RIBBON *of* GREEN

SW + NE | July 2019

Edmonton

Prepared for

City of Edmonton

Prepared by

O2 Planning + Design Inc.

Preface

This document provides policy direction to guide the planning, programming and management of the southwest and northeast portion of the North Saskatchewan River Valley and Ravine System (the System). These policies were developed based on existing direction, best practices, public engagement and analyses.

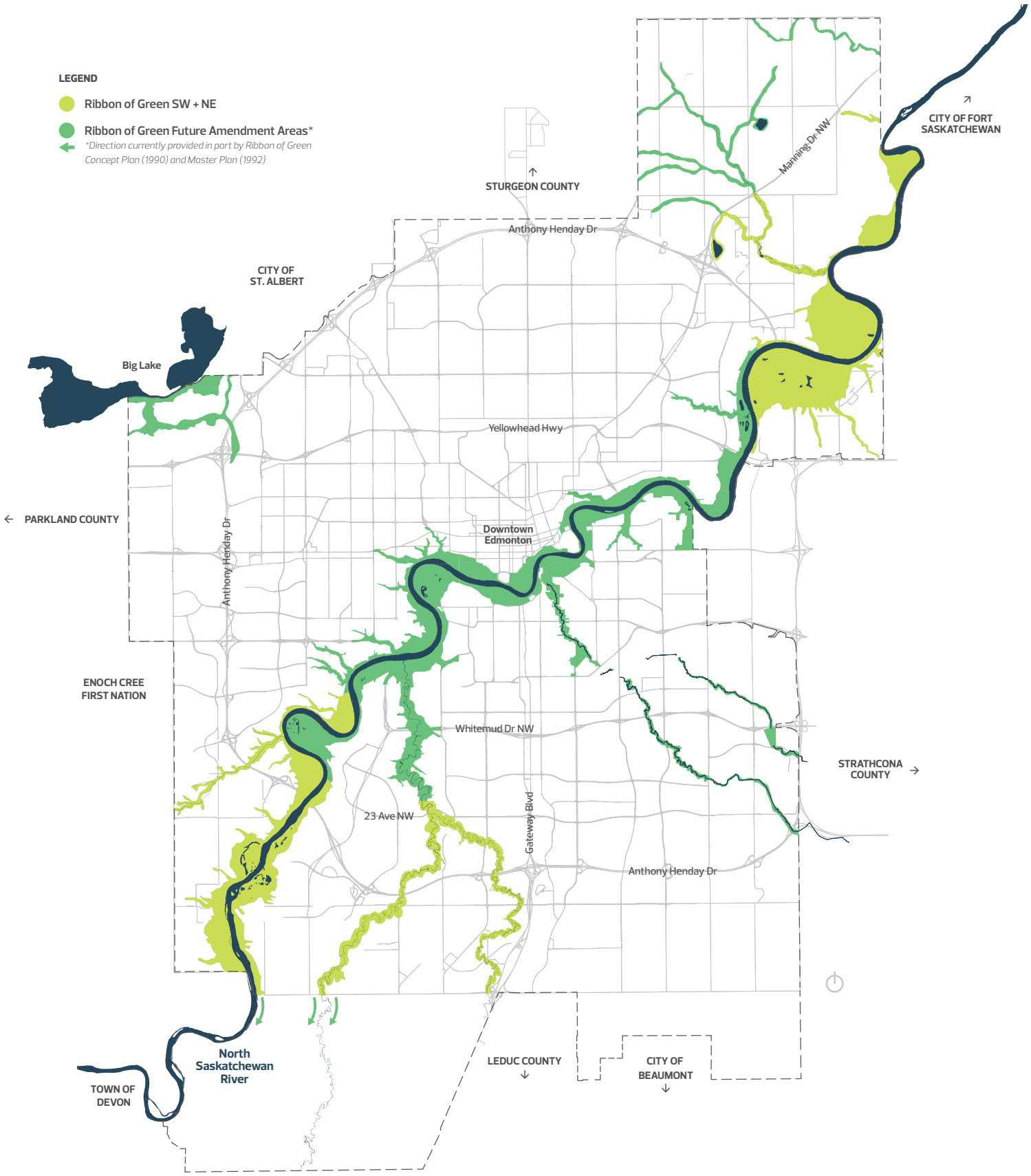
The polices and spatial direction in this Plan applies to the furthest northeast and southwest areas of the System (see map on the following page). Spatial direction for the central areas of the System shown on the map can be found in the *Ribbon of Green Concept Plan (1990)* and *Ribbon of Green Master Plan (1992)*.

As other areas within the System are revisited, spatial planning (application of the Land Management Classifications and creation of Program Guidance), along with refinement and confirmation of the System-wide policies, will be conducted and included in this document. This will ensure that the *Ribbon of Green SW + NE* remains current.

Acknowledgment

The City of Edmonton acknowledges that it is situated within Treaty 6 territory; within the Métis Nation of Alberta Region 4; and on the traditional territory of the Cree, Dene, Saulteaux, Blackfoot, and Nakota Sioux. The North Saskatchewan River Valley and Ravine System has significance to Indigenous people and to all those who come from around the world to share Edmonton as a home. This document calls upon the collective honoured traditions and spirits of Indigenous peoples and Edmontonians to work together in protecting the City's Ribbon of Green today, and for future generations.

RIBBON OF GREEN SW + NE PLANNING AREAS



HOW TO USE THIS PLAN

The *Ribbon of Green SW + NE* is divided into five sections, each with a different intent:

INTRODUCTION VISION + PRINCIPLES

Section 1

This section provides background and outlines the **Vision** and **Principles** for the *Ribbon of Green SW + NE*.

SYSTEM-WIDE POLICIES

Section 2

This section contains policies to guide decision making and direct the planning, design, and management of the northeast and southwest areas within the River Valley and Ravine System. The direction here ensures a consistent approach is applied throughout the System.

Site Direction: LAND MANAGEMENT CLASSIFICATIONS

Section 3

This section divides the River Valley into three main Classifications:

PRESERVATION
(Highest level of ecological protection)

CONSERVATION
- Trail-based Recreation
- Natural Recreation

ACTIVE/WORKING LANDSCAPES
- Intensive Recreation
- Agriculture and Horticulture
- Urban Services and City-wide Attractions

These Classifications are defined in this plan and presented in section 3. **It is important to note** that this Plan is a result of a desktop analysis using the best data available at the time. Future site-specific planning will include field assessments that may result in further refinement of these Classifications and the spatial delineation of the Sub-Classifications.

Site Direction: PROGRAM GUIDANCE

Section 4

Program Guidance provides the following:

A vision for each reach:
(river valley or ravine segment)

Program guidance for each reach: This includes spatial direction that functions as a starting point, and will be refined and confirmed during future site-specific planning processes.

Amenity Node and Primary Trailhead direction: This section includes program statements, design ideas, and circulation direction for areas of activity within each reach.

IMPLEMENTATION

Section 5

This Plan concludes with an implementation section that provides direction to expand, monitor, evaluate and realize the *Ribbon of Green SW + NE* over time.

1 INTRODUCTION

1.1 The River Valley in Edmonton

The North Saskatchewan River originates over 2,000 metres above sea level at the Saskatchewan Glacier in the Columbia Icefield. It flows across western Alberta before reaching the City of Edmonton. The River Valley is incised 45 to 60 metres below the plains upon which most of the city is located – plains that were once covered by a glacial lake at the end of the last ice age. As the glaciers retreated, regional drainage patterns were restored and the North Saskatchewan River Valley began to form. The river has carved through the landscape, resulting in a unique network of river terraces, meanders, and oxbows that characterize the North Saskatchewan River Valley and Ravine System (the System) today.

What is the System?

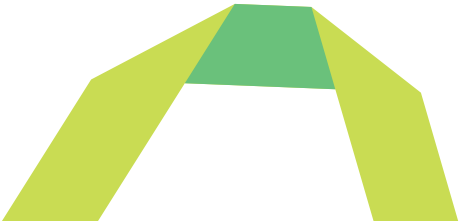
The North Saskatchewan River Valley and Ravine System is referred to as the System throughout the Plan.

The City of Edmonton lies within the Parkland Ecotone, the transition zone between boreal forest to north and prairie grassland to the south. As a transition zone, the Parkland Ecotone supports a high level of diversity of both boreal and prairie species, making its conservation critical.

The System is the Edmonton region's greatest natural asset and a significant contributor to the quality of life of Edmontonians. Long established as a gathering place for Indigenous Nations, Edmontonians continue to value the protection and celebration of the natural and cultural heritage of this area. The System provides Edmontonians with the unique opportunity to connect with nature within an urban environment. Canada is becoming increasingly urbanized, with over 80% of Canadians now living in cities. As this urbanization trend continues, the protection of the System as a natural asset within an expanding urban area will become even more important.

The North Saskatchewan River winds through the City of Edmonton from its southwest corner to its northeast corner. In addition to the river itself, the System includes multiple ravines and numerous tributaries, which measure over 100 kilometres long. Together, these watercourses form the Ribbon of Green.

This System is the most dominant physical feature within Edmonton and the surrounding region, and is the spine of the ecological system. Totaling more than 7,400 hectares, few cities can claim such an expansive area of connected urban parkland in a largely natural condition. Its unique physical, biological, historical and scenic characteristics significantly contribute to Edmontonians' quality of life and is cherished throughout the community and region.



1.2 Purpose of the Ribbon of Green SW + NE

The Ribbon of Green SW + NE provides strategic direction to guide the protection and responsible use of the southwest (SW) and northeast (NE) portion of Edmonton's River Valley and Ravine System over the next 20 years.

As the City of Edmonton grows, the System faces increasing pressure from urban development and use. The *Ribbon of Green SW + NE Plan* helps support and sustain an interconnected System that meets the needs of the environment while providing diverse recreational and cultural experiences for those who work, play and/or live in Edmonton. The Plan provides direction to the acquisition, management, programming, and development of publicly owned land within the Plan's two study areas.

Specifically, the *Ribbon of Green SW + NE*:

- Contains policy direction to guide decision making, further planning, monitoring and management of the System.
- Informs collaboration, public engagement and partnerships with communities, institutions and other orders of government.
- Defines and applies Land Management Classifications to outline the protection and level of programming appropriate for different locations within the System.
- Provides program direction to inform future site-specific planning.

The Ribbon of Green SW + NE does not change the development rights of private landowners, as per the Land Use Bylaw, Statutory Plans, and City Policy.

It is important to note that all analyses conducted during the Ribbon of Green SW + NE process have been completed at a desktop level, and that the policies and recommendations within the Plan do not supersede Federal or Provincial regulations and laws, and should be implemented in accordance with other City polices and bylaws.

The Quarry

1.3 Plan Hierarchy

The *Ribbon of Green SW + NE* translates the City of Edmonton's high-level open space strategies, plans, and policies to guide River Valley and Ravine System management, site-specific planning, and design. The Plan expands on the *Ribbon of Green Concept Plan* (1990) and *Master Plan* (1992), by providing policy and spatial direction for the furthest northeast and southwest areas of the System.

ConnectEdmonton and City Plan

ConnectEdmonton is Edmonton's Strategic Plan for 2019-2028. It sets the direction for our future by providing Edmonton's vision, guiding principle, four 10-year strategic goals and indicators. The City Plan (under development) will replace The Ways documents, including the Municipal Development Plan and Transportation Master Plan.

City-Wide Policy

The following selection of policies apply to the City of Edmonton as a whole but also contain important direction for future System planning.

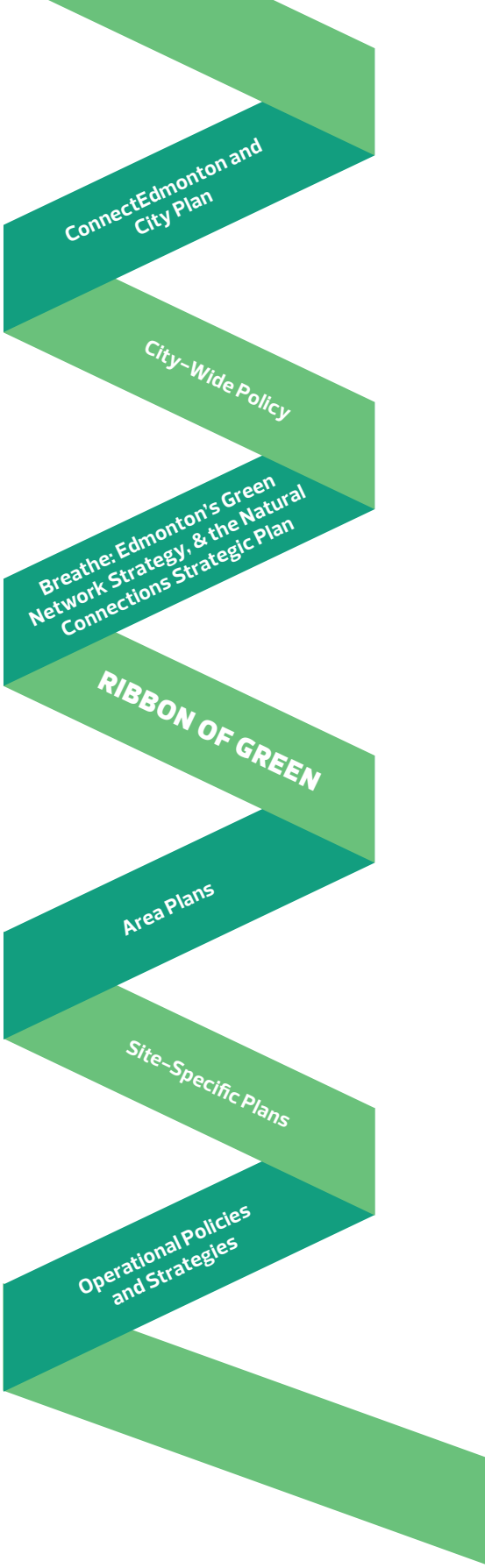
- **Development Setbacks from River Valley/Ravine Crests (C-542A):** This policy establishes appropriate setbacks from the river valley and ravines to preserve views, optimize public access and protect private and public property from hazardous slopes.
- **Open Space Policy (C-594):** This policy commits the City to evidence-based, collaborative planning in service of an integrated, sustainable, vibrant, and multi-functional green network.
- **Natural Area Systems (C-531):** This policy recognizes the importance of balancing environmental considerations with economic and social considerations by conserving, protecting, and restoring Edmonton's natural areas as an integrated and connected system throughout the city.

Natural Connections Strategic Plan

Edmonton's *Natural Connections Strategic Plan* establishes a coordinated direction for the City to conserve an ecologically functional network of natural areas in Edmonton.

Green Network Plan

Breathe: Edmonton's Green Network Plan provides the framework for the *Ribbon of Green SW + NE*. Breathe is a strategy to ensure that each neighbourhood is supported by an accessible network of parks and open spaces as the city grows. Breathe will help to plan a healthy city by encouraging connected and integrated open spaces.



The graphic above shows how the *Ribbon of Green SW + NE* relates to the various plans and strategies for River Valley and Ravine System planning.

Climate Resilient Edmonton: Adaptation Strategy and Action Plan

Climate Resilient Edmonton guides the City in responding to the impacts of climate change and protecting the community, infrastructure, and services from its impacts.

Area Plans

These plans provide statutory direction to the River Valley and Ravine System and the adjacent neighbourhoods.

- **North Saskatchewan River Valley Area Redevelopment Plan:** This Plan provides the environmental review framework and policy direction for the planning and protection of the North Saskatchewan River Valley and Ravine System.
- **Area Structure Plans (ASPs), Area Redevelopment Plans (ARPs), Neighbourhood Structure Plans (NSPs) and Neighbourhood Area Structure Plans (NASPs):** These documents provide direction for neighbourhoods adjacent to the River Valley and Ravine System.

Site-Specific Plans

The *Ribbon of Green SW + NE's* directions are anchored in an extensive desktop analysis. Desktop analysis refers to written reference materials, modeling and mapping using datasets, and engagement instead of site visits and field assessments. Further River Valley and Ravine System planning will involve field assessments to verify and refine the direction contained here to inform the detailed planning and design for specific sites within the System. These plans can take many forms including, but not limited to, the design and programming for a single park (e.g. the Oleskiw River Valley Park Master Plan), a management strategy for controlling erosion on a vulnerable slope, a trail alignment study, and a natural area management plan.

Site-specific plans must align with the System-wide policies within this Plan. These policies will provide concrete and consistent direction, whereas the Land Management Classifications and Program Guidance function as a starting point, which is subject to change during site-specific planning when detailed site visits, analysis, and engagement can be conducted.

Operational Policies and Strategies

The following policies guide specific amenities, uses, practices, and activities within Edmonton's open spaces.

- **Live Active Strategy (2016):** The Strategy provides a road map for supporting the active recreational and sporting needs of all Edmontonians.
- **Parkland Bylaw (2202):** This bylaw regulates the conduct and activities of people on City-owned or operated parkland in order to promote the safe, enjoyable, and reasonable use of parks and to protect and preserve natural ecosystems.
- **Corporate Tree Management Policy:** This policy protects the tree canopy on City property by guiding the development and maintenance of the City's tree inventory, providing a tree reserve account for new planting, and coordinating all City tree planting programs.
- **Dogs in Open Spaces Strategy:** The Strategy includes recommendations to help shape and update the City of Edmonton's current planning, design, and management practices regarding dog off leash areas.
- **Plan of Action for the Capital Region River Valley Park:** Developed by the River Valley Alliance, this plan is a 25-year vision for a continuous and connected North Saskatchewan River Valley Park, and outlines specific improvements, amenities, and features.
- **River Access Guiding Principles Policy (C-586):** This policy ensures that river access and activities are provided and managed in a responsible, orderly, equitable, and environmentally appropriate way.
- **Approach to Community Recreation Facility Planning:** The Approach outlines the long-term strategic direction for the provision of recreation facilities, amenities and services, and a means to identify recreation priorities into the future.

1.4 History of the River Valley

The First People

Humans began occupying the area around the North Saskatchewan River Valley not long after the last ice age ended. Indigenous people have used the River Valley and Ravine System for food, medicine, camping, transportation, gathering, and celebrating for thousands of years – a cultural and spiritual connection with the land that local First Nations, Métis, and urban Indigenous peoples continue to practice today. Although known archaeological sites speak to diverse Indigenous histories, countless other significant places (sacred sites, burial grounds, traditional plants, historic camps) in the System remain undocumented. An ongoing dialogue with Indigenous communities is important to identify these sites, preserve the natural and cultural heritage, respect Treaty rights, and advance reconciliation.

A Centre for Trade

The first Europeans arrived in the Edmonton area in the mid-1700s. For over a century, the North Saskatchewan River Valley was a centre of trade, commerce, and settlement in Alberta. Fur trading brought settlers to Rossdale Flats in the early nineteenth century, and soon a growing community developed to service Fort Edmonton and the many industries along the river: oil extraction, gold panning and dredging, brickyards, coal mining and farming, among others. Throughout this time, Dene, Nakota Sioux, Anishinaabe, Woodland Cree, Blackfoot, TsuuT'ina, and Métis people encamped along the river to facilitate trade with the settlers and the Hudson's Bay Company. These communities were later displaced to reserves outside the city after the implementation of the Indian Act.

Early River Recreation

After 1891, when the Edmonton, Yukon, and Pacific Railway reached Strathcona, a recreation function gradually supplanted the industrial and transportation function of the River. People would embark on ice skating and paddle steamer excursions, specifically the route between Big Island and Fort Saskatchewan. Further rail development, such as the Canadian Pacific Railway (1885), and construction of the High Level, Dawson and Walterdale Bridges (1912 to 1915) caused land use patterns to shift away from the river valley to the tablelands.

Formalizing River Valley Protection

Although Indigenous people have been stewards of the River Valley and Ravine System since time immemorial, landscape architect Frederick C. Todd was the first to suggest a formal plan to protect the System for recreational purposes. Todd remarked that being a new city, Edmonton was in a unique position to reserve lands in the river valley and ravines for park space. In 1915, the Province of Alberta adopted Todd's report, which recommended the protection of the river valley environment for future generations as a contiguous recreational and open space system.

Between 1907 and 1931, the City began acquiring river valley and ravine lands. By 1931, the City had acquired most lands on both sides of the river from Highlands golf course to Laurier Park, as well as the majority of the ravine lands. A Municipal Zoning Bylaw followed in 1933 to regulate land use by preserving the river valley as parkland.

The beauty that people sought to foster in their cities in the early twentieth century was augmented in the decades that followed by a desire to have a place where citizens could build healthy minds and bodies. Having a respite from the frenetic pace of modern cities – being able to camp, fish, picnic, skate and toboggan in nature – gave parks new purpose in this era.

Yet despite an increasing awareness of its environmental and recreational value, the River Valley and Ravine System continued to provide a convenient location for urban services that required a public land base or were perceived as "nuisances" to tableland communities. From the Grierson Dump that operated as an active landfill (and shantytown) until the late 1930s, to the unrealized Metropolitan Edmonton Transportation Study for a downtown freeway loop in the 1970s, the System has been envisioned for diverse purposes well into the twentieth century. Even today, industrial uses such as aggregate extraction and wastewater treatment facilities require careful management and/or restoration to mitigate ongoing environmental impacts.

Advancing River Valley Planning

River Valley planning accelerated in the 1970s. This acceleration began with a top-of-bank policy (the ancestor of the contemporary Policy C-542A) that delineated the boundaries of the River Valley and Ravine System and established principles and regulations around adjacent development. Throughout the remainder of the early and mid-1970s, environmental protection and acquisition planning of the System lands were reinforced by policies, regulations, and legislation adopted by various orders of government.

The Capital City Recreation Park

An important development in the history of River Valley and Ravine System planning occurred when Premier Lougheed announced an Urban Parks Program that would fund environmental protection and recreational park development in the province's largest cities. Through a partnership between the Province of Alberta and the City of Edmonton, the Capital City Recreation Park (CCRP) was approved in 1974. This Park encompassed 16 kilometres of the North Saskatchewan River Valley from the High-Level Bridge to Hermitage Park. The trails and amenities here are among the most valued places in Edmonton to this day.

Building on the *River Valley Study* (1975) and draft N*orth Saskatchewan River Valley Control Bylaw* (1976), City Council approved the *North Saskatchewan River Valley Area Redevelopment Plan (ARP) Bylaw* in 1985. The purpose of the ARP was to protect the River Valley and Ravine System through responsible planning and environmental management. This ARP remains in use and continues to regulate development and environmental review requirements in the System.

Early Ribbon of Green Concept and Master Plans

Enabled by the renewal of the provincial Urban Parks Program (Phase II), the *Ribbon of Green Concept Plan* (1990) and *Master Plan* (1992) were developed to undertake further planning for the long-term use, care, and management of the River Valley and Ravine System. These plans established a shared vision, management approach, general development program, and prioritization criteria for the entire River Valley and Ravine System, as well as specific guidelines and programs for priority areas. These original plans provided the basis for this renewed, consolidated, and modernized *Ribbon of Green SW + NE*.

Protecting Urban Biodiversity

Recognizing that its boundaries encompassed areas of natural vegetation and wetlands that contribute to urban biodiversity and ecosystem services, in 1995 the City created a Natural Areas Policy, and in 2007 a *Natural Systems Policy (C531)* and the accompanying *Natural Connections Strategic Plan*, whose purview included the river valley and ravines and acknowledged the importance of a systems approach to conservation.

A Thriving Valley – and A Vision for the Future

Edmonton's River Valley and Ravine System is a remarkable story. Each generation added a reason for retaining the natural character of Edmonton's riverside lands. Today the Ribbon of Green is the largest urban park in Canada, with more than 160 kilometres of maintained trails and 20 major parks. The System provides irreplaceable ecological services to humans, animals, and the environment, from air and water filtration to wildlife habitat, and urban climate regulation. The *Ribbon of Green SW + NE* not only guides the ongoing planning, design and maintenance of this parkland, but also offers guidance and direction for future parkland in the System. This will ensure that Edmonton's most treasured outdoor space remains healthy, accessible, and celebrated for generations.

1.5 Methodology

A Plan for the River Valley and Ravine System requires multiple analyses and inputs to ensure local relevance, a reflection of best practice approaches, an appropriate relationship to the surrounding context and respect for site characteristics and conditions. Specifically, the following inputs informed the *Ribbon of Green SW + NE*:

Ecological Assessment

The ecological network was defined through the Ecological Resources Overview, which:

- Reviewed natural features (e.g. waterbodies, soil, vegetation, flood areas)
- Evaluated areas based on biodiversity potential, ecological connectivity and representative value (how rare or unique landforms and/or vegetation is)
- Classified habitats as core habitats, habitats, corridors and stepping stones

Areas for restoration were defined by:

- Reviewing sites with non or semi-natural land cover in **Preservation** or **Conservation** areas
- Identifying locations in **Active/Working Landscapes** to improve wildlife connectivity while shaping, locating and clustering development in the most appropriate and least impactful locations

Cultural Assessment

The Cultural Assessment included:

- Inventory of known and unknown archaeological sites and historic sites
- Evaluation to determine recommended levels of impact and interpretation

Recreation Assessment

The Recreational Assessment included:

- Evaluation of recreation preferences, trends and important connections
- Evaluation of nearby planned and existing adjacent open spaces to identify gaps

Geotechnical Considerations

An initial Geotechnical Survey was conducted to:

- Understand the geotechnical conditions
- Provide guidance for future work

Transportation Considerations

To determine access requirements for all modes, the following was evaluated:

- Existing and potential access points (roads, transit, active transportation)
- Creative parking solutions

Public Engagement

Stakeholders and the public provided insights throughout the process by:

- Sharing knowledge, expertise and ideas for the future
- Shaping high-level policies, Land Management Classifications and program direction
- Helping to refine and confirm the Plan direction

Indigenous Contribution

Indigenous communities contributed valuable input that informed the policies and program guidance, including:

- Identifying opportunities to provide input during future planning, monitoring, programming, restoration, remediation work, etc.
- Traditional knowledge and practices
- Importance of ecological health and protection

1.6 Vision + Principles

A vision statement and principles are critical foundational statements that guide the *Ribbon of Green SW + NE*. The vision defines the ideal state of the River Valley and Ravine System and the principles add further detail about the elements and actions required to achieve the vision. These statements, in turn, inform the direction in this Plan and together provide the framework to support a healthy and sustainable System enjoyed by generations of Edmontonians.

VISION

The North Saskatchewan River Valley and Ravine System is a protected, connected landscape that supports ecological resilience and promotes healthy living through opportunities for recreation, active transportation, learning, and gathering in the tranquility of nature.

PRINCIPLES

1. The ecological system will be protected, connected, restored, and managed to preserve its integrity and resiliency and to minimize the impact of human use.
2. Where required to support opportunities for people to gather and recreate in nature, or to provide essential urban services, new and/or expanded facilities will be located and designed to minimize environmental impact.
3. A continuous trail system and access points will connect neighbourhoods, the city, and the region to the River Valley and Ravine System, and provide safe and accessible opportunities for recreation and active transportation.
4. Through engagement and partnerships, meaningful opportunities will be provided to contribute to the planning, design, and management of the River Valley and Ravine System.
5. The natural and cultural heritage of the River Valley and Ravine System will shape the places, experiences, and connections within it. Natural and historical sites, features, and landscapes will be protected and, where appropriate, interpreted.
6. Indigenous traditional uses will be recognized and supported throughout the River Valley and Ravine System, and Indigenous communities will be meaningfully engaged in the planning, management, and use of the System.

Fraser Ravine

2 SYSTEM-WIDE POLICIES

These system-wide policies for Edmonton's River Valley and Ravine System respect and guide the implementation of the Strategic Directions outlined in Breathe: Edmonton's Green Network Strategy and the Ribbon of Green SW + NE Vision and Principles.

2.1 **Ecological Integrity**

Breathe Strategic Direction:

Preserve and enhance the ecological quality and connectivity of the green network.

The River Valley and Ravine System contains most of Edmonton's remaining ecologically valuable places. These places provide countless services that benefit humans and ecosystems alike, such as food production, water management, climate regulation, and risk mitigation. The wetlands, riparian areas, woodlands and geological features also provide habitats and corridors for diverse wildlife and plants. Taken together, these places form an ecological network that maintains wildlife movement and healthy ecological flows across the region.

Preserving ecological integrity is the foundation of the *Ribbon of Green SW + NE*. Natural systems are intrinsically valuable, and all other activities (habitat, recreation, education, transitional uses) in the River Valley and Ravine System rely on the health of natural systems. At the same time, planning the System requires harmonizing human use with protection to enable nature-based experiences while supporting healthy ecosystems and biodiversity. Improving access to and enjoyment of the System can foster appreciation for the environment and investment in its protection. The key is facilitating this use without jeopardizing ecological health.

Currently, development, infrastructure, and erosion have disturbed valuable natural areas. Past and current disturbances can interrupt wildlife movement, damage habitats, and harm ecological health. Ongoing threats include invasive species, disease, and climate change. If improperly managed, even relatively benign activities, like walking, can bring people into contact with sensitive habitats that may be adversely affected. This is why restoration and mitigation tactics are vital and will, over time, improve ecosystem health and increase resiliency.

The *Ribbon of Green SW + NE* harmonizes ecological protection with human enjoyment by dividing the System into Land Management Classifications (see **Section 3**). These Classifications protect the most sensitive areas, support restoration, and concentrate activity in areas where environmental impacts are likely to be lowest. Policies support these Classifications by providing guidance to minimize and mitigate environmental impacts and outlining review, evaluation and monitoring processes. This supports the River Valley and Ravine System as the foundation of an integrated, multi-functional and healthy green network for decades to come.

2.1.1 RESPECTING THE ECOLOGICAL NETWORK

a) Adopt an ecological network approach to planning and protecting the System together with adjacent municipal parks and other public open spaces in the tablelands and adjacent jurisdictions.

b) Protect a contiguous, ecologically functional network of habitats and wildlife connectivity corridors by classifying them as **Preservation**, restoring critical areas, and limiting human activity.

2.1.2 PROTECTING THE RIBBON OF GREEN SW + NE

a) Keep the majority of the System natural.

b) Avoid habitat loss and fragmentation by concentrating development and activity in less sensitive areas.

c) Minimize fragmentation, edge effects, and linear disturbances through important core and habitat areas.

d) Maintain adequate groundwater and surface water connections, and minimize activities and disturbances that could interfere with the water table or sub-surface flow.

e) Investigate the modification of stormwater outfalls that drain directly into waterways to mitigate elevated water temperatures and pollution through engineering and design solutions.

f) Limit stormwater management facilities (non-natural waterbodies) to Active/Working Landscapes , where they are complementary to the program and design of the open space.

g) Limit underground utilities within the system. Where underground utilities are required, ensure that they do not compromise the primary use of the land and pursue opportunities to co-locate compatible above ground and below ground infrastructure.

h) Investigate with partners on how to improve the health of fish populations, and collect and periodically monitor baseline information to assess the effectiveness of water quality and quantity protection measures.

i) Implement a high level of protection for sensitive habitats and landscapes, rare or at-risk species, and wildlife movement areas by limiting human access.

j) Employ dark sky principles throughout the System, wherever possible, by:

- Restricting the area, level (intensity) and timing (hours) of lighting to the minimum required for programming and safety needs, as per the relevant Land Management Classification
- Minimizing blue light emissions
- Using fixtures that shield and direct illumination downward to the desired surface

The Convention on Biological Diversity

Signed by 150 government leaders at the 1992 Rio Earth Summit, the Convention on Biological Diversity is dedicated to promoting sustainable development. The Convention recognizes that biological diversity is about sustainable ecosystems, but is also about people and the need for food security, fresh air and water, shelter, and a clean and healthy environment in which to live. The City of Edmonton, through the Way We Green (2011), and in partnership with the Government of Canada, the Government of Alberta, and other local authorities, have made a commitment to implement the Convention.

Why is it important to maintain connections between surface water and groundwater?

The transition zone from surface water to groundwater provides ecologically important services including thermal buffering, stormwater storage, water purification capacity, habitat, and food production for fish and invertebrates.

k) Preserve and enhance regional wildlife connectivity throughout the System by:

- Preserving natural land cover using restoration techniques, naturalized landscaping, and native vegetation to restore or replicate wildlife corridors (either continuous corridors or a series of closely connected "stepping stones") while accounting for user safety (e.g. sight lines) and programming needs
- Removing barriers to wildlife movement (e.g. pinch-points or narrow corridor sections, fences) or providing alternative routes (e.g. nearby corridors, wildlife passages) where feasible
- Minimizing disturbances (e.g. construction, human activity, pollution) in wildlife habitats and corridors
- Rehabilitating roadways during renewal or reconstruction projects to include wildlife passages where analysis indicated a return on investment

l) Minimize riverbank and slope erosion and ensure proper water drainage by:

- Avoiding development on steep slopes susceptible to water runoff
- Ensuring appropriate setbacks from watercourses and the top-of-bank
- Orienting trails across slopes diagonally or using switchbacks to climb steep slopes
- Re-routing trails on failing slopes
- Incorporating natural grade dips or other grading into trails to divert drainage at frequent intervals
- Where appropriate providing steps on steep slopes, and diverting water from the top of the steps
- Using context sensitive techniques (e.g. natural channel design, bio-remediation) to manage water flow and erosion
- Implementing measures to minimize erosion from stormwater outfalls
- Minimizing the removal of groundcover vegetation, and increasing the planting of groundcover vegetation where appropriate, to limit erosion

m) Work with landowners, including the Provincial and Federal Governments, as well as stakeholders, and Indigenous communities, to improve the ecological functioning of the entire System.

Non-paved Trail

n) Pursue conservation easements and agreements with the Provincial and Federal Governments in suitable locations, in order to deliver a high level of management, monitoring, and protection.

o) Ensure that the ecological and environmental integrity of the non-developable upland area is retained, and that it functions as a buffer from adjacent development by providing wildlife connectivity and ensuring slope stability.

p) Address and reduce encroachments on the system through neighbourhood design, education, and enforcement.

q) Encourage the relocation of existing impactful uses to the tablelands, and/or transition these uses to support the Active/Working Landscape Classification, to reduce impacts. Over time, enable their transition into Conservation and/or Preservation areas to improve ecological functioning within the entire System.

r) With the exception of essential infrastructure, avoid development within the floodway. Ensure that any infrastructure or amenities located within the flood fringe can withstand periodic flooding.

2.1.3 BUFFERING SENSITIVE SITES

a) Adopt a 'variable width' buffer approach that increases buffer distances around sensitive features and where disturbances are more impactful, and takes into account flood protection, unstable lands, and pollution prevention.

b) Determine specific buffer zone distances and sizes through the site-specific plans.

c) Establish natural buffers of riparian vegetation around watercourses to reduce disturbance and bank erosion in areas where the disturbance may:

- Compromise natural habitats or potential archaeological, cultural and/or historic sites
- Impact wildlife or aquatic habitats
- Pollute traditional plants and foods through water run-off from potentially contaminated lands (e.g. roads – salt, sand and oil, open spaces – pesticides and herbicides)

d) Establish wetland and riparian buffers in accordance with Alberta Environment's recommendations (e.g. *Stepping Back From the Water, 2012*) , and best available science and management practices.

e) Buffer large core habitat areas (e.g. ungulate wintering areas) to reduce "edge effects" from the surrounding amenity nodes or top-of-bank land uses.

f) Establish buffers of natural vegetation between areas of disturbance/active use to provide corridors for wildlife connectivity.

g) Reclassify buffers as either Conservation (when adjacent to an Active/Working Landscape) or Preservation (when adjacent to the Conservation Classification).

What is a non-developable upland area?

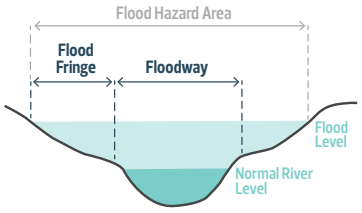
The non-developable upland area is the land between the Urban Development Line (see text box on following page) and the River Valley and Ravine System's top-of-bank or crest. This area is unstable, but provides public access for circulation, amenities and emergency response.

What is the floodway?

The floodway is the portion of the flood hazard area where flows are deepest, fastest and most destructive. The floodway typically includes the main channel of a stream and a portion of the adjacent bank.

What is the flood fringe?

The flood fringe is the portion of the flood hazard area outside the floodway. Water in this zone is generally shallower and flows more slowly than the floodway.



h) Classify areas between the Urban Development Line (UDL) and top-of-bank as Conservation.

i) Encourage habitat restoration projects, and avoid and/or mitigate disturbance in areas identified as wildlife pinchpoints.

What is the Urban Development Line?

The Urban Development Line (UDL) is a scientifically-derived line marking the boundary between the developable upland area (urban development) and the River Valley and Ravine System.

2.1.4 MITIGATING ECOLOGICAL IMPACTS

a) Anticipate potential ecological impacts prior to development and avoid such impacts where feasible. When avoidance is not feasible, mitigate the impacts. When mitigation is not feasible, minimize the disturbance area.

b) Limit negative impacts to ecological health by applying appropriate mitigation and management techniques, including:

- Limiting access (e.g. no access at night or during nesting season)
- Locating trails along the edge of, instead of through ecologically sensitive areas
- Implementing light, odour, and sound baffles (e.g. shelter belts, sound barriers)
- Concentrating amenities and facilities in appropriate locations away from habitats and corridors
- Consolidating amenities at trailheads to minimize further disturbance
- Dispersing or limiting programmed activities (e.g. limit events and impacts when the ground is wet)
- Limit the use of fencing to only areas with high-levels of activity or security concerns, and whenever possible fencing should be wildlife friendly
- Use soft barriers (e.g. landscaping, vegetation) as an alternative to fencing, when appropriate
- Removing agricultural fencing that is no longer in use and may impede wildlife movement
- Landscaping with native and locally-adapted plant species that are suitable to the habitat
- Minimizing impervious surfaces
- Managing waste and other attractants
- Monitoring trails and amenity nodes to identify and address areas of overuse
- Incorporating wildlife passages where roads intersect with the System timed with construction or rehabilitation

c) Use signs, campaigns, programs and enforcement to:

- Ensure public use is restricted to appropriate areas
- Inform users about appropriate behaviour within sensitive ecological areas (e.g. remain on designated trails, avoid littering or making excessive noise, keep pets on leash and under control)
- Raise awareness about the impacts of invasive species and promote behaviours to reduce their impact (e.g. regularly checking boats, checking and cleaning footwear, using native bait)
- Connect with community, recreation, and environmental groups to support education and enjoyment of the System

2.1.5 RESTORING AND REMEDIATING

a) Restore disturbed, degraded, or fragmented core natural areas with the purpose of re-establishing key ecosystem functions (e.g. wildlife connectivity, habitat integrity, erosion control, soil productivity, stormwater management).

b) Use the restoration areas identified in this Plan (see **Section 4: Program Guidance**) as a starting point for further restoration site identification and evaluation conducted during the site-specific planning process.

c) Recognize disturbed areas as locations for restoration and prioritize them based on their ability to enhance connectivity and habitat value.

d) Focus restoration efforts on the following landscape components:

- Buffers around unique, critical, or sensitive sites
- Core habitat areas
- Key wildlife corridors, and pinch-points
- Links that connect natural areas
- Degraded water body buffers
- Areas where restoration efforts will have a high likelihood of success
- Areas where restoration efforts will align with trail and infrastructure development
- Locations where topography, hydrology, soils, etc., have the potential to support diverse habitat types, rare, or sensitive species
- Locations where water quality and flood attenuation needs to be improved
- Linear patches of disturbance through otherwise intact patches
- Trailheads of user-created trails that have been identified for closure
- Opportunities to restore the scenic quality of a location

e) Restore portions of creeks, and reconnect them to the river through methods such as daylighting.

f) Employ reforestation and/or re-vegetation techniques to stabilize denuded embankments and restore previously working landscapes, where applicable.

g) Use habitat suitable native, non-invasive, and locally-adapted species in restoration projects.

h) Remediate or manage known locations of contamination in accordance with legislative requirements.

i) Work collaboratively with environmental groups and Indigenous communities on restoration and remediation projects.

j) Explore capacity building opportunities for Indigenous communities as it pertains to remediation and restoration projects.

Horsehills Creek Ravine

2.1.6 SITE-SPECIFIC PLANNING

a) Address ecological value, protection, and management during future site-specific plans in accordance with City policies and bylaws.

b) Ensure future site-specific plans:

- Ground-truth and respect ecological sensitivity (e.g. rare plants or habitats)
- Recognize and enhance ecological systems
- Include a biophysical inventory
- Identify mitigation and protection measures
- Preserve and integrate natural features and ecological resources (e.g. vegetation, wetlands, slopes, rock outcrops, habitats, tree stands, natural drainage corridors)
- Confirm and prioritize areas for restoration (e.g. invasive species removal, creek daylighting)
- Study drainage patterns, flow rates, geotechnical and hydrological conditions, wildlife movement, and potential contamination
- Study and confirm the conceptual wildlife passages identified within **Section 4: Program Guidance**. Site level planning studies are required in order to confirm where passages are required, and the design of the passage.

c) Deter access to protect highly sensitive areas.

d) Establish an acceptable level of ecological functioning, an assessment of current functioning and actions for the restoration and maintenance of ecological functioning during site-specific planning, and include the following components:

- The acceptable level of recreational use
- The threshold of acceptable ecological functioning
- The range between the existing conditions and limits of acceptable change
- The level of acceptable impact during and after construction (e.g. limit of disturbance)
- The management actions required to maintain the site within the acceptable range
- A monitoring program and protocols to evaluate the effectiveness of the management

What are the impacts of trails on wildlife?

Recreation trails can have a negative impact on wildlife due to the noise and motion from people. When startled or disturbed, wildlife unnecessarily burn energy reserves or experience stress. Trails also cause habitat fragmentation which may impact some plant and animal species. Avoiding environmentally sensitive areas or educating outdoor enthusiasts about the need to keep a safe distance from wildlife can mitigate some of these impacts.

What is the limits of acceptable change?

Limits of acceptable change is the variation that is considered acceptable in a particular component or process of the ecological character of an area or ecosystem.

e) Outline tactics to mitigate negative ecological impacts in site-specific plans such as:

- Defining the disturbance area
- Providing recommendations on construction timing (e.g. avoiding nesting season)
- Avoiding sensitive areas, as defined during the environmental review
- Implementing erosion control measures

f) Design amenity nodes to facilitate wildlife movement.

g) Assess the risk posed by wildfires to amenity nodes, facilities, and adjacent development, and mitigate where feasible. Undertake research and develop techniques to address the wildland-urban interface (the transition between wildland and human development).

