TO: Chair and Members
Economic Development and Planning Committee

WARD(S) AFFECTED: WARD 12

COMMITTEE DATE: August 9, 2010

SUBJECT/REPORT NO:
Appeal of the City of Hamilton Committee of Adjustment Decision to Approve Severance Application AN/B-10:02, John Ross (Owner), 179 Sunnyridge Road (Ancaster) - (PED10157/PW10075) - (Ward 12)

SUBMITTED BY:
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Gerry Davis, CMA
General Manager
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PREPARED BY:
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SIGNATURE:

RECOMMENDATION

That Council agrees to the following actions, as detailed in Report PED10157/PW10075, respecting the appeal of City of Hamilton Committee of Adjustment Consent/Land Severance Application AN/B-10:02 (John Ross), 179 Sunnyridge Road (Ancaster), as shown on Appendix “A” to Report PED10157/PW10075, be approved by the Committee of Adjustment but recommended for Denial by the Planning and Economic Development Department and Public Works Department:

Vision: To be the best place in Canada to raise a child, promote innovation, engage citizens and provide diverse economic opportunities.
Values: Honesty, Accountability, Innovation, Leadership, Respect, Excellence, Teamwork
(a) That Council of the City of Hamilton proceed with the appeal to the Ontario Municipal Board (OMB) against the decisions of the Committee of Adjustment to approve Application AN/B-10:02.

(b) That Council directs appropriate Legal Services, Planning, and Public Works staff to attend the future Ontario Municipal Board (OMB) Hearing.

EXECUTIVE SUMMARY

Application AN/B-10:02 was considered by the City of Hamilton Committee of Adjustment on May 13, 2010. Comments to the Committee of Adjustment from the Planning Division did not support this application, as it was the opinion of staff that the proposal was not consistent with the Provincial Policy Statement, did not conform to the policies of the Greenbelt Plan, the Hamilton-Wentworth Official Plan, or the severance policies, as set out in the former Town of Ancaster Official Plan (see Appendix “B”). The proposed severance was not supported by Public Works staff, as the proposed lots where not of a sufficient size to provide sustainable on-site private services in accordance with the requirements outlined in the Jerseyville Settlement Capability Study (see Appendix “E”). The Committee of Adjustment, at its meeting of May 13, 2010, approved the severance application, subject to conditions (see Appendix “C”). Due to the appeal period, Public Works staff submitted an appeal letter and the required fee to the Secretary-Treasurer of the Committee of Adjustment to initiate an appeal process, subject to Council’s approval/ratification.

Alternatives for Consideration - See Page 12

FINANCIAL / STAFFING / LEGAL IMPLICATIONS

Financial: Infrastructure and Source Water Planning Section has submitted the required fee of $125.00 to the Minister of Finance to begin the appeal process. As a result of staffing constraints in the Legal Department, and a high volume of appeals, outside legal counsel may also have to be retained. The hearing would likely take between two to three days. The cost for external legal counsel would be several thousand dollars per day of hearing or greater.

Staffing: Pertinent representatives from Development Planning, Public Works, Public Health, and Legal Services will need to prepare for and attend an Ontario Municipal Board Hearing. However, as indicated above, Legal Services is currently experiencing staffing constraints and a high volume of hearings. It is highly likely external legal counsel may need to be retained in respect of this appeal.
Legal: No legal implications are expected.

HISTORICAL BACKGROUND

Proposal
The subject property is located at 179 Sunnyridge Road, Ancaster (see Appendix “A”). The severance application proposes to convey a vacant parcel of land, having a frontage of 25.1m± and an area of 5,412.9m²± for a rural residential building lot, and to retain a parcel of land having a frontage of 25.1m± and an area of 5,412.9m²±, containing an existing rural single detached dwelling, as shown on Appendix “D”.

The proposed severance is to replace a previous severance (AN/B-08:112), which was previously approved by the Committee of Adjustment on October 16, 2008, but lapsed due to the fact that the conditions were not fulfilled within one year of approval. The applicant also submitted a minor variance application (AN/A-08:263) to reduce the required lot frontage from 30m to 25.1m, and to permit an existing accessory building to have a minimum side yard setback of 0.4m instead of the required 0.75m. The proposed variances were approved by the Committee of Adjustment on October 16, 2008. Staff supported the previous severance and variance application, however, the City’s Infrastructure and Source Water Planning Section was not circulated on the original severance and variance application, and Planning staff was unaware that a minimum lot size of 0.8 ha is required in order to provide appropriate sustainable septic services and adequate potable water for the Jerseyville Settlement Area.

The applications were reviewed against all applicable planning policy documents, which included the Greenbelt Plan, Provincial Policy Statement, the Hamilton-Wentworth Official Plan, Town of Ancaster Official Plan, and the Town of Ancaster Zoning By-law. Planning Division staff recommended denial of this application on the basis of non-conformity with the Greenbelt Plan, the Provincial Policy Statement, the Hamilton-Wentworth Official Plan, and the Town of Ancaster Official Plan and, as such, staff comments for Severance Application AN/B-10:02 recommended that the severance application be denied.

The Committee of Adjustment, at its meeting of May 13, 2010, approved the severance application, subject to seven conditions (see Appendix “C”).

POLICY IMPLICATIONS

Greenbelt Plan
The subject lands are designated as “Protected Countryside - Hamlet” under the Greenbelt Plan.
“3.4.3.1 Hamlets, as identified in municipal Official Plans and within their approved boundaries as they existed on the date this Plan came into effect, continue to be governed by municipal Official Plan and related programs or initiatives, and are not subject to the policies of this Plan, save for the external connections policies of Section 3.2.5. This Plan permits infill and intensification of Hamlets subject to appropriate water and sewage services.”

The Settlement Capability Study for the Jerseyville Area recommends a minimum lot size of 2 acres. In the absence of a site-specific hydrogeological study that provides support for this application, and based on the review by Public Health Services, and their support of the position of the Infrastructure and Source Water Planning Section, the creation of another residential lot with private drinking water and sewage disposal services cannot be viewed as sustainable. Therefore, the proposed severance does not comply with policies of the Greenbelt Plan.

**Provincial Policy Statement**

The application has been reviewed with respect to the Provincial Policy Statement (PPS).

“1.1.4.1 In rural areas located in municipalities:

a. Permitted uses and activities shall relate to the management or use of resources, resource-based recreational activities, limited residential development, and other rural land uses;

b. Development shall be appropriate to the infrastructure which is planned or available, and avoid the need for the unjustified and/or uneconomical expansion of this infrastructure;

c. New land uses, including the creation of lots, and new or expanding livestock facilities, shall comply with the minimum distance separation formulae;

d. Development that is compatible with the rural landscape and can be sustained by rural service levels should be promoted; and,

e. Locally-important agricultural and resource areas should be designated and protected by directing non-related development to areas where it will not constrain these uses.
1.6.4.4 Individual on-site sewage services and individual on-site water services shall be used for a new development of five or less lots or private residences where municipal sewage services and municipal water services or private communal sewage services and private communal water services are not provided, and where site conditions are suitable for the long-term provision of such services. Despite this, individual on-site sewage services and individual on-site water services may be used to service more than five lots or private residences in rural areas provided these services are solely for those uses permitted by Policy 1.1.4.1(a) and site conditions are suitable for the long-term provision of such services.”

As the proposal is to create an additional residential dwelling lot that will not be of sufficient size to provide sustainable private water and sewage services, the proposed development would not be consistent with Policies 1.1.4.1 d) and 1.6.4.4 of the Provincial Policy Statement.

**Hamilton-Wentworth Official Plan**

The subject property is designated “Rural Area - Jerseyville Rural Settlement Area” within the Hamilton-Wentworth Official Plan.

“C.3.2.1.6 Residential development within Rural Settlement Areas may occur by means of plans of subdivision, land lease, or plans of condominium. Limited development by severance may be permitted if in conformity with the secondary plan and if located in a manner that will not interfere with future development.

D.8.2.1 Establish a minimum lot size in the Rural Area of 0.4 hectares (approximately 1 acre). A large lot size may be required by the Regional Public Health Department depending upon soil and site conditions or the findings of a hydrogeological study. A potable water supply must be available for the intended use of the land.”

Upon review of the proposed severance, and in absence of a site-specific hydrogeological study that supports the proposed severance application, it has been determine by Public Health Services and the Infrastructure and Source Water Planning Section that the creation of another residential lot, with private drinking water and sewage disposal services, cannot be viewed as sustainable in respect to the Jerseyville Settlement Compatibility Study recommendation of a 2-acre minimum lot size. Therefore, the proposed severance application would not comply with Policy D.8.2.1 of the Hamilton-Wentworth Official Plan.
**Town of Ancaster Official Plan**

The subject property is designated “Rural Settlement Area” in the Town of Ancaster Official Plan.

