EXECUTIVE SUMMARY:

In the spring of this year, the city was advised that certain lands in Barriefield Village owned by the Federal Department of National Defense were considered surplus to the needs of the Federal Government and were available to be purchased. Council directed staff in closed session to express the city's interest in the possible acquisition of some or all of the available lands for development of affordable housing and directed staff to undertake some preliminary analysis of the lands to determine the merits of pursuing affordable housing on these lands and to inquire of the Federal Government as to whether there are any other parcels of land coming available for sale.

This report recommends a number of steps to explore the merits of developing affordable housing on lands described as Parts 2 and 3 on Plan 13R-18296 and public open space uses for Part 1 on Plan 13R-18296, as shown on the map included in Exhibit A attached.

RECOMMENDATION:

THAT subject to its approval of Clause 1, Report No. 102 on the October 20, 2009 Council agenda (Barriefield affordable housing concept), council hereby:

1. Receives the preliminary affordable housing development concept plan prepared by Hughes/Downey Architects attached to report no. 09-312 of the Commissioner of Community Development Services as Exhibit A, for lands described as Part 3 on Plan 13R-18296 as shown on the map contained in the concept plan report, showing 32 units in 8 buildings

2. Directs staff to undertake a broad and inclusive public consultation process to seek neighbourhood and community input into the question of developing the subject lands for affordable housing purposes in accordance with the concept plan developed by Hughes/Downey Architects

3. Directs staff to investigate and report back on development partnership opportunities with a local housing provider
4. Earmarks up to $2.46 million from the city’s DOOR Affordable Housing Construction Reserve towards the possible development of twenty (20) housing units as phase one on lands labeled as Part 3 consistent with the concept prepared by Hughes Downey architects;

5. Authorizes staff to submit an application for funding through the Canada-Ontario Affordable Housing Extension 2009 – Year Two, or subsequent funding programs as they may become available, for an additional twelve (12) housing units on the remaining portion of land described as Part 3 on Plan 13R18296, consistent with the concept prepared by Hughes Downey architects.

AUTHORIZING SIGNATURES:

ORIGINAL SIGNED BY COMMISSIONER
Lance Thurston, Commissioner, Community Development Services Group

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER
Gerard Hunt, Chief Administrative Officer

CONSULTATION WITH THE FOLLOWING COMMISSIONERS:

| Commissioner Beach, Sustainability & Growth | N/R |
| Commissioner Leger, Corporate Services | N/R |
| Jim Keech, President, Utilities Kingston | N/R |

(N/R indicates consultation not required)
OPTIONS/DISCUSSION:
The City of Kingston continues to actively engage in the development and creation of new affordable housing throughout the community by working in close partnership with all levels of government, the not for profit sector and the private sector. Over the past few years, 255 new units have been built or are under development within the city and County of Frontenac as a result of these efforts.

One of the ongoing challenges with the creation of new affordable housing and the commitment to provide access to low cost rental housing across the city is the availability of land. City staff has worked to maximize the use of vacant municipal land through a commitment to consider “housing first” when municipal land is being declared surplus. In addition, staff examines opportunities to include an affordable housing component into development plans whenever possible.

Currently, there is no social housing or affordable housing projects east of the Cataraqui River. Over the past decade, there has been significant growth in this eastern area of Kingston and in keeping with the objective of providing affordable housing options in all areas of the city, there is an interest in seeking appropriate opportunities in this part of the city. The potential availability of surplus federal lands in Barriefield presents a unique opportunity to further the city’s social policy goals of creating more affordable housing while re-introducing a varied socio-economic mix to Barriefield in manner that is respectful of the village’s cultural and built heritage.

This report examines a number of key issues to be considered by council in assessing the merits of this opportunity, including: availability of surplus federal lands; the federal program that would enable the City to acquire the lands at nominal cost; planning and heritage considerations that are specific to Barriefield village; conceptual designs for sensitive development; public consultation steps; recommended funding sources; and partnership opportunities that would enable development.