2.1.7 CONDUCTING ENVIRONMENTAL REVIEWS

a) Ensure further ecological and environmental assessments and reviews follow the processes outlined in *North Saskatchewan River Valley Area Redevelopment Plan*, as well as evaluating and ground-truthing the following:

- The presence of sensitive flora and fauna
- Health of wildlife habitat
- Sensitive/hazardous landforms
- Floodways
- Soil conditions
- Vegetation
- Areas in need of restoration and remediation
- Opportunities for protection and management
- Cumulative impacts, particularly impacts arising from related or nearby projects
- Proposed (re)development projects (e.g. utility upgrades, slope stabilization, grading or excavation, facility expansions) to ensure that the development is compatible with the *Ribbon of Green SW + NE*

b) Use the results of the environmental review to delineate the following:

- Land Management Classification delineations
- Ecologically sensitive areas to protect from development
- Mitigation measures to reduce ecological impact
- Locations to concentrate amenities, facilities, infrastructure and uses
- Monitoring measures to understand the cumulative impacts of the development
- Areas in need of restoration and remediation

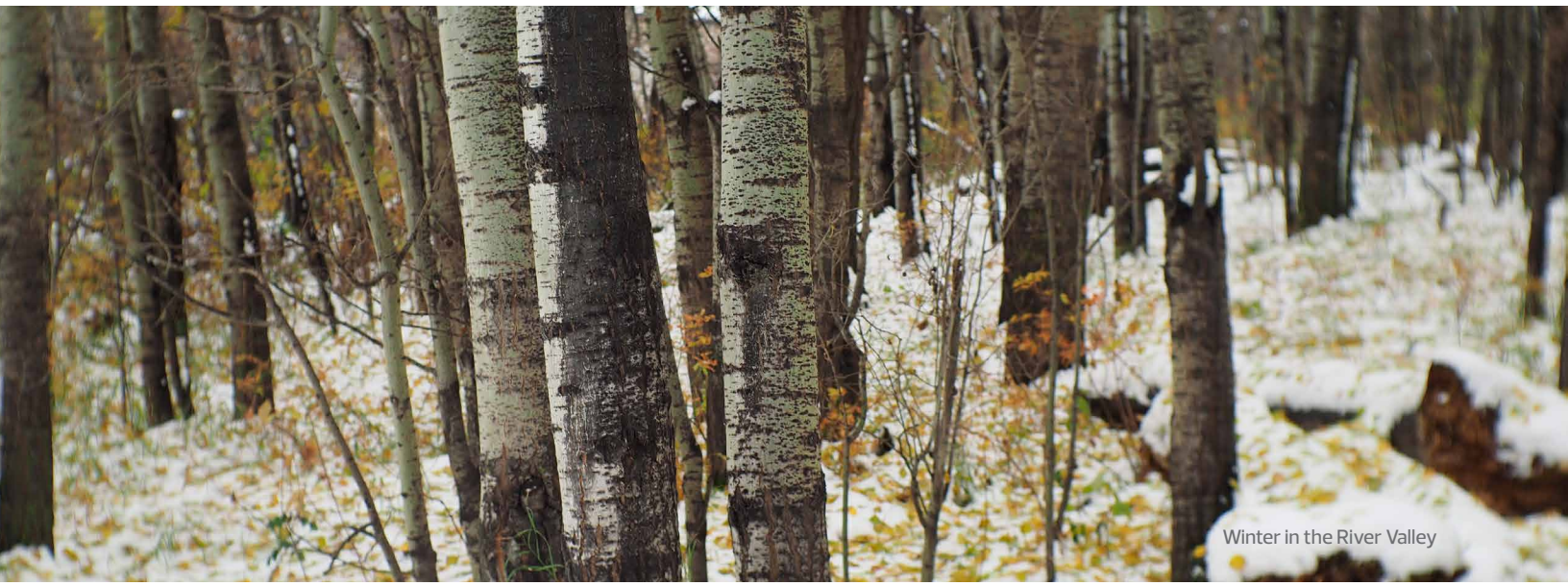
c) Complete a site-level environmental review to ensure suitability prior to any development.

2.1.8 MONITORING ECOLOGICAL HEALTH

a) Follow the city-wide monitoring protocols and those established during the site-specific planning processes, and report on the ecological health of the River Valley and Ravine System.

b) Support research and monitoring projects to understand and improve the condition of wildlife populations, habitats, and other natural areas.

c) Follow City assessment and removal protocols for abandoned or hazardous infrastructure, including materials that have been dumped.



Winter in the River Valley

2.2 **Safe + Inclusive**

Breathe Strategic Direction:

Ensure the green network is safe, accessible, and inclusive for all.

The North Saskatchewan River Valley and Ravine System holds a special place in the lives and identities of Edmonton residents – residents whose diverse incomes, genders, ages, ethno-cultural identities, and physical abilities shape their access to and experience of the System. As one of the most important community places in the city, the System should provide opportunities to experience nature, culture, and recreation in spaces that are designed and managed to accommodate Edmontonians of all ages, abilities, and backgrounds.

Creating inclusive spaces means providing appropriate physical infrastructure for diverse needs. For example, using best practices in wayfinding and park design can expand opportunities for visually or mobility-impaired community members. Amenities, such as washrooms and benches, can help encourage greater participation by everyone, especially children and older adults. Although universal physical accessibility to every part of the System is difficult to accomplish given other management priorities, the *Ribbon of Green SW + NE* acknowledges the right to equitable access to experience the System for all Edmontonians. While parking lots and paved trails can provide access for many people, development in some areas might be restricted to low-impact natural trails due to the ecological sensitivity.

A precondition of welcoming, inclusive open spaces is safety. Design and management interventions can facilitate comfort, enjoyment, and can help mitigate crime or harassment. With appropriate ecological consideration, design, monitoring, and maintenance can address unsafe environmental conditions (e.g. unstable slopes) and ensure ongoing safety. Education and enforcement can improve understanding and help shift unsafe behaviours (e.g. trespassing in hazardous areas, canoeing during high water events) and user conflicts. It is important to acknowledge that some risk is inherent to recreation in natural areas, and to establish clear expectations so that users can make informed decisions regarding their safety and actions within the System.

In many ways, concerns about safety intersect with opportunities to make open spaces more inclusive for the diverse people of Edmonton. Creating a safe and inclusive River Valley and Ravine System will ensure that Edmontonians feel welcome and comfortable when enjoying, using, or accessing one of the city's most cherished places.

2.2.1 IMPROVING SAFETY THROUGH EDUCATION + ENFORCEMENT

a) Implement education and awareness programs, and install informational signage to improve public safety (e.g. inform people about hazards and crime prevention), and inform users how they can report hazards.

b) Provide user safety messaging for all seasons at water access and launch points along watercourses to inform users about potential safety concerns.

c) Use public engagement and other communication tools to educate Edmontonians about the rights of open space users to safe, welcoming environments and experiences.

d) Determine the appropriate number of additional Park Rangers and other operational resources required, and secure required resources as the System is expanded.

2.2.2 IMPROVING SAFETY THROUGH DESIGN

a) Incorporate established, comprehensive, and systematic environmental crime reduction methods (e.g. CPTED) in trailhead, facility, and amenity node design.

2.2.3 IMPROVING TRAIL SAFETY

a) Repair and maintain trails as per the type of trail, using a risk-based approach.

b) Place safety railings along sections of trails with steep grades or adjacent to steep shoulders or drop-offs, as required by the type of trail.

c) Use sensory cues and ensure adequate sight lines where vehicles and trails intersect.

d) Use urban design cues and chicanes to compel cyclists to stop and check for traffic before crossing busy roads.

e) Continually monitor and maintain a safe trail network by assessing and removing hazards (e.g. removing fallen trees, and repairing washed-out trail sections).

2.2.4 LIGHTING

a) Determine the need and appropriate location for lighting on a site-by-site basis, as informed by the Land Management Classifications, any City-wide trail lighting strategy, and *Light Efficient Community Policy* (C576). The following guidelines should be used to reduce lighting impacts in sensitive locations:

- Fixtures should be illuminated only in those locations and during those hours when lighting is required for safety and programming needs
- Level of illumination should be no brighter than necessary
- Blue light emissions should be minimized
- Fixtures should be fully shielded such that illumination is directed downward


Innovative Lighting in Victoria Park

2.2.5 CREATING INCLUSIVE + ACCESSIBLE SPACES

a) Create welcoming spaces at strategic and appropriate locations for all ages, abilities, and backgrounds by implementing the following principles:

- Ensure amenity nodes and trailheads are welcoming for people of all abilities, ages, and cultures
- Accommodate multiple travel modes (walking, cycling, driving and/or taking transit) wherever possible
- Create places that facilitate interaction (e.g. locating multiple uses together)
- Create spaces that promote an inclusive environment for children, youth, and seniors
- Work with Indigenous people and other cultural communities to design safe, designated areas for the practice of cultural activities

b) Provide open spaces, facilities, programs, experiences and amenities that are welcoming, comfortable and accessible for all Edmontonians. Relevant design and program elements may include:

- Adequate shade, shelter, washrooms, water fountains, and seating spaces to support personal comfort in every season
- Barrier-free play features, facilities, and trails
- Barrier-free river access points and launching facilities (e.g. accessible canoe/kayak docks)
- Gender-neutral facilities in new or renovated public washrooms and change rooms

c) Consider universal accessibility design approaches on a site-specific basis according to the ecological sensitivity of the area while ensuring all major facilities, amenities, and regional trails are accessible and barrier-free.

d) Strategically locate facilities and amenities close to parking areas and access points to facilitate universal access.

e) Adhere to the City's *Age-Friendly Edmonton Access Design Guide* when developing or renovating public structures, buildings, and facilities in the River Valley and Ravine System.

2.3 **Vibrant Spaces**

Breathe Strategic Direction:

Make open spaces vibrant, sustainable and functional to support community identity and needs.

Open spaces are much more than simply a setting – they offer experiences that provide opportunities for learning, gathering, and leisure. The North Saskatchewan River Valley and Ravine System has a unique character than makes it foundational to the story and identity of Edmonton and Edmontonians.

The Ribbon of Green offers a range of opportunities for solitude and celebration, for people to connect with nature and each other while respecting the health of the ecosystem. The existing parks within the System attract thousands of people annually who use these spaces for recreation, celebration, reflection, appreciation, education, and relaxation. The *Ribbon of Green SW + NE* builds upon these experiences to service a growing population while protecting ecological health.

This section provides direction to create respectful vibrant spaces that:

- Are tailored to the River Valley and Ravine System context
- Attract activity and enjoyment year-round
- Celebrate diverse community identities and cultures
- Respect the scenic quality of the landscape
- Allow for creative expression and interpretation of the System
- Guide appropriate celebration opportunities
- Expand temporary and permanent programming opportunities

The *Ribbon of Green SW + NE* defines locations to create vibrant spaces while leaving the majority of the System for natural experiences. The right mix of uses allows Edmontonians to enjoy multiple different experiences within the River Valley and Ravine System while respecting its ecological and cultural importance.

2.3.1 EXPERIENCING THE RIVER VALLEY AND RAVINE SYSTEM

a) Ensure uses and facilities fit the River Valley and Ravine System context, respect the scenic quality of the landscape, and provide people with the opportunity to enjoy and learn more about the System. Evaluate whether the use or facility would be better located in the tablelands.

b) Promote, develop, and program the System as a unique, world-class natural destination that offers a diversity of year-round experiences.

c) When determining the location of amenity nodes, trailheads, and the amenities provided, evaluate the following:

- The Land Management Classification, and compatible uses, facilities and infrastructure
- Potential environmental impacts (short-term and cumulative)
- Available nearby amenities
- How people will access the area
- Estimated maintenance costs and timelines
- Necessity of providing amenities
- Distribution of staging areas System-wide

d) Implement the Development Setbacks from *River Valley / Ravine Crests Policy* (C542A). Encourage the non-developable upland area to function as a transition zone and buffer between the neighbourhood and the river valley by providing trail connections, gathering spaces, regular seating, signage, and protecting viewscapes, while ensuring the ecological and environmental integrity of the area.

What are the tablelands?

The tablelands are all areas within Edmonton that are outside the River Valley and Ravine System, beginning at the Urban Development Line.

Example Future Site Features: Amenity Node

e) Monitor the use and attendance of areas and events within the System (e.g. amenity nodes, the trail system, recreation programming, boat docks and hand launches) through a variety of methods (e.g. trail counters, parking counts, and intercept surveys to inform future planning.

2.3.2 EXPERIENCING THE NORTH SASKATCHEWAN RIVER

a) Encourage the use of North Saskatchewan River as a water trail through signage and communications, and by providing supporting amenities (e.g. parking, washrooms, storage, and watercraft cleaning stations) at boat and hand launch locations.

b) Encourage active recreation uses of the North Saskatchewan River (e.g. canoeing, kayaking, and paddleboarding), while ensuring that use of the river does not infringe on others use and enjoyment of the system (e.g. noise).

c) Support access to, and use of the North Saskatchewan River for fishing, boating, and other river-based activities in locations with good access, parking, and lower ecological sensitivity.

d) When determining the appropriate spacing between boat launches and stopover facilities, use a guideline of a 2-hour float space. Since river flow rates vary throughout the year and from year to year, use the most recent slowest flow rate during the summer as a benchmark to establish appropriate distances.

Parks for All

The Ribbon of Green SW + NE supports and aligns with Parks for All, an Action Plan for Canada's Parks Community. Parks for All was initiated and supported through a partnership between the Canadian Parks and Recreation Association (CPRA) and the Canadian Parks Council (CPC), and promotes actions and priorities that support healthy nature and healthy people in harmony for generations to come.

2.3.3 CELEBRATING IN THE SYSTEM

a) Expand opportunities for temporary and permanent uses and programming year-round, as per the appropriate Land Management Classification and in accordance with City policies and bylaws, such as:

- Festivals
- Events
- Programs (e.g. day camps, naturalist walks, educational workshops)
- Art installations
- Performances
- Food vendors
- Markets
- Pop-up experiences (e.g. movie screenings, winter warming shelters)

b) Collaborate with festival and event organizers to improve the sustainability, and reduce the ecological impacts of their operations.

c) When locating festivals and events, consult and evaluate the following:

- The Land Management Classification
- Potential environmental impacts (short-term and cumulative)
- Available amenities
- How people will access the event
- Estimated maintenance costs and timelines
- Necessity and/or length of closures to non-attendees
- Distribution of festivals and events city-wide

2.3.4 ALLOWING COMMERCIAL USES

a) Develop or permit limited commercial activities (as per the relevant Land Management Classification) which align with the Plan's vision and principles. Prioritize commercial activities that support open-space services (e.g. equipment outfitters, watercraft and bicycle rental shops, food and beverage kiosks). Where appropriate, updates to regulations or site-specific zoning amendments may be required to facilitate limited commercial development.

b) Work with landowners and operators to improve the ecological and recreational functioning of their land through:

- Sustainable landscape maintenance
- Wildlife management practices
- Winter use (e.g. cross-country skiing and snowshoeing)
- Sustainable water management practices

2.3.5 FACILITATING YEAR-ROUND USE

a) Encourage year-round use by locating, designing, and managing facilities and amenities to:

- Provide a balance of sun and shade tailored to different seasons
- Incorporate, where appropriate, natural and artificial lighting to expand winter use
- Provide infrastructure and amenities that encourage year-round use (e.g. shared-use trails for walking, cycling, cross-country skiing, skating and/or snowshoeing)
- Clear stairs, paved trails, and accessible access points of snow and debris according to the type of trail
- Landscape with a mix of native drought-tolerant, annual and evergreen vegetation to provide year-round colour, shade and shelter
- Within **Active/Working Landscapes**, consider limited commercial development to promote additional year-round use

b) Consider creative lighting opportunities:

- Within **Active/Working Landscapes**
- Away from **Preservation** and **Conservation** boundaries
- When impacts to local wildlife are evaluated and minimized

c) Use lighting to identify pedestrian connections and illuminate public buildings, facilities, and historical features, where it does not negatively impact sensitive areas.

d) Expand year-round recreational programming, for both land and water based recreational opportunities, (as per the relevant Land Management Classification) and provide consistent and regular amenities throughout the network to enable connections, improve access, and increase the predictability of all recreational experiences.

2.3.6 INCORPORATING PUBLIC ART+ HERITAGE

a) Use public art and heritage encounters/interpretation as a tool to tell the story of the River Valley and Ravine System.

b) Include public art in landscaping and building design in accordance with the *Percent for Art to Provide and Encourage Art in Public Areas Policy* (C458C).

c) Encourage interactive or "playable" public art and heritage encounters/interpretation into the design of facilities, in accordance with the City's public art policies.

d) Engage with the public, stakeholders, and Indigenous communities on the design and placement of public art and heritage encounters/interpretation, in accordance with the City's public art policies.

Winter in the River Valley

2.4 **Education + Awareness**

Breathe Strategic Direction:

Improve awareness of open-space opportunities and appropriate use.

The River Valley and Ravine System offers a diversity of unique, interesting, and rewarding experiences. These include important education opportunities for students and others. At over 7,400 hectares, wayfinding is also important for directing residents and visitors toward the amenities, facilities, and spaces that interest them. Proper wayfinding and interpretative signage will help people navigate the System, and learn about its diverse types of heritage.

The City currently offers River Valley Programs for school groups from kindergarten through Grade 12. The health and wellness benefits of being in an outdoor classroom (e.g. reduced stress, increase in happiness, restored attention capacity), along with the unique research and lesson opportunities, make the Ribbon of Green an excellent location for educational opportunities and programming. Outdoor programming and educational opportunities can cultivate a conservation ethic, raise awareness about the value of biodiversity and ecological integrity, and the benefits of connecting with nature.

To improve user comfort and awareness, wayfinding throughout the System should be complemented by informational signage and other awareness-building methods (outreach events, liaison staff or volunteers, media campaigns). These will share stories and facts, promote appropriate uses, and communicate restrictions. For example, signs can provide advice on how to share a trail to minimize user conflicts, raise awareness about potential hazards, and help people plan their visit.

Signs or other communications tactics can help improve transparency by sharing the rationale behind regulations, designs, and decisions, leveraging the opportunity for educational purposes. For example, a trail closure sign can also provide information about erosion mitigation, restoration efforts, and ways to get involved in stewardship initiatives. Signs can also explain why it is important to remain on designated trails to protect sensitive habitats and ensure user safety.

In these ways, education can increase awareness of the natural, cultural, and historic features of the System, including its thousands of years of geographic, natural, and human history. In this regard, the System becomes an outdoor classroom for people of all ages to learn through interpretive displays, programs, and facilities. Education is essential for promoting and building awareness of the System to help stimulate further stewardship and volunteerism, and protect this resource for future generations.

2.4.1 RECOGNIZING INDIGENOUS TRADITIONAL USE

a) Recognize the historic significance of the River Valley and Ravine System, and the river itself, as a meeting and gathering place for Indigenous people.

b) Recognize and respect Traditional Territories, and Treaty rights.

c) Educate Edmontonians, visitors, and City staff about the Indigenous history of the North Saskatchewan River and River Valley and Ravine System, and their ongoing importance to Indigenous people.

d) Work with organizations, archaeologists, historians, Indigenous communities, elders/Traditional Knowledge Keepers, and education institutions to explore opportunities to advance reconciliation through traditional practices, and educational opportunities for all Edmontonians.

e) Consider naming or renaming ravines, sites, features and/or roads to better acknowledge the contributions of Indigenous communities and people to the River Valley and Ravine System. Specific sites, for example, may have names in multiple languages (e.g. English and Cree) that are officially recognized and included on signage.

2.4.2 PROMOTING THE RIVER VALLEY + RAVINE SYSTEM THROUGH INTERPRETATION

a) Offer archaeological, geological, ecological, cultural, and historical interpretation, when appropriate and respectful. Opportunities may include interpretive signs, audio-visual displays, cairns, educational programming, and events. Opportunities should consider diverse types of heritage, including (but not limited to):

- Natural and geological history
- Areas of ecological significance
- Pre-contact archaeological resources
- Indigenous traditional knowledge and oral histories
- Industrial, commercial and/or agricultural resources and history
- Recreational and park-management history
- Early settler history and post-contact history
- Notable historic people or events
- Recent history and ongoing narratives of newcomers and other cultural communities

b) When the site or territory has Indigenous significance, work with Indigenous communities and people to determine the most appropriate and respectful marker.

c) Collect stories from the public about the history and importance of the System to incorporate in educational and interpretive materials and inform site programming and design.

d) Consider spaces for exhibitions, galleries, story-telling, performances, and other expressions to celebrate and honour the River Valley and Ravine System.

2.4.3 BUILDING AWARENESS OF APPROPRIATE BEHAVIOUR IN THE SYSTEM

a) Implement programs and services to:

- Promote respect for historical, archaeological, and cultural resources
- Encourage environmentally responsible behaviours
- Promote respect for other users
- Develop awareness about the impacts of reckless or destructive human activity

b) Use trailhead signs, parking lot signs, and trail markers to:

- Identify permissible uses and any applicable user restrictions
- Show potential hazards
- Identify the precautions required
- Provide information about safe recreation
- Inform dog owners of proper dog waste disposal etiquette

c) Post signs to identify water-recreation routes, distances to other river access points, and relevant river safety advice/precautions.

d) Post signage at boat launches related to the appropriate use of river, and potential ecological impacts associated with boating (e.g. riparian damage from wakes, invasive species).

e) Use positive language on regulatory signage to create an inviting atmosphere for visitors.

f) Support regulations and use restrictions with educational programs and campaigns in collaboration with community groups and organizations. Potential campaigns include:

- Use restrictions (e.g. routes closed to mountain biking)
- Introducing new uses (e.g. commercial use, facility)
- Sharing trails between different user groups
- Respecting sensitive ecosystems, species, and habitats
- Explaining the impact of dogs on natural areas
- Explaining the impact of user created trails on natural areas
- Educating adjacent landowners about the impacts and rules associated with encroachment

g) Work with developers and builders operating in adjacent areas to develop strategies to minimize the impact of design and construction on the System and ensure that there are appropriate buffers (e.g. limiting drainage into the System).

2.4.4 PROVIDING EDUCATIONAL OPPORTUNITIES

a) Accommodate educational programming, information, and opportunities in a form and intensity appropriate to the relevant Land Management Classification.

b) Place interpretive signs at viewpoints and areas of significance to:

- Highlight ecologically, geologically, culturally, and historically significant sites
- Describe restoration work underway
- Celebrate and honour Indigenous heritage, and where appropriate, include stories told by Indigenous people
- Educate the public on how to react when encountering a wild animal

c) Explore innovative methods to educate visitors about the significance of the System.

Why include educational opportunities in the Ribbon of Green SW + NE?

The River Valley and Ravine System offers important education opportunities for primary, secondary, and post-secondary students. The City currently offers River Valley Programs for school groups from kindergarten through Grade 12. The unique research and lesson opportunities, along with the health and wellness benefits of being in an outdoor classroom, make the Ribbon of Green an excellent location for educational programming.

2.4.5 WAYFINDING

a) Use simple and legible wayfinding to support exploration and enhance visitor experiences by telling people where they are, where they can go, how they can get there, and how far it is to key destinations.

b) Update signage as required to indicate altered conditions (e.g. permanent trail closures, changes in permitted use, and previously unidentified safety hazards).

Example Future Site Features: Trailhead

c) When planning the installation of wayfinding signage in the System, consider the following:

- Place identification and wayfinding signage at all trailheads and access points into the trail network
- Use wayfinding signage along the top of bank to identify the nearest access point into the System to discourage new user-created trails, and to show options available to visitors
- Place directional signs and distance markers at junctions where two or more trails meet, where appropriate
- Explore opportunities for digital wayfinding and trail conditions updates through online applications and mapping, and through digital signage at key locations, amenity nodes, and primary trailheads

d) Ensure wayfinding maps:

- Identify trails, major amenities (e.g. parking, washrooms, boat launches), River Valley and Ravine System destinations, and amenities in adjacent neighbourhoods
- Note which trails are appropriate for which user group (e.g. universally accessible trails, mountain bike trails, foot-based travel only)
- Specify trail difficulty and identify stairs or steep grades

What is foot-based travel?

Foot-based travel includes hiking, walking, jogging, etc., and includes people who use mobility aids.

2.4.6 DESIGNING SIGNS

a) Implement signage design (e.g. shape, style, materials) that is consistent throughout the System, and aligns with City wayfinding standards. Ensure that both sign design and content respect the river valley setting.

b) Coordinate wayfinding design and placement with City partners.

c) Follow visual accessibility best practices to ensure sufficient legibility (e.g. text size, contrast).

d) Take the surrounding landscape into consideration when locating signs to:

- Limit safety hazards (e.g. obstructing users)
- Ensure adequate visibility (e.g. sight lines, placement in relation to trails)
- Respect existing natural features

e) Encourage the use of Indigenous languages on signage in areas with Indigenous interpretation, programming, and trailheads nearby.

2.5 **Distribution + Supply**

Breathe Strategic Direction:

Ensure an adequate supply, quality, diversity and distribution of open spaces throughout Edmonton.

The River Valley and Ravine System is a unique resource. It offers valuable ecological services, irreplaceable historical, archaeological and cultural resources, and unparalleled recreational experiences that support Edmonton's quality of life and environment. In contrast to the tablelands, where a park deficit can be solved by building more parks, one cannot build another River Valley and Ravine System – so protecting and enhancing this System is paramount.

Currently, much of the System is privately-owned. The City will work to acquire land and expand this public resource; however, access to private property is restricted for security or privacy reasons. In the meantime, the City can work with landowners to improve access through easements or other means to provide seasonal or temporary access where public use would not hinder landowners and the use of their land (e.g. cross-country skiing on private golf courses).

Equally important to securing land is understanding and enhancing the functions it provides. The City must direct the distribution of these functions and experiences within the System while ensuring ecological integrity is not compromised. This means focusing activities in appropriate locations to meet demand (current and anticipated) while leaving ecologically significant areas untouched and inaccessible. This Plan ensures that each reach of the System offers multiple recreational, natural, cultural, and educational opportunities.

The System should not fulfill the same functions as tableland parks. Specifically, the river valley and ravines offer a unique experience that complements Edmonton's open space network, natural experiences, and critical ecosystem functions within the city. Links between the System and the tablelands will support a connected network and complementary experiences. The *Ribbon of Green SW + NE* guides the type, quality, and location of functions and experiences while protecting the System's ecological functioning.

2.5.1 EXPANDING THE RIBBON OF GREEN SW + NE

a) Pursue the assembly of private land within the System through both strategic and opportunistic means. Use the following considerations to prioritize land assembly:

- Population being served
- Ecologically significant areas, including existing pinchpoints which require restoration
- Contiguous parkland (acquiring land sequentially to avoid gaps)
- Land required to complete and connect to major capital infrastructure (planned or developed)
- Known archaeological or historic resources with a low level of acceptable impact and/or areas with a high likelihood of archaeological resources
- Locations that can contribute to the trail network
- Strategic water access locations
- Land that can enable recreational and/or cultural uses

b) Dedicate all eligible lands within the River Valley and Ravine System as Environmental Reserve through the subdivision process.

c) Expand the System through a combination of purchase, environmental and conservation reserve dedication or easements, donations, and bequethments that allow for protection in perpetuity.

d) Encourage and promote donation of private land to the City as an option for securing land to expand the System for public use.

e) Where fee-simple acquisition is not possible, negotiate public access easements with landowners for the purposes of active transportation, recreation, education, or research.

f) Work proactively with private landowners during site-specific planning to advance the vision and principles of the Plan while respecting their rights.

g) The boundary in this Plan is conceptual only, and should be updated through site-specific planning and to reflect the Urban Development Line and North Saskatchewan River Valley Area Redevelopment Plan boundary.

h) Location and site names within this Plan are based on available information, local sources, and adjacent communities. As the System is expanded, formalizing location and site names should include public and stakeholder engagement, and align with the City's *Naming Development Areas, Parks, Municipal Facilities, Roads and Honorary Roads Policy* (C509B).

2.5.2 PROVIDING RECREATIONAL OPPORTUNITIES

a) Distribute amenity nodes and active areas throughout the System in locations with good access (road and/or trails), a history of disturbance, and lower environmental sensitivity.

b) During site-specific planning, examine:

- The service area for the site
- Existing and anticipated recreational demand
- Important trail connections and existing user-created trails
- Facilities and activities that would serve a local or city-wide demand
- Any gaps in local amenities, facilities, or trails
- The optimal distribution of facilities and amenities
- Potential connections to programs and/or activities to nearby parks
- Unique uses and attractions that are appropriate for a river valley or ravine setting
- Opportunities for partner-run facilities that provide recreation services

c) Accommodate passive recreation opportunities across all Land Management Classifications.

d) Ensure supported recreational activities are aligned with the land uses outlined in the Land Management Classifications, are compatible with the protection of natural areas, and are appropriate within a River Valley setting.

e) Provide natural play opportunities without compromising the ecological integrity of the System.

f) Develop a framework to evaluate and manage conflicting uses, including the impact of recreational development on the ecological network, while recognizing the benefits for community health, access, and enjoyment.


Example Future Site Features: Boat Launch

2.5.3 MANAGING HERITAGE, CULTURAL + TRADITIONAL RESOURCES

a) Use the results of the *Ribbon of Green SW + NE Historic Resources Overview* and collaborate with Alberta Culture and Tourism to inform the level of additional review and oversight required for developments throughout the System.

b) Identify, monitor, manage, and protect significant archaeological, cultural, and historic resources.

c) Classify the most sensitive archaeological, cultural, and historic sites, where public access is not appropriate, as **Preservation**.

d) Work collaboratively with Indigenous people to classify areas where Indigenous burial, cultural, and archaeological sites have a high probability of occurrence.

e) Work with heritage interest organizations and other relevant stakeholders (e.g. sporting organizations, pioneer descendants' groups, and industry associations) to identify culturally significant locations and historic resources to ensure appropriate protection and/or interpretation.

f) Submit all development footprints (for any scale of development from trails to amenity nodes) to Alberta Culture and Tourism along with an application for Alberta Historical Resources Act (HRA) clearance prior to construction anywhere in the System. Comply with any regulatory requirements that result from the HRA clearance application.

g) Report the discovery of historic resources to Alberta Culture and Tourism to determine strategies for on-site assessment.

h) Protect all burial sites and follow Alberta Government protocols for unregistered burial sites.

i) Protect natural and undeveloped areas to enable access to traditional resources.

What are Indigenous Traditional Resources?

Indigenous traditional resources include medicinal plants, berries, fish, clay, and minerals, etc. For more information on how these resources are traditionally used, see Indigenous Traditional Use in the Glossary.

2.5.4 DEVELOPING BUILDINGS, URBAN SERVICES + FACILITIES

a) Locate new or expanded urban services in disturbed areas, where environmental impact will be low, and where they will have the least impact to ecological and trail connectivity. Identify and mitigate any negative impacts to ecological systems and recreational uses.

b) Cluster buildings and facilities, or combine uses within a single structure to minimize the development footprint, whenever possible.

c) Locate buildings, urban services, and facilities within the Active/Working Landscapes and Conservation Land Management Classifications.

d) Ensure all new or renovated City-owned, leased and/or funded buildings demonstrate sustainable design, construction, and operations practices in accordance with City policies, and advance Edmonton's Climate Resilient Strategy and Action Plan.

e) Ensure the compatibility of new or expanded buildings and facilities with the surrounding environment (e.g. include elements and materials that blend buildings into the natural setting).

2.6 **Public Access + Connectivity**

Breathe Strategic Direction:

Improve open space access for residents and visitors.

The river and creeks stitch the River Valley and Ravine System together. Steep slopes and floodways have also helped protect much of the System from development to create a network of interconnected open spaces. Despite this network, natural and man-made features inhibit public access and connectivity. For example, development and infrastructure located at or near the water's edge interrupt potential connections. Steep slopes and erosion hazards add further challenges to public access and connectivity.

Planners must provide public access in areas while ensuring environmental protection within the System. For example, roads and parking provide opportunities for people with limited mobility, older adults, and children to access nature but they also impact natural systems. This is why it is important to take advantage of existing accesses and disturbed areas while leaving other locations in a more natural state.

The *Ribbon of Green SW + NE* must consider how people access the System and how the System connects with city mobility networks for vehicles (private and ride-share), transit (ongoing and special events) and active transportation (e.g. walking, cycling, cross-country skiing, snowshoeing, canoing, kayaking). For example, trails play an important role in the active transportation network by connecting communities to destinations. Access and connectivity can also be improved by designing facilities and promoting the river itself for water transportation.

Lastly, given the popularity and desirability of trail-based recreation, providing direction for trail planning, development, and management is critical. A carefully planned trail network allows people to access and enjoy nature in harmony with the environment. The System is both ecological and archaeologically sensitive; however, the demand for varied trail recreation is increasing. For this reason, a thoughtful and respectful trail network that offers varied experiences is critical to the enjoyment and experience of the River Valley and Ravine System.

2.6.1 ACCESSING THE SYSTEM

a) During future site-specific planning processes:

- Ensure that access points and uses align with the planned/existing adjacent land uses
- Consider demand for on-river activities and the infrastructure required to support them (e.g. washrooms, waste receptacles, parking, beach access, boat docks and hand launches)
- Explore the possibility of trails, parking, and amenities in transportation and utility corridors
- Study transportation and parking demand, based on anticipated local and regional growth, and outline access possibilities for people who walk, bicycle, drive, and/or take transit

b) Provide multiple access points to trails and parks from adjacent neighbourhoods. To determine access point frequency:

- Evaluate desire lines
- Conduct public engagement
- Consult local recreational groups, including both land and water-based recreations
- Assess the location of existing user-created trails
- Seek alignment with statutory plans (e.g. Area Structure Plans, Neighbourhood Structure Plans)

c) Provide functional access to the System for emergency services and maintenance personnel.

d) Prohibit all-terrain vehicles on City-owned/operated land within the System, with the exception of City staff and others with explicit permission from the City.

e) Encourage public transportation to primary trailheads and amenity nodes.

f) Encourage carpooling, transit, shuttle services, and emerging transportation solutions to support access to special events, festivals, and ecologically sensitive areas within the System.

g) Enhance transit access during large festivals by temporarily adjusting routing and extending service to align with event hours of operation.

2.6.2 CREATING A TRAIL NETWORK

a) Implement a trail network that, where feasible, provides a connected regional trail system that ties together destinations, neighbourhoods, and adjacent municipalities. The trail network will also provide a range of recreational trail opportunities throughout the System, while respecting ecological sensitivity.

b) With the exception of programming areas, restrict development within the System to a trail network that improves accessibility, while supporting ecological protection by avoiding key habitats and wildlife corridors, when possible.

Why is it important to limit trail density?

Recreation trails can cause negative ecological impacts to ecosystems, plants, and wildlife, including soil compaction, erosion, wildlife disturbance (due to noise and motion), pollution, and introduction of non-native invasive plant species. Corridors such as trails and roads also cause habitat fragmentation which may impact some plant and animal species. Limiting the number of trails within an area, or reducing trail density, as well as avoiding environmentally sensitive areas can mitigate some of these impacts.

c) Plan the trail network strategically to provide access to nature and prevent the creation of further user-created trails while minimizing trail density as much as possible.

d) When determining the optimal trail alignment, consider the role of the trail in the larger network, with attention paid to how it contributes to one or both of the following:

- A comprehensive **recreational network** that includes: hiking circuits, mountain bike routes, multi-purpose trails, a continuous system of accessible trails, winter recreational activities, and connections to amenity nodes
- **Active transportation** connections that include commuter routes, links across the river and ravines (where appropriate), and routes between destinations

Why is it important to provide connections to Edmonton's active transportation and transit networks?

Providing opportunities for Edmontonians to walk, roll, and cycle, regardless of age, ability, or socio-economic status enhances the safety, inclusivity and diversity of our communities, and minimizes the impact of transportation activities on Edmonton's ecosystem.

2.6.3 FACILITATING TRAIL EXPERIENCES

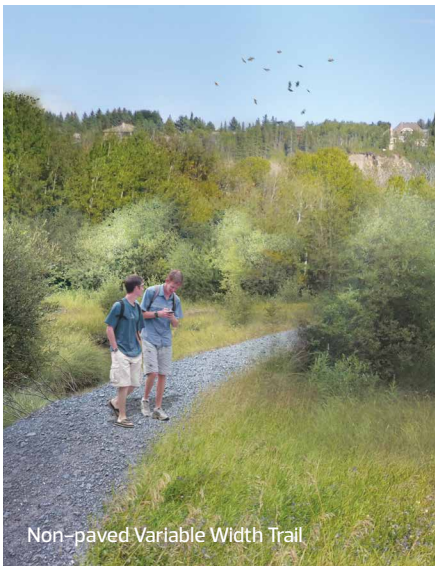
a) Implement a trail network that provides immersive river valley experiences, as per the compatible uses outlined in the land management classification section, including:

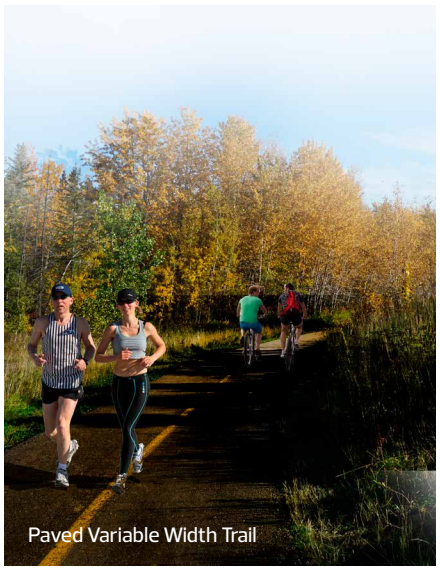
- **Non-paved narrow width trails** (e.g. single track) through ecologically sensitive areas or challenging terrain with limited accessibility
- **Non-paved variable width trails** through natural environments with limited to moderate accessibility
- **Paved variable width trails** that support active transportation and regional connections through natural environments with maximum accessibility for people of all ages and abilities

b) Explore opportunities to name select trails in order to provide unique destination trail experiences for users.

c) Provide accessible interpretive trails near points of interest, and incorporate distinctive signs and other design features to improve user experiences.


Non-paved Narrow Width Trail


Non-paved Variable Width Trail


Paved Variable Width Trail

d) Provide rest benches at frequent intervals, where feasible, to support passive nature appreciation activities and accommodate a range of users.

e) Limit trail density to create a sense of remoteness throughout the System and strategically incorporate higher trail densities near amenity nodes to facilitate interaction and activity.

f) To support user comfort and safety, separate trail uses where the trails are heavily used, and/or there is evidence of user conflicts or safety concerns. Landscaping and wildlife-compatible fencing may be used to separate a trail from uses resulting in user conflicts or safety concerns.

g) Provide an accessible trail system along the top-of-bank.

h) Support active transportation by providing appropriate amenities along commuter routes and key connections (e.g. bicycle repair stations, water fountains).

i) Locate trailheads at amenity nodes and ensure they are accessible and visible.

j) Distribute waste and recycling receptacles at trailheads and major trail junctions.

2.6.4 PLANNING TRAILS

a) During future site-specific planning, include the following guidance for trails:

- Appropriate trail width, grade, and surfacing material
- Justification for the alignment and trail type (e.g. accessibility, connection, aesthetics, avoidance of sensitive areas)
- The locations, scale, and design of trailheads
- Associated amenities and infrastructure (e.g. lookouts)
- Educational opportunities
- Views from the trail and views of the trail
- Construction guidance to minimize impact and costs
- Ongoing maintenance, operations, and management requirements (including any specialized amenities such as cross-country ski tracks)
- Whether lighting is appropriate, and if so, in what form (e.g. bollard or overhead lighting)

b) Incorporate mitigation and protection measures during future site-specific trail planning, that addresses:

- Changes in geological and hydro-geological conditions
- Hydraulic connectivity
- Impacts from flooding
- Erosion and sediment control measures during and after construction
- Restoration and/or mitigation measures to implement
- Other hazards for trail users

c) Minimize the level of disturbance by providing fewer trails within/near sensitive and intact natural areas to reduce habitat fragmentation.

d) Link new and existing trails to:

- Top-of-bank active transportation networks
- Tableland open spaces
- Recreational facilities
- Mobility and open space networks of adjacent municipalities
- Areas of higher density housing
- Mixed-use, commercial and employment areas
- Appropriate river access

e) When evaluating potential trail routes:

- Connect to existing and future trail corridors
- Consider destinations (e.g. recreation centres and tourist attractions)
- Utilize utility corridors
- Avoid fragmenting habitat
- Avoid locations critical to wildlife movement
- Avoid the floodway and flood fringe, when possible (if not possible, refer to 2.6.4 f)
- Avoid rare species of vegetation or sensitive habitats
- Avoid slopes that are highly susceptible to erosion
- Avoid sensitive historic, archaeological, or cultural sites where human use is not appropriate. Where interpretation and use of the site is deemed appropriate ensure that trail connectivity is provided.
- Choose accessible routes, when possible
- Link to high density neighbouring uses, tableland parks, or established community access points
- Utilize user-created trails, when possible

f) If a trail in a floodway or flood fringe is deemed necessary or desirable:

- Avoid locating the trail directly adjacent to the watercourse by preserving a naturally vegetated buffer between the trail and the watercourse
- Implement a higher design standard (more resilient surfacing and foundation)
- Ensure all amenities (e.g. seating, waste receptacles) can withstand periodic flooding or avoid locating them in the floodway or flood fringe

g) Ensure that trail connections identified in Area Structure Plans and Neighbourhood Structure Plans are compatible with this Plan, and do not encourage access to, or use of areas where that is not the intended use.

Why construct a trail in a flood fringe?

People have a natural desire to access and walk along waterways. If there are no trails, people will often create their own informal trails, which can accelerate erosion and bank instability. Providing appropriate trails, amenities, and facilities that are developed to a higher standard will allow people to enjoy and learn about these important environments in a more sustainable manner.

2.6.5 DESIGNING TRAILS

a) Consider current and intended trail density, and types of users when reviewing trail standards and maintenance guidelines, and update to include non-paved narrow width trails.

b) Employ best practice sustainable design guidelines (e.g. width, surfacing, alignment, buffers, low-impact design) to minimize the impact of trails on adjacent natural areas, and mitigate the effects of stormwater and erosion through positive drainage, water infiltration, and /or diversion.

c) Prioritize user safety in the location, design, and management (e.g. maintenance, and closures) of trails.

d) Design trails to reduce user conflicts in locations where they are likely to occur.

e) Investigate separated paved and non-paved trails in circumstances such as the following:

- Locations with existing or potential high rates of use by both cyclists and pedestrians
- Trails adjacent to densely populated areas and major destinations
- Major active transportation commuter routes with higher than average speeds
- Areas with multiple complaints of conflicts
- Signs of wear/or damage next to the trail

f) When designing and constructing trails, consider equipment access requirements for:

- Snow clearing
- Setting cross-country skiing tracks
- Ongoing operations and maintenance
- Emergency vehicles

2.6.6 MAINTAINING TRAILS

a) Work with partners and stewardship organizations, when appropriate, to inspect and monitor trails, and to identify and resolve:

- Hazards
- Vegetation maintenance (e.g. clearing or restoration depending on the trail)
- Unwanted trails and short-cuts
- Required drainage improvements
- Required cleaning, repairs, or other infrastructure maintenance
- Adverse impacts on the surrounding natural environment

b) Permanently or temporarily realign or close a trail, and install information signs, if there is a high risk of:

- Injury (e.g. due to land instability or erosion)
- Unanticipated damage to ecologically sensitive areas

c) Seek opportunities, when appropriate, to work with community partners, sporting and stewardship organizations to manage trails (e.g. cross-country skiing, mountain biking, trail running), when they will not be maintained by the City.

d) Clear snow and provide winter maintenance for trails that provide active transportation links.

e) Close trails temporarily if there are reports of sensitive wildlife in the area (e.g. seasonal closures during mating/laying/calving/birthing seasons).

f) Relocate existing trails and trailheads away from sensitive areas (e.g. mature forests, riparian areas, threatened or endangered habitats, significant archaeological sites).

g) Upgrade trail surfacing, where appropriate, in order to provide a more accessible trail network.

2.6.7 MONITORING TRAILS

a) Create a safe trail system for all users by monitoring for safety hazards and non-permitted uses.

b) Consider the following methods to monitor trail use:

- Collect and analyze user data through on-line services that record location and movement through GPS
- Install pedestrian and cyclist counters along trails and at trailheads
- Place user perception survey forms at trailheads with a drop-box
- Conduct direct observation surveys to assess trail use along busy trail sections

c) Use the data gathered along with recreational trend analyses to forecast potential future use during site-specific planning processes.

d) Provide resources towards monitoring and enforcing non-permitted trail use.

e) Develop ecological monitoring, mitigation, and management practices for environmentally sensitive areas around trails since the impact of trails is not confined to their footprint.

2.6.8 IMPLEMENTING STAIRS + DECKING

a) Where more accessible options exist, minimize installation of stairs and consider alternative approaches.

b) Locate stairs, decking, and other access infrastructure away from environmentally sensitive areas, unstable slopes, and areas prone to erosion.

c) Ensure stairs follow the contour of the land or rise above it to minimize disturbance.

d) Use safe, durable, and environmentally sustainable materials to minimize operational costs.

e) Provide bike rails that accommodate a variety of bicycle tire sizes on stairs along multi-use trails.

Major Pedestrian Bridge: Oleskiw River Valley Park

Minor Pedestrian Bridge: Access to Larch Sanctuary

2.6.9 PLANNING PEDESTRIAN BRIDGES

a) Ensure the design and construction of all bridges minimize the impact on sensitive land, avoid unstable topography, and facilitate important regional connections.

b) Provide pedestrian bridge connections across the North Saskatchewan River, ravines, creeks/streams, and other necessary crossings.

c) Locate major pedestrian bridges to accomplish the following:

- Maximize accessibility and connect populations to amenities on both sides of the North Saskatchewan River
- Connect amenity nodes to the opposite bank
- Facilitate a continuously accessible trail network
- Provide active transportation connections between destinations and for commuters
- Create larger recreational loops

d) Locate minor pedestrian bridges to accomplish the following:

- Limit damage across sensitive riparian areas where desire-lines exist
- Provide important regional connections and access for communities when other, less intrusive, opportunities are unavailable

e) Upgrade existing pedestrian bridges with improved environmental and accessibility design standards during rehabilitation projects.