“5.8.1 The Rural Settlement Areas, shown on Schedule A, are those areas where a variety of land uses and development have clustered together on a small scale outside the designated Urban Area, and where it is considered appropriate that further development, predominantly residential, on a limited basis, can be accommodated in the time span of this Plan.

5.8.4 The predominant use of land in the Rural Settlement Areas shall be for single-family detached residential development. Home occupation uses, parks, institutional uses such as schools and places of worship, may also be permitted, as well as commercial uses as detailed in this Subsection.

5.8.8 In the Rural Settlement Area known as Jerseyville, residential development, in the form of single-detached dwelling units, shall be encouraged. In this regard, the Secondary Plan for this area shall take the following into consideration:

ii) Residential lots are to be of a size satisfactory to the Regional Health Unit, providing an adequate supply of potable water and a sewage disposal system; and,

iv) All development will be subject to the approval of the Regional Health Unit regarding water and sanitary sewage facilities and, where necessary, shall be appropriately set back from the Toronto, Hamilton, and Buffalo Railway lines to reduce the effect of noise on residents.

7.7.1 Land development will occur primarily by Registered Plan of Subdivision pursuant to the Planning Act. Where it is clearly not necessary, nor in the public interest that development of land proceeds by means of a Registered Plan, the division of land by Consent of the Land Division Committee may be considered.

7.7.1.2 When considering any application for Consent for the division of land for any purpose, conformity with the following provisions is required:

i) No Consent shall be permitted unless the proposal is in compliance with the policies of this Plan, the Regional Official Plan, Niagara Escarpment Plan, approved settlement capability studies, the
requirements of the Planning Act and the Minimum Distance Separation Formula of the Agricultural Code of Practice.

vii) Severances not located within the Urban Area Boundary shall be permitted only where the approval of the authority having jurisdiction has been secured, indicating that a private potable water supply and adequate sewage disposal facilities are or can be made available on the site.”

Based on the review by Public Health Services, and their support of the position of the Infrastructure and Source Water Planning Section, and in the absence of a site-specific peer reviewed hydrogeological study that provides support for the application, the creation of another residential lot with private drinking water and sewage disposal services cannot be viewed as sustainable in the presence of a Settlement Capability Study recommendation of a 2-acre minimum lot size. Therefore, the proposed severance would not conform to Policy 5.8.8 and Policy 7.7.1.2 of the Town of Ancaster Official Plan.

Rural Hamilton Official Plan (Council Adopted) (for Information purposes only):

The subject property is designated as "Jerseyville Rural Settlement Area - Settlement Residential" within the Council Adopted Rural Hamilton Official Plan.

“A.2.3.4.1 In the Rural Settlement, Area known as Jerseyville, residential development in the form of single-detached dwelling units shall be encouraged.

A.2.3.4.2 The size of residential lots shall be satisfactory to the City, and subject to Section C.5.1 Sustainable Private Services policies in Volume 1 of this Plan.

C.5.1 It is the objective of this Plan to ensure that all new rural development establishes, and maintains in perpetuity, sustainable private services wherever municipal water and/or wastewater services are not available.

C.5.1.3 All development requiring approval under the Planning Act that is dependent upon sustainable private services shall comply with the following:

a) With the exception of application made under Section 41 of the Planning Act, all development shall ensure that the design and capacity of private water supply and sewage disposal systems are capable of sustaining the land uses permitted by the Zoning By-law in the buildings to be serviced by those systems;
b) An application for the severance or subdivision of a lot utilizing an existing or proposed private sewage disposal system shall include sufficient land to accommodate a reserve discharge site or leaching bed for the system effluent in the event of a failure of the primary discharge site or leaching bed;

c) An application for the severance or subdivision of a lot that includes an existing or proposed sewage disposal system shall be a minimum, 0.4 hectares (1 acre) in size, or such larger lot area as may be required by environmental or cumulative land use conditions associated with the site for the discharge and dispersion of sewage system effluent to a standard equal to or exceeding those set out under the Ontario Environmental Protection Act and Safe Drinking Water Act guidelines;

d) All applications for severance or subdivision of a new lot, or creation of a new land use requiring amendments to this Plan or the Zoning By-law in an area not served by existing municipal water or wastewater systems, shall include a servicing suitability study of groundwater and geotechnical conditions that includes an assessment of water supply and sewage disposal system impacts of existing and proposed development associated with the site, that is prepared by a professional engineer, hydrogeologist, or similarly qualified professional, which demonstrates, to the satisfaction of the City, that a private water well and private sewage disposal system with associated reserve discharge area can be established in accordance with the sustainable private service definition of this Plan;

e) The City may consult with such agencies as deemed advisable and/or retain the services of an independent consultant, at the expense of the applicant, to peer review the study described in Section 5.1.3 d), above;

f) No endorsement, draft, or conditional approval under the Planning Act shall be provided by the City for any development dependent on a new private sewage disposal system until the development has complied with the provisions of Section C.5.1.3 a), b), c), d) and e), above;
g) No final approval under the Planning Act shall be provided by the City for any development dependent upon a new private water supply system until the development has complied with the provisions of Section C.5.1.3 a), d), and e), above.

For information purposes only, in the absence of a site-specific peer reviewed hydrogeological study that provides support for the application, the review by Public Health Services, and their support of the position of the Infrastructure and Source Protection Water Section, states that the creation of another residential lot with private drinking water and sewage disposal services cannot be viewed as sustainable in the presence of a Settlement Capability Study recommendation of a 2-acre minimum lot size. Therefore, the proposed severance would not comply with Policy A.2.3.4.2, Policy C.5.1, and Policy C.5.1.3 of the Rural Hamilton Official Plan.

**RELEVANT CONSULTATION**

- Legal Services Division.
- Infrastructure and Source Water Planning Section.
- Public Health Department.

The Infrastructure and Source Water Planning Section was circulated for comments on this application for severance. However, they were not circulated on the original severance application (AN/B-08:112) or the associated minor variance application (AN/A-08:263). With further input from the City’s Public Health Department, the comments from Infrastructure and Source Water Planning indicated that the proposed lots were not of sufficient size to provide adequate and safe services and, therefore, the proposed severance could not be supported.

The comments submitted by the Infrastructure and Source Water Planning Section reference three separate sources of technical information, all of which provide a basis for assessment of the requirements for sustainable private servicing related to potable water and sewage disposal in the Jerseyville Rural Settlement Area. The Jerseyville Settlement Capability Study prepared for the City (see Appendix “E”) identifies the native silt soils as having a poor attenuating capability for septic bed effluent. The Study also assesses the quality of groundwater (both overburden and bedrock sources) as marginal and prone to further deterioration with increased extraction through concentrated development. The study concludes that, because of constraints imposed by the water supply and the disposal of sewage effluents, future lot development should be limited to sizes of 2 acres (0.8 hectares) or greater.
Public Works and Public Health staff would note that the development constraints (soil types and groundwater conditions) and recommendations (minimum lot size) indicated in the Jerseyville Settlement Capability Study will not change over time. The Jerseyville Rural Settlement Area residents rely on a mix of dug/bored and drilled wells for drinking water. Dug/bored wells are very susceptible to microbiological and nitrate contamination. A review of water well lab analysis indicated the following:

- In 2008, 26 of 60 (43%) of well water samples submitted from 24 Jerseyville Settlement Area residences to the Provincial Public Health Lab indicated the water sample was either unsafe to drink (presence of *E. coli*), or had significant evidence of bacterial contamination (high levels of Total coliform bacteria).

- The lab results in 2009 were 11 of 41 (27%) submitted from 23 Jerseyville Settlement Area residences and, to date in 2010, 10 of 27 (37%) submitted from 14 residences.

- Over the period 2008 to June 2010 and for those Jerseyville Settlement Area residents submitting water samples, 3 wells within 100m and 12 wells within 500m of the subject lands have results indicating significant evidence of bacterial contamination or of water being unsafe to drink.

The above information is an indication that the wells in this settlement area may be more prone to bacteriological contamination and site-specific (and nearby) assessment of the drinking water quality and susceptibility should be conducted as mentioned previously. Factors including poor infiltration rates of rain water and septic system effluent (silty clay soils), especially during periods of heavier rainfall or snow melt, older well construction, and likely a lack of general maintenance will all contribute to higher percentages of adverse sample results. These conditions are exacerbated with smaller and narrower lots as septic systems and wells will invariably be located in closer proximity with reduced setbacks, and are more likely to be impacted from surface drainage issues.

