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Parker Lands Major Re-Development Site in Relation to Ecologically Significant Natural Lands Program Criteria



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EXECUTIVE SUMMARY

Gem Equities Inc. (Gem Equities) owns a parcel of land within the northern area of the Parker Lands Major Re-Development Site with plans to develop this property into a transit-oriented residential community development project (TOD). The size and type of development of the lands owned by Gem Equities in association with the Parker Major Re-Development Site (Project Study Area) does not fall under the Provincial Classes of Development and therefore does not require approval under the *Manitoba Environment Act* or *Canadian Environmental Assessment Act* (CEAA) and does not require an Environment Act License to proceed with development.

The City of Winnipeg has developed an Ecologically Significant Natural Lands (ESNL) Strategy & Policy to provide a framework for areas of habitat that have been identified as important for the creation of a vibrant and healthy city. In 2005, when the Project Study Area was owned by the City of Winnipeg, a natural habitat inventory was conducted by the City of Winnipeg Naturalist Services Department, within the context of the City of Winnipeg's Ecologically Significant Natural Lands (ESNL) Strategy. Gem Equities purchased the Project Study Area from the City of Winnipeg in 2009 and recently conducted intensive environmental surveys (spring and summer 2016) within the Project Study Area, to document the avian, mammal, herptile, and floral species present and to assess for the presence of species at risk.

Using these data, from both the 2005 and the 2016 surveys, the Parker Lands Major Re-Development Site is assessed in relation to the multi-criteria used for the ESNL evaluation process to determine the current potential value of the Project Study Area as an ESNL site. The determination of an ESNL site within the City of Winnipeg is based on four foundational pillar criteria of the ESNL assessment process being habitat quality, rarity of species, ecological services, and human interaction. These four pillar criteria are evaluated to determine the priority of a site for ESNL protection.

The Project Study Area is comprised of wet meadow, grasslands, and aspen woodlands. These habitat types are characteristic of the historical habitat types found within the Prairies Ecozone and the Winnipeg Ecodistrict. Given the presence of these habitat types, the site provides certain ecological services. Within the wet meadows, the site acts to improve water quality, provides stormwater retention, and filters and retains nutrients. The aspen woodlands influence microclimates, improve air quality, decrease net greenhouse gas emissions, and both the meadows and woodlands provide some habitat potential to birds and mammal species.

Overall, however, the habitat quality within the Project Study Area is substantially degraded due to significant saturation of a majority of the footprint and extensive human use of the site. The Project Study Area has been heavily influenced with a wide-spread human and dog walking trail network. There has been substantial dumping of garbage and debris and use of the site for human shelter. The grasslands have been mowed and the site has been used for the dumping of yard and grass clippings. The trail network exhibits signs of bicycle and vehicle use. These man-made disturbances have introduced and encouraged the spread of non-native, invasive

plants and weedy species. Purple loosestrife and European buckthorn were both found to be common in the willow/sedge wet areas and the aspen woodlands within the Project Study Area. Both these invasive plant species are listed as Category 2 (ISCM) and as Principal Invasive Aliens. Both of these species produce many seeds that are dispersed by birds and animals. These invasive plants can be detrimental to adjacent green spaces within the city as avian and terrestrial wildlife could spread these invasive seeds into other City greenspace areas.

During both the 2005 and 2016 environmental survey work, the Project Study Area was not identified to contain any unique ecological features. There have been no mammal, bird, herptile, or plant species at risk identified within the Project Study Area.

The Project Study Area is not distinguished as a historically significant heritage location. However, the site does hold cultural recreational value to local residents as a human and dog walking area. The site arguably provides the community with character helping to define the neighbourhood. This site would not be considered to increase neighbourhood residential property values or enhance buyers appeal to the area. The site does not attract tourism to the city.

Overall, the Project Study Area has limited quality functional habitat for urban wildlife given it is fragmented, lacks connectivity to adjacent habitat, and lacks proximity to riparian areas. The Project Study Area is a remnant habitat patch that is surrounded by residential and commercial land uses offering no habitat corridor options. Within the Project Study Area, the habitat is degraded with an extensive trail network, severing the larger habitat block into a series of smaller habitat patches creating numerous new edges and disjoining the habitat continuity. The degree of human and dog activity within the Project Study Area discourages the use of the area for many wildlife species.

