetation, wildlife, fish, amphibian and insects populations in Bois des Esprits.
- Further studies and/or management efforts by civic and provincial governments to increase water flows and improve water quality on the Seine.
- Invasive vegetative species control and management – including monitoring and control efforts.
- Encouraging community based stewardship of Bois des Esprits through public outreach communications (E.g. newsletters, website postings) that work to foster increased public education, interpretation, understanding and appreciation of Bois des Esprits values.
- Management and control of White-tailed Deer and Beaver populations found to be negatively impacting forest and waterway conditions through over-browsing, cutting down large trees or damming the river.

Cultural Values:

- Research, including historical/archaeological studies and inventories to better determine historic and pre-historic cultural heritage values associated with the forest
- Encouraging community based stewardship of cultural heritage values through public outreach communications (E.g. newsletters, website postings) that work to foster public education, interpretation, understanding and appreciation



Access to Bois des Esprits:

Areas to Not Access

- Sensitive riparian zone habitats (habitats nearest to the river's edge), floodplain areas close to the river, steep slopes prone to erosion.
- Sensitive wildlife habitats including known habitat locations for sensitive or rare wildlife (mammal, bird, amphibian) species & fish spawning locations.
- Sensitive cultural heritage sites, including both confirmed locations or sites suspected of containing cultural heritage values.
- Controlled access to certain unique or rare landscape features, e.g. remnant prairie grassland habitat.
- Limit soil disturbance or compaction within oak forest areas.
- The forest edge near new sub-division developments along the eastern edge of the Bois des Esprits forest parcel north of Shorehill Drive and east of the Seine River, to avoid the presently enforced Restrictive Covenant corridor and natural forest fringe habitats.
- Managing trails and access to sensitive habitats, including field programs to assess and monitor effects of user access on sensitive habitat areas.

Areas to Access

- Utilize existing forest access points and trails throughout the forest, as much as possible - limit new trail or access point development where possible.
- Promote development of a trail hierarchy – primary & secondary access corridors – to better confine volumes of citizen use to certain corridors (primary).
- Promote an “interpretation with care” stewardship message through public communications (E.g. newsletters, access point kiosk, trail signage) with regard to sensitive forest values and areas to conserve and protect, e.g. oxbow wetlands, remnant prairie grassland, near river-shore riparian and floodplain habitats



Existing trail through upland Oak forest.



- Consider the possibility of developing an access trail on the outside edge of forest, primarily the eastern edge of the larger forest parcel north of Shorehill Drive and east of the River, to promote more access volumes to the edge of the forest, conserving the integrity of the forest interior.
- Less sensitive sites or areas in proximity to, or in view of the river, e.g. Upland areas setback from the river's edge.
- Connection to rest of the Seine River Greenway corridor.

Enhancing the “Experience” for all

- Develop or refurbish existing access features – access points and trails - to better establish or promote: Sufficient access points; clearly defined paths and trail surfacing; clear, communicative signage; garbage receptacles and bicycle racks (access points only); universal accessibility (primary corridor); public safety.
- Structures (e.g. boardwalk, stairs, bridges) to improve or provide access or adjacent access to wetlands and streams without negative impacts, habitat loss or degradation .
- Habitat restoration activities including revegetation, riverbank stabilization in areas requiring such conservation interventions.
- Lookout points and rest areas – preferably located at trail end points, not along a trail route.
- Parking: Consider developing canoe access point parking at the Shorehill Drive Bridge and work to establish agreements with neighbouring Shopping Mall property owners/managers, east of St. Anne's Road and Shorehill Drive, to permit parking in large Mall lots for Bois des Esprits users.
- The Master Plan should be adaptable and open to change through time, allowing for adaptive management strategies in future. Requirements for adaptive management may include situations where issues may arise that are not considered as part of this Plan, or where guidelines, strategies or actions outlined in this Plan fall short of working to achieve the Master Plan or Vision for the Forest.



Interpretive signage.



- Promote public “Stewardship” of the forest and waterway through ongoing public communications and engagement through programming that involves education, interpretation, understanding, appreciation, and – perhaps most importantly – involvement in ongoing management actions and Plan implementation.

4.2 Bois des Esprits Master Plan

The Bois des Esprits Master Plan (page 41) illustrates how many of the preferred approaches for managing use and access and conserving forest and waterway values, will come together to look like on the ground.

The Master Plan addresses present and future access and use by citizens and the ongoing conservation of forest and waterway features and values (e.g. access points, known sensitive areas, wetland areas, “Woody”, etc.). How public access and use is to be managed and enhanced in the future is a key consideration of the Master Plan.

How will people continue get to and through the forest, and along the waterway, without negative impacts to the present condition or integrity of Bois des Esprits?

Existing access and use of Bois des Esprits was previously characterized by an informal network of trails throughout the forest and adjacent to the river, primarily within the larger forest parcel east of the river and north of Shorehill Drive. Approximately, 4,440 metres of trail currently provides access within the forest (not including exterior access corridors and sidewalks leading into the forest). Access to the river during open water seasons for watercraft is accommodated by a canoe launch adjacent to the north side of the Shorehill Drive bridge. The winter season turns the river into a frozen corridor accommodating pedestrians, skiers, snowshoers and the like.

The Master Plan incorporates the following management approaches for ongoing access and use of the forest. These same approaches are further incorporated into specific *Management Guidelines* that follow this section, that are intended to assist with the overall implementation of the Bois des Esprits Management Plan.



