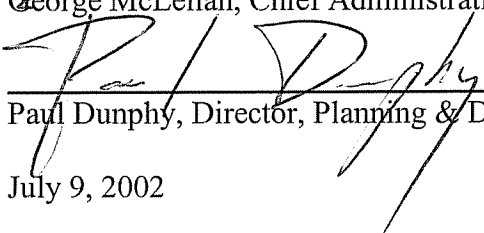


Halifax Regional Council  
July 16, 2002

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:**

  
George McLellan, Chief Administrative Officer

  
Paul Dunphy, Director, Planning & Development Services

**DATE:** July 9, 2002

**SUBJECT:** Project 00382 -Annapolis Basin Group Plan Amendment

### SUPPLEMENTARY REPORT

#### ORIGIN

- Annapolis Basin Group Inc. presentation to Council in January 2001, requesting that a master plan process be initiated on approximately 1324 acres, (680 in Bedford and 644 in former County area).
- Annapolis Basin Group Inc. Request to HRM in June 2001 for an amendment to the Bedford Municipal Planning Strategy concerning part of its land holdings ( 480 acres).
- Regional Council motion of July 17,2001, approving that the SGE Group undertake a preliminary analysis of the Annapolis Group request for a plan amendment.
- Presentation to Committee of the Whole Council by Annapolis Group Inc. on June 4, 2002.
- June 11, 2002 staff report recommending that the plan amendment request be deferred (see attachment I).
- June 18, 2002 resolution of Council that this matter be referred back to Planning staff for a report within three weeks, if possible, for comment regarding Alternative 1 of the June 11, 2002 staff report.

#### RECOMMENDATION

It is recommended that further consideration to this request be deferred until the broader implications can be considered within the context of the regional planning program.

## **BACKGROUND**

At the June 18, 2002 session of Regional Council, a report from Planning & Development Services was considered regarding a request by the Annapolis Basin Group to amend the Bedford Municipal Planning Strategy (the report, dated June 11, 2002 is presented as attachment I to this report). The request was to allow for development serviced by municipal water and sanitary sewer services over 480 acres of the company's land holdings located on the west side of the Bicentennial Highway, extending from the south side of the Hammonds Plains Road towards the Kearney Lake Road. The lands are illustrated on Map 1 of the June 11<sup>th</sup> report.

Staff recommended that further consideration be deferred pending completion of the regional planning exercise. The first alternative to this recommendation was that a plan amendment process be initiated to allow for a limited interim expansion to the Bedford development boundary until the regional planning program is completed.

The extent of the potential interim expansion was outlined in the SGE preliminary servicing study undertaken for the Municipality regarding the Annapolis land holdings. SGE recommended that, if the Municipality wanted to provide some accommodation to the Annapolis Basin Group at this time, a development boundary extension be limited to 90 acres of the company's land holdings on the south side of the Hammonds Plains Road, as well as an abutting 22 acre parcel owned by HRM. The HRM property had been a site proposed for a blood fractionation plant but the project was subsequently abandoned.

The potential interim boundary extension, illustrated on attachment II, encompasses lands within the Sandy Lake watershed where sanitary sewers extensions could flow by gravity towards an existing main along the Hammonds Plains Road. Any extensions further south (towards Halifax) would necessitate pumping stations and force mains to direct sewage flows towards the Hammonds Plains Road.

After the June 11, 2002 staff report was prepared, Annapolis advised staff that the 90 acre option would not permit a viable development. The company stated that a minimum 200 acre development was needed as a first phase.

At the June 18<sup>th</sup> Council meeting, this information was presented verbally. A motion was approved that this matter be referred back to Planning staff for a report within three weeks, if possible, for comment regarding Alternative 1 of the staff report dated June 11, 2002. The implications of both the 90 and 200 acre options are reviewed in the following discussion.

## **DISCUSSION**

### **Site Specific Implications**

If assessed in isolation of any other potential developments within the vicinity, development of either the 90 or 200 acre option may be accommodated without substantial upgrading of municipal services. These lands can be adequately serviced from an existing water main along the Hammonds Plains Road. The system connection to the Meadowbrook Reservoir should

ensure that water is delivered to this area in accordance with the Water Commission's operating criterion.

Similarly, a development of 200 acres should not be anticipated to necessitate major upgrades to the road network in the vicinity. During peak traffic periods, however, south bound vehicles on the Bicentennial Highway are experiencing relatively long delays when attempting to turn westward (left) onto the Hammonds Plains Road. Traffic signals at this intersection may resolve this problem but it is unknown when upgrades may take place as this interchange is owned and maintained by the Province.

