



City of
Peterborough

TO: Members of the Planning Committee

FROM: Ken Hetherington, Manager, Planning Division

MEETING DATE: November 19, 2012

SUBJECT: Report PLPD12-073
Lily Lake Functional Planning Study

PURPOSE

A report to present the findings of the Lily Lake Functional Planning Study and to obtain City Council authorization to initiate an Official Plan Amendment process to adopt a Secondary Plan for the Lily Lake Planning Area.

RECOMMENDATIONS

That Council approve the recommendations outlined in Report PLPD12-073 dated November 19, 2012, of the Manager, Planning Division, as follows:

- a) That the Lily Lake Functional Planning Study, attached as Appendix 1 to Report PLPD12-073, completed by Bousfields Inc., be received.
- b) That the Planning Division be authorized to initiate the public process for the preparation and adoption of a Secondary Plan for the Lily Lake Secondary Planning Area.

BUDGET AND FINANCIAL IMPLICATIONS

There are no direct budget and financial implications arising out of this matter. The necessary Official Plan Amendment to adopt a Lily Lake Secondary Plan will be a City-initiated application carried out by the Planning Division with expenditures for advertising and public notices drawn from the Division's operating budget.

BACKGROUND

On January 1, 1998, the City of Peterborough annexed approximately 285 hectares of land from Smith Township and 375 hectares of land from Otonabee Township, as phase one of a two-phase annexation agreement made with the townships, and approved by the Ministry of Municipal Affairs in 1997. As phase two of the agreement, the City annexed an additional 350 hectares of land from the Township of Smith-Ennismore-Lakefield and 170 hectares of land from the Township of Otonabee-South Monaghan on January 1, 2008. The Minister's order approving the annexation was the culmination of five years of negotiations with the townships in an attempt to accommodate the future growth of the City.

The boundary adjustment proposal, which was first initiated in 1993, concentrated on large tracts of vacant land, which were within the servicing shed of the City. This focus would provide the City with the opportunity to consider comprehensive development proposals of an urban scale with full municipal services. Although a few "pockets" of existing rural development were included in the annexation, primarily to ensure that the new municipal boundary was sensible, the primary objective of annexing larger tracts of serviceable land to accommodate future city growth was achieved.

Prior to considering development applications for the annexed lands, it has been the City's position that the large, contiguous tracts of vacant land should be the subject of a comprehensive area wide review of the major planning issues. This provides the City with the opportunity to plan on a community/neighbourhood wide basis, rather than the more traditional subdivision by subdivision approach.

Lily Lake Functional Planning Study:

The Lily Lake Planning Area is located at the north-western limit of the City. The area is bounded by the City limit and the Jackson Creek East Provincially Significant Wetland (including Lily Lake) to the west, Jackson Park and Jackson Creek to the south, Lily Lake Road to the north, and Fairbairn Street to the east. The area is approximately 198 hectares (489 acres) in size.

Topographically, the area contains a large drumlin near its centre, oriented in a southwest-northeast manner which allows for natural drainage to both Lily Lake and Jackson Creek. There are mixed deciduous and coniferous woodlots along the south and west boundaries of the Planning Area adjacent to Jackson Creek as well as intermittent hedgerows.

Land use in the study area is predominantly agricultural with some single detached homes associated with those agricultural uses and others that have been severed along Fairbairn Street and Lily Lake Road. Access to the Planning Area may be gained from Lily Lake Road and Fairbairn Street however there are currently no open streets within the interior of the planning area.

At the east limit of the Planning Area, behind the existing homes that front onto Fairbairn Street and Lily Lake Road, exists a collection of 94 undeveloped lots together with lands intended for road allowances and parkland. The area, known as the O'Grady Subdivision, was created through a process known as checkerboarding in the 1960s and has yet to develop due to a lack of municipal services, legal road frontage, and residential zoning.