Access and Use of the Forest:

- The Master Plan maintains the current existing network of trails and access points to the forest. This is especially the case in the main forest parcel north of Shorehill Drive and east of the Seine River. New trail development is to occur in the southwest most forest parcel, south of Shorehill Drive and west of the Seine River, as planned by the city of Winnipeg in 2007.
- New trail development is to be limited in order to maintain habitat integrity and prevent further fragmentation
- Certain existing trail corridors have been identified for *potential* decommissioning, including trails through sites deemed sensitive, areas possibly negatively impacted by present citizen use (e.g. eroded slopes and soil erosion along trails at steep banks or directly adjacent to the river's edge), including near river-shore riparian and floodplain environments. The total length of these corridors equals 1,233 m. Sensitive areas / habitats and impacts from existing access and trail use must be monitored by City of Winnipeg staff through field studies in the future, to consider and confirm areas identified for potential decommissioning.
- Access to key forest features and values, such as "Woody" the tree sculpture and the remnant prairie grassland meadow, is to be maintained in the Master Plan
- The Plan illustrates a trail hierarchy – primary (3,618 m.) and secondary trails (1,596 m.) – defined from existing trails, providing options for various use and circulation through the forest in the future. Total access trail length illustrated in the Plan equals 5,756 m. (including interior forest trails (5,214 m.) and exterior access corridors, pathways and sidewalks (542 m.)).
- Primary trails are intended as the main high traffic corridor, and are to be surfaced and maintained according to present City of Winnipeg standards to achieve universal accessibility for walkers, hikers, cyclists and the disabled. Primary trails are to be surfaced in "quarter-down" limestone gravel according to City of Winnipeg standards. Primary trail widths should be maintained to dimensions of 60"-72" throughout the forest (corridors defined Primary trails in the plan currently range in width from 50"± - 72"+). Consideration should be given to trail widths and access requirements for City of Winnipeg utility and maintenance vehicles and equipment.



Bois des Esprits - Concept Master Plan

What could future access and use be like?

1) Forest Parcels: Work With Existing Access

- North forest parcel east of Seine River and north of Shorehill Drive. Monitor/Maintain/Rehabilitate what is there
- Maintain access to key forest features and values
- Identify trail routes impacting sensitive sites: decommission and revegetate/naturalize corridors
- Limit new trail development
- Maintain habitat integrity - prevent fragmentation
- Define a trail hierarchy: Primary/Secondary Trail use options
- Surfacing: Primary Trail - quarter-down gravel - accessibility Secondary Trail - woodchips
- Trail widths: maintain existing dimensions - suitable for walking/biking
 - Maintain average 40-72" Primary Trail 1 width (widths vary throughout the forest - 50" / 72" 4+)
 - Maintain average 40" Secondary Trail width (widths vary throughout the forest - 36/40")
- Forest Parcels west of the Seine and South of Shorehill Drive: Maintain and monitor existing natural conditions - No formal access/trails

2) Access Corridor Enhancements

- Rest areas, lookout points, benches, interpretive panels, trail signage at feature locations
- Trail head signage, waste receptacles at trail heads/major access points



Proposed trail decommission area: wetland floodplain area



Existing footbridge access



Upland "levee" trail

Legend:

	Primary trail corridor		Access structure: boardwalk/bridge/stairway
	Secondary trail corridor		Existing trail corridors *Potential decommission
	Public access points		Rest area (benches)look-out/ interpretive panel/trail signage
	Forest value/feature		Forest edge

Trails and Access Points	
	Natural Areas
	Aspen
	Grassland
	Oak
	River/culverts
	Wetland
	Wetland
	Stair Area
	City Property
	City Property
	Buildings
	RR Blue Floodway
	32 Meter Restriction
	Command



Trail Surfacing



Primary trail: Existing gravel surfacing at Shorehill Dr.



Secondary trail: wood-chip surfacing

Trail Maintenance/Development



Trail widths primarily for hikers/walkers



Keep to the high ground or top of bank



Features & Values



Cottonwoods



Wetland adjacent to proposed new trail corridor



Woody - rest area/signage/interpretive panel



River look-out points



Look-out & Rest Area Enhancements



Top of bank look-out point



Benches



Interpretive panels



Waste Receptacle



Signage: Values and regulation



- Secondary trails are intended for less user traffic, are not universally accessible, and are surfaced in woodchips or to remain as earthen surfaced trails
- Smaller Bois des Esprits forest parcels west of the Seine River north and south of Shorehill Drive, and east of the river south of Shorehill Drive, should be monitored and maintained by City Staff to ensure the ongoing existing state of “natural” landscapes and habitats. No access improvements or trails are planned for these forest parcels.

Park Amenities & Enhancements:

- User experience enhancements are to be developed at noted feature locations in the Master Plan including rest areas, lookout points, benches, interpretive panels and trail signage
- Existing and proposed public trail head access points into Bois des Esprits are to be developed to include trail head signage or information kiosks, waste receptacles and bicycle racks
- Options and possibilities for vehicle parking are to be considered including canoe launch access parking and parking in adjacent shopping mall lots

4.3 Management Guidelines

Moving forward with implementing the Master Plan requires Management Guidelines to then formulate the overall approach of this Management Plan. Management Guidelines are developed to ensure that the overall management approach to Bois des Esprits includes sound conservation and management practices, actions and strategies that ultimately achieve the Vision for the Forest. The Guideline statements also incorporate the preferred management approaches previously outlined in this document. *This is what we need to consider and follow in working to achieve our Vision for the Forest.* The Management Guidelines also identify responsibilities, *“Who is to do what?”*

Presently, there are a number existing civic and provincial or federal government policies and legislation that provide guidelines for how public lands and natural or cultural resources are to be managed by all citizens of Winnipeg and the province. Examples already mentioned in relation to Bois des Esprits include the City of Winnipeg *Ecologically Significant Natural Lands Strategy and Policy* or Federal *Species at Risk Act*. Existing



policy or legislation is to be considered as setting the foundation for Bois des Esprits Management Guidelines and are highlighted in relation to the Guideline statements outlined in this Plan for future use and reference in Plan implementation.

The City of Winnipeg, as sole owner of the Bois-des-Esprits lands, has key responsibilities in the management, maintenance and protection of the forest, as well as for undertaking certain management actions. However, the successful implementation of this Management Plan will require a collaborative effort on the part of the City of Winnipeg, key stakeholders, members of the community and other funding partners.

The Management Guidelines work to maintain and reinforce the cooperative and collaborative efforts of the City, stakeholders and citizens already established in this management planning process. Identified responsibilities, for the most part, involving a collaborative effort of the City of Winnipeg, stakeholders and citizens, should be noted as they also relate to a process for ongoing Management Plan implementation, addressed in section 5.0 of this Plan document.