There are also concerns regarding traffic impacts on the Bedford Highway as the traffic analysis submitted by Annapolis had limited the scope of the study to the Hammonds Plains Road/Bicentennial Highway interchange.

The existing sanitary main which extends eastward down the Hammonds Plains Road to the Mill Cove pumping station and waste water treatment facility should be adequate for this level of development, although further investigation is needed to ensure there are no localized constraints.

Transit provision does not appear to be viable. A limited transit service (one bus during the a.m. and p.m. peak hours on week days) extends along the Hammonds Plains Road between the Bicentennial Highway and Basinview Drive (Route 86). This route is too far removed from the Annapolis lands to provide service and the level of transit demand anticipated over 90 or 200 acres would not be sufficient to warrant a new route extension.

There are no other obvious servicing problems.

### Broader Implications

Granting any interim development boundary extension as a first phase of a larger development proposal poses a number of longer term planning problems for this area. The design and costs for any required municipal service system upgrades will depend on the expected increase in demand. Examples include whether sanitary sewage will be diverted towards Halifax rather than Mill Cove, road improvements needed to accommodate increased traffic levels on the Kearney Lake and Hammonds Plains Road; and the size of a new water reservoir.

These design decisions cannot be made without an understanding of the extent to which future development will proceed in this area. Without this information, cost allocation to benefiting property owners is not possible. As a result, the Municipality may be faced with unanticipated budgetary expenditures in future years to maintain satisfactory service levels for both new and existing residents.

The Municipality's recent adoption of the capital cost contribution policies was, in part, intended to overcome the problems inherent with incremental planning. The policies require that a master planning exercise be undertaken over a larger area where development could be expected. This

allows prediction of ultimate service demand, the associated service upgrades, timing of expenditures in relation to development phasing, as well as an equitable apportionment of costs between the Municipality and benefiting property owners.

#### Jack's Lake

Establishing any boundary for a master planning study within this area presents difficulties at this time. The Bedford Municipal Planning Strategy specifically identifies the Jack's Lake Land Assembly as suitable for residential development and directs that consideration be given to this parcel when an amendment to the plan area development boundary is contemplated. This parcel, formerly owned by the N.S. Department of Housing and Consumer Affairs and now under the ownership of the Municipality, is a substantial land holding on the north side of the Hammonds Plains Road, across from the Annapolis land holdings (Attachment III illustrates the Jack's Lake land assembly in relation to the Annapolis lands).

If the Municipality remains committed to pursuing this directive, there would be ramifications for the design and cost of upgrading municipal services as both may place significant demands on the same systems. Of particular significance would be the design of the sanitary sewer systems given that the systems for both developments, if directed towards the Mill Cove treatment facility would generate significant flows relative to the remaining available capacity. Substantial allocation to these developments would inevitably have ramifications for other potential candidate sites throughout the communities of Bedford and Sackville.

It was because of these inter-relationships and broader implications that staff remains committed to the recommendation that the Annapolis' request to develop any portion of its' land holdings be deferred until the implications can be considered within the context of the regional planning program.

#### Greenfield Studies

One of the initiatives that Council recently approved under the growth management component of the regional planning program is a greenfield development study. The study will examine ten undeveloped areas around the urban core which are believed to have development potential. The study will examine the relative costs of servicing each area under various scenarios (the approved study terms of reference is presented as attachment IV).

The Jack Lake land assembly, Bedford West (Annapolis land holdings) and lands in the Sackville/Beaver Bank area have been identified as candidate sites. Although the study is not intended to be conclusive in deciding which areas should be designated for future growth, staff believe that the findings may address many of the issues raised in this report.

If Council does not support the staff recommendation, potential options are presented in the alternatives section of this report.

### **BUDGET IMPLICATIONS**

There are no budget implications associated with staff's recommendation. However, budgetary resources would have to be approved to undertake the course of action presented under alternative three of this report.

### **MULTI-YEAR FINANCIAL STRATEGY IMPACTS**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves as well as any relevant legislation.

### **ALTERNATIVES**

1. Further consideration of this request be deferred until the broader implications can be considered within the context of the regional planning program. As part of the regional planning process, this area will be studied and recommendations made to Council.
2. The Annapolis request could be deferred until the Greenfield Study is completed. It is anticipated that the study will be completed by the end of this year or early next year. As suggested in the discussion section, the findings of this study may provide valuable insight into the merits