2.6.10 PARKING

a) Prioritize small dispersed parking lots throughout the system, and along the top-of-bank, as an alternative to fewer, but larger lots.

b) Provide parking (in lots or on-street) at primary trailheads and amenity nodes.

c) Determine the location of new parking areas on a site-by-site basis and consider the following:

- Locate parking areas based on current/anticipated demand, the availability of space, and environmental or other constraints (e.g. land ownership, visual impact)
- Prioritize on-street stalls (if possible – angled or perpendicular parking) at the top-of-bank and place signs explaining that they are for River Valley and Ravine System users
- Locate small parking lots along the top-of-bank in strategic locations, or utilize on-street parking to service trailheads and amenity nodes
- Prioritize constructing new parking lots on previously disturbed areas, and provide parking only when the environmental review has deemed the impact acceptable
- Consider exclusive parking for boat and hand launches, people with limited mobility, park maintenance staff, and other users who require special access on a case-by-case basis

d) Create shared parking areas for all uses within an amenity node.

e) Explore shared parking agreements with adjacent or nearby private commercial or institutional landowners. In residential areas explore opportunities to provide parking where there are compatible land uses that do not generate high levels of on-street parking. This may include roadways along a utility corridor or the top-of-bank roadway.

f) Design parking areas to minimize their environmental impact by:

- Treating stormwater runoff on-site through bioswales and rain gardens
- Planting shade trees
- Incorporating permeable surfacing instead of pavement or asphalt, where appropriate

g) Identify parking management solutions during site-specific planning.

h) Provide adequate bicycle and bus parking at amenity nodes and primary trailheads to facilitate System access by these modes, where appropriate.

2.7 **Adaptive Management + Flexible Spaces**

Breathe Strategic Direction:

Adaptively manage changing trends in growth, demographics and preferences.

The *Ribbon of Green SW + NE* is based on extensive research, analysis, and engagement; however, the System is not static. Seasonal weather patterns constantly alter slopes and watercourses, while larger forces, like climate change, invasive species, and disease, stress ecosystems and influence the type and range of species living there.

Trends, preferences and demographics change over time and effect how the System is used and enjoyed. Edmonton is expected to grow to nearly 2 million people, which will increase recreational demand in the System. Also, an aging population necessitates greater thought devoted to infrastructure and activities suited to older adults, while simultaneously accommodating the needs of a new generation of children and youth. Some trends can be anticipated where others cannot – this is why the *Ribbon of Green SW + NE* needs to remain flexible.

Adaptive management is one tool to address changes and pressures. Adaptive management involves a cycle of monitoring, evaluation, and adjustment to ensure decision making responds to current conditions and knowledge. The process emphasizes continuous learning to keep abreast of trends and changes; correct outdated information and direction and ensure staff can appropriately anticipate and respond to changes.

Building adaptable open spaces avoid "locking in" to preferences and management practices that may change over time. For example, instead of expensive single-purpose facilities, flexible structures and spaces designed for multi-functionality can adapt more easily to new uses. Temporary and movable programming (e.g. park furniture, classes, events, art or exhibits) can also activate spaces with minimal investment in fixed infrastructure. Natural areas can also be managed for resilience to changing conditions (e.g. planting diverse native species). This will ensure the System continues to reflect the needs of Edmontonians.

2.7.1 MANAGEMENT PRACTICES

a) Adopt an adaptive management framework (e.g. a cycle of monitoring, evaluation and adjustment) to allow management practices to adapt to changing conditions and ensure the ongoing relevance of the *Ribbon of Green SW + NE*.

b) Promote a corporate culture of continuous learning so that City personnel responsible for planning and managing the System are better able to remain aware and revise the Plan in light of changing conditions, emerging trends, and evolving best practices.

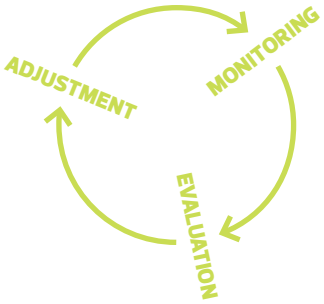
c) If current or projected human use is greater than anticipated for trails and amenity nodes (classified under **Preservation** or **Conservation**), consider:

- Altering the site (closing trails/moving facilities)
- Re-defining the use for less impact
- Implementing protection measures
- Adding educational and informational signage

d) When assessing and developing mitigation procedures or actions for unforeseen challenges (e.g. natural disasters, severe weather events, human caused damage, higher intensity of use), considering the following:

- Ecological impacts
- Safety concerns
- Acceptable level of future user risk
- Likelihood of event or situation reoccurring
- Other relevant City policies, bylaws, and procedures

Adaptive Management Framework



2.7.2 MAINTENANCE STANDARDS

a) Define the level of maintenance for each amenity, infrastructure, or facility and ensure it is compatible with ecological and habitat protection, public safety and sustainable operational costs.

b) Place animal resistant recycling and garbage receptacles at trail heads and amenity nodes, and provide composting, recycling, garbage receptacles at all public facilities.

c) Ensure that trail maintenance regimes are appropriate to the type of trail.

d) Evaluate and pilot alternative management practices, which may not exist in approved policy/guidelines, if they are supported by relevant City departments through the site-specific planning process (e.g. prescribed burns).

e) Implement forest management practices, when feasible, to support ecological health, public enjoyment, and safety.

f) Follow the direction outlined in the Integrated Pest Management Policy for the City. Notify users about recent or future chemical applications through on-site signs and online notices.

g) Use integrated pest management and other maintenance best practices to prevent the spread of noxious and non-native plant species.

h) Train City staff and community partners, where applicable, in the proper maintenance and monitoring of trails and amenity nodes.

i) Extend hours of operation and/or year-round operation of washrooms, when feasible, in locations with high demand.

2.7.3 CREATING FLEXIBLE SPACES

a) Design amenity nodes and primary trailheads to minimize their impact on natural areas, while maximizing their versatility and adaptability to funding shifts, user preferences, and advancements in technology.

b) Integrate multi-functionality in amenity nodes and primary trailheads (e.g. trails that can be used for educational walks and sporting events).

c) Design spaces that can change and adapt over time (e.g. installing "solar ready" sub-surface infrastructure for facilities or lighting).

d) Maximize all-season use.

e) Animate open spaces with diverse activities, events, and movable amenities (e.g. games, lightweight furniture) as an alternative to investment in fixed assets, where appropriate.


Example future site features: Pavilion

2.8 **Community Engagement**

Breathe Strategic Direction:

Empower people to become active participants and stewards in planning, sustaining and using the green network.

Community engagement is a cornerstone of open space planning in Edmonton. The City acknowledges the value of citizen involvement in decision making for the River Valley and Ravine System. For this reason, further System planning will include opportunities ranging from consultation to community empowerment.

Public engagement is essential to gain insight into the needs and desires of a community and all Edmontonians. Input from other stakeholders, such as community organizations and clubs, is also important to learn from local knowledge of specific sites and experts in the field. Developing solutions directly with stakeholders can create key partnerships for implementation and a shared responsibility to ensure long-term success. A combination of public and stakeholder engagement will be used to inform all future planning processes in the River Valley and Ravine System.

Collaboration with the Indigenous communities is especially important to understand the history and importance of the System, and to develop solutions that can sustain its natural and cultural resources and uses for future generations. The City commits to meaningful ongoing collaboration with Indigenous communities and Traditional Knowledge Keepers on the System's planning and management. This will help provide insight and understanding of natural systems and processes, traditional and ceremonial uses, and potential collaboration and partnership opportunities.

Future *Ribbon of Green SW + NE* initiatives and site-specific planning need to reach out to Edmontonians and neighbouring communities alike. The River Valley and Ravine System is one of the most cherished aspects of the city, and its future is something that all residents should have the opportunity to share in.

2.8.1 ENGAGING THE PUBLIC

a) Ensure meaningful engagement, both city-wide and local, during the development of site-specific plans and revisions to the *Ribbon of Green SW + NE* in accordance with the *Public Engagement Policy* (C593).

b) Determine the official names of trails, parks, and other features through a public engagement process with approval by the Naming Committee and in accordance with the *Naming Development Areas, Parks, Municipal Facilities, Roads and Honorary Roads Policy* (C509B).

c) Pursue representation (both direct and through advisory/advocacy groups) from marginalized communities during public engagement processes. Include socio-economic and cultural minorities, people experiencing homelessness, children and youth, older adults, and people with limited mobility or visual, cognitive or auditory impairments.

2.8.2 COLLABORATING WITH INDIGENOUS COMMUNITIES

a) Identify opportunities to advance reconciliation and strengthen relationships with Indigenous communities and peoples.

b) Work with Indigenous peoples and communities, and Keepers of Traditional Knowledge to identify areas of interest and the best methods for collaboration, feedback, and review.

c) Ensure early, meaningful, in-person and ongoing Indigenous engagement for the sharing of information, the identification of issues and concerns, and collaboration on mitigation, recommendations, and management.

Henderson Estates + Haddow

2.9 **Collaborative Planning**

Breathe Strategic Direction:

Improve collaborative open space planning among City stakeholders, community partners, and other jurisdictions.

Collaborative planning is essential to protect the health and integrity of the River Valley and Ravine System. Even though much of the System is owned and managed by the City, many recreational facilities are operated by private corporations or non-profit entities. Also, much of the System remains privately-owned (including farms and industrial operations) and working with these landowners and private operators will continue to be an important and ongoing effort to implement the *Ribbon of Green SW + NE*. Specifically, this involves:

- Keeping an open dialogue about their plans for their land
- Providing support for best land management practices
- Offering incentives and, where necessary, disincentives for certain activities
- Keeping landowners informed about corporate goals for the System
- Establishing and maintaining strong community partnerships

The planning, design, programming, and operations of the River Valley and Ravine System is the responsibility of different City departments, so collaboration and communication across departments is essential for success.

At the same time, the System does not begin and end at Edmonton's city boundaries. Protecting ecological integrity, and enhancing the cultural and recreational value of the System requires cross-government collaboration. This includes adjacent municipalities (through the Edmonton Metropolitan Region Board and the River Valley Alliance), the Provincial Government, Indigenous communities and the Federal Government. These and other community partnerships are integral in ensuring the System offers culturally sensitive regional recreational opportunities that are in harmony with the land.

2.9.1 PARTNERING

a) Work with public and private sector partners, including other jurisdictions and other orders of government, to implement this Plan.

b) Actively pursue opportunities to establish or reinforce formal partnerships in River Valley and Ravine System planning, development, operating, monitoring, research, public education, and protection with:

- Private landowners
- Land trusts
- Indigenous communities and peoples
- Schools and school boards
- Post-secondary institutions
- Sporting and recreation organizations
- Heritage interest groups
- Naturalist societies
- Arts and culture organizations
- Community leagues and groups
- Environmental organizations
- Utility providers
- Regional/provincial planning and advisory bodies
- Other jurisdictions

c) Work with the Province and other jurisdictions to complete environmental research, monitor success, implement initiatives, and identify environmental, cultural, archaeological, and/or historical significance.

d) Collaborate with adjacent municipalities, Indigenous communities, and the Government of Alberta to coordinate planning, development, and operation of River Valley and Ravine System parks.

e) Work with research, environmental, search and rescue, and Indigenous organizations to determine how best to facilitate their use and access to restricted areas.

f) Respect and observe Indigenous protocols (e.g. smudges, prayers, ceremonies) when projects intersect with Indigenous interests and concerns.

g) Collaborate with local Indigenous communities to gather and preserve traditional ecological knowledge (TEK) about the System, and explore ways to incorporate TEK into the monitoring, management and decision making of culturally and historically significant areas.

h) Coordinate historic resource management activities with the Government of Alberta.

i) Work with tourism agencies to identify projects to enhance Edmonton's tourism marketing position.

j) Seek community, corporate, and/or non-profit partnerships to share responsibility for planning, developing, financing, and maintaining specific initiatives.

k) Work together with the public, volunteer organizations, and Edmonton emergency services to ensure the safety and security of all users.

l) Partner with organizations and businesses to deliver programming and provide rentable equipment or activity kits that enable users to activate open spaces on a flexible/casual basis.

m) Work with the Provincial and Federal governments to achieve the international biodiversity commitments, including the Durban Commitment and the Convention on Biological Diversity's Aichi Biodiversity Targets.

2.9.2 COORDINATED PLANNING

a) Promote interdepartmental coordination to:

- Synchronize development of System trails with the top-of-bank/tablelands active transportation network
- Identify opportunities to align planning, acquisition, development, operations, programming, and funding activities
- Improve access and connections between tableland neighbourhoods and the System
- Reinforce connections among natural areas, parks, and other open spaces of the System and Edmonton tablelands

b) Review administrative processes (e.g. booking, permitting, insurance requirements) to facilitate appropriate uses (e.g. commercial uses, events, social gatherings), improved customer level of service, and community participation in stewardship activities.

c) Work with developers to coordinate the implementation of this Plan with adjacent development, and leverage implementation opportunities.

d) Leverage adjacent or nearby capital projects to renew existing park infrastructure and amenities.

e) Seek approval from Government of Alberta for any new and/or expanded infrastructure within Transportation Utility Corridors during planning processes.

f) Work with Government of Alberta to identify areas within Transportation Utility Corridors where mowing practices could be changed to enable passive regeneration.

g) Work with adjacent communities to plan, develop, and manage the River Valley and Ravine System across municipal jurisdictions.

What is a Transportation Utility Corridor?

A Transportation Utility Corridor (TUC) is Government of Alberta land that accommodates, or is planned to accommodate linear transportation and utility facilities. These uses include ring roads (and associated interchanges), stormwater management facilities, petroleum pipelines, power transmission lines, and municipal regional water, sanitary and storm sewer lines.

2.10 **Sustainable Funding**

Breathe Strategic Direction:

Develop a sustainable funding model that responds to operational requirements, community capacity and local needs.

Funding the *Ribbon of Green SW + NE* differs from the rest of the green network due to different needs and funding constraints. First, older open space amenities and infrastructure require increasing expenditures on maintenance, redesign or replacement. These existing open spaces are also subject to demand for new or upgraded facilities in response to contemporary needs and preferences. Also, since the River Valley and Ravine System is a citywide amenity, the City is largely responsible for improvements, in contrast to the tablelands, where community leagues have a major role in open space planning.

In addition to upgrades, the City has a mandate to acquire land in the System for public ownership. This can occur through subdivision, purchase, or other means. During subdivision, the City requires all land within the boundary of the North Saskatchewan River Valley Area Redevelopment Plan be dedicated as environmental reserve. To purchase land, the City has a special reserve fund; however, contributions are inconsistent. In the meantime, River Valley and Ravine System land prices continue to climb, and restoration, development, and maintenance work come with their own costs.

Given these realities, the City must strategically allocate resources to the System. Decisions must account for both capital and operating costs for all future initiatives. To do this sustainably, the City should explore creative solutions to acquire, develop, and maintain land. These can include governance arrangements (e.g. park conservancies), innovative funding models (e.g. community bonds) and/or alternatives to fee simple acquisition (e.g. conservation covenants, access easements).

Engagement during the *Ribbon of Green SW + NE* process highlighted the need to partner with landowners, environmental organizations, and other stakeholders. Many are already involved in voluntary conservation programs, citizen science campaigns, trail building and maintenance and other initiatives to preserve and enhance the System. In addition, the City must work with other orders of government to ensure sufficient investment and other in-kind support where necessary. These partnerships are vital in creating and managing a financially sustainable River Valley and Ravine System.

2.10.1 SUSTAINABLE FUNDING

a) Pursue additional revenue streams to support ongoing management, including philanthropy, leases, parking, permitting and user fees, etc. Ensure that any revenue-generating agreements conform with City policies.

b) Support access to amenities and facilities for people of every socio-economic background through sustainable fee rates, sliding-scale fees, and/or subsidization programs.

c) Work with funding partners (e.g. private organizations, non-profits, other jurisdictions) to ensure that all advertising, sponsorships, and funding partnerships are appropriate within the River Valley and Ravine System context and align with relevant City of Edmonton policies.

d) Cash-in-lieu of municipal reserve, received through subdivision of industrial or commercial areas, will be used to purchase River Valley and Ravine System land (Parkland Purchase Reserve Account).

e) Ensure that acquisitions and capital expenditures in the System are supported by a life-cycle assessment of operating and repair/replacement costs in accordance with asset management best practices.

f) Establish a targeted minimum balance for the Parkland Purchase Reserve Account and define conditions under which funds may be borrowed for non-River Valley and Ravine System projects (e.g. project eligibility, repayment timelines).

g) Incorporate life-cycle resourcing estimates into departmental budget planning processes.

h) Retain City ownership of all facilities constructed on City-owned land within the Ribbon of Green. Where permitted, private or partner operations can pursue leases with the City.

i) Take advantage of provincial or federal infrastructure funding programs to assemble land and build or renew trails and amenities.

j) Explore innovative tools to acquire, develop, and maintain land to reduce costs and improve the Systems financial sustainability.

E.L. Smith Water Treatment Plant

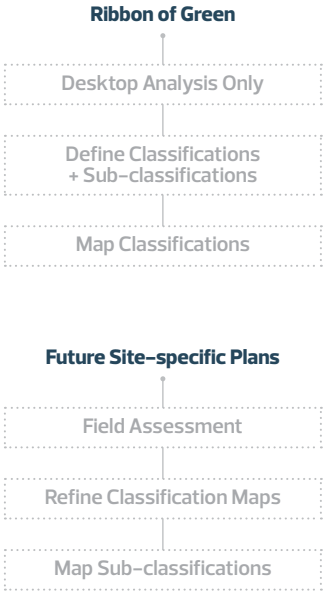
3 SITE DIRECTION: LAND MANAGEMENT CLASSIFICATIONS

These Land Management Classifications outline the level of protection or permitted development within each area. In turn, these Classifications will guide design and programming decisions to create park amenities and operations standards appropriate to their location within the River Valley and Ravine System.

3.1 Introduction

To manage the System, protect its ecological health, and offer unique recreational and cultural opportunities, the *Ribbon of Green SW + NE* defines three Land Management Classifications. The original *1992 Ribbon of Green Master Plan* Classifications functioned as a starting point and were modernized based on public engagement, best practices, analysis, and in alignment with the *Ribbon of Green SW + NE* vision and principles. A key revision to the original Classifications is the addition of Sub-classifications. These Sub-classifications provide greater precision, certainty, and guidance.

The *Ribbon of Green SW + NE* defines and applies the Classifications to respond to existing conditions, guide future use, protect sensitive areas and improve disturbed areas. The *Ribbon of Green SW + NE* provides direction for the Sub-classifications while later site-specific plans will apply the Sub-classifications spatially once on-the-ground conditions are verified and the uses confirmed.



PRESERVATION	CONSERVATION		ACTIVE/WORKING LANDSCAPES		
Protect the integrity of the natural environment and restore natural functioning with limited access and recreational opportunities. Compatible uses include *foot-based travel on natural-tread trails only.*	Connect people to nature by allowing people to enjoy and appreciate the System while minimizing environmental impact and restoring ecological functioning, when possible.		Facilitate gathering and recreation within the System, recognize existing uses and encourage restoration.		
	TRAIL-BASED RECREATION	**NATURAL RECREATION**	**INTENSIVE RECREATION**	**AGRICULTURE + HORTICULTURE**	**URBAN SERVICES + CITY-WIDE ATTRACTIONS**
	Facilitate a variety of trail experiences in harmony with the natural environment through a connected trail network. Compatible uses include *all types of trail use.*	Provide opportunities to rest, linger and enjoy nature. Compatible uses include *all types of trail use, plus picnicking, unstructured play and river access.*	Provide a wide-range of recreational opportunities tailored to the river valley and ravine setting. Compatible uses include *events and festivals, fitness courses and boat launches.*	Recognize existing agricultural and horticultural uses. Compatible uses include *farms and supporting uses.*	Support city-wide attractions while acknowledging the importance of urban services to accommodate a growing city. Compatible uses include *existing development, golf courses and city-wide attractions.*

3.2 **Overview of the System**

The maps on the following pages illustrate the locations for each instance of a Classification. Sub-classifications will be defined through site-specific planning when on-the-ground conditions are verified, and uses confirmed. These Classifications will also be refined during site-specific planning based on field assessments.

The recommended Land Management Classifications (**Preservation**, Conservation and Active/Working Landscapes) were initially informed by four major spatial datasets:

1. **Ecological Evaluation Natural Area Ratings** were used to identify the most essential existing natural areas within the System, with the highest scoring areas classified as **Preservation**

2. **Landslide Risks** were identified during the geotechnical assessment, drawing on detailed aerial imagery to identify where slopes had been previously compromised

3. **The City's Environmental Sensitivity Model,** which makes Classification recommendations based on 26 datasets

4. **Archaeological Potential**, which draws from expert recommendations to identify known and likely locations of cultural and archaeological finds

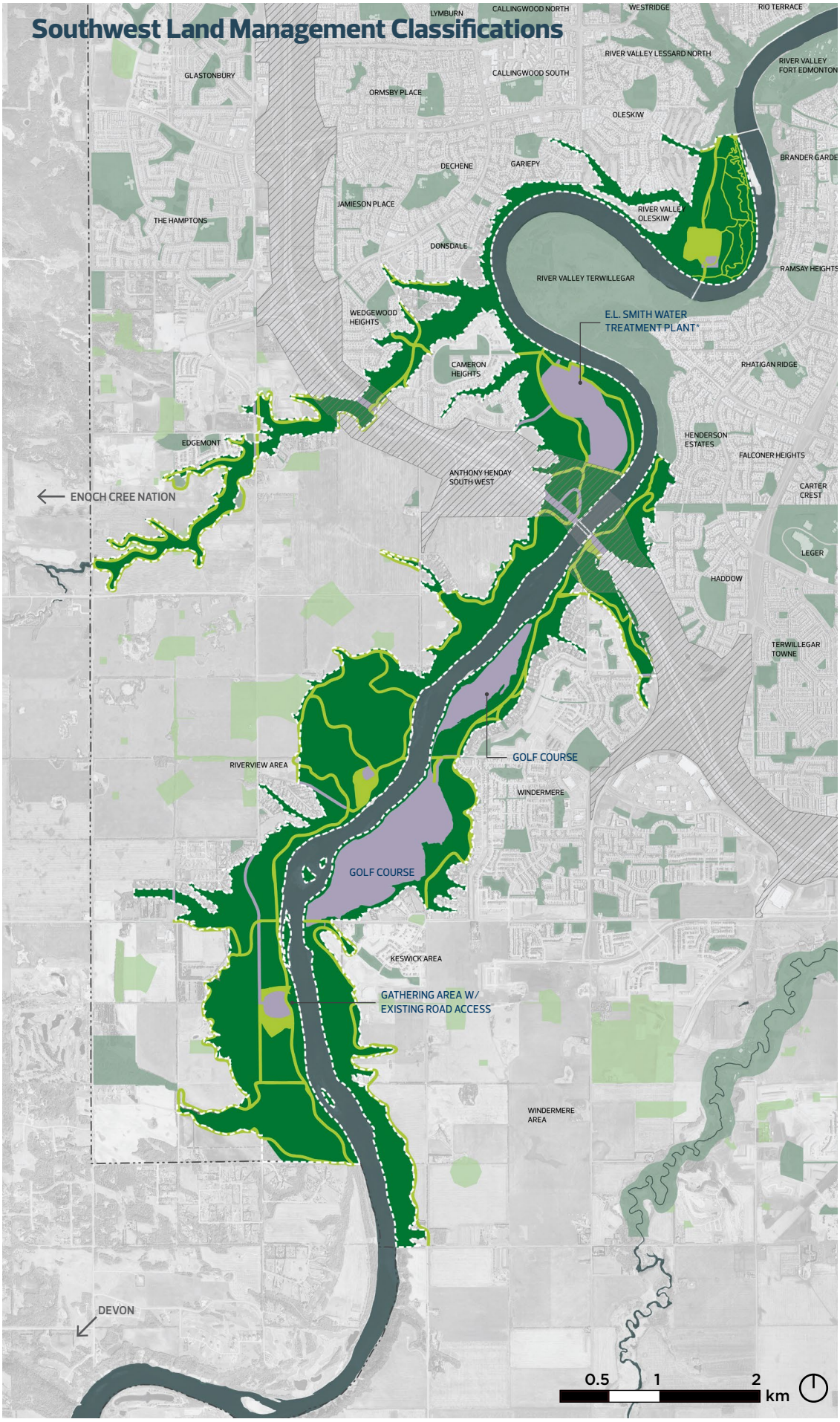
In addition to the above datasets, the Land Management Classifications were refined to reflect unique circumstances such as history, existing uses, and current initiatives. For example, recreational areas (e.g. private golf courses), planned parks (e.g. Oleskiw River Valley Park), historic recreational use (e.g. the Old Klondike Campground) and areas with vehicle access (e.g. Woodbend Natural Area) were classified as Conservation or Active/Working Landscapes.

Additionally, linear bands of Conservation were created in response to the need of enabling access and connectivity to areas throughout the System, and to mitigate any potential negative impacts from trails-based activities on natural environments. They are unique to the Conservation classification. These modifications ensure the Land Management Classification system reflects existing conditions and balances ecological protection with appropriate recreational use.

Linear Bands of Conservation

The linear bands of Conservation are approximate and based on the desktop analysis conducted as part of this Plan. Their precise location and alignment will be defined during further site-specific planning when on-the-ground conditions can be confirmed. Also during site-specific planning, additional Conservation trails (e.g. mountain biking, horseback riding) and **Preservation** trails (for foot-based travel only) will be identified, located and classified appropriately.

Southwest Land Management Classifications



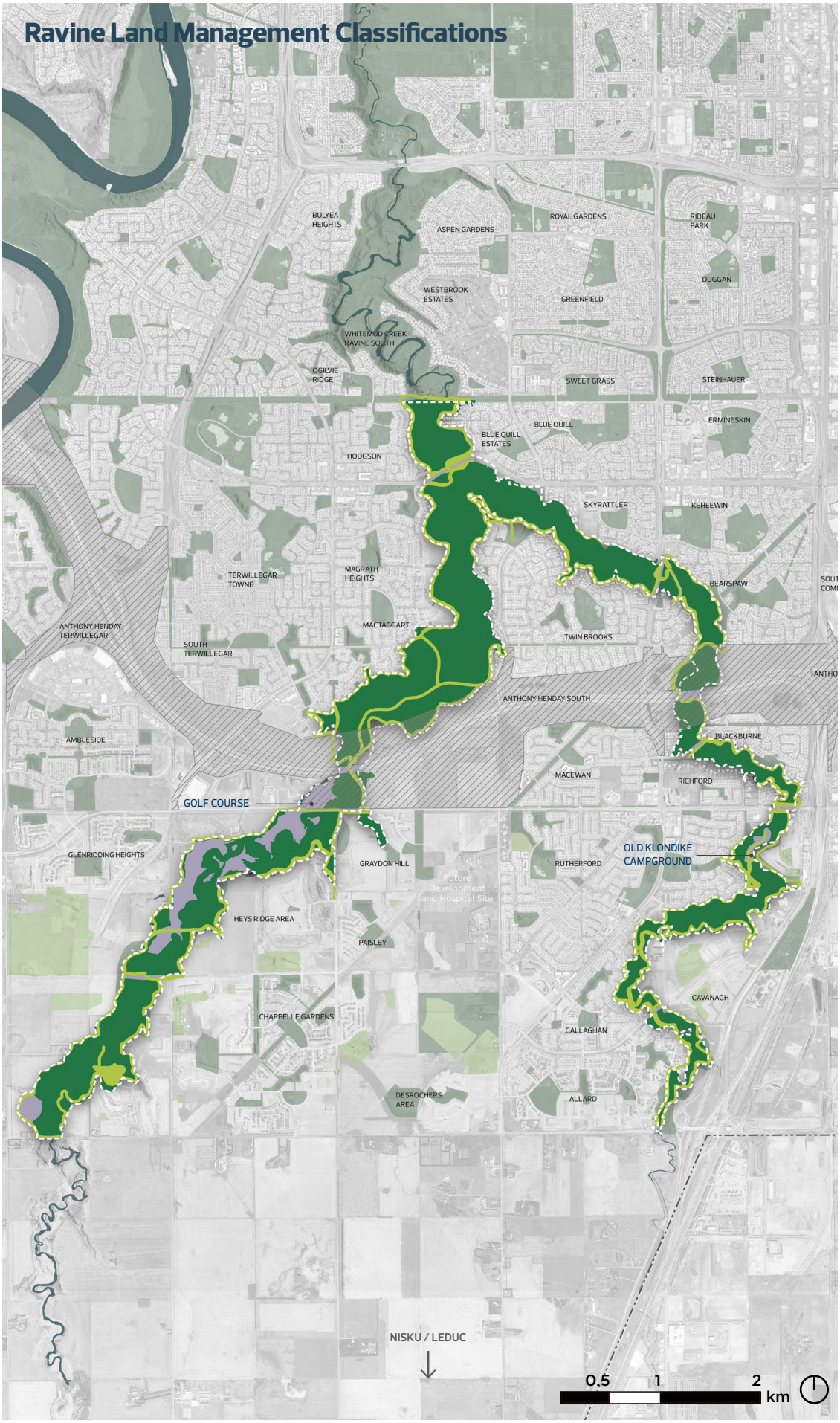
*The data-derived land management classification for a portion of the E.L. Smith Water Treatment Plant site is Preservation. The Plan identifies a portion of the site as Active / Working Landscapes in order to provide existing and expanded water treatment services. If the site is no longer required for that use, the classification is to be re-evaluated.

LEGEND

- Existing Parks
- Future Parks
- Preservation
- Conservation
- Active / Working Landscapes
- Transportation Utility Corridor

For illustrative purposes only.
To be confirmed through later site-specific planning.

Ravine Land Management Classifications

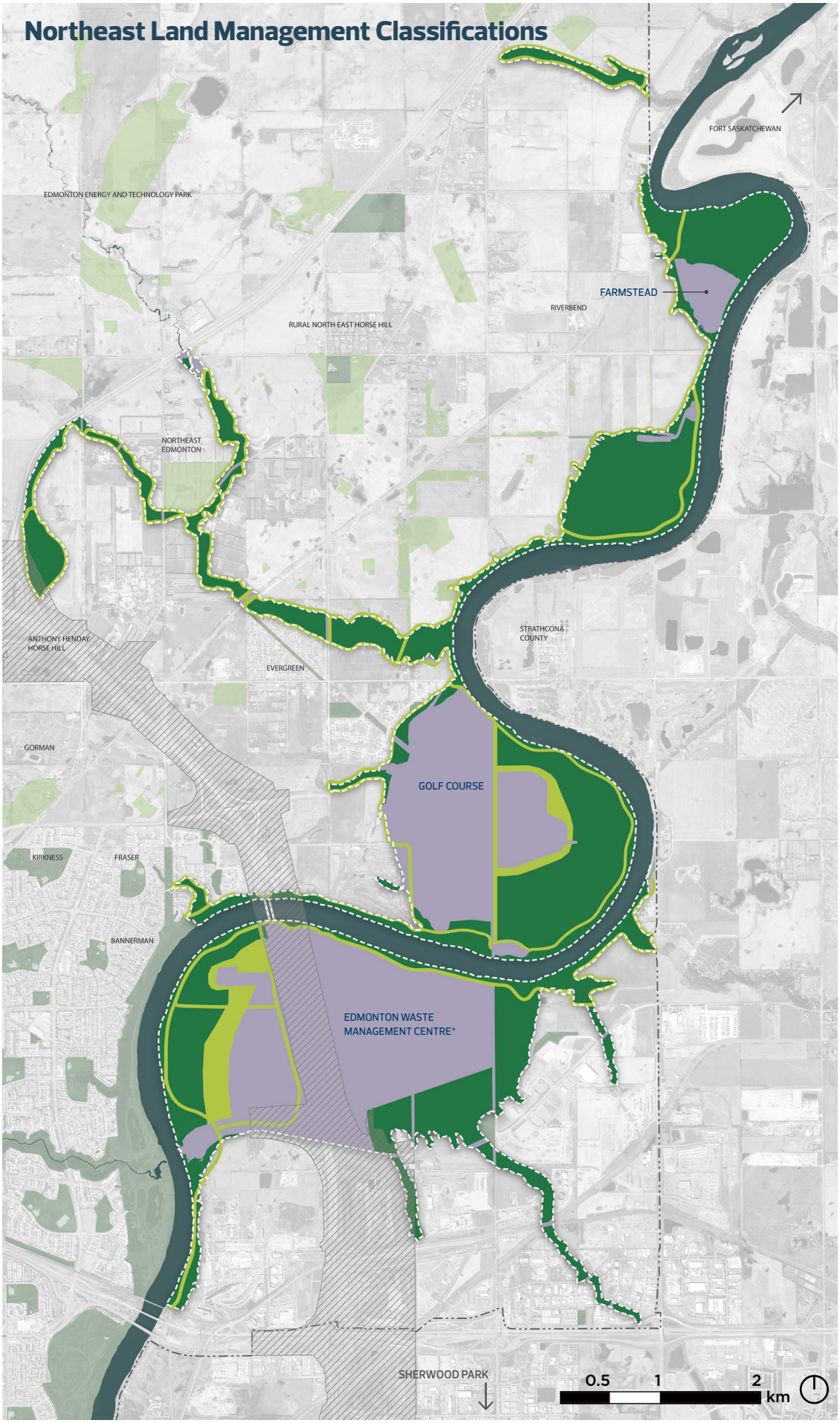


LEGEND

- Existing Parks
- Future Parks
- Preservation
- Conservation
- Active / Working Landscapes
- Transportation Utility Corridor

For illustrative purposes only.
To be confirmed through later site-specific planning.

Northeast Land Management Classifications



*The data-derived land management classification for the Edmonton Waste Management Centre is a combination of Preservation, Conservation and Active/Working Landscapes. The plan identifies the site as Active/Working Landscapes in order to provide existing and expanded waste management services. If the site is no longer required for that use, the classification is to be re-evaluated.

LEGEND

- Existing Parks
- Future Parks
- Preservation
- Conservation
- Active / Working Landscapes
- Transportation Utility Corridor

For illustrative purposes only. To be confirmed through later site-specific planning.

3.3 **Relationship with Breathe**

Edmonton's green network is a connected network of open spaces that provide multiple services to people and the environment. These services are categorized into the functions in *Breathe: Edmonton's Green Network Strategy*, which are, in turn, categorized into three theme areas:

- **Ecology:** Supports and enhances the environment by sustaining healthy and resilient ecosystems
- **Celebration:** Connects people to one another and builds a sense of place by providing places for communities to thrive, gather and celebrate
- **Wellness:** Promotes healthy living and fosters wellbeing through diverse kinds of recreation, mobility and environments

Each of these theme areas do not occur in equal measure across all of Edmonton's open spaces, but each community, regardless of their location in the city, should have access to the spectrum of open space functions nearby.

The River Valley and Ravine System primarily delivers ecological benefits, but also provides important wellness and celebration functions. The Land Management Classifications build upon the *Breathe* theme areas by providing greater detail about what should occur and where in the River Valley and Ravine System.

Each of *Breathe's* three themes are present throughout the Land Management Classifications; however, the priority and focus shifts depending on the nature and intent of the Classification. Ecological health is the priority across all Classifications, but the proportion and type of wellness and celebration functions vary.

- **Preservation: Ecology** functions (biodiversity, climate regulation, water management, risk mitigation) dominates with small proportions of **Wellness** and **Celebration** functions (Wellness functions focus on natural, foot-based, contemplative and learning experiences while celebration uses focuses on the natural aesthetic value and heritage)
- **Conservation: Ecology** functions (all of the above in **Preservation** plus waste management) dominate with a greater proportion of **Wellness** and **Celebration** functions compared to **Preservation** (Wellness functions focuses on active transportation with more recreational and learning experiences to connect people with nature while celebration functions focus on heritage interpretation, aesthetics and public safety)
- **Active/Working Landscapes: Ecology** functions (every ecological function) dominate with an almost comparable level of **Wellness** and **Celebration** functions (the full range of Wellness functions and the full range of Celebration functions can be accommodated)

3.4 Land Management Classification Policies + Direction

This section supplements the System-wide policies with direction tailored to each Land Management Classification. Specifically, this section outlines the intent of each Land Management Classification and Sub-classification; provides policy direction to guide further planning and design and includes compatible uses, facilities and infrastructure. It is important to understand that the compatible uses, facilities and infrastructure do not mean that all listed items are appropriate in every instance of the Sub-classification. Rather, they form a set of options to consider during site-specific planning.

Notes

All compatible uses, facilities, and infrastructure are discretionary and subject to further study, engagement and consideration based on the site condition and context.

All the policies in the System-wide section apply to the Land Management Classifications. Additional policies are provided in this section that are specific to the Classification or Sub-classification.

3.4.1 LAND MANAGEMENT CLASSIFICATION APPLICATION POLICIES

The following policies apply to the application and refinement of the Land Management Classifications and Sub-classifications discussed in this section.

a) Use the boundaries of the Land Management Classifications to guide appropriate design and maintenance measures.

b) Refine any changes to the Land Management Classifications based on the field, environmental and further archaeological assessments conducted during site-specific planning processes.

c) Define the comprehensive trail network during site-specific planning when on-the-ground conditions can be confirmed and classify each trail type appropriately, including:

- Foot-based uses along non-paved narrow width trails in more sensitive areas – **Preservation**
- A variety of trail uses (e.g. mountain biking) on non-paved variable width and paved variable width trails in less sensitive areas with mitigated ecological impacts – **Conservation: Trail-based Recreation**

d) Delineate the Sub-classifications during site-specific planning processes once on-the-ground conditions and uses are confirmed.

3.4.2 PRESERVATION

The intent of the **Preservation** Classification is to protect the integrity of the natural environment and restore natural functioning with minimal disturbance to wildlife and vegetation. Protecting and improving ecological health is the primary objective of **Preservation** areas. This includes protecting ecosystem functions, key habitat areas, wildlife corridors, and sensitive archaeological/cultural/historic sites. For this reason, recreational opportunities are limited to foot-based travel along non-paved trails in appropriate locations (as determined through an environmental review).

Visitor Experience

Limiting recreation to foot-based travel along non-paved trails will facilitate the quiet enjoyment and appreciation of nature. These trails will be located strategically where they do not damage sensitive habitats, landforms, or archaeology. Restricting this trail use to foot-based travel only also reduces user conflicts and environmental impact. Some very limited off-trail use is permitted, but only for research and conservation management activities, search and rescue, and Indigenous traditional use.

Impact of the Visitor Experience

Since the **Preservation** Classification's priority is ecosystem health over recreational experiences, restricting trail and off-trail use is critical to minimize impacts. Defining levels of acceptable ecological functioning during site-specific planning is required to inform management practices and establish a baseline to monitor ongoing health. If ecosystem health is negatively impacted by overuse, restoration, closures, and use limitations are required.

For more information
See **Section 2.1.6** – Ecological Integrity: Site-specific Planning

3.4.2.1 COMPATIBLE USES, FACILITIES + INFRASTRUCTURE

PRESERVATION

COMPATIBLE USES	FACILITIES + INFRASTRUCTURE
RECOGNIZE: + Indigenous traditional use **LEARN:** + Research and conservation related activities + Nature study, observation and photography **MOVE:** + Foot-based travel + Cross-country skiing (non-track set only) + Snowshoeing + Canoeing/kayaking **PLAY:** + Dogs (on-leash) **OTHER:** + Fishing	**APPRECIATE:** + Viewpoints (informal non-constructed) + Bird blind **EXPLORE:** + Signage (interpretive, wayfinding and regulatory) **MOVE:** + Non-paved trails + Stairs and decks (wood only) **PROTECT:** + Wildlife compatible fencing, and security fencing + Slope stabilization infrastructure **RELAX:** + Seating areas and benches

3.4.2.2 SPECIFIC PRESERVATION DIRECTION

Compatible Uses

a) Use the criteria below to evaluate whether a use is compatible and appropriate within the **Preservation** Classification:

- Ecological, archaeological, cultural or historical resources are not placed at increased risk
- The potential use does not require equipment or specialized gear (e.g. bicycles and boats)
- The use will not close off portions of the area or limit the availability of trails to the public (e.g. races)
- The use will not leave anything behind and/or traces beyond footprints (e.g. chalk marks, flags, and litter)

Compatible Facilities + Infrastructure

b) Evaluate all infrastructure and structures with the following criteria to determine whether it is appropriate within a **Preservation** area:

- The infrastructure improves visitor safety
- The infrastructure serves an important engineering function (e.g. improves drainage, slope stability, or prevents erosion)
- The infrastructure cannot be located in any other Land Management Classification while meeting its objectives
- The infrastructure protects habitats, species, landscapes, vegetation and/or landforms

c) Essential infrastructure may include:

- Construction to stabilize slopes, provide erosion control, and improve drainage
- Screening devices to facilitate non-disruptive wildlife and bird observation (e.g. bird blinds, rest benches)
- Stairs and decks, if they provide safe access into the System and/or to minimize the total amount of land disturbance (e.g. trails on slopes without stairs often cause more disturbance to achieve an appropriate slope, and stairs can also help prevent erosion)
- Mitigation measures to reduce the impact of trails and other infrastructure
- Low-impact seating

d) Limit unnecessary signage clutter.

Ecological Protection

e) Native and locally-adapted vegetation that forms the principal wildlife movement route shall be retained and managed with human access limited.

f) Allow fencing, if necessary to protect sensitive areas and ensure visitor safety. Ensure all fencing is wildlife compatible.

g) Establish a buffer between **Preservation** areas and **Active/Working Landscapes** areas of a width sufficient to mitigate the impacts of noise, light and other pollution, whenever possible.

h) Maintain wetlands and riparian areas with an appropriate variable-width buffer, to be determined on a case-by-case basis, to maintain overland, waterborne and aerial wildlife movement.

i) Apply a different management and maintenance standard for **Preservation** areas around trails since the impact of a trail is not confined to the trail footprint. This includes higher levels of monitoring, waste collection, and mitigation to address edge effects, noise impacts and other potential impacts on preservation areas.

j) Restrict public access to significant environmentally sensitive areas, if warranted.

Restoration + Rehabilitation

k) Restore disturbed landscapes in **Preservation** areas unless they are needed for trail connectivity.

Heritage + Cultural Resources

l) Work with Indigenous communities to identify culturally significant and sacred locations (e.g. natural occurrences of traditional medicinal plants) to protect them from public use and ensure that trails avoid these areas.

Recreational Uses

m) Limit recreation to foot-based travel that facilitates nature appreciation (e.g. observation, study, or photography) while limiting visitor impact.

n) Provide informal viewpoints (which will not be maintained) at key sites while minimizing impact to ecological integrity.

Access + Trails

o) Ensure that each trail route within **Preservation** areas offers a unique experience, focusing on localized natural environments, providing access to natural sights, or curating interpretive loops.

p) Weave trails around existing vegetation and topography to reduce their overall footprint and disturbance to existing vegetation.

q) Manage the number and density of trails to limit habitat fragmentation and disruption.

r) Restrict public access in areas with sensitive or unsafe environmental conditions (e.g. unique vegetation cover, nest or den sites, wet areas, unstable slopes, or erosion prone conditions).

s) Protect and classify wetlands as restricted areas.

t) Reduce or manage user-created trails in ecologically sensitive areas through education, signage, restoration, design, and enforcement. Engage with the public about the change or closure, and post notices on site.

Other Uses

u) Do not permit commercial uses.

Education + Awareness

v) Provide educational signs and enforcement to minimize disturbances to wildlife from inappropriate behaviour (e.g. cautioning against loud activities, littering, or interacting with wildlife).

w) Provide educational information about why **Preservation** areas are important and the impacts of excessive or intensive recreational use.

x) Explore digital opportunities (e.g. live feeds or imagery), based on management recommendations, to educate and communicate about specific sites and ecosystems within the System without providing public access to those most ecologically sensitive areas.

Maintenance + Operations

y) Limit active maintenance and management to:

- Trail safety and functionality improvements
- Conservation practices
- Inspections and repairs of any infrastructure/structures
- Litter clean-ups in partnership with communities and organizations
- Inventory and monitoring of ecosystem health
- Any other monitoring and maintenance guidance as defined in the site-specific plan
- Preventing the creation of additional user-created trails through education, design and outreach

z) Reduce edge effects and prevent weed introduction from nearby developments or high-use areas by adopting disturbance-management practices in natural areas.

aa) Maintain the existing vegetation understory around trails to provide habitat and shelter for wildlife.

ab) Do not provide snow clearing services.