Surplus Federal Land
Earlier this year, the city became aware of the Federal Government’s intention to divest of certain vacant lands in Barriefield for which it no longer has an interest in owning. The lands are described as Parcel 3, Parts 1, 2 and 3 on Plan 13R-18296 and labeled as Parts 1, 2 and 3 on the map contained in Exhibit A to this report. Council directed staff to indicate the city’s interest in possibly acquiring these lands for the development of affordable housing and public open space purposes. We have been advised that the earliest we could be eligible for such consideration would be in the 2010 Federal budget year (April 1, 2010 to March 31, 2011).

The Surplus Federal Real Property for Homelessness Initiative (SFRPHI)
The Surplus Federal Real Property for Homelessness Initiative (SFRPHI) is a funding stream that makes surplus federal real properties available to community organizations, the not-for-profit sector and other levels of government for projects to help prevent and reduce homelessness. Eligible recipients include Provincial, territorial and municipal governments and agencies, public health and educational institutions with the agreement of their provincial/territorial government; community organizations; and, in some cases, housing cooperatives with valid not-for-profit charters.

Eligible activities include investments in transitional and supportive housing, longer-term housing (rental and home ownership), and related support/emergency services. The primary purpose of these investments is to help individuals obtain access to longer-term housing. This is a prescribed monitoring period in that all contributions of real property will contain a covenant, applicable for a minimum of 15 years (monitoring period) from the date of commencement of the operation, restricting the use of the property to the uses outlined in the recipient’s proposal.

Project proposals require federal government approval through a National Tripartite Committee, composed of Human Resources and Skills Development Canada (HRSDC), Public Works and Government Services Canada and Canada Mortgage and Housing Corporation. The committee will complete a thorough assessment of the potential recipient’s capacity to implement the proposed project.

The inclusion of an environmental or social component in the development of a project is encouraged (projects adapted for people with physical disabilities, projects with an energy efficient component, etc.). HRSDC, with help from its partners, provides guidance, feedback and assistance throughout the proposal and submission processes.
Planning and Heritage Considerations of Barriefield Village:
The subject lands, although vacant, are situated within Barriefield Village, which is a designated Heritage Conservation District under the Ontario Heritage Act. This imposes a number of limitations on what can and cannot be built within the boundaries of the district. A quick summary of the Heritage Designation profile helps to reinforce these goals. The Barriefield Heritage Conservation District is an evolving village landscape that has retained much of its historic 19th century character. It sits on a hillside rising from the eastern shore of the Great Cataraqui River, adjacent to the intersection of Highways 2 and 15 near Fort Henry, the Royal Military College and Canadian Forces Base Kingston. The village contains a diversity of buildings, mostly residential, and landscape features of 19th century character, while reflecting two centuries of natural, physical, and socio-economic change.

Any development within or adjoining Barriefield must respect the unique built character of the village by considering such matters as maintaining the existing low density, low rise residential profile, conserving the heritage stature of the village wherever appropriate, while maintaining and preserving the natural features such as existing trees and tree lines where practical. In terms of the built environment, there are a few two-storey buildings, but the overall built environment is typified by low profile, one-and-a-half storey houses. Additions and alterations to properties in the village have reflected continuing use and changing needs and tastes of their owners and occupants over time. The District's landscape reveals a mix of natural and built features that further contribute to its distinctive overall historic character. These include the original street grid that divides the properties into rectangular lots and the lilac hedgerows and other surviving landscape elements that define property boundaries.

Pertinent Official Plan Considerations:
Kingston's Official Plan identifies specific planning directions relating to Barriefield as a Heritage Conservation District. These include:

1. Land uses to be limited to detached dwellings and limited numbers of semi-detached dwellings (being 10% or less of the total). Churches, publicly-funded schools, other community facilities, senior citizens homes and small scale commercial uses are also permitted.
2. New lots must have full street frontage and be similar to the lot pattern and grid road structure of the heritage area.
3. New residential and institutional units must be low profile and compatible with adjacent properties.
4. A landscaped buffer along Highway 15 must be maintained and no new structure will be permitted to impede the view of St. Mark's Church from either Main St. or Highway 15.
5. A heritage impact statement may be required where construction, alteration, or addition to a property located within a heritage conservation district is proposed.

