# **DOCUMENT 2**

## Category 1 and 2 Lands

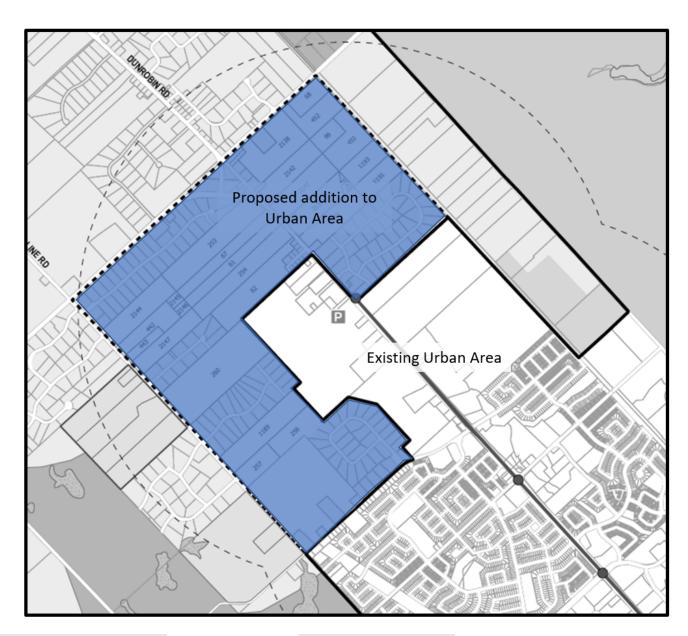
- South March Cluster
- Stittsville Cluster
- Barrhaven South Cluster
- Riverside South Cluster
- Leitrim Cluster
- Orléans South Cluster
- Orléans North Cluster

### Introduction

This document presents a planning overview and the results of the evaluation of candidate lands for urban expansion. It summarizes the evaluation results for Category 1 lands (Pass 1 and 2) with strong Adherence to the GMS and Five Big Moves and Category 2 lands with partial adherence to the GMS and Five Big Moves. Additional refinements and detail are outlined in Document 1.

The land use planning overview includes commentary on existing land area, Official Plan designation(s), land use, planning context and proximity to employment, retail and recreational facilities and the natural environment. The servicing and transportation evaluation criteria and implications are provided for seven clusters of land across the city. The servicing evaluation and scoring for each of the clusters considers on-site and off-site requirements and is presented in five main factors: water supply; wastewater capacity; stormwater outlet; integration factor and penalty factors / geotechnical conditions. The Transportation analysis and evaluation focuses on the primary evaluation criteria including lands within or in proximity to the 1.9 km radial Transit Catchment Area as well as transit capital and operating, road capacity, modal share and vehicle kilometres traveled (VKT) considerations.

### **South March Cluster**



Net Developable Area:

175.35 ha

Planning Status:

no applications

Official Plan Designation:

General Rural Area

Zoning:

RU - Rural Countryside

Land Use:

Fields and forested areas with some agricultural and single detached residential uses. Pockets of rural estate subdivisions. Some tributaries of Shirley's Brook

can be found within the cluster.

Description:

Located in South March east of Old Second Line Road and south of March Road. The Beachburg rail corridor (non-active) runs along the eastern edge of the cluster. East of the corridor are lands constrained from development by the Connaught Range and Primary Training Facility (DND).

The lands include five existing subdivisions which would be added to the urban boundary and public service area.

The current urban boundary is irregular shaped, a result of the previous urban expansion approved through OPA 76 hearings. The approved Kanata North Community Design Plan as well as active subdivision applications contemplate further road connections to the cluster. This would facilitate connectivity and integration with the existing urban area.

The cluster is in close proximity to existing facilities and services such as retail (including grocery store), recreational facilities, schools and employment uses including the Kanata North Technology Park, the largest non-governmental cluster of jobs in Ottawa.

Parcels east of the Beachburg rail corridor adjacent to March Valley Road are impacted from the Connaught Range and Primary Training Facility and have therefore been excluded from further consideration. This is consistent with the outcome of OPA 76 hearings on the matter as well as recent correspondence from the Department of National Defense confirming the range is intended to continue to operate on a daily basis (both day and nighttime) and with a range of noise sources including firearms, explosives and heavy vehicles.

### Servicing

### Water

The South March Servicing Cluster Areas (SCAs) are situated adjacent to two pressure zones: 2W/2C and the Morgan's Grant pressure zone. With the exception of areas west of Old Second Line Road, and SM-9b, (see Identification map below) the area can be serviced with good water pressure from Zone 2W/2C via watermain connections in the Kanata North Urban Expansion Area (KNUEA) lands.

Due to high elevation, of the parcels west of Old Second Line Road, and SCA SM-9b they would ideally be serviced by pressure zone 3W, which would require the construction of a new watermain on Old Second Line south to Terry Fox Drive. The construction of this watermain would create an opportunity to eliminate the Morgan's Grant pressure zone, and by connection to the Morgan's Grant water distribution network, provide looping for redundancy. A 3W zonal capacity upgrade, MG pump station decommissioning, and installation of PRV's in the existing MG area would also be required. If the parcels west of Old Second Line Road and SM-9b are not serviced by pressure zone 3W then the water pump station serving the Morgan's Grant pressure zone would require an upgrade to service these SCAs, a new watermain constructed on Old Second Line and several watermains would need to be upgraded in the Morgan's Grant area to provide redundancy.

### **Wastewater**

The future March Road Collector and East March Trunk have capacity to service expansion areas contiguous to the Kanata North Urban Expansion Area (SM-1a, SM-2, SM-5, SM-6a, SM-8) by gravity. However, service to areas SM-3, SM-9a, SM-9b and the parcels west of Old Second Line Road would require major upgrades to the March Road Collector or a new sewer conveying flows to the East March Trunk. Furthermore, twinning sections of the East March Trunk would also be required to store excess flow during large wet weather events.

Servicing areas SM-1b, SM-6b, would require a new off-site trunk discharging to future sanitary sewers within the Kanata North Urban Expansion area.

Depending on actual future flows, sufficient residual capacity to service SM-3, SM-9a, SM-9b and the parcels west of Old Second Line Road could be available in the downstream trunk sewers. To reduce off-site servicing costs and minimize impacts on existing development areas, SCAs SM-3, SM-9a, SM-9b and the parcels west of Old Second Line Road could be gated until flow monitoring demonstrates sufficient residual capacity.

### Stormwater

All South March SCAs are located within the Shirley's Brook watershed. Surface runoff from the SCAs is collected in small tributaries or ditch drainage systems of Shirley's Brook, which are expected to require some improvements to establish a reliable outlet for urban drainage. Shirley's Brook itself has existing erosion problems that require analysis and implementation of a long-term mitigation plan prior to any new development. Geotechnical conditions and topographic relief in the area of available stormwater outlets are favourable in all SCAs to avoid long-term maintenance challenges associated with submerged storm sewer systems.

### **Penalty Factors**

Much of the area is underlaid by shallow bedrock, and some SCAs are located adjacent to Country lot subdivisions on private services (well and septic) that could be at risk due to blasting. Isolated areas have depressional storage / imperfect drainage that, if lost through urbanization, would add to the increase in runoff volume that would be normally expected as a result of development based on conventional practices. This would contribute further to erosion conditions in Shirley's Brook.

Transportation

Parcels in this cluster are within the 1.9km radial catchment area from the planned March Road Transitway transit stations. There is a planned park & ride lot located at the terminus transit station on March Road, at the southern edge of the cluster boundary.

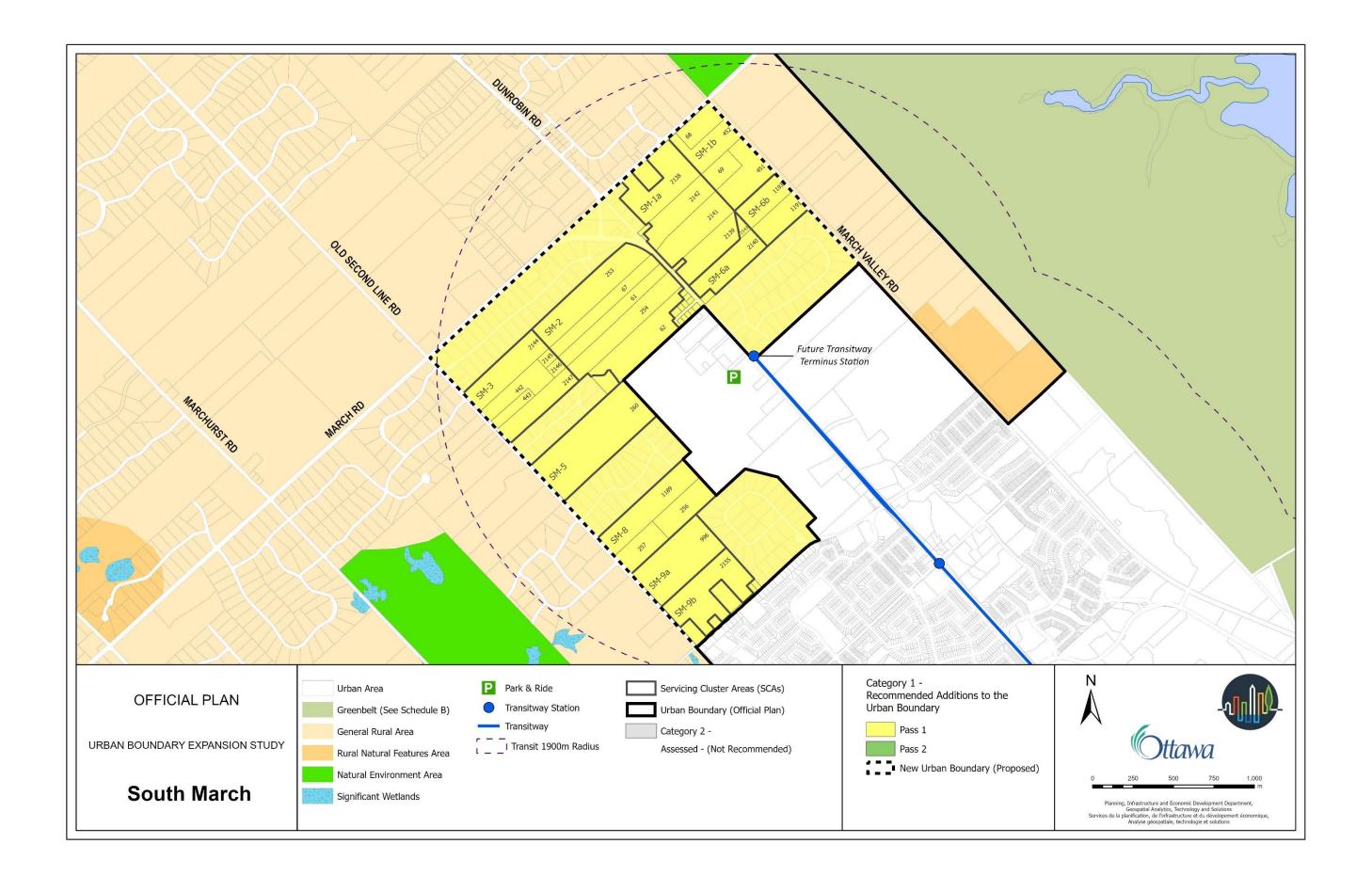
March Road provides the only direct arterial road access to Highway 417.