Monitor + Study

ac) Develop a plan to monitor wildlife populations and movement to ascertain whether there are any adverse impacts from human use, and respond to these impacts by restricting access, if necessary.

Larch Sanctuary

3.4.3 CONSERVATION

The **Conservation** Classification's intent is to connect people with nature. This Classification offers more recreational opportunities to enjoy and explore nature than the **Preservation** Classification; however, maintaining and restoring ecosystem health remains important.

The **Conservation** Classification is divided into two Sub-classifications:

+ **Trail-based Recreation**
+ **Natural Recreation**

The *Ribbon of Green SW + NE* applies the **Conservation** Classification to locations throughout the System. The Sub-classifications will be applied during further site-specific planning when on-the-ground conditions are confirmed and the precise location of uses is defined.

3.4.4 CONSERVATION | TRAIL-BASED RECREATION

Trail-based recreation supports ecological protection and restoration with a connected trail network that connects people to the System and provides a range of trail-based experiences.

The *Ribbon of Green SW + NE*'s high-level trail network defines major access points and regional connections, and is not a comprehensive trail inventory. Instead, it functions as a starting point for further site-specific planning, where field assessments and public engagement will define the complete trail network. Some trails will remain in **Preservation** but most (based on an environmental review) will become **Conservation: Trail-based Recreation**. Site-specific plans may also realign or remove trails in the *Ribbon of Green SW + NE*.

What is the role of different plans for trails?

Through desktop assessment, Ribbon of Green SW + NE outlines the major access points, and regional connections. Trail areas are classified as **Conservation**.

Site-specific plans refine the alignment of those regional connection, add more recreational trails, and identify all access points through public engagement and field assessments. Trail areas will be classified during this site-specific planning as **Conservation: Trail-based Recreation** (if they will accommodate a range of uses like mountain bike trails) or remain as **Preservation** (if they will accommodate foot-based travel only).

Visitor Experience

The *Ribbon of Green SW + NE*'s public engagement highlighted trail-based recreation as the quintessential River Valley and Ravine System recreational activity. Edmontonians desire a variety of trail experiences and this Sub-classification will fulfill that desire through multiple trail types and uses year-round.

Impact of the Visitor Experience

This Sub-classification, applied during site-specific planning, will focus trails in appropriate areas to limit their ecological impact. This Sub-classification will apply to the entire trail network, except the foot-based travel only non-paved trails that fall under **Preservation**. This trail network will:

+ Provide regular access into the System
+ Facilitate recreation and active transportation
+ Reduce the incentive to create user-created trails that may damage the System

3.4.4.1 COMPATIBLE USES, FACILITIES + INFRASTRUCTURE

CONSERVATION: TRAIL-BASED RECREATION

COMPATIBLE USES

RECOGNIZE:
- Indigenous traditional use

LEARN:
- Research and conservation related activities
- Nature study, observation and photography
- Educational and nature-based programming, including Indigenous Knowledge, ways of knowing, and storytelling

MOVE:
- Foot-based travel
- Cross-country skiing (track and non-track set)
- Snowshoeing
- Canoeing/kayaking
- Active transportation from neighbourhoods to regional destinations
- Trail destinations (e.g. stacked trail loops, interpretive trails)
- Cycling and mountain biking
- Horseback riding

EXPLORE:
- Orienteering

PLAY:
- Geo-caching
- Dogs (on-leash)

GATHER:
- Trail-based events

OTHER:
- Fishing

FACILITIES + INFRASTRUCTURE

APPRECIATE:
- Viewpoints and platforms (informal non-constructed and constructed)
- Bird blind

EXPLORE:
- Signage (interpretive, wayfinding and regulatory)

MOVE:
- Paved trails
- Non-paved trails
- Stairs, decks, and boardwalks
- Pedestrian bridges
- Trailheads
- Hand boat launch and docks

PROTECT:
- Wildlife compatible fencing, and security fencing
- Retaining walls
- Slope stabilization infrastructure

RELAX:
- Seating areas and benches

OTHER:
- Low-impact Development (LID)
- Lighting (trail and security)
- Waste and recycling receptacles

Conservation: Trail-based Recreation

3.4.4.2 SPECIFIC TRAIL-BASED RECREATION DIRECTIONS

Compatible Uses

a) When evaluating uses not explicitly mentioned in the compatible use table, determine whether the use is appropriate within a Conservation: Trail-based Recreation area if the use can be wholly contained within the width of the trail.

Compatible Facilities + Infrastructure

b) Evaluate all infrastructure and structures with the following criteria to evaluate whether the infrastructure is essential and appropriate within a Conservation: Trail-based Recreation area:

- The infrastructure is required to ensure visitor safety
- The infrastructure provides an important engineering function (e.g. improves drainage or slope stability)
- The infrastructure uses the least intrusive method for achieving the desired purpose
- The infrastructure protects habitats, species, landscapes, vegetation, and landforms
- The infrastructure provides space to rest, repair equipment, or take a break without blocking the trail for other users
- The infrastructure connects or provides the opportunity to create a recreational circuit
- The infrastructure provides a direct link to facilitate active transportation or fills a gap in the larger trail network

Ecological Protection

c) Use Conservation: Trail-based Recreation areas to separate intensive uses from **Preservation** areas, whenever possible.

Restoration + Rehabilitation

d) Restore and/or rehabilitate areas that have been degraded due to excessive use (e.g. habitats adjacent to trail alignments, or erosion prone slopes).

e) Restore trails that have been permanently closed.

Heritage + Cultural Resources

f) Place interpretive displays along trails to highlight important historic and cultural sites.

Recreational Uses

g) Accommodate multiple trail-based recreational uses year-round.

h) Encourage the development of mountain biking trails where appropriate, and work with mountain bike groups and organizations to find suitable locations.

i) Provide seating along trails, where feasible, to provide places to rest, take in views or scenery, and enjoy the natural setting.

Access + Trails

j) Provide a well-connected trail network that supports active transportation connectivity and accessibility within the System.

k) Use trail buffers to reduce "edge effects" between trail disturbances and adjacent natural areas and increase the width of the buffers based on the degree of anticipated use.

l) Employ every reasonable effort, including, but not limited to, engineering solutions and/or alternative alignments, to minimize the extent of disturbance from the development of trails.

m) Weave trails around existing vegetation or important sites to reduce their overall footprint and disturbance to vegetation.

n) Apply caution when finalizing the alignment of paved trails to avoid ecologically sensitive areas due to the larger extent of disturbance relative to non-paved trails.

o) Create a variety of trail experiences for different purposes, users, routes, and destinations.

p) Implement and enforce trail closures to minimize the impact of human overuse, erosion and human-wildlife conflicts, where necessary.

q) During site-specific planning, designate trails specifically for horseback riding, if appropriate.

Other Uses

r) Do not permit permanent commercial uses.

Education + Awareness

s) Provide educational signage and enforcement measures to minimize disturbance to wildlife from inappropriate behaviour in Conservation areas (e.g. cautioning against loud activities, littering, or interacting with wildlife).

Maintenance + Operations

t) Ensure trail maintenance is tailored to the type of trail.

u) At the top-of-bank, ensure that stormwater run-off is directed to the stormwater system instead of allowing it to flow down the river valley or ravines.

v) Maintain the existing vegetation understory around trails to provide shelter for wildlife.

Monitor + Study

w) Develop a plan to monitor wildlife populations and movement to ascertain whether there are any adverse impacts from human use, and respond to these impacts by restricting access, if necessary.

3.4.5 CONSERVATION | NATURAL RECREATION

The **Conservation: Natural Recreation** Sub-classification's intent is to provide opportunities to exercise, relax, play, and gather with friends and family in a natural setting. This Sub-classification also applies to trailheads. This Sub-classification offers unstructured passive recreational opportunities in a natural setting and can also buffer **Preservation** areas.

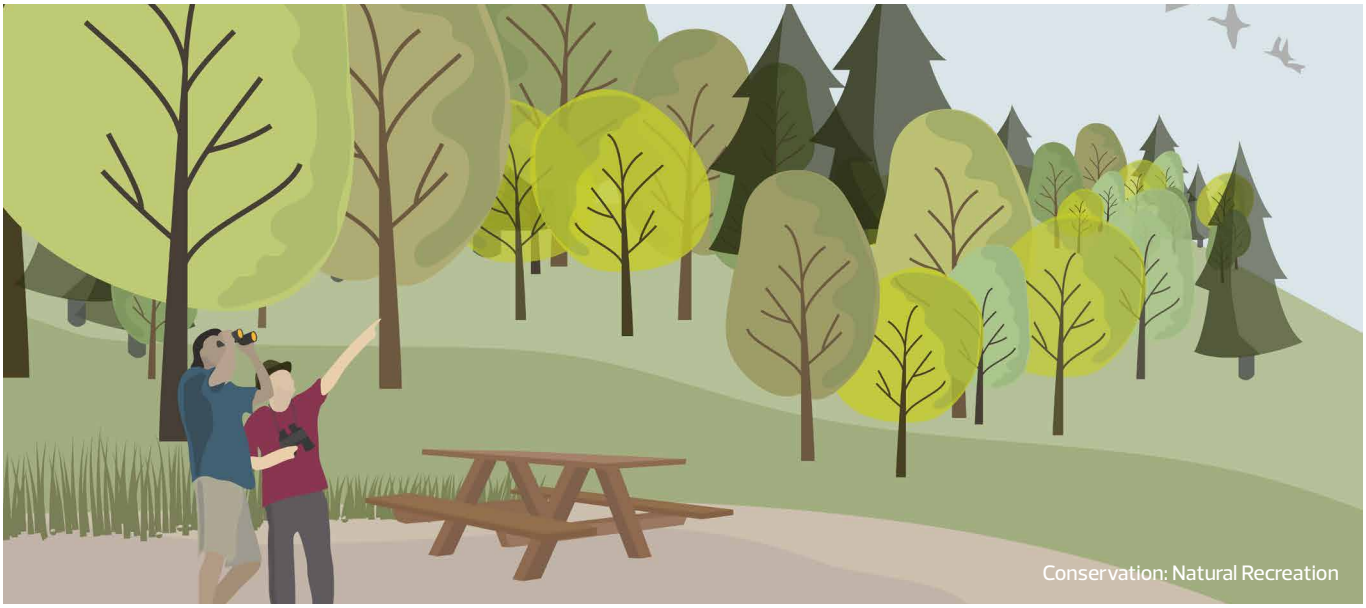
The **Conservation: Natural Recreation** Sub-classification provides recreation opportunities in a natural setting while minimizing environmental impact and restoring ecological functioning, when possible. **Conservation: Natural Recreation** areas can be thought of as "nodes" to complement **Conservation: Trail-based Recreation's** "corridors". This reflects their purpose as areas to stop and enjoy nature, whereas **Conservation: Trail-based Recreation** facilitates movement through nature.

Visitor Experience

The type of activities permitted are unstructured and non-programmed to allow people to experience nature individually or in small groups. Activities include picnicking, reading, nature observation, launching a canoe and fishing.

Impact of the Visitor Experience

Conservation: Natural Recreation can buffer **Preservation** areas from more intense uses to help protect the most sensitive and vulnerable parts of the System. These areas are also intended to protect ecological functioning and maintain wildlife movement while allowing visitors to enjoy a natural setting. The types of activities are limited to control the amount of people and their potential impact. Connecting people with nature also helps grow personal investment and appreciation of nature that may, in turn, lead to stewardship, advocacy, and volunteering.



Conservation: Natural Recreation

3.4.5.1 COMPATIBLE USES, FACILITIES + INFRASTRUCTURE

CONSERVATION: NATURAL RECREATION

COMPATIBLE USES

RECOGNIZE:
- Indigenous traditional use

LEARN:
- Research and conservation related activities
- Nature study, observation and photography
- Educational and nature-based programming, including Indigenous Knowledge, ways of knowing, and storytelling

MOVE:
- Foot-based travel
- Cross-country skiing (track and non-track set)
- Snowshoeing
- Canoeing/kayaking
- Active transportation from neighbourhoods to regional destinations
- Trail destinations (e.g. stacked trail loops, interpretive trails)
- Cycling and mountain biking
- Horseback riding

EXPLORE:
- Orienteering

PLAY:
- Geo-caching
- Dogs (on and off-leash)
- Day camps
- Low-impact primitive camping
- Unstructured play

GATHER:
- Picnicking
- Trail-based events

ACCESS:
- Vehicular access
- River access
- Ice skating

OTHER:
- Fishing

FACILITIES + INFRASTRUCTURE

APPRECIATE:
- Viewpoints and platforms (informal non-constructed and constructed)
- Bird blind

EXPLORE:
- Signage (interpretive, wayfinding and regulatory)

MOVE:
- Paved and non-paved trails
- Stairs, decks, and boardwalks
- Pedestrian bridges
- Trailheads

PROTECT:
- Wildlife compatible fencing, and security fencing
- Retaining walls
- Slope stabilization infrastructure

RELAX:
- Seating areas and benches
- Warming huts
- Primitive campground

GATHER:
- Non-bookable picnic sites

PLAY:
- Off leash dog areas (up to 1 ha in size)
- Nature and adventure play features
- Flexible turfed open area
- Activity pad
- Hand boat launch and docks

ACCESS:
- Parking area, park-road, turn-around
- Emergency vehicle access

OTHER:
- Low-impact Development (LID)
- Lighting (trail, security and parking lot)
- Public art
- Drinking fountains
- Washrooms
- Waste and recycling receptacles

3.4.5.2 SPECIFIC NATURAL RECREATION DIRECTIONS

Compatible Uses

a) Use the points below to evaluate whether a use is appropriate within **Conservation: Natural Recreation** areas:

- The use does not contain any facilities that require bookings/reservations
- The use does not require the construction of specialized facilities beyond washrooms, warming huts, hand boat launches, Green Shacks, picnic tables, and/or other minor user amenities
- The use does not require any special maintenance and management beyond clearing snow and setting cross-country skiing tracks
- The use does not result in impact to ecologically sensitive areas

Compatible Facilities + Infrastructure

b) Evaluate all infrastructure and structures with the following criteria that indicate whether the infrastructure is essential and appropriate within **Conservation: Natural Recreation** areas:

- The infrastructure improves visitor safety
- The infrastructures provides an important engineering function (e.g. improves drainage, slope stability)
- The infrastructures uses the least intrusive method for achieving the desired purpose
- The infrastructure protects habitats, species, landscapes, vegetation, and landforms
- The infrastructure provides space to rest, picnic, relax, exercise a dog or undertake impromptu games and activities without damaging sensitive ecological areas
- The infrastructure provides trailhead amenities appropriate for the location and type of trail served

Ecological Protection

c) Use **Conservation: Natural Recreation** areas to separate intensive uses from **Preservation** areas, whenever possible.

d) Ensure that site-specific planning processes to determine the location, design, construction and maintenance of any proposed water-based infrastructure (e.g. docks, and boardwalks) addresses and mitigates any negative effect on the aquatic environment.

Restoration + Rehabilitation

e) During the site-specific planning process, refine, and potentially identify future areas for remediation, restoration or rehabilitation.

f) Restore areas disturbed through development.

Heritage + Cultural Resources

g) Place interpretive displays in Conservation: Natural Recreation areas to highlight important historic and cultural sites.

h) Work with Indigenous communities to identify appropriate Indigenous gathering spaces that should consider the following:

- Clean soil
- Not previously cultivated or disturbed
- Offers privacy
- Can accommodate river access, and close to natural areas

Recreational Uses

i) Allow node-based passive recreational opportunities that complement the natural setting and require minimal infrastructure (e.g. picnic sites, washrooms, warming huts, rest areas, hand boat launches, and turf areas for casual games/hobbies/sports).

j) Determine which areas are appropriate for low-impact primitive camping (e.g. walk-in or canoe/kayak-in) and how they would be operated through site-specific plans.

k) Provide informal viewpoints (which will not be maintained) and formal viewpoints (which will be maintained) at key sites while minimizing impacts to ecological integrity.

l) In Conservation: Natural Recreation areas, off-leash dog parks should be fenced to minimize impacts on adjacent natural areas and wildlife.

Access + Trails

m) Classify all trailheads as Conservation: Natural Recreation.

n) Create universally accessible trailheads, wherever possible.

o) Design trailheads based on the type of trail they service. Trailheads can fall into one of the following three categories:

TRAILHEAD TO PRESERVATION AREAS	TRAILHEAD TO CONSERVATION AREAS	TRAILHEAD TO CONSERVATION + ACTIVE/WORKING LANDSCAPES
Trail Access Points: These trailheads lead to a natural surface trail that accommodates foot-based travel only. These trailheads require few amenities but typically provide signage, seating and, potentially, bicycle and/or vehicle parking. Trailhead signage should identify that only foot-based activities are the only permitted activities on the trail.	**Local Trailhead:** These trailheads lead to trails that accommodate all types of non-paved trail activities. Given their greater use, these trailheads typically include some vehicle parking, signage, seating, and bicycle parking.	**Primary Trailhead:** These trailheads service paved and non-paved trails that accommodate users of all ages and abilities. As a result, they require more amenities and consideration. Universal accessibility is required and typical amenities include: vehicle parking, signage, seating, washrooms, and bicycle parking.

Other Uses

q) Do not permit permanent commercial uses.

Education + Awareness

r) Provide educational signs and enforcement measures to minimize wildlife disturbances from inappropriate behaviour (e.g. cautioning against loud activities, littering, interacting with wildlife), and interpret environmentally significant sites.

Maintenance + Operations

s) Reduce edge effects and prevent weed introduction from nearby developments or high-use areas by adopting disturbance-management practices in natural areas.

Monitor + Study

t) Monitor wildlife populations and movement to ascertain whether there are any adverse impacts from human use, and restrict access, where necessary.

Quarry Park

3.4.6 ACTIVE/WORKING LANDSCAPES

Active/Working Landscapes are located regularly throughout the River Valley and Ravine System and accommodate the highest intensity of uses while limiting ecological impact, when possible. This Classification applies to existing uses, such as farms, industry, recreational facilities, utilities, and attractions. It also applies to new areas to focus and concentrate recreational activities; these areas were placed in locations with existing access, site disturbance and lower ecological value. Overall, this Classification intends to transition existing development that does not serve the *Ribbon of Green SW + NE* vision, to more compatible uses over time.

Active/Working Landscapes have three Sub-classifications:

- Intensive Recreation
- Agriculture and Horticulture
- Urban Services and City-wide Attractions

The *Ribbon of Green SW + NE* applies the overall Active/Working Landscapes Classification to locations throughout the System. The Sub-classifications will be applied during further site-specific plans when on-the-ground conditions are confirmed and the precise nature of uses defined.

3.4.7 ACTIVE/WORKING LANDSCAPES | INTENSIVE RECREATION

The Active/Working Landscapes: Intensive Recreation's intent is to accommodate a range of more intensive recreational opportunities appropriate to the river valley and ravines. These opportunities allow people to exercise, play, learn and gather with friends and family in a unique park setting that cannot be replicated in tableland parks. Since Active/Working Landscapes have lower levels of ecological sensitivity, they have the greatest potential to accommodate multiple activities and services to meet the needs of visitors.

Despite that overall recreational purpose, Active/Working Landscapes: Intensive Recreation areas must minimize their footprint, incorporate green features and support ecological functioning. Also, like **Preservation** and Conservation, opportunities will be sought to restore and/or enhance ecosystem functions.

Visitor Experience

Active/Working Landscapes: Intensive Recreation's locations provide opportunities for gathering and interaction through multiple outdoor recreational and cultural opportunities. Given the disturbed nature of these sites, there is the opportunity to design environments that facilitate a breadth of recreational experiences while also improving ecological functioning and respecting local history.

Impact of the Visitor Experience

These are largely disturbed areas with a history of agricultural, industrial, and other development. Maintaining and restoring the ecological functioning and protecting wildlife movement, while accommodating unique recreational experiences is the priority.

3.4.7.1 COMPATIBLE USES, FACILITIES + INFRASTRUCTURE

ACTIVE/WORKING LANDSCAPES: INTENSIVE RECREATION

COMPATIBLE USES

RECOGNIZE:
- Indigenous traditional use

LEARN:
- Research and conservation related activities
- Nature study, observation and photography
- Educational and nature-based programming, including Indigenous Knowledge, ways of knowing, and storytelling

MOVE:
- Foot-based travel
- Cross-country skiing (track and non-track set)
- Snowshoeing
- Canoeing/kayaking
- Active transportation from neighbourhoods to regional destinations
- Trail destinations (e.g. stacked trail loops, interpretive trails)
- Cycling and mountain biking
- Horseback riding

EXPLORE:
- Orienteering

PLAY:
- Geo-caching
- Dogs (on and off-leash)
- Day camps
- Unstructured play
- Swimming in constructed facilities
- Fitness courses
- Slope based activities (tobogganing and skiing / snowboarding)
- Niche activities (hot air ballooning, model boating, hang gliding, archery)

GATHER:
- Picnicking
- Events and festivals

ACCESS:
- Vehicular access
- River access
- Ice skating

GROW:
- Urban gardens

SHOP:
- Commercial spaces

OTHER:
- Fishing

Active/Working Landscapes: Intensive Recreation

ACTIVE/WORKING LANDSCAPES: INTENSIVE RECREATION

FACILITIES + INFRASTRUCTURE

APPRECIATE:
- Viewpoints and platforms (informal non-constructed and constructed)
- Bird Blind

EXPLORE:
- Signage (interpretive, wayfinding and regulatory)

MOVE:
- Paved trails
- Non-paved trails
- Stairs, decks, and boardwalks
- Pedestrian bridges
- Trailheads

PROTECT:
- Wildlife compatible fencing, and security fencing
- Retaining walls
- Slope stabilization infrastructure

RELAX:
- Seating areas and benches
- Warming huts

GATHER:
- Bookable and non-bookable picnic sites
- Amphitheatres
- Bookable meeting/event space

PLAY:
- Off leash dog areas
- Nature and adventure play features
- Flexible turfed open area
- Activity pad
- Hand boat launch
- Boating facilities and launches (hand launch and motorized)
- Spray decks and swimming pools
- Sports fields
- Climbing and play structures
- Recreation facilities (indoor and outdoor)
- Fitness circuits
- Skating rinks and trails

ACCESS:
- Parking area, park-road, turn-around
- Emergency vehicle access
- Mechanized access

GROW:
- Urban gardens

SHOP:
- Restaurants and cafés (permanent and temporary)
- Ancillary retail

OTHER:
- Low-impact Development (LID)
- Lighting (trail, security, parking lot and aesthetic)
- Public art
- Drinking fountains
- Aesthetic fountains/water features
- Washrooms / change rooms
- Waste and recycling receptacles

3.4.7.2 SPECIFIC INTENSIVE RECREATION DIRECTION

Compatible Uses

a) Use the points below to evaluate whether a use is appropriate within an Active/Working Landscapes: Intensive Recreation area:

- The use implements the *Ribbon of Green SW + NE* vision and principles
- The use provides the public with an opportunity to learn more about the ecological, archaeological, cultural and historical importance of the System
- The use requires the river valley and ravine setting

b) Transition any existing development or use that does not serve the Plan's vision and principles over time to more compatible uses.

Compatible Facilities + Infrastructure

c) Evaluate all infrastructure and structures with the following criteria to determine whether it is essential and appropriate within Active/Working Landscapes: Intensive Recreation areas:

- The infrastructure improves visitor safety
- The infrastructure provides an important engineering function (e.g. improves drainage, slope stability)
- The infrastructure provides or supports an active recreational opportunity appropriate for the area
- The infrastructure protects habitats, species, landscapes, vegetation, and landforms

Ecological Protection

d) Establish larger buffers between areas prone to high densities of site visitors, loud noises, and/or other substantive disturbances.

Whitemud - Anthony Henday Wildlife passage

e) Ensure that site-specifc planning processes determine the location, design, construction, and maintenance of any proposed water-based infrastructure (e.g. docks, boardwalks) and addresses and mitigates any negative effects on the aquatic environment.

f) Ensure adequate fencing to prevent wildlife habituation (e.g. from unsecured waste collection areas) or unmitigable human-wildlife conflicts (e.g. from unsecured dog off-leash areas near important wildlife corridors).

Restoration + Rehabilitation

g) Restore landscapes degraded through recreational development or activities that are no longer in use.

Heritage + Cultural Resources

h) In locations with a high level of disturbance from previous uses (e.g. quarries), incorporate and acknowledge this history in the design of the public space.

i) Ensure that the design of celebration and gathering spaces (e.g. amphitheaters, pavilions, picnic shelters) in Active/Working Landscapes: Intensive Recreation areas address topography, maintenance and operation costs, sustainability, and accessibility in their design.

j) Work with Indigenous communities to identify appropriate Indigenous gathering spaces that should consider the following:

- Clean soil
- Not previously cultivated or disturbed
- Offer privacy
- Can accommodate river access, and close to natural areas

Recreational Uses

k) Focus outdoor active recreational facilities in Active/Working Landscapes: Intensive Recreation areas, including specialized facilities that can accommodate more intensive uses (e.g. mountain bike skills courses, canoe/kayak course).

l) Ensure celebration and wellness active recreational opportunities are customized to, and suit the river valley and ravine setting, for example:

- Skating trails through a restored woodland
- Mountain bike skills courses that mimic the challenging terrain experienced in nature
- Urban agriculture demonstration projects that incorporate native and edible river valley and ravine plants
- Natural play features that incorporate local materials like stumps and rocks

m) In Active/Working Landscapes: Intensive Recreation areas, off-leash dog parks may be larger and (potentially) not fenced if it is determined through the environmental review that the dogs will not damage the ecological functioning of the area.

Access + Trails

n) Ensure vehicular access is provided from collector and arterial roads, wherever possible.

o) Provide paved parking for heavily used sites and incorporate design solutions (bioswales and other low-impact development) to reduce and treat stormwater runoff.

p) Provide access to recreational opportunities and day-use areas via multiple active transportation modes (walking, hiking, running, biking, skiing, snowshoeing).

q) Provide ample bicycle parking at amenity nodes.

r) Provide accessible routes for all users from parking areas or trailheads to River Valley and Ravine System destinations.

s) Work with Edmonton Transit Service to provide public transit access to Active/Working Landscapes: Intensive Recreation areas when there is a significant demand/draw.

Other Uses

t) Ensure that commercial amenities (e.g. cafés, restaurants, food kiosks, equipment rentals) support surrounding recreational/educational/community gathering uses.

u) Minimize environmental impacts of commercial amenities.

v) Incorporate urban gardens, where appropriate, including raised beds and green roofs.

w) Enhance bookable and non-bookable picnic facilities with features such as universally accessible tables and shelters, family-style picnic tables, fire pits, bake ovens, etc.

x) Provide drinking fountains and water bottle refill stations at public facilities wherever infrastructure permits.

Education + Awareness

y) Provide cultural, historic appreciation, and biodiversity-related programming and information (e.g. plant and bird identification, guided walks, installations) to promote knowledge and skills development that enhances visitor experience.

z) Manage potential user conflicts (e.g. cycling and off-leash dogs) through signs or separation of uses.

Maintenance + Operations

aa) Ensure that public facilities are adequately protected from wildfires and flooding.

ab) Ensure that odour control and waste management services are in place to reduce the appeal to wildlife and minimize negative effects on users and adjacent residential areas.

ac) Manage stormwater on-site.

Study, Monitor + Adapt

ad) Implement ecological monitoring practices to ensure that human activities do not compromise the ecological functioning of surrounding **Preservation** or Conservation areas.

3.4.8 ACTIVE/WORKING LANDSCAPES | AGRICULTURE + HORTICULTURE

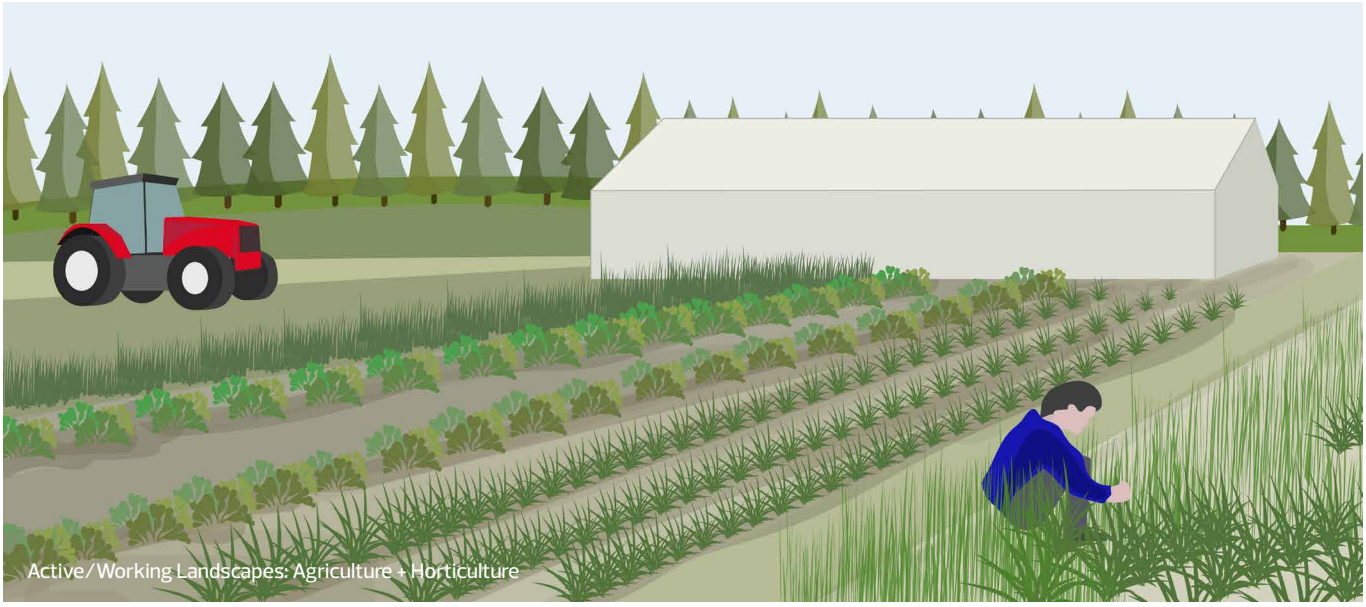
The Active/Working Landscapes: Agriculture and Horticulture sub-classification's intent is to recognize, support, and protect existing farms and agriculture uses where there is public value. This is especially relevant in the northeast parts of the System that contain multiple farms, which have been identified through statutory plans and whose long-term viability could be protected through partnerships. Local agriculture and food culture can grow through opportunities to celebrate local food — such as farm-to-table opportunities, markets, greenhouses, public programs and more. This Classification should not be applied to new agricultural or horticultural uses.

Visitor Experience

Public access may be limited due to the agricultural land use and private land use. However, public access is still encouraged in order to maintain trail and recreational connectivity throughout the System. The City will work with landowners to address public access concerns and limit impacts to agricultural operations.

Impact of the Visitor Experience

The impact of this visitor experience is the continued agricultural legacy established in the area. The City will partner with landowners to maintain and improve the ecological functioning of these sites.



Active/Working Landscapes: Agriculture + Horticulture

3.4.8.1 COMPATIBLE USES, FACILITIES + INFRASTRUCTURE

ACTIVE/WORKING LANDSCAPES: AGRICULTURE + HORTICULTURE

COMPATIBLE USES

RECOGNIZE:
- Indigenous traditional use

LEARN:
- Research and conservation related activities
- Nature study, observation and photography
- Educational and nature-based programming, including Indigenous Knowledge, ways of knowing, and storytelling
- Indoor educational programming

MOVE:
- Foot-based travel
- Cross-country skiing (track and non-track set)
- Snowshoeing
- Active transportation from neighbourhoods to regional destinations
- Trail destinations (e.g. stacked trail loops, interpretive trails)
- Cycling and mountain biking
- Horseback riding

GATHER:
- Picnicking

ACCESS:
- Vehicular access

GROW:
- Urban Gardens
- Agriculture (urban and rural)

SHOP:
- Commercial spaces

FACILITIES + INFRASTRUCTURE

APPRECIATE:
- Viewpoints and platforms (informal non-constructed and constructed)
- Bird Blind

EXPLORE:
- Signage (interpretive, wayfinding and regulatory)

MOVE:
- Paved trails
- Non-paved trails
- Stairs, decks, and boardwalks
- Trailheads

PROTECT:
- Wildlife compatible fencing, and security fencing
- Slope stabilization infrastructure

RELAX:
- Seating areas and benches
- Warming huts

GATHER:
- Picnic areas and facilities

ACCESS:
- Parking area, turn-around
- Emergency vehicle access

GROW:
- U-picks, market gardens and stalls
- Urban gardens
- Agricultural operations, and Green houses, and

SHOP:
- Restaurants and cafés (permanent and temporary)
- Ancillary retail

OTHER:
- Low-impact Development (LID)
- Lighting (trail, security, parking lot and aesthetic)
- Public art
- Drinking fountains
- Aesthetic fountains/water features
- Washrooms
- Waste and recycling receptacles

3.4.8.2 SPECIFIC AGRICULTURE + HORTICULTURE DIRECTION

Compatible Uses

a) Use the questions below to evaluate whether a use is compatible and appropriate within Active/Working Landscapes: Agriculture and Horticulture areas:

- The use supports an existing agricultural or horticulture operation
- The use offers educational or skills building opportunities for the public related to local food production

Compatible Facilities + Infrastructure

b) Evaluate all infrastructure and structures with the following criteria to determine whether it is essential and appropriate within Active/Working Landscapes: Agriculture and Horticulture areas:

- The infrastructure improves visitor safety
- The infrastructure provides an important engineering function (e.g. improves drainage, slope stability)
- The infrastructure supports the agricultural purpose of the area
- The infrastructure protects habitats, species, landscapes, vegetation, and landforms

Ecological Protection

c) Work with private landowners to restrict agricultural land cover to the current extent.

d) Encourage native species for hedgerows and windbreaks.

e) Buffer riparian systems with zones of native vegetation to filter stormwater runoff from fields, yards, and service roads.

f) Work with private landowners to enhance habitat connectivity of agricultural lands, and between agricultural areas and surrounding natural vegetation.

Restoration + Rehabilitation

g) Restore/naturalize riparian areas surrounding agricultural uses to minimize the likelihood of runoff and erosion.

Heritage + Cultural Resources

h) Facilitate the harvesting of traditional and local food.

i) Provide interpretation opportunities that share agricultural history and acknowledge this history through design, landscaping, and programming.

Recreational Uses

j) Promote passive recreational opportunities that complement the agricultural function (e.g. hiking, walking, horseback riding, picnicking).

k) Ensure that recreational access near agriculture operations is managed to promote visitor safety and awareness of private land.

l) Support active recreational opportunities related to agriculture and food production.

Access + Trails

m) Provide access via multiple active transportation modes to cafés, market and urban gardens , in collaborate with private land owners.

n) Provide accessible routes for all users from parking areas to amenities and facilities, when possible.

o) Work with land owners to accommodate trails for leisure, active transportation, or educational purposes.

Other Uses

p) Preserve existing agricultural uses within the System or restore these areas.

q) Ensure supplementary uses and activities support or enhance the current agricultural use.

r) Support the expansion of food-related commercial, education, and community-building uses such as market gardens, community kitchens, food shares, cooking/agricultural courses and camps, work-stay programs, etc.

s) Partner with local businesses and farms to improve access to the river for the public.

Education + Awareness

t) Promote the northeast river valley as a multi-functional destination, providing both nature- and agriculture-based recreation and educational opportunities.

Maintenance + Operations

u) Support partners and landowners in applying farming best management practices to reduce greenhouse gas emissions, improve moisture infiltration/nutrient cycling, and increase the climate change resilience of their lands and operations.

Monitor + Study

v) In collaboration with private landowners, implement ecological monitoring practices to ensure that human activities do not compromise the ecological functioning of surrounding **Preservation** or **Conservation** areas.

w) Support wildlife monitoring to understand the impacts of agricultural practices on wildlife.

3.4.9 ACTIVE/WORKING LANDSCAPES | URBAN SERVICES + CITY-WIDE ATTRACTIONS

The Active/Working Landscapes: Urban Services and City-wide Attractions Sub-classification's intent is to acknowledge existing uses (e.g. Edmonton Waste Centre) and allow new attractions that relate to the river valley and ravine setting. Specifically, urban services refer to existing industrial, utility, and waste management uses in the System. City-wide attractions include both indoor and outdoor recreational uses. What distinguishes the outdoor recreational uses in this Sub-classification from Active/Working Landscapes: Intensive Recreation is controlled admission, most frequently through admission fees (e.g. golf courses).

Visitor Experience

City-wide attractions are, mostly, unique river valley and ravine experiences that draw attendance from the city and region; any new development in this Sub-classification will continue that legacy. These uses are located on disturbed land and often include buildings and infrastructure that draw multiple attendees. The intent is to offer a one-of-a-kind Edmonton experience.

This Classification also includes existing working landscapes such as the Edmonton Waste Centre and E.L. Smith Water Treatment Plant, among others. These uses are working areas and provide municipal services that will continue, and may expand in the future to accommodate growth. They often have limited public access but provide a valuable function to serve a growing city.

Impact of the Visitor Experience

Like the other Sub-classifications under Active/Working Landscapes, the intent is to maintain and improve ecological functioning, when possible. All new buildings must incorporate sustainable design features that can include on-site electricity generation, green roofs, local or recycled materials, and low-impact development, among others.

3.4.9.1 COMPATIBLE USES, FACILITIES + INFRASTRUCTURE

ACTIVE/WORKING LANDSCAPES: URBAN SERVICES + CITY-WIDE ATTRACTIONS

COMPATIBLE USES

RECOGNIZE:
- Indigenous traditional use

LEARN:
- Research and conservation related activities
- Nature study, observation and photography
- Educational and nature-based programming, including Indigenous Knowledge, ways of knowing, and storytelling

MOVE:
- Foot-based travel
- Cross-country skiing (track and non-track set)
- Snowshoeing
- Active transportation from neighbourhoods to regional destinations
- Trail destinations (e.g. stacked trail loops, interpretive trails)
- Canoeing/kayaking

EXPLORE:
- Orienteering

PLAY:
- Geo-caching
- Day camps
- Unstructured play
- Swimming in constructed facilities
- Fitness courses
- Slope based activities (tobogganing and skiing / snowboarding)

GATHER:
- Picnicking
- Events and festivals

ACCESS:
- Vehicular access

ATTEND:
- City-wide attractions

OTHER:
- Commercial spaces
- Existing development (industrial and other uses)
- Urban services

FACILITIES + INFRASTRUCTURE

APPRECIATE:
- Viewpoints and platforms (informal non-constructed and constructed)
- Bird Blind

EXPLORE:
- Signage (interpretive, wayfinding and regulatory)

MOVE:
- Paved trails
- Non-paved trails
- Stairs, and decks

PROTECT:
- Wildlife compatible fencing, and security fencing
- Slope stabilization infrastructure

RELAX:
- Seating areas and benches
- Warming huts
- Campground

GATHER:
- Amphitheatres
- Bookable meeting/event space

PLAY:
- Golf courses
- Downhill ski hill

ACCESS:
- Parking area, park-road, turn-around
- Emergency vehicle access

SHOP:
- Restaurants and cafés (permanent and temporary)
- Ancillary retail

OTHER:
- Low-impact Development (LID)
- Lighting (trail, security, parking lot and aesthetic)
- Public art
- Drinking fountains
- Aesthetic fountains/water features
- Washrooms
- Waste and recycling receptacles
- Stormwater management facilities
- Water treatment plant
- Wastewater treatment plant
- Park operations yard
- Power generation

3.4.9.2 SPECIFIC URBAN SERVICES + CITY-WIDE ATTRACTION DIRECTION

Compatible Uses

a) Use the questions below to evaluate whether a new or expanded use is appropriate within Active/Working Landscapes: Urban Services and City-Wide Attractions areas:

- Does the use improve the overall sustainability and mitigate the ecological impact of existing operations?
- Does the use provide services/programs that benefit the entire city? (e.g. ecologically, culturally, historically, and/or archaeologically)
- Does the use provide urban services deemed essential?

Compatible Facilities + Infrastructure

b) Evaluate all new or expanded infrastructure and structures with the following criteria to determine whether it is essential and appropriate within Active/Working Landscapes: Urban services and city-wide attractions areas:

- The new facility provides space to support ecological, archaeological, cultural, historical, and recreational purposes related to the System
- The facility provides a municipal service (e.g. power, water, wastewater services) that is deemed essential to meet the needs of a growing population
- The location of the facility is appropriate within the River Valley and Ravine System context

c) Include spaces for community programming and meetings within facilities. Explore opportunities for kitchens in new facilities that can facilitate commercial use or community use.

d) Integrate services to increase efficiency and reduce duplication, when possible.

e) Ensure that any new facilities are located on disturbed sites and make every effort to preserve significant/sensitive ecological features and important wildlife movement corridors.

Active/Working Landscapes:
Urban Services + City-wide Attractions

Ecological Protection

f) Mitigate the impact of the facilities by preserving, enhancing, or replicating ecosystem functions, wherever possible. Examples include:

- Incorporating technologies and management practices that replicate natural stormwater management services (e.g. water filtration)
- Including native tree and vegetation plantings, green roofs, and wood-based construction (where required) to promote carbon sequestration
- Ensuring facility design or landscaping supports wildlife habitat and connectivity corridors
- Employing bioremediation to address landscape contamination
- Protecting or restoring fish overwintering/spawning habitat where it has been damaged by outfall locations
- Incorporating native non-invasive and locally-adapted species vegetation in landscaping

g) Ensure adequate fencing to prevent wildlife habituation (e.g. from unsecured waste collection areas), unmitigable human-wildlife conflicts (e.g. from campground play areas near important wildlife corridors), and hazards to wildlife (e.g. stormwater outfalls).

Restoration + Rehabilitation

h) Rehabilitate existing disturbances to restore wildlife movement patterns, when possible.

Heritage + Cultural Resources

i) When planning city-wide attractions, explore amenities that celebrate the archaeology, culture, and history of the System. This can include:

- **Art Spaces** – e.g. spaces that can include permanent and temporary displays, performance spaces, artist-in-residence programs - all with a focus on the System's natural and human history
- **Exhibition and Interpretation Spaces** – e.g. exhibition and programming spaces that facilitate multiple forms of expression, celebration of history, and programming to tell the story of the System
- **Community Gathering Spaces** – e.g. flexible spaces and meeting rooms that provide a river valley experience
- **Indigenous Ceremonial Spaces** – e.g. spaces for a variety of ceremonies (e.g. pow wows), events (e.g. Aboriginal day), activities (e.g. culture camps) and uses (e.g. story telling)
- **Education and Natural Learning Spaces** – e.g. spaces that provide exhibits, research opportunities/space, resources, educational opportunities, theatres or flexible spaces for the purpose of educating on, and protecting local ecology and natural history

j) Ensure that amenities honour the site's history through design and programming.

Recreational Uses

k) Ensure facilities are, when possible, open to Edmontonians and visitors, provide opportunities for non-structured activities, and accommodate drop-ins.

l) Ensure that new facilities are appropriate to be located within the River Valley and Ravine System, and are not better located outside of the System.

m) Create unique new facilities within the System that are known for their sustainable design.

n) Continue the use of existing facilities created for downhill skiing, camping, climbing, organized sports, swimming, and golfing.

o) Focus programming on:

- Site remediation
- Education
- Research opportunities/testing new management practices
- Unique visitor experiences
- Income generation
- Tourist attractions (e.g. eco-tourism, historical tourism, recreational tourism)
- Ecosystem functions
- Industrial operations (only existing)

p) Plan for visitors from outside of the City, and provide appropriate services and amenities.

Access + Trails

q) Maintain buffers and access management around urban service infrastructure to ensure public safety.

r) Ensure that facilities are accessible via multiple transportation modes, including public transit and active transportation, where appropriate.

s) Provide sufficient parking at city-wide attractions and employment areas. Explore opportunities to monitor use of parking lots to more accurately determine parking needs, and adjust parking provision as necessary.

t) Provide ample bicycle parking at city-wide attractions and employment areas.

u) Provide accessible transportation for all users from parking to facilities.

Other Uses

v) Support accessory commercial uses in city-wide attractions.

Education + Awareness

w) Ensure that wayfinding at city-wide attractions complements city-wide River Valley and Ravine System wayfinding.

x) Use regulatory signs to identify service areas that are inaccessible to the public for safety or security reasons.

Maintenance + Operations

y) Ensure that facilities are adequately protected from wildfires and flooding.