The Management Guidelines are organized according to the following key headings:

- ***Access & Use***
- ***Park Amenities & Enhancements***
- ***Forest, Waterway & Watershed Conservation & Management***
- ***Monitoring***
- ***Stewardship***



4.3.1 Access & Use

Trails:

- The City of Winnipeg, with assistance from interested stakeholders and citizens, will conduct necessary maintenance and refurbishment of the existing network of primary and secondary walking trails to ensure ongoing public access, universal accessibility, safety and use. Monitoring of the trails will be conducted by City staff as time and resources permit and will rely on the feedback of stakeholders and trail users through the Public Works Customer Service Line. Maintenance and refurbishment will be conducted in relation to the management approaches for trail hierarchy, surfacing width and access requirements as incorporated in the Master Plan (Section 4.2).
- New trail development will be limited within the forest in order to maintain habitat integrity and prevent further fragmentation. New trails are only to be developed as replacement for decommissioned trails. New trail alignments will be determined by the City of Winnipeg, with assistance from interested stakeholders and citizens.
- The City of Winnipeg will act immediately to address any issue it deems a risk to public safety.
- The City of Winnipeg, with assistance from interested stakeholders and citizens, will assess existing trail routes to determine potential impacts to sensitive habitat areas (e.g. trails resulting in soil erosion through over use in lowland, flood plain areas directly adjacent to the River). Sections of trail found to impact sensitive sites should be decommissioned and rehabilitated / revegetated, with alternative corridors developed or improved. The Master Plan illustrates areas for considered decommissioning and new trail development.
- Trail access to key forest features and values, such as “Woody” the tree sculpture, the remnant prairie grassland meadow, wetlands, etc, will be maintained as much as possible.
- Trails throughout Bois des Esprits are to be considered multi-use. Access trail signage, to be developed in the future (See 4.3.2) is to communicate this approach, requesting various users – hikers, cyclists, etc. – to be mindful of multiple users and safety for all (e.g. cyclists to maintain low speeds).
- Presently a Restrictive Covenant applies to the Parkland, as part of the 2006 Bois des Esprits Tree Stand (14.91 acres) purchase agreement between the City of Winnipeg



and Ladco Company Limited. The Restrictive Covenant prevents pathway or walkway development from occurring within the outside 30 metres of the forestlands, east of the Seine River, until January 1st, 2011 (See Master Plan). At that time, the City of Winnipeg, interested stakeholders and citizens can cooperate and collaborate to undertake a public planning process, to assess the feasibility and public support for developing a perimeter trail system along the eastern most edge of Bois des Esprits.

Managing Park Use:

- Inappropriate activities that conflict with the Vision for the Forest ethics message, and also contravene City of Winnipeg by-laws, are not permitted in Bois des Esprits Park, including:
 - Campfires or bonfires
 - Makeshift shelter structures, tree houses or forts
 - Off-leash dogs
 - Cutting down or vandalizing trees
 - Vandalism to park infrastructure (e.g. signage, benches)
 - Feeding deer
 - Off-trail walking or hiking
 - Motorized use including ATV's or snowmobiles
 - Garbage dumping
 - Accessing and negatively impacting sensitive habitat areas and/or wildlife and fish species
- Dogs must be kept on leash by their owner to prevent chasing wildlife, especially deer. Dog solid-waste is to be cleaned up and removed from the forest by the owner.
- The City of Winnipeg, with assistance from stakeholders and citizens, will develop park entry signage that identifies both encouraged and discouraged use within Bois des Esprits. Inappropriate activities that conflict with the *Vision* for the Forest ethics message, and also contravene City of Winnipeg by-laws, will be highlighted. Other key information to be communicated:
 - Contact information (phone numbers) for reporting inappropriate activities,
 - Information on locations of off-leash dog parks throughout the city, as options other than Bois des Esprits for dog owners.



Fire in the forest.



- The City of Winnipeg will also communicate contact information for reporting inappropriate activities through The City of Winnipeg website postings.
- The City of Winnipeg will encourage and support stakeholders and citizens interested in establishing a “Community Watch” program for Bois des Esprits. Establishment of a Community Watch program could consider stakeholders or local citizens acting as “Park Stewards”, watchful to the occurrence of inappropriate activities within or adjacent to Bois des Esprits.

Relevant Policies, By-laws and Legislation

- *Plan Winnipeg 2020, Section 5E, “Creating a Beautiful City”, subsection 5E-04 “Promote Cleanliness and Beautification”*
- *Plan Winnipeg 2020, Section 5C “Managing Parks, Open Space, and Waterways”, subsection - 5C-01 - “Maintain and Expand the System of Public Parks”*
- *The City of Winnipeg, Ecologically Significant Natural Lands Strategy and Policy*
- *The City of Winnipeg, Universal Design Policy*
- *The City of Winnipeg, Universal Design Guiding Principles*
- *The City of Winnipeg Parks and Recreation By-law, No. 3219/82*
- *The City of Winnipeg Pound By-law, No. 2443/79 - sections 19 and 20*
- *The City of Winnipeg Interference with Wildlife Bylaw, No. 3219/82 - section 10*

4.3.2 Park Amenities and Enhancements

- The City of Winnipeg will maintain, improve or develop park access points and trails identified in the Master Plan, as capital funding and operational resources permit. Collaboration with stakeholders and members of the community can potentially leverage any City investment into additional funding and human resources from other levels of government and funding agencies. Forest access points could include information kiosk structures or trailhead signage that incorporates:
 - Information and mapping that communicates guidelines for both encouraged and discouraged use within Bois des Esprits, the location of accessible forest values (e.g. Woody the tree sculpture, giant Cottonwoods, etc.), the broader north-south connections to the Seine River Greenway and the City of Winnipeg’s Parkway Trail System and vehicle parking areas