### South March Cluster - Scoring - Category 1

		1. Water	3.a) Stormwater characteristics and availability of surface water outlate	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	<ul><li>6.Availability of Rapid Transit or Transit Priority - Isolated Measures</li></ul>	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	14. Conflict with Agricultural Land Uses	15.Active Agricultural Operation	16.Natural Heritage Linkages	Total Score	Category
SCA	ID																				
SM-1-a	2138	8 8	0	6	6	-4	24	10	4	14	6	1	1	3	0	6	0	-1	0	54	1
SM-1-a	2142	8 8	0	6	6	-4	24	10	4	14	6	1	1	3	0	8	0	-2	0	55	1
SM-1-a	2141	8 8	0	6	6	-4	24	10	8	18	6	1	1	3	0	6	0	-2	0	57	1
SM-1-a	2139	8 8	0	6	6	-4	24	10	8	18	8	1	1	3	0	6	0	-1	0	60	1
SM-1-b	68	8 2	0	6	4	-4	16	10	4	14	6	1	0	3	0	6	0	-1	0	45	1
SM-1-b	452	8 2	0	6	4	-4	16	10	4	14	6	1	1	3	0	6	0	-1	0	46	1
SM-1-b	69	8 2	0	6	4	-4	16	10	4	14	6	1	1	3	0	8	0	-2	0	47	1
SM-1-b	451	8 2	0	6	4	-4	16	10	8	18	6	1	1	3	0	6	0	-2	0	49	1
SM-2	253	8 8	0	6	6	-4	24	10	4	14	8	1	1	3	0	6	0	-2	0	55	1
SM-2	67	8 8	0	6	6	-4	24	10	8	18	8	1	1	3	0	8	0	-1	0	62	1
SM-2	61	8 8	0	6	6	-4	24	10	8	18	8	1	2	3	0	8	0	-1	0	63	1
SM-2	254	8 8	0	6	6	-4	24	10	8	18	8	1	2	3	0	6	0	-1	0	61	1
SM-2	62	8 8	0	6	6	-4	24	10	8	18	8	1	2	3	0	6	0	-1	0	61	1
SM-3	2144	6 2	0	6	6	-4	14	10	4	14	8	1	1	3	0	6	0	-2	0	45	1
SM-3	442	6 2	0	6	6	-4	14	10	4	14	8	1	2	3	0	6	0	-1	0	49	1
SM-3	2145	6 2	0	6	6	-4	14	10	8	18	8	1	1	3	0	8	0	-1	0	52	1
SM-3	2146	6 2	0	6	6	-4	14	10	8	18	8	1	2	3	0	8	0	-1	0	53	1
SM-3	443	6 2	0	6	6	-4	14	10	4	14	8	1	2	3	0	8	0	-1	0	49	1
SM-3	2147	6 2	0	6	6	-4	14	10	8	18	8	1	2	3	0	6	0	-1	0	51	1
SM-5	260	6 6	0	6	6	-2	22	10	8	18	8	1	2	3	0	2	0	-1	0	55	1
SM-6-a	2143	8 2	0	6	4	-2	18	10	8	18	8	1	1	3	0	6	0	-1	0	60	1
SM-6-a	2140	8 2	0	6	4	-2	18	10	8	18	8	1	2	3	0	2	0	-1	0	57	1
SM-6-b	1193	8 2	0	6	4	-2	18	10	8	18	8	1	1	3	0	6	0	-1	0	54	1

			2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7.Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	<ol> <li>Conflict with Agricultural Land Uses</li> </ol>	15.Active Agricultural Operation	16.Natural Heritage Linkages	Total Score	Category
SM-6-b	1191	8 2	2	0	6	4	-2	18	10	8	18	8	1	2	3	0	2	0	-1	0	51	1
SM-8	1189	6 8	3	0	6	6	-2	24	10	8	18	8	1	3	3	0	6	0	0	0	63	1
SM-8	257	6 8	3	0	6	6	-2	24	10	4	14	8	1	3	3	0	8	0	-1	0	60	1
SM-8	256	6 8	3	0	6	6	-2	24	10	8	18	8	1	3	3	0	6	0	0	0	63	1
SM-9a	996	6 2	2	0	6	4	-2	16	10	4	14	8	3	4	3	0	6	0	0	0	54	1
SM-9b	2155	2 2	2	0	6	2	-2	10	10	4	14	8	3	4	3	0	6	0	0	0	48	*

<sup>\*</sup>Note the area (ha) of SM-9b has not been included in the total area due to servicing constraints however the entire parcel which consist of SM-9a and b has been included since this logical urban area boundary.



### **Stittsville**



Net Developable Area:	Pass 1: 38.17 ha	Planning Status:	no applications
	Pass 2: 37.15 ha		
	Total: 75.32 ha		
Official Plan Designation:	General Rural Area	Zoning:	RU – Rural Countryside
			O1 - Open Space (part of the hydro corridor)

Land Use: Fields, forest, some single detached residential, stormwater pond - mainly

cleared land.

Description:

Northwest Cluster S1/S2 is located adjacent to the Stittsville urban area and is north of Hazeldean Road and southeast of Highways 417 and 7.A hydro corridor which includes a pathway system traverses the cluster in the urban portion. A

quarry and the A.G. Reed Industrial Area are to the north and the Goulburn Wetland Complex is located to the south. The A.G. Reed Industrial Area is recommended to be added to the urban area in the Traditional Industrial Freight

and Storage designation.

The S1/S2 cluster as shown is outside the 500m aggregate buffer, however, to avoid an irregular shaped urban boundary it is recommended that the proposed boundary follow the property lines. The portion of the parcel within the buffer from the quarry has been excluded from the net developable area calculation.

This S1/S2 cluster is close to, existing schools, parks, employment and to retail including grocery stores on Hazeldean Road and Stittsville Main Street.

The South S10/S11 cluster abuts previous expansion lands north of Flewellyn Road and east of Shea Road. A hydro corridor traverses the cluster and a stormwater management pond can also be found within the cluster.

The existing and planned roads, as well as the hydro corridor, would allow to the cluster to connect and integrate with the existing urban area, accommodating both road and active transportation connections. (planned road connections in development to the north

Parcels west of the Stittsville urban area were assessed and determined to have complexities related to servicing and connection because of the wetland complex located on or adjacent to the parcels. It was also determined that the parcels were not of adequate size and shape to allow for a transit supportive gridded street pattern. A parcel located northwest of Shea Road and Flewellyn Road was also excluded due to an active court case related to a site alteration by-law violation.

#### Servicing

### Water

All Servicing Cluster Areas (SCAs) in Stittsville are located adjacent to the 3W pressure zone. As topography rises from east to west, water pressures reduce from good in SCAs S-10 and S-11, to borderline in the remaining SCAs during peak hour on a Max Day. Off-site watermains would also be required for all SCAs on the west side of Stittsville to tie-into larger diameter watermains to provide sufficient capacity – and to provide redundancy. Generally, SCAs closest to Hazeldean Road require the least off-site work for capacity. SCAs south of Hazeldean Road require additional off-site work to establish redundancy, and for some SCAs may require crossing the Goulbourn Provincially Significant Wetland Complex.

Improving borderline water pressure in the affected SCAs by pressure zone reconfiguration could prove to be cost prohibitive, given the comparatively small area that would benefit from the required works. Consequently, should development be considered in any of the affected SCAs, alternative approaches to improving water pressure could include increasing watermain size, requiring private plumbing upgrades, and/or other measures that would reduce water head loss.

### **Wastewater**

Capacity is generally available in downstream trunk sewers to service all SCAs in West Stittsville – but not necessarily in the receiving collector sewers and local sewers located adjacent to the SCAs.

Areas S-1 and S-2 are readily serviceable via a connection to a sewer on Hazeldean Road. Area S-3 would require upgrading existing sewers on Thrasher Avenue and West Ridge Drive or constructing a new sewer to Beverley Street. Areas S-4, S-5 and S-6 can be serviced by a 1000m sewer extension on Abbott Street.

Local upgrades to existing sewers on Fernbank Road would also be required to service areas S-7, a portion of S-8 and S-9. Areas in S-8 east of the watercourse

can be serviced by existing infrastructure within the Shea Road Pump Station sewershed which may require local upgrades. Area S-9 would require a local pump station that would outlet to future infrastructure within area S-8.

A local capacity upgrade at the Shea Road pump station would be required to service areas S-10 and S-11.

#### Stormwater

Storm drainage from the Stittsville SCAs outlets to four different drainage systems: S-1 to a headwater system that drains to Feedmill Creek; S-2 - S-6 to the Hazeldean Municipal Drain / Goulbourn Wetland Complex; S-7 & S-8 to the headwaters of the Faulkner Municipal Drain; S-10 & S-11 to the Faulkner Municipal Drain; and S-9 to a headwater system of Flowing Creek. With the exception of SACs S-10 and S-11, all storm drainage outlets are minor and would likely require off-site works to establish a stable outlet. Topographic conditions in SCAs S-1 - S-8 and S-11, are expected to constrain grading and storm servicing and create long-term maintenance challenges associated with submerged storm sewer systems.

### **Penalty Factors**

All of the Stittsville SCAs are underlaid by shallow bedrock. Several clusters are adjacent to Country lot subdivisions on private services and could be impacted by blasting. Isolated areas have depressional storage / imperfect drainage that, when urbanized, would exacerbate the conventional increase in runoff volume and requires additional stormwater management measures to avoid downstream impacts.

Transportation

The clusters are within or adjacent to the 1.9km radial catchment area from the Transit Priority Corridor (Isolated Measures) that is planned for the Stittsville community. The southerly cluster is just outside the capture area of the planned Transitway and park and ride which is planned to be located at the intersection of Robert Grant and Fernbank Road.

The northerly cluster has good connectivity, it is close to the highway interchange, has frontage on Hazeldean Rd and Rothbourne Rd and can access existing services by active transportation (walking/bike). The cluster can connect to existing pathway in hydro corridor allowing for a direct active transportation connection to convenience retail and existing parks in the vicinity.

SCA	OPID	1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7.Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs 9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	<ol> <li>Conflict with Agricultural Land Uses</li> </ol>	15.Active Agricultural Operation	16.Natural Heritage Linkages	Total Score	Category
S-10	54	4	4	7	6	6	-4	17	6	8	14	6 0	4	3	-4	6	-4	-1	0	41	1
S-10	1371	4	4	7	6	6	-4	17	6	8	14	6 0	4	3	-2	6	-4	-1	0	43	1
S-11	1369	4	4	1	3	6	-3	15	10	4	14	6 0	4	3	-2	6	-4	-1	0	41	1
S-1	458	4	4	0	3	4	-3	12*	6	4	14	6 5	2	0	-2	6	0	-1	0	38	1
S-2	458	4	4	0	3	4	-3	12*	6	4	14	6 5	2	0	-2	6	0	-1	0	38	1
S-2	623	4	4	0	3	4	-3	12*	6	4	14	6 5	2	0	-2	6	0	-1	0	38	1