Study, Monitor + Adapt

z) Implement ecological monitoring practices to ensure that human activities do not compromise the ecological functioning of surrounding **Preservation** or **Conservation** areas.

aa) Develop a close-out plan to reclaim industrial or commercial uses (e.g. golf courses, water treatment facilities) before the end of their operating lives. Begin a site-specific planning process as soon as possible after the creation of close-out plans to determine the most appropriate future use and design of the site, and areas suitable for restoration.

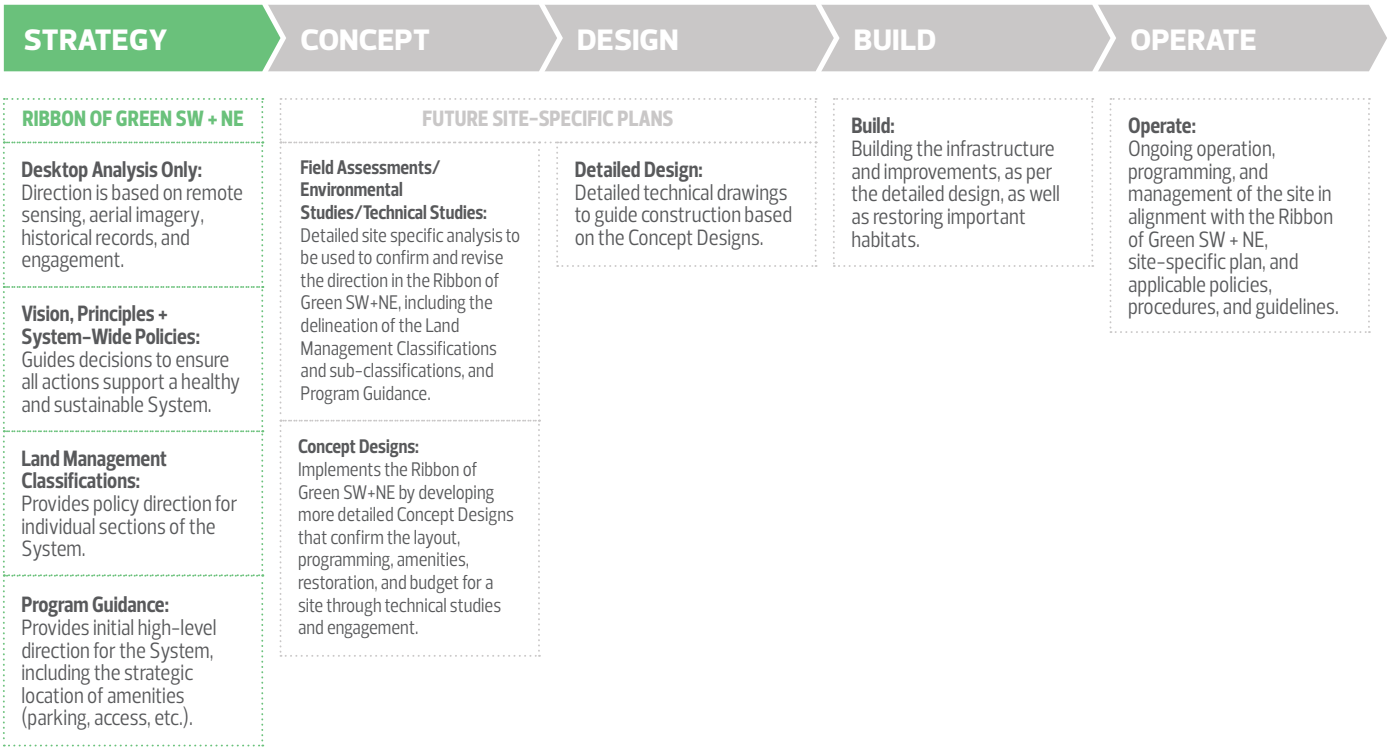
Larch Sanctuary

4 SITE DIRECTION: PROGRAM GUIDANCE

4.1 Introduction

This section provides program direction for the River Valley and Ravine System, specifically, the high-level trail network, amenity nodes, and primary trailheads. Amenity nodes and primary trailheads are sites that accommodate a higher level of use through a concentration of amenities and programming, located at appropriate intervals. They connect to each other via a high-level trail network, which in the Ribbon of Green SW + NE, includes access points and key regional connections. Together this forms a high-level recreational and active transportation network that is a starting point for further site-specific planning. This network approach focuses human activity in appropriate locations while protecting more ecologically sensitive areas.

CONTINUUM OF RIVER VALLEY AND RAVINE PLANNING



This section is separated into reaches. Each reach is small enough to provide clear spatial direction while remaining at a high-level scale to show how this spatial direction relates to the larger ecological and recreational networks. Also, these reaches demonstrate how different amenity nodes connect to access points and regional trail connections.

This Plan identifies the following reaches:

SOUTHWEST RIVER VALLEY	BLACKMUD + WHITEMUD RAVINES	NORTHEAST RIVER VALLEY
+ Cameron-Oleskiw River Valley Reach + Wedgewood Ravine Reach + Big Island + Woodbend Reach	+ The Confluence (Mactaggart / Larch Sanctuary) Reach + Whitemud Ravine Reach + Blackmud Ravine Reach	+ Marquis River Valley Reach + Horsehills Creek Ravine Reach + Edmonton East Reach

4.1.1 PROGRAM GUIDANCE COMPONENTS

The Program Guidance for each reach includes:

1. **A Vision for the Reach:**
   Each vision statement contains elements relating to the ecology, culture, and recreation opportunities of each reach. The vision statements were developed using input from the environmental, cultural, and recreation analyses in addition to public input.

2. **Program Statements for each Primary Trailhead and Amenity Node:**
   These define the desired activity and amenities for each amenity node and primary trailhead and were informed by the analyses and public feedback.

3. **Illustrated Ecological Guidance:**
   + Existing natural features (e.g. wetlands, waterbodies, floodways, wildlife corridors)
   + Existing habitat areas (e.g. core areas, corridors)
   + Potential restoration areas

4. **Illustrated Program Guidance:**
   + Primary Trailhead and Amenity Node locations
   + Design features (amenities and facilities to consider for each site)
   + Circulation plan (key access points, connections, and trail types)

Amenity Nodes

Amenity nodes are key destinations in the System that facilitate various activities, from picnicking in a natural setting to more intensive amenities, pavilions, community gathering spaces and road access.

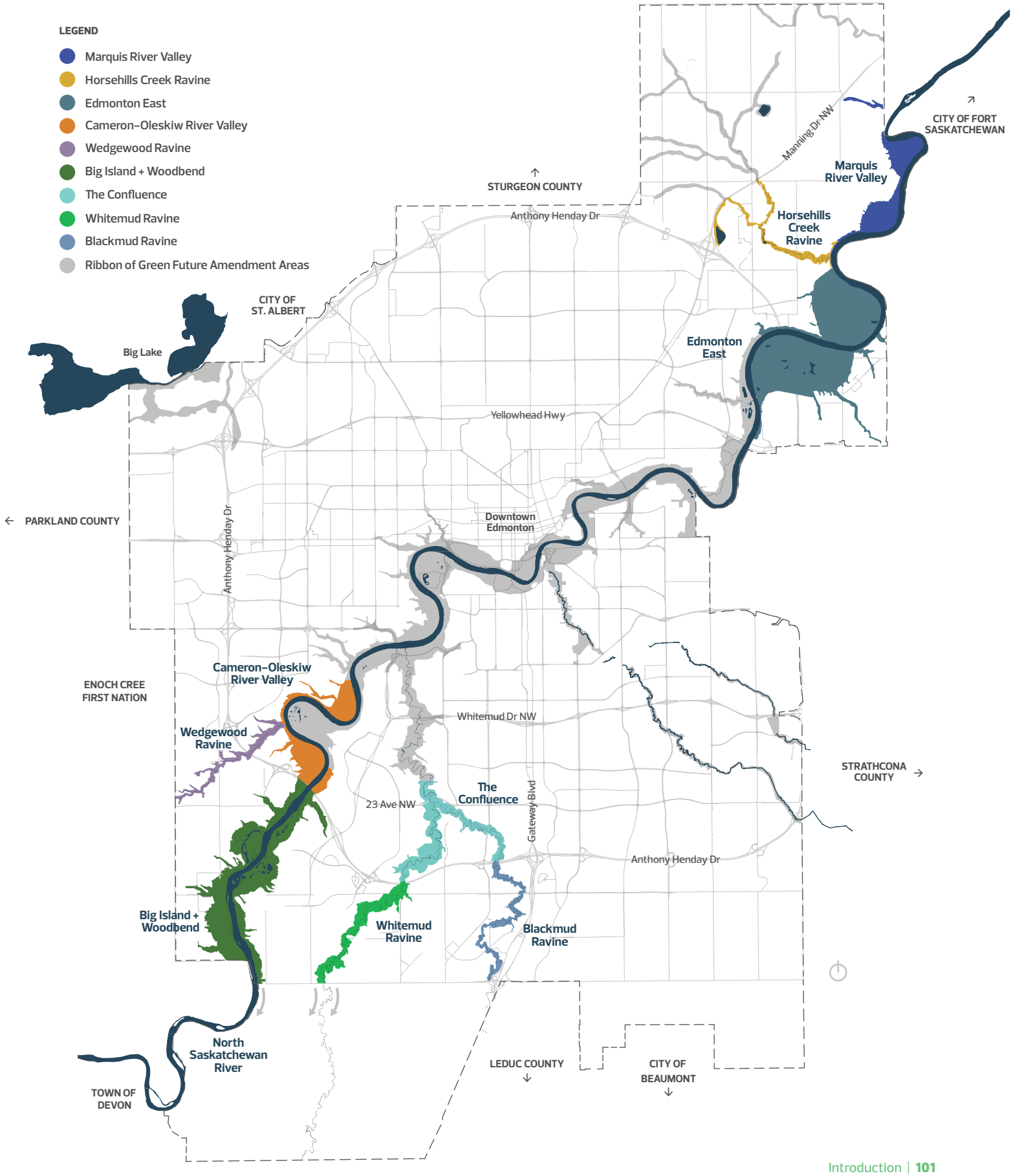
Primary Trailheads

Primary trailheads provide a city-wide starting and meeting point where amenities and facilities can be located, acting as staging areas for trail and river recreation, and supporting entry points into the broader trail network.

Local Trailheads

Local trailheads provide regular access from neighbouring communities and will be confirmed through later site-specific planning phases.

RIBBON OF GREEN SW + NE REACHES



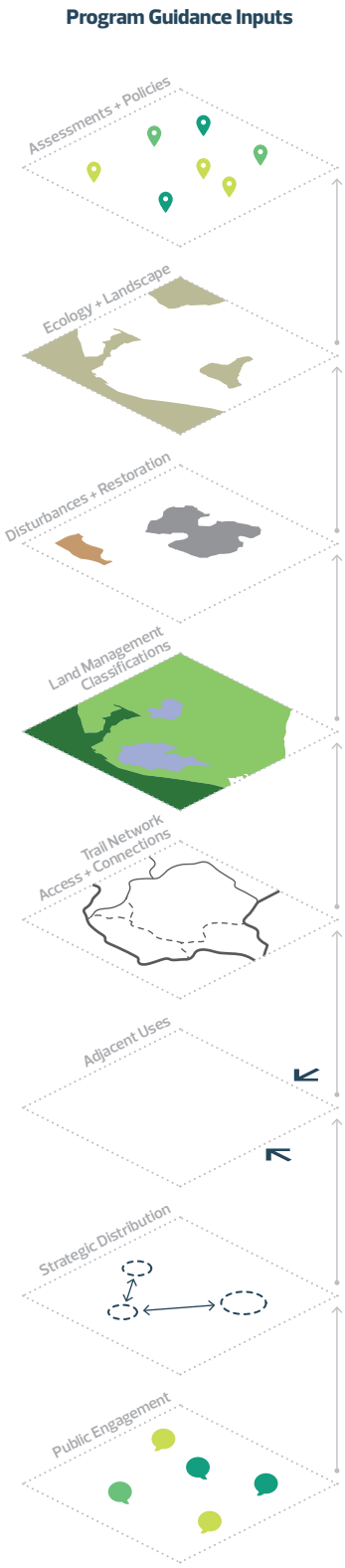
4.1.2 PROGRAM GUIDANCE METHODOLOGY

All analyses conducted during the *Ribbon of Green SW + NE* process have been completed at a desktop level using data available at the time. For more details on the analysis and data limitations that informed this Plan, refer to the *Ribbon of Green SW + NE Technical Report*.

LOCATING AMENITY NODES AND PRIMARY TRAILHEADS

The following informed the location of the amenity nodes and trailheads:

- **Recreation Analysis:** Highlighted potential locations to consider for day use, active recreation opportunities, and support amenities
- **Ecological Analysis:** Defined locations with moderate or low environmental sensitivity that may be appropriate for recreation. Some areas with higher ecological value were included to provide opportunities for the public to learn about and appreciate the natural environment.
- **Historic Analysis:** Identified locations with historical recreational use that can be re-introduced (e.g. the picnicking area on Big Island) as well as locations with sensitive archaeology to avoid
- **Public Engagement:** Noted locations to focus recreational activities and locations to avoid due to ecological/cultural considerations
- **Existing or Past Development and/or Disturbance:** Presented opportunities to locate recreational facilities in areas that were already disturbed as well as locations for restoration
- **Existing Road and/or Pavel Trail Access:** Provided opportunities to connect with existing accesses



DEFINING THE HIGH-LEVEL TRAIL NETWORK

(Major access points and key regional connections only)

The following informed the high-level trail network presented in this Plan:

- **Existing Network:** Built off of existing trails, access points and trail-use data, and also evaluated planned access points and trails
- **Ecological and Landscape Characteristics:** Used topography, soil type, vegetation, waterbodies, and geological features to inform the access points and regional connections to ensure they avoid sensitive areas
- **Adjacent Uses:** identified access points and connections to top-of-bank parks, active uses, and neighbourhoods
- **Public Engagement:** Included connections that the public identified throughout the engagement process
- **Network Considerations:** Focused on providing a continuous trail along the river valley bottom and opportunities for accessible connections to the top-of-bank and parking areas (this Plan is not intended to provide a comprehensive trail plan, that will be done through further site-specific planning)
- **Trail Types:** Recommended trail types based on the importance of the connection as an accessible route into the System as well as the ecological and geological conditions

LAYING OUT PROGRAM DIRECTION

The following informed the Program Guidance layout:

- **Land Management Classifications:** Defined appropriate uses, facilities, and infrastructure for each area within the System
- **City Policy:** Identified opportunities to align with other City policies and initiatives as well as provide a guiding framework to define management and use practices within the System
- **Site Understanding:** Accomplished through site analysis and research (including the analyses discussed above)
- **Amenity Node, Primary Trailhead and High-level Trail Network:** Identified the major locations and routes for recreational activity to start shaping the program guidance
- **Public Engagement:** Provided ideas for future use, protection, and restoration
- **Strategic Locations:** Distributed facilities and amenities throughout the system that require equitable and appropriate distribution (e.g. boat launches, bridge crossings, parking, washrooms)
- **Restoration Areas:** Located restoration areas in disturbed areas within Preservation and Conservation areas as well as locations in Active/Working Landscapes to help shape and concentrate development in appropriate locations while improving ecological health

Breathe Open Space Classification System

All open space will be classified using the open space classification system in Breathe: Edmonton's Green Network Strategy at the time of land assembly, and confirmed through site-specific planning. Regardless of the classification, the direction within the Ribbon of Green SW + NE will still apply. The following are the applicable classifications that may be used:

Metropolitan Parks are large, feature parks intended to provide value to residents and visitors throughout Edmonton and the greater Metro region. Metropolitan Parks may have a variety of functions and uses, but usually contain features and amenities that are not available elsewhere in the City.

District Parks are designed to meet the needs of multiple communities. They may be more specialized than community parks, but also may provide multi-functional amenities. Some district parks contain unique attractions.

Ecological Parks are managed for the primary purpose of preserving natural processes, species and habitat elements. Human activities are primarily passive (e.g. nature interpretation) with the exception of trails for walking, bicycling, and running where those uses do not compromise the primary purpose of protection.

Activity Nodes vs. Amenity Nodes

The River Valley Activity Node is a site-specific zone in the Edmonton Zoning Bylaw that allows uses not found in the zones most commonly used in the River Valley and Ravine System. Although some Amenity Nodes may be zoned River Valley Activity Node, not all will be. The zoning will be determined through site-specific planning exercises.

ECOLOGICAL AND PROGRAM GUIDANCE MAP SYMBOLOGY

These symbols are used on the following ecological and program guidance maps:

Natural Waterbodies: Naturally formed bodies of open water which serve as important habitat for local and migrant species.

Non-Natural Waterbodies: Includes constructed waterbodies used to store stormwater runoff, as well as waterbodies that were created as a result of resource extraction.

Wetlands (Class I–VIII and Not Classified):
Class I: Ephemeral wetlands that typically have free surface water for only a short period of time after snowmelt or storm events in early spring.
Class II: Temporary wetlands that are periodically covered by standing or slow moving water.
Class III: Seasonal ponds and lakes that are characterized by shallow marsh vegetation, which generally occurs in the deepest zone (usually dry by midsummer).
Class IV: Semi-permanent ponds and lakes that frequently maintain surface water throughout the growing season (e.g. from May to September).
Class V: Permanent ponds and lakes that have permanent open water in central zones, and is generally devoid of vegetation.

Stream/Wetland Buffer: A buffer around a stream or wetland, intended to reduce impacts from disturbances in the surrounding landscape.

Floodway/Flood Fringe:
Floodway: The portion of the flood hazard area where flows are deepest, fastest, and most destructive.
Flood Fringe: The portion of the flood hazard area outside of the floodway.

Streams (Strahler 3–6): Streams are classified using the Strahler Stream Order. When two first-order streams come together, they form a second-order stream. When two second-order streams come together, they form a third-order stream. Streams of lower order joining a higher order stream do not change the order of the higher stream.

Core (Natural Cover): Habitat patches of suitable size and quality that support entire populations of animals, plants, and associated ecosystem functions.

Corridor (Natural Cover): Natural linear vegetated patches that enhance movement among other habitat patches such as core areas or natural stepping stones.

Corridor (Treed Shelterbelt): Semi-natural linear vegetated patches that enhance movement among other habitat patches such as core areas or natural stepping stones.

Habitat (Natural Cover): Natural vegetation that provides important environmental conditions in which plants and wildlife may find the necessary resources with which to grow, survive, and reproduce.

Habitat (Non-Maintained Grass): Non-natural vegetation that provides important environmental conditions in which plants and wildlife may find the necessary resources with which to grow, survive and reproduce.

Stepping Stone (Natural Cover): Natural non-linear vegetated patches that provide many resources for species but may not be of sufficient size or quality to provide for all habitat requirements or ecosystem functions.

Wildlife Corridor: Areas where coyotes and chickadees are likely to use while moving across the landscape based on computer models.

Wildlife Pinchpoints: Areas dominated by non-suitable landcover, causing the remnants of suitable cover to take on greater importance for the maintenance of wildlife connectivity through the landscape.

Wildlife Passages (Existing): Existing structures that facilitate wildlife movement between significant natural areas of known present and future ecological value. These passages may include culverts, bridges, and overpasses.

Wildlife Passages (Proposed): Potential structures that facilitate wildlife movement between significant natural areas of known present and future ecological value. These passages may include culverts, bridges, and overpasses.

Corridor Restoration: Restoration of significant corridor areas of known present and future ecological value.

Potential Restoration Area: Potential restoration of significant natural areas of known present and future ecological value.

Reach Boundary: Study area boundary defined by the City, based on physical site characteristics and high-level planning strategies.

Arterial and Collector Roads:
Arterial: Roads designed to carry larger volumes of traffic between areas with relatively few and controlled access points.
Collector: Roads that provide neighbourhood travel between local and arterial streets with direct access to adjacent land.

Existing Trail: An existing paved trail, either shared-use or separated, to facilitate accessible active transportation and regional connections for people or all ages and abilities.

Existing Parks: Existing City-owned parks and open spaces.

Future Parks: Future City-owned parks and open spaces.

Waterbodies: Generalized groupings of natural waterbodies, non-natural waterbodies, wetlands (classes I-VIII and not classified) and streams.

Proposed Paved Variable Width Trail: Paved trails, either shared-use or separated, that support active transportation and regional connections through natural environments with maximum accessibility for people of all abilities.

Proposed Non-Paved Variable Width Trail: Non-paved trails, with varying widths, that can accommodate a range of activities, including walking, cycling, and track-set cross-country skiing with limited to moderate accessibility. Trail width and surfacing will be determined through site-specific planning.

Existing NSP/ASP/Other Connections: Existing pedestrian connections that have been identified in Neighbourhood and Area Structure Plans.

Proposed NSP/ASP/Other Connections: Potential pedestrian connections that have been identified in Neighbourhood and Area Structure Plans.

Proposed Recreational Trail Connections: Potential trail connections providing access to adjacent areas from trails and amenity nodes.

Existing Road: An existing vehicular road.

Planned Roads: A planned, but unbuilt vehicular road.

Proposed Access Roads: A proposed vehicular road.

Existing LRT Alignment: Existing Light Rail route alignment for the Edmonton Transit System.

Future LRT Alignment: A proposed Light Rail route alignment for the Edmonton Transit System.

Boat Dock and Hand Launch: Infrastructure that allows people to walk their canoe, kayak, or other water craft to a dock at the water's edge without the aid of a vehicle and/or trailer.

Boat Dock and Launch (Vehicle): Infrastructure that allows people to place their canoe, kayak, or other water craft into the water with the aid of a vehicle and/or trailer.

Dock: Infrastructure extending alongshore or out from the shore into a body of water, enabling people to access the water.

Pedestrian Bridge Crossing: A pedestrian crossing structure that spans across rivers, creeks, or ravines.

Parking (City-wide Catchment): Larger surface parking lots located at primary trailheads or amenity nodes that serves people from across the city.

Parking (Local Catchment): Small surface parking lots that serves people from surrounding neighbourhoods.

On-Street Parking: Vehicle parking that is accessed on the street, anywhere along the curb where permitted.

Primary Trail Head: Trailhead locations offering amenities such as benches, wayfinding signage, parking, potential washroom facilities, and shelters.

Local Trail Head: Trailhead locations offering amenities such as wayfinding signage, seating, bicycle parking, and parking in some cases.

Washroom Facility: Publicly accessible washrooms that are operationally seasonally, or year-round.

Areas Proposed for Programming: Identified locations that can host a variety of amenities and facilities including parking lots, buildings, washroom facilities, picnic shelters, trail heads, signage and staging areas.

View Point: A location that offers scenic opportunities for people, requiring minimal or no infrastructure.

City Boundary: The City of Edmonton's corporate boundary line.

4.2 **Cameron–Oleskiw River Valley Reach**

Vision Statement:

Cameron–Oleskiw River Valley is an essential wildlife corridor through the restoration of native ecological communities along the river edge. Trailheads will connect residents to natural, trail-based recreation opportunities while interpretative elements, enhanced viewpoints, and places to gather will offer opportunities to teach and learn about the history of the River Valley.

Ecology

- Cameron–Oleskiw River Valley contains unique and rare vegetation, important wildlife movement areas, and areas of environmental sensitivity.
- It will be essential to maintain the riparian buffer and improve wildlife network connections through restoration.
- Public input has identified this reach as an important natural place for native plants and wildlife movement.

Culture

- The 1908 surrender of the Enoch Cree Nation is part of the Cameron–Oleskiw River Valley Reach. The area is valuable to Indigenous peoples, and has a high interpretive potential due to the socio-political and cultural significance of the location.
- The Edmonton Golf and Country Club is the third oldest golf course in Canada, and relates to the recreational history in the province.
- The Holy Redeemer College and cemetery, which was a minor seminary for Catholic students and a training location for a federal penitentiary, is located in this reach.
- Public input has identified the importance of neighbourhood connections into this area, as well as unique historical features, such as old farm equipment and fossils.

Recreation

- The public has expressed the desire for improved trail connections, nature-watching, on-leash dog walking, and viewpoints.
- Existing trails are available for walking, running, cycling and being immersed in nature. There is potential to improve trail connections and provide opportunities for food vendor services, outdoor recreation, stargazing, and Indigenous and traditional use.

Important Adjacent Plans

- Riverbend ASP
- Henderson Estates NSP
- Cameron Heights NASP
- West Jasper Place South ASP

4.2.1 OLESKIW RIVER VALLEY PARK AMENITY NODE

Direction will be provided by the Oleskiw River Valley Park Master Plan.

4.2.2 E.L. SMITH WATER TREATMENT PLANT PRIMARY TRAILHEAD

Program Statement

The trailhead takes advantage of the proposed connection to Terwillegar Park. Visitors learn about water treatment, using the proposed trail network to circle the land near the river. Partnership opportunities with EPCOR will be explored to strengthen educational components of the site. Vegetation is restored along the river's edge to enhance wildlife connectivity through the site.

Ecological Opportunities *(see Ecological Guidance map)*

- Wildlife connectivity through the river valley should be maintained
- Riparian buffer along the North Saskatchewan River should be maintained and restored where feasible

Program Opportunities *(see Program Guidance map)*

- The data-derived land management classification for a portion of the E.L. Smith Water Treatment Plant site is Preservation. The Plan identifies a portion of the site as Active/ Working Landscapes in order to provide existing and expanded water treatment services. If the site is no longer required for that use, the classification is to be re-evaluated.
- Primary trailhead
- Parking lot adjacent to trailhead
- Explore opportunities with partners to provide additional parking and a washroom facility

Circulation *(see Program Guidance map)*

- Proposed bridge crossing to Terwillegar Park
- Proposed trail connection to Cameron Heights
- Proposed trail connection – Paved north-south trail
- Proposed trail connection – Non-paved trail around the site

Sources:

1. Klickitat Trail Trailhead, Washington

klickitat-trail.org

4.2.3 HENDERSON ESTATES + HADDOW PRIMARY TRAILHEAD

Program Statement

This trailhead is a regional multi-use trail connection that links to broader recreational and active transportation networks. It provides opportunities for historic interpretation, environmental education and ecological restoration where appropriate. This trailhead could be enhanced with interpretive elements and programming. The City may want to explore partnerships with community groups, Indigenous communities, or organizations focused on healing and nature restoration.

Ecological Opportunities *(see Ecological Guidance map)*

- Trail development on the east bank should ensure that wildlife connectivity is maintained.
- Natural cover should be maintained
- Riparian areas should be protected and restored

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- On-street parking (existing)

Circulation *(see Program Guidance map)*

- Multi-use paved trail connection to utility corridor (existing)

Sources:

1. Interpretive Sign at Millhaven Creek, Kingston, Ontario

southfrontenac.net/en/things-to-do/trails.asp?_mid_=30003

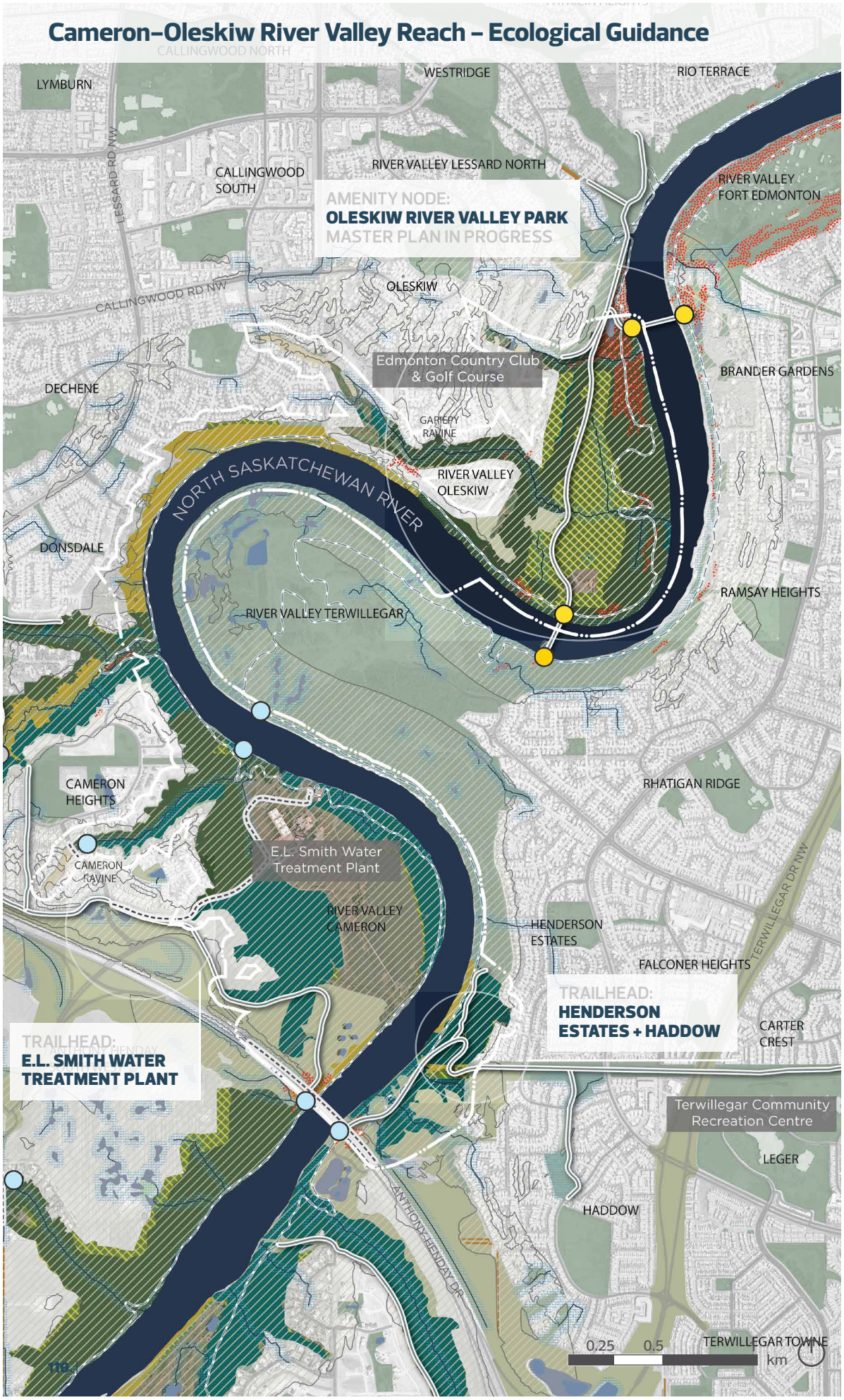
2. Trail Head at The Bluff forest pathway, Belgium, OMGEVING

landezine.com/index.php/2015/12/the-bluff-by-omgeving

3. Composting Washroom, Camey Locgan Burke Architects, Laurance S. Rockefeller Preserve, Grand Teton National Park, Wyoming

clivusmultrum.com/parks-recreation-toilet-systems-lsr.php

Cameron–Oleskiw River Valley Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Parks
- Future Parks
- Existing Roads

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Floodway / Flood Fringe*
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

ECOLOGICAL DIRECTION

- Potential Restoration Areas

*For illustrative purposes only. To be confirmed through later site-specific planning.

Cameron–Oleskiw River Valley Reach – Program Guidance

LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Existing Road
- Proposed Paved Variable Width Trail
- Proposed Non-Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections

PROGRAM DIRECTION

- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- Primary Trail Head
- Washroom Facility
- Proposed
- Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.3 **Wedgewood Ravine Reach**

Vision Statement:

Wedgewood Ravine is a protected ravine system providing a top-of-bank active transportation link to adjacent communities. Existing ecosystems, wildlife corridors, and geological features will be preserved, contributing to a unique nature experience.

Ecology

- Wedgewood Ravine is a narrow hydrological corridor, transporting water from the outer boundary of the city to the North Saskatchewan River.
- There is potential for restoration in disturbed areas along the ravine edge.
- This ravine provides an essential connection between the North Saskatchewan River and intact upland habitats to the west and north.

Culture

- The Wallbridge and Imrie House (or "Six Acres") was completed in 1957 and is located in Wedgewood Ravine. It was Canada's first all-female architectural firm.

Recreation

- Recreation should mainly occur on trails along the top-of-bank, with key bridge connections in less sensitive areas.
- There is potential to partner with Enoch Cree Nation to create a trail connection between the First Nation and this reach.

Important Adjacent Plans

- Cameron Heights NASP
- Wedgewood Heights NASP
- West Jasper Place South ASP
- The Uplands NSP
- Edgemont NASP

4.3.1 WEDGEWOOD RAVINE PRIMARY TRAILHEAD

Program Statement

Wedgewood Ravine is an active transportation corridor adjacent to a protected ravine system. A Primary Trailhead in Wedgewood Heights and the proposed trail network provide key connections to surrounding parkland and communities.

Ecological Opportunities *(see Ecological Guidance map)*

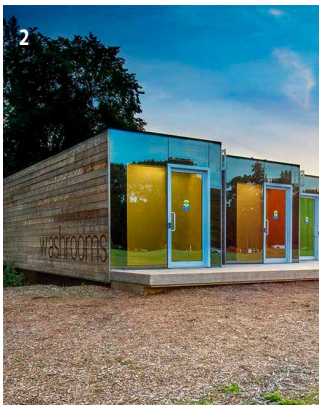
- Preserve existing vegetation in the ravine
- Restore areas of non-native vegetation along the ravine edge
- Strengthen ecological connections at the river edge and to adjacent green spaces to the west
- Limit trail development in the ravine and monitor informal trail use
- Maintain buffer surrounding streams and wetlands
- Minimize impact on wildlife movement through the area
- Improve wildlife connectivity through wildlife passages

Program Opportunities *(see Program Guidance map)*

- Primary trailhead with wayfinding signage and on-street parking in Wedgewood Heights

Circulation *(see Program Guidance map)*

- Proposed trail connection – Paved top-of-bank trail
- Proposed trail connection – Non-paved ravine trails
- Explore non-paved trail connections along the river where feasible



Sources:

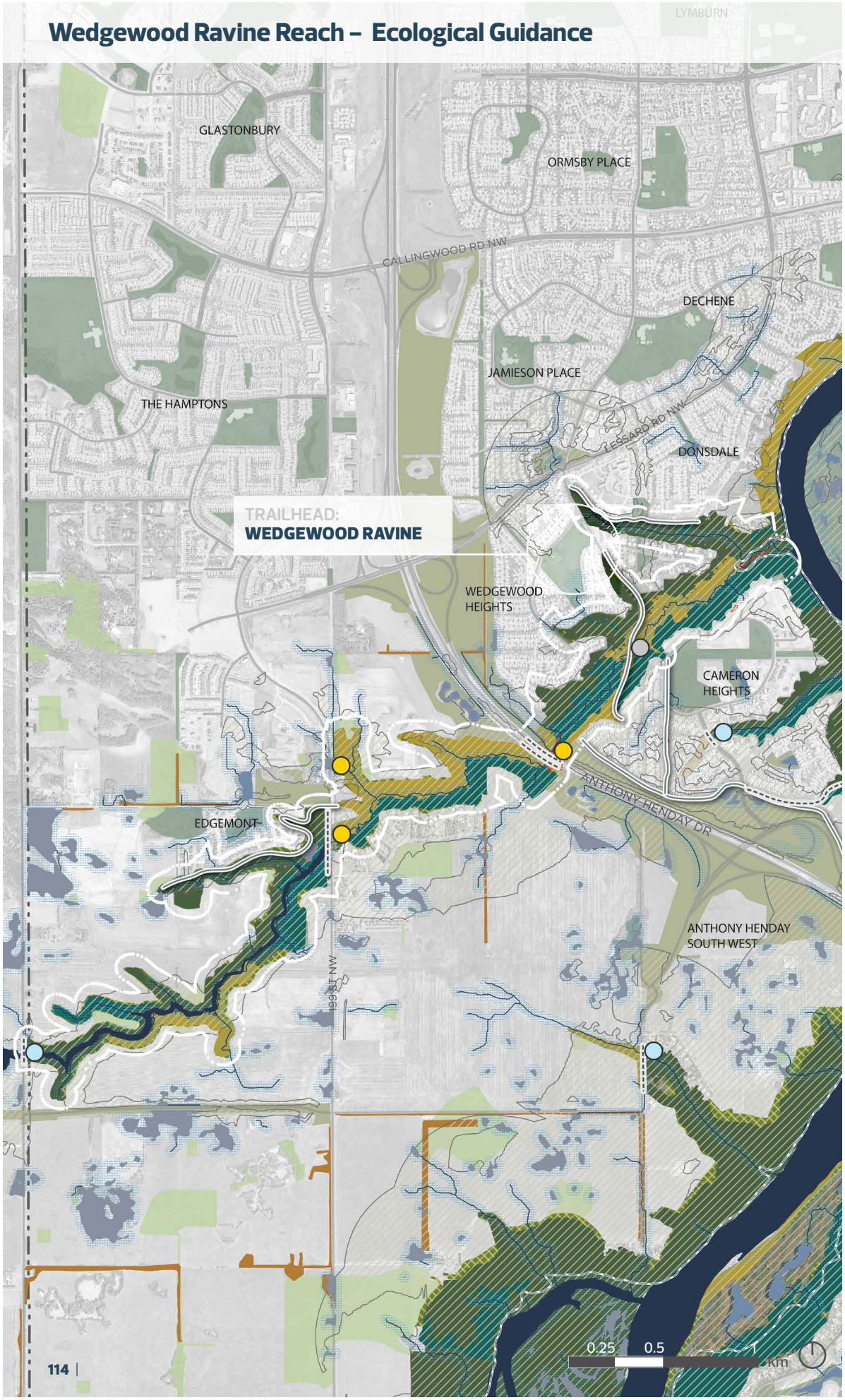
1. Wald.Berlin.Klima trailhead sign and seating, hochC Landscape Architects

landezine.com/index.php/2017/07/wald-berlin-klima-exhibition-in-the-forest-by-hochc-landscape-architects/01-wbk_foto_gewerkdesign

2. Assiniboine Park Washrooms, Winnipeg, Peter Sampson Architecture Studio Inc.

wolfromeng.com/Projects/Play-Work/Assiniboine-Park-Washrooms.html

Wedgewood Ravine Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Road
- Existing Parks
- Future Parks

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Floodway / Flood Fringe*
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

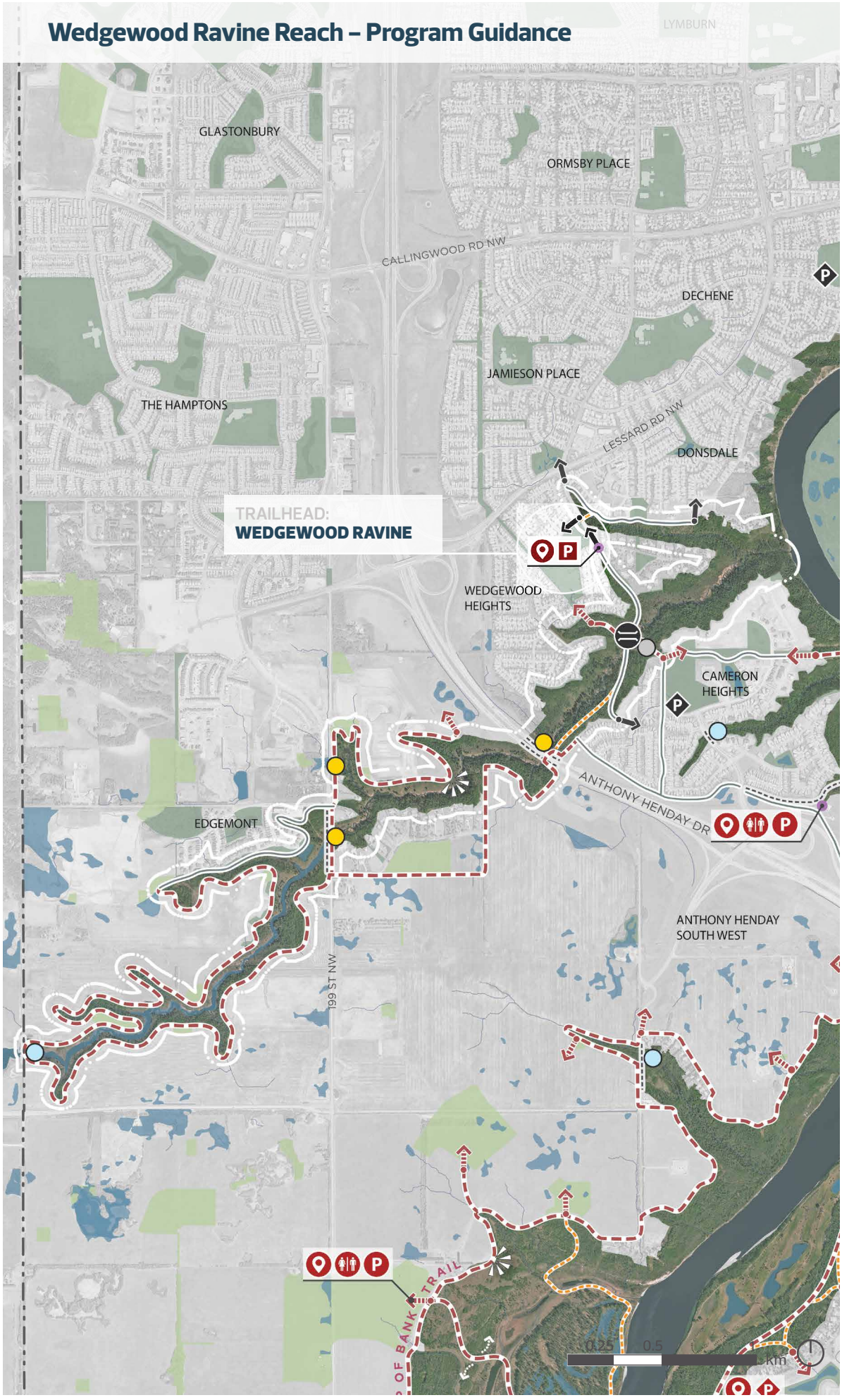
- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Constructed)
- Wildlife Passages (Potential)
- Corridor Restoration

ECOLOGICAL DIRECTION

- Potential Restoration Areas
- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

Wedgewood Ravine Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Existing Road
- Proposed Paved Variable Width Trail
- Proposed Non-Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Recreational Trail Opportunity

PROGRAM DIRECTION

- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- On-Street Parking
- Primary Trail Head
- Washroom Facility
- Proposed
- Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration
- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.4 **Big Island + Woodbend Reach**

Vision Statement:

As a connected and accessible green network, Big Island + Woodbend will remain an essential link to regional ecological systems, including the Devon Dune Field. It will incorporate nature-focused recreation and river access for Edmonton's growing population. The integrity of this ecologically and culturally significant landscape will be protected and restored through design with nature, creating a sense of place and opportunities to celebrate the river valley.

Ecology

- There is rare vegetation in locations along the river valley slopes adjacent to Woodbend, Keswick, and Windermere neighbourhoods.
- The reach contains important wildlife movement corridors, with opportunities for improved connections through the existing golf courses.
- Permanent wetlands and areas of environmental sensitivity are also located in this reach.

Culture

- Public input indicated a desire to commemorate the historical use of this reach for recreation, including the 19th century picnic and boating area in Big Island.
- Big Island is also an important site for Indigenous people in Edmonton.
- Other significant historical uses include gold dredging and resource extraction.
- This reach was previously adjacent to Enoch Cree Nation.

Recreation

- Through engagement activities, the public has indicated that this reach should be accessible for people of all abilities.
- Desired activities include nature watching, boating, and small community gatherings

Important Adjacent Plans

- River's Edge NSP
- Riverview ASP
- Keswick NSP
- Windermere NSP
- Windermere ASP

4.4.1 RIVERS EDGE + WINDERMERE AMENITY NODE

Program Statement

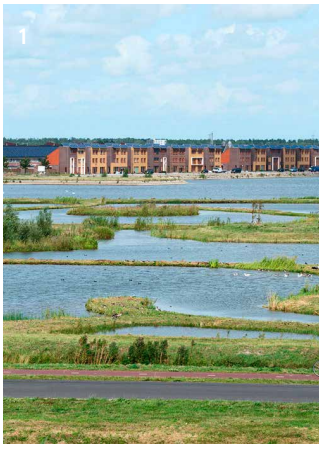
Currently two private golf courses, Rivers Edge + Windermere present opportunities to work with landowners to improve the short-term ecological functioning and connectivity of the sites. A new bridge connection to Big Island is proposed, along with a potential staging area for trail-based activities near the river crossing. There are opportunities to improve trail connections and ecological functioning with landowners.