Based on the four pillars of the ESNL evaluation process, while the Project Study Area is reflective of the historical habitat types found in the area and does function to provide certain ecological services, overall, the Project Study Area is considerably degraded and falls short on several key evaluation criteria used for the ESNL program.

1 INTRODUCTION

Gem Equities Inc. (Gem Equities) owns a parcel of land within the northern area of the Parker Lands Major Re-Development Site with plans to develop this property into a transit-oriented residential community development project (TOD). The size and type of development of the lands owned by Gem Equities in association with the Parker Major Re-Development Site (Project Study Area) does not fall under the Provincial Classes of Development and therefore does not require approval under the *Manitoba Environment Act* or *Canadian Environmental Assessment Act* (CEAA) and does not require an Environment Act License to proceed with development. In 2005, when the Parker Lands Site was owned by the City of Winnipeg, a natural habitat inventory was conducted by the City of Winnipeg Naturalist Services Department, within the context of the City of Winnipeg's Ecologically Significant Natural Lands (ESNL) Strategy & Policy. Gem Equities purchased the land from the City of Winnipeg in 2009 and, despite that the development of the site does not require an Environment Act License, recently conducted intensive environmental surveys (spring and summer 2016), to document the avian, mammal, herptile, and floral species present within the Project Study Area and to assess for the presence of species at risk.

The following report provides an overview of the findings from both the 2005 and 2016 environmental surveys conducted within the Project Study Area. Using these data, the Project Study Area is assessed in relation to the multi-criteria used for the ESNL evaluation process to determine the current potential value of the Project Study Area as an ESNL site.

2 ECOLOGICALLY SIGNIFICANT NATURAL LANDS STRATEGY & POLICY

The City of Winnipeg has developed an Ecologically Significant Natural Lands (ESNL) Strategy & Policy to provide a framework for areas of habitat that have been identified as important for the creation of a vibrant and healthy city (ESNL, 2007). The determination of ESNL site within the City of Winnipeg is based on a number of important criteria including:

- lands and/or waters with natural or native biotic communities representative of the natural ecology of the area;
- lands where significant animal or bird communities reside;
- lands where species at risk reside;
- lands of cultural or historical significance;
- lands which offer habitat connectivity for wildlife; and
- lands adjacent to waterways that contain vegetation, i.e. riparian areas (ESNL, 2007).

The pillar criteria of the ESNL assessment process are habitat quality, rarity of species, ecological services, and human interaction. These four pillar criteria are evaluated to determine the priority of the site for ESNL protection. The City of Winnipeg (ESNL, 2007) emphasizes the distinction between all natural habitat sites and an ESNL site, which are specific natural habitat areas that the City of Winnipeg has or plans to actively protect, either through the designation of

the land as a parkland, through a Conservation Easement, or via an Ecological Gift. The City of Winnipeg promotes the ESNL program for a variety of ecological and cultural reasons including:

- ESNL lands may preserve natural heritage remnants;
- natural lands shape the character of a community and help to define neighbourhoods;
- ESNL sites potentially increase residential property values, buffer communities against noise and traffic, and enhanced buyers appeal for a particular neighbourhood;
- ESNL sites offer many ecological benefits such as: potential protection against erosion, recharging groundwater, improving water quality, decreasing water treatment costs, mitigating flooding, moderating temperature, decreasing net greenhouse gas emissions, filtering and retaining nutrients, improving air quality, and providing wildlife habitat;
- ESNL areas increase human recreational opportunities; and
- ESNL areas attract tourism to the city.

The City of Winnipeg's determination of whether an area becomes an ESNL site is initially based on an inventory conducted by the City of Winnipeg Naturalist Department. The inventory of an area is based on a broad four tier habitat classification grade of A, B, C, or D, with "A" representing the highest quality habitat and "D" representing the lowest habitat quality grade. These habitat classification grades are based on five basic classes of natural habitats being; Riverbottom Forest, Tall Grass Prairie, Aspen Forest, Oak Forest, and Wetlands. All of these natural habitat communities are considered habitats at risk by the Canadian Wildlife Service and the World Wildlife Fund, except for aspen forests (ESNL, 2007).