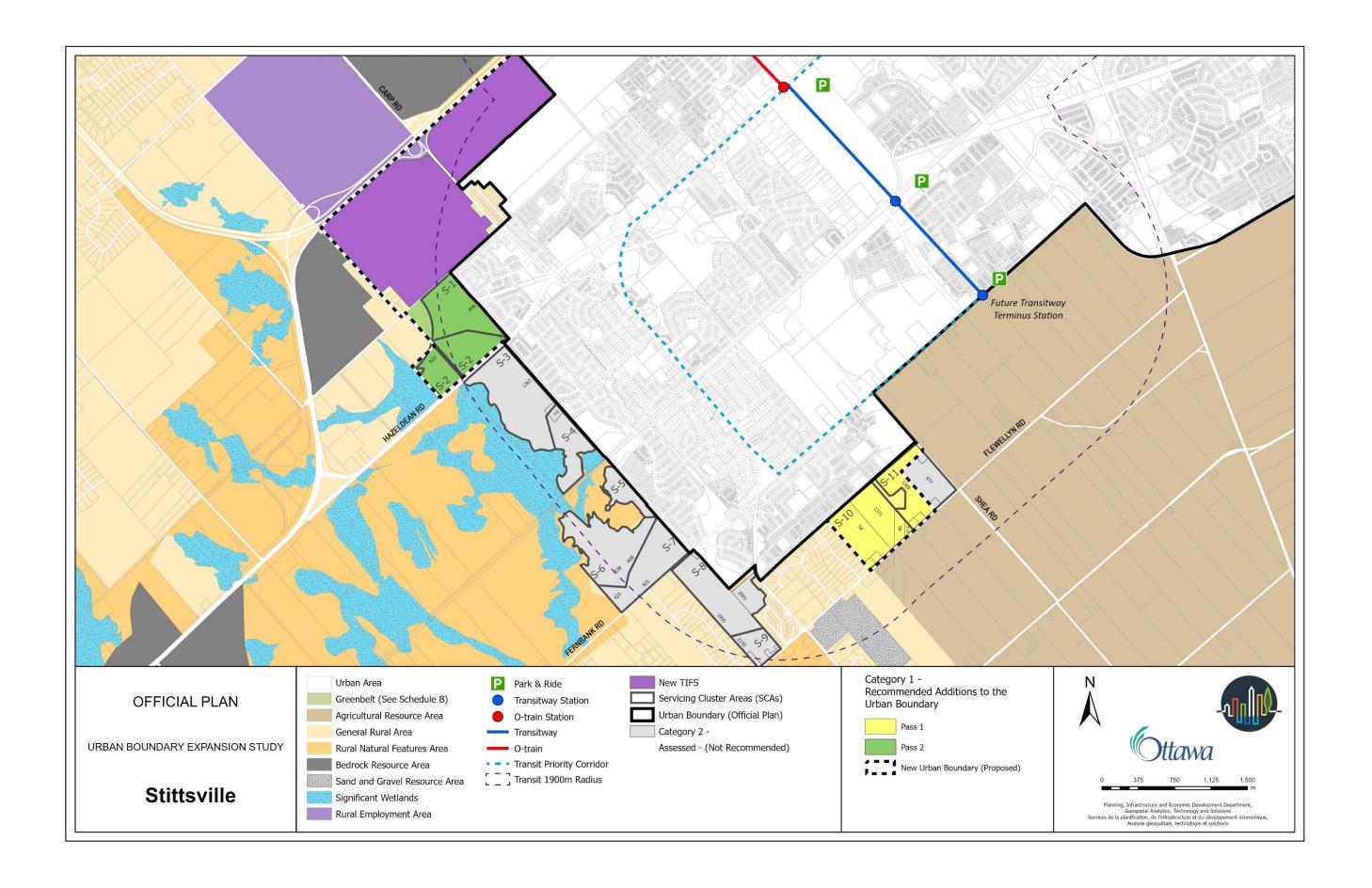
<sup>\*</sup>Note – While these parcels score below the minimum servicing threshold they can be serviced. See servicing comments for further details.

## Category 2

The parcels within Category 2 do not meet the minimum thresholds scores for servicing and some do not meet the transit threshold score, with one exception (see below). The parcels west of the Stittsville urban area were further accessed beyond the scoring criteria and have been excluded due to complexities related to servicing and connectivity caused by the provincially significant wetland complex located on or adjacent to the parcels, as well as protected habitat of provincially and federally threatened species. It was also determined that the parcels were not of adequate size and shape to allow for a transit supportive gridded street pattern. A parcel located northwest of Shea Road and Flewellyn Road (S-11 - 977) while meeting the mining scoring thresholds was also excluded due to an active court case related to an alleged site alteration by-law violation.

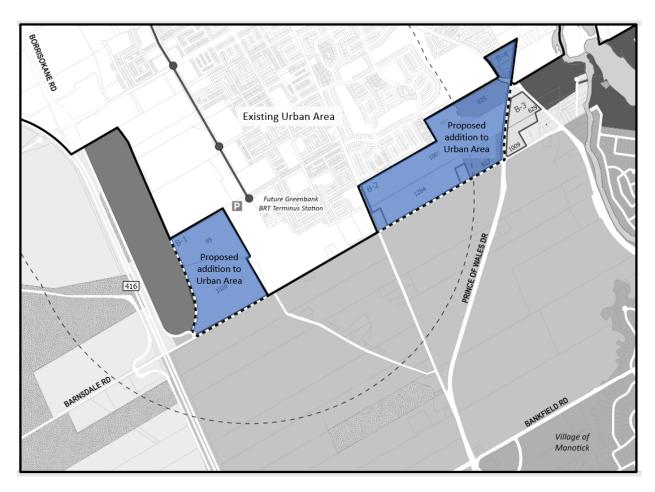
The gross area of the clusters west of Stittsville (S-3 to S-9) is approximately 215 ha, but it should be noted that the environmental features as well as other non-developable areas have not been removed and once removed will likely significantly reduce the developable area of this cluster. The gross area of the parcel south of Stittsville (S-11 – 977) is 14.28 ha.

		1.Water	2.Waswater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3.b)Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4. Servicing Integration Factor	5. Servicing Risk Factor	Total Servicing	6. Availability of Rapid Transit or Transit Priority - Isolated	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor - Isolated Measures or Park and Ride feeding Rapid Transit System	Transit Total	8. Proximity to Jobs	9. Proximity to Convenience Retail	<ol> <li>Distance to Major City Facilities</li> </ol>	<ol> <li>Distance to Emergency Facilities - Fire</li> </ol>	12. Potential Arterial Road Upgrades	13. Connectivity	14. Conflict with Agricultural Land Use	15. Active Agricultural Operation	16. Natural Heritage Linkage	Total Score	Category
SCA	OPID																					2
S-3	1362	4	4	0	3	4	-3	12	6	4	10	6	3	3	0	-2	2	0	-1	0	33	2
S-4	1362	4	4	0	3	4	-3	12	6	4	10	6	3	3	0	-2	2	0	-1	0	33	2
S-5	608	2	4	0	3	3	-1	10	6	4	10	6	1	3	3	-2	6	0	-2	0	35	2
S-6	238	2	4	0	3	2	-1	10	6	4	10	6	1	2	3	-2	6	0	-1	0	25	2
S-6	423	2	4	0	3	2	-1	10	0	0	0	6	1	2	3	-2	6	0	-1	0	15	2
S-6	608	2	4	0	3	2	-1	10	6	4	10	6	1	3	3	-2	6	0	-2	0	35	2
S-7	425	2	4	0	3	2	-2	10	6	4	10	6	0	3	3	-2	8	0	-2	0	36	2
S-7	608	2	4	0	3	2	-2	10	6	4	10	6	1	3	3	-2	6	0	-2	0	35	2
S-7	238	2	4	0	3	2	-2	10	6	4	10	6	1	2	3	-2	6	0	-1	0	35	2
S-7	423	2	4	0	3	2	-2	10	0	0	0	6	1	2	3	-2	6	0	-1	0	25	2
S-8	1994	2	4	0	3	2	-4	4	6	4	10	6	0	3	3	-2	6	0	0	0	30	2
S-8	1995	2	4	0	3	2	-4	7	6	4	10	6	0	2	3	-2	4	0	-1	0	29	2
S-8	2001	2	4	0	3	2	-4	4	6	4	10	6	0	3	3	-2	4	0	-1	0	27	2
S-9	1992	2	2	0	6	2	-2	6	6	4	10	6	0	2	3	-2	8	0	0	0	33	2
S-9	1998	2	2	0	6	2	-2	6	6	4	10	6	0	2	3	-2	6	0	0	0	31	2
S-11	977	4	4	1	3	6	-3	15	10	4	14	6	0	4	3	-2	6	-4	-1	0	41	2



### **Barrhaven South Clusters**

Description:



Net Developable Area:	Pass 1: 92.74 ha	Planning Status:	no applications
	Pass 2: 15.75 ha		
	Total: 108.49 ha		
Official Plan Designation:	General Rural Area	Zoning:	RU – Rural Countryside, MR -
	Sand and Gravel		Mineral Aggregate Reserve Zone, O1A - Open Space
Land Use:	Fields, forest, some s works yard	single detached residential	and, to the east, a golf course

north of Barnsdale Road.

A portion of the current urban boundary ends at Barnsdale Road, a result of the previous urban expansion. The proposed urban expansion clusters would round out the remaining rural parcels on either side of the existing urban area ending at Barnsdale Road. This would create a clear delineation between the urban area, north of Barnsdale Road and the Agricultural Resource Area to the south.

Located south of Barrhaven, East of Highway 416, west of Prince of Wales and

The following approved Community Design Plans are applicable to the lands adjacent to the clusters; Barrhaven South Urban Expansion Area Community Design Plan and Barrhaven South Community Design Plan.

The clusters are in close proximity to existing or planned facilities and services including the Minto Recreation Complex, schools, parks and retail.

A portion of the cluster is zone as Mineral Aggregate Reserve however the reserve has been depleted and license removed and can be redeveloped for other purposes.

The Trail Road Waste disposal facility is located to the west on the other side of Highway 416. The clusters are outside 500m buffer of the waste disposal facility.

Future proposed urban industrial land (Traditional Industrial Freight and Storage (TIFS) Future highway interchange at Barnsdale and Highway 416 as identified in TMP.

The east boundary of cluster B-2 has been set at Prince of Wales Drive. Due to topography, there are about seven hectares of land towards the east side of B-2 that have not been included in the expansion area total because they cannot be serviced through B-2. Expansion of developable land in this area on the basis of a new pump station is not recommended and staff further recommend against any retaining walls. For this reason staff recommend against further consideration of the lands.

The cluster identified as (B-4) contain small parcels (less than 2.0ha in size) with existing homes and has not been included in the Net Developable Area however they have been included in the proposed area since, given their location, they form a logical boundary of the urban area.

#### Servicing

#### Water

A suitable water supply to the Servicing Cluster Areas (SCAs) in South Barrhaven would be available with implementation of the planned South Urban Community (SUC) pressure zone reconfiguration project. There would be no need for any pump station upgrades or pipe upsizing. Area B-1 can be serviced by extending local watermains in South Barrhaven. Area B-2 can be serviced from connecting into the feeder main on Greenbank Rd. Area B-3 and B-4 can be serviced from the feeder main on Prince of Wales Dr. The Manotick watermain and the future watermain along re-aligned Greenbank Rd would provide secondary supply ensuring system reliability.

### Wastewater

Sanitary sewers (existing and proposed through the Barrhaven South Master Servicing Study) on Greenbank Road and Barnsdale Road have capacity to accommodate SCAs B-1 and B-2 by gravity.

The topography of B-3 and B-4, and the east limits of B-2 are at a lower elevation from the existing servicing. This complicates serviceability because, for example, the SCA B-3, a relatively small cluster, would require a sanitary pumping station. The east limits of SCAs B-2 and B-4 have been shown as Prince of Wales Drive. The development limit, however, is intended to be restricted to areas that can drain by gravity to available outlets, and without the use of retaining walls in their respective grading plans.

### Stormwater

Stormwater drainage in SCAs B-1 and B-2 is generally southward towards Barnsdale Road. B-1 is situated in the Mud Creek watershed and overlays the

Kars Esker. B-2 outlets to a small tributary that follows a circuitous route before outletting to the Rideau River. B-3 drains to a small tributary just upstream of its outlet to the Rideau River. B-4 outlets to a local watercourse just before its outlet to the Rideau River.

Storm servicing in the approved Barrhaven South Urban Expansion Area provides an outlet option for SCAs B-1 and B-2. It is anticipated that minor system flow could be directed to an existing stormwater pond that outlets to the Jock River, and major system flow would be directed to existing outlets south of Barnsdale Road. Overall, the Barrhaven South SCAs are expected to be well drained with no topographic constraints that would result in long-term maintenance problems due to submerged sewers

### **Penalty Factors**

SCAs B-2, and B-3 include depressional areas greater than 10% of their coverage area or imperfect drainage that, when if urbanized without additional controls, would result in an increase in runoff volume above what would normally be expected as a result of development based on conventional practices. SCAs B-2 also includes bedrock shallower than 5 metres in areas.

SCA B-1 is located overtop the Kars Esker. Servicing of B-1 will need to be set above the seasonal high groundwater level, and management systems implemented to maintain pre-development infiltration rates. Prior to development of B-1, the impact of the development proposal will have to be checked against an existing groundwater model in the area of the Trail Road landfill site to confirm that the leachate plume will not be affected.