Bousfields Inc. was retained by the City through a competition process (P-21-09) in 2009, funded by Area Specific Development Charges, to provide land use planning services for the completion of the Lily Lake Functional Planning Study. This included managing a team of sub-consultants whose responsibility it was to complete a review of the major issues that would affect the development of a Secondary Plan. These major considerations include:

- Archaeology;
- Natural environment;
- Geology and hydrogeology;
- Stormwater Management;
- Municipal Servicing;
- Transportation; and,
- Land Use Planning.

The Lily Lake Functional Planning Study has been completed as a series of independent reports culminating in the recommendation of a land use development concept within a Planning Background Report prepared by Bousfields Inc. A copy of that report is attached to this report as Appendix 1.

Key findings and recommendations from the various reports that cumulatively comprise the Lily Lake Functional Planning Study are summarized below.

Archaeology

Archaeological Services Inc. (ASI) completed a Stage 1 Archaeological Assessment of the study area consisting of a review of existing geographic, land use and historical information for the area, including information maintained by the Ministry of Tourism, Culture and Sport, and a site visit to inspect current conditions. The purpose of the Stage 1 Archaeological Assessment is to determine the potential for archaeological sites within the study area and to recommend requirements for future study.

Based on their review, ASI has identified the majority of the study area as having moderate to high potential for the presence of archaeological resources and has therefore produced a map illustrating those areas requiring, at minimum, completion of a Stage 2 Archaeological Assessment prior to any development occurring. ASI also notes that although development within floodplain areas and the Jackson Creek valley is not contemplated in their review, should future land disturbing activities be planned for such areas, a Stage 2 survey of those areas should also be required prior to undertaking any such activity.

Natural Environment

Niblett Environmental Associates Inc. (NEA) completed a review of the natural environment features both within and adjacent to the study area. Key features identified include:

- Jackson Creek East Provincially Significant Wetland (PSW) located along the western edge of the Lily Lake Planning Area;
- A locally significant wetland situated northeast of the Lily Lake Planning Area, away from any proposed development areas within the Planning Area;
- Valley lands associated with Jackson Creek along the southern limit of the Planning Area with steep slopes that change approximately 25m in elevation, erosion scarring and groundwater seepage in sections of the valley wall;
- Woodlands associated with the Jackson Creek East PSW and the Jackson Creek Valley;
- Seasonal and permanent wetland pools at the bottom of the Jackson Creek valley, along the Jackson Creek Kiwanis Trail;
- Fisheries habitat associated with Jackson Creek and a creek running in a westerly direction across the northern limit of the planning area that discharges into Lily Lake; and,
- An intermittent stream near the southeast limit of the study area, within the O'Grady Subdivision, that is considered indirect fish habitat.

Based upon their site surveys and review of historic natural heritage information applicable to the area, NEA did not identify the presence of any federally, provincially or regionally significant species of bird, wildlife or fish within the study area. Notwithstanding this, historical records and studies completed by others do identify past sightings of, and/or the potential for the presence of, a number of significant bird, wildlife and plant species in the vicinity.

Accordingly, in order to protect natural features identified within and adjacent to the study area and to better understand the status of certain significant species in the area, NEA recommends the following measures:

- Additional study at the development approval stage with respect to identifying, protecting and/or providing habitat for snapping turtles, particularly along Lily Lake Road and the Jackson Creek Kiwanis Trail;
- Additional study at the development approval stage to assess the status of Foxglove Beardtone, a regionally rare plant, within the study area and the level of protection required;
- A minimum 30m buffer from all wetlands, Jackson Creek, and all creeks/tributaries considered to be fisheries habitat;
- A 15m buffer from all creeks/tributaries considered to be indirect fish habitat;
- Protection of all woodlands associated with the Jackson Creek East PSW and the Jackson Creek Valley; and,
- Protection of the Jackson Creek Valley, below the top of bank.