- Text in both English and French
- Waste receptacles and bicycle racks as deemed necessary.
- The City of Winnipeg, with assistance from interested stakeholders and citizens, will work to develop way-finding trail signage within the forest, identifying routes of travel and levels of accessibility.
- The City of Winnipeg will encourage and support stakeholders interested in developing interpretive panels illustrating Bois des Esprits forest and waterway values, for placement at appropriate locations within the forest. Locations are to be determined in the field by the City of Winnipeg, with assistance from interested stakeholders and citizens.
- As trails are implemented and as funding permits, The City of Winnipeg, will assess the need for access improvements to and over sensitive areas (e.g. oxbow wetlands, stream channel crossings, steep access areas, etc.), which may include boardwalks, bridges, staircases / accessible ramps at locations throughout the forest, as illustrated in the Master Plan. Construction practices and materials are to include approaches already implemented by the City of Winnipeg including the use of “environmentally friendly” construction materials (e.g. composite decking materials) and “universal design guiding principles”. Assessments to determine locations and priorities for developing such structures are to be determined and confirmed from on-site assessments by the City of Winnipeg, with assistance of interested stakeholders or citizens.
- Rest areas and lookout points are to be developed as funding permits and as illustrated in the Master Plan. Developments are to include benches and relevant interpretive signage. Appropriate locations and requirements for benches and interpretive signage are to be confirmed by the City of Winnipeg with assistance by interested stakeholders and citizens. Construction practices and materials are to include approaches already implemented by the City of Winnipeg including the use of “environmentally friendly” products, materials and construction practices (e.g. durable, composite / re-cycled materials and signage) and “universal design guiding principles”.
- The City of Winnipeg will continue to maintain the existing canoe launch located on the Seine River on the north side of the Shorehill Drive Bridge.
- The City of Winnipeg will investigate the possibility of developing a parking/drop-off lane within the existing north boulevard, east of the Shorehill Drive Bridge, as illustrated in the Master Plan, in order to better accommodate waterway users accessing the



launch by vehicle with their watercraft.

- If the Shorehill Drive drop-off lane is not feasible, the City of Winnipeg will explore other canoe launch sites in the area, including the location in the vicinity of the John Bruce Road Bridge, near the northern edge of Bois des Esprits at the Seine River.
- The City of Winnipeg will support stakeholders and community organizations interested in negotiating with shopping mall property owners/managers, east of St. Anne's Road at Shorehill Drive, to permit vehicle parking in large Mall lots for Bois des Esprits users.

Relevant Policies, By-laws and Legislation

- *Plan Winnipeg 2020, Section 5E, "Creating a Beautiful City", subsection 5E-04 "Promote Cleanliness and Beautification"*
- *The City of Winnipeg, Ecologically Significant Natural Lands Strategy and Policy*

4.3.3 Forest, Waterway & Watershed Conservation & Management

The City of Winnipeg will conduct vegetation and habitat assessment of the forest as funding permits and as deemed necessary in the implementation of the Management Plan.

- The City of Winnipeg will provide support to educational institutions and environmental groups interested in conducting:
 - Environmental baseline studies to assess and better determine the spatial extent of terrestrial and aquatic vegetation, wildlife, fish and amphibian habitat areas and species locations within the forest and waterway. Adapt future management and maintenance actions / strategies relating to access and use in order to address and conserve identified rare, endangered or sensitive vegetation, wildlife, amphibian and fish species or habitats.
 - Studies and assessments are to involve the assistance of interested stakeholders or citizens with knowledge or familiarity of the forest and waterway, it's natural conditions and values, both past and present.
- Site work or development that is to occur in the forest in future (E.g. new trail development) is to be managed in order to prevent soil erosion, or excessive site disturbance and soil compaction. Particular attention will be given to:



- Sites near the river's edge, in the riparian zone
- Oak forest stands in order to prevent damage to root systems, causing stress and Oak decline or dieback within the tree canopy
- Forest parcels identified in the Master Plan as to be maintained in a "natural state", including areas north of Shorehill Drive and west of the Seine River, are to be managed and maintained as such and will include access improvements only through consultation with relevant stakeholders and citizens.
- Forest features including natural and cultural heritage values – such as "Woody" the tree spirit, giant Cottonwood tree and historic and pre-historic cultural use of the forest (Métis and late Woodland Culture) are to be conserved and interpreted. The City of Winnipeg will support stakeholders and organizations interested conducting preliminary assessments of the forest to determine the full extent of cultural heritage values.
- The City of Winnipeg will encourage and support interested stakeholders or citizens with undertaking conservation fundraising initiatives (e.g. grant applications), not available to the City, in order to further support the implementation and to conduct priority conservation, maintenance and refurbishment projects agreed to by the parties (e.g. potential habitat/vegetation restoration/rehabilitation)
- The City of Winnipeg will provide support to Manitoba Conservation, Wildlife Branch, who has jurisdiction and responsibility to manage White-tailed Deer and Beaver populations.

Relevant Policies, By-laws and Legislation

- *Plan Winnipeg 2020, Section 5C (see above) subsection 5C-04 "Protect Environmentally Sensitive Lands",*
- *Plan Winnipeg 2020, Section 5E "Creating a Beautiful City", subsection 5E-03, "Protect and Enhance Urban Forest" Plan Winnipeg 2020, - Section 5C-03 "Support Waterway Management"*
- *The City of Winnipeg, Ecologically Significant Natural Lands Strategy and Policy*
- *The City of Winnipeg, Best Management Practices Handbook for Activities In and Around the City's Waterways and Watercourses*
- *The City of Winnipeg Waterway Bylaw, No, 5888/92*
- *The Province of Manitoba, The Environment Act*



'Woody' Tree Spirit.



- *The Province of Manitoba, The Endangered Species Act*
- *The Province of Manitoba, The Water Protection Act*
- *The Province of Manitoba, The Heritage Resources Act*
- *Federal Fisheries Act, Manitoba Fishery Regulations, 1987*
- *Federal Navigable Waters Protection Act, sections 5(1), 6(1), 6(4), 10(1) and 10(2)*
- *Federal Species at Risk Act, 2002*
- *Canadian Environmental Protection Act, 1999*

