



July 22, 2011

The Municipality of Hastings Highlands
33011 Hwy. 62 North
Maynooth, Ontario
K0L 2S0

Attention: Frank Mills, CBO/BLEO

Regarding Birds Creek Waste/Wastewater Servicing

Dear Mr. Mills:

Further to the Municipality's request, the purpose of this letter is to provide an opinion regarding the technical feasibility of water/wastewater servicing for the Hamlet of Birds Creek.

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1.0 Scale of Future Growth is Relatively Small

Forecasting of future growth has been undertaken and summarized in the *Background Discussion Paper for the Birds Creek Secondary Plan (2011)* prepared by Dillon Consulting. The forecasting relies on the estimated 2030 population of the North Hastings Market Area in the County of Hastings Growth Accommodation Report, assuming that Birds Creek will absorb a 6.1% share of this growth of the long term.

It is estimated that Birds Creek will grow by approximately 100 people and approximately 42 new dwelling units in the next 20 years.

The *High Level Commercial Review (2011)* prepared by EDP Consulting (appended to the Background Report), indicates that "low population growth limits the demand for major retail uses."

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2.0 The Groundwater Supply is More than Adequate

The *Birds Creek Groundwater Characterization Study (2010)* prepared by JP2G Consultants was undertaken to “determine on a preliminary basis whether or not there are any quality or quantity concerns” of the groundwater characteristics in the hamlet. The report contains a number of key conclusions, including “all health related parameters are below their respective provincial guidelines,” “there was no correlation between the spatial distribution of nitrate and bacteriological content,” and “based on a review of reported water well pumping rates...there is an adequate supply of water.”

Most importantly, the study finds that “the most conservative estimate of groundwater recharge (476,000 m³/year) will exceed the projected water demand of Bird’s Creek.”

3.0 Development is Feasible Considering Cumulative Impacts to Groundwater

The *Birds Creek Cumulative Groundwater Quality Impact Assessment (2011)* prepared by Dillon Consulting was undertaken to assess the potential groundwater impacts associated with the development of 100 hectares¹ of the hamlet on private water and sewage disposal. It notes that the sand aquifer is the most dominant aquifer used in the community (versus the deeper Precambrian bedrock aquifer) and due to its unconfined nature and high permeability, it is considered to be highly vulnerable to groundwater impacts.²

However, the report concludes that “the current land use has not significantly impacted the groundwater quality,” “development on individual septic systems and water wells with the proposed development area is deemed to be potentially feasible,” and “an average lot size of approximately 0.5 ha is likely appropriate to avoid significant nitrate impacts to the aquifer.”

The report also provides numerous recommendations for new and existing development to protect the long-term sustainability of the groundwater resource – including requirements for hydrogeological studies to support initial and phased-in development approvals – which would be implemented through the Secondary Plan’s policies.

¹ Given that the 20-year growth forecast is approximately 42 housing units, this 100 ha area is nearly double the land demand to accommodate future development at one unit per hectare, and four times the land demand to accommodate future development at two units per hectare.

² By law, well drillers are required to provide a well record that identifies the well construction, so it is possible to confirm that a new well draws from the bedrock aquifer.

4.0 Costs of Piped Services Still Outweigh the Benefits

The *Planning and Development Study, Bird's Creek Area, 2006*, was prepared by Ainley Group to, among other things, assess and determine the area's potential for expansion of services to accommodate future growth. The report notes that "costs to bring water or sanitary sewer lines from Bancroft are roughly estimated at \$1 million per kilometre." Based on our knowledge of servicing costs, we do not think this cost estimate is unreasonable. Assuming that this cost was recovered entirely through the approximately 40 residential lots anticipated in the next twenty years, the levy would be \$25,000 per kilometre, per unit.

At this time, it appears that the costs of piped services outweigh the benefit to protection of water resources, in light of the findings of the *Birds Creek Groundwater Characterization Study* and *Birds Creek Cumulative Groundwater Quality Impact Assessment*.

5.0 Conclusion

Based on the above considerations regarding the scale of forecasted growth, the groundwater resource, and the ability to manage wastewater, it is considered technically feasible to service the Hamlet of Birds Creek on private well and septic services for the next 20 years.

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We trust that you have found the foregoing acceptable and that it will be useful for facilitating a discussion with other stakeholders about county / provincial policy matters, the ultimate servicing approach for the Hamlet of Birds Creek, and servicing policy direction for the Birds Creek Secondary Plan. We believe that through this discussion, we will be able to reach a consensus-based solution for the servicing of the Hamlet's growth.

Should you have any questions, please do not hesitate to contact the undersigned by e-mail at halvey@dillon.ca or rbaksh@dillon.ca, or by telephone at 613.745.2213.

Yours truly,

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