Geotechnical/Hydrogeological Considerations

Geo-Logic Inc. completed a geotechnical and hydrogeological review of the study area in order to identify the existing subsurface soil and groundwater conditions within the study area, the local hydrogeology of the site, and to evaluate potential impacts resulting from urban development of the area.

Key features and considerations identified by Geo-Logic include:

- A central drumlin feature with a change in elevation in the order of 30m radiating from the centre and up to 50m to the bottom of Jackson Creek valley;
- Soils on site consisting of topsoil underlain by a sandy silt or silty sand till and a deeper layer of dense, clayey silt till;
- Groundwater seep areas at the toe of the Jackson Creek valley slope near the Jackson Creek Kiwanis Trail;
- Relatively shallow groundwater elevations generally in areas of lower elevation that may necessitate the use of an engineered drainage system at those locations;
- An anticipated reduction in water infiltration due to future development that will require further investigation and implementation of mitigation measures at the development approval stage to minimize infiltration loss;
- An anticipation that development will not pose an adverse threat to existing private wells adjacent to the study area; and,
- The need for an Erosion Hazard Limit Study to be completed prior to the approval of development in order to define the top of bank for the Jackson Creek valley and appropriate development setbacks from that feature.

Stormwater Management

Cole Engineering undertook an assessment of the potential stormwater drainage impact that future urban development of the study area may have and identified a preliminary strategy for mitigating negative effects.

Key findings and recommendations include:

- Confirmation of water balance conditions at the time of development approval and determination of appropriate measures for minimizing infiltration loss;
- The development of 4 centralized stormwater management facilities encompassing a combined area of approximately 10.5 ha to service the study area;
- Siting of stormwater management ponds located near the top of bank for the Jackson Creek valley will be subject to confirmation of the soil's capacity to bear the hydraulic loading associated with a stormwater management facility;
- Outlets for stormwater management ponds located near the top of the Jackson Creek valley will enter into the environmentally sensitive and floodplain areas associated with Jackson Creek and its valley.

Municipal Servicing

Cole Engineering reviewed the location and capacity of existing sanitary collection/treatment and water storage/distribution services surrounding and downstream of the study in order to identify options for providing municipal service to any future urban development of the Lily Lake area. The study was completed on the premise that urban development within the Lily Lake Planning Area would be done on the basis of full municipal services including roads with curbs and gutters.

Key findings and recommendations include:

- Through the use of deep sewers and routing that crosses through a short portion of lands within the Township of Smith-Ennismore-Lakefield, sanitary sewage can be collected and conveyed by gravity to the Parkhill Road Pumping Station located near the intersection of Parkhill Road and Ravenwood Drive;
- Constraints in the downstream sanitary system, namely, the capacity of the Parkhill Road Pumping Station and the sizing of The Parkway trunk sewer, south of Clonsilla Avenue, are currently being rectified;
- The City's Wastewater Treatment Plant currently has sufficient capacity to accommodate development of the Lily Lake Planning Area;
- The entire study area is located within water supply pressure Zone 3W save and except for the extreme south-east corner of the O'Grady Subdivision which is located in Zone 2;

- A Peterborough Utilities Commission conceptual plan to provide a trunk watermain loop within Zone 3W can be accommodated by providing a trunk watermain from the existing reservoir on Towerhill Road, through the study area, to Parkhill Road near Ravenwood Drive and ultimately to the Sherbrooke Street elevated storage tower; and,
- A detailed hydraulic analysis of the water supply system needs to be completed at the development approval stage to confirm existing and future system demand, system storage, pump operational ranges and the pumping capacity required to service the Lily Lake area.

Transportation

Cole Engineering undertook an assessment to anticipate the impacts that full build-out of the Lily Lake Planning Area would have on adjacent roadways and other external corridors and affected intersections in order to provide a balanced transportation system with transportation alternatives for the Study Area.

Generally, direct access to the Lily Lake Planning Area is only available from Lily Lake Road and Fairbairn Street. Accordingly, traffic generated within the Planning Area is proposed to be accommodated via a collector street network consisting of three accesses to Lily Lake Road and one access to Fairbairn Street, through the O'Grady subdivision.