Overall habitat quality is defined by the ESNL program as habitat that is pristine, of a significant patch size, characterized by the presence of few exotics or invasives, with the existence of unique ecological features. The habitat quality of a site is higher if the site is in an area that may act as a staging or migration corridor and/or is a site that provides overall habitat connectivity with another site. The rarity of the communities present (i.e. communities that house the presence of S1-S3 species) as well as the ecological services of the site are also factors in the determination of the priority of a site for the program. Natural habitat locations receiving a grade "B" or higher are considered sites worthy of consideration for the ESNL program (ESNL, 2007).

According to the City of Winnipeg ESNL grading system, "A" and "B" grade habitat rankings are provided to locations considered to have a plant community reflecting the natural heritage of the area (ESNL, 2007). However, the City of Winnipeg places higher significance on a grade "A" and "B" prairie habitat than a grade "A" and "B" aspen forest given that quality prairie landscapes are endangered, whereas aspen forest landscapes are not (ESNL, 2007). Basing the multi-criteria evaluation process for ESNL assessments on a current inventory of the natural area is an important requirement of the program, ensuring any natural and human caused changes that have occurred since the last inventory are accurately reflected (ESNL, 2007).

Over and above the natural habitat grade (the quality and rarity) of a site are other important factors when considering the merit of an area as an ESNL site. Cultural value, such as areas that contain significant historical sites, that support recreational use, and that provide a variety of ecological services are also key aspects of consideration (ESNL, 2007).

3 PARKER LANDS MAJOR RE-DEVELOPMENT SITE

Gem Equities Inc. (Gem Equities) owns a parcel of land within the northern area of the Parker Lands Major Re-Development Site (**Map 1**) with plans to develop this property into a transit-oriented residential community development project (TOD). The size and type of development of the lands owned by Gem Equities in association with the Parker Major Re-Development Site does not fall under the Provincial Classes of Development and therefore does not require approval under the *Manitoba Environment Act* or *Canadian Environmental Assessment Act* (CEAA) and does not require an Environment Act License to proceed with development.

In 2005, when the site was owned by the City of Winnipeg, the Naturalist Department conducted a Natural Habitat Inventory within the Project Study Area (City of Winnipeg unpublished documents, available upon request). At that time, the results of the inventory ranked a portion of the Project Study Area, Site 1032, as “A” grade habitat and a portion of the Project Study Area, Site 550, as “B” grade habitat (**Map 2**). Of the total footprint area of 19.22 hectares, only three hectares, 18%, of the footprint area are classified as grasslands.

Despite that the development of the Project Study Area does not require an Environment Act License, during the spring and summer of 2016, Gem Equities hired an independent environmental consultant company, EcoLogic Environmental Ltd. (EcoLogic) to conduct impartial intensive science-based environmental survey work within the Project Study Area. The biophysical environmental survey work conducted was designed to document the avian, mammal, herptile, and floral species present within the Project Study Area and to assess for the presence of species at risk. Results of the science-based environmental surveys identified no species at risk for birds, mammals, or herptile species. Overall, very little mammal activity was identified and the bird species identified were common species. There were no listed plant species, or Manitoba Conservation Data Center (MBCDC) S1-S3 plant species identified.

The survey work identified that the Project Study Area currently appears to be a drainage basin for neighbouring properties with adjacent lands graded to drain into the Project Study Area. As a result, the majority of the property footprint is substantially saturated, diminishing the quality of the habitat for a variety of species.

Further, the Project Study Area is characterized by an extensive trail network with invasive and weedy species spreading outwards from each trail, occupying just under 10% of the total footprint area (Ecologic, 2016b). Over and above the trail network, the Project Study Area has been used considerably for the dumping of garbage and waste and appears to support a number of areas that may have been used by homeless people for shelter. **Map 3** presents the trail network in combination with the garbage, debris, and squatter sites overlain. The total

footprint area comprised of habitat lost due to the trail network, mowing, garbage and squatter is 2.65 ha (13.77%) of the total footprint area (EcoLogic, 2016b).