4.3.4 Monitoring

- The City of Winnipeg, together with interested stakeholders and citizens, will conduct an annual inspection of park infrastructure and forest and waterway biophysical conditions including:
 - trails and access infrastructure (e.g. trail surfacing conditions, signage, boardwalks)
 - forest and waterway conditions (e.g. the occurrence of invasive vegetation species) Inspections will be conducted in order to determine and prioritize necessary maintenance, refurbishment and conservation requirements. Inspections will assist with developing annual work plans and budgets for priority maintenance, refurbishment and conservation projects, for City of Winnipeg budget process (e.g. trail maintenance, habitat restoration, etc.).
- The City of Winnipeg, together with interested stakeholders and citizens, will review and update the Bois des Esprits Management Plan every 10 years to assess the state of forest and habitat ecological function. Ten year monitoring and assessment processes will consider:
 - The state of ecological function, at the time of reporting, compared to environmental baseline studies information compiled for Bois des Esprits
 - Adjacent properties and land use, ensuring harmony with the forest and no negative effects from adjacent land use, encroachment or development (e.g. garbage dumping, surface water flows and drainage into the forest)
 - Management actions or strategies to address identified issues pertaining to ecosystem function



Relevant Policies, By-laws and Legislation

- *Plan Winnipeg 2020, Section 5C, subsection 5C-01 “Maintain and Expand the System of Public Parks”*
- *The City of Winnipeg, Ecologically Significant Natural Lands Strategy and Policy*

4.3.5 Stewardship

- The City of Winnipeg as owner of the property has a key role in the management and stewardship of the forest. However, the long-term success of this Management Plan will require a collaborative effort that includes various stakeholders, citizens and funding partners.
- One approach to strengthening this collaborative approach would be the formalizing of a “Bois-des-Esprits Stewardship Team” organization comprised of interested stakeholders and citizens. This group could focus on the issues related to Bois des Esprits and strive to improve public awareness and understanding of Bois des Esprits natural and cultural values and *Vision for the Forest* in order to foster community based ownership and stewardship of the forest.
- Efforts could include:
 - Advocacy for capital and operational funding as well as summer Green Team workers.
 - Bois des Esprits communications (website postings)
 - Partnerships with school divisions to enhance environmental education in school curriculums, with the intent of encouraging an understanding and appreciation of Bois des Esprits natural and cultural heritage features and values.
 - conducting interpretive tours of the forest and waterway, through “Park Steward” volunteers with local knowledge of the forest and it’s values, features and required approaches to stewardship and conservation.

Relevant Policies, By-laws and Legislation

- *The City of Winnipeg, Ecologically Significant Natural Lands Strategy and Policy*
- *The Province of Manitoba, Department of Education, Citizenship and Youth, “Education for Sustainable Development” Curriculum Guide*



5.0 Plan Implementation

The Management Guidelines presented in the previous section of this report outline a number of required responsibilities or actions by the City of Winnipeg, stakeholders and local residents, all working together to conserve Bois des Esprits. The Bois des Esprits Management Planning process has been successful as a result of the number of stakeholders and citizens, with varying interests in the forest and waterway, all coming together to realize a common vision and future for the forest and waterway. An approach of continued cooperation and collaboration must be encouraged to achieve continued future success with the implementation of a Bois des Esprits Management Plan.

The Vision for the forest, really, has all citizens of Winnipeg working to conserve the appearance and ecological function of the Bois des Esprits forest and waterway over the next 10, 25 or 50 years. Ultimately, this is a necessary approach for us all to guide into perpetuity. The Vision for Bois des Esprits must continue to act as the single most important guide for implementing the Management Plan.

5.1 Bois des Esprits Stewardship Team

Figure 1 presents an ongoing “Bois des Esprits Stewardship Team” (BEST) organizational framework that includes the continued efforts of the City of Winnipeg and process stakeholders and citizens working to implement the Management Plan.

Participants of the Stewardship Team should be principally based on participant involvement in the Management Planning process and include:

- The City of Winnipeg – including a representative of the Planning and Property Development Department and local area Parks Superintendent
- Save our Seine River Inc. representative
- Representative of Ladco Company and/or local home-builders in the new Royalwood Subdivision
- A Representative from each of the Local Residents Associations, such as The Royalwood Property Owners Association, Local Condominium Associations, etc.
- Special interest groups including recreational associations, non-government

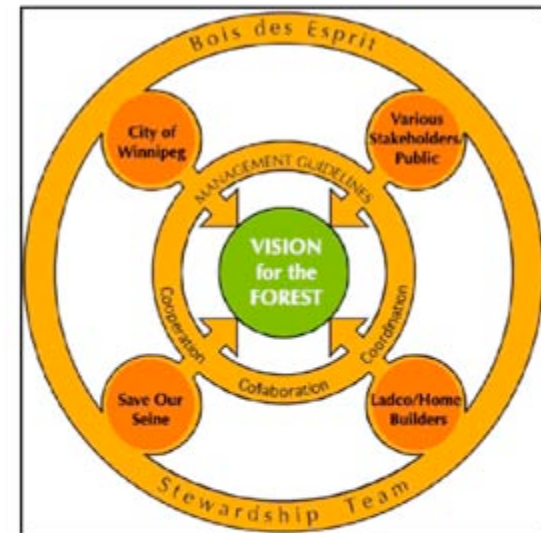


Figure 1: The Bois des Esprits Stewardship Team (BEST)



- environmental groups, local area school or school division representatives.
- Members of the general public

Organizational aspects of the Team should include:

- City of Winnipeg representatives to act as a support to the Team
- The Team should work to assemble and meet as a group at least once annually to address management guidelines and topics of annual park maintenance, refurbishment, programming and costs associated funding requirements. Such an event could coincide with annual City of Winnipeg efforts to assess “next fiscal year” projects and funding requirements. The meeting would also work to coordinate ongoing management actions and strategies including, monitoring and assessment, sourcing project funding – both by the City of Winnipeg and Team representatives with ties to special interests groups with the ability to access additional project funding.
- Impromptu meetings required to address special circumstances or issues (e.g. ongoing vandalism) are to be arranged, bringing the Team together in due course and define and employ appropriate adaptive management strategies that may or may not already be outlined in the plan

5.2 Management Actions and Responsibilities

The City of Winnipeg will ultimately maintain mandated control and responsibility over Bois des Esprits park land, including ongoing management, maintenance and refurbishment of the park and associated infrastructure and site amenities. The Management Guidelines presented in this document outline necessary management actions or strategies to be implemented by the City of Winnipeg, working collaboratively and cooperatively with interested stakeholder or citizens or representatives of the Stewardship Team. Table 1 illustrates identified management guidelines in relation to implementation time frame requirements.