Irrespective of the effective condition of individual septic systems, the quality of native soil has an important and supportive role in contaminant attenuating capacity. It is incumbent upon municipal agencies, through applicable policies and more recent legislation such as the Clean Water Act 2006, to ensure that private servicing conditions are, at a minimum, sustained and not further exacerbated through the broader planning process.
The third source of interpretive technical assessment for sustainable servicing again references the native soils’ attenuating capacity for septic effluent nitrate, a critical health concern with concentration limits for safe potable water set at 10 mg/L. The Province’s Groundwater Reasonable Use Guideline (Guideline B-7) stipulates that the quality of groundwater at the boundary of a lot supporting a waste system should meet safe drinking water criteria. The Building Code, and its recognition of any tertiary treatment systems, is not applicable in this case, as the Code’s performance parameters are limited to the effluent quality criteria of chemical and biological oxygen demand, and of suspended solids (see Table 8.6.2.2 A, Division B - Part 8 of the Code).

Instead, nitrate attenuating capacity is determined by native soil dilutive qualities and through an assessment by calculation of nitrate concentration at the lot boundary. This assessment is effectively applied at the planning stage to ensure appropriate lot sizing at the outset, and that adequate attenuating capacity for nitrates is available. The Ministry of Environment provides Guideline D-5-4 for the calculation of boundary nitrate concentrations and the determination of lot sizes for sustainable private servicing. Infrastructure and Source Water Planning Section staff calculated boundary nitrate concentrations of 13.44 mg/L for each of the proposed consent and retained lots, well above the Province's drinking water criteria of 10 mg/L (see Appendix F).

**ANALYSIS / RATIONALE FOR RECOMMENDATION**

The proposed lands to be severed, and lands to be retained, will comply with the minimum lot area requirement of 1,850 sq.m. required in the Town of Ancaster Zoning By-law, but will not comply with the minimum lot frontage requirement of 30m. Furthermore, an existing accessory building will not comply with the minimum side yard setback of 0.75m. In order to bring the proposed severance into conformity with the Zoning By-law, the applicant applied for minor variance approval (AN/B-08:263), which was approved by the Committee of Adjustment on October 16, 2008, and remains in effect. The approved minor variance further exacerbates the issues associated with adequate servicing needs.

The current evidence indicates that the proposed severance will create a lot that is not of sufficient size to meet the safe and adequate servicing needs of both the lands to be severed and lands to be retained. Therefore, the proposal does not conform to the policies of the Greenbelt Plan; it is not consistent with the policies of the Provincial Policy Statement; and does not comply with the policies of the Hamilton-Wentworth Official Plan and Town of Ancaster Official Plan.

Based on the foregoing, staff feels that it is appropriate to proceed with an appeal to the Ontario Municipal Board in opposition of the approval from the Committee of Adjustment.
ALTERNATIVES FOR CONSIDERATION

Option 1
Council could proceed with the appeal and direct appropriate Legal Services, Public Works, Public Health, and Planning staff to attend the Ontario Municipal Board Hearing in opposition to the approved severance and variance applications, as recommended in this report.

Option 2
Council may direct staff to withdraw the appeal letter, which was filed by staff against the decisions of the Committee of Adjustment, to the Ontario Municipal Board (OMB).

CORPORATE STRATEGIC PLAN


Financial Sustainability
• Address infrastructure deficiencies and unfunded liabilities.

Healthy Community
• Plan and manage the built environment.

APPENDICES / SCHEDULES

• Appendix “A”: Location Map
• Appendix “B”: Development Planning Comments
• Appendix “C”: AN/B-10:02 Consent/Land Severance Decision
• Appendix “D”: AN/B-10:02 Severance Sketch
• Appendix “E”: Settlement Capability Report - Jerseyville
• Appendix “F”: Nitrate Boundary Calculations

:DB/CS
Attachs. (6)
Re-scheduled
AN/B-10:02 (179 Sunnyridge Road, Ancaster)

PLANNING and ECONOMIC DEVELOPMENT DEPARTMENT

Development Planning – West:

The applicant is proposing to sever the existing 1.08 ha property to create one new lot for a single detached dwelling.

Greenbelt Plan

The subject lands are designated as “Protected Countryside – Hamlet” under the Greenbelt Plan. Policy 3.4.3.1 states that Hamlets, as identified in municipal official plans and within their approved boundaries as they existed on the date this Plan came into effect, continue to be governed by municipal official plans and related programs or initiatives and are not subject to the policies of this Plan, save for the external connections policies of section 3.2.5. This Plan permits infill and intensification of Hamlets subject to appropriate water and sewage services. Staff note, that the subject application has been reviewed by the Source Water Protection Section. Based on their review, the creation of another residential lot on the subject lands is not sustainable in terms of private servicing and should be denied.

Provincial Policy Statement

The application has been reviewed with respect to the Provincial Policy Statement (PPS). Staff recognizes that the application is consistent with the policies that govern Rural Areas, 1.1.4.

However, policy 1.6.4.4 states that individual on-site sewage services and individual on-site water services shall be used for a new development of five or less lots or private residences where municipal sewage services and municipal water services or private communal sewage services and private communal water services are not provided and where site conditions are suitable for the long-term provision of such services. As noted above, the subject application has been reviewed by the Source Water Protection Section. Based on their review, the creation of another residential lot on the subject lands is not sustainable in terms of private servicing and should be denied.

Hamilton-Wentworth Official Plan

The subject property is designated “Rural Area – Jerseyville Rural Settlement Area” within the Hamilton-Wentworth Official Plan. Policy 3.2.1.3 requires that Area Municipalities prepare secondary plans for designated Rural Settlement Areas where growth other than infilling is anticipated. Further, Policy 3.2.1.5 states that development within Rural Settlement Areas will conform to the secondary plan, and be consistent
with the provisions of this plan. Finally, Policy 3.2.1.6 states that residential development within Rural Settlement Areas may occur by means of plans of subdivision, land lease or plans of condominium. Limited development by severance may be permitted if in conformity with the secondary plan and if located in a manner that will not interfere with future development.

Policy D-8 addresses land severance. Specifically, Policy D-8.2.1 states that a minimum lot size in the Rural Area is .4 hectares (approximately 1 acre). A larger lot size may be required by the Regional Public Health Department depending upon soil and site conditions or the findings of a hydrogeological study. A potable water supply must be available for the intended use of the land. Staff note that although both the lands to be conveyed and the lands to be retained are approximately 1.34 acres in size (.54 hectares) and meet the minimum size requirement of the Plan, a review of the subject application by the Source Water Protection Section has found that the creation of another residential lot on the subject lands would not sustainable in terms of private servicing. Therefore, staff are of the opinion that the subject application should be denied.

As part of Severance Application AN/B-08:112, staff made the following comments regarding the above noted application:

The subject property meets two of the 11 criteria used by the City of Hamilton and the Ministry of Culture for determining archaeological potential:

1) Within 200 metres of water or prehistoric water, or 200 metres of a secondary watercourse; and,
2) Within 100m from a historic transportation corridor.

These criteria define the property as having archaeological potential. Accordingly, Section 2 (d) of the Planning Act and Section 2.6.2 of the Provincial Policy Statement apply to the subject application. If this severance is granted a condition should be attached to the approval as follows:

Standard condition
That the owner shall carry out an archaeological assessment of the entire development property and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. No demolition, grading, construction activities, landscaping, staging, stockpiling or other soil disturbances shall take place on the subject property prior to the approval of the Director of Planning and the Ministry of Culture confirming that all archaeological resource concerns have met licensing and conservation requirements. All archaeological reports shall be submitted to the City of Hamilton concurrent with their submission to the Ministry of Culture.
Should deeply buried archaeological remains be found on the property during any of the above development activities the Ontario Ministry of Culture (MCL) should be notified immediately (416.314.7143). In the event that human remains are encountered during construction, the applicant/landowner should immediately contact both MCL and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government Services (416.326.8392).

The criteria referenced in the previous comments determined that the lands were of archaeological potential. Accordingly, Section 2 (d) of the Planning Act and Section 2.6.2 of the Provincial Policy Statement still apply to the subject application. If this severance is granted, staff require, the fulfillment of condition # 1 stated below.

Rural Hamilton Official Plan (for information purposes only):

The subject lands are designated as "Jerseyville Rural Settlement Area – Settlement Residential" within the Council adopted Rural Hamilton Official Plan. Section A.1.0 provides the general policies for rural settlement areas. Specifically, Policy A.1.2.4 b) states that all development shall be required to obtain approval from the City for servicing. Any development shall be serviced in accordance with Section C.5.1, Sustainable Private Water and Wastewater Services of Volume 1 of this Plan. In addition, Policy A.1.3.1 states that on lands designated Settlement Residential, residential uses are limited to single detached dwellings and small scale institutional.

Policy A.2.3 addresses the Jerseyville Rural Settlement Area Plan. The following policies are relevant to the subject application:

A.2.3.4.1 states that in the Rural Settlement Area known as Jerseyville, residential development in the form of single detached dwelling units shall be encouraged.