Invasive species such as Purple loosestrife and European buckthorn were both found to be common in the willow/sedge wet areas and the aspen woodlands within the Project Study Area. Both of these species are listed as Category 2 (Invasive Species Council of Manitoba) and are Principal Invasive Aliens (White et al., 1993). Both of these species produce many seeds that are dispersed by birds and animals. As such, these invasive plants could be detrimental to adjacent green spaces within the city as avian and terrestrial wildlife species could spread these seeds into other greenspace areas.

A number of patches of swamp milkweed (*Asclepias incarnata*) were observed in the middle and north areas of the Project Study Area. These plants provide critical habitat and food for Monarch butterflies (*Danaus plexippus*) and should be preserved or replaced wherever possible, in accordance with the proposed Environment Canada Species at Risk Act Management Plan for the Monarch (Environment Canada 2014).

The wetland areas were categorized as a mix of Class I, II, and III, with one potential Class IV wetland (based on the Stewart & Katrud, 1971 classification system); however, all of the wetland areas were degraded by garbage dumping and woody species encroachment.

For additional information regarding the 2016 survey methodologies and findings, please see the GEM Equities Oak Grove Development Project: Biophysical Technical Report (Ecologic, 2016b).

4 PARKER LANDS SITE IN RELATION TO THE ESNL PROGRAM

In 2005, the Parker Lands Major Re-Development site was inventoried by the City of Winnipeg Naturalist Department. As noted, at that time, portions of the property footprint were allocated an “A” grade while the remaining portions were allocated a “B” grade. Eleven years later, in 2016, science-based biophysical surveys were conducted to provide a recent assessment of the property habitat quality and to assess for the presence of species at risk. Findings of the 2016 survey indicate there were no mammal, bird, herptile, or plant species at risk identified. Overall, the Project Study Area was found to be significantly saturated with a heavy degree of human influence including an extensive human and dog walking trail network, garbage and debris dumping, and sites used by homeless people for shelter. The Project Study Area was degraded by these human pressures supporting the considerable presence of invasive and weedy species throughout the footprint area.

Using these data, from both the 2005 and 2016 habitat inventories, the Project Study Area was reviewed in relation to the ESNL program based on the multi-criteria assessment used for the ESNL evaluation process.

4.1 ESNL Criteria: Lands and/or Waters with Natural or Native Biotic Communities

The Project Study Area is located within the Prairies Ecozone and the Winnipeg Ecodistrict (Smith et al., 1998). The site is located in an area that is surrounded by residential and commercial land-uses. The Project Study Area is currently vacant and undeveloped with no buildings or intact structures; however, there are several remnants of what appear to be some small engineered structures with large pieces of concrete with rebar location in several locations within the site suggestive of some past small structures, or that the area has been used as a dumping site. The site does not contain unique ecological species or features.

The site contains an Aspen woodland, meadow grasslands, and willow/sedge wetlands characteristic habitat types of this ecozone and ecodistrict. In all areas of the footprint, both native (species that are within their natural past or present distribution and are not alien) and non-native plants were identified. Non-native or introduced floral species are plants that are growing outside of their country or region of origin. Invasive plants are non-native plants that are out-competing or even replacing native plants (Invasive Species Council of Manitoba). However, the site has been subjected to a significant amount of human pressures. Disturbance caused by human activity has introduced and encouraged the spread of non-native, invasive plants. The Project Study Area is well used for walking (and dog walking) during all seasons which promotes non-native plant species spread. Further, double-tracked trails exist within the Project Study Area where vehicles have been driven (possibly ATVs, dirt bikes, and/or bicycles) act as a vector for non-native, invasive plant species spread.

The Project Study Area has been heavily used by humans with a matrix of human and dog walking trails that exist throughout the footprint area. In addition to the trail network that exists throughout the Project Study Area, the property appears to be a pooling site for water runoff from neighbouring properties as there is a substantial amount of standing water over a majority of the footprint. Given the magnitude of standing water, and plant species composition changes, the overall habitat quality for a variety of species is diminished.