Some of the key ongoing management actions and responsibilities the City of Winnipeg that are to include the participation, cooperation and collaboration of the Stewardship Team include:

- Annual assessments of parkland maintenance, refurbishment or management



requirements, e.g. trail maintenance, naturalization / revegetation projects

- 10 year review and update the Bois des Esprits Management Plan to assess the state of park access, trails, natural features conditions (forest, grassland, waterway, wildlife populations, programming, etc.) and to gauge the success of management plan implementation.
- Fund raising, conducted by representatives of the Stewardship Team, separate from City of Winnipeg budgeting and project funding allocations, to assist with necessary or additional project implementation as required
- Maintenance or refurbishment projects deemed appropriate by the City of Winnipeg for the inclusion of volunteer support and capacity, e.g. rehabilitative naturalization planting programs, litter clean up, trail re-surfacing (woodchips / gravel)

Management actions and responsibilities will involve a wide range of short term (e.g. a single growing season) and long term activities (e.g. a river bottom vegetation restoration planting program over many years or providing educational / interpretive tours).



Table 1: Management Guidelines - Actions & Strategies Required to Achieve the "Vision for the Forest"

Management Guidelines	Actions/ Strategies	2008	2009	2010	Ongoing	Responsibilities	Cost
Access & Use							
TRAILS Trail development, maintenance and refurbishment	Develop Primary Trail Corridor (gravel surface) and forest access points					City of Winnipeg in consultation with interested stakeholders	\$175,000
	Develop Secondary Trail Corridors (wood chip) including trail de-commissioning in sensitive areas					Partnership project with City of Winnipeg, SOS and other stakeholders	\$65,000
	Maintain trails to ensure multi-use access					City of Winnipeg with support from stakeholders (e.g. Green Teams)	TBD
	Develop a consultation process for assessing the feasibility of trail expansion on the eastern edge of the forest.					City of Winnipeg in consultation with interested stakeholders	n/a
MANAGING PARK USE Discourage inappropriate activities and promote awareness of appropriate park use.	Communicate appropriate/ inappropriate activities: signage, website postings					City of Winnipeg in consultation with interested stakeholders	\$5,000
	Publicize contact information for reporting issues					City of Winnipeg in consultation with interested stakeholders	n/a

Notes:

- This table synthesizes more detailed Guideline statements found in section 4.3 of the document, A Management Plan for Bois des Esprits
- TBD - "To Be Determined"



Table 1: Management Guidelines - Actions & Strategies Required to Achieve the "Vision for the Forest"

Management Guidelines	Actions/ Strategies	2008	2009	2010	Ongoing	Responsibilities	Cost
Park Amenities & Enhancements							
Maintain, improve or develop park access features and signage.	Establish information "kiosks" at park access points.					City of Winnipeg in consultation with interested stakeholders	\$20,000
	Develop way-finding signage and interpretive panels within the forest trail network.					City of Winnipeg in consultation with interested stakeholders	\$25,000
Develop access amenities and structures	Install rest areas, waste receptacles and bicycle racks					City of Winnipeg in consultation with interested stakeholders	\$15,000
	Assess need for constructing boardwalks, bridges, stairs, and ramps over/adjacent to sensitive sites					City of Winnipeg in consultation with interested stakeholders	TBD
	Maintain existing Shorehill Drive canoe and/or consider a launch site at John Bruce Road					City of Winnipeg in consultation with interested stakeholders	TBD
Explore ways to improve parking	Investigate the possibility of developing a parking lane east of the Shorehill Drive Bridge					City of Winnipeg in consultation with interested stakeholders	TBD
	Investigate potential parking arrangements with area businesses.					Stakeholders with support of City of Winnipeg	n/a

Notes:

- This table synthesizes more detailed Guideline statements found in section 4.3 of the document, A Management Plan for Bois des Esprits
- TBD - "To Be Determined"



Table 1: Management Guidelines - Actions & Strategies Required to Achieve the "Vision for the Forest"

Management Guidelines	Actions/ Strategies	2008	2009	2010	Ongoing	Responsibilities	Cost
Forest, Waterway & Watershed Conservation & Management							
Gain knowledge of site ecology to guide conservation and management	Conduct vegetation and habitat assessment/ environmental baseline studies of forest.					Educational institutions and environmental groups with support from the City of Winnipeg	TBD
Conserve and protect natural & cultural heritage features and values	Manage future development to prevent soil degradation, erosion, compaction and protect forest stands.					City of Winnipeg in consultation with interested stakeholders	n/a
	Limit access into "natural state" forest parcels (identified in Master Plan).					City of Winnipeg in consultation with interested stakeholders	n/a
	Assess full extent of cultural heritage values.					Interested stakeholder/organizations with support from City of Winnipeg	n/a
	Manage deer and beaver populations.					Manitoba Conservation with support from City of Winnipeg	n/a
Monitoring							
Monitor condition of park infrastructure and ecology.	Conduct annual inspection of trails, amenities, habitat conditions. Inspections to guide work plans and budgets.					City of Winnipeg in consultation with interested stakeholders	n/a
Assess long term condition of ecosystem function	Update management plan every 10 years to review and assess ecosystem function and impact of adjacent land use.				Every 10 years	City of Winnipeg in consultation with interested stakeholders	TBD
Stewardship							
Foster a collaborative approach in the management and stewardship of the forest: The Bois des Esprits Stewardship Team (BEST)	BEST organization comprised of interested stakeholders and citizens					Interested stakeholder/organizations with support from City of Winnipeg	n/a
	Advocacy, communications, partnerships with school divisions, conducting interpretive tours					Interested stakeholder/organizations with support from City of Winnipeg	n/a

Notes:

- This table synthesizes more detailed Guideline statements found in section 4.3 of the document, A Management Plan for Bois des Esprits
- TBD - "To Be Determined"



5.3 Annual and 10 Year Monitoring Reports

It is most important that regular general assessments of management plan implementation be conducted annually to determine if Master Plan recommendations or required management guidelines and actions or strategies have been conducted or achieved.