A.2.3.4.2 states that the size of residential lots shall be satisfactory to the City, and subject to Section C.5.1 Sustainable Private Services policies in Volume 1 of this Plan.

Finally, staff note, that Policy C.5.1.3 a) states that with the exception of applications made under Section 41 of the Planning Act, all development shall ensure that the design and capacity of private water supply and sewage disposal systems are capable of sustaining the land uses permitted by the Zoning By-law in the buildings to be serviced by those systems.

For information purposes and based on comments provided by the Source Water Protection Section, staff note that this application would not meet Policy A.2.3.4.2 as the proposed lot sizes are not sustainable in terms of private servicing.

The Town of Ancaster Official Plan
The subject property is designated “Rural Settlement Area” in the Town of Ancaster Official Plan. Policy 5.8.1 states “The Rural Settlement Areas shown on Schedule A are those areas where a variety of land uses and development have clustered together on a small scale outside the designated Urban Area and where it is considered appropriate that further development, predominately residential, on a limited basis can be accommodated in the time span of this Plan.”

Policy 5.8.4 states “The predominant use of land in the Rural Settlement Areas shall be for single-family detached residential development. Home occupation uses, parks, institutional uses such as schools and places of worship, may also be permitted as well as commercial uses as detailed in this Subsection.”

Policy 5.8.5 states “Residential development in the Rural Settlement Areas shall be permitted in accordance with the relevant policies specified in this Subsection.”

Policy 5.8.8 states “In the Rural Settlement Area known as Jerseyville, residential development in the form of single detached dwelling units shall be encouraged. In this regard, the Secondary Plan for this area shall take the following into consideration:

ii) Residential lots are to be of a size satisfactory to the Regional Health Unit, providing an adequate supply of potable water and a sewage disposal system; and,

iv) All development will be subject to the approval of the Regional Health Unit regarding water and sanitary sewage facilities and, where necessary, shall be appropriately set back from the Toronto, Hamilton, and Buffalo Railway lines to reduce the effect of noise on residents.”

As the proposed residential lots are not of a size satisfactory to provide an adequate supply of potable water as stated by the City’s Source Water Protection Section the proposal does not conform to the policies of the Town of Ancaster Official Plan.

Town of Ancaster Zoning By-law

The subject property is zoned Residential Hamlet “RH” Zone in the Town of Ancaster Zoning By-law, to which the proposed use complies.

The proposed lands to be severed and lands to be retained will meet the minimum lot area requirement of 1,850 sq. m. but will not meet the minimum lot frontage requirement of 30m. Furthermore the existing garage will be within the minimum 0.75m side yard setback requirement. Therefore minor variance approval will be required as a condition of any severance approval.

Recommendation:
As the proposal does not conform to the Greenbelt Plan, Provincial Policy Statement, Hamilton-Wentworth Official Plan, and Town of Ancaster Official Plan staff recommends that the proposed severance be Denied.

Conditions (If Approved):

1) That the proponent shall carry out an archaeological assessment of the entire property and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. No demolition, grading, construction activities, landscaping, staging, stockpiling or other soil disturbances shall take place on the subject property prior to the approval of the Director of Planning and the Ministry of Culture confirming that all archaeological resource concerns have met licensing and conservation requirements. All archaeological reports shall be submitted to the City of Hamilton for approval concurrent with their submission to the Ministry of Culture.

Should deeply buried archaeological materials be found on the property during any of the above development activities the Ontario Ministry of Culture (MCL) should be notified immediately (416.314.7143). In the event that human remains are encountered during construction, the proponent should immediately contact both MCL and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Small Business and Consumer Services (416.326.8392).

2) That the applicant receive minor variance approval for all required variances to the satisfaction of the Manager of Development Planning.

NOTE (TO BE INCLUDED IN DECISION IF APPROVED):

Based on the attached plans, and on this application being approved and all conditions being met, the owner/applicant should be made aware that the lands to be conveyed (Part 1) will be assigned the municipal address of 173 Sunnyridge Road, and that the lands to be retained (Part 2) will remain as 179 Sunnyridge Road.

Building Services Division:

This application will permit the conveyance of a vacant parcel of land for single residential purposes, and retain a parcel of land containing an existing single family dwelling and detached garage for residential purposes.

The applicant should obtain an appropriate municipal address for the proposed parcel(s) from the Development Section of the Planning and Development Division prior to the issuance of a building permit.
Variance for lot frontage will be required for zoning compliance of the lands to be severed and retained.

Variance for the existing detached garage will be required for zoning compliance of the lands to be retained.

The owner/applicant, as a condition of approval, shall submit survey evidence from a Qualified Designer (Part 8 Sewage System), Professional Engineer or Architect that the existing septic system complies with the clearance requirements of Part 8 of the Ontario Building Code for the lands to be severed and or retained, to the satisfaction of the Planning and Economic Development Department (Building Services Division).

Note: Please note that the applicant has already applied to the Committee of Adjustment for the above mentioned variances under AN/A-08: 263 and the variances have been granted.

**Development Engineering – West:**

**Information**

1. The future width of this section Sunnyridge Road is 26.213m. As a condition of approval the Owner shall convey 3.048m of land from the lands to be severed and retained to establish this future width.

2. There are no municipal roads within the Sunnyridge Road road allowance available to service the subject lands. The applicant is proposing to service the severed and retained lands by way of well and septic. The applicant shall confirm through a detailed grading and drainage plan the both existing the well and septic system are located entirely within the lands to be retained.

**Recommendation**

1. That the owner enter into, and register on title of the lands a Consent Agreement with the City of Hamilton to the satisfaction of the Manager of Design and Construction to deal with the grading and drainage on the subject lands. The applicant/owner shall demonstrate to the Manager of Design and Construction that all drainage from the site shall be taken to a suitable outlet.

2. That the owner convey to the City of Hamilton by deed, 3.048m of land from the lands to be severed and retained for road allowance widening purposes to establish the property line 13.106m from the centre of the Sunnyridge Road road allowance.

CERTIFIED A TRUE COPY

[Signature]

SECRETARY TREASURER
Hamilton Municipal Parking System (Parking Services):
No concerns.

PUBLIC WORKS DEPARTMENT

Traffic, Engineering and Operations Division:
For the information of the owner/applicant, a separate access is required for each of the severed lands and the retained lands. Details on the permit and construction of the access can be obtained through the offices of the Municipal Parking Systems at Extension 4578.

Operations and Maintenance Division (Forestry & Horticulture Section):
See attached comments.

Environment & Sustainable Infrastructure Division:
See attached comments.

CORPORATE SERVICES:

Budgets, Taxation & Policy (outstanding taxes):
The owner shall pay any outstanding realty taxes and/or all other charges owing to the City Treasurer.

See attached for additional comments.
Appendix "B" to Report PED10157 / PW10075 (Page 8 of 13)

Scott Plante, Urban Forestry Planning & Protection Coordinator
City Centre, 77 James Street North, Suite 301
Hamilton, On L8R 2K3
Phone (905) 546-2424 Ext. 7375, Fax (905) 546-3972
Email - splante@hamilton.ca

Hamilton
Public Works Department
Operations and Maintenance Division
Forestry & Horticulture Section

Urban Forestry Tree Asset Management

Date: January 20, 2010
To: Carol Connor, Secretary – Treasurer, Committee of Adjustment
From: Scott Plante, Urban Forestry Planning & Protection Coordinator
Subject: 179 Sunnyridge Road, Ancaster {AN/B-10:02}

PREAMBLE

Tree Protection is a measure of efforts to preserve existing trees and with this in mind the Forestry & Horticulture Section provides the following opinion based on the application before the Committee of Adjustment and dated January 19th, 2010.

An assessment of the Consent / Land Severance Application for the conveyance of a vacant parcel of land for single family residential purposes and to retain a parcel of land containing an existing single family dwelling and detached garage for residential purposes shows, that there are Municipal Urban Forestry conflicts.

TREE OVERVIEW

There is one mature trees located in front {Part One} of this site on the Road Allowance of Sunnyridge Road. This Municipal tree asset (a 60cm d.b.h Sugar Maple) was found to be in good condition and governed under The City of Hamilton Tree By-Law 06-151.

TREE MANAGEMENT

With the current information provided it appears that this Municipal Tree Asset located back of the existing ditch will be impacted if this application is approved without a Tree Management Condition.

Therefore the Forestry & Horticulture Section requests that all trees within this proposed development area be identified and that a Tree Management Plan be prepared by a Landscape Architect.
All trees shall be surveyed & plotted accurately on the plan. The determination of ownership of all trees is the responsibility of the applicant and any civil issues which may exist between property owners with respect to trees, must also be resolved by the applicant.