Ecological Opportunities *(see Ecological Guidance map)*

- Potential restoration of sites to improve wildlife connectivity, biodiversity, and habitat

Circulation *(see Program Guidance map)*

- Pedestrian bridge crossing from Henderson Estates/Haddow area to the E.L. Smith area under the Anthony Henday (existing)
- Pedestrian bridge crossing from Windermere Blvd. to Big Island
- Pedestrian bridge crossing from Ellerslie Road to north of the Woodbend Natural Area
- Proposed trail connection – Paved top-of-bank trail
- Proposed trail connection – Non-paved trail in ravine
- Trail connections from a paved north-south trail that connect to the parks system within the Windermere neighbourhood



Sources:

1. Park of Luna stormwater ponds, The Netherlands, HOSPER Landscape Architecture and Urban Design

landezine.com/index.php/2011/06/park-of-luna-by-hosper-and-drftwd-office-associates

4.4.2 WOODBEND NATURAL AREA AMENITY NODE

Program Statement

The western side of the node is a protected natural area with limited human access, focused environmental remediation and ongoing ecological monitoring of the sensitive wetland systems.

The eastern side becomes an ecologically dynamic park that celebrates natural processes and restoration opportunities while accommodating cultural gatherings, recreational uses, and small events that are sensitive to the natural surroundings and its location within the floodway. Low-impact trails and boardwalks welcome visitors into restored natural areas. Small clearings become resting places for quiet contemplation or gathering spaces for small groups. Access to the river is formalized to accommodate a hand launch. A proposed park pavilion acts as a meeting location, education facility, and washroom.

Ecological Opportunities *(see Ecological Guidance map)*

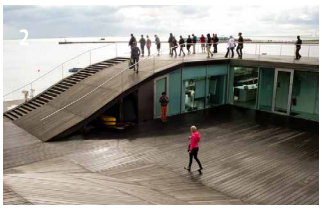
- Unique and rare vegetation along slopes should be protected
- Key wildlife connections from the river valley leading west to the Devon Dunes region should be maintained
- Wetlands should be protected and hydrological connectivity maintained
- Complete hydrological studies as part of site-specific planning
- Trail development should minimize fragmentation and disturbance to core habitats
- This node is located within the North Saskatchewan River's flood fringe

Program Opportunities *(see Program Guidance map)*

- Parking that minimizes its ecological impact, and could include on-street parking, and/or a parking lot adjacent to the park pavilion
- Washroom facility
- Accessible dock and hand launch
- Programmed use area – Park Pavilion
  - *The programmed area could provide functions such as a space for meetings, education, partner activities, and day use facilities. Some small gatherings, such as performances or cultural events, could take place here as well.*

Circulation *(see Program Guidance map)*

- Pedestrian bridge crossing from Ellerslie Road to north of the Woodbend Natural Area
- Proposed vehicle access to programmed use area and boat dock and hand launch
- Proposed trail connection – Paved trails along top-of-bank, along river edge, and east-west connection
- Interpretive trail connections into Woodbend Natural Area (white arrows)
  - *Trails could connect to boardwalks in the preserved and restored wetland areas*
- Trail connections to create a trail loop to Big Island, Natural Area NW 384, and through the adjacent neighbourhoods



Sources:

1. Existing wetlands in Woodbend Natural Area

2. Maritime Youth House boating pavilion, Copenhagen, Julien De Smedt, Bjarke Ingels

flickr.com/photos/evandagan/7716223886

3. Winnipeg Folk Fest stage, Birds Hill Provincial Park - example of low-impact event stage

mustdocanada.com/finding-true-music-at-the-winnipeg-folk-fest/winnipegfolkfeststage

4. Low-impact accessible canoe/kayak dock, Camden Maine

https://www.penbaypilot.com/sites/default/files/2017/08/field/gallery_large/%28H%290460_RampPic.jpg

4.4.3 BIG ISLAND AMENITY NODE

Program Statement

The integration of trails and recreational amenities into one of the River Valley's most ecologically dynamic parks creates an experience unique within Edmonton. Critical trail connections and park use are balanced with the protection and restoration of sensitive natural areas for wildlife, including migratory birds and waterfowl.

Amenities and trails around the perimeter of the park help to connect visitors to the natural setting, maintaining a separation between park users and sensitive areas while providing opportunities for wildlife viewing. Amenities and infrastructure are designed and built to withstand the frequent flooding in the area. The park supports small gatherings and individual nature appreciation. As a natural area for all Edmontonians, the park includes barrier-free access, picnic amenities and an accessible hand launch. The adjacent District Park will complement the programming in Big Island and support the amenity node with access and parking.

Ecological Opportunities *(see Ecological Guidance map)*

- Wetland complex should be restored
- Trail development should minimize disturbance to core habitats
- Environmental sensitivity areas should be minimally disturbed
- Natural cover along slopes should be restored
- This node is located within the North Saskatchewan River's flood fringe

Program Opportunities *(see Program Guidance map)*

- Primary trailhead west of Big Island with washroom facility and parking
- Small parking lot south of Big Island for drop off and people with limited mobility
- Accessible boat dock and hand launch
- Day use area
  - *This area will provide users the unique opportunity to picnic within a restored wetland complex. Trail and boardwalk connections will allow users to connect to the regional trail system and meander through the landscape. Creative, sensitive and low-impact site furniture and trail design will allow people to gather while minimizing their impact on the surrounding environment.*

Circulation *(see Program Guidance map)*

- Pedestrian bridge crossing at Big Island to Windermere Boulevard
- Trail connection north of Big Island to the urban park at the top-of-bank and the pedestrian bridge
- Road access to the site (south side)
- Proposed trail connection – Paved top-of-bank and east-west trails
- Proposed trail connection – Non-paved north-south trail
- Interpretive trail and boardwalk connections

Sources:

1. Lizard Log Picnic Shelters, Wetherill Park, New South Wales, CHROFI

http://www.chrofi.com/project/lizard-log-amenities-events-pavilion

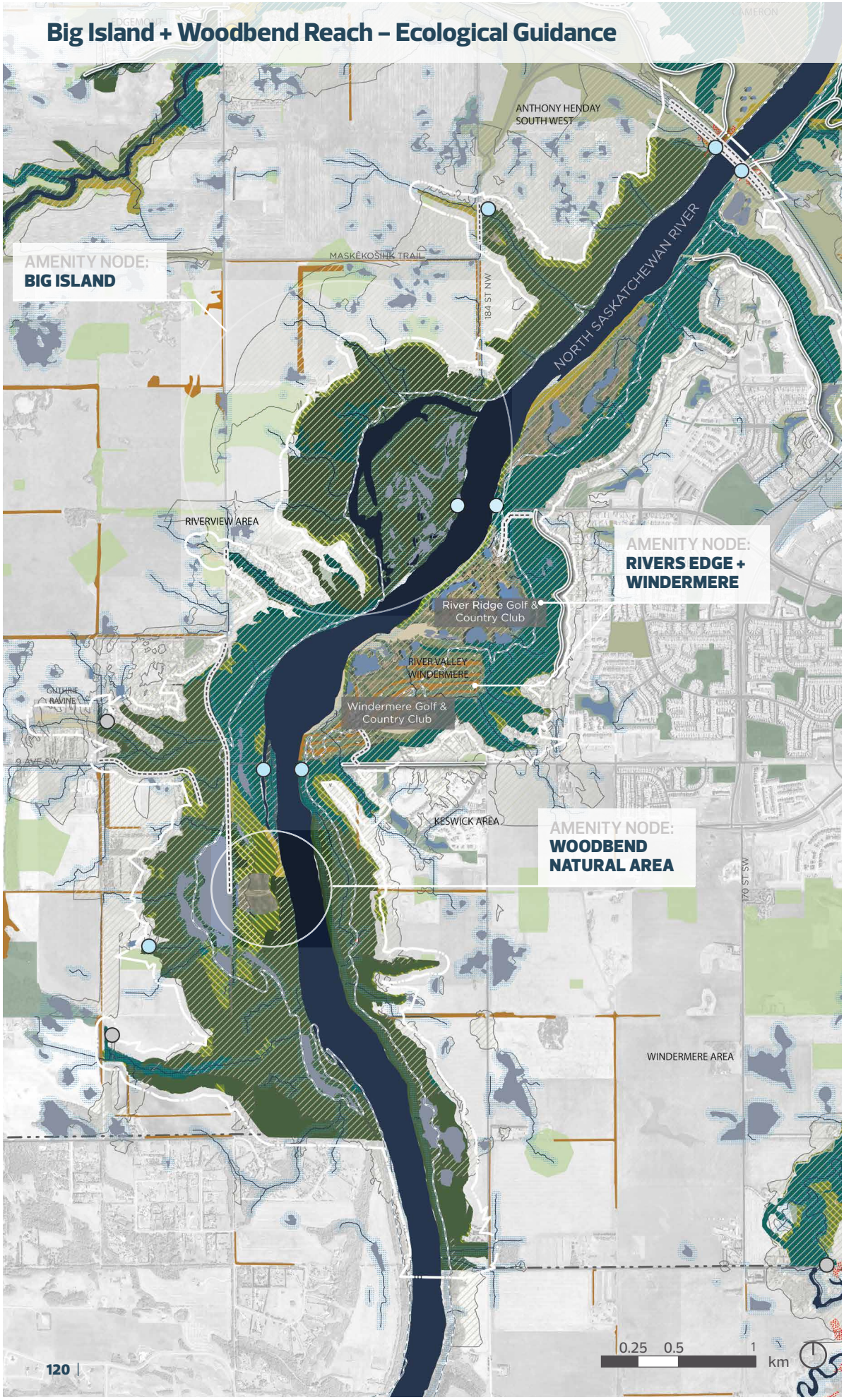
2. Governors Island Hammock Grove, West 8, New York

https://stage.govisland.com/things-to-do/activities/hammocks

3. Audubon Wetlands boardwalk, Kentucky

friendsofaudubon.org/wetlands

Big Island + Woodbend Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Road
- Existing Parks
- Future Parks

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Floodway / Flood Fringe*
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

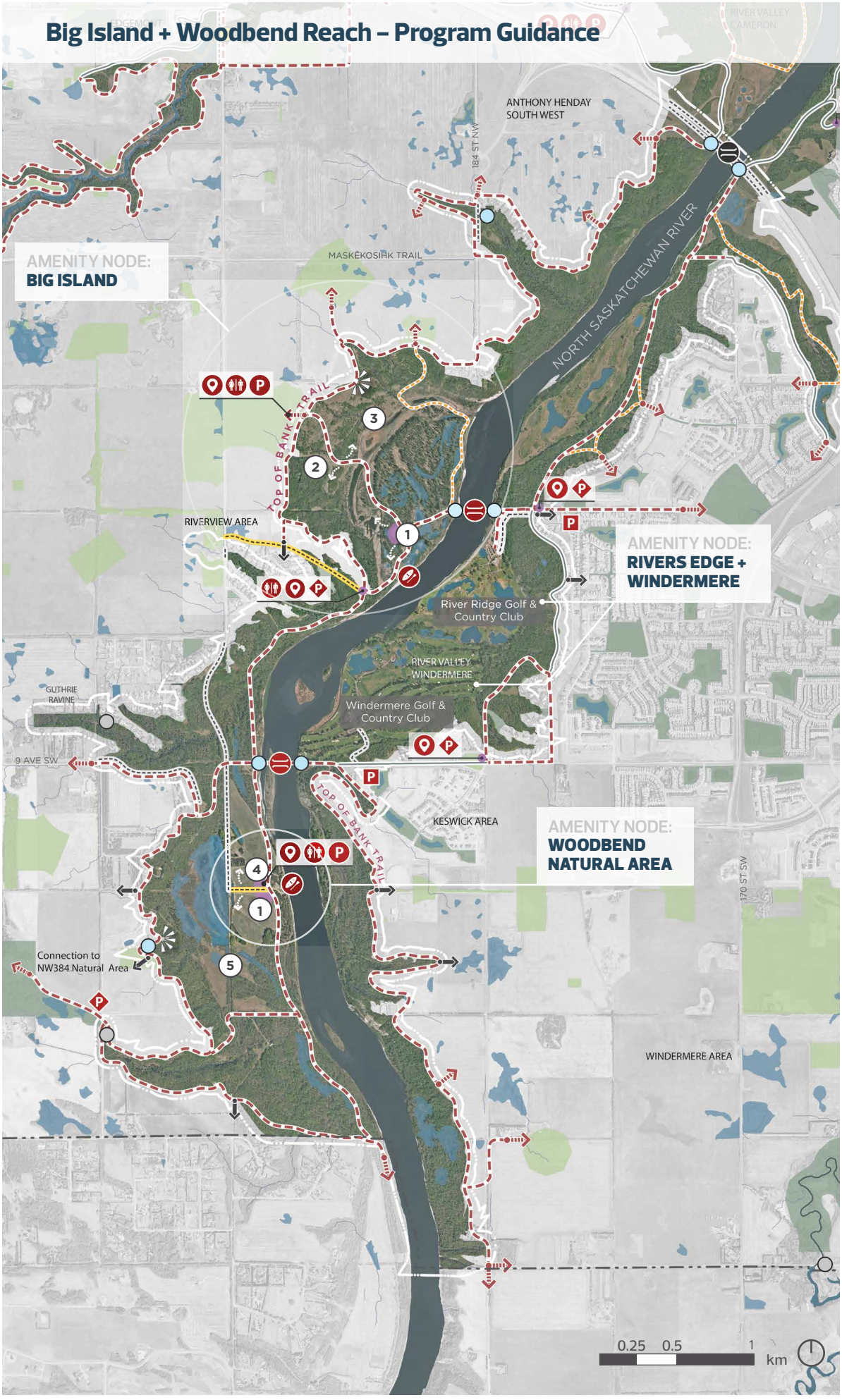
- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

ECOLOGICAL DIRECTION

- Potential Restoration Areas
- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

Big Island + Woodbend Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Proposed Non-Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Recreational Trail Opportunity
- Existing Roads
- Proposed Access Roads

PROGRAM DIRECTION

- Boat Dock and Hand Launch
- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- On-Street Parking
- Primary Trail Head
- Washroom Facility
- Proposed / Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

1. Potential day use area
2. Potential recreational trail and boardwalk connections
3. Potential restored wetland complex
4. Potential location for boating hand launch and staging area
5. Potential removal of road and restoration of hydrological connections

- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.5 **The Confluence Reach**

Vision Statement:

The Confluence will remain an essential area of protected wildlife habitat with improved trail connections from adjacent communities. As a culturally significant place, the confluence of Whitemud and Blackmud Creek will incorporate trail-based interpretive and recreational opportunities for visitors to enjoy the ravine system and learn about their layered history.

Ecology

- The Confluence contains unique and rare vegetation, as well as important wildlife movement areas, throughout the site.
- Whitemud and Blackmud Creeks provide important wildlife connections.
- Areas of extremely high environmentally sensitive areas are located throughout the site, and permanent wetlands can be found in this reach.
- Public input has indicated a desire to maintain a natural feel and protect wildlife habitat.

Culture

- This area includes the Larch Sanctuary, a conservation easement managed by the Edmonton and Area Land Trust.
- The Mactaggart Sanctuary, also within this reach, was donated to the University of Alberta, and through the cooperation of the donor, the Province, the University, and the City of Edmonton, has been made available for public access.
- The reach contains natural features of significance for Indigenous people.
- Other historical features in the reach include the Twin Bridges (a community gathering space for picnics), traces of historic coal mining, and the Canadian Northern Western Railway Trestle bridge.

Recreation

- This reach can provide trails for immersion in nature.
- It can also provide opportunities for outdoor recreation, photography, and Indigenous and traditional use.
- Public input has indicated a desire for parking, viewpoints, and pedestrian and bike access.

Important Adjacent Plans

- Hodgson NASP
- Magrath Heights NASP
- Mactaggart NASP
- Twin Brooks NASP

4.5.1 LARCH SANCTUARY PRIMARY TRAILHEAD

Program Statement

This trailhead is an area for the protection of environmentally sensitive areas, supported by the existing Larch Sanctuary, managed by the Edmonton and Area Land Trust. It provides an opportunity for people to embark on trail excursions through natural areas north of Anthony Henday Drive. Additional opportunities for the interpretation of past land uses and programming partnerships with the Edmonton and Area Land Trust will be explored.

Ecological Opportunities *(see Ecological Guidance map)*

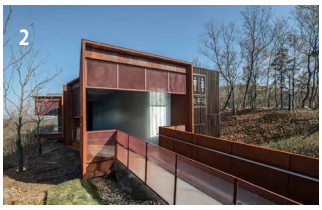
- Maintain existing wetlands and habitat
- Wildlife pinchpoints should be minimally disturbed
- Improve wildlife connectivity through wildlife passages or corridor restoration where feasible

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Existing parking
- Washroom facility
- Viewpoints
- Improved connections through neighbourhood to ensure connectivity around locations where slope instability exists

Circulation *(see Program Guidance map)*

- Opportunity to formalize user-created trails into low-impact recreational trails
- Proposed Trail Connection – Paved top-of-bank trail heading north adjacent to Blue Quill Estates



Sources:

1. Information signs and parking at Rockefeller Prairie Trail trailhead, Kansas

landezine.com/index.php/2017/07/wald-berlin-klima-exhibition-in-the-forest-by-hochc-landscape-architects/01-wbk_foto_gewerkdesign

2. Public washroom with views, Niushou Mountain Scenic Spot, Jiangning Qu, Nanjing Shi, Jiangsu Sheng, China, LiZhu (architects)

archdaily.com/783153/view-public-toilet-lizhu

3. Bridge access to Larch Sanctuary

4.5.2 MACTAGGART SANCTUARY PRIMARY TRAILHEAD

Program Statement

This trailhead connects the Twin Brooks neighbourhood to the Mactaggart Sanctuary. It provides an access point for people to use the trail system in the Mactaggart Sanctuary and along the Whitemud Creek. Education opportunities and interpretation, in partnership with the University of Alberta, will be explored.

Ecological Opportunities *(see Ecological Guidance map)*

- Wildlife pinchpoints and habitat should be minimally disturbed
- Natural cover should be maintained where possible

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Small parking lot
- Washroom facility

Circulation *(see Program Guidance map)*

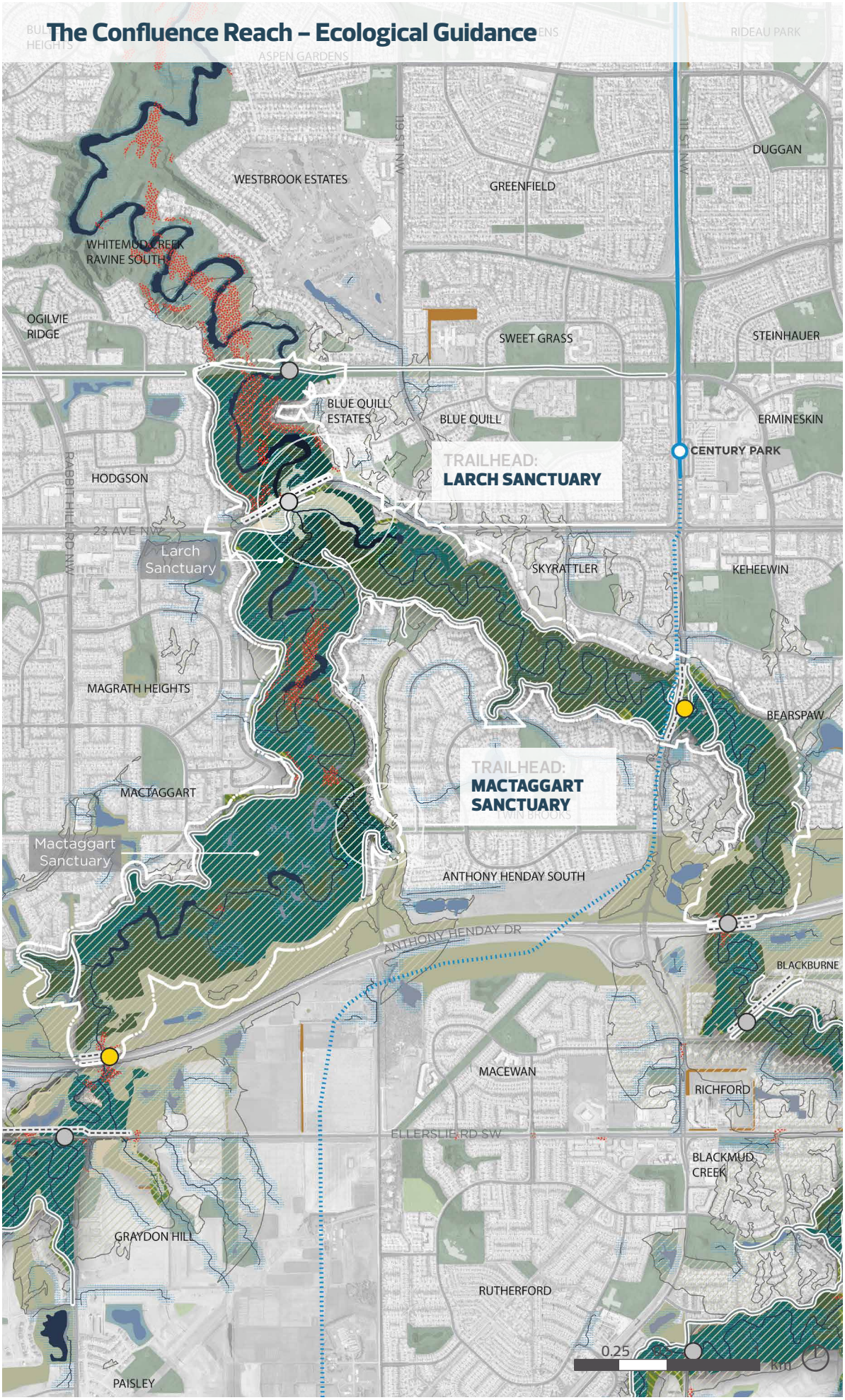
- Proposed Trail Connection – Paved top-of-bank trail extension to connect to existing top-of-bank trail
- Proposed Trail Connection – Non-paved trail to Whitemud – Anthony Henday Wildlife passage Primary Trailhead and the Mactaggart neighbourhood

Sources:

1. Interpretive signage and parking at Waskasoo Park, Red Deer, Alberta

https://www.redpointcreative.ca/wp-content/uploads/2016/03/maskepetoon_A182481.jpg

The Confluence Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Parks
- Future Parks
- Existing LRT Alignment
- Future LRT Alignment

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

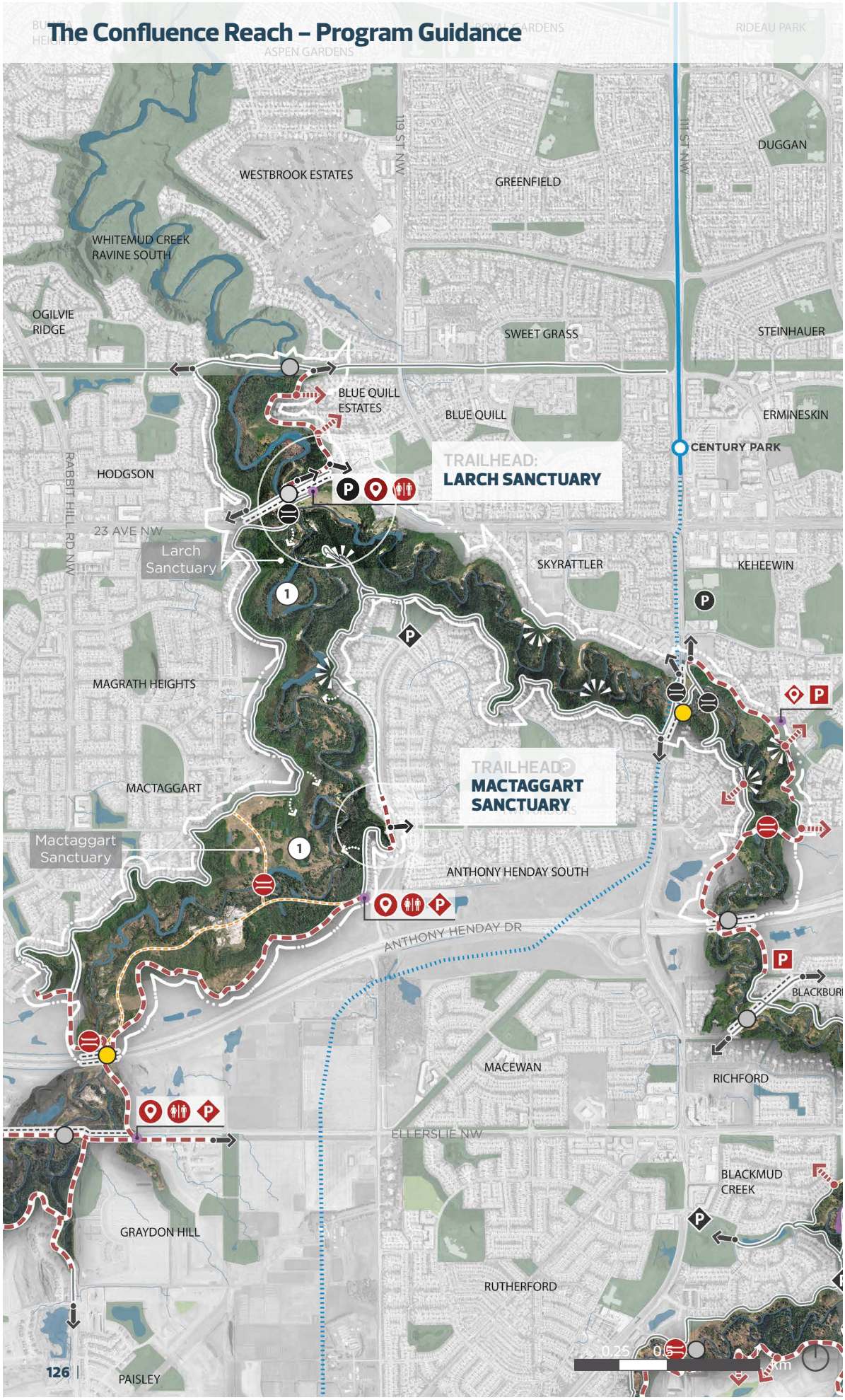
- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

ECOLOGICAL DIRECTION

- Potential Restoration Areas

* Flood zone mapping has not been completed in The Confluence Reach. To be reviewed in site-specific studies.

The Confluence Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Proposed Non-Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Recreational Trail Opportunity
- Existing LRT Alignment
- Future LRT Alignment

PROGRAM DIRECTION

- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- On-Street Parking
- Primary Trail Head
- Local Trail Head
- Washroom Facility
- Proposed / Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

(1) Maintain existing wetlands and habitat in sanctuary; opportunity to formalize existing user-generated trails

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.6 **Whitemud Ravine Reach**

Vision Statement:

Whitemud Ravine will be protected from future environmental disturbance and will remain an important wildlife corridor. The ravine will be restored wherever possible and ecological connections will be supported in the surrounding landscape. Improved trail connections will immerse visitors in nature and provide access to trail-based interpretation of the surrounding land use history.

Ecology

- Whitemud Ravine contains a wildlife passage under Anthony Henday Drive.
- The reach contains unique and rare vegetation, as well as important wildlife movement areas (generally located along the top-of-bank).
- Connections from the surrounding landscape are important for wildlife movement.

Culture

- Whitemud Ravine contains several known archaeological resources.
- Historical features located in the area of the Whitemud Ravine Reach include: Rabbit Hill United Church, Ashby Farm and Elevators, Hiller Pumphouse, Whitemud School, and a historic oil well.

Recreation

- Whitemud Ravine is an appropriate location to provide trails for walking, running, cycling, and being immersed in nature.
- The reach may be also be used for Indigenous and traditional use.

Important Adjacent Plans

- Ambleside NSP
- Glenridding Heights NSP
- Windermere NBHD NSP
- Graydon Hill NASP
- Hays Ridge NASP
- Chappelle NASP

4.6.1 WHITEMUD – ANTHONY HENDAY WILDLIFE PASSAGE PRIMARY TRAILHEAD

Program Statement

This trailhead presents an opportunity for ecological protection and reclamation with a focus on promoting wildlife connectivity. It also provides an opportunity for people to embark on trail excursions north or south of Anthony Henday Drive through the wildlife underpass and trail. This trailhead is supported by a washroom facility and a small parking lot.

Ecological Opportunities *(see Ecological Guidance map)*

- Improve wildlife corridors and pinchpoints through wildlife passages
- Maintain natural cover

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Washroom facility
- Parking
- Interpretation of geological features

Circulation *(see Program Guidance map)*

- Proposed trail connection – Paved top-of-bank trail

Sources:

1. Trailhead Signage, Warfield Railgrade Trail Head, Kootenays, BC

ehcanadatravel.com/gallery/picture/10704-ailgrade_trail_001/category/1321-railgrade_trail

2. Tommy Thompson Park pavilion, Toronto, DTAH

explorewaterfrontoronto.ca/project/tommy-thompson-park

3. View into Whitemud Ravine

4.6.2 SOUTH WHITEMUD RAVINE PRIMARY TRAILHEAD

Program Statement

This trailhead is a connection to the Whitemud Ravine with opportunities to learn about aquatic habitats, the hydrological system, geology, and past land uses; and gather with friends and family for unstructured recreation. This amenity node offers the opportunity to appreciate the dramatic landscape.

Ecological Opportunities *(see Ecological Guidance map)*

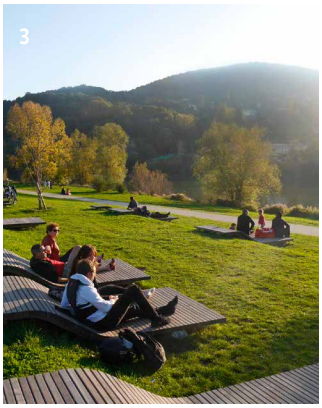
- Maintain natural cover
- Restore formerly disturbed areas
- Incorporate a wildlife passage in future road construction
- Buffer environmentally sensitive areas and core habitat from 41 Ave. SW

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Washroom facility
- Parking
- Viewpoint
- Geological interpretation
- Day use area – Picnic and Interpretive Lookout
  - *This area will capitalize on the dramatic landscape to create a unique experience for users by incorporating opportunities for interpretive recreation and providing lookout points. This area will feature a picnic site situated on a plateau with trail access into the South Whitemud Ravine System.*

Circulation *(see Program Guidance map)*

- Proposed vehicle access north of the day use area
- Proposed trail connection – Paved top-of-bank trail
- Interpretive non-paved trails into ravine from day use area



Sources:

1. The Bluff lookout, Belgium, OMGEVING

landezine.com/index.php/2015/12/the-bluff-by-omgeving

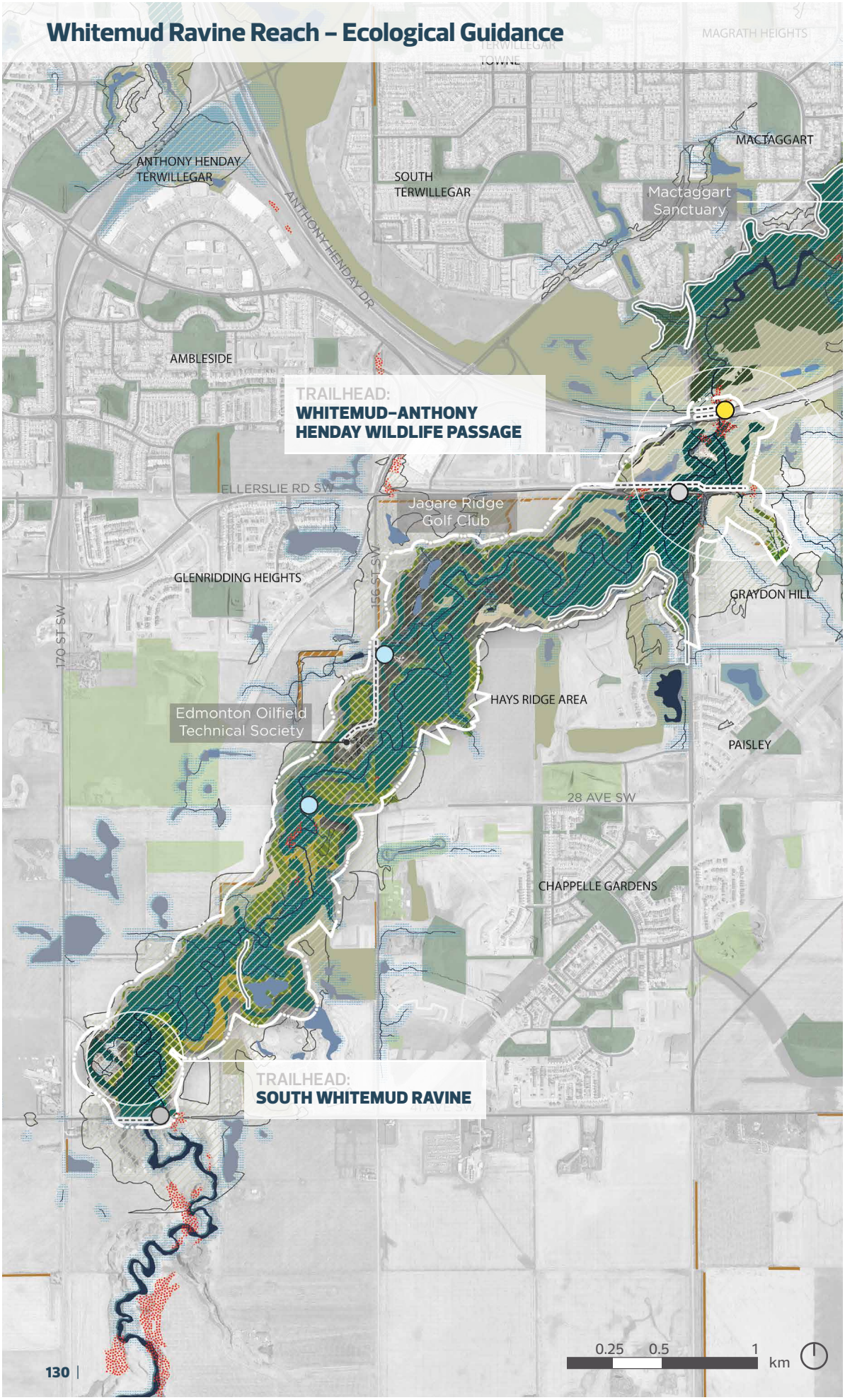
2. Parking and washrooms at West Fork Trail, Sedona

sedonahikingtrails.com/images/west_fork_trail/West-Fork-Trail-1-5.htm

3. Seating at Rochetaillee banks of the Saone, Lyon, In Situ Architectes Paysagistes

landezine.com/index.php/2016/09/rochetaillee-banks-of-the-saone-by-in-situ

Whitemud Ravine Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Roads
- Existing Parks
- Future Parks

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

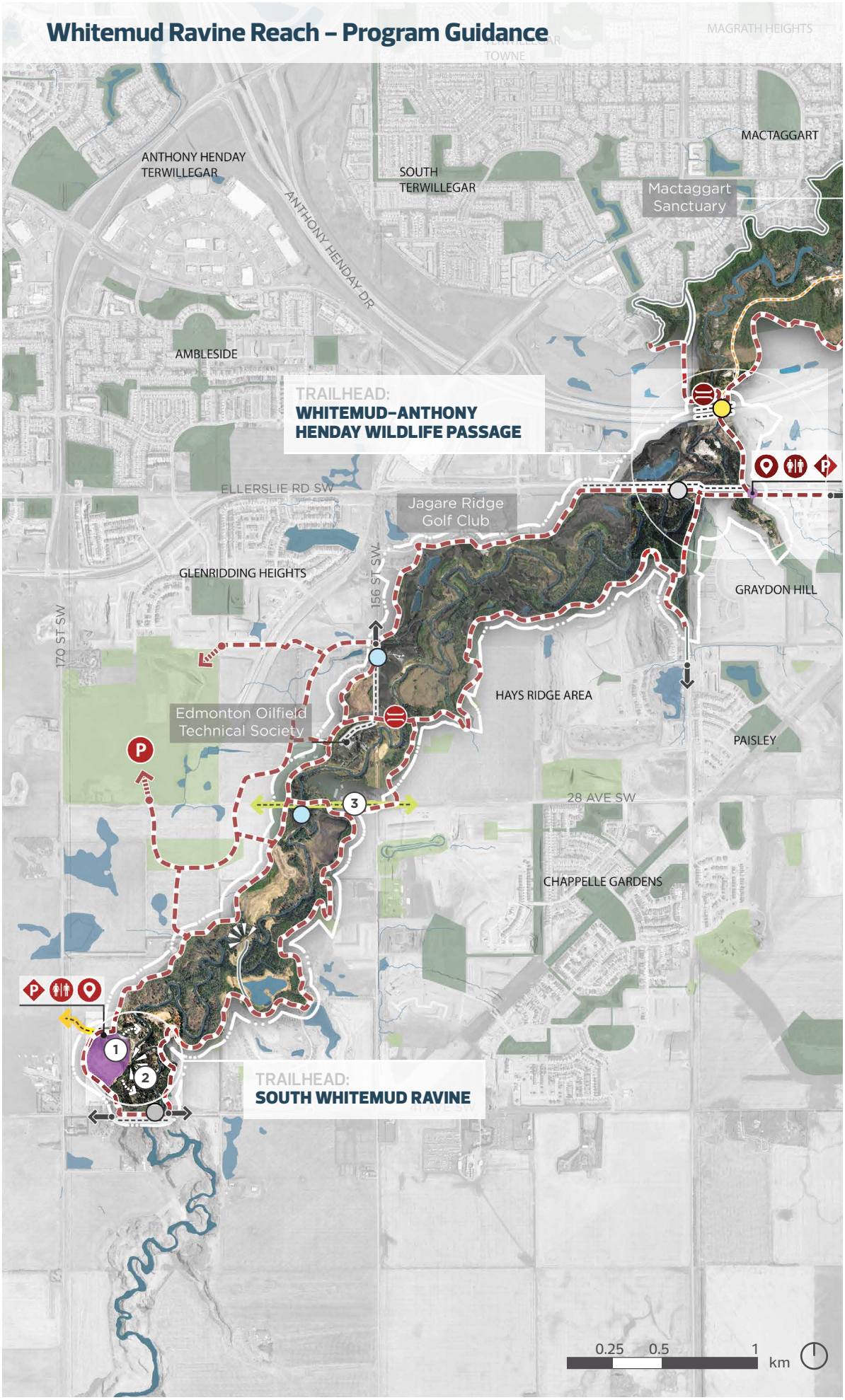
ECOLOGICAL DIRECTION

- Potential Restoration Areas

- City Boundary

* Flood zone mapping has not been completed in Whitemud Ravine. To be reviewed in site-specific studies.

Whitemud Ravine Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Proposed Non-Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Recreational Trail Opportunity
- Existing Roads
- Planned Roads

PROGRAM DIRECTION

- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- Primary Trail Head
- Washroom Facility
- Proposed
- Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

1. Potential picnic and interpretive lookout day use area
2. Potential interpretive trails into ravine system via day use area
3. Proposed 28th Avenue connection as per statutory plans

- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.7 **Blackmud Ravine Reach**

Vision Statement:

Blackmud Ravine will become a restored ravine system, providing ecological services as well as opportunities for passive recreation and nature appreciation for the surrounding neighbourhoods. The previous histories of the site will be recognized through interpretive elements and community stewardship of the landscape.

Ecology

- The Blackmud Ravine Reach contains important wildlife movement areas as well as unique and rare vegetation.

Culture

- The Papaschase Indian Reserve included large portions of Blackmud Creek. It will be necessary to determine if physical or archaeological remains exist. There are additional historic land uses of significance to Indigenous people in this reach.
- Other historical features in the Blackmud Ravine Reach include the Big Island Coal Company Mine, Walker Farm, and the Samuel Adam Blacksmith Shop and Farm.

Recreation

- The Blackmud Ravine Reach is ideal for trails for walking, running, cycling, and experiencing nature. Other uses could include low-impact outdoor recreation and Indigenous and traditional use.
- As a previous campsite, the old Klondike campground provides infrastructure that may be used for community gathering and recreation.
- Public input identified a potential user conflict with dog-walking in the area and a desire for improved wayfinding.

Important Adjacent Plans

- Richford NASP
- Blackmud Creek NASP
- Callaghan NASP
- Allard NASP
- Blackburne NASP
- Cashman NASP
- Cavanagh NASP

4.7.1 FORMER KLONDIKE CAMPGROUND AMENITY NODE

Program Statement

All-season trails provide a local connection to this natural area. Riparian vegetation is maintained and restored where possible, and human activity is limited to reduce impacts to important bird habitat.

The heritage of the site is celebrated and physical remnants of the former campground are maintained as locations for picnicking, small cultural gatherings and other unstructured recreation. In the winter, select trails are transformed into a skating or skiing paths. The park is supported with a washroom facility, parking, and regional trail connections.

Ecological Opportunities *(see Ecological Guidance map)*

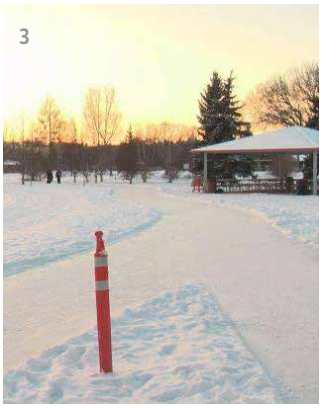
- Protect and restore riparian areas
- Re-naturalize areas of the former campground

Program Opportunities *(see Program Guidance map)*

- Parking
- Washroom facility
- Programmed use area – Picnic and Skating Loop
  - *This area will become an all-season amenity node by utilizing the former campsites in the area as a possible skating loop or skiing trails during the winter, and picnic sites during the summer months.*
  - *Warming huts, or other amenities required to make this a winter destination*

Circulation *(see Program Guidance map)*

- Proposed trail connection – Non-paved along west top-of-bank



Sources:

1. Existing pathway through former Klondike campground

2. Interpretive area with picnic tables, Round Lake Preserve, Town of Malta, NY

thelagroup.com/wp-content/uploads/2015/10/Interpretive-Area.jpg

3. Victoria Park Iceway Edmonton

globalnews.ca/news/3162839/victoria-park-iceway-isnt-the-only-skating-trail-in-edmonton

4.7.2 SOUTH BLACKMUD RAVINE PRIMARY TRAILHEAD

Program Statement

This trailhead is gateway and staging area for people to explore southern section of the Blackmud Ravine and learn about aquatic habitats, the hydrological system, and the geology of the area. The trailhead is supported by on-street parking and washroom facilities.