Exposing and compressing bare soils and transporting weed seeds by vehicles, people, and animals all contribute to the spread of non-native, invasive plants. Introduced plant species line the edges of the trails and penetrate into the forest, depending on the width of the trail, which affects the severity of the disturbance. Vehicle use not only compresses and churns up the soil but also act as conduits for depositing weed seeds into the bare ground allowing weedy and invasive plants to spread.

Further to vehicle use and the human trail network, maintenance activities, such as mowing, encourage the growth of non-native grasses and herbs within the Project Study Area. In combination with the mowing activities, the dumping of construction and garden waste has also occurred on the site, which further degrades the quality of the habitat required for native vegetation to thrive.

Even with the significant human pressures on this Project Study Area, the site provides certain ecological services. Within the wet meadows, the site acts to improve water quality, provides stormwater retention, and filters and retains nutrients. The aspen woodlands influence microclimates, improve air quality, decrease net greenhouse gas emissions, and both the meadows and woodlands provide some habitat potential, although degraded, to birds and mammal species.

4.2 ESNL Criteria: Lands where Significant Animal or Bird Communities Reside

The Project Study Area appears to be the drainage basin for neighbouring properties with a majority of the property footprint being saturated substantially with high water levels diminishing the quality of the habitat for a variety of species. During the 2016 surveys, very little mammal activity was identified and the bird species seen and heard were common species. There were two species of amphibians heard, both of which are common species. Very few signs of white-tailed deer were noted, likely given the degree of saturation of the property in combination with the significant amount of human and dog walking activity that occurs throughout the site. There were two medium-sized stick nests identified and several potential cavity nesting trees and snags.

4.3 ESNL Criteria: Lands where Species at Risk Reside

Extensive field surveys conducted within the Project Study Area in 2016 identified no listed species and no MBCDC S1-S3 species, of mammals, birds, herptiles, or plants. There have been no species at risk identified during any environmental surveys conducted within the Project Study Area.

The majority of the native plants that were found within the Project Study Area were found within the aspen woodlands. Aspen, with few green ash trees present, dominate the low and seasonally wet areas. Understory species include: dogwood, high-bush cranberry, dewberry, Solomon's seal, poison ivy, fringed loosestrife, wild currants, Virginia creeper, Kentucky bluegrass, violets, and asters. Bur oaks mix in with the aspen in the higher, drier sites. The shrub layer consists of American hazelnut, nannyberry, high-bush cranberry, Saskatoon, and chokecherry. Ground cover consists of: sarsaparilla, violets, gooseberry, wild strawberry, American vetch, poison ivy, Canada mayflower, meadow rue, western snowberry, golden alexander, and Canada anemones. Clovers, dandelions, sow-thistles, and sweetclover are among the weedy species observed within the Project Study Area.

The current condition of the site, however, is degraded with considerable presence of invasive and weedy species. Purple loosestrife and European buckthorn were both found to be common in the willow/sedge wet areas and the aspen woodlands within the Project Study Area. Both these invasive plant species are listed as Category 2 (ISCM) and as Principal Invasive Aliens. Both of these species produce many seeds that are dispersed by birds and animals. These invasive plants could be detrimental to adjacent green spaces within the city as avian and terrestrial wildlife could spread these invasive seeds into other City greenspace areas. Even off the trail network, buckthorn, sow-thistles, Canada thistle, and sweetclovers were observed.

Many non-native “weedy” plants were also present where soil was exposed and the native vegetation had been trampled. These include: dandelions, alfalfa, clovers, plantains, and black medic.

A number of patches of swamp milkweed (*Asclepias incarnata*) were observed in the middle and north areas of the Project Study Area. These plants provide critical habitat and food for Monarch butterflies (*Danaus plexippus*) and should be preserved or replaced wherever possible, in accordance with the proposed Environment Canada Species at Risk Act Management Plan for the Monarch (Environment Canada 2014).

Overall, there were no rare plants or plants of conservation concern found within the Project Study Area.

4.4 ESNL Criteria: Lands of Cultural or Historical Significance

The Parker Lands site is not distinguished as a historically significant heritage location. However, the site holds cultural recreational value to local residents as a human and dog walking area. The site arguably provides the neighbourhood with character helping to define the neighbourhood. This site would not be considered to increase neighbourhood residential property values or enhance buyers appeal to the area. The site does not attract tourism to the city.