Both a Heritage Impact Statement and an Official Plan Amendment will be necessary to allow for a denser residential development than detached dwellings.

A sampling of the other pertinent excerpts in the Official Plan that are relevant to any proposed residential development includes, for example, the following:
- In fully serviced areas, intensification through moderate increases in building height or density, and gradual transition to more intense forms of housing may be approved at the edge of neighbourhoods, adjacent to transit routes... (Section 3.3.8 Intensification).
- The City's affordable housing initiatives, designed to provide a full range of housing, in terms of tenure and affordability within all urban residential neighbourhoods, include ...(Section 3.3.10 Affordable Housing):
  - The use of surplus lands owned by the municipality and other governmental agencies be considered for "Housing First"...
  - Assess different forms of housing design which make housing more affordable
  - Investigate alternative dwelling design standards that may contribute to more affordable housing.
  - A Municipal Non Profit Housing Corporation or other non-profit housing association may acquire, assemble, rehabilitate or dispose of lands, buildings or structures for the purpose of providing residential units.
Barriefield Housing Concept Designs

The architectural firm of Hughes Downey was hired by the city with the challenge of creating a preliminary affordable housing development concept for the subject lands to assist council, staff and the general community in assessing the merits of developing the lands for the intended use. A concept plan for Part 3 only is included in the submission from Hughes Downey, attached as Exhibit A. Hughes/Downey has taken great pains to create a concept that fits in with the built and natural environment of the neighbourhood. The concept is considerate of the challenges of developing in a residential Heritage Conservation District and encompasses the city's commitment to accessibility and sustainability. It creates 32 primarily one bedroom, modest sized homes, while preserving green space and using innovative environmental design elements.

It was the architect's view that development for Part 2 would be best accommodated as part of a larger plan incorporating the surplus school property and staff is therefore recommending that this land be developed in a subsequent phase, following public consultations. Part 1 fronts on Main Street in the village and is adjoining St. Mark's church. It is better suited for use as public open space in order to preserve the heritage vista along Highway 15 and is not considered appropriate for housing development.

Public Consultation

The city and other private and public proponents of affordable housing developments throughout the community have successfully developed projects based on mutually respectful neighbourhood consultation processes. Although the limits of time and funding need to be taken into account, this proposed project proposal involves development within a heritage conservation district, and the opportunities for public comment should be broad. Broad and inclusive consultation is required. This could include such elements as:

1. A public meeting or meetings hosted by the city's Affordable Housing Development Committee to confirm goals and intentions
2. Public workshops and open houses to provide interested parties and opportunity to discuss the proposed preliminary concept designs and to develop a vision for possible future developments in conjunction with the JE Horton School property
3. Heritage Committee consideration of the proposal
4. A web-hosted consultation process to enable further comment from those that cannot or do not want to attend a public meeting

If the proposal proceeded to the formal development application stage then there would be further opportunity for public input as part of the application review processes under the Planning Act.

Partnership Opportunities

If council wishes to proceed with the investigation of this proposal, there is considerable design, planning, public consultation, and site development work to be undertaken before this project could meet the "construction-ready" status required by the Federal government to transfer the land, and as required by the Province as part of its new Affordable Housing Program. It is desirable therefore that the city partner with a housing provider that has the experience in building and managing affordable housing projects that are sensitive to the heritage nature of the older parts of Kingston while demonstrating a commitment to ensuring that mixed income residential developments fit within an integrated neighbourhood setting. A sincere desire to carry out the construction and management of this unique community project will also be critical. City staff would bring forward a report outlining a preferred partner in order to move the process forward at the appropriate time.