To accommodate growth in background traffic within the 10-year horizon of the study, the following improvements are recommended for the surrounding road network:

- Realignment and signalization of the Parkhill Road / Brealey Drive / Ackison Road intersection;
- Signalization of the Lily Lake Road / Fairbairn Street intersection together with exclusive eastbound, westbound, northbound, and southbound left turn lanes;
- Exclusive westbound left turn and northbound right turn lanes at the Lily Lake Road / Ackison Road intersection; and,
- An exclusive eastbound left turn lane at the Parkhill Road / Fairbairn Street intersection.

In addition to these improvements, the study recommends the following improvements for accommodating full build-out of the Planning Area:

- Signalization of the Lily Lake Road / Ackison Road intersection located in the Township of Smith-Ennismore-Lakefield;
- Modification of the southbound pavement marking at the Parkhill Road / Fairbairn Street intersection to permit exclusive left turn and shared left-right turning movements;
- An exclusive westbound right turn lane on Parkhill Road at Fairbairn Street;
- An exclusive eastbound right turn lane on Lily Lake Road/Towerhill Road at Chemong Road.
- Signalization of the collector street access to the Planning Area from Fairbairn Street;
- Stop sign controls for all other accesses from the Planning Area to Lily Lake Road;
- All proposed collector streets should have should have one (1) inbound and separate left and right outbound lanes at their intersection with the external road system;
- Exclusive left turn lanes on Lily Lake Road at its approach to all site accesses;
- Widening of Fairbairn Street from one (1) lane to two (2) lanes per direction between Parkhill Road and Lily Lake Road; and,
- Widening of Lily Lake Road/Towerhill Road from one (1) lane to two (2) lanes per direction between Chemong Road and the easterly site access on Lily Lake Road.

Relationship with other City Transportation Initiatives

The transportation component of the Lily Lake Functional Planning Study originally commenced in 2009. Since that time the City has undertaken or commenced a number of transportation initiatives independent of the Lily Lake work that will have an impact on the recommendations of the Lily Lake transportation analysis and will require that the study outcomes be changed to reflect approved policy and plans.

Parkhill Road West

In 2011, the City completed a Class Environmental Assessment (EA) for the reconstruction of Parkhill Road West from Wallis Drive to the west City limit. Through that Project, Council has approved the realignment and reconstruction of the intersection at Parkhill Road, Brealey Drive and Ackison Road as a roundabout. This work, planned for construction in 2013, will eliminate the need for the improvements at this intersection which are recommended in the Lily Lake Functional Planning Study.

Comprehensive Transportation Plan

In 2011 Council adopted The Comprehensive Transportation Plan Update which, among other things, recommended the construction of a new two-lane road between Fairbairn Street and Cumberland Avenue within The Parkway alignment and the widening of Fairbairn Street to four lanes south of The Parkway allowance to serve the City's transportation needs to 2031.

The transportation analysis conducted for the Lily Lake Functional Planning Study was based on the full build-out of the Lily Lake area and it assumed that such build-out would be achieved over a ten year period with a horizon year of 2020. While the Functional Planning Study does assume achievement of provincially-mandated density targets in the planning area, it does not take into account the timing of that growth in light of overall city-wide population and employment growth projections to 2031 as reflected in Section 2.4.3 of the Official Plan.

The Comprehensive Transportation Plan, on the other hand, does not assume full build-out of the Lily Lake area within its horizon but instead considers a city-wide distribution of the population and employment growth projected to 2031. As a consequence of the differing assumptions between the Transportation Plan and the Functional Planning Study, projects recommended in the Lily Lake Functional Planning Study, such as the widening of Fairbairn Street between Parkhill Road and Lily Lake/Towerhill Road, are not included in the Comprehensive Transportation Plan nor in the City-wide Engineering Services Development Charge By-law that was approved in July 2012.