Every 10 years the City of Winnipeg and willing members of the Stewardship Team will work to conduct a more detailed assessment of Bois des Esprits natural and cultural heritage values to ensure that the management approach for the *Vision for the Forest* is maintained.



References

Publications:

- Chaput, Lucien (Trigo Associés); The Seine River Corridor: its history and suggestions for its interpretation; June 1995
- The City of Winnipeg; "Ecologically Significant Natural Lands Strategy & Policy"; 2007
- The City of Winnipeg; "Plan Winnipeg 2020 Vision"; 2001
- The City of Winnipeg; "Universal Design Guiding Principles"; 2006
- The City of Winnipeg; "Universal Design Policy"; 2001
- The City of Winnipeg; "Best Management Practices Handbook for Activities In and Around the City's Waterways and Watercourses"; 2005
- Coley, Ronald (Coley Water Resource and Environment Consultants); The Seine River - Its Importance to Wildlife and to the Citizens of the City of Winnipeg and Southeastern Manitoba Hydraulic Technical Review Report; January 2006
- Cowan, Andrew (City of Winnipeg); An Assessment of Vegetation and Wildlife Habitat Quality for The Seine River Parkway, 1995; 1995
- Denis Andrews Consulting; Seine River Riffle Site Development Plan - Technical Report; March 2000
- Eco-Journal - Volume 14, Number 1; Bois des Esprits: The Story of an Urban Forest; January / February 2004
- Gaboury, Etienne (Gaboury Préfontaine Perry Architects); Bois des Esprits Park Plan Seine River Development; March 2001
- Minnesota Department of Natural Resources Trails and Waterways; Trail Planning, Design and Development Guidelines - Shared Use Paved Trails, Natural Surface Trails, Winter Use Trails, Bikeways; 2007
- Save Our Seine River Environment Inc.; Seine River Greenway Map; 2005



Save Our Seine River Environment Inc.; Seine River Interpretive Trail - Provencher Boulevard to Marion Street; November 1995

Smith, Morley John (Natural Resources Institute, University of Manitoba); Water Management Strategies For The Lower Seine River; October 1992

Maps & Drawings:

Ladco Company Limited; Royalwood Phase II, Stage 1, General Plan; City of Winnipeg Drawing #D-8063, Wardrop Engineering Inc No. 195 Expiry: April 30, 2007

Ladco Company Limited; Royalwood Phase II, Stage 4, Lot Grading Plan; City of Winnipeg Drawing #LD-3316, Wardrop Engineering Inc No. 195 Expiry: April 30, 2007

Ladco Company Limited; Royalwood Phase II, Stage 5, Lot Grading Plan; City of Winnipeg Drawing #LD-3416, Wardrop Engineering Inc No. 195 Expiry: April 30, 2007

Personal Correspondence:

Bois des Esprits Specialist

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Cultural Heritage Resources

Gary Dickson, Co-Manager, Province of Manitoba, Culture, Heritage, Tourism and Sport Culture, Heritage & Recreation Programs, Historic Resources, Provincial Heritage Registry Unit

Ecosystem & Natural Vegetation Specialists

Cheryl Hemming, City Naturalist, City of Winnipeg Naturalist Services Branch, 2007

Chris Penner, Wetland Ecologist, Prairie and Wetland Restoration Specialist, Native Plant Solutions, 2007

Christopher Lepa, Urban Forestry Technician (ISA certified), City of Winnipeg, 2007



Fisheries

Doug Watkinson, Research Biologist, Environmental Science Division, Fisheries and Oceans Canada, 2007

Hydrology

Bruce Harding, Senior Hydraulic Engineer, Bruce Harding Consulting, 2007

Wildlife – Mammals, Birds & Amphibians

Gene Collins, Wildlife Manager, Central Region, Manitoba Conservation, 2007

Brian Hagglund, Wildlife Biologist, Manager of Oak Hammock Marsh, 2007

David Hatch, Naturalist, Green Spaces Environmental Consulting, 2007

Chris Penner, Wetland ecologist, prairie and wetland restoration specialist, Native Plant Solutions, 2007



Appendix 1

Bois des Esprits – Management Plan Development Vision, Principles and Objectives



BOIS DES ESPRITS - MANAGEMENT PLAN DEVELOPMENT
Text Applies to Figure on Page 3

Major Step 1 – Confirmation of Approach

- Consists of three parts:
 - a meeting on February 1st with the City of Winnipeg and Save Our Seine
 - individual meetings with LADCO and/or the Builders and with the Province
 - an approach to the three City Councillors to acquaint them with the planning activity (the task of the City and SOS)
- Seek agreement to proposed objectives, principles and process

Major Step 2 – Confirmation of Approach

- Requires a more extensive list of stakeholders which would be obtained during Major Step 1. This list could include organizations such as residents associations, condo associations, recreation and conservation groups such as Prairie Pathfinders, Paddle Manitoba, Manitoba Recreational Trails Association, Manitoba Naturalists Society, Metis Federation, etc.
- Consists of an evening meeting which would offer opportunity to stakeholders to comment on the objectives and principles upon which this process is based. Also, participants would be asked if they wished to be involved in the design workshops.
- Also begins public information process, largely led by the City but with all Advisory Committee members participating

Major Step 3 – First Design Workshop

- This is the first part of the design consultation and would consist of one-third to one-half day of background information on the forest and on the design process. The second half-day would have the consultants engaging the participants in the process of designing appropriate interventions.
- Outputs will include some acceptable interventions and some options where consensus cannot be achieved.

Major Step 4 – Second Design Workshop

- The second part of the design consultation would consist of a discussion on the optional interventions which came out of the first part and, then, the development of development and maintenance guidelines which would form an integral part of the plan.

Major Step 5 – Confirmation of Results

- Consists of five parts:
 - Draft plan from consultant to Advisory Group and review of same by Advisory Group (Specific Report 1). The Advisory Group review may be done individually, e.g. consultant could present to SOS Board.
 - Presentation and review of draft plan at public open house.
 - Final adjustments made to plan by consultant.
 - Receipt and review of final plan by Advisory Group (Specific Report 2)
 - Presentation of plan to Community Committee by Advisory Group members



BOIS DES ESPRITS - MANAGEMENT PLAN DEVELOPMENT (cont'd.)