It is compulsory that all proposed surface treatment changes within individual tree driplines as well as property lines, building footprints, driveways, utility construction corridors, heavy equipment parking and temporary access roads be accurately depicted on the submission.

If it is determined that existing trees can remain, a Tree Protection Zone Detail with notes showing Tree Preservation Techniques shall be included on the submission as per the Tree Preservation & Protective Measures for Trees Affected by Construction Policy.

GRADE CHANGES, TRENCHLESS TECHNOLOGY & SOIL COMPACTION

The primary objective is to protect the existing soil structure and grade changes within the driplines of trees, especially those presently growing higher or lower than the existing traveled portion of the current road allowance is the single most important consideration when determining if trees can be retained.

The following information should be considered before providing the recommendation to retain and preserve trees regulated by the City of Hamilton’s Tree By-Law 06-151.

Construction outside the Tree Protection Zones may impact retained trees, 85% of a trees roots are located within the top 45cm of soil. Roots are the most important component of a tree and if soil compaction reduces the soil pore space below an ideal 50% it can be devastating. Roots need space, oxygen & water to survive and soil compaction closes the soils pores which reduces the roots ability to store carbohydrates, absorb minerals and enable the conduction of water and nutrients.

Grade changes resulting in the piling of soil over the root system also adversely affect the roots ability to function and can lead to tree mortality. As little as 10 centimeters of additional soil is enough to smother fine roots and harm a sensitive mature tree.

The exposure and severing of roots through the grading or utility construction process is most severe in terms of decreasing tree longevity and increasing tree mortality. Severing only one major root can cause the loss of up to 25% of the roots system. Roots provide anchorage and loss of structural stability can and have resulted in property damage and death.

APPROVALS & FEES

All healthy trees on Municipal property which are found to be in conflict with this proposed development and do not meet our criteria for removal, will be subject to a Replacement Fee as outlined in the Reforestation Policy – Municipally Owned Lands. This 60cm d.b.h Sugar Maple has an established value of $5,400.00 plus GST.
Director approval (Letter of Intent for Public Tree Removal as per the Public Tree Removal Policy in Tree By-Law 06-151) will be required for the removal of all healthy Municipal trees where the total number is less than twenty-five.

After approval, all Municipal tree and stump removals will be the responsibility of the Developer and shall be removed during the construction process.

SUMMARY

The Forestry & Horticulture Section requests that a Tree Management Condition be applied to this application and encourages you to provide the applicant with a copy of our comments

60cm dia. Sugar Maple @ 179 Sunnyridge Road

Should you or the Applicant require clarification or technical assistance, please do not hesitate to contact me at (905) 546-2494, Ext. 7375

Regards,

Scott Plante

Urban Forestry Planning & Protection Coordinator
Forestry Technician
I.S.A Certified Arborist & Utility Specialist
REPORT ON APPLICATIONS FOR LAND SEVERANCE

DATE: February 3, 2010  
TO: Carol Connor  
Secretary-Treasurer  
Committee of Adjustment (City of Hamilton)  
Fax: (905) 546-4202  
RE:  
179 Sunnyridge Road  
Former Town of Ancaster  
Now City of Hamilton

COMMENTS:

Further to a site visit of subject property on January 25, 2010, Public Health Services has recently become aware of additional information concerning this severance application.

Specifically:
1. Subject lands to be severed and retained are located in an area where Settlement Capability Studies identify recommended lot sizes of 2 acres minimum to ensure that groundwater used as a source of drinking water is not adversely affected.

2. Preliminary calculations as provided by Infrastructure and Planning-Source Water Protection, Public Works Department indicate support for the 2 acre minimum lot size recommendation for this area. Sufficient area is needed to ensure nitrate concentrations found in sewage effluent are diluted to levels at lot boundary that will not adversely impact on existing groundwater generally used as a source of drinking water in the area.

In this case it appears that septic systems needed to service the proposed lots may contribute nitrates to the groundwater at lot boundary that exceed the Maximum Acceptable Concentration of 10 mg/l for drinking water. Therefore Public Health Services supports the position taken by Source Water Protection to refuse this application.

RECOMMENDATIONS:
Refused.

All of which is respectfully submitted,

for

Medical Officer of Health  
Public Health Services

Public Health Inspector  
Carlos Catarino, C.P.H.I.(C)
Dear Ms. Connor,

Thank you for your letter of April 27, 2010 with respect to the subject application above.

Source Protection Planning (SPP) has commented previously on the application (see below for comments and related documents attached) and staff attended the initial Committee of Adjustment (Cof A) meeting wherein the item was tabled. The comments made by SPP remain.

It was noted by the proponent’s agent at the CofA meeting that additional documentation would be forthcoming to address these concerns. SPP has not been provided with any additional materials to date. It is noted in Item 3 of the Consolidation Services Report of February 4th, 2010 that the proponent will provide evidence that the existing services comply with the clearances required by the Ontario Building Code. Septic clearance alone will not address the issues raised by SPP with respect to nitrate boundary conditions and the requirement for ensuring safe, functional and sustainable private drinking water and septic services accordant with the inherent and natural carrying capacity of the lands within the Jerseyville Rural Settlement Area. These issues have been substantiated by previous Settlement Capability Studies (attached below), by the results of more recent technical investigations in the area in support of other development proposals, as well as the nitrate boundary calculations provided below.

It is further noted that Planning and Economic Development (PED) has concluded that the proposal does not conform with a number of City planning instruments and Provincial legislation and recommends that the severance be denied. If further documentation is presented by the proponent at the CofA intended to address the bases of the recommendations by PED, PHS and SPP, we respectfully request that SPP have opportunity to review and assess its relevance and application to issues respecting the proposal.

Trusting you will find that above, below and attached in order, thank you again for the opportunity to comment.

Yours truly,

Chris Shrive, M.Sc., P.Ag.
Senior Project Manager, Source Protection Planning
Infrastructure & Source Water Planning Section
Environment & Sustainable Infrastructure Division
Public Works Department
55 John Street North, 6th Floor
Hamilton, ON L8R 3M8
Phone: 905 546 2424 x7209
Fax: 905 546 4491
email: Chris.Shrive@Hamilton.ca

“This record may contain personal information which is exempt from disclosure under Section 14 of the Municipal Freedom of Information and Protection of Privacy Act and shall not be disclosed to any person other than the individual to whom the information relates or to an officer or employee of the institution who needs the record in the performance of his or her duties and if the disclosure is necessary and proper in the discharge of the institution’s functions.”

1
Hello Diana

Thank you for the opportunity to comment.

Source Protection Planning would not support this proposed severance, based on a number of factors.

- The new proposed lot sizes would each not assure lot boundary conditions for nitrates (< 10 mg/L) would be met accordant with Provincial reasonable ground water use guidelines (see Mike's preliminary calcs below, this assumes an existing 0 mg/L nitrate concentration which we know from other studies in the area is not the probable case - it's much more.
- There is recent evidence in the area that sustainable, potable supplies of water are subject to compromise; this due to prevailing natural conditions as well as more recent servicing management issues. In addition, many of the nearby existing wells are dug and shallow, and thereby even more vulnerable to contamination.
- Past Settlement Capability Studies for the area (Jerseyville and Regional - see attached) all identify recommended lot sizes be a minimum of 2 acres for the very reasons set out above. The existing lot meets this criteria and, for sustainability and source protection reasons, should remain integral and not be further severed.

http://Jerseyville RegionHW-Jersey
 Settlement Capabiliville.doc (266 ...)

Given a preliminary desktop review of lot boundary conditions, incorporating recharge estimates at the high end of the range of values for the site, the subject property is considered sustainable as it is with one residence, however the severance and creation of another residential lot is considered not sustainable as per below.
COMMITTEE OF ADJUSTMENT

NOTICE OF DECISION

APPLICATION FOR CONSENT LAND SEVERANCE

APPLICATION NO. AN/B-10:02
SUBMISSION NO. B-02/10

IN THE MATTER OF The Planning Act, R.S.O. 1990, Chapter P13, Section 53(1);

AND IN THE MATTER OF the Premises known as Municipal number 179 Sunnyridge Road, formerly in the Town of Ancaster, now in the City of Hamilton;

AND IN THE MATTER OF AN APPLICATION by the agent John Ross on behalf of the owner Antonio Peter Gumiero, for consent under Section 53(1) of The Planning Act, R.S.O. 1990, Chapter 13, so as to permit the conveyance of a vacant parcel of land measuring 25.1m² (82.3'[2] x 215.5m(707'), for single family residential purposes, and to retain a parcel of land measuring 25.1m² (82.3'[2] x 215.5m(707'), containing an existing single family dwelling and detached garage for residential purposes.