There would be other worthwhile opportunities to partner with others in the community that have expertise in environmental sustainability, energy efficiency, and the integrated design process. It is recommended that Hughes/Downey assist with the process of engaging with experts on these important considerations and staff will provide further updates as these opportunities arise.
FINANCIAL CONSIDERATIONS
There are two principal funding sources being considered at this time:

Canada-Ontario Affordable Housing Program Extension 2009 (AHP Extension 2009): The 2009 Federal and Provincial Budgets included substantial funding for the construction of new affordable housing over the next 2 years. Although proposals do not have to be construction ready at the time of submission into the provincial data base, they do need to be "construction ready" at the time of the announcements to be considered for funding. The Ministry of Municipal Affairs and Housing (MMAH) indicates the base requirements for "construction ready" as proposals that have land, zoning in place, all planning approvals, Council approval, drawings, permits, and are ready to put a shovel in the ground. Therefore it is imperative that projects continue to move forward through the planning process to become construction ready for a future allocation. Because of these stringent parameters, this source of funding is only recommended for a possible second phase of development in the acquisition of surplus Federal lands in Barriefield adjoining the school.

DOOR Funding: A proposed project for the subject lands would not be in a position to be considered for AHP Extension 2009 funding in year one and, depending upon the timing of the transfer of the land from the federal government and the availability of provincial funds, this project may not receive funding in Year 2. City staff is therefore recommending that the first phase of this project be funded under the city's DOOR program. The balance in this account, once the existing council-approved projects are disbursed, would be approximately $2.46 million. Funding of $120,000 per unit (the amount of funding provided to other DOOR and AHP proponents) would allow for the development of twenty (20) units, in addition to the $10,000 per unit allowed for impost and building permit fees.

The concept for developing Part 3 by Hughes/Downey architects allows for 32 homes in 8 buildings that combine elements of affordability, environmental sustainability and energy efficiency. The first phase, funded through the DOOR reserve fund, would allow twenty (20) homes in 5 buildings. An additional twelve (12) units in 3 more buildings could then be funded through the AHP Extension in 2010 or through a municipal capital grant or other sources. Development on Part 2 would be subject to further funding program availability and the outcome of a public consultation process.

The cost for the city to obtain two parcels of land for affordable housing development would be nominal under the federal homelessness prevention initiative program to which we would be applying. Although the full market appraised value of the 3 parcels is not known for sure, Federal staff indicate it could range from between one million and one and a half million dollars, depending on any environmental remediation requirements the outcomes of other background studies or investigations.

The costs incurred to date for the development of the concept plan have been absorbed within the Affordable Housing Administration operating budget. The future costs associated with getting the parcels to "construction ready" status may be drawn from the city's DOOR Reserve or another municipal reserve fund to be determined and reported at a future date.

The DOOR Reserve fund as of September 17, 2009 has a balance of $5,660,000. Council has approved allocations from this reserve of $3.2 million for four projects. Therefore, there is an unallocated balance of $2.46 million.

CONTACTS:
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Mary McIntyre, Housing Programs Administrator ext. 4948
Cheryl Hitchen, Manager Applicant Services and Community Programs, ext. 4998

OTHER CITY OF KINGSTON STAFF CONSULTED:
George Wallace, Director of Planning, Planning and Development Department
Marnie Venditti, Manager of Development Approvals, Planning and Development Department
Speros Kanellos, Director, Real Estate and Construction Services
Marcus Letourneau, Heritage Planner
Hal Linscott, City Solicitor

EXHIBITS ATTACHED: Exhibit "A" Barriefield Housing Concept Design by Hughes Downey Architect
BARRIEFIELD HOUSING
CONCEPT DESIGNS

1 OVERVIEW

The Department of National Defense is considering releasing specific properties it owns along Highway 15. Three properties are within the Village of Barriefield. These will be offered first to the City at a nominal cost, provided they are used for the development of affordable housing.