Follow-up Step 1 - Closing the Loop

- Meeting involving the consultants, the City of Winnipeg, Save Our Seine and other Advisory Group members, if desired, to determine how the process worked, what could be improved another time, etc.

Consultants' Management Principles

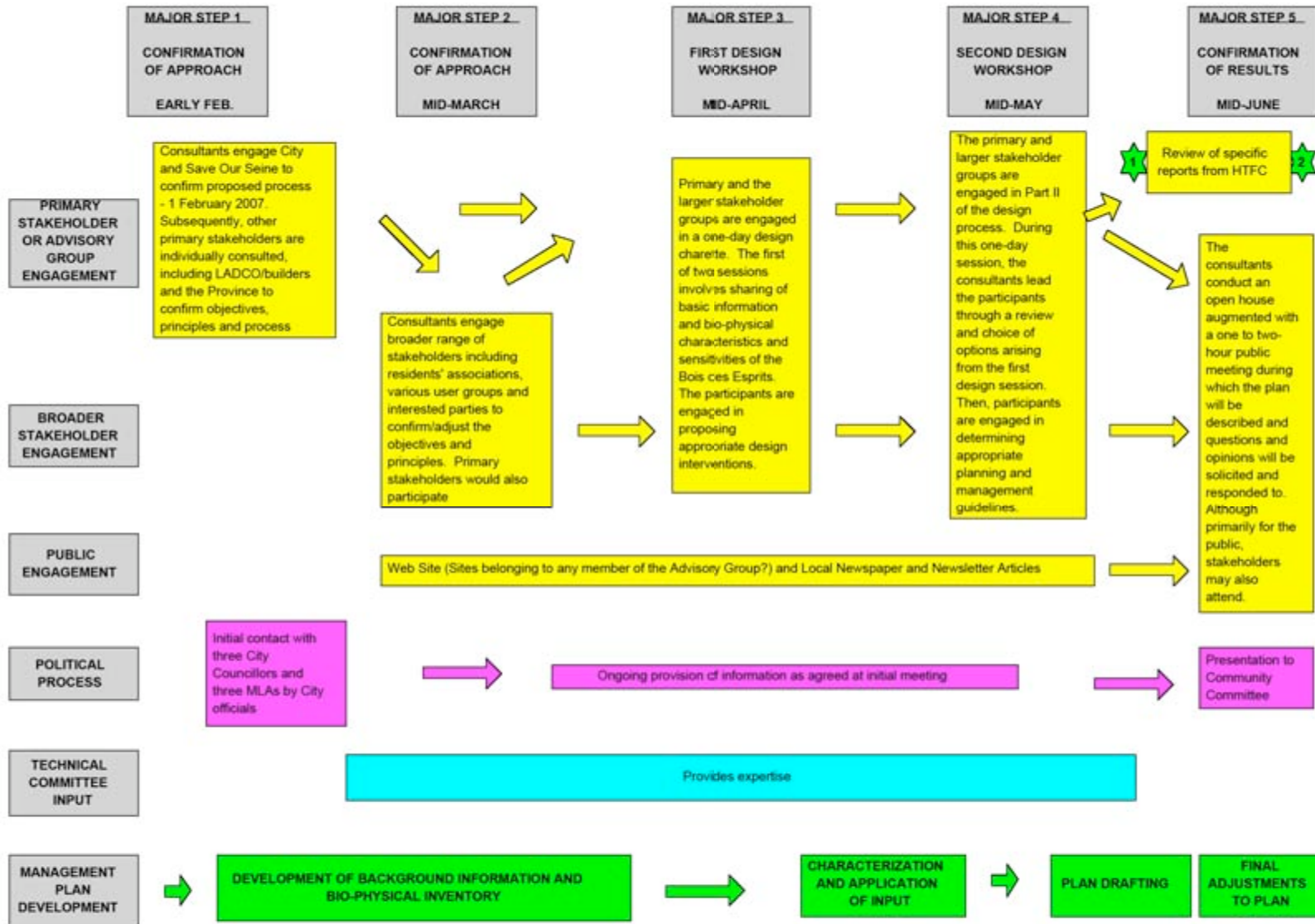
- The stakeholder and public engagement processes will be based on inclusiveness and transparency. The consultants would discuss departures from these principles explicitly and in advance with the Advisory Group.
- No significant change to the process portrayed and described in this document will be made without discussion with the Advisory Group members.



February 2007

BOIS DES ESPRITS - MANAGEMENT PLAN DEVELOPMENT

June 2007



Hilderman Thomas Frank Cram and SLMcLeod



Draft Vision, Principles and Objectives

Vision for the Forest:

In 10, 25 or 50 years, the Bois des Esprits will not be noticeably different, in appearance or ecological function than it is in 2006.

Principles to Guide the Management Plan:

- *Protection* – The unique features, the biodiversity and general character of the forest and the landforms, and thus the habitat, will be maintained.
- *Metis Tradition* – Respect and enhance appreciation of the Metis' historic use of the area and of Metis culture.
- *Use and Access* – providing opportunities for area residents and the general public to access and enjoy the forest through low impact, non-motorized uses.
- *Understanding, Education and Appreciation* - enhanced understanding and knowledge of the forest and how it functions, the sharing of that knowledge and understanding with others and encouragement to all to appreciate the forest and its diverse facets. The formal education system should be encouraged as partners in this initiative.
- *Informed, Adaptive and Active Management* – encouragement of research which will inform adaptive planning and management, and a strong commitment to ongoing maintenance and enforcement.
- *Public Safety* – management, maintenance and enforcement decisions will reflect a recognition of the importance of public safety.
- *Cooperation* – recognition that the need to engage all legitimately interested parties in decision-making with respect to the forest is ongoing and long-term and does not end with the development of the management plan.

Objectives of the Project:

- To develop a management plan for the Bois des Esprits for the consideration and approval of the Winnipeg City Council.
- To ensure all legitimately interested parties have had an opportunity to have input to the development of the plan and to demonstrate to those parties that they have had meaningful involvement.
- To seek agreement or acceptance from all legitimately interested parties of the vision and principles to which the Management Plan is to adhere.