THE DECISION OF THE COMMITTEE IS:

That the said application, as set out in paragraph three above, IS APPROVED for the following reasons:

1. The Committee, after careful consideration of the evidence, is satisfied that the proposal does not offend the intent of the Hamilton-Wentworth and Town of Ancaster Official Plans.
2. The applicant has already applied to the Committee of Adjustment and received approval for the necessary variances to the Zoning By-law.
3. The Committee is satisfied that a plan of subdivision is not necessary for the proper and orderly development of the lands.

Having regard to the matters under subsection 51(24) of the Planning Act, R.S.O. 1990, c.P. 13, the said application shall be subject to the following conditions.

1. The owner shall submit a deposited Ontario Land Surveyor’s Reference Plan to the Committee of Adjustment Office, unless exempted by the Land Registrar.
2. The owner/applicant shall submit survey evidence from a Qualified Designer (Part 8 Sewage System), Professional Engineer or Architect that the existing septic system complies with the clearance requirements of Part 8 of the Ontario Building Code for the lands to be severed and or retained, to the satisfaction of the Planning and Economic Development Department (Building Services Division).
3. The owner shall enter into, and register on title of the lands a Consent Agreement with the City of Hamilton to the satisfaction of the Manager of Design and Construction to deal with the grading and drainage on the subject lands. The applicant/owner shall demonstrate to the Manager of Design and Construction that all drainage from the site shall be taken to a suitable outlet.
4. The owner shall convey to the City of Hamilton by deed 3.048m of land from the lands to be severed and retained for road allowance widening purposes to establish the property line 13.108m from the centre of the Sunnyridge Road road allowance.
5. The owner/applicant shall satisfy the requirements of the Public Works Department, Operations and Maintenance Division, Forestry & Horticulture Section.
6. The owner shall pay any outstanding realty taxes and/or all other charges owing to the City Treasurer.
7. The owner shall submit to the Committee of Adjustment Office an administration fee of $15.00, payable to the City of Hamilton, to cover the cost of setting up a new tax account for the newly created lot.

DATED AT HAMILTON this 13th day of May, 2010.

CERTIFIED A TRUE COPY

[Signature]
SECRETARY, TREASURER
THE DATE OF GIVING OF THIS NOTICE OF DECISION IS May 20th, 2010.
HEREIN NOTED CONDITIONS MUST BE MET WITHIN ONE (1) YEAR OF THE DATE OF THIS NOTICE OF DECISION (May 20th, 2011) OR THE APPLICATION SHALL BE DEEMED TO BE REFUSED (PLANNING ACT, SECTION 63(41)).

NOTE: THE LAST DATE ON WHICH AN APPEAL TO THE ONTARIO MUNICIPAL BOARD MAY BE FILED IS June 9th, 2010.

THIS DECISION IS NOT FINAL AND BINDING UNLESS OTHERWISE NOTED.

NOTES

1. Based on the attached plans, and on this application being approved and all conditions being met, the owner / applicant should be made aware that the lands to be conveyed (Part 1) will be assigned the municipal address of 173 Sunnyridge Road, and that the lands to be retained (Part 2) will remain as 179 Sunnyridge Road.

2. The subject property has been determined to be an area of archaeological potential. It is reasonable to expect that archaeological resources may be encountered during any demolition, grading, construction activities, landscaping, staging, stockpiling or other soil disturbances and the proponent is advised to conduct a Stage 1 and 2 archaeological assessment prior to such impacts in order to address these concerns and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. Mitigation, by an Ontario-licensed archaeologist, may include the monitoring of any mechanical excavation arising from this project. If archaeological resources are identified on-site, further Stage 3 Testing and Stage 4 Mitigation may be required as determined by the Ontario Ministry of Culture. All archaeological reports shall be submitted to the City of Hamilton for approval concurrent with their submission to the Ministry of Culture.

Should deeply buried archaeological materials be found on the property during any of the above development activities the Ontario Ministry of Culture (MCL) should be notified immediately (416.314.7143). In the event that human remains are encountered during construction, the proponent should immediately contact both MCL and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Small Business and Consumer Services (416.329.8952).
Appendix “D” to Report PED10157 / PW10075 (Page 1 of 1)

SUNNYRIDGE ROAD

NOTE:

SKETCH SHOWING
PART OF LOT 19, CONCESSION 3
GEOGRAPHIC TOWNSHIP OF ANCASTER
NOW IN THE CITY OF HAMILTON

ASHENHURST NOUWENS LIMITED
PROFESSIONAL ENGINEERS & ONTARIO LAND SURVEYORS
201–310 YORK BLVD, HAMILTON, ONTARIO L9B 3G5
PHONE: 905-639-8989 FAX: 905-639-8994
EMAIL: mail@AshenhurstNouwens.com
WEBSITE: www.AshenhurstNouwens.com

DATE: AUG 9, 2006
FILE No. 28109-40

SCALE: 1:1000

NOTE: THIS IS NOT A SURVEY, AND SHALL NOT BE USED FOR AMORTISATION OR TRANSMISSION PURPOSES. PROPERTY LIMITS HAVE BEEN DETERMINED FROM LAND REGISTRY OFFICE RECORDS, NOT FROM AN ACTUAL SURVEY.

SKETCH AN/B-10:02
SETTLEMENT CAPABILITY STUDY
FOR
THE JERSEYVILLE AREA

ON BEHALF OF

THE REGIONAL MUNICIPALITY OF HAMILTON-
WENTWORTH PLANNING AND DEVELOPMENT
DEPARTMENT

PROJECT NO. 82-2

DISTRIBUTION:
15 cc: CLIENT
1 cc: FILE

FEBRUARY, 1983
February 3, 1983

The Regional Municipality of Hamilton-Wentworth, Planning and Development Department, P.O. Box 910, Hamilton, Ontario. L8N 3V9.

Attention: Mr. John A Gartner, M.C.I.P. Director Regional Planning Division

Dear Sirs:

Re: Settlement Capability Study for The Jerseyville Area GLAL 82-2

We have now completed the above noted study and respectfully submit fifteen copies of our report for your consideration.

Thank you for allowing us to be of service on this most interesting project.

Yours very truly
GARTNER LEE ASSOCIATES LIMITED

J.F. Gartner, P.Eng.
Consulting Engineering Geologist
President

JFG:dg
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SUMMARY

This study provides background information for the development of a Secondary Plan for the Jerseyville area. We have examined the physical setting of the area — soils, topography and ground water — in order that the settlement capability of the land, based on private individual services, can be assessed.

The results of our study indicate development in Jerseyville should be limited to larger lots, based on private individual services. The bedrock aquifer is capable of providing a sufficient supply of ground water. However, increased extraction may cause deterioration of the already marginal water quality. We have recommended that pumping tests, carried out to M.O.E. standards, be used to properly evaluate the ground water resources as a condition for Draft Plan approval.

Septic tile beds in the Jerseyville area are prone to seasonal problems because of the clayey silt soils found here. We have recommended the modified tile field design currently accepted by the Regional Health Unit. Even so, there may still be seasonal operational problems and this has been recognized as a constraint to development.

We have completed the report by recommending a minimum lot size of 0.8 hectares (2.0 acres) for residential lot development, based upon the foregoing conclusions.
1.0 INTRODUCTION:

The Official Plan (June 1980) for the Regional Municipality of Hamilton-Wentworth acknowledges the need for additional Rural Residential Development in designated Rural Settlements which can be defined as development based on private, individual, on-site water supplies and sewage disposal facilities. Jerseyville is one of twenty existing rural settlements designated in the Plan as areas to which rural development will be directed in the future. As a fore-runner to development, each settlement will require a Secondary Plan detailing the type of development, geographical limit, amount of growth, size and location of lots. These parameters will, to a large extent, be determined by the ability of the soils and ground water supplies within each settlement to safely accommodate the additional growth.

This study, which is the first stage in the formulation of a Secondary Plan for Jerseyville, was undertaken by Gartner Lee Associates Limited, at the request of the Planning and Development Department of the Regional Municipality of Hamilton-Wentworth. Authorization to proceed with the study was received from the Region in January, 1982.

1.1 PURPOSE AND SCOPE:

The Terms of Reference for this study are contained in Appendix 1 to this report.
Basically, the study is intended to determine the settlement capability of the area for rural residential development. The major factor affecting the rural settlement capability of an area is the long term impact of the proposed development on the natural capability of the land to provide a potable source of water and to safely accommodate the disposal of sanitary sewage. The study is required to provide a technical foundation on which a Secondary Plan can be based and the appropriateness of applications for development can be evaluated.

1.2 Location of Study Area:

The Hamlet of Jerseyville is located in the Town of Ancaster approximately 2 kilometres north of Highway 53, at the intersection of Regional Road 3 and Jerseyville Road, as shown on Figure 1.