Hughes Downey Architects was engaged to investigate the site layout feasibility of the development of these sites for affordable housing in a manner consistent with the intent of the Barriefield District Study and the character of the Village.

Building affordable housing in Kingston’s only Residential Heritage District offers unique challenges because of unique design parameters and the sensitive historic atmosphere of the Village. Requirements for low-cost construction, smaller units and denser development may have fit in with the socio-economic situation when the Village was created but may compete with current approaches to the preservation of the Village ambiance.

It must be understood that this current offer of properties in Barriefield presents a great opportunity for the City of Kingston to have control over the development of these properties and, in the process, to address concerns of the Village residents regarding the future of any vacant land.

Apart from underground services and their associated access structures, the sites are vacant, with a variety of grassed fields, thickets of dense brush, trees and open areas. Phase 1 Environmental Site Assessments have been completed for all three sites and no indication of contamination has been identified.

The approach taken for the housing model was to develop a simple housing unit, using the architectural character of the village as a basis and designed to respond to the variety in village housing stock. It is one and a half storey on one side and two on the other, thereby offering different wall heights while employing the same structural components. This repetition of the building system is meant to address the economy of this proposed project, while its combination with other units and additional components were intended to provide visual variety and improve energy efficiency.
MAP OF BARRIEFIELD SHOWING THE 3 SITES
2 PROCESS

2.1 GATHERING BACKGROUND INFORMATION

Staff from Hughes Downey Architects visited the sites and conducted meetings with City Staff to gather background information. The following publications, maps and studies were reviewed by Hughes Downey Architects in reference to this project:

4. Township of Pittsburgh Zoning By-law Number 32-74 – Specifically Section 9 (2) Special R2 Zones (a) Barriefield (R2-1).
5. Ministry of Municipal Affairs and Housing – Recommended unit sizes for affordable housing development and the Canada-Ontario Affordable Housing Program (AHP) 2009 Extension.
7. Aerial Photographs of Barriefield and surrounding area.
8. Digital Mapping of Barriefield – including site grades, streets, trees, buildings and landscaping.
9. Site Services Mapping – including water, sanitary, gas and steam lines.
10. Barriefield Building Review – a study conducted by this Firm in 1988 to better understand the relationship of the buildings to their lots as well at the proportional qualities of the width of the structures to their height.

2.2 STUDY OF R2-1 ZONING

All three sites are currently zoned Institutional (I) and any residential development would require a Zoning Amendment. The Barriefield R2-1 Zone is a specific zone intended to guide development in keeping with the character of the Village of Barriefield.

As an exercise only, Hughes Downey explored how many units could be built if the site were developed under the R2-1 Zoning. Development would have to be individual single family homes on separate lots. This type of development did not appear to be beneficial to the character of the village or conducive to Affordability, Environmental Sustainability or Energy Efficiency. In order to meet the Zoning requirements, building size would be greater than the maximum allowed for under the affordable housing model and would not meet the model’s required balance of one-bedroom units to larger units.
Although the approach of single family homes on individual lots may not lead to Affordable, Environmentally Sustainable and Energy Efficient housing, it is the most likely approach for private development of the sites and was explored as a comparison.

Allowing for the required landscape buffer along Highway 15, it appears that approximately 42 house lots could be created if the whole site were divided into minimum sized lots. In contrast, if this number of units were provided in multi-unit buildings, they could take up a fraction of the area and leave significant landscape buffering and open area space.
3 BACKGROUND

3.1 AFFORDABLE HOUSING

This project is part of a larger initiative by the City of Kingston to build housing across the community that is affordable, accessible, and sustainable. There is an opportunity to acquire these three sites from the Department of National Defense as Federal Surplus Lands at minimal cost for affordable housing.