Ecological Opportunities *(see Ecological Guidance map)*

- Restore watercourse and riparian vegetation
- Maintain existing natural cover
- Re-naturalize disturbed areas
- Avoid development within the wildlife pinchpoints
- Restoration of creek bank along former 7 Oaks Golf Course lands

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- On-street parking (existing)

Circulation *(see Program Guidance map)*

- Proposed trail connection – Paved top-of-bank trail
- Opportunity for recreational trails and to formalize minor pedestrian bridges where historic crossings existed at the former 7 Oaks Golf Course

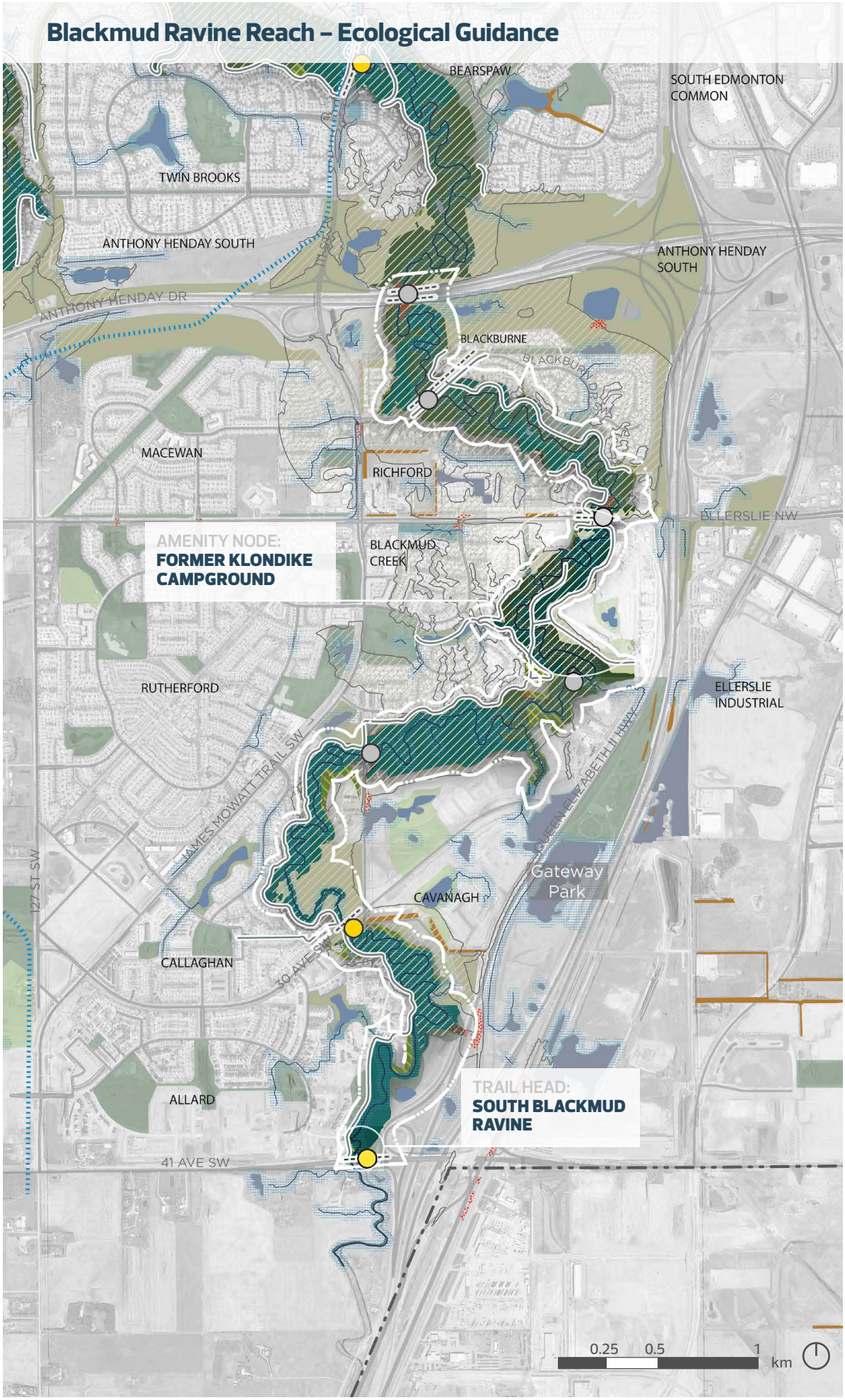
Sources:

1. The Bluff forest pathway, Belgium, OMGEVING

landezine.com/index.php/2015/12/the-bluff-by-omgeving

2. View into Blackmud Ravine

Blackmud Ravine Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Parks
- Future Parks
- Future LRT Alignment

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

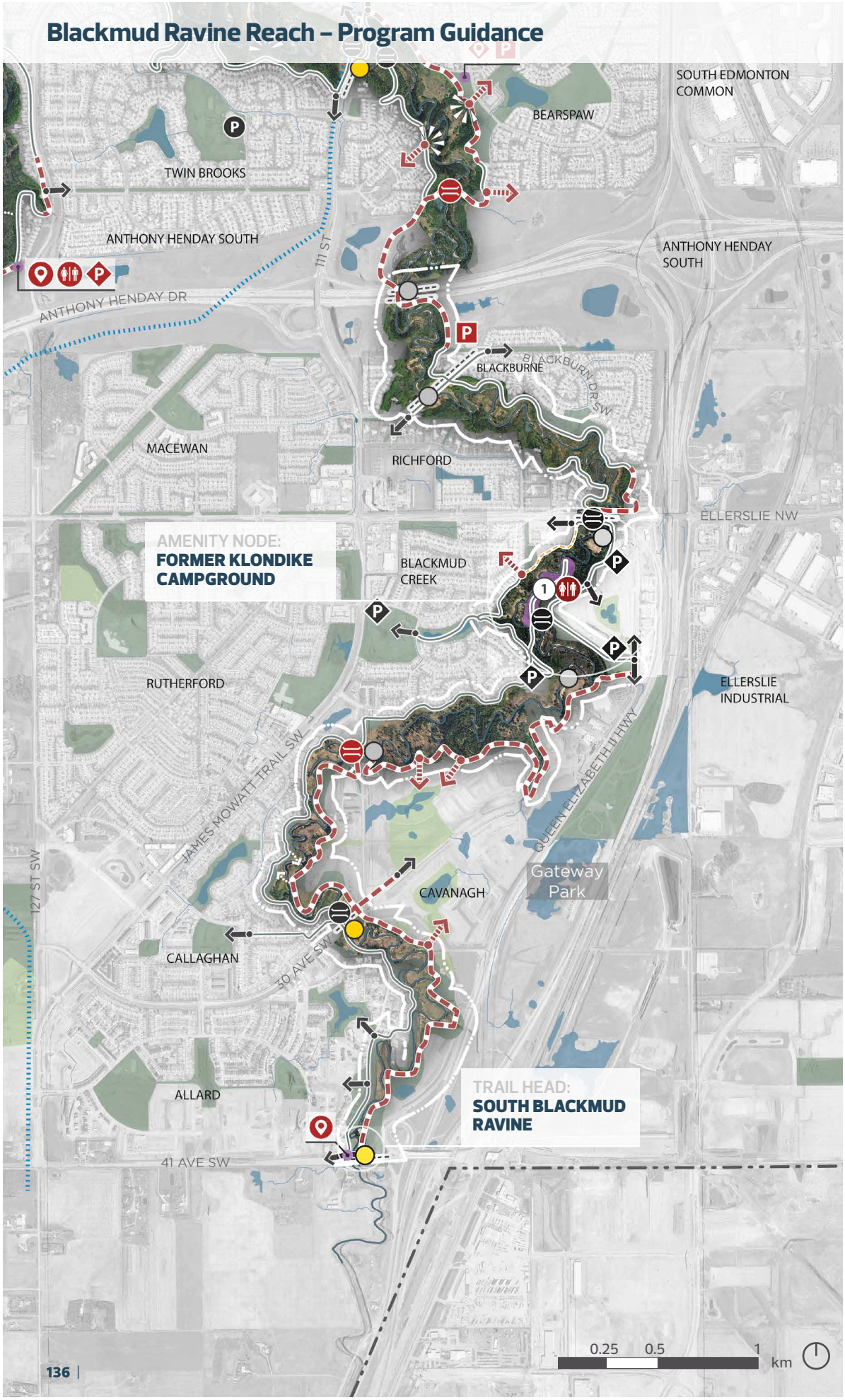
ECOLOGICAL DIRECTION

- Potential Restoration Areas

- City Boundary

* Flood zone mapping has not been completed in Blackmud Ravine. To be reviewed in site-specific studies.

Blackmud Ravine Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Proposed Non-Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Recreational Trail Opportunity
- Future LRT Alignment

PROGRAM DIRECTION

- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- On-Street Parking
- Primary Trail Head
- Local Trail Head
- Washroom Facility
- Proposed
- Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

- (1) Potential skating/skiing trails and picnic area

- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.8 **Marquis River Valley Reach**

Vision Statement:

The Marquis River Valley will become a place for community-building, nature preservation, and the re-establishment of ecological systems. The restoration of natural areas will improve wildlife connectivity in the northern reaches of Edmonton's River Valley, while the continued operations of agricultural land will support social enterprises and cultural programming. New trail connections to surrounding neighbourhoods will provide future residents with access to the River Valley and Ravine System for the passive enjoyment of nature.

Ecology

- The Marquis River Valley Reach contains unique and rare vegetation, as well as environmentally sensitive areas, including permanent wetlands present in South Sturgeon Park.
- The riparian buffer should be maintained and restored, where necessary, in this reach to improve wildlife connectivity.

Culture

- The recent history of the reach is focused on food and resource production. Pointe la Pie (McLellan and Featherstonaugh sawmill) acted as a steamboat landing site and a location for river excursions and picnics. It was also a location for the transport of flour and coal between Edmonton and Fort Saskatchewan.
- A number of agricultural operations existed in the area.
- Both the reach, and the neighbourhood it is located adjacent to, are named after Marquis, a variety of wheat that was developed in Canada during the early 1900s.

Recreation

- The Marquis River Valley Reach is a place for the passive enjoyment of nature.
- Local food production and low-impact recreational activities are appropriate uses.
- Trail connections to adjacent communities will become more important as the population increases.
- Public input has indicated this reach as a good location for dog walking and cycling.

Important Adjacent Plans

- Horse Hill ASP
- Marquis NSP

4.8.1 THE FARMSTEAD AMENITY NODE

Program Statement

Existing social enterprises and community wellness programming at the Farmstead, including urban gardens, food education programs and environmental education, are supported through public and private partnerships.

Ecological Opportunities *(see Ecological Guidance map)*

- Maintain forest with limited disruption
- Preserve riparian vegetation
- Encourage sustainable agricultural practices

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Parking adjacent to top-of-bank park
- Washroom facility
- Partnerships with Edmonton & Area Land Trust and landowners to maintain and interpret agricultural uses and ecologically sensitive areas

Circulation *(see Program Guidance map)*

- Pedestrian bridge crossing to Fort Saskatchewan
  - *Alignment and location of pedestrian bridge to be determined through site-specific planning exercises*
- Proposed trail connection – Paved top-of-bank trail and connection to proposed bridge crossing
  - *Alignment of trail to be determined through statutory plan amendments and site-planning exercises*

Sources:

1. River edge along Riverbend Gardens

2.Rivebend Gardens

Photo credit: Mack Male

4.8.2 SOUTH STURGEON PARK AMENITY NODE

Program Statement

A bird sanctuary where people can enjoy, appreciate, and learn about wildlife through a network of trails. Habitats are restored for various species of waterfowl. Nesting sites and habitat for migratory birds are restored on the formerly disturbed landscape. A trail network encircles the site, creating wildlife viewing opportunities. Vehicle access and parking support an interpretive centre, vehicle boat launch, recreational trails and boardwalks for interpretive use.

Ecological Opportunities *(see Ecological Guidance map)*

- Restore wetlands and habitats for ecological benefits and interpretation
- Maintain riparian buffer
- Improve wildlife connectivity

Program Opportunities *(see Program Guidance map)*

- Interpretive centre
- Parking
- Washroom facility
- Vehicle boat launch and hand launch

Circulation *(see Program Guidance map)*

- Extend existing access road at 33 St NE to support river access
- Proposed trail connection – Paved top-of-bank and river adjacent trails
- Trail connections along top-of-bank
- Non-paved recreational trails and interpretive boardwalks

Sources:

1. East Point Park Bird Sanctuary bird blind, Toronto, PLANT Architect

branchplant.com/building/eastpoint.html

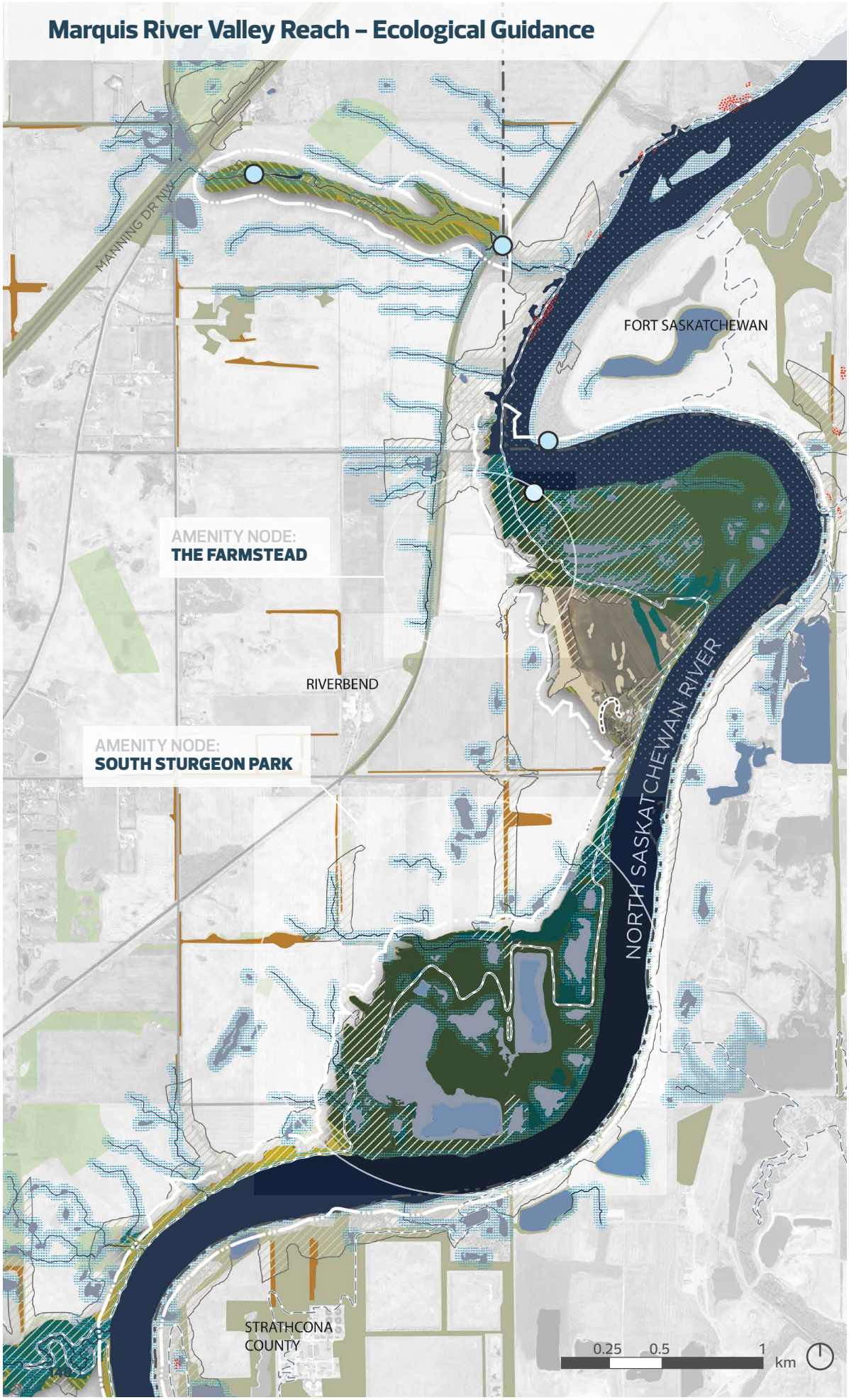
2. EVOA Bird Observatory, Portugal, maisr arquitetos

designboom.com/architecture/maisr-arquitetos-evoa-environmental-interpretation-center

3. Upper Canada Migratory Bird Sanctuary + Campsite, St Lawrence Parks Commission, Ontario - Example of wildlife viewing opportunities in a natural setting

visit1000islands.com/places-to-stay/campgrounds/?searchvalue=Cornwall

Marquis River Valley Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Road
- Existing Parks
- Future Parks

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Class A Water Body
- Stream / Wetland Buffer
- Floodway / Flood Fringe*
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

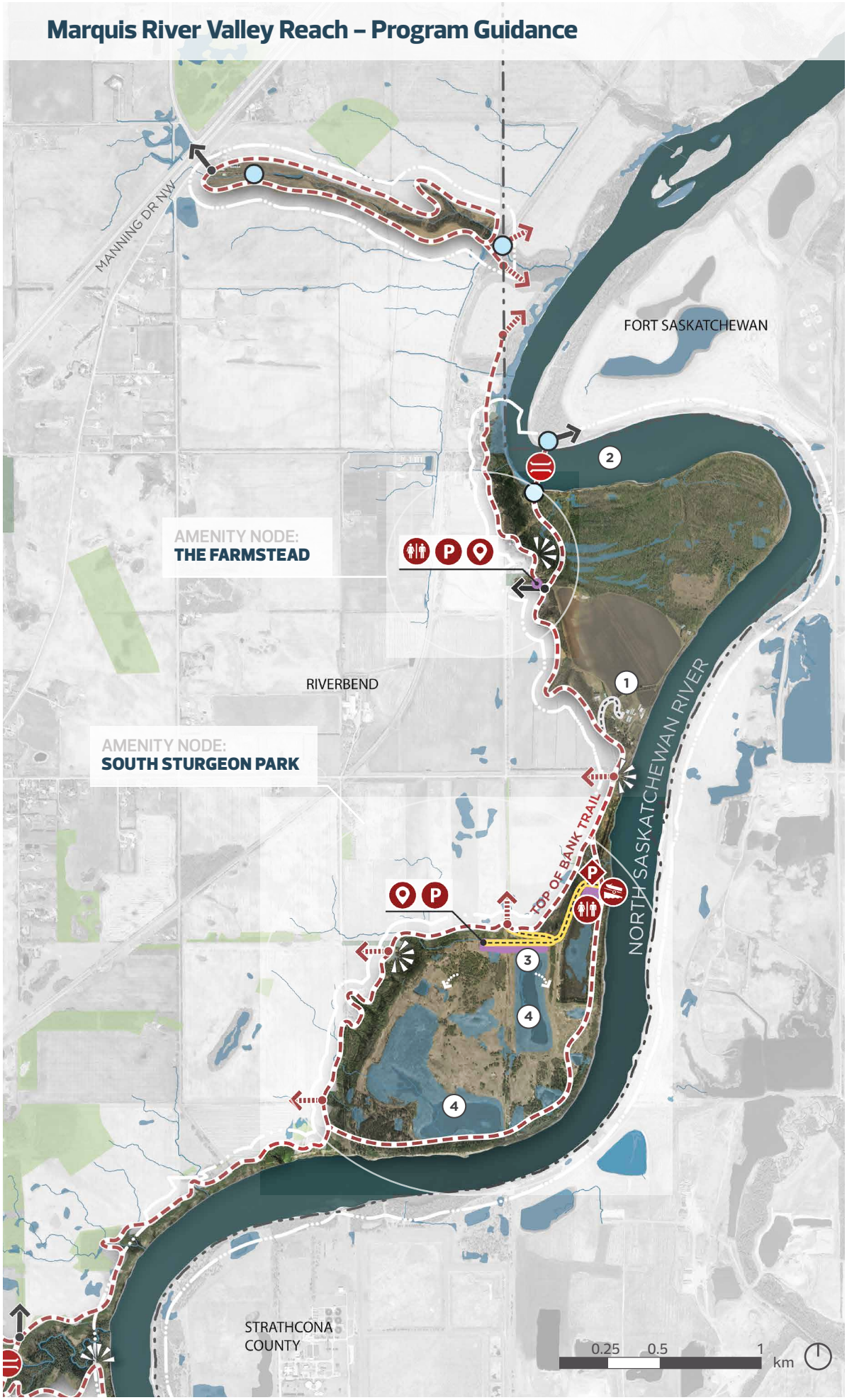
ECOLOGICAL DIRECTION

- Potential Restoration Areas

- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

Marquis River Valley Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Existing Roads
- Proposed Access Roads

PROGRAM DIRECTION

- Boat Dock and Launch (Vehicle)
- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- Primary Trail Head
- Washroom Facility
- Proposed
- Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

1. Existing agricultural and community programming
2. Proposed pedestrian bridge to Fort Saskatchewan
3. Interpretive centre for South Sturgeon Park Bird Sanctuary
4. Potential wetland/habitat restoration

- City Boundary

*For illustrative purposes only. To be confirmed through later site-specific planning.

4.9 **Horsehills Creek Ravine Reach**

Vision Statement:

Horsehills Creek Ravine will be a restored wildlife corridor connecting to the northern reaches of the North Saskatchewan River in Edmonton. The ravine's unique ecological features will be protected from disturbance and will be appreciated by visitors using the interconnected trail system for passive, trail-based recreation. Minor amenities will support greater access into the ravine system. Interpretive elements will educate trail users on the history of the river, including its role in transportation and trade.

Ecology

- This reach contains unique and rare vegetation as well as important wildlife movement areas.
- The ravine's steep slopes show signs of erosion.
- Permanent wetlands are present in the reach, and it may also contain underground springs.

Culture

- The recent history of the landscape has a relation to the fur trade. Hudson's Bay Company employees and families pastured horses at Horse Hill for Fort Edmonton.

Recreation

- Through public consultation, the public has identified the need for pedestrian and cyclist crossings, as well as the desire for limited top-of-bank development.
- Trail connections to adjacent communities will become more important as neighbourhoods are built out.
- Appropriate trail activities include hiking, walking, running, and cycling.

Important Adjacent Plans

- Horse Hill ASP
- Marquis NSP

4.9.1 NORTH HORSEHILLS CREEK PRIMARY TRAILHEAD

Program Statement

This trailhead is a gateway and staging area for people to explore Horsehills Creek, which includes restored areas and links to the future town centre. The trailhead is supported with a kiosk, washroom facility, and a small parking lot.

Ecological Opportunities *(see Ecological Guidance map)*

- Restore riparian vegetation
- Manage invasive species
- Pursue a wildlife passage under Manning Drive

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Washroom facility
- Small parking lot

Circulation *(see Program Guidance map)*

- Proposed trail connection – Paved top-of-bank trail
- Trail connection to future neighbourhood development

Sources:

1. Syncline West parking, trail head sign and day use area, Castle Public Recreation Area, Alberta

alberta.ca/release.cfm?xID=48344324B0DA3-AC99-A5B9-AD6AC2D89EC67591

4.9.2 HORSEHILLS CREEK PRIMARY TRAILHEAD

Program Statement

This trailhead provides opportunities to restore and learn about habitats and wildlife while enjoying an all-season trail system. There are also opportunities to improve wildlife connectivity under the rail corridor, and interpret historical use of the ravine by the Hudson's Bay Company.

Ecological Opportunities *(see Ecological Guidance map)*

- Restore riparian vegetation
- Pursue a wildlife passage under the rail line
- User activity should be restricted to the top-of-bank areas to prevent further slope erosion

Program Opportunities *(see Program Guidance map)*

- Primary trailhead east of Evergreen
- Washroom facility
- On-street parking
- Recreation trails

Circulation *(see Program Guidance map)*

- Proposed Trail Connection – Paved top-of-bank trail
- Proposed pedestrian bridge east of Meridian St. NW

2

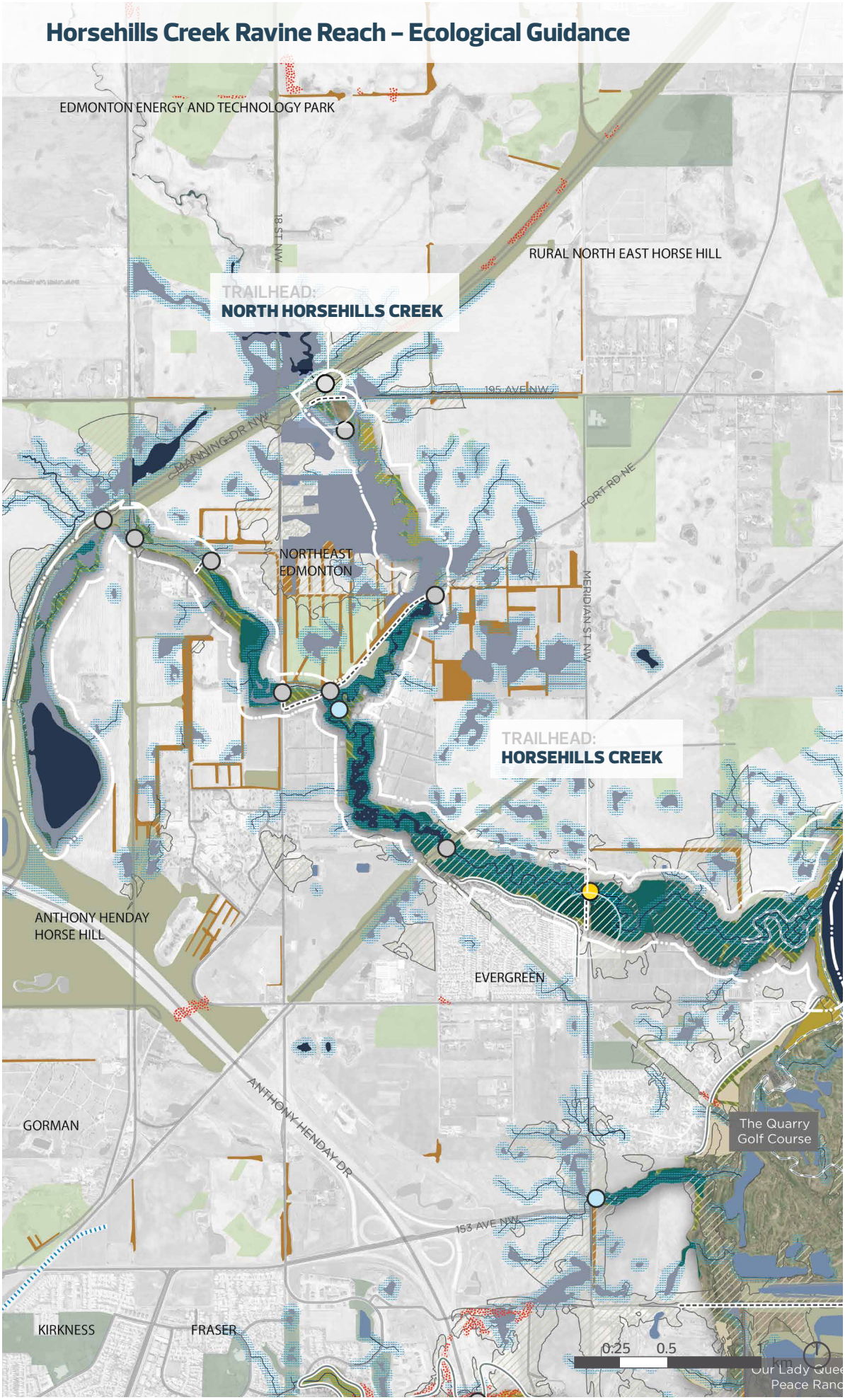
Sources:

1. Lewis Creek Park shelter and washroom, Bellevue, Washington

parks.bellevuewa.gov/rentals/outdoor-rentals/lewis-creek-park-picnic-shelters

2. View into Horsehills Creek Ravine

Horsehills Creek Ravine Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Roads
- Existing Parks
- Future Parks
- Future LRT Alignment

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Stream / Wetland Buffer
- Floodway / Flood Fringe*
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

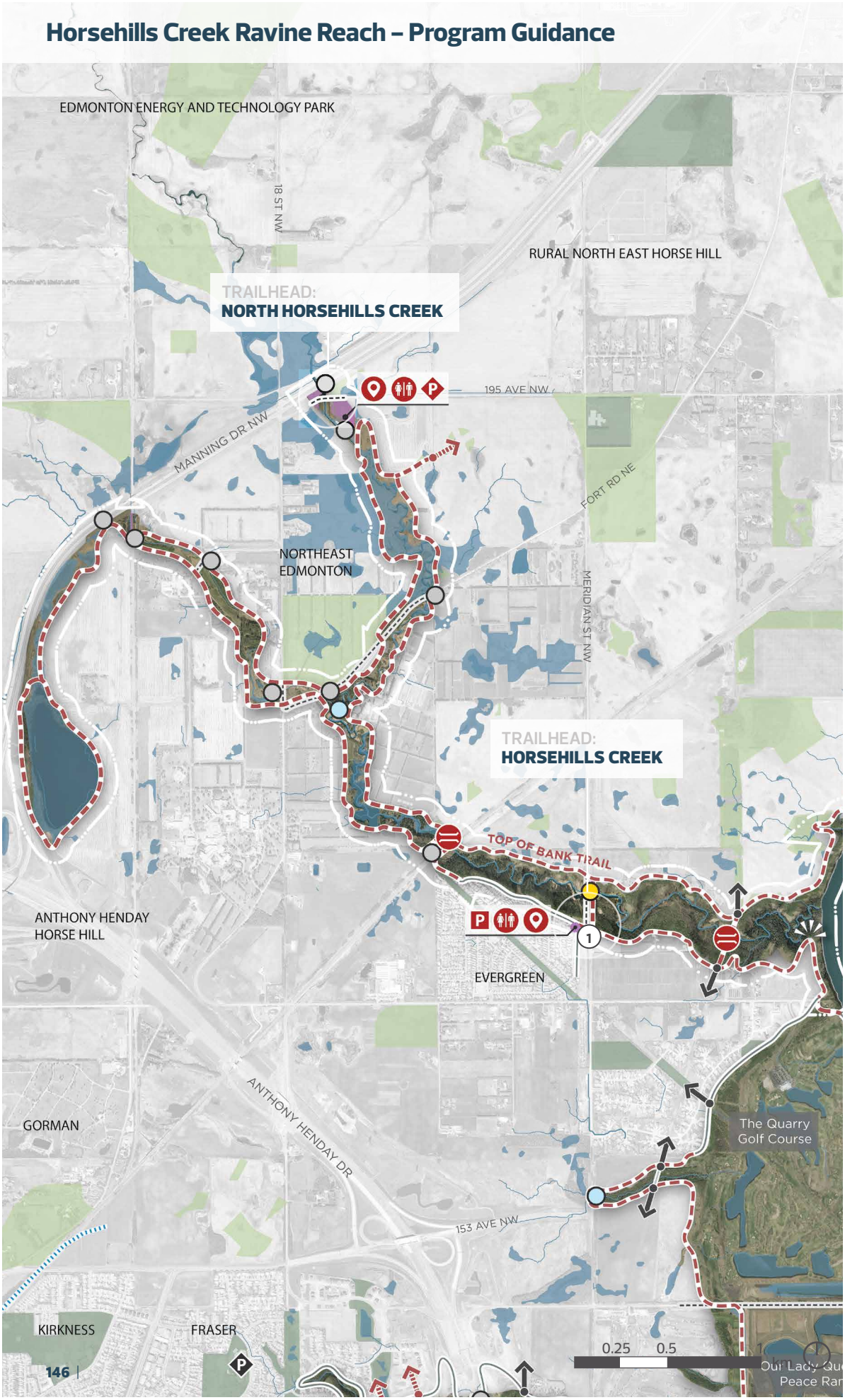
- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

ECOLOGICAL DIRECTION

- Potential Restoration Areas

* Flood zone mapping has not been completed in Horsehills Ravine. To be reviewed in site-specific studies.

Horsehills Creek Ravine Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Existing Roads
- Future LRT Alignment

PROGRAM DIRECTION

- Pedestrian Bridge Crossing
- Parking (Local Catchment)
- On-Street Parking
- Primary Trail Head
- Washroom Facility
- Proposed
- Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

- (1) Trailhead connection with parking (local catchment) and washroom

* For illustrative purposes only. To be confirmed through later site-specific planning.

4.10 **Edmonton East Reach**

Vision Statement:

The Edmonton East Reach will become an all-season regional destination, building upon the altered sites and conserving ecologically rich places to create opportunities for new activities and experiences in the System. The area will be reclaimed as an ecological asset for the city, establishing wildlife habitat, productive landscapes, and a variety of educational and recreational opportunities unique to Edmonton's River Valley.

Ecology

- The Edmonton East Reach includes important wildlife movement areas and areas of environmental sensitivity, including permanent wetlands.
- Historic and present industrial land use has impacted the quality of habitat in the reach; restoration efforts will be essential during and after the closing of present operations.

Culture

- The recent history of the site is tied to the fur trade and mining. Historic locations include a potential campsite of Anthony Henday, the Black Rock Mine, and the Clover Bar Coal Co. Ltd. Mine.

Recreation

- The Edmonton East Reach is suited to active use, including multi-use fields, campgrounds, festival sites, and an ecology park. Active use should be closely tied and complementary to restoration efforts.
- Trail connections to surrounding communities will become more important as the population increases.
- Public input has indicated a desire for this reach to become a regional destination, maintaining opportunities for boating, fishing, viewpoints, multi-season trails, and places to rest and enjoy nature.

Important Adjacent Plans

- Horse Hill ASP
- Marquis NSP

4.10.1 THE QUARRY AMENITY NODE

Program Statement

This future regional destination immerses visitors in the ecological systems of the North Saskatchewan River Valley through recreational and cultural experiences. The park can offer facilities such as constructed waterbodies, a mountain bike skills course, an event space, an ecological park, an accessible dock and hand launch, and an all-season trail network. Restoration, re-forestation and re-naturalization of the industrial landscape will improve this area's ecological health and functioning, and complement the proposed development.

Ecological Opportunities *(see Ecological Guidance map)*

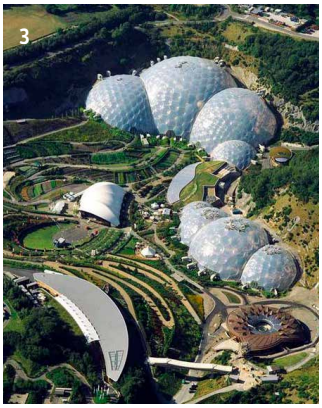
- The forest buffer, wetlands, and watercourses should be restored
- Restore natural areas in active use zones to complement programming
- Restoration of the eastern portions of the quarry should ensure greater wildlife connectivity through the area
- Development of a dock and hand launch should avoid significant fish habitat

Program Opportunities *(see Program Guidance map)*

- Large event / festival site (in previously disturbed areas)
  - *This area can host medium to large events (e.g. concerts and festivals) through a centralized open space that may have a fixed or temporary stage/amphitheatre*
- Eco-Park with tourism, commercial and educational programming
  - *This area can include botanical gardens, biodomes, greenhouses or other research and educational facilities. It can also support commercial and tourism uses.*
- Field and recreation staging area
- Day use area with picnic and informal use programming
- Constructed waterbodies with potential use by small watercraft
  - *The watercourse should be defined by the remnant terrain from the quarry operations. The closure plan and amenity node design should inform each other.*
- Mountain bike skills course
- Parking lots
  - *Parking is a major consideration for the uses proposed. Parking lots should be integrated into the landscape, using low-impact development techniques and design best practices. Public transportation or a shuttle from the site to the future LRT station to the north could improve public access to the site.*
- Washroom facility, and accessible dock and hand launch
- Opportunity for the City to partner with aggregate operators to coordinate site restoration, and explore partnerships to provide interpretive and educational information regarding former land uses

Circulation *(see Program Guidance map)*

- Pedestrian bridge crossing north of the Quarry to Strathcona County
- Recreational trail connections into the forest for uses including mountain biking, hiking, snowshoeing and cross-country skiing (white arrows)
- Vehicle access



Sources:

1. Millennium Park, Chicago, SOM

enjoyillinois.com/travel-illinoismillennium-park-the-front-yard-of-chicago

2. Example of outdoor recreation in a restored environment

3. The Eden Project Visitor Centre, Cornwall, UK

edenproject.com

4.10.2 CLOVER BAR AMENITY NODE

Program Statement

Clover Bar River Valley is a destination and city-wide attraction in a reclaimed public open space. Wetlands, stormwater management ponds, and restored forested areas are designed in cooperation with the closure plan for the aggregate operation, providing an ideal setting for a river valley waterfowl sanctuary and interpretive centre. Opportunities for restoration, recreation, interpretation, and viewpoints will be explored, as portions of the Edmonton Waste Management Centre transition to other uses.

Productive use of the landscape may be explored by working to showcase innovative sustainability initiatives (e.g. food systems, carbon sequestration) along side recreational opportunities, leveraging the site location, access to infrastructure and resources.

Ecological Opportunities *(see Ecological Guidance map)*

- Restore wetlands and riparian buffer to create a waterfowl sanctuary
- Buffer the waterfowl sanctuary from the highway with vegetation
- Possible contamination from industrial activities will require field review and potential remediation efforts

Program Opportunities *(see Program Guidance map)*

- The data-derived land management classification for the Edmonton Waste Management Centre is a combination of Preservation, Conservation and Active/Working Landscapes. The Plan identifies the site as Active/Working Landscapes in order to provide existing and expanded waste management services. If the site is no longer required for that use, the classification is to be re-evaluated.
- Interpretive centre for meetings, events, and other programmed uses
- Parking lot
- Washroom facility
- Opportunities for restoration, recreation, interpretation, and viewspoints will be explored as portions of the Edmonton Waste Management Centre transition to other uses

Circulation *(see Program Guidance map)*

- Existing bridge connection on Anthony Henday Drive
- Proposed trail connection – Paved trail near the river
- Interpretive trail connections into the restored landfill site and the waterfowl sanctuary
- Pedestrian bridge crossing to Hermitage Park

Sources:

1. Fort Whyte Interpretive Centre, Winnipeg

where.ca/manitoba/winnipeg/essential-city-winter-wonderland/slide/fortwhyte-alive

2. Bioremediation in a industrial site , Montreal - example of bioproduction and restoration method

biopolis.ca/en/projects/phytoremediation-of-eastern-montreal-industrial-sites

3. Thalie Park, France, URBICUS - example of a park built on a former landfill site

landezine.com/index.php/2015/02/thalie-park-by-urbicus

4.10.3 FRASER RAVINE PRIMARY TRAILHEAD

Program Statement

The ravine becomes a connection between Hermitage Park and the northeast lengths of the North Saskatchewan River Valley with opportunities for ecological, geological, and wildlife interpretation, and a pedestrian bridge.

Ecological Opportunities *(see Ecological Guidance map)*

- Remediate damage to bank caused by informal trails
- Limit development to avoid additional pressure on wildlife pinchpoints

Program Opportunities *(see Program Guidance map)*

- Primary trailhead
- Parking (existing on-street)

Circulation *(see Program Guidance map)*

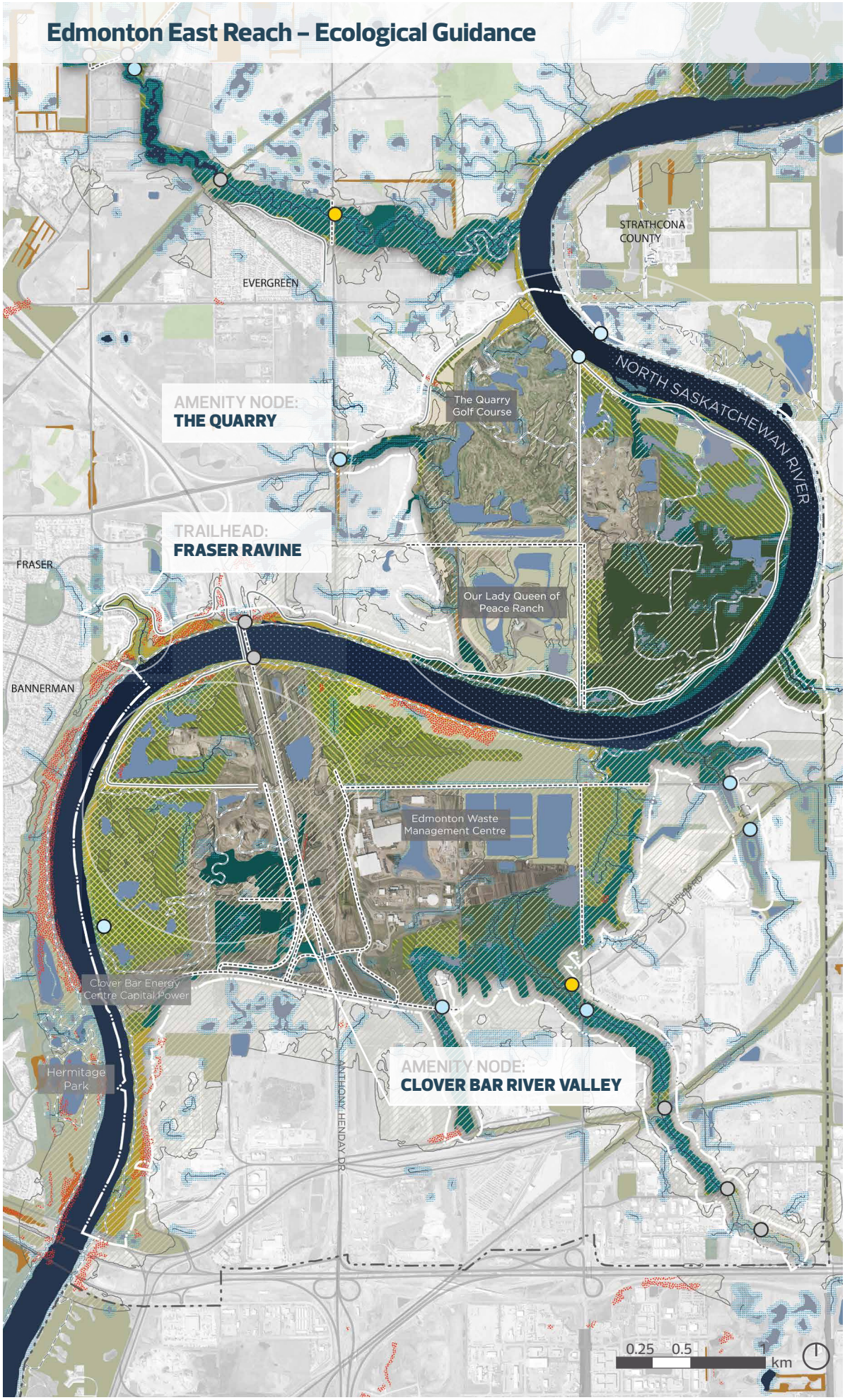
- Existing trail connection – Paved top-of-bank trail
- Opportunity to improve the pipeline crossing to increase safety and connectivity

Sources:

1. Henry David Thoreau Footbridge, Connecticut, Gray Organschi Architecture

grayorganschi.com/projects/details/henry_david_thoreau_footbridge#d115_13

Edmonton East Reach – Ecological Guidance



LEGEND

CONTEXT

- Reach Boundary
- Arterial and Collector Roads
- Existing Trail
- Existing Roads
- Existing Parks
- Future Parks

EXISTING HYDROLOGIC FEATURES

- Natural Waterbodies
- Non-Natural Waterbodies
- Wetlands (Class I–VIII and Not Classified)
- Class A Water Body
- Stream / Wetland Buffer
- Floodway / Flood Fringe*
- Streams (Strahler 3–6)

EXISTING HABITAT CLASSIFICATIONS

- Core (Natural Cover)
- Corridor (Natural Cover)
- Corridor (Treed Shelterbelt)
- Habitat (Natural Cover)
- Habitat (Non-maintained Grass)
- Stepping Stone (Natural Cover)

WILDLIFE CORRIDORS

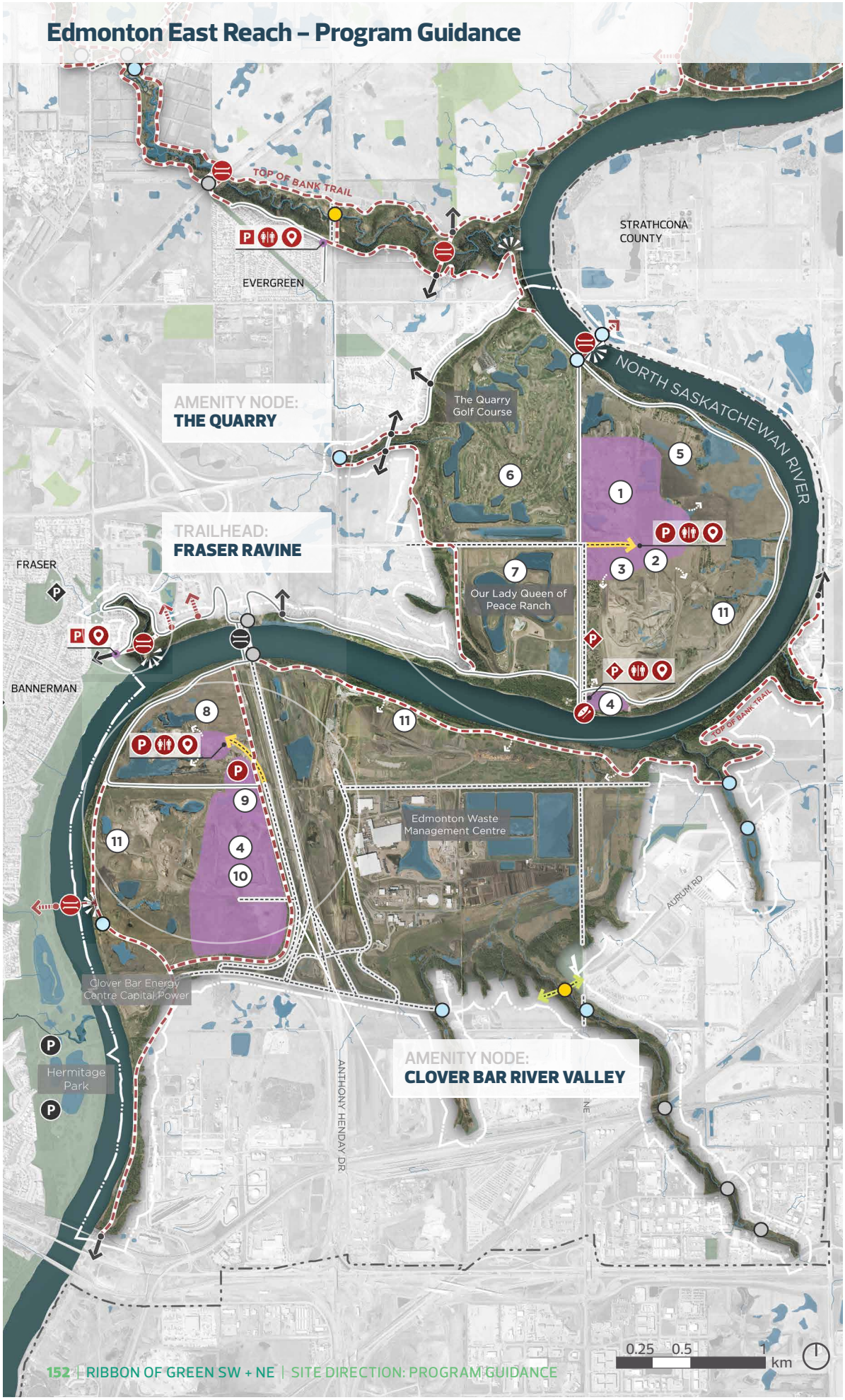
- Wildlife Corridors (incl. Coyotes and Chickadees)
- Wildlife Pinchpoints
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

ECOLOGICAL DIRECTION

- Potential Restoration Areas

* For illustrative purposes only. To be confirmed through later site-specific planning.

