



memo

to: Shakir Rehmatullah
Flato Lindsay Community Inc.
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cc:
from: Karl Repka, P.Eng
date: September 2, 2021

re: Lindsay East Expansion Servicing Strategy
file #: 21012

Counterpoint Engineering Inc. has been retained as the civil engineer for Flato Lindsay Community Inc. (Flato), the owner of lands east of Verulam Road and North of Highway 7 in the Town of Lindsay, City of Kawartha Lakes. Refer to Figure C-1 showing the extents of subject lands. The subject lands are referred to herein as Flato's East Lindsay Community.

This memo outlines a possible servicing strategy and an overview of the servicing design process required to facilitate the proposed development. This memo does not represent approval of any civil engineering design solution and the proposed development is subject to the full planning process for settlement expansion, development approval submissions and review by the municipality, Kawartha Conservation, and the Ministry of Environment, Conservation and Parks prior to final approval.

Existing Conditions

There are currently 9 parcels which comprise the extent of the lands owned by Flato to the east of Verulam Road. Two (2) of the parcels are partially within the City defined settlement boundary (referred to herein as 'Phase 1' and the remaining parcels are adjacent to the settlement boundary.

The subject lands are referred to herein as 'Phase 2'. The subject lands are shown on the attached Figure C-1. The majority of the land use is agricultural and there are 3 primary drainage features through the lands that will serve as the future stormwater management outlets from the proposed development.

Assumed Development Phasing for Servicing Discussion

The following sections outlines a conceptual strategy for proposed water and wastewater servicing for the Lindsay East Lindsay Community in a three phased approach:

- Phase 1: Residential & Commercial developments within the existing Urban Boundary
- Phase 2: Subject Lands**
- Phase 3: Remaining Lands



In July 2021, the City of Kawartha Lakes council has approved the initiation of the Master Servicing and Master Transportation studies that will be foundational documents to infrastructure improvements to support growth within Lindsay to the next planning horizon (~2051). The studies are to be tendered and commence in Q3 / Q4 2021. Flato's consulting team is working with City staff to ensure the Master Servicing studies include the full extents of Flato's East Lindsay Community.

We note that the actual capital infrastructure needs and preferred servicing solution determined by the City's own Master Servicing Study may differ from the servicing solutions suggest herein.

Water

Phase 1

- Both parcels will be serviced from the existing watermain along Verulam Road (CKL Road 36). The sites are within the existing Urban Boundary and Servicing Boundary and no concerns are anticipated.

Phase 2 – Subject Lands

- The developments are outside of the Urban and Servicing Boundaries and the following capital improvements to City infrastructure are anticipated to be required to support the development of East Lindsay:
 - It is anticipated that a 400mm transmission watermain will need to be extended to service the site, and it is further anticipated that a second Water Tower or Reservoir will need to be constructed to service the new development.
 - Based on anticipated growth in the near term it is known that upgrades to the intake and water treatment plant are required to facilitate growth within the current urban boundary. The City is aware and planning for the upgrade with a tentative construction timeline of 2028 per the current development charges background study. Actual timing of the upgrades will be determined through the recently commissioned Master Servicing Plan and the ongoing monitoring of increased water demand due to actual development activity in the coming years.
 - The planned plant upgrades contemplate target populations for the full build out of the current settlement area. Any future upgrades to the water treatment plant to service the East Lindsay Community would be additional to the current plant upgrades.

Phase 3

- Capacity for Phase 3 will be accommodated through the upgrades listed for Phase 2.

Wastewater

The proposed development phases are anticipated to generate the following sanitary flows which have been conveyed to the City of Kawartha Lakes to initiate the discussion on conveyance and plant capacity.

Phase 1: 5.6 L/s

Phase 2: 123 L/s – approx. pop. 5,400

Phase 3: 314 L/s – approx. pop. 16,000

Phase 1

- Both parcels can be serviced through an extension of a local sanitary sewer from the west side of CKL Road 36. An extension of the Colborne Street system for the Commercial Development, and an extension of the Kawartha Drive system for the Residential Development.
- The City has confirmed that as-of-right sanitary conveyance and allocation will be given to the Phase 1 parcels within the current settlement boundary.