Based on the current waiting list for Rent-Geared-to-Income (RGI) housing in Kingston, the greatest demand is for one bedroom rental units. However, over the past few years, there has also been a demand for larger (3-4 bedroom) accessible units as these are not available within the social housing portfolio or in the private sector rental market. The preferred proportions of unit sizes is 60% one bedroom, 20% two bedroom, 10% three bedroom and 10% four bedroom. There should be two or three larger (three to four bedroom) accessible units.

The New Rental Housing Component of the Canada-Ontario Affordable Housing Program (AHP) is an initiative to provide funding for new self-contained rental housing for households on, or eligible to be on, social housing lists, with emphasis on low-income seniors and persons with disabilities. Other target groups include Aboriginal persons, recent immigrants, victims of domestic violence and the working poor.

The average combined federal and provincial AHP contribution is $120,000 per unit. A maximum of $150,000 is available to projects which incorporate enhanced energy efficiency and provide units for low-income seniors and persons with disabilities.

Buildings must meet the energy efficiency requirements of the proposed 2012 Ontario Building Code. Buildings under Part 9 of the Building Code must meet the performance requirements of Energuide 80 or the equivalent. Accessible and barrier-free design is encouraged.

3.2 BARRIEFIELD

The Village of Baniefield was reviewed as a Heritage District in 1978. It was one of the Province’s first designated Heritage Districts, and has therefore had any development monitored by the Municipality through design review by the Local Architectural Conservation Advisory Committee (now the Kingston Heritage Committee). The design review was originally based on the 1978 study and is now based on an updated District Plan Study, completed in 1992. The intent of the guidance provided in the Studies is to endeavour to have alterations to the district carried out in a manner consistent with the historic ambiance. That ambiance is one derived from the historic, hand-built, unadorned structures using local materials and a basic knowledge of the carpenter/boat builder’s craft. It was a village of the working class.

It is intended that original components of historic structures are retained in order that evidence of the techniques and tools of the time are preserved and held distinct from the machined quality of today’s building components.
The Municipal Bylaws and District Plan offer specific requirements for any new development in an attempt to retain the quality of the village. Any new building must first address these requirements and be reviewed by the Heritage Committee for consideration of the design and how it responds to the architectural character and setting in the Village.

### 3.3 ENVIRONMENTAL SUSTAINABILITY

Achieving Environmental Sustainability and Energy Efficiency in construction is most successful when an Integrated Design Process is followed. This process requires a commitment to more involvement in the process by the client, consultants such as energy simulators, engineers and landscape architects at earlier stages of the process to encourage interdisciplinary solutions to specific issues. More direct communication between disciplines throughout the design process helps with appropriate decision making and balancing of factors relating to the design. Cost consultants should be closely involved in the choices of means and methods from early in the process to allow decisions to be made before design development goes too far to allow corrections. Since these sites are in a sensitive heritage area, communications with the City's Heritage Committee and local residents early on are also a part of this process.

It is likely that an Integrated Design Process would offer alternatives not explored in these initial concept designs included in this report. For the purposes of this exercise, it is necessary to address some fundamental design issues regarding environmental sustainability in design because they relate to the layout of the site. Choices of materials and systems are finalized at more detailed design stages, but planning choices with respect to physical form and site layouts certainly relate to the energy efficiency of buildings. Heating and cooling loads over time account for the greatest consumption of energy in construction and using the physical form of the buildings to reduce these loads reduces the dependence on mechanical means to achieve comfort, and therefore improves energy efficiency.

Reduction of heat loss in the winter and heat gains in the summer is directly related to the form of buildings. Compact shapes with reduced surface to volume ratios reduce heat losses. Apartments are more efficient than detached homes because of reduced exterior walls and roofs. However, the heritage building forms in the village are predominantly single detached homes. It was felt that developing designs that would be similar in size and shape to the existing buildings, but housing several units rather than a single unit in one building would be an appropriate compromise.