The study area is bounded in the north by the Toronto, Hamilton and Buffalo Railway line and on the south by the proposed highway 403 alignment. The western boundary is the lot line between Lots 17, 18, and the creek and reservoir form the eastern boundary.
FIGURE 1

LOCATION MAP

SCALE 1:560,000

PROJECT 82-2

Gartner Lee Associates Limited
2.0 STUDY RESULTS:

2.1 METHODOLOGY:

A full description of the methodology used in this study is contained in Appendix 2. Briefly, the approach adopted consisted of an evaluation of the relevant geographical, hydrogeological and topographical characteristics of the area. From this we determined the suitability of the soils and ground water to safely accommodate future growth, based on private services. Details of the study results now follow.

2.2 PHYSICAL SETTING:

Figure 2, found in the back pocket of this report, illustrates the physical setting of the study area and also includes the locations of boreholes, hand auger holes and percolation test holes. Figures 3 and 4, located in Section 2.2.2 Overburden Soils, are cross-sections showing the general subsurface stratigraphy from both north to south and west to east through the entire Jerseville study area. Borehole and hand auger testhole logs, and grain-size distribution curves are contained in Appendix 3 - Geologic Details.

2.2.1 TOPOGRAPHY AND DRAINAGE:

Jerseville is situated on the Haldimand Clay Plain which
is described as gently undulating terrain underlain by lacustrine silty clays and clayey silts. Regionally, the land slopes gently from an elevation of 226 m above sea level in the north to a low of approximately 210 m at the reservoir in the southeast of the study area. The average slope across the study area is less than 2% and the land is generally of rolling topography with occasional subdued hummocks also present with slopes up to 10%. Locally, side slopes in excess of 25% are present along the creek and reservoir forming the eastern boundary.

There are two main drainage courses within the study area. The eastern portion of the hamlet drains towards a perennial creek which is dammed at the south end to create the reservoir. The western portion of the area drains to an intermittent stream running south along the western study area boundary. Fed by a multitude of poorly defined micro-drainage features the creek and streams flow southward, towards the Grand River. With the exception of the creek in the east, all streams and feeder channels are intermittent and flow only during the spring melt, periods of prolonged rainfall, and high intensity storms. However, the continued presence of these existing drainage patterns is essential for the removal of surface runoff and prevention of ponding and flooding.

2.2.2 **OVERBURDEN SOILS:**

Figures 3 and 4, which follow, are geologic cross-sections through the area. All soil test data including borehole logs, grain size distribution curves and percolation test data are found in Appendix 3, and MOE water well logs are found in Appendix 4.
Appendix "E" to Report PED10157 / PW10075 (Page 13 of 30)
The soils consist of approximately 12 to 16 metres of lacustrine silts to clayey silts overlying a thick sequence of glacial silt till. Locally, surficial veneers of fine sand and silty fine sand are sometimes present in the north-west section of the study area. These shallow sands generally occur on the tops of the hummocks and are not extensive. The lacustrine deposits contain isolated pockets of waterbearing sand at depths which serve as a minor water source for some residents. The glacial till may overlie the bedrock directly or is occasionally underlain by a relatively thin (<2.0 m) discontinuous layer of granular soils. The total thickness of soil overlying the bedrock is about 40 metres.

The geotechnical properties of the lacustrine fine grained clays and silts and the fine grained glacial silt till are similar and they may be considered as one unit.

The lands immediately adjacent to the creek in the east are occasionally prone to flooding or prone to periods of more prolonged wetness and have been highlighted as Bottomlands on Figure 2, Physical Setting.

2.2.3 **BEDROCK:**

The bedrock beneath the study area consists of dolostone rock belonging to the Guelph Formation. The Ministry of the Environment well records indicate that the buried bedrock surface is undulating in this area, as illustrated on the cross sections. The upper few metres of the bedrock are fractured and may also contain solution
channels. This is the local aquifer for the drilled wells. The thickness of the dolostone is approximately 60 m and it overlies dolostones, shales and sandstones of the Clinton-Cataract groups. About 10 km south of the study area the Guelph dolostone is overlain by shales, dolostones and evaporite deposits of salt and anhydrite of the Salina Formation.

2.2.4 GROUND WATER:

The ground water table is about 2 to 3 metres below ground surface at approximately elevation 220 m. During wet periods of the year -- after precipitation events or spring runoff -- water will tend to pond on surface and then percolate downwards to the ground water table. Since the surface silts have low permeabilities, this downward migration is slow, and localized surface ponding of water can occur. If such ponding occurs in the vicinity of tile fields, the proper functioning of these fields can be impaired.

2.2.5 CLIMATE:

Table 7 in Appendix 7 provides details of the temperature and precipitation records, based on 20 year normals, for Mount Hope Weather Station.

The data show that there is a potential annual water surplus of 186 mm, of which about 60% will run off and 40% will infiltrate into the soils. For the period of December to
March, when evapotranspiration losses are negligible, the total amount of precipitation is 237 mm. Thus, during the spring melt, a high proportion of the total yearly infiltration will likely take place within a relatively short period of time. The effect this has on the performance of the tile fields for the disposal of sewage waste water is dealt with in detail in Section 3.1.

2.2.6 WOODLOT INVENTORY AND AGRICULTURAL CAPABILITY OF SOILS:

Appendix B of this report contains the detailed report on the woodlot inventory. Jerseyville lies within the Deciduous Forest Region. The woodlot located in the southeast corner of the study area is approximately 6.5 hectares (16 acres), in size. It is typical of deciduous woods, being dominated by broad leafed species. No uncommon plot species were noted, the woodlot being typical of the area. No significant wildlife was noted and this woodlot does not constitute an extensive wildlife corridor. Overall then, this woodlot is not considered to be environmentally sensitive. It is important to note that the vegetation provides a significant erosion control function along the northern lands of the reservoir.

The Canada Land Inventory map for this area shows that, basically, the soils are considered to be Class 1 agricultural soils. On the western portion of the study area these soils are mixed with up to 50% Class 3 agricultural soils.
2.3 Existing Water Supplies:

A summary of the results of our reconnaissance survey is contained in Appendix 6.

The existing water supplies in the Jerseyville area are obtained from either one, or a combination of, the following sources:

(a) deep drilled wells developed in the dolostone bedrock,

(b) deep drilled wells developed in the granular soils locally present overlying the bedrock,

(c) shallow dug wells, seasonally supplemented by commercially hauled water,

(d) rain water cistern, supplemented by commercially hauled water.

As a general rule, the shallow dug wells developed in the overburden are present throughout the area and are usually associated with the older homes. The more recently constructed homes generally have drilled wells.

The overburden wells, may be either hand dug or, more commonly, constructed by large diameter (0.45 m±) augering techniques, and can be up to 18 metres deep. They appear to obtain their water from discontinuous silt and
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The overburden wells, may be either hand dug or, more commonly, constructed by large diameter (0.45 m+) augering techniques, and can be up to 18 metres deep. They appear to obtain their water from discontinuous silt and
excessive pumping. Due to the sporadic distribution of fractures in the bedrock, these wells may not have intersected sufficient water-bearing fractures to provide an adequate yield. However, we feel that these are isolated occurrences and the probability is good that this aquifer is generally capable of supplying sufficient yield for domestic purposes.

The regional ground water flow direction within the bedrock aquifer is thought to be to the south-east at a low hydraulic gradient. Since the majority of the flow occurs within fractures or solution channels, the flow direction, permeability and hydraulic gradient are quite likely to be locally highly erratic.

2.3.1 GROUND WATER QUALITY:

The results of the chemical and bacteriological analyses carried out on the four water samples collected from residences within the study area are contained in Appendix 5. The location of the water samples are shown in Figure 12 contained in Appendix 5.

Generally speaking, the water within the Guelph-Lockport aquifer is of marginal quality for domestic purposes, but its use has not been restricted in rural settlements. The water is usually hard, with high sulphate and total dissolved solids content. The results of our analyses confirm this view. Several of the parameters analyzed exceed the Ministry guidelines for drinking water quality, but again, this is not uncommon for water from this aquifer.
Whether or not a specific well is used for drinking purposes appears to be a matter of personal preference. The results of our reconnaissance survey do indicate though, that the majority of the bedrock wells are used for drinking water supplies. Several of the people interviewed reported that their water is occasionally sulphurous, i.e. contains hydrogen sulphide.

Two of four samples tested showed unusually high Total Coliform counts. These residents have been advised to have their water re-tested by the Regional Health Unit. Because of the small number of wells sampled, it is unwise to draw any conclusions from these results. We do, however, suggest that the Hamilton-Wentworth Regional Health Unit undertake a more extensive well water testing program.