To ensure that road network improvements required to accommodate full build-out of the Lily Lake area are included in the City-wide Development Charge By-law and future Capital Budgets for, additional transportation network analysis will be required to update the Comprehensive Transportation Plan. The first step in this process would be to identify this added work through inclusion of policy in the Secondary Plan approval process.

Parkway Corridor Class EA

Based upon the approved Comprehensive Transportation Plan Update, the City has commenced a Municipal Class EA to evaluate road network alternatives for the complete Parkway Corridor. As noted previously, the Comprehensive Transportation Plan does not consider full build-out of the Lily Lake area and consequently the Parkway Corridor Class EA is not intended to fully address anticipated traffic outcomes generated by the full build-out of Lily Lake.

Notwithstanding this, it is anticipated that the outcome of the Parkway Corridor Class EA will affect the recommended transportation network improvements identified in the Lily Lake Functional Planning Study and therefore, it will be necessary for additional traffic assessment to be undertaken for the Lily Lake area following completion of the Parkway Corridor Class EA. The need for such a study will be identified in policy through the Secondary Plan approval process.

Land Use Planning

Bousfields Inc. undertook a review of the existing land use policy and regulation framework affecting the Planning Area including the Provincial Policy Statement, the Growth Plan for the Greater Golden Horseshoe, the City of Peterborough Official Plan and the current zoning of the lands to recommend the following principles for any future development in the area:

- Respect for provincial planning policy including a minimum average density target of 50 residents and jobs per hectare across the entire Planning Area;
- Sustainable, compact community design that provides for a mix of residential unit types and densities in addition to supporting employment uses, such as small-scale retail, and institutional uses;
- Promotion of personal health and transportation choice through the use of local street patterns that encourage walking, cycling, and transit;
- Establish a linked park and trail system with a well-defined relationship to adjacent natural features and accessible open space areas, specifically Jackson Creek and its associated valley lands and the Jackson Creek Kiwanis Trail; and,
- Recognize the unique location and topography of the area to create a distinctive community with exceptional views and maximum sun exposure.

Land Use Concept

Giving consideration to the principles described in their land use planning assessment and the findings of the other reports that comprise the Functional Planning Study, Bousfields Inc. has prepared a conceptual land use plan for the Planning Area:



The conceptual land use plan focuses on establishing a complete neighbourhood by combining a mix of low, medium and high density residential uses together with recreation and open space areas, local commercial uses and two elementary school sites. The plan is intended to respect the sensitive natural features of the area including watercourses, the Jackson Creek East PSW and the Jackson Creek valley by protecting such areas from development through the use of open space buffers. In addition to the recommendations of the stormwater management reporting prepared by Cole Engineering, the land use concept also illustrates potential for accommodating some of the area's stormwater management needs in a facility located at a topographically appropriate site within the Township of Smith-Ennismore-Lakefield. Any development of such a facility would require approval from both the Township and the County of Peterborough.

A key feature of the concept plan is its treatment of the O'Grady Subdivision. Although O'Grady contains 94 vacant lots of record, those lots are not currently zoned for residential use and therefore the concept plan has evaluated the lands on the basis of current planning legislation and standards. Portions of the O'Grady Subdivision have been identified as being located within the Jackson Creek valley and therefore development may not be suitable. Additionally, in order to protect surrounding lands including Jackson Park and Jackson Creek, a stormwater management facility will be required within O'Grady in order to enable development to occur at that location. Generally, the plan considers O'Grady to be greenfield lands in accordance with the Growth Plan for the Greater Golden Horseshoe and accordingly, it is anticipated that the current rural residential lotting pattern within the site will be redeveloped over time to a more appropriate urban density.

Overall, in order to satisfy the density target established in the provincial Growth Plan and reflected in the Official Plan for greenfield areas, the plan envisions a community with an ultimate population of approximately 8400 residents and jobs combined. Based on information contained in the recently approved Planning Area-Specific Development Charges Background Study (CPFS12-056, July 23, 2012), the area is anticipated to accommodate almost 3000 residential units.

Lily Lake Secondary Plan:

Information contained within the Lily Lake Functional Planning Study is intended to serve as the basis for a City-initiated Official Plan Amendment to adopt a Secondary Land Use Plan for the Lily Lake area that will contain Official Plan policies for the area. Each of the detailed sub-consultant reports is available through the Planning Division.

Implementation of a number of the recommended servicing and transportation infrastructure upgrades will require collaboration with a number of agencies including: County of Peterborough, Township of Smith-Ennismore-Lakefield, Otonabee Region Conservation Authority, Ministry of Natural Resources and potentially the Federal Department of Fisheries and Oceans. Some projects, such as the construction of new sewers, stormwater management facilities and the widening or realignment of existing roads and/or the construction of new roads and intersections may be subject to approvals under the Municipal Class Environmental Assessment (EA) process.

Should Council accept the results of the Lily Lake Functional Planning Study and authorize staff to commence the process for the preparation and adoption of a Lily Lake Secondary Plan, staff will prepare a draft secondary plan for the area that will be brought forward for public consultation.

A public open house meeting was held on November 8, 2012 to provide area residents and property owners with the opportunity to review the draft findings of the Lily Lake Functional Planning Study. The meeting was well attended with 100 guests. Some of the issues raised by those attending include:

- The need and means for establishing municipal services and roads within the O'Grady Subdivision;
- Transportation impacts of development and the effects of possible road widenings on existing area residents;
- The need to protect natural features in the area including the Jackson Creek East PSW, Jackson Creek Kiwanis Trail, Jackson Creek and its associated valley, and Jackson Park; and,
- The validity of planning for development in the Lily Lake area in light of observed population growth rates, the amount of development activity already occurring in the City, policy direction to encourage intensification of existing built-up areas, and employment conditions in the City.

Comments received from the public regarding the Lily Lake Functional Planning Study will be considered by staff during preparation of a Secondary Plan for the Lily Lake area.

Additionally, in advance of seeing the results of the Functional Planning Study, the Peterborough Architectural Conservation Advisory Committee (P.A.C.A.C) highlighted the need to value and protect the Jackson Creek valley and Jackson Creek Kiwanis Trail and, in particular, sightlines from the trail in the Lily Lake area as a cultural heritage landscape. Such consideration can be incorporated in the secondary plan policies and schedule to be developed for the area.

Finally, as a member of the project steering committee, Otonabee Region Conservation Authority has made a number of recommendations for further study at the development approval stage based on their review of the draft Functional Planning Study reports including:

- Additional investigation of the appropriateness of 30 m wetland buffers in light of local evidence supporting the use of wider buffers and including a more detailed assessment of indirect impacts from noise, human activity, stormwater runoff and lighting on the form and function wetlands within and adjacent to the study area;
- Additional environmental field investigation of hydrologic linkages and flow patterns in the south and east of the study area to ensure maintenance of surface and ground water features and functions as identified in the Natural Environment and Hydrogeological/Geotechnical components of the Functional Planning Study; and,
- Further hydrogeological study to assess potential well impacts to the rural subdivision areas located north of the study area.

The Lily Lake Functional Planning Study, as with all functional planning studies completed by the City, has been prepared as a macro-level investigation of the opportunities and constraints affecting the future development of the study area. When a Secondary Land Use Plan is prepared for the Lily Lake area, the need for more detailed investigations can be included as a requirement with the Secondary Plan development policies.

SUMMARY

The lands associated with the Lily Lake Planning Area were annexed by the City to accommodate, in part, future growth of the City. The completion of a City-initiated Secondary Plan for the Lily Lake Planning Area is a proactive planning approach that will assist in guiding the active development interests in the Planning Area.

Submitted by,

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Attachments:

Appendix 1 – Lily Lake Functional Planning Study – Planning Background Report