4.5 ESNL Criteria: Lands which offer Habitat Connectivity for Wildlife

Unlike the Assiniboine Forest (an ESNL site), the Project Study Area has limited quality functional habitat for urban wildlife given it is fragmented, lacks connectivity to adjacent habitat, and lacks proximity to riparian areas. Habitat fragmentation refers to smaller isolated patches of habitat with no connectivity to adjacent habitat. Despite the quality of the habitat patch, these insulated areas overall provide very little benefit to flora or fauna for a variety of reasons (City of Winnipeg Ridgewood South Precinct Report, accessed on May 12, 2016b). Many species of wildlife require large home ranges and the ability to move between different areas to survive and satisfy their life requirements. Bird, mammal, reptile, and amphibian species require enough space to fulfill the various stages of their life cycle such as feeding, breeding, rearing young, overwintering, genetic dispersal, and protective cover. Many plant species require pollinators and these species benefit from gene flow among individuals, which may not be present in small isolated areas (City of Winnipeg Ridgewood South Precinct Report, accessed on May 12, 2016b). Therefore, despite the potential quality of these smaller habitat patches designated in 2005 with a City of Winnipeg “A” or “B” ranking, they may provide very little functional habitat for urban wildlife.

Of further consideration for overall habitat quality for wildlife is the degree of habitat edge, known as the edge effect. Typically, the perimeter of a habitat patch is exposed to very different conditions than the habitat located within the patch, especially in an urban environment. Urban environments are characterized by significant human pressures, where often the poorest quality habitat is found along the edge. The edge of a habitat patch is also naturally exposed to

different conditions than the interior habitat, such as higher levels of sunlight infiltration, wind, and precipitation. The Project Study Area has been heavily used by humans with a matrix of dog walking trails that exist throughout the area. As a result, walking trails weave throughout the aspen habitat, creating numerous new edges, a series of smaller habitat patches, and disjointing the habitat continuity.

4.6 ESNL Criteria: Lands Adjacent to Waterways (Riparian Areas)

The Project Study Area is located approximately 1.6 km from the Red River corridor. This corridor of riparian habitat serves as part of the “North American flyway”, which are routes used by migrating birds to move between summer and winter breeding and overwintering areas (Bird Nature, 2016). The occasional presence of some species of migratory birds in the Project Study Area may occur as these birds make their way to suitable breeding habitats; however, the Project Study Area is not adjacent to or even close to a waterway and is not a riparian area.

5 SUMMARY

Using data from environmental surveys conducted in 2005 and 2016, the Project Study Area is assessed in relation to the multi-criteria used for the ESNL evaluation process to determine the current potential value of the Project Study Area as an ESNL site. The determination of an ESNL site within the City of Winnipeg is based on four foundational pillar criteria of the ESNL assessment process being habitat quality, rarity of species, ecological services, and human interaction. These four pillar criteria are evaluated to determine the priority of a site for ESNL protection.

Based on the criteria used to evaluate the priority of a natural heritage site for the ESNL program, the Project Study Area attains some criteria while not other criteria. The habitat types found within the Project Study Area are reflective of the habitat types historically found in the area and the site does provide certain ecological services. The site is highly valued by local residents as a human and dog walking area. Given the extensive use of the site by humans, the Project Study Area habitat quality is diminished. The site is characterized by an extensive dog walking trail, high levels of human and dog activity, garbage and debris dumping, and is considerably dominated by invasive and weedy plant species. The site is also being used as a drainage pool by adjacent properties with their lands graded to drain into the Project Study Area changing the composition of plant species. All of these factors in combination with the isolation of the site from adjacent habitat, limit the functionality of the site for a variety of wildlife species. There have been no species at risk of mammals, bird, herpitiles, and plants identified within the Project Study Area.

Based on the four pillars of the ESNL evaluation process, while the Project Study Area is reflective of the historical habitat types found in the area and does function to provide certain ecological services, overall, the Project Study Area is considerably degraded and falls short on several key evaluation criteria used for the ESNL program.