Orientation of the buildings and openings also affect energy efficiency and relate to the site layouts. Increasing passive solar heat gains in the winter means ensuring predominantly southern orientation for windows and avoiding overshadowing on that side. Reducing heat gains in the summer means a combination of shading windows and reducing windows, particularly west-facing ones.
3.4 OFFICIAL PLAN

Kingston's Draft Official Plan identifies specific planning directions relating to Barriefield as a Heritage Conservation District. These include:

1. **Land uses** to be limited to detached dwellings and limited numbers of semi-detached dwellings (being 10% or less of the total). Churches, publicly-funded schools, other community facilities, senior citizens homes and small scale commercial uses are also permitted.

2. **New lots** must have full street frontage and be similar to the lot pattern and grid road structure of the heritage area.

3. **New residential and institutional units** must be low profile and compatible with adjacent properties.

4. A landscaped buffer along Highway 15 must be maintained and no new structure will be permitted to impede the view of St. Mark's Church from either Main St. or Highway 15.

An Official Plan Amendment would be necessary to allow for a denser residential development than detached dwellings.

3.5 ZONING

All three sites are currently zoned Institutional (I). Part 1, on Main Street next to the church, is adjacent to properties zoned as Residential (R1). Part 2 is adjacent to the school, which is zoned Institutional (I-8). Part 3 is adjacent to the Hwy # 2 / Hwy # 15 intersection and heritage properties zoned Residential (R2-1).

The R2-1 zoning is a special zone for Barriefield recognizing the heritage nature of the village and allowing for smaller lot areas and setbacks in keeping with the existing urban patterns. It is assumed that future residential developments on the sites would need to respond to the requirements of the R2-1 zone.

The approved buildings allowed in the R2-1 zone are existing dwelling houses, single family dwelling houses, converted dwelling houses or boarding houses. Zoning amendments would be required to allow for duplexes, triplexes and apartments. In addition, an 18m setback is required from Highway 15.

R2-1 zoning provisions include:

1. **Lot Area** (min.): 464.5 m²
2. **Lot Frontage** (min.): 15.24m
3. **Front Yard Depth** (min.): 1.2m
4. **Exterior Side Yard Width** (min.): 1.2m
5. **Interior Side Yard Width** (min.):
   1. If 1 yard: 3.04m
   2. If more than 1 yard and 3.04m on any other side: 1.2m
6. Dwelling Unit Area (min.):
   1. Boarding house: 18.58m²/person
   2. Other permitted dwelling house: 92.9 m²/unit

7. Yards for Accessory Buildings (min.): 1.2m and not allowed in front yard

8. Setback (min.): 7.3m

3.6 ENVIRONMENTAL SITE ASSESSMENTS

The Department of National Defense has owned Parts 1 and 2 since 1909 and Part 3 since 1840, but they have not been used by the base for any military purposes.

Phase 1 Environmental Site Assessments of all the sites were completed in March, 2007. Apart from services and their associated structures, the sites are vacant, with a variety of grassed fields, treed areas and thickets of dense brush. There is no evidence that buildings have ever been constructed on any of the sites.

Potential for Contamination: According to the assessments, there have been no activities on the sites contributing to actual or potential contamination, although the service route through Part 1 has been identified as a potential migratory route for contaminants, though nothing specific was identified.

Archaeological Significance: The Environmental Site Assessments indicate that Parts 1 and 3 have high to moderate archaeological significance due to documented historic period land use as 19th century civilian farmsteads and a grave location, although nothing specific was identified. Part 2 is not identified as an area of specific archaeological significance.

Part 1 - a triangular lot bordered by Main Street, Highway 15 and St. Mark’s church - is an approximately 0.86 acre manicured grass field with limited trees, sloping to the north-west. There is a water metering station in the south-east portion. Water and sanitary service lines cross the property along the east and south edges, and a sanitary service line runs along the north-east side. The soil is shallow clay and loam.