### Transportation

The clusters are within or are immediately adjacent to the 1.9 km radial catchment area from the planned new Greenbank\_Road Transitway\_terminus transit station. There is a planned park & ride lot located at the terminus transit station on new Greenbank Road.

The existing and planned roads would allow the clusters to connect and be integrated with the existing urban area, accommodating both road and active transportation connections.

## Barrhaven South Cluster – Scoring - Category 1

S	cCA .	ID	1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5. Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	<ol> <li>Conflict with Agricultural Land Uses</li> </ol>	15.Active Agricultural	Operation 16.Natural Heritage Linkages	Total Score	Category
В	I-1	85	8	8	2	6	6	0	30	10	12	24	4	0	4	4	0	8	-4	0	0	68	1
В	i-1	1020	8	8	2	6	6	0	30	10	8	18	4	0	3	0	0	8	-4	0	0	59	1
В	<b>3-2</b>	461	8	8	2	6	6	-3	27	10	4	14	6	0	4	4	0	8	0	-1	0	63	1
В	3-2	1005	8	8	2	6	6	-3	27	10	4	14	6	0	4	4	0	8	0	-1	0	63	1
В	3-2	1204	8	8	2	6	6	-3	27	10	4	14	6	0	4	4	0	8	-4	-1	0	58	1
В	3-2	825	8	8	2	6	6	-3	27	0*	0*	0*	6	1	4	4	0	8	0	-1	0	49	1
В	3-2	827	8	8	2	6	6	-3	27	0*	0*	0*	6	0	4	4	-2	8	-4	-2	0	41	1

<sup>\*</sup>Note – while these parcels score zero for transit they are considered to be part of the cluster and are recommended for inclusion.

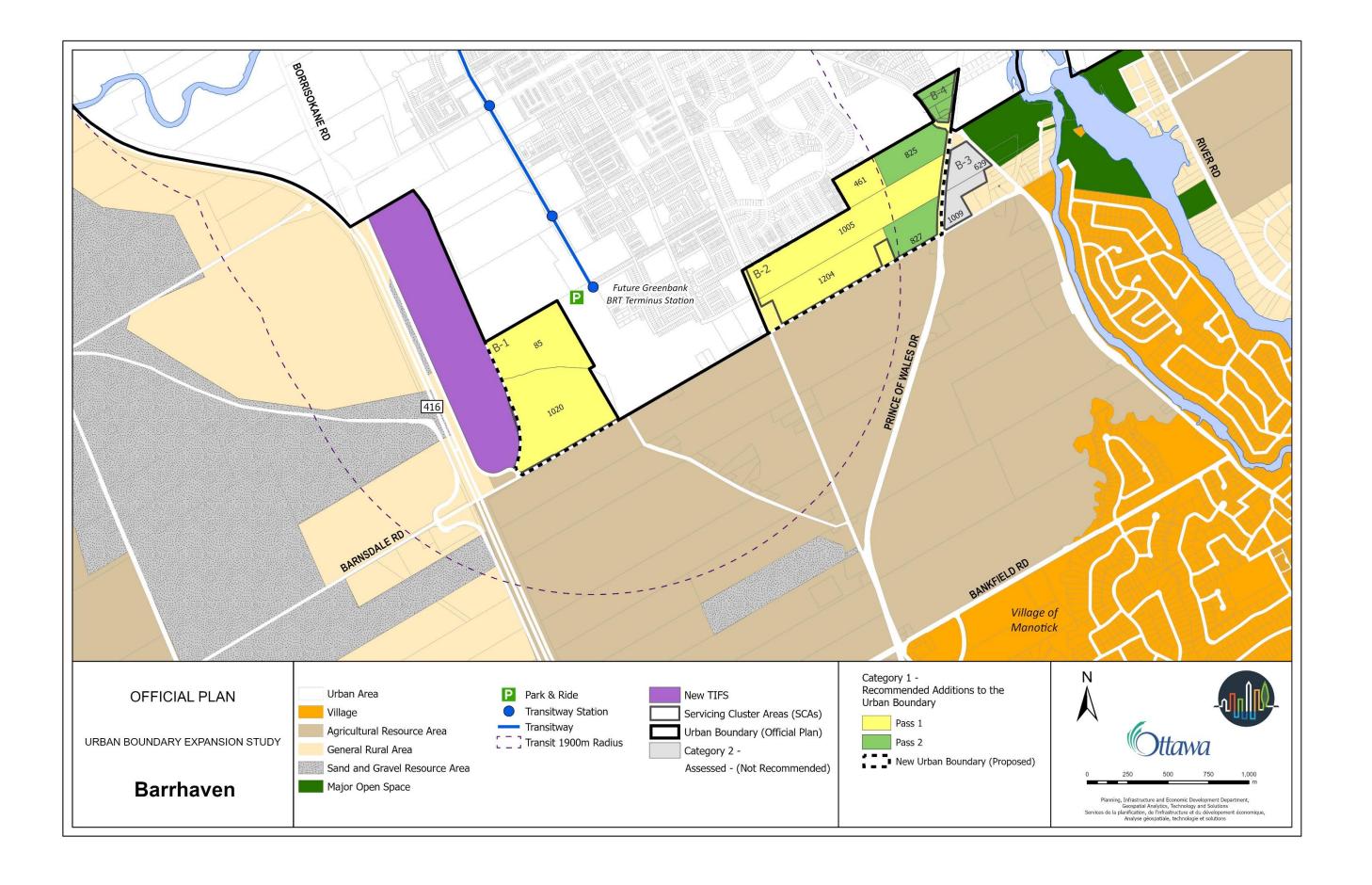
### Category 2

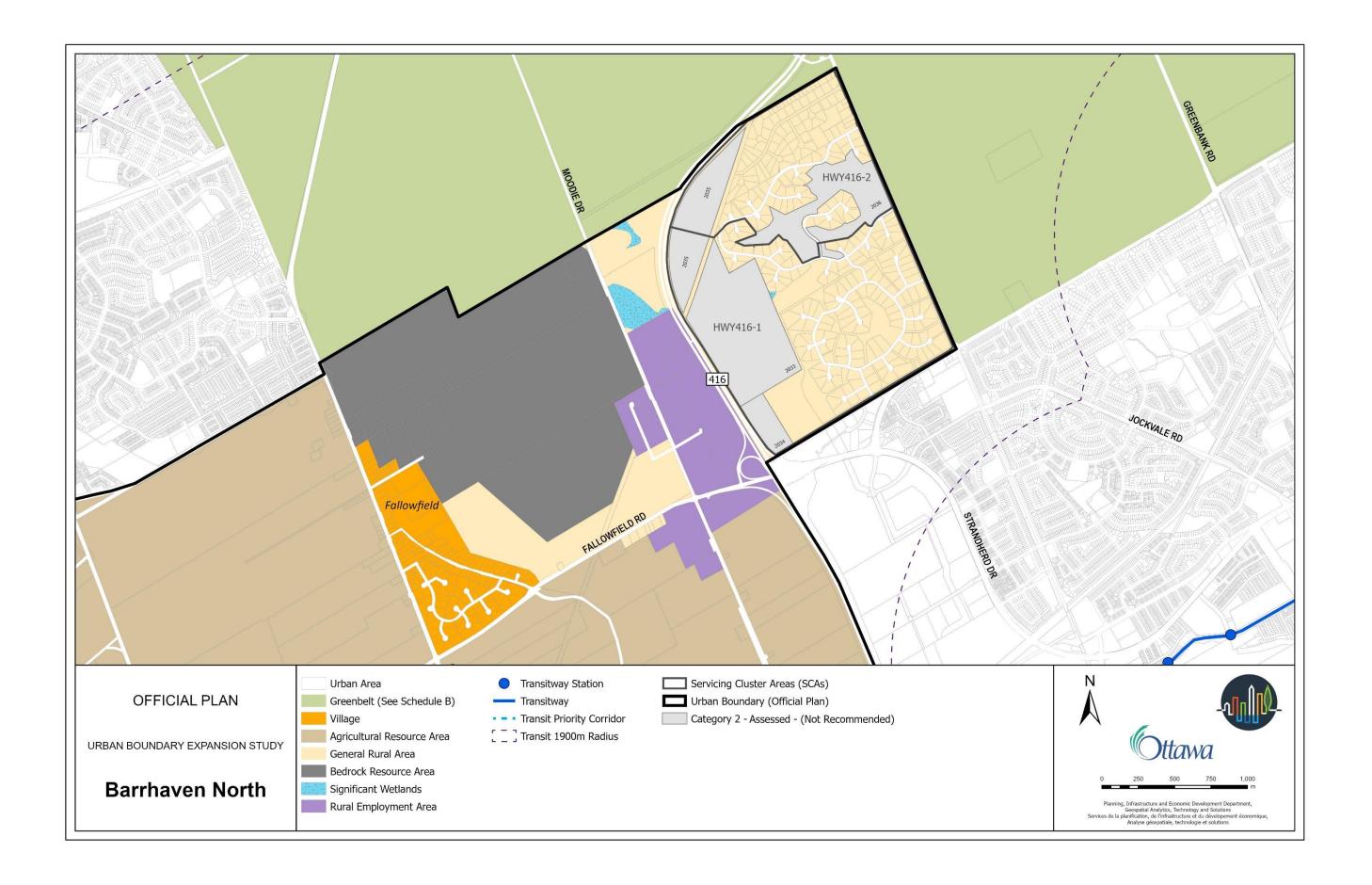
The parcels (B-3) east of Prince of Wales Drive do not meet the minimum threshold for transit. While they meet the servicing threshold they would require their own sanitary pump station and given their size (\*8.9 ha gross) this is considered to be cost prohibitive. Given their location there are also constraints related to connectivity and integration with the surrounding community. For these reasons these lands have been excluded.

The parcels near Cedarhill Estates and Highway 416 (HWY416-1, 2) do not meet the minimum threshold for servicing and transit. These lands were assessed beyond the scoring criteria and ultimately excluded since there would be a very high off-site servicing costs and require major facilities. The configuration of these lands and surrounding land use present issues with connectivity and integration with the surrounding community. There is also a Provincially Significant Wetland within the HWY416-1 which would reduce the overall developable area. The gross developable areas of these clusters are \*65 ha for HWY416-2.

\*Note the area (ha) does not include any potential exclusions such as environmental constraints, hydro corridors, etc. and the actual developable area may be smaller.

			1.Water	2.Waswater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3.b)Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4. Servicing Integration Factor	5. Servicing Risk Factor	Total Servicing	6. Availability of Rapid Transit or Transit Priority - Isolated	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor - Isolated Measures or Park and Ride feeding Rapid Transit System	Transit Total	8. Proximity to Jobs	<ol><li>Proximity to Convenience Retail</li></ol>	<ol> <li>Distance to Major City Facilities</li> </ol>	<ol> <li>Distance to Emergency Facilities - Fire</li> </ol>	12. Potential Arterial Road Upgrades	13. Connectivity	14. Conflict with Agricultural Land Use	15. Active Agricultural Operation	16. Natural Heritage Linkage	Total Score	Category
SCA	OPID																						_
B-3		629	8	2	1	6	4	-2	19	0	0	0	6	1	4	4	0	8	0	-2	0	40	2
B-3	1	009	8	2	1	6	4	-2	19	0	0	0	6	0	4	4	-2	8	-4	-1	0	34	2
HWY416-1	2	033	2	4	1	3	2	-4	10	0	0	0	8	0	3	4	-2	2	0	-1	0	22	2
HWY416-1	2	034	2	4	1	3	2	-4	10	0	0	0	8	0	3	4	-2	2	0	-1	0	22	2
HWY416-1	2	035	2	4	1	3	2	-4	10	0	0	0	8	0	1	4	-4	2	0	-1	0	18	2
HWY416-2	2	035	2	2	0	3	2	-2	7	0	0	0	8	0	1	4	-4	2	0	-1	0	17	2
HWY416-2	2	036	2	2	0	3	2	-2	7	0	0	0	8	1	4	4	-2	8	0	0	0	30	2





### **Riverside South Cluster**



Net Developable Area:

Pass 1: 202.8 ha

Pass 2: 106.29 ha

Total: 309.09 ha

Planning Status:

Sand and Gravel Resource
Areas east of the cluster have
been removed in the mineral
aggregate overlay of the new
Official Plan due to proximity of
the international airport. The

required buffer from aggregate lands therefore has not been applied.