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Appendix 1: Report Maps

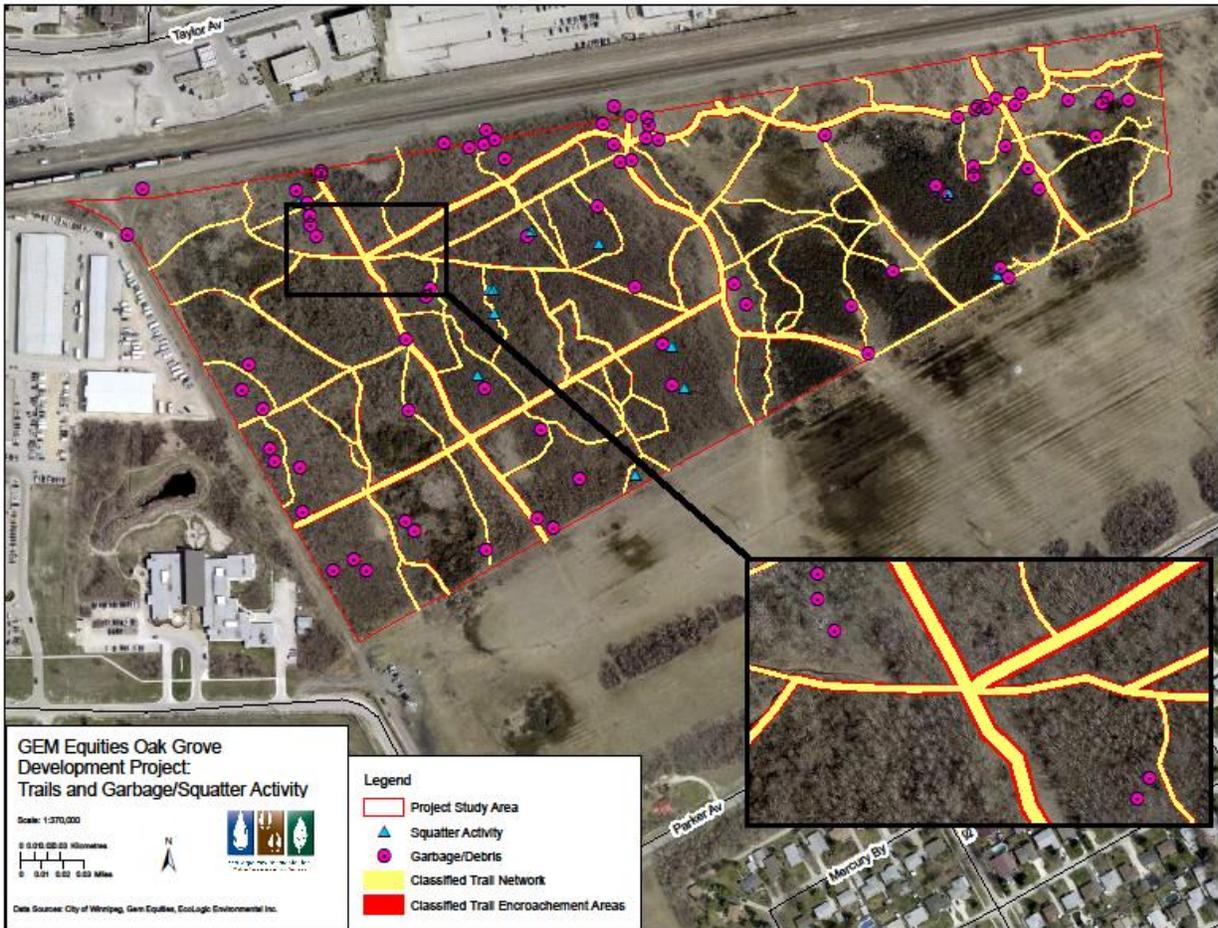
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Map 1: Gem Equities Oak Grove Development Project - Project Study Area



Map 2: City of Winnipeg 2005 Delineation of Habitat Ranking within the Project Study Area



Map 3: Trail Network with Weedy and Invasive Species Encroachment including locations of Debris, Garbage, and Squatter Activity