2.4 EXISTING SEWAGE DISPOSAL PRACTICES:

Our reconnaissance survey verifies that the most common method of sewage disposal in Jerseyville is by conventional septic tank and tile field systems. These systems generally work well in the area, but seasonal flooding of tile fields has been reported by eight of the 54 property owners that we interviewed. This flooding is likely caused by poor surface drainage conditions or in some cases, by a malfunction of the tile fields themselves.

The results of our investigations show that the soils in the Jerseyville area are generally fine grained and perco-
lution times are characteristically slow. When this slow percolation time is considered in conjunction with the topography, poor surface drainage and potential for seasonal surface flooding, raised tile beds are required. However, the Board of Health indicates that raised tile fields were used on an experimental basis between 1974 and 1979 and that they proved to be no better -- and in many cases worse -- than the conventional trench system. The main problem was the high occurrence of effluent breakout at the interface between the base of the fill and the slowly permeable natural soils. It is our understanding that the raised tile field design is now discouraged by the Board of Health.

With regard to the sizing of the tile field system, the Board of Health indicates that their current minimum requirement for a three bedroom house is a 150 m length of tile laid in a trench 0.6 m wide and about 1 m deep. The trench is backfilled to ground surface with select stone and planted with grass or shrubs. This design appears to function satisfactorily for the most part in Jerseyville. Isolated, operational problems have been reported in the spring. The tile fields may become "spongy" and the inhabitants must use common sense so that the tiles are not overloaded at this time of year. Although the tile fields function satisfactorily for most of the year, the ground surface may flood temporarily in the spring, partially flooding the tile trenches. If this happens their storage capacity will be reduced, as is the quantity of effluent that can infiltrate into the soil. This may result in occasional backup and even overflow onto the ground surface.
2.5 PROPOSED DEVELOPMENTS:

Information received from the Town of Ancaster offices indicates that two separate proposals for sub-divisions have been put on hold by town council pending the results of further study. These were proposed by Mr. J. Schoeman in 1974 and Mr. J. Brooks in 1980 and are located on figure 2 in the back pocket of this report. Currently there are no further proposals before council.

3.0 DISCUSSION OF RESULTS:

3.1 CAPABILITY OF SOILS FOR LONG TERM DISPOSAL OF SEWAGE EFFLUENT:

The silt and clay soils present in this area are naturally slowly permeable. The Ministry of the Environment guidelines for tile field design require that a raised bed system be used in these soil conditions. The Regional Board of Health have found that raised beds do not function properly here and have reverted to a modified trench design. However, although these tile fields function satisfactorily for most of the year, occasional operational difficulties may be expected in the topographical low areas, even with the modified design, and particularly in the spring. During this time of snow melt, there is a lot of surface water available for infiltration over a short period of time. Surface ponding may result in partial flooding of the tile trenches. Consequently, the effectiveness of the tiles is greatly reduced, which may result
in possible back up and even surface flooding of
effluent. Increasing the size of the tile field will
likely not be of any major benefit during the spring
conditions. Proper grading of the ground surface at the
tile field to promote surface runoff is of paramount
importance in this setting.

Another consequence of the gently rolling terrain and
slowly permeable nature of the soils is the complex micro-
drainage pattern which is present. Although these drain-
age features are very small, their presence is essential
for effective removal of surface water runoff. Any de-
velopment within this type of terrain must take very
careful regard of the surface drainage pattern, otherwise
serious surface water ponding and flooding could result.

3.2 CAPABILITY OF AQUIFERS FOR LONG TERM SUPPLY
OF POTABLE WATER:

The major aquifer is the upper fractured surface of the
bedrock. This aquifer is buried beneath thick deposits
of overburden soils which provide protection against
surface originating sources of ground water contamination.

The aquifer appears to have the ability to safely supply
the present population of the Hamlet area plus future
rural settlement development. Preliminary calculations
suggest that only about 45% of the aquifer's supply
potential has been utilized by present development and
agricultural practices. Thus, the population can at least double without jeopardizing the quantity of available ground water. If this development takes place within the presently remaining unsettled land, this will result in a minimum suggested lot size of 0.8 hectares (2 acres).

The quality of the ground water is marginal at present and this may deteriorate in the future due to increased extraction. A concentrated development would require a relatively heavy ground water extraction within a fairly small area. Over the long term, this could result in upward hydraulic gradients both within the aquifer and also from within underlying rock formations. It is known that increased penetration into the aquifer generally yields water of poorer quality than that obtained from the upper fractured zone. Consequently, heavy extraction on a long term basis, could well result in deterioration of ground water quality. Prior to any major development, a long term pump test should be carried out to properly define the aquifer characteristics and also to monitor the change in ground water quality with time.

The other water source used in the Jerseyville area is shallow dug wells. These wells tap isolated and generally small pockets of silty, sandy soils found within the overburden soils. These small aquifers are susceptible to surface contamination, have limited and unpredictable yields, and can often go dry. They are not recommended as a viable water supply for future development.
3.3 **SETTLEMENT CAPABILITY:**

The natural setting within the Jerseyville Hamlet study area imposes some constraints for future development. The ground water supply is susceptible to over-development and the natural subsoils are only slowly permeable, thus possibly inhibiting tile field operations. Both of these constraints dictate that future development be non-intensive and rural-estate in character.

During wetter times of the year, water will tend to pond in poorly drained areas on the ground surface due to the impermeable nature of the soils. To overcome this problem when designing septic tile fields, a modified design, as required by the Regional Health Unit, should be adopted. This modified design may not completely alleviate the spring functioning problems and careful attention to site grading is required. The potential for problems will be in relation to the number and density of tile fields that are allowed to be built. Limiting of lot sizes is an effective way of controlling settlement density.

Ground water supplies for future development should be adequate as long as development is not too dense, and single high capacity wells are not attempted. If increased extraction takes place within a relatively concentrated area, then the water quality could deteriorate and interference with adjacent wells is possible. Thus, we have a second reason for limiting the density of future settlement.

Preliminary calculations concerned with water use indicate
that the present population of about 250 persons is utilizing a little less than half of the potential supply. If a population increase is desired and proposed through the Secondary Planning process, a doubling of the population in the future seems to be feasible. This can be controlled by limiting the size of future lots to no less than 0.8 hectares (2.0 acres). Lots of this size will also provide the flexibility to design and operate individual septic systems with minimum off-site impact.

4.0 CONCLUSIONS:

Based upon the findings of our study we conclude the following:

- The bedrock aquifer is capable of providing a sufficient quantity of water for limited future development. The existing ground water quality, however, is marginal and further deterioration is possible with increased long term concentrated extraction.

- Wells dug into the overburden tap isolated and limited aquifers and they cannot be guaranteed to adequately supply future development.
Septic tile fields require a modified design to make such fields more functional during wet spring time periods. Even so, some instances of flooded tile fields have been reported, and these conditions provide a constraint to development.

Because of constraints imposed by the water supply and the disposal of sewage effluents, we conclude that future development should be large lot development with restricted lot sizes.

5.0 RECOMMENDATIONS:

Our conclusions lead us to make the following recommendations.

Future development in the Jerseyville area should be limited to large lots, utilizing private services.

Lots should be limited to a minimum size of 0.8 hectares (2.0 acres).

Development should be prohibited within the bottomlands (shown on Figure 2 - Physical Setting) and on the steep side-slopes of the creek along the eastern boundary of the study area.
• Applications for multiple lot development should be required to confirm the presence of adequate ground water supplies, utilizing a properly designed and executed pump test to M.O.E. standards, comprising well yields and potential interference problems.

• Percolation tests as required by the Health Department should be carried out at the actual site of each tile bed within each lot.

• Design layout of streets, buildings, and grading of tile fields should pay particular attention to the preservation of existing drainage patterns to minimize any potential ponding or flooding of lands.

• Potential developers of land should refer to the "Manual of Policy Procedures and Guidelines For Private Sewage Disposal Systems", issued by the Pollution Control Branch for the Municipal and Private Section of the Ontario Ministry of the Environment.

Prepared by:
GARTNER LEE ASSOCIATES LIMITED

Project Engineering Geologist  Project Engineer
Nitrate Boundary Calculations Accordant with Guideline D-5-4 - Technical Guideline for Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment

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Comments: Using 1125L/Day/residence average daily flows (based on 4 bedrooms), recharge estimate from PRMS model of 150mm/a (sandy silt), and the total land available for attenuation of 5409m² (from application), and background concentration of 0mg/L nitrate.

Summary:
- volume required for 10mg/L (L/a) = 1642500
- volume of recharge required (L/a) = 1231875
- Required area (m²) = 8212.50
- Required area (Ac) = 2.05
- Required area (Ha) = 0.82
- Acceptable impervious area (m²) = -2803.5
- Additional Impervious area req'd. (Ha) = 0.28