Part 2 - next to the school - is an approximately 1.85 acre grassy open area with several thickets of dense brush, gently sloping to the south. There are indications that the site may have been used as a staging area for a nearby quarry at one time. A parking lot associated with the adjacent school is located in the south west corner and there is an electrical control box next to the road along the south edge. Water and sanitary service lines run north-south across the property along the west side. Bedrock is very close to the surface, and exposed in places. The site is, in the words of the Environmental Site Assessment, “heavily used by deer”.

Part 3 - between George St and Highway 15 - is an approximately 1.38 acre property with a grassed field to the north and forested land with several thickets of dense brush to the south. Sanitary and water lines run north-south along the west side. A gas line runs east-west along the north edge of the site and then north-south along the west side. A steam line from the Base Central Heating Plant, located on the east side of highway 15, runs east-west across the centre of the site and then to the south along the west side of the site. There are also several service vaults and ventilation pipes associated with the steam line. Several trails cross the site,
including one which is "heavily used by deer". There are indications that the site has been used for recreational purposes by local residents.

4 BARRIEFIELD VILLAGE HOUSING DESIGN

4.1 THE SITES

The three sites suggest different approaches for development.

1. Part 1 is a small triangular site with frontage on Main St., backing on to Highway 15 and St. Mark’s Church. This suggests a limited number of lots on Main Street, leaving an easement for the sanitary and water service lines on the south side, open space at the corner, and a landscaped buffer along Highway 15 and at the rear of the site. This would maintain the sight lines for the church from the Highway.

2. Part 2 is a narrow, deep property running along the east side of the JE Horton Public School property. This school is presently under-enrolled and is slated to close. If this happens, it is likely that the property will be developed, whether as another community facility, residential units or a combination of building types. If possible, it would be best if development of Part 2 is integrated into whatever happens to the school site.

3. Part 3 is adjacent to the existing heritage residential area. It is accessible from two sides and wide enough to allow for a street with houses on both sides as well as a possible continuation of regent Street. It was important to consider that a right-of-way will likely be required to ensure no development occurs over the existing service lines.

4.2 HOUSING MODULE

The combined requirements for affordability, environmental sustainability and energy efficiency all suggest a compact form. A simple 24’x24’ housing unit was developed, with a one bedroom unit on each floor level, including kitchen, dining, living, bedroom, bathroom and utility space.

The architectural character of the village was used as a basis. The lots and houses in the village vary in size and shape. The main housing component was designed to respond to the variety in village housing stock. It is one and a half storey on one side and two on the other, thereby offering different wall heights while employing the same structural components.
This repetition of the building system is meant to address the economy of this proposed project.

Two housing units would be put together to make up a building with four one-bedroom units and a building footprint of 1150 ft² (107 m²). Additional components, such as bedroom units, porches, dormers, stair units and pergolas can be added to make up larger units, to provide visual variety and improve energy efficiency.

This housing model offers the consistency and economies of a modular system while allowing for flexibility to respond to the general character of the village and solar access.

4.3 SITE PLAN

A site plan was developed for Part 3 using the housing module system for the buildings. It was felt that development for Part 2 would be best accommodated as part of a larger plan incorporating the school property and that Part 1 was only large enough for two or three house lots and the required open area space.

Lot sizes were increased to provide additional amenity space and parking for the larger number of units per lot. 32 units were accommodated on eight lots in the south portion of the property, leaving room for community gardens to the north and landscaped buffers along George St. and Highway 15.

The rationale for development of the site plan include:

1. Using the housing modules in different combinations for visual variety.
2. Using combined forms which are longer in the east-west direction to increase passive solar gains in the winter and decrease westerly heat gains in the summer.
3. Providing a road directly from Wellington St. to avoid increasing traffic through the village.
4. Maintaining the service route along the west side of the property. This would form laneway access for parking. A landscaped buffer area would remain between the service route and George St.
5. Maintaining open area space for landscape buffering.
6. Keeping existing vegetation where possible.
Exhibit "A" – Report 09-312

Barrie Field Village Housing Proposal - Housing Module Combinations