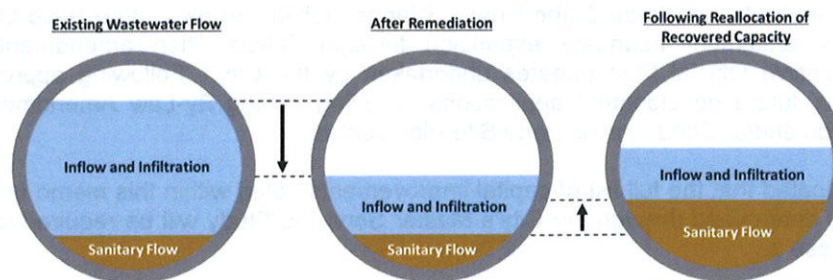
Phase 2 – Subject Lands

- The development lands are outside of the Urban and Servicing Boundaries and the following capital improvements to City infrastructure will be required to support the development of Flato's East Lindsay Community:
 - The trunk sewer from the treatment facility would need to be twinned and extended from St David Street along Needham Street to CKL Road 36 and then to Colborne Street along the south boundary of Phase 1 to ultimately facilitate the north half of the development. The trunk will be extended further south along CKL Road 36 to Parkside Drive to service the south half of the development.
 - A portion of the trunk sewer system will be forcemain. It is anticipated that two pumping stations will be required to service Flato's East Lindsay Community.
 - Wastewater pollution control plant upgrades.
- Further I&I reduction will be pursued with the intent to facilitate an accelerated timeline for the Phase 2 development lands. An Inflow and Infiltration offset program which has been given approval to commence in coordination with the City of Kawartha Lakes. A specialty inflow and infiltration consultant (Civica - information attached) has completed similar studies and offset throughout the GTA most notably the Town of Newmarket and York Region.
- It is anticipated that for 2 units of allocation given to the subject lands, 3 equivalent units of allocation in inflow and infiltration will need to be removed from the system (i.e. 1.5:1 Ratio as illustrated below).

Net Benefit to the Sanitary System



- To increase resiliency for the wastewater system, some of the recovered capacity is retained by the municipality
- Capacity assignment in a 1.5:1 ratio (or greater) an established safety factor to address potential future risks
 - One person of capacity is assigned to the developer for every 1.5 persons capacity recovered through I/I reduction



- Inflow and Infiltration offset can provide a community benefit increasing the efficiency of the existing infrastructure, reducing operation costs, and allowing for additional private service to be brought online, or intensification areas to be developed.
- Planning applications must be made and advanced enough to ensure Phase 2 and 3 of Flato's development lands are considered in the Master Servicing Plan.
- The City is currently undertaking a wastewater pollution control plant upgrade to increase the capacity of the plant to accommodate growth and an additional plant upgrade is scheduled for 2025. The planned plant upgrades contemplate target populations for the full build out of the current settlement area. Any future upgrades to the wastewater treatment plant to service the East Lindsay Community would be additional to the current plant upgrades.



Phase 3 – Other Lands

- Allocation for Phase 3 will be accommodated through one or a combination of:
 - I&I reduction,
 - Available residual capacity in the municipal systems, and
 - Wastewater Treatment plant upgrades.

Development Approvals & Capital Improvements

Phase 1 - Initial applications for Phase 1 will require typical Official Plan Amendment, Zoning By-Law Amendments that are supported by preliminary design in a functional servicing report and Site Plan approval applications that will be supported by detailed engineering design.

No capital improvements are anticipated to facilitate the development of Phase 1.

Phase 2 - The Phase 2 lands as highlighted on the attached figure and it is understood that a settlement boundary expansion through an Official Plan amendment will be required. Following approval of the settlement expansion, future development applications including Zoning By-Law Amendment, and Draft Plan of Subdivision and/or Condominium, and Site Plan control.

It is anticipated that a portion or all of Phase 2 could feasibly proceed based on capital improvements that are already underway or already planned, such as a wastewater treatment plant upgrade that is already in progress and the planned water intake and treatment plant upgrades. Utilization of the planned water and wastewater plant upgrades to service the Phase 2 lands would need to be approved by the City with regard for the upgrades being oversized or to have additional planned phases to reflect additional capacity over and above existing target populations. Further, Flato may elect to build ultimate servicing solutions such as a sanitary pumping station and select sections of trunk sanitary sewer to avoid the need for interim servicing solutions.

It is also anticipated that servicing Phase 2 will require the installation of watermain and sanitary sewers within easements through other lands owned by Flato.

Phase 3 – Similar to Phase 2, the Phase 3 lands highlighted as 'Future Build Out' on Figure C-1 will require a settlement boundary expansion through Official Plan amendments or through future comprehensive Official Plan updates undertaken by the City. Following approval of the settlement expansion, future development applications including Zoning By-Law Amendment, and Draft Plan of Subdivision and/or Condominium, and Site Plan control.

It is anticipated that the full list of capital improvements noted within this memo or analogous alternative upgrades determined through the City's Master Servicing Study will be required to service the full build out of Phase 3.



Conclusion

This memo and the attached figure outline a high-level strategy and schematic that could be used to service Flato's East Lindsay Community and support the necessary development applications.

The ultimate capital program to service Flato's East Lindsay Community will be defined through the City's Master Servicing Plan. The City of Kawartha Lakes is initiating its Master Servicing Study in the fall of 2021 that will guide capital improvements that support the City's future growth.

Flato's team is working to ensure the entire East Lindsay Community is included in these studies such that future infrastructure upgrades can be designed to accommodate the projected development within the current settlement boundary as well as the subject lands for Flato's East Lindsay Community.