Edmonton East Reach – Program Guidance



LEGEND

GREEN SPACE

- Reach Boundary
- Existing Parks
- Future Parks
- Waterbodies

CIRCULATION FEATURES

- Existing Trail
- Proposed Paved Variable Width Trail
- Existing NSP/ASP/ Other Connections
- Proposed NSP/ASP/ Other Connections
- Recreational Trail Opportunity
- Existing Roads
- Planned Roads
- Proposed Access Roads

PROGRAM DIRECTION

- Boat Dock and Hand Launch
- Pedestrian Bridge Crossing
- Parking (City-wide Catchment)
- Parking (Local Catchment)
- On-Street Parking
- Primary Trail Head
- Washroom Facility
- Proposed / Existing
- Areas Proposed for Programming
- Viewpoint
- Wildlife Passages (Existing)
- Wildlife Passages (Potential)
- Corridor Restoration

AMENITY NODE / TRAILHEAD FEATURES

1. Potential event/festival site, mountain bike skills course, and constructed waterbodies
2. Potential ecological interpretive centre
3. Potential active staging area and open field
4. Potential informal day use area with picnic sites
5. Potential in-land watercourse for small boats
6. Golf course (existing)
7. Youth camp (existing)
8. Potential restored wetlands and waterfowl sanctuary interpretive centre (may be extended southward as land uses change)
9. Potential meeting and event facilities
10. Potential educational landscape to showcase sustainable initiatives
11. Potential restoration area with public access and trail connections

- City Boundary

* For illustrative purposes only. To be confirmed through later site-specific planning.

4.11 System-Wide Access

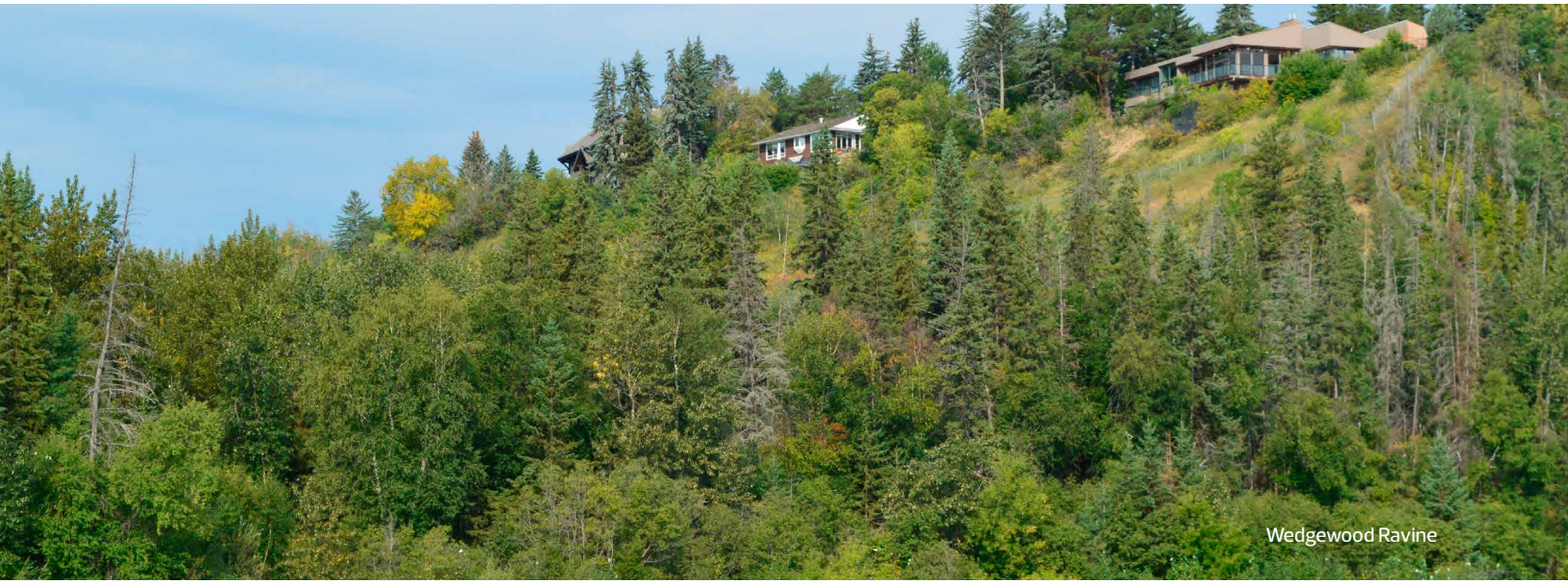
The following two maps show the high-level trail network and North Saskatchewan River access points previously presented in the Program Guidance section, but at a city-wide scale. Map components include:

Trail Network Access

- Existing high-level trail network and connections into adjacent neighbourhoods
- Proposed paved variable width trails and connections into adjacent neighbourhoods
- Proposed and existing pedestrian bridge crossings
- Proposed primary trail heads

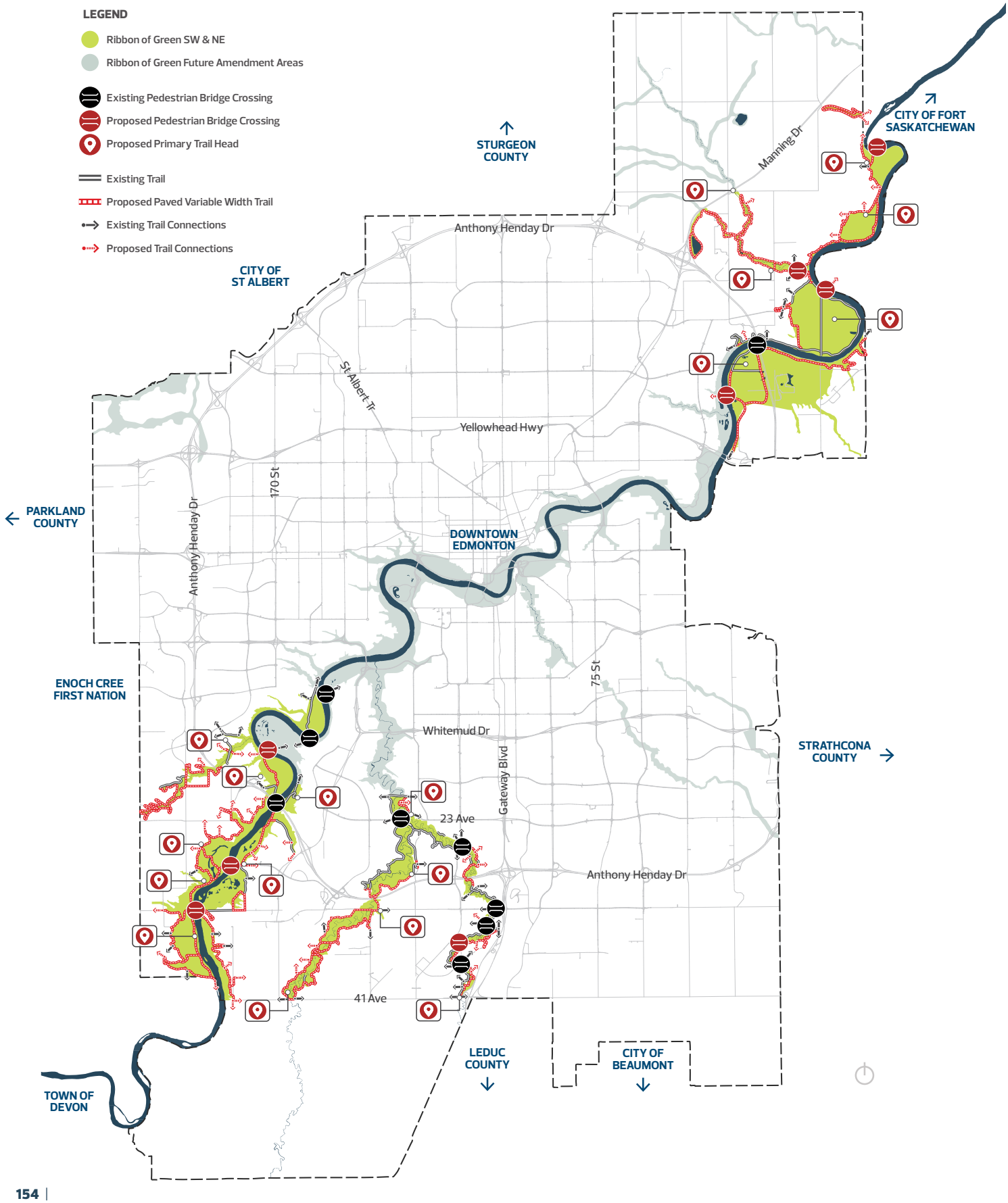
North Saskatchewan River Access

- System-wide existing and proposed boat dock and vehicle launches
- System-wide existing and proposed boat dock and hand launches
- Proposed docks

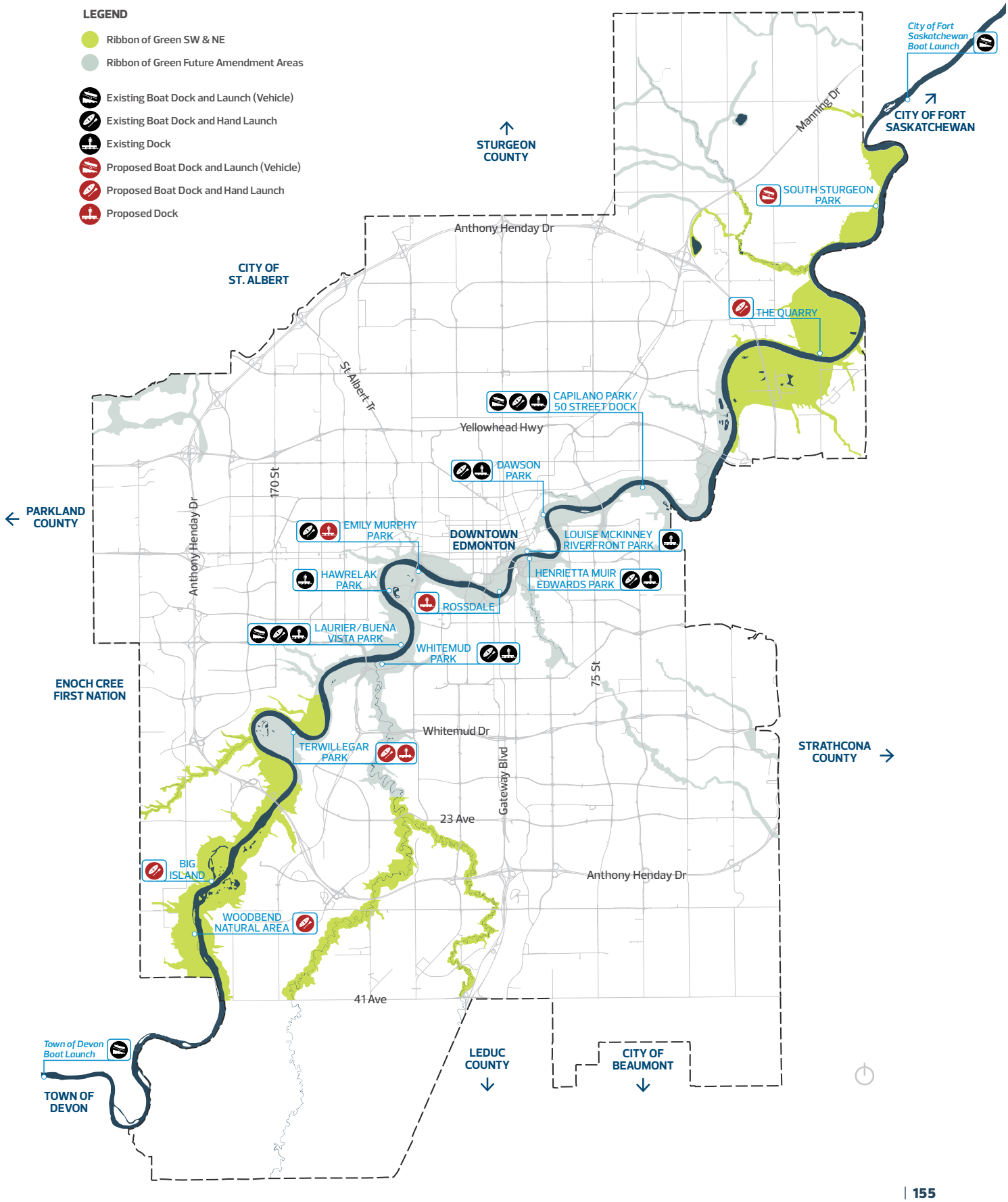


Wedgewood Ravine

RIBBON OF GREEN SW + NE TRAIL NETWORK ACCESS



NORTH SASKATCHEWAN RIVER ACCESS



5 IMPLEMENTATION

5.1 Introduction

The *Ribbon of Green SW + NE* provides a vision, principles, and policies that outline a consistent approach to River Valley and Ravine System management, planning, and development. To do this effectively, a comprehensive implementation program is required. The implementation program addresses the following areas:

- Implementation Actions
- Program Guidance Implementation Principles
  - Land Assembly
  - Site-Specific Planning + Development Prioritization
  - Emerging Opportunities
- Plan Monitoring, Evaluation, and Review
- Plan Monitoring + Evaluation
- Plan Review + Amendments

Henderson Estates + Haddow

5.2 Implementation Actions

The *Ribbon of Green SW + NE* will take time, resources, and partnerships to implement. The following actions are to be completed within the 5-year review period, in order to deliver on this commitment. Through subsequent updates and renewal of the Plan, this section will be reviewed and updated. Additionally, implementation of the *Ribbon of Green SW + NE* will be closely tied to the *Breathe: Edmonton's Green Network Plan* implementation program.

RIBBON OF GREEN SW + NE IMPLEMENTATION ACTIONS:

A. Ribbon of Green Phase 2

- Complete strategic level planning for the remainder of Edmonton's River Valley and Ravine System, including the central core and annexation areas, so that the City has a modernized, comprehensive policy framework to guide management, planning, and development.

B. Monitoring and Reporting Plan

- In alignment with the Green Network Monitoring and Reporting Plan identified in the Breathe Implementation Plan, establish and measure selected indicators on a continuous basis to provide a meaningful understanding of the condition of the River Valley and Ravine System, including ecological health and recreational use. The Monitoring and Reporting Plan will identify the responsibilities, resources, and training for City staff that is required to monitor and report on the indicators created. Partnerships with conservation organizations and research institutions may be explored in order to deliver this monitoring.
- Report Monitoring and Reporting Plan indicators to the public in a clear and concise manner.
- Monitoring + Evaluation of the *Ribbon of Green SW + NE* plan (**Section 5.4.1**) will be developed through this action.

Oleskiw River Valley Park

C. River Valley Trail Guidelines

- Building off the direction for trails within the *Ribbon of Green SW + NE*, and in alignment with trail management practices and standards City-wide, undertake a review of the standards used to construct, maintain, and operate trails within the River Valley and Ravine System. This work may include the development of a non-paved narrow width trail standard, guidelines on when to separate uses, and operational guidelines to manage user-created trails.

D. Stakeholder Identified Areas of Natural and Scientific Interest Program

- Recognizing the significant expertise stakeholders have regarding natural areas and the River Valley and Ravine System, work with stakeholders to develop a framework for the City to receive, track and disseminate expertise.

E. River Access Strategy

- Building off the *River Access Guiding Principles Policy* (C586) and in alignment with the *Ribbon of Green SW + NE*, complete a River Access Strategy that will inform future programming, operations, and infrastructure improvements related to access and activities associated with the river.

F. River Valley Boundary Guidelines

- Develop guidelines that the City can use to assess development applications for private properties adjacent to the River Valley and Ravine System. The guidelines will outline considerations that support the objectives of the *Ribbon of Green SW + NE* plan, including providing access, protecting views, and ecological protection.

G. Open Space Encroachment Strategy

- Develop a strategy to reduce and address encroachments on the River Valley and Ravine System. This will be done as part of a city-wide strategy for encroachments on open space.

H. Land Assembly Program

- Develop a Land Assembly Program for the two *Ribbon of Green SW + NE* study areas that determines land assembly methodology, prioritizes sites, and forecasts available resources over the long term. This may also include working with existing land owners to transition the land from the existing use to the intended future use. The program is ongoing and will reflect the adjacent development status and available resources.

I. Capital Program

- In alignment with the Land Assembly Program, develop a long-term capital program to prioritize and fund the site-specific plans, designs, and studies required to implement the *Ribbon of Green*. The Capital Program will be updated in alignment with the City's capital budget cycle in order to inform capital investment priorities.

J. Indigenous Partnerships

- Work with Indigenous communities to explore opportunities for co-creation and co-management within the System. This program is ongoing.

5.3 Program Guidance Implementation Principles

Strategic planning for the North Saskatchewan River Valley and Ravine System acknowledges that the System's important geological, habitat, structural and functional connectivity should be prioritized. All future plans for the River Valley and Ravine System should include direction for the protection, enhancement, restoration, use, and integration among the ecology, celebration and wellness networks (outlined in *Breathe: Edmonton's Green Network Strategy*) and identify ecological and active transportation connections to the tablelands and citywide green network. This section provides the principles to evaluate and prioritize the direction outlined in **Section 4: Program Guidance**.

5.3.1 LAND ASSEMBLY

As per **System-Wide Policy 2.5.1: Expanding the Ribbon of Green SW + NE**, the City of Edmonton will pursue the protection and designation of private land within the System.

Through a Land Assembly Program, identified in **Section 5.2.2**, the City of Edmonton will use the following principles to achieve a complete open space system:

- Pursue environmental reserve opportunities, whenever possible.
- Evaluate spontaneous acquisition opportunities on a case-by-case basis, using a variety of tools (e.g. conservation reserves).
- Support and coordinate the work of partners, including other levels of government, to acquire or protect land through legal tools and funding support, where the vision and principles of this plan align with the goals of the organization.
- Coordinate assembly timing with existing land uses and planned infrastructure. This involves working with landowners and may include a phased approach to acquisition of a site.

The City of Edmonton recognizes that assembly of private land within the system is a long-term goal, and depends on external factors such as neighbourhood development staging and existing land uses. The City will work proactively with landowners to advance the vision and principles of the Plan, while respecting their rights. In the short and medium term, where land assembly is not feasible, the City will explore interim measures to provide access and improve ecological functioning through private sites, such as easements.

5.3.2 SITE-SPECIFIC PLANNING + DEVELOPMENT PRIORITIZATION

Site-specific plans are required in order to implement the *Ribbon of Green SW + NE*, and will be completed for the elements identified within **Section 4: Program Guidance**. Site-specific plans will vary in scale and scope, and may range from a trail connection to restoration site,

up to an entire river valley reach. Wherever feasible site planning should be comprehensive in area, as this allows the City to plan, develop, and manage the River Valley and Ravine System holistically, ensuring comprehensive environmental review, efficient use of resources, and limited disturbances to the wellness and ecology networks.

Given limited municipal resources, the City must prioritize site-specific plans in order to have the most immediate benefit either by satisfying a local/regional demand, mitigating further ecological impact, or addressing a recreational gap. This will be done through the Ribbon of Green SW + NE Capital Program identified in **Section 5.2-G**, and based on the following prioritization criteria.

Prioritization of site-specific planning and development exercises will consider:

- Ownership status, including whether or not the site is under public ownership and has legal access, or is anticipated to be by the end of the planning exercise.
- Opportunity to fill gaps in the active transportation system by providing connections from and between neighbourhoods.
- The planned and existing population in an adjacent area.
- Monitoring indicators (identified through **Section 5.2-B**), including:
    - The proliferation of unauthorized user-generated trails
    - Safety, including user conflicts
    - Poor or very poor infrastructure condition rating
    - Impact to the functioning or protection of sensitive ecological, historical, or cultural sites
- Opportunities for:
    - Partnerships for development, programming, or management
    - Gaps to be filled in the system (e.g. river access, restoration, programming, recreation, education, interpretation, celebration, accessibility, cultural interpretation)
    - Coordination between other municipal or regional initiatives (e.g. top-of-bank development, shared-use trail development, restoration opportunities, district park development, neighbourhood renewal, utility upgrades)

5.3.3 EMERGING OPPORTUNITIES

It is recognized that opportunities will emerge outside of the site-specific planning process (e.g. recreational trails, interpretive opportunities) that are desirable and align with the Plan. These opportunities will be reviewed based on the policies within this Plan, and if appropriate, undertake an environmental review as required by City policies and bylaws. The City will:

- Review the proposal to ensure that it complies with the policies outlined in this Plan.
- If a full site-specific planning exercise is warranted, direct the opportunity to be included as part of that process, considering the opportunity in the prioritization of the site-specific planning work.

5.4 Plan Monitoring, Evaluation + Review

5.4.1 PLAN MONITORING + EVALUATION

To measure the effectiveness of the *Ribbon of Green SW + NE* plan indicators are required. The City will establish a baseline, develop indicators, and monitor indicators upon approval of the Plan and through the Monitoring and Reporting Plan action identified in **Section 5.2–B**, and in conjunction with broader open space and ecological monitoring.

5.4.2 PLAN REVIEW + AMENDMENTS

Regular reviews will allow planners to evaluate changes in the System and adjust if necessary. This will ensure that the *Ribbon of Green SW + NE* remains relevant over time and reflects adaptive management best practices.

a) Review and amend the *Ribbon of Green SW + NE* every 5 years in order to consider administrative updates, emerging trends, implementation progress, and policy gaps.

b) Increase the review frequency if *Ribbon of Green SW + NE* plan indicators do not show improvement, and in alignment with resource capacity.

c) Undertake administrative updates in alignment with Council approved environmental reviews and site-specific planning in order to ensure the plan is relevant and useful. This may include:

- **i.** Update maps as site-specific planning is completed, when site-specific engagement is conducted and on-the-ground conditions are verified.
- **ii.** Edit the Land Management Classifications delineation as existing uses change or new uses are identified based on detailed field assessments.
- **iii.** Define the sub-classifications during site-specific planning and update the maps contained in here to reflect those plans.

Larch Sanctuary

A GLOSSARY

Access Easements: An access easement is a legal agreement between a landowner and the City to allow public use or access through privately-owned land.

Active Recreation: Activities, sports, or events that require a developed space with supporting infrastructure and often require specialized parkland development and management. The emphasis is placed on providing opportunities for community gathering, games, events, and sports. Compared to passive recreation, active recreation requires more intensive management and maintenance, and often results in higher costs. Typical uses include fields, play features, golf courses, skating rinks, event spaces, urban agriculture, and motorized boat launches.

Active Transportation: Travel by means of non-motorized locomotion (e.g. walking, cycling, roller blading, skateboarding, cross-country skiing, canoeing, kayaking, rowing).

Agriculture: The cultivation of animals, plants, fungi, and other life forms for food, fiber, biofuel and other products.

Amenities: These are structures or features that improve the physical, psychological, or social comfort of an area. In the System, amenities include seating, fire pits, warming shelters, etc.

Amenity Node: Locations within the River Valley and Ravine System where activities, amenities, facilities and sometimes buildings are co-located and concentrated. This focuses the most intensive activities, facilities, and structures in one key destination that facilitates various activities to minimize impacts on more ecologically sensitive areas.

Bicycle Parking: Rack, railing, locker or other structurally sound device to secure one or more bicycles in an orderly fashion.

Biodiversity Inventories: An inventory of the variety and variability of species within an area.

Boardwalks: A wooden walkway across sand, marshes, or other waterbodies.

Buffer: An area of land separating two distinct land uses, or land types, that softens or mitigates the effects of one land use, or land type, on the other.

Campground: Areas that provide seasonal short-term use for holiday trailers, motor homes, tents, campers and similar recreational vehicles, and are not used as year-round storage or accommodation for residential use.

City-wide attractions: Facilities that draw visitors from across the city. They are often unique attractions that are not located elsewhere in the city or are relatively common or popular attractions but the System setting makes them an attraction (e.g. golf courses).

Urban Gardens (Community Gardens): The practice of growing and raising food, either as a group or as an individual, in a shared garden space. Community gardens are often located on public lands or undeveloped private land and are the result of a group of people coming together to make land available for gardening. Community gardens often contain raised beds, allotment plots, tool sheds, water access, public art and educational signage, among other features.

Compatible Uses: Uses lists under each Land Management Classification and Sub-classification. The presence of a use on these lists does not mean it is automatically appropriate, it means it can be considered and evaluated during subsequent site-specific planning. Before a use is planned for a site, it must be evaluated through a public engagement process and its potential ecological, cultural and recreational impacts studied to determine if it is appropriate.

Connectivity: The degree to which a landscape facilitates or impedes wildlife movement through natural areas. It also refers to a connected trail network. Connectivity may be provided through corridors, stepping stones, or compatible adjacent land uses.

Conservation: The sustainable use and management of natural resources including wildlife, water, air and earth. Compared to **Preservation**, Conservation does not mean keeping areas pristine (or as close to pristine as possible), instead it protects ecological functioning while accepting that development is necessary to facilitate public access, appreciation, recreation and use in balance with ecological needs.

Conservation Easements: Conservation easements are voluntary legal agreements between landowners and the City or an environmental stewardship organization, in which the land owner agrees to property restrictions in order to protect the natural values of the land.

Core Area: A habitat area capable of supporting entire populations of plants, animals, and associated ecosystem functions.

Corridor: A linear connection that facilitates through-movement across the landscape, such as greenways and utility corridors for animals and humans. Some corridors are contiguous (physically connected) while others are a linear series of spaces (stepping stones).

Corridor Restoration: Restoration of corridor areas of known present and future ecological value to support wildlife movement, habitat connectivity, and biodiversity.

CPTED: Crime prevention through environmental design (CPTED) uses urban design tactics and interventions to deter criminal behaviour.

Dark Sky Practices: Dark sky practices protect natural areas from the impacts of light pollution by limiting the number and type of lighting.

Day Camps: Day camps provide activities in a social setting for school-aged children during the day. In a river valley and ravine setting, this means a facility or a structure in an amenity node for children to gather, eat lunch and receive instruction. They can then embark on hikes, bicycle rides, or other activities throughout the System, appropriate to the Classification. It is important that a parking facility, which can potentially accommodate a school bus, is located nearby.

Day-Use Areas: Day-use areas provide a staging function for further River Valley and Ravine System activities. They are located near access points (either vehicular or other) and include seating and signage. Day-use areas may provide washrooms, picnic tables, and other facilities to accommodate longer stays.

Desire-line: A desire-line is a path created through erosion or wear, and caused by human or animal movement.

Development Footprints: An area impacted by any development activity. Hardscape, access roads, parking lots, facilities, structures, and construction impact areas are all included in the development footprint.

Dogs (on-leash): Dogs must always be on a leash when on public property and outside of a designated off-leash area.

Dogs (off-leash): Shared use and relatively undeveloped areas that may have fencing and special measures to protect wildlife and ecosystems. Off-leash areas may also accommodate a small neighbourhood fenced dog park, which is a fenced area that serves residential neighbourhoods within walking distance and within a conservation area. Sizes and surfacing options vary depending on level of use. These areas can include small, durable "urban dog parks" or "dog runs".

Drainage Outfalls: A discharge point for a wastewater/stormwater stream into a body of water.

Ecological Functioning: The joint effects of all processes (fluxes of energy and matter) that sustain an ecosystem over time and space through biological activities. Given the dynamic nature of biological systems, the balance may shift within a given natural range.

Ecological Integrity: The ability of an ecosystem to support and maintain ecological processes and a diverse community of organisms.

Ecological Resilience: The capacity of an ecosystem to respond to a perturbation or disturbance by resisting damage and recovering quickly.

Ecological Stewardship: Responsible use, care, and protection of the natural environment through conservation and sustainable practices.

Ecologically Sensitive Area: Areas of land or water that are particularly sensitive or vulnerable to ecological disturbance, such as fragile grassland habitats or riparian areas prone to erosion.

Ecosystem Functions: A biological, geochemical, or physical process that takes place within an ecosystem.

Edge Effects: Changes in population or community structures that occur at the boundary of two habitats.

Educational Programming: The placement of interpretive elements and features to educate the public about a site, its ecology or history.

Emergency Vehicle Access: An access route that can accommodate an emergency vehicle, it may or may not accommodate other vehicles.

Environmental Reserve: A land dedication that occurs during the subdivision of private land, where the ownership of environmentally sensitive land is transfered to the City. This includes swamps, gullys, ravines, coulees, natural drainage courses, land subject to flooding or land not less than six meters abutting a body of water.

Environmental Review: Environmental review is an overarching term for the ecological and technical reviews required to satisfy the requirements of the *North Saskatchewan River Valley Area Redevelopment Plan* (Bylaw 7188, as amended).

Essential Infrastructure: Essential Infrastructure are uses and facilities deemed necessary for a location. The parameters for what types of infrastructure can be considered essential are outlined in Land Management Classification policy within this plan and further defined during the Environmental Review.

Facilities: These are places or equipment that are provided for a particular purpose and/or activity. In the River Valley and Ravine System, facilities include picnic areas, trails, boat launches, buildings, etc.

Fee Simple Acquisition: In the System, a fee simple acquisition transfers full ownership of the property to the City after they purchase the land.

Fitness Courses: Programmed courses that include equipment to facilitate specific exercises. The equipment can be purpose-built or incorporate natural materials; however, signage is required to educate participants on how to use the equipment and for what purpose.

Foot-Based Travel: Foot-based travel includes hiking, walking, jogging, etc. and includes those who use mobility aids.

Gathering: Gathering, in the River Valley and Ravine System context, means providing facilities that can accommodate groups of people of different sizes. Small gathering spaces typically provide space for six people or less (the amount of people that fit around a picnic table). Facilities that accommodate gathering include: picnic shelters, event spaces, flexible fields ,etc. Each of these facilities can vary in size based on the anticipated demand and capacity to limit ecological impacts.

Grade Reversals: Grade Reversals are short sections of trails that change from climbing to descending to climbing, this shortens the water flow path and enhances the user experience.

Green Buildings: Green buildings strive to balance environmental, economic, and social considerations through their design, construction, and operation. Key considerations include energy, water, and resource efficiency; occupant comfort and well-being; site development and community context; and the economics of building construction and operation. In comparison to conventional buildings, green buildings take advantage of natural processes to generate less waste, less pollution, and reduce their overall environmental footprint.

Greenhouses: Greenhouses refer to indoor structures used for the propagation, storage, and sale of plants, as well as the sale of products used for landscaping or gardening purposes.

Ground-Truth: The process of confirming the results of an analysis through direct on-site observation.

Hand Boat Launch: Facilities that allow people to walk their canoe, kayak or other vessel to the water's edge, place the water craft in the water and board without the aid of a vehicle and/or trailer.

Hazard: Condition or situation that could cause harm to people, property or the environment. Common hazards include erosion, flooding or faulty equipment.

Hydrologic Regime: Partial and temporal variations of the incoming and outgoing water from a region, including rainfall, evaporation, runoff, and seepage.

Imminent Risk: In the River Valley and Ravine System context, imminent risk refers the to potential damage of a significant ecological or archaeological site from human interference. This can be on private land where the landowner is disturbing intact natural areas through construction, vegetation removal or other disturbances. It can also be on public land where users are damaging areas by cutting trails, creating clearings, digging, etc. without the City of Edmonton's knowledge.

Indigenous Traditional Use: In this document, traditional uses mean land uses, activities, and cultural modifications that Indigenous people historically practiced and continue to practice in relation to their natural environment. Traditional uses include (but are not limited to) sacred and ceremonial sites, historic trails and other storied places, burial grounds, culturally modified landscapes or features (e.g. rocks, trees) and harvesting activities such as hunting and trapping, fishing, and gathering. It is also important to note that Traditional Use Sites, as defined in the Historical Resources Act, include historic cabins, historic cabin remains, cultural or historical community campsites, ceremonial sites/spiritual sites, gravesites, historic settlements/homesteads, historic sites, oral history sites, ceremonial plant or mineral gathering sites, historical trail features and sweat/thirst/fasting lodge sites.

Invasive Species: Species that are not native to an area and have a tendency to spread and cause damage to the environment, economy, or human health.

Land Dedication: Land dedication is a method of government land acquisition through subdivision where land is transfered to the City from the private land owner for a public purpose.

Land Management Classifications: Management Classifications, developed from the Land Management Classifications in the 1992 *Ribbon of Green Master Plan*, direct the appropriate level of development, management, and operation for the River Valley and Ravine System. They use current site conditions to describe the future desired state of an area.

Land Management Sub-Classifications: The Sub-classifications under the Conservation and Active/Working Landscapes provide more precise direction that allow these two Classifications to be tailored to existing uses and conditions. These are spatially delineated at the site-specific plan level.

Level of Acceptable Ecological Functioning: The ecological variation that is considered acceptable, determined during the site-specific planning processes.

Low-impact Camping: Walk-in, bike-in, or kayak/canoe-in camping with minimal impact on the surrounding area, and with minimal amenities.

Low-impact Development: Planning, engineering, and design approaches to manage stormwater runoff as part of green infrastructure. It emphasizes protection and use of on-site natural features to protect water quality.

Management (ecological): These are maintenance and operational behaviours that either improve or do not cause additional harm to the System. This includes environmentally friendly maintenance techniques as well as limiting programming footprints and activities.

Market Gardens and Stalls: The practice of growing a range of fresh produce, herbs, and other foods for sale to restaurants and other food markets.

Mechanized Access: Mechanized access (e.g. funiculars and inclined elevators) involve motorized solutions to improve access into the River Valley and Ravine System to make it more accessible to people of all ages and abilities.

Metropolitan Park: Large feature parks intended to provide value to residents and visitors throughout Edmonton and the greater Metro region. Metropolitan Parks may have a variety of functions and uses, but usually contain features and amenities that are not available elsewhere in the City.

Mitigation: These are design initiatives to minimize impacts to ecological health. Mitigation measure include light baffles, permeable paving, low-impact design, etc.

Multi-functional: Able to accommodate multiple services or uses (functions) simultaneously.

Natural Areas: Areas of land or water that is dominated by native vegetation in naturally occurring patterns, including wetlands, grasslands, woodlands, or riparian areas.

Nature Play Features: Alternative play features that use natural elements to inspire active and creative outdoor play, and connect people to nature. They are predominantly created with natural elements such as sand, water, wood, landforms, plants, and boulders.

Non-Developable Upland Area: The non-developable upland area is the land between the Urban Development Line and the River Valley and Ravine System's top-of bank or crest that cannot be used for urban development, and is protected as Environmental Reserve. This area is unstable and provides public access for circulation, amenities, and emergency response.

Non-Paved Narrow Width Trail: Non-paved narrow trails (e.g. single track) through ecologically sensitive areas or challenging terrain with limited accessibility. These trails are only appropriate for foot-based travel.

Non-Paved Variable Width Trail: Non-paved trails, with varying widths, that can accommodate a range of activities, including walking, cycling, and track-set cross-country skiing through natural environments with limited to moderate accessibility. Trail width and surfacing will be determined through site-specific planning.

Open Space: An area of outdoor land or water that is publicly owned or publicly accessible, including municipal parks, civic spaces, provincial or federal parkland, institutional campuses, and other public spaces.

Outsloped Tread: An outsloped tread is one that is lower on the outside or downhill side of the trail than it is on the inside or bankside. Outsloping lets water sheet across the trail naturally.

Park Operations Yard: Park operations yards are facilities that store maintenance equipment and provide space for parks staff to work from.

Parking Areas: In the River Valley and Ravine System, parking lots have limited impermeable material (unless needed because of high anticipated use), substantial tree cover and plant material, and direct surface runoff toward landscaped basins, thus encouraging on-site stormwater management and eliminating or reducing the need for mechanical drainage connections.

Passive Recreation: Passive recreation occurs on largely undeveloped spaces that require minimal development, with the exception of some surface treatments (e.g. trails, turf.) and support amenities (e.g. picnic tables, waste/recycling receptacles, signage). It also places an emphasis on the protection of wildlife and the environment, quiet activities for individuals and small groups, and accommodates less structured recreational activities, which require little or no specialized parkland development and management. The spaces and amenities operate on a first-come, first-serve basis with minimal visitor facilities and services available. It involves casual activities and the pursuit of hobbies with no adverse impact on the natural environment, such as walking, jogging, hiking, nature walks, wildlife viewing, bird watching, photography, cross-country skiing, rustic picnic areas, canoeing, kayaking, horseback riding, bicycling, etc.

Paved Variable Width Trail: Paved trails, either shared-use or separated, that support active transportation and regional connections with maximum accessibility for people of all abilities. Trail width may vary, as determined through site-specific planning.

Pre-Field Investigation: A desktop review of site conditions to prepare and consolidate information before conducting a site visit.

Preservation: Sustaining a space or resource. In contrast to Conservation, these areas are largely maintained in their present condition to prioritize ecological health over recreational use. Limited public access in the form of foot-based travel on non-paved trails is accommodated to provide people the opportunity to appreciate nature and minimize the risk of further user-created trails.

Public Park: The development of public land specifically designed or reserved for the general public for active and/or passive recreational use, includes all natural and man-made landscaping, facilities, playing fields, buildings and other structures that are consistent with the general purposes of public parkland, whether or not such recreational facilities are publicly operated or operated by other organizations pursuant to arrangements with the public authority owning the park. Typical uses include tot lots, band shells, picnic grounds, trails, landscaped buffers, play features, and water features.

Rehabilitation: The blanket process of making a site suitable for some manner of human use (including such practices as agriculture, forestry, and urbanization).

Research and Conservation Related Activities: Activities conducted by organizations, researchers, scientists and non-profit groups to study specific ecosystems in their natural state or human impacts on these systems. They may involve site visits, recordings, and equipment.

Restoration: A legally and technically specific term for returning a disturbed site to a more-or-less natural condition.

Restricted Access: This refers to areas within the River Valley and Ravine System where only specific uses and activities are permitted.

Riparian Areas: The banks or boundaries of waterbodies, including rivers, creeks, streams, and wetlands.

River Access: The provision of shoreline infrastructure that allows individuals touch the water or go into it for activities (e.g. swimming, fishing, canoe/kayak launching).

Separated-Use Trail: A trail that separates slower moving modes (e.g. walking) from faster moving modes (e.g. bicycling) to reduce user conflicts.

Significant Archaeological Sites: Locations that have known archaeological resources or are likely to contain archaeological resources.

Significant Cultural Sites: Locations that hold a historic and/or current significance for Indigenous people.

Significant Historic Sites: Specific, post-contact historic sites and locations.

Stormwater Management Features: Specific features of stormwater management, which is a comprehensive approach to the planning, design, implementation and operation of stormwater drainage infrastructure.

Tablelands: The tablelands are all areas within Edmonton that are outside the River Valley and Ravine System, beginning at the Urban Development Line.

Top-of-Bank: Where the slope of the river valley or ravine meets the tablelands. This is not to be confused with the urban development line, which demarcate the boundary between developable upland area (urban development) and non-developable upland area or Environmental Reserve.

Traditional Ecological Knowledge (TEK): A cumulative body of knowledge, know-how, practices, and representations maintained and developed by Indigenous people over a long period of time. TEK includes spiritual relationships, historical and present relationships with the natural environment and the use of natural resources. TEK is generally expressed in oral form and passed on from generation to generation through story telling and practical teaching.

Trails: Refers to paved or non-paved routes for recreational or active transportation.

Trail Density: Refers the amount of kilometres of trails within each square kilometre.

Trail Destinations (stacked loops, hiking routes, interpretive trails): Routes that guide the user through a circuit or loop through or to a place of interest, opposed to trails that are intended as connections.

Trail-Based Recreation: The variety of activities that can take place within the confines of a trail, often involving traveling through a space instead of stationary pursuits. Examples include hiking, bicycling, cross-country skiing, etc.

Trailheads: Locations with amenities such as benches, signage and potentially washrooms, shelters and other facilities that allow users to prepare and orient themselves before embarking on a trail.

Trailhead (local): A local trailhead provide System access to the neighbouring community and has few amenities (likely just a sign, waste receptacle and/or bench). It may or may not have parking.

Trailhead (primary): A primary trailhead provides district, city-wide and/or regional access to the System and includes multiple amenities and parking. It may or may not include interpretation materials, washrooms and other features.

Turfed Areas: Fields with native or non-native ground cover that facilitate informal activities such as pick-up sports, sun bathing, picnicking, events, etc.

Turn Around: Components of the road infrastructure that allow a vehicle to turn around without reversing. They should be designed to accommodate anticipated activities, especially where trailers are required.

U-Picks: Farms that allow members of the public to harvest their own produce for a fee.

Universally Accessible: Ideas and design that create environments and facilities that are accessible to older people, people without disabilities and people with disabilities.

Urban Development Line: The Urban Development Line (UDL) is a scientifically-derived line marking the boundary between developable upland area (urban development) and the River Valley and Ravine System.

Unstructured Play: Unstructured play provides children with opportunities to direct their own activities. They are often self-motivated and spontaneous and do not require specific equipment.

Urban Agriculture: The practice of cultivating, processing and distributing food in and around towns and cities. It involves applying intensive production methods, and (re)using natural resources and urban wastes to yield a diversity of crops and livestock. Urban agriculture could be undertaken in backyard gardens, rooftop gardens, community gardens and urban farms.

Urban Services: Uses, buildings and facilities that provide municipal services such as waste management, electricity generation, stormwater treatment, etc.

User-Created Trails: Trails created by individuals that are not formally planned for, maintained of acknowledged by the City.

Vehicular Access: Opportunities for people to drive within the river valley or ravine; these opportunities may offer drop-off opportunities or include parking.

Viewpoints (informal non-constructed): Locations with minimal or no infrastructure and may include only a fence, signage and natural clearing. These viewpoints are not meant to be maintained.

Viewpoints and Platforms (constructed): Structures created to facilitate the appreciation of significant views. They can include a cantilevered deck, tower or other structure, and should be maintained over time.

Warming Huts: Structures that gather and retain heat from the sun using passive solar principles for heating without the need for electricity. The hut's windows are oriented south so that they capture the heat and retain it in the thermal mass of concrete floors while insulation prevents the heat from escaping.

Wayfinding: Signage, cartographic materials, and design techniques that provide information about the location, orientation and surroundings in order to support navigation around the city.

Wildlife Compatible Fencing: Fences designed to facilitate wildlife movement and not hurt or injure wildlife.

Working Landscapes: Uses dependent on the landscape to fulfill their function in terms of extracting material or treating material. For example, a quarry extracts rock and a waste centre stores and treats waste on-site.

Wildlife Passages: Structures that are constructed to facilitate wildlife movement between significant natural areas of known present and future ecological value. These structures include culverts, bridges, and overpasses, whose size and configuration are designed to accommodate specific types of wildlife most likely to be found in the area in question.

Xeriscaping: Landscaping that requires little or no irrigation.