Official Plan Designation:

General Rural Area

Zoning:

RU – Rural Countryside,

O1 – Open Space

RC - Rural Commercial

Land Use: Fields, forest, some single residential uses and golf (Falcon Ridge).

Description:

The clusters are located southeast of the Riverside South urban area, north of the Village of Greely (beyond the 1km village exclusion area) and south of Stage 2 O-Train Bowesville Station and park and ride. Bisecting the lands is a city owned rail corridor. The future use of the rail corridor has not been determined – future study is necessary to determine the appropriate setback from this railway line.

The lands to the west are designated as Agricultural Resource Area. Land and may also be withing the Airport Influence Operating Zone (AOIZ) which prohibits noise sensitive uses such as residential. Lands within the AOIZ have been excluded from consideration.

A former landfill is located to the south east at corner of Albion Rd and Rideau Rd. All the lands included in the expansion cluster are outside the 500m influence area of the landfill.

The cluster is in close proximity to the planned Riverside South town centre, which is planned to include a City library and recreational complex and commercial uses and the Ottawa International Airport Special Study Area), and employment areas.

The cluster includes a potential natural linkage identified in Annex 16 to the current Official Plan. The scoring reflects the impacts on this linkage, which subsequently would not be carried forward into the new Plan.

The stormwater servicing for the clusters would outlet to sensitive natural features, the provincially-significant Leitrim Wetland and cool-water Findlay Creek. Additional mitigation measures might be required to protect these features.

Hydro and pipeline corridors cut across the southwestern corner of the cluster.

The Riverside South CDP applies to the lands abutting the northwest portion of the cluster.

Servicing Water

A suitable water supply to the Servicing Cluster Areas (SCAs) in Riverside South would be available with implementation of the South Urban Community (SUC) pressure zone reconfiguration project due to be completed by 2023. With the facility upgrade projects identified in the 2013 Water Master Plan, there would be no need for any major pump station upgrades or pipe upsizing to service R-2, R-3, R-4, R-5, R-6, and R-7. It is anticipated that progression of development would occur from north-to-south, through which the large diameter transmission main on Bowesville Rd would be extended to service R-2, R-3, R-4, R-5, R-6

and R-7. Extension of watermain along Earl Armstrong and internal looping through approved and future growth areas would provide redundancy.

#### **Wastewater**

The future extension of the Spratt Road collector and downstream trunk sanitary infrastructure would have capacity to service all SCAs. Areas R-2, R-3, and R-4 could be conveyed by gravity to the Spratt Road collector. Areas R-5, R-6 and R-7 would require a new pumping station and forcemain to outlet north to future sanitary sewers within area R-2.

### Stormwater

All SCAs are located in the Mosquito Creek watershed. Exacerbation of existing erosion conditions along Mosquito Creek and its tributaries due to an increase in runoff volume resulting from further urbanization is a significant concern that would need to be addressed in any future development. Topographic conditions of SCAs R-5 and R-6 are expected to allow for a free-flowing storm outlet. SCAs R-2 and R-3 would require a channel to be constructed to establish an outlet to Mosquito Creek. SCA Area R-4 would require a storm sewer outlet along Rideau Road to establish an outlet to Mosquito Creek. SCA R-7 sits in a low-lying area that outlets to a tributary of Mosquito Creek with topographic constraints that would result in maintenance problems associated with submerged storm sewer systems.

### **Penalty Factors**

SCAs R2 - R-7 have areas of shallow bedrock. SCA R-2 includes areas with compressible clays, while SCAs R-3 - R-7 include depressional areas greater than 10% of their coverage area / imperfect drainage that, when urbanized, would result in an increase in runoff volume above what would normally be expected as a result of development based on conventional practices. The loss of this storage function would need to be accounted for in stormwater management measures to avoid aggravation of erosion conditions in Mosquito Creek.

Transportation

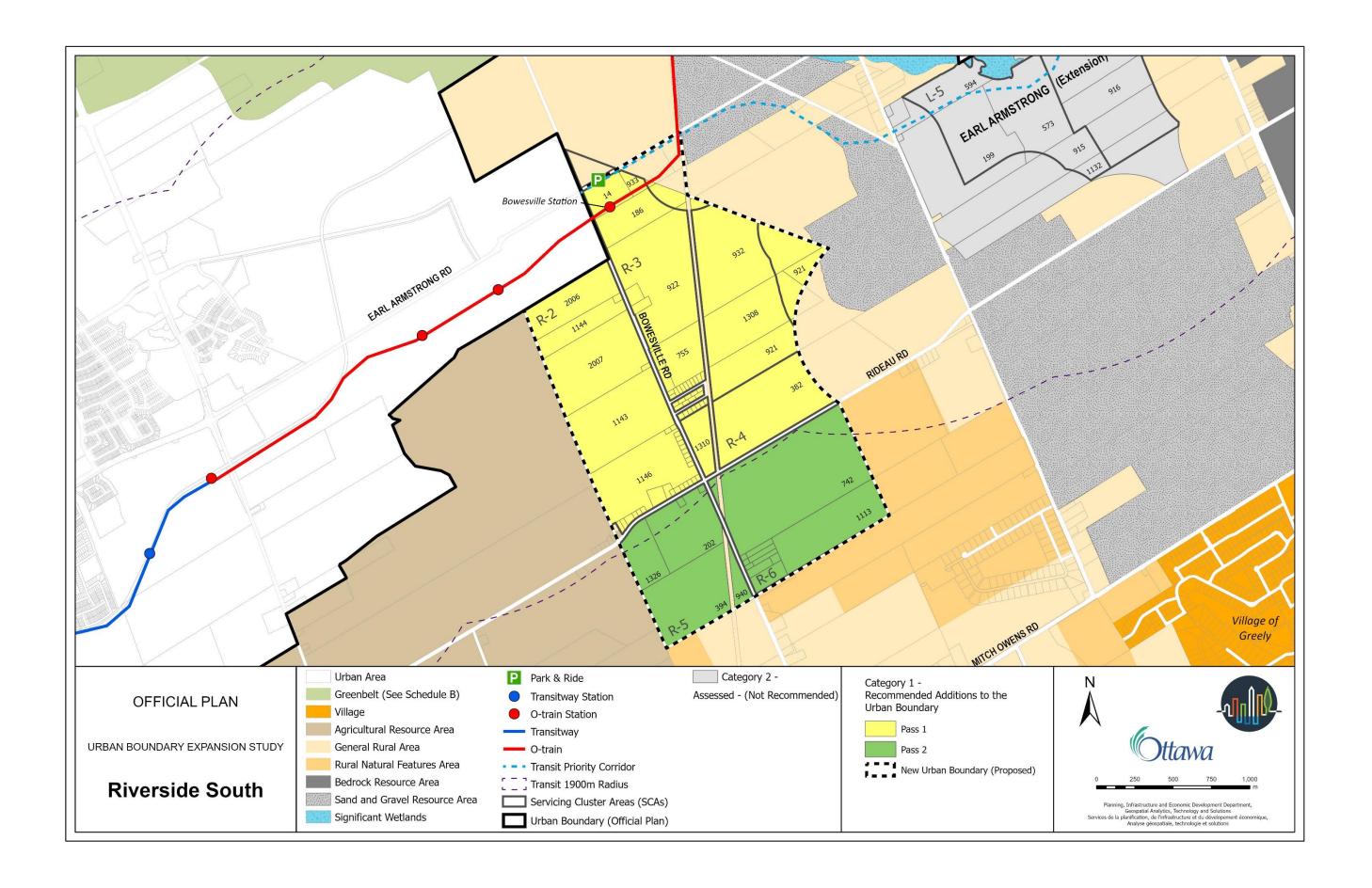
Parcels in this cluster are within or are adjacent to the 1.9km radial transit catchment area from the Bowesville\_O-Train transit station and park & ride. The parcels primarily have their frontage on Bowesville Road with some also having frontage on Rideau Road. These roads may require upgrade to urban standards to support future growth.

The former Prescott rail corridor (Non-Active) owned by the City of Ottawa traverses the cluster and is currently used as a multipurpose pathway (MUP) however it is reserved for potential future rail transportation and would require setbacks for any adjacent development.

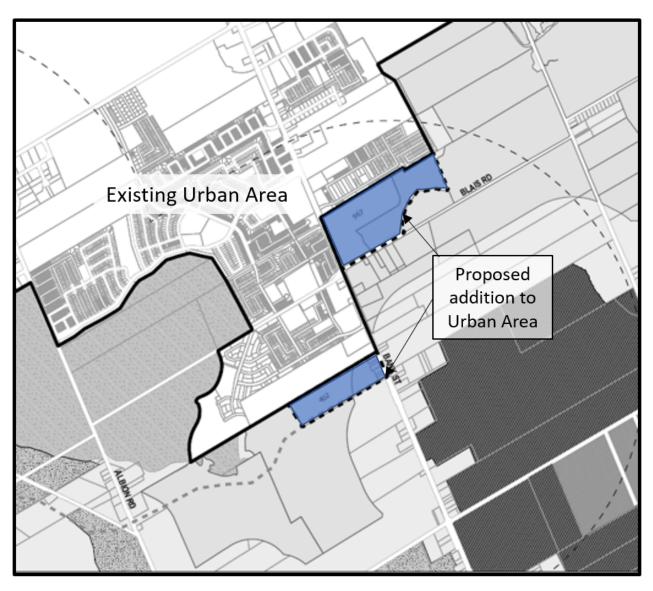
SCA	ID	1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	<ol> <li>b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.</li> </ol>	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs	9. Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	14. Conflict with Agricultural Land Uses	15.Active Agricultural Operation	16.Natural Heritage Linkages	Total Score	Category
R-2	2006	8	8	0	3	4	-2	21	18	12	30	8	0	3	0	0	8	-4	0	0	66	1
R-2	1144	8	8	0	3	4	-2	21	18	12	30	8	0	3	0	0	8	-4	0	0	66	1
R-2	2007	8	8	0	3	4	-2	21	18	8	26	8	0	3	0	0	8	-4	0	0	62	1
R-2	1143	8	8	0	3	4	-2	21	18	4	22	8	0	3	0	0	8	-4	-1	0	57	1
R-2	1146	8	8	0	3	4	-2	21	18	4	22	8	0	3	0	0	8	-4	-1	0	57	1
R-3	186	8	8	0	3	4	-3	20	18	12	30	8	0	2	3	0	6	0	0	-4	65	1
R-3	922	8	8	0	3	4	-3	20	18	12	30	8	0	2	0	0	6	0	0	-4	62	1
R-3	932	8	8	0	3	4	-3	20	18	12	30	8	1	1	0	0	2	0	0	-2	60	1
R-3	755	8	8	0	3	4	-3	20	18	8	26	8	0	2	0	0	6	0	0	-4	58	1
R-3	1308	8	8	0	3	4	-3	20	18	4	22	8	0	1	0	0	6	0	0	-4	53	1
R-3	921	8	8	0	3	4	-3	20	18	8	26	6	0	0	0	0	2	0	0	-2	52	1
R-4	1310	8	8	0	3	4	-3	20	18	4	22	8	0	2	0	0	6	0	0	-4	54	1
R-4	382	8	8	0	3	4	-3	20	18	4	22	8	0	1	0	0	6	0	0	-4	53	1
R-5	1326	8	2	0	6	4	-3	17	0*	0*	0*	6	0	3	3	-4	8	-4	-4	-1	24	1
R-5	202	8	2	0	6	4	-3	17	0*	0*	0*	6	0	2	0	-4	6	-4	-1	-4	17	1
R-5	394	8	2	0	6	4	-3	17	0*	0*	0*	6	0	2	0	-4	6	-4	-1	-4	17	1

		1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7.Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	14. Conflict with Agricultural Land Uses	15.Active Agricultural Operation	16.Natural Heritage Linkages	Total Score	Category
R-6	742	8	2	0	6	4	-3	17	0*	0*	0*	6	0	1	0	-6	6	0	0	-2	22	1
R-6	1113	8	2	0	6	4	-3	17	0*	0*	0*	6	0	1	0	-12	8	0	0	-2	18	1

<sup>\*</sup>Note – while these parcels technically score zero points for transit because the centroid of the parcel is outside the 1.9km radius from a transit station. They are considered to have met the criteria since the 1.9km radius was to represent a 2.5km over roads and these parcels are within this distance via Bowesville Road.



### **Leitrim Clusters**



Net Developable Area: Official Plan Designation: Land Use: 22 ha Planning Status: no applications
General Rural Area Zoning: RU – Rural Countryside
Fields and forested areas with some agricultural and single residential uses.
The land available for urban expansion within the Leitrim area is limited at this time in part due to active quarry operations in the vicinity.

Two small clusters have been identified for potential urban expansion.

The portion of the cluster along Bank Street is partially within the 500m buffer of the Bedrock Resource Area and has been removed from the net developable area calculation. Further west is the Leitrim wetland (PSW) and southwest is the Rideau Carleton (Hard Rock) racetrack and casino.

The Leitrim Community Design Plan is applicable to lands abutting the cluster

The second cluster is located in the southeastern area of Leitrim with frontage on Bank Street and Blais Road. The cluster includes an existing Stormwater

management pond and has urban development to the north and west. A watercourse also traverses this cluster.

The clusters are in proximity to existing retail and commercial uses, which includes a grocery store, as well as other existing and planned amenities and services, such as parks and schools and are also close to the Ottawa International Airport and other employment areas.

### Servicing

#### Water

A suitable water supply to the Servicing Cluster Areas (SCAs) in Leitrim would be available with implementation of the planned South Urban Community (SUC) pressure zone reconfiguration project. There would be no need for any pump station upgrades. Area L-1, L-2, L-3, and L-3a could be serviced from the existing feeder main on Bank St. Area L-4a could be serviced by extending the feeder main on Kelly Farm Dr. A looping option for area L-4a also exists from the feeder main on Bank St, which would provide redundancy. Areas L-4 and L-5 would be serviced via watermains constructed along the future Earl Armstrong Rd watermain, or off site from a 1.5 km extension from the Albion Rd feeder main. Area L-6 would require local watermain upsizing in the recently developed Lilythorne subdivision to the west.

#### Wastewater

There is no residual capacity at the Leitrim pumping station to service new growth areas in Leitrim. A capacity upgrade is planned for 2024 at the facility to accommodate lands added in the previous urban boundary expansion. Furthermore, twinning of the Conroy Trunk downstream of the pump station was identified in the 2013 Infrastructure Master Plan to accommodate growth to the year 2036.

Any proposed expansion areas would require a major upgrade to the Leitrim Pump Station. Property constraints at the station make it very challenging to accommodate additional expansion. SCA L-1 would require a new off-site sewer on Bank Street. L-2 could be serviced by upsizing local sewers to the west of Bank Street. Drainage from L-3 and L-3a to the pump station is constrained by a large diameter storm sewer crossing Bank Street. As a result, servicing these SCAs is expected to require a new pumping station and forcemains to cross under the storm pipe and Findley Creek.

Areas L-4 and L-5 would require a new pump station south of the current urban boundary that outlets to a new sewer on Bank Street. Expansion area L-6 would require a new local pump station near Hawthorne Road that outlets to existing pipes east of Bank street and north of the SWMF. A portion of L-4 north of Earl Armstrong Drive (L-4a) could be serviced by upsizing local sewers on Kelly Farm Drive. Modifications to the Conroy Trunk twinning project is required to accommodate expansion areas L-3, L-3a, L-4, L-5 and L-6.

#### Stormwater

SCAs L-1, L-2, and L-3 outlet to Findlay Creek, downstream from Leitrim. SCAs L-4 and L-4a would outlet to the constructed channel south of the Remer Subdivision, which discharges into the Leitrim Provincially Significant Wetland. L-5 drains to the Leitrim Wetland, and if developed, would require mitigation measures to avoid impacts to the PSW. L-6 drains to a headwater system of Bear Brook. All Leitrim SCAs have adequate relief and suitable geotechnical conditions that should avoid long-term maintenance problems associated with submerged storm sewer systems.

### **Penalty Factors**

All Leitrim SCAs are located in areas of shallow bedrock. SCAs L-3 - L-6 include depressional areas greater than 10% of their coverage area / imperfect drainage that, when urbanized, would result in an increase in runoff volume above what would normally be expected as a result of development based on conventional practices.

### Transportation

The clusters are within the 1.9km radial catchment area from the Transit Priority Corridor - Isolated Measures that is planned for the future extension of Earl Armstrong Road to the Leitrim community. This planned extension will connect the community to the Bowesville O-Train station and park & ride lot to the west.

The cluster located in the southwestern area of Leitrim has frontage on Bank Street to the east and the future Earl Armstrong Road to the south. The cluster to the northeast has frontage on Bank Street to the west and Blais Road to the south. Frontage on these streets will allow for connectivity and integration into the existing urban area to the north.

### <u>Leitrim Clusters – Scoring - Category 1</u>

SCA ID L-1 967 8 2 1 6 4 -1 <b>20</b> 6 4 <b>10</b> 8 5 0 3 0 8 0 -2 -4 <b>48 1</b>			1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding Rapid Transit System	Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	14. Conflict with Agricultural Land Uses	15.Active Agricultural Operation	16.Natural Heritage Linkages	Total Score	Category
	SCA	ID																					
	L-1	967	8	2	1	6	4	-1	20	6	4	10	8	5	0	3	0	8	0	-2	-4	48	1
L-2 414 8 2 1 6 4 -1 <b>20</b> 6 4 <b>10</b> 8 5 0 3 0 8 0 -2 -4 <b>48 1</b>	L-2	414	8	2	1	6	4	-1	20	6	4	10	8	5	0	3	0	8	0	-2	-4	48	1
L-4a 402 8 4 1 6 6 -3 <b>22</b> 6 12 <b>18</b> 6 1 0 0 -1 8 0 0 <b>54 1</b>	L-4a	402	8	4	1	6	6	-3	22	6	12	18	6	1	0	0	-1	8	0	0	0	54	1

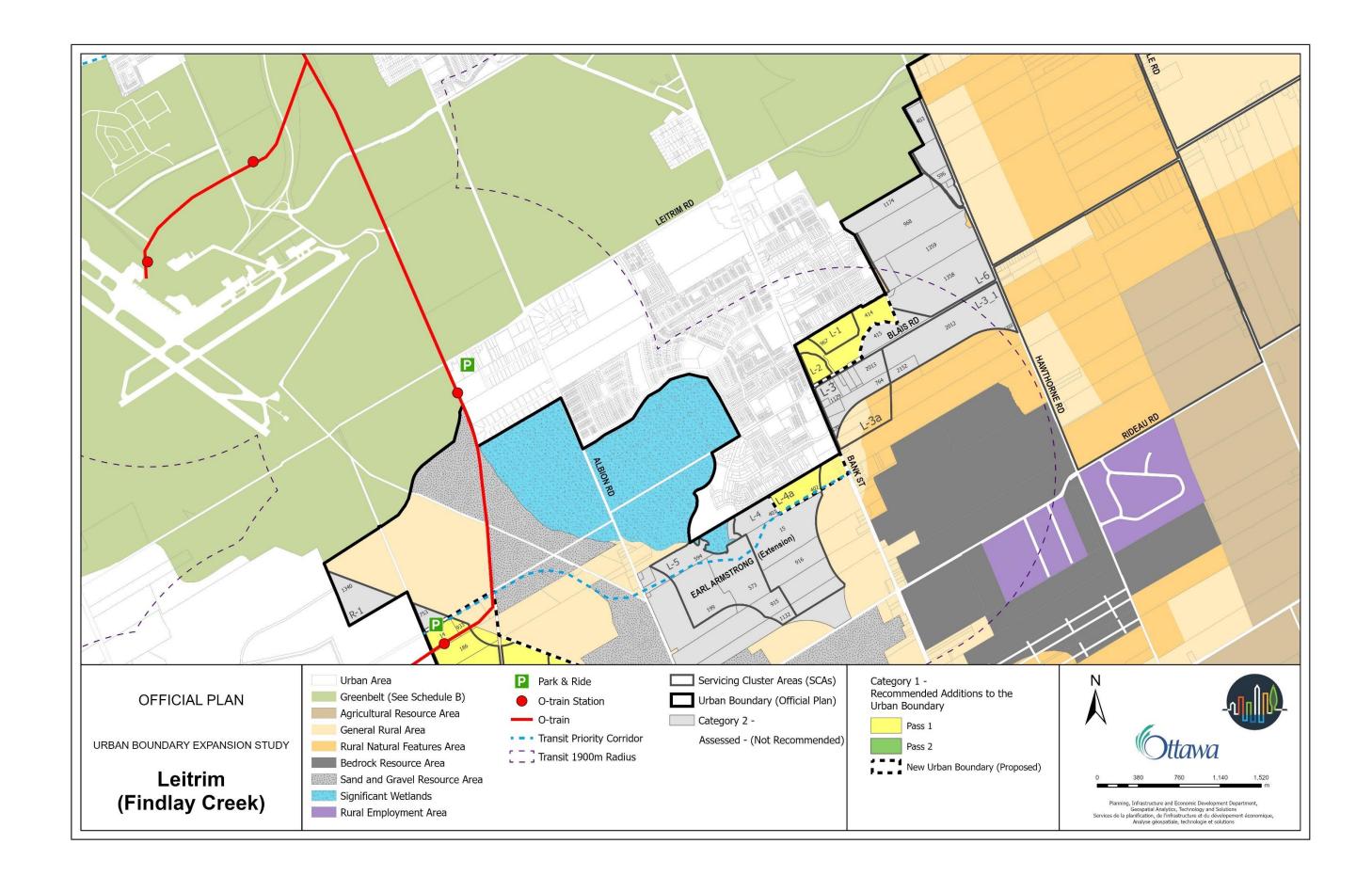
### Category 2

The parcels within Category 2 do not meet the minimum thresholds scores for servicing as well some did not meet the threshold for transit. Urban expansion in constrained by limited capacity in the Letrim pump station and Conroy Road Trunk Sewer. Cluster L-4 and L-5 is part the remaining drainage area for the Leitrim Provincially Significant Wetland and development would have unpredictable impacts on hydrology and natural conditions of the wetland. Cluster Areas L-3, L-4, L-5, and L-6 could all be serviced by a new sanitary pump station constructed in the Hawthorne Road and Blais Road area with a new trunk outlet to the Green Creek Collector.

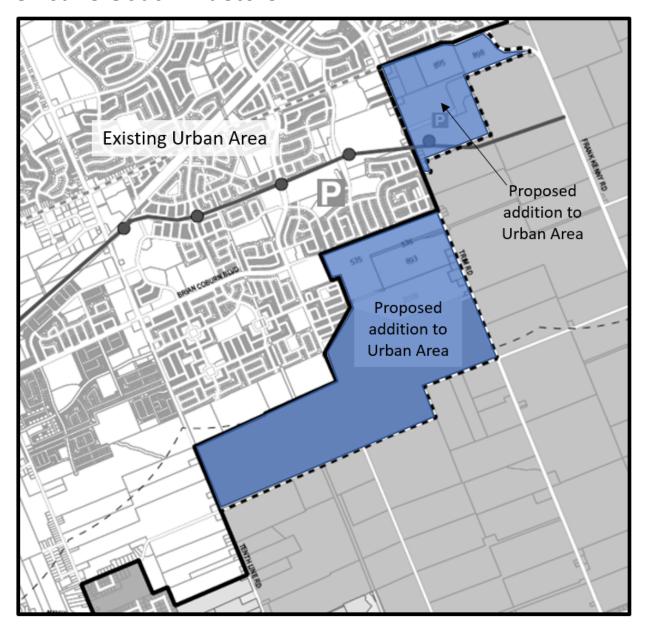
The gross area of the clusters south of Leitrim (L-4 and L-5) is approximately \*190 ha. It should be noted that this includes approximately 63.5 ha occupied by the Rideau Carleton (Hard Rock) racetrack and casino. The gross area of the clusters east of Leitrim L-3 and L-6 is approximately \*200 ha.

\*Note the area (ha) does not include any potential exclusions such as environmental constraints, hydro corridors, etc. and the actual developable area may be smaller.

SCA	OPID	1.Water	2.Waswater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3.b)Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4. Servicing Integration Factor	5. Servicing Risk Factor	Total Servicing	<ol><li>Availability of Rapid Transit or Transit Priority - Isolated</li></ol>	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor - Isolated Measures or Park and Ride feeding Rapid Transit System	Transit Total	8. Proximity to Jobs	9. Proximity to Convenience Retail	10. Distance to Major City Facilities	11. Distance to Emergency Facilities - Fire	12. Potential Arterial Road Upgrades	13. Connectivity	14. Conflict with Agricultural Land Use	15. Active Agricultural Operation	16. Natural Heritage Linkage	Total Score	Category
L-3	570	8	0	1	6	0	-3	12	6	12	18	6	1	0	3	-2	8	0	-1	0	45	2
L-3	1129	8	0	1	6	0	-3	12	6	8	14	8	3	0	3	0	8	0	-1	0	47	2
L-3	764	8	0	1	6	0	-3	12	6	8	14	8	3	0	3	-2	6	0	-1	-2	41	2
L-3	2013	8	0	1	6	0	-3	12	6	4	10	8	3	0	3	-2	6	0	-1	-4	35	2
L-4	916	4	0	1	6	0	-3	8	6	12	18	6	1	0	0	-1	8	0	0	0	40	2
L-4	15	4	0	1	6	0	-3	8	6	12	18	6	1	0	0	-1	8	0	0	0	40	2
L-5	915	4	0	0	6	0	-3	8	6	12	18	6	1	0	0	-4	6	0	0	0	35	2
L-5	594	4	0	0	6	0	-3	8	6	12	18	6	1	0	0	-5	6	0	0	0	34	2
L-5	1132	4	0	0	6	0	-3	8	6	8	14	6	1	0	0	-4	6	0	0	0	31	2
L-6	1358	4	0	1	6	0	-3	8	0	0	0	8	1	0	3	-2	8	0	-1	-4	21	2
L-6	1174	4	0	1	6	0	-3	8	0	0	0	8	1	0	3	-6	8	0	-1	0	21	2
L-6	596	4	0	1	6	0	-3	-1	0	0	0	8	1	0	3	-6	8	0	-1	0	12	2
L-6	968	4	0	1	6	0	-3	8	0	0	0	8	1	0	3	-4	8	0	-1	0	23	2
L-6	1359	4	0	1	6	0	-3	8	0	0	0	8	1	0	3	-4	8	0	-1	-2	21	2



### **Orléans South Clusters**



**Net Developable Area: Planning Status:** Southern cluster subject to a Pass 1: 92.33 ha City initiated zoning by-law Pass 2: 186.55 ha amendment to change from AG to RU zone per LPAT decision Total: 278.88 ha Official Plan Designation: General Rural Area Zoning: RU - Rural Countryside, AG3, AG - Agricultural Zone Land Use:

Fields, forest and some single residential uses.

#### **Description:**

Located southeast of Orléans urban area, the southern cluster is situated north of Wall Road, east of 10th Line Road and west of Trim Road. The northern cluster is south of Innes Road and east of Trim Road. There are lands designated as Agricultural Resource Area south west of both clusters.

The clusters are in close proximity to existing facilities and services including multiple retail centres(including grocery stores), recreational facilities (Francois Dupuis Recreational and Facility and Millennium Park), schools, parks and employment uses may of which can be accessed by sustainable transportation (walking/bike)

A hydro corridor traverses the southern cluster which includes a pathway system in the urban portion of the corridor.

Some tributaries of McKinnon's Creek (Lepage Charbonneau Municipal Drain) can be found within the southern cluster.

The Mer Bleue Urban Expansion Area 10 Community Design Plan applies to the lands east of the southern cluster.

### Servicing

### Water

SCAs in the East Urban Community area could be serviced by pressure zone 2E. There would be no need for any pump station upgrades and pressure in the SCAs would be very good. Area E-1 could be serviced from a watermain on Tenth Line. Watermain extension on Portobello Blvd. would provide redundancy to area E-1. SCAs E-2, E-3, E-4, E-5 and E-6 could be serviced via an extension of the watermain on Tenth Line Rd per the approved Mer Bleue Master Servicing Study. Redundancy to areas E-2 and E-3 would be provided through connections to the planned Mer Bleu community to the north. In order to provide redundancy to E-4, E-5 and E-6, about 0.5 km of existing Navan Road watermain would require upsizing, and a 2 km extension of the watermain.

### Wastewater

There is no residual capacity at the Tenth Line Pump Station to service new growth areas in the East Urban Community (EUC). A capacity upgrade to the pump station is scheduled to service lands added in the previous urban boundary expansion.

Any proposed expansion areas would require either a major upgrade to the Tenth Line Pump Station or constructing a new facility near Wall Road to service existing, planned growth and SCAs. Decommissioning the existing facility would be a requirement if the new pump station is built. Areas E-5 and E-6 south of Navan Road would also require a new local pump station due to low elevation challenges. The Gloucester Cumberland Trunk downstream of the Ottawa River Sub-Trunk has limited capacity to service candidate expansion areas in the EUC. Twinning sections of the trunk sewer or increasing capacity at the Orleans Cumberland Collector Pump Station would be required to service SCA's E-2 to E-6.

#### Stormwater

All SCAs outlet to either McKinnons Creek or to the East Savage Municipal Drain. A Petition process to convert a portion of McKinnons Creek to a municipal drain is underway. This process is intended to provide a deeper storm outlet for lands planned in the Mer Bleue expansion area. If lands in the EUC are added to the Urban Boundary, amendments to the Municipal Drain By-laws would be required, although the need for physical changes to the Drains is not anticipated.

Due to topographic and/or soils conditions it is expected that SCAs E-1- E-4 would have long-term maintenance problems due to submerged storm sewers. Area S-4 would also require lowering of a tributary of McKinnons Creek and a portion of McKinnons Creek to establish a functional outlet. E-5 and E-6 have sufficient topographic relief that would avoid the need for a submerged storm sewer system.

### **Penalty Factors**

SCAs E-2 - E-6 all include depressional areas greater than 10% of their coverage area / imperfect drainage that, when urbanized, would result in an increase in runoff volume above what would normally be expected as a result of development based on conventional practices. The availability of the Mer Bleu South SWM Pond and deeper outlet to McKinnons would likely avoid exceeding grade raise restrictions in E-2. All other SCAs have grade raise restrictions due to compressible clay soils.

Note: discussion of servicing scoring for SCAs C-1 and C-4 are found in the table below in the Cardinal Creek section.

### **Transportation**

Parcels in the clusters are within or are adjacent to the 1.9km radial transit catchment area from the future Cumberland Transitway transit stations. They have proximity to the existing Millennium park & ride lot.

The parcels within the clusters primarily have their frontage on Trim Road with some also having frontage on Wall Road. These roads may require upgrade to urban standards to support future growth. The existing and planned roads would allow to the clusters to connect and integration with the existing urban area, accommodating both road and active transportation connections. The clusters have good connectivity to the surrounding community and can connect further to the north to the existing pathway in the hydro corridor allowing for an active transportation connection to convenience retail and existing parks in the community.

SCA	ID	1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4.Servicing Integration Factor	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures	7.Proximity to nearest Rapid Transit Station, Transit Priority Corridor – Isolated Measures or Park and Ride feeding	Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	10.Distance to Major City Facilities	11.Distance to Emergency Services – Fire	12.Potential Arterial Road Upgrades	13.Connectivity	14. Conflict with Agricultural Land Uses	15.Active Agricultural	Operation 16.Natural Heritage Linkages	Total Score	Category
C-1	895	8	4	0	3	4	-1	18	10	12	24	4	5	4	3	0	6	-4	-1	0	57	1
C-1	898	8	4	0	3	4	-1	18	10	8	18	4	3	3	0	0	8	-4	-1	0	49	1
C-4	535	8	4	0	3	4	-1	17	10	8	18	4	1	5	3	0	8	-4	-1	0	51	1
C-4	893	8	4	0	3	4	-1	17	10	8	18	4	1	5	3	0	8	-4	-2	0	50	1
C-4	2008	8	4	0	3	4	-1	17	10	4	14	4	1	5	3	0	8	-4	-1	0	47	1
E-1	2009	8	2	0	3	2	-2	13*	10	4	14	4	1	5	3	0	8	-4	-1	0	43	1
E-1	1387	8	2	0	3	2	-2	13*	10	4	14	4	1	4	3	0	8	-4	-1	0	42	1
E-1	593	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	5	0	-4	8	-4	-2	0	21	1
E-1	533	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	5	4	0	8	-4	-1	0	30	1
E-1	352	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	5	0	-2	8	-4	-1	0	24	1
E-1	1285	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	4	4	0	8	-4	-1	0	29	1
E-1	540	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	5	0	-2	8	-4	-1	0	24	1
E-1	349	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	4	4	0	8	-4	-2	0	28	1
E-1	165	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	5	0	-2	8	-4	-2	0	23	1
E-1	534	8	2	0	3	2	-2	13*	0**	0**	0**	4	1	4	4	0	8	-4	-2	0	28	1
E-1	166	8	2	0	3	2	-2	13*	0**	0**	0**	4	0	4	4	-2	8	-4	-2	0	25	1

<sup>\*\*</sup>Note – While these parcels score zero points for transit because the centroid of the parcel is outside the 1.9km radius from a transit station they are considered to have met the criteria however since the 1.9km radius represents a 2.5km over roads.

<sup>\*</sup>Note – While these parcels score below the minimum servicing threshold they can be reasonably serviced. See servicing comments for further details.

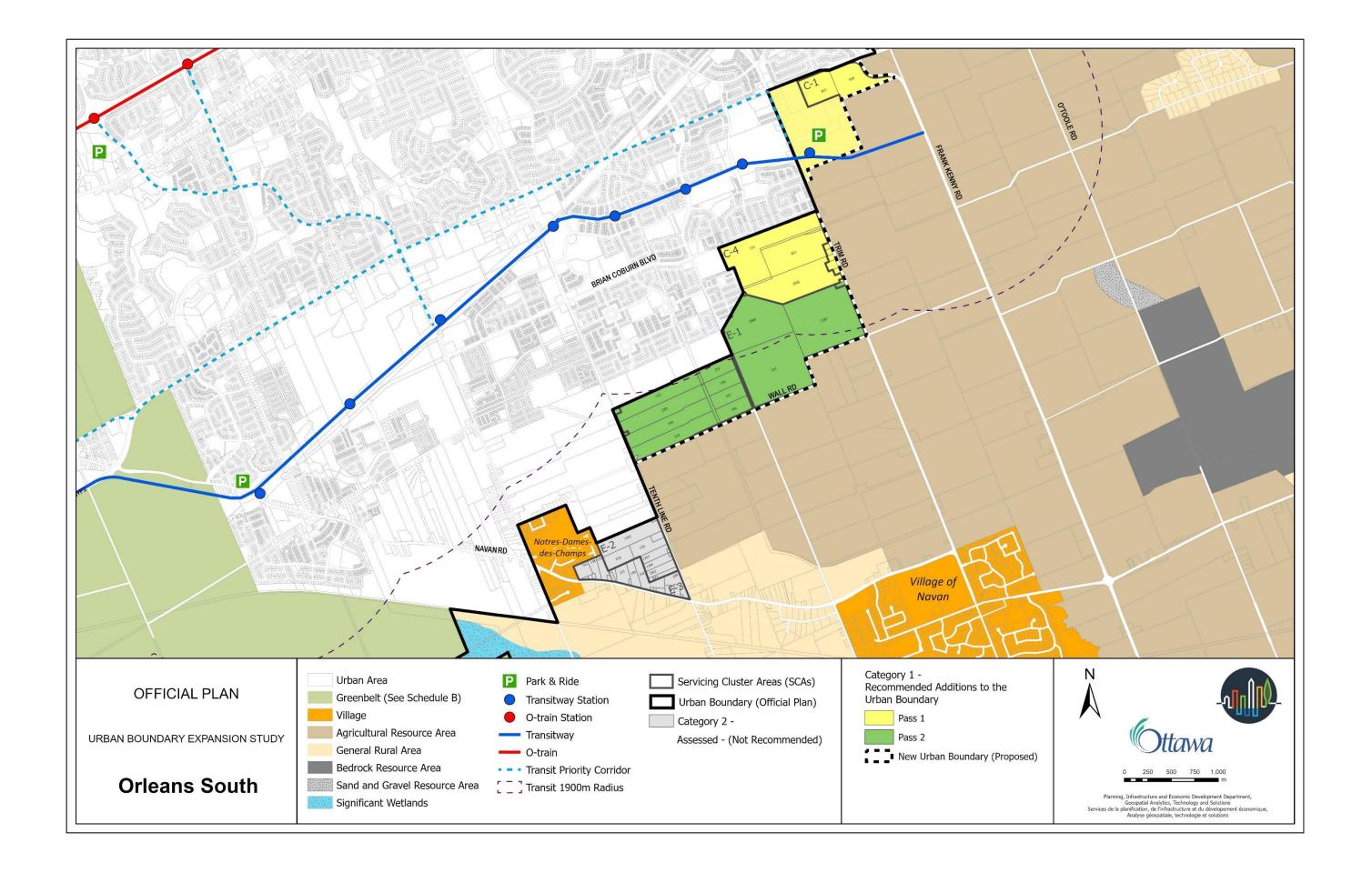
### Category 2

The parcels within Category 2 (E-2, E-3) do not meet the minimum thresholds scores for servicing and transit. Despite the serviceability of Cluster Areas E-2 and E-3 to the planned pump station, system modelling indicates that the cumulative impact of development of these cluster areas in combination with other development in the east end exceeds the capacity threshold of the Gloucester-Cumberland Trunk Sewer. Costs on a per hectare basis would be Very High.

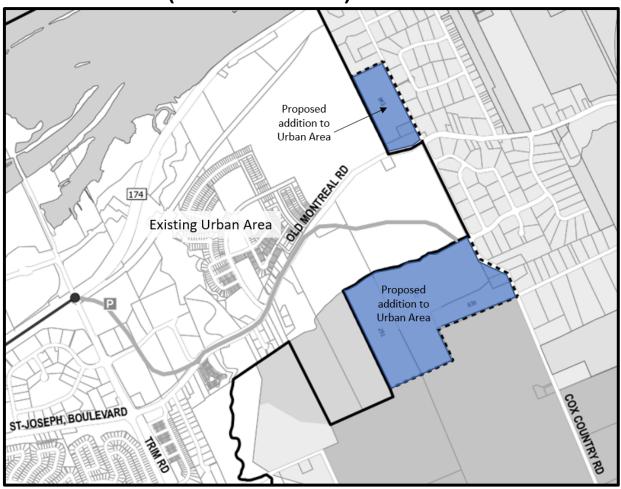
The gross area of the clusters E-2, E-3 is approximately \*55 ha.

\*Note the area (ha) does not include any potential exclusions such as environmental constraints, hydro corridors, etc. and the actual developable area may be smaller.

SCA	OPID	1.Water	2.Waswater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3.b)Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints on drainage.	4. Servicing Integration Factor	5. Servicing Risk Factor	Total Servicing	<ul><li>6. Availability of Rapid Transit or Transit Priority - Isolated</li></ul>	7. Proximity to nearest Rapid Transit Station, Transit Priority Corridor - Isolated Measures or Park and Ride feeding Rapid Transit System	Transit Total	8. Proximity to Jobs	9. Proximity to Convenience Retail	10. Distance to Major City Facilities	<ol> <li>Distance to Emergency Facilities - Fire</li> </ol>	12. Potential Arterial Road Upgrades	13. Connectivity	14. Conflict with Agricultural Land Use	15. Active Agricultural Operation	16. Natural Heritage Linkage	Total Score	Category
1445	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	6	-4	-1	0	22	2
1266	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	8	-4	-2	0	23	2
873	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	8	-4	-1	0	24	2
878	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	8	0	-2	0	27	2
520	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	8	-4	-1	0	24	2
1265	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	8	-4	-2	0	23	2
1082	E-2	8	0	0	3	0	-2	13	0	0	0	4	0	2	4	-2	8	-4	-1	0	24	2
702	E-3	8	0	0	3	0	-4	11	0	0	0	4	0	2	4	-2	8	0	-2	0	25	2
148	E-3	8	0	0	3	0	-4	11	0	0	0	4	0	2	4	-2	6	0	-2	0	23	2
331	E-3	8	0	0	3	0	-4	11	0	0	0	4	0	2	4	-2	8	0	-2	0	25	2
699	E-3	8	0	0	3	0	-4	11	0	0	0	4	0	2	4	-2	8	-4	-1	0	22	2
147	E-3	8	0	0	3	0	-4	11	0	0	0	4	0	2	4	-2	6	0	-2	0	23	2
705	E-3	8	0	0	3	0	-4	11	0	0	0	4	0	2	4	-2	6	0	-1	0	24	2
146	F-3	8	Ω	0	3	Ω	-4	11	0	0	0	4	Ω	2	4	-2	8	Ω	-2	Ω	25	2



### **Orléans North (Cardinal Creek) Clusters**



Net Developable Area: Planning Status: N/A 41.87 ha

Official Plan Designation: General Rural Area Zoning: RU - Rural Countryside,

Rural Natural Area

Land Use: Fields, forest and some single residential uses

Located northeast of the Orléans urban area and adjacent to the Cardinal Creek Description:

community.

The southern cluster has frontage on Cox County Road to the east, to the south are lands designated as Agricultural Resource Area, to the west are undeveloped lands added in the previous urban boundary expansion (known as 11H). A tributary of Cardinal Creek is located within this cluster and including some steep slopes along the northern edge.

The northern cluster on fronts Ted Kelly Lane and is just north of Old Montreal Road. There is a country lot subdivision to the east, urban residential development to the north (Cardinal Creek) and south is single family residential.

The clusters are close to employment uses within the Taylor Business park as including some commercial uses as well as planned parks, schools and other services with the Cardinal Creek Community.

From Old Montreal Road south to Watters Road, the Cardinal Creek Valley and tributary are deep with unstable slopes. They contain provincially significant karst features, including an active cave under Watters Road. Transportation and servicing is not feasible through this area.

The following approved Community Design Plan is applicable to the lands adjacent to the clusters; Cardinal Creek Village Concept Plan.

### Servicing Summary

### Water

SCAs C-1, C-2, C-3, C-4, and C-5 could be serviced by pressure zone 2E, all with good pressure. C-1 would be serviced by a watermain connection on Innes Rd. Watermain looping is possible by extending a watermain on Millenium Blvd. C-2, C-3, and C-5 could be serviced from an extension of the watermain on Old Montreal Rd. However, providing redundancy to C-2, C-3, and C-5 would be a challenge, and would require additional off-site work. SCAs C-3 and C-5 would further require servicing from Pressure zone 1E and extension of watermain on Old Montreal Rd to provide reliable water supply during a disruption in Pressure Zone 2E. Area C-4 has good pressure and could be readily serviced from the watermain on Trim Rd. SCAs C-6 and C-7 are at higher elevations than other areas, and cannot be serviced by Pressure Zone 2E. To service SCAs C-6 and C-7 a new Pressure Zone would be required, with the need for two new pump stations to provide a reliable supply.

### **Wastewater**

Expansion areas C-1 and C-4 would require new off-site trunk sewers, but could be serviced by gravity systems by connecting to the existing sanitary trunk sewer on Trim Road. Proposed trunk sewers identified in the Cardinal Creek Village Expansion Area have capacity to service areas C2 and C3. A significant extension of off-site trunk sewers would be required to service expansion areas C-5, C-6 and C-7 coupled with local upgrades on future sewers within Cardinal Creek Village, and twinning of sections of the Gloucester Cumberland Trunk or major expansion of the Orleans Cumberland Collector Pump Station.

### Stormwater

All Cardinal Creek SCAs outlet to Cardinal Creek or its tributaries, with the exception of SCA C-2, which drains to an existing SWM Pond in Cardinal Creek Village with outlet to the Ottawa River and C-5, which drains to small tributaries of the Ottawa River. Due to significant topographic relief, further urbanization of the Cardinal Creek watershed creates the potential to exacerbate existing erosion conditions affecting the stream and channel banks.

SCA C-4 includes lands that drain to Cardinal Creek and to McKinnons Creek under existing conditions. The south limit of C-4 is based on maximizing the area that could be serviced by a gravity sanitary outlet. If SWM measures cannot mitigate the impact of draining all of C-4 to Cardinal Creek, original storm drainage patterns should be maintained.

Topographic constraints in C-1 are likely to result in a submerged sewer system in this SCA. SCAs C-2 and C-3 have sufficient topographic relief to avoid

submerged sewers. All other SCAs will require off-site storm sewer or channel improvements to establish a functional outlet without submerged sewers. The existing Cardinal Creek Village SWM pond is expected to require a minor expansion to accommodate drainage from C-3.

### **Penalty Factors**

With the exception of SCA C-4, all areas have shallow bedrock. SCA C-4 has compressible clay soils. All SCAs except C-1 and C-4 include depressional areas greater than 10% of their coverage area / imperfect drainage that, when urbanized, would result in an increase in runoff volume above what would normally be expected as a result of development based on conventional practices.

### Transportation

Parcels in the clusters are primarily adjacent to the 1.9km radial transit catchment area from the Trim Road O-Train station and park & ride lot, but are within the 1.9km capture area of the conceptual future rapid transit corridor that terminates near Cox Country Road.

Parcels in the southerly cluster generally have frontage on Cox Country Road and the northerly cluster on Ted Kelly Lane, both of which may require upgrade to urban standards in order to support growth.

SCA	ID	1. Water	2. Wastewater (sanitary)	3.a) Stormwater characteristics and availability of surface water outlets	3. b) Stormwater - expected grade raise requirement relative to restrictions and other topographic constraints	2 4.	5.Servicing Risk Factors	Total Servicing	6.Availability of Rapid Transit or Transit Priority - Isolated Measures		Total Transit	8. Proximity to Jobs	9.Proximity to Convenience Retail	. 10.Distance to Major City Facilities	. 11.Distance to Emergency Services – Fire	, 12.Potential Arterial Road Upgrades	13.Connectivity	14. Conflict with Agricultural Land Uses	15.Ac		Total Score	Category
C-2	292	4	6	0	6	6	-3	19	18	12	30	4	1	1	4	0	8	-4	-2	0	61	1
C-2	291	4	6	0	6	6	-3	19	18	8	24	4	1	2	0	0	6	-4	-2	0	52	1
C-2	839	4	6	0	6	6	-3	19	18	12	30	4	1	1	4	0	8	-4	-2	0	61	1
C-3	843	1	4	1	6	7	-4	17	18	8	26	4	n	Λ	Δ	Λ	8	n	Ο	0	59	1

