

May 9, 2014

City of London
300 Dufferin Avenue
P.O. Box 5035
London, ON N6A 4L9

Attention: **Frank Gerrits**

Re: **39T-02511 – Chelsea Green Meadows, 1 Terrace Street**
Subdivision Agreement – Special Provisions

We have reviewed the revised special provisions of the subdivision agreement dated April 29, 2014, as well as the clauses related to methane that were recently forwarded to our office. The following list outlines our concerns / comments:

a) (i) This clause only addresses the “exposed elements” of the methane gas control system. Our understanding was that the payment in lieu of maintenance and monitoring covered the entire system. Wording that limits the scope to only the exposed elements should be removed.

The cash-in-lieu payment was intended to cover all required maintenance of the methane control system, not all maintenance below some upset limit. Wording regarding the \$4,000 limit should be removed.

a) (ii),
(iii),
(iv) At our meeting with City staff on February 3, 2014, it was agreed that building permits could be issued before the methane control system is constructed for all lots except lots 44 through 50. The lots listed in this clause have not been identified in any discussion with the City.

Lots on which permits can be issued prior to construction of the methane control system should not be considered benefitting landowners.

Owners of lots that are not directly adjacent to the methane control system should not be responsible for maintenance of the system; their activities in the vicinity of their lot lines will not impact the system.

a) (ii) The frequency of monitoring outlined in this clause is inconsistent with the geotechnical Engineer’s plan. This clause should be revised to reflect that monitoring is to take place 4 times per year.

- a) (iii) The cash-in-lieu payment was intended to cover all required maintenance of the methane control system, not all maintenance below some upset limit. This clause should be removed.
- a) (iv) The cash-in-lieu payment was intended to alleviate the obligation for Aar-con to maintain the barrier in perpetuity, therefore this clause should be removed.
- Furthermore, landowners of future lots have no obligation to maintain a system that mitigates methane created by garbage on City lands.
- a) (v) Statutory requirements or other agreements may require the City to remove landfill material or undertake site remediation on City property. Neither the Draft Plan conditions nor City policy require the Owner to acknowledge or agree to the City's obligations with respect to City property. This clause should be removed.
- l) The water system proposed in the accepted water servicing report is not looped. The second paragraph of this clause is inconsistent with the proposed design and should be removed.
- m) Nitrile gaskets are not required by the accepted water servicing report, the geotechnical report, or City standards. EXP has provided the following response confirming that nitrile gaskets are not required:

After reviewing the clause with our specialist environmental engineer, our comments regarding specific measures to control the effects methane gas on watermain and water services materials are as follows:

- 1. Methane is a non-corrosive non-reactive gas and unlike hydrogen sulfide gas, it does not dissociate or react when dissolved in water and result in possible corrosive conditions.*
- 2. Given the 50 plus years that have elapsed since landfilling, the pressure driven component for methane gas migration should be very limited and the potential for methane migration.*
- 3. Watermains and laterals are filled with water under pressure in the approximate 30 to 50 psi range, whereas the pressure of methane containing landfill gas at peak landfill activity is in the order of 6 inches or so of water column. Therefore it is difficult to conceive under typical water main pressures for any appreciable transport of methane either under pressure and partial pressure – concentration – gradients into a pressurized watermain.*
- 4. From a human risk standpoint, methane gas is not considered toxic and concentrations that might be found if methane migrated into a flow water stream would be in the human health range.*

To this end, we do not believe it being necessary given the age of the landfill. We would think that the normal flange connections for a watermain would be sufficiently tight and adequate.

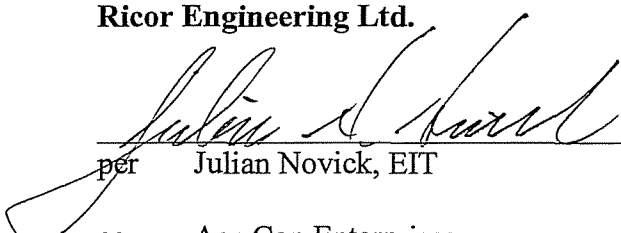
- n) Water quality requirements have already been confirmed in the accepted water servicing report which does not identify the need for subitems i) and ii), nor are additional measures specified. This clause should therefore be removed.
- o) April 2015 should be changed to June 2015 as capacity should be reserved for one year from the date of the subdivision agreement.
- ah) The remediation work has been completed to the standards at the time of the submission for the Record of Site Condition (RSC). The RSC was filed on March 24, 2011 and was acknowledged by the Ontario Ministry of Environment (MOE) on April 7, 2011. The RSC Reference Number is 96311. The last sentence in this clause is redundant because the RSC has been submitted and successfully acknowledged by the MOE.
- al) Remediation of the site has been completed, and the general provisions of the subdivision agreement prescribe the course of action to be taken if organic deposits are encountered during building construction.

The requirement to perform bar testing of specific lots within the plan prior to permit issuance is not justified; therefore this clause should be removed.
- am) The obligation to maintain the methane control system forever was to be eliminated in favor of a cash-in-lieu payment. This clause is inconsistent with that approach and should be revised.
- an) Landowners that are responsible for maintaining the methane control system should not require permission to access the easement; access would be required to fulfill their maintenance obligations.

We are open to engage in further discussion regarding the proposed changes to the agreement. We would like the agreement to be presented at Planning Committee on May 27, 2014 as you had suggested.

Should you have any questions, please contact our office at 519-963-0531.

Yours truly,
Ricor Engineering Ltd.


per Julian Novick, EIT

cc Aar-Con Enterprises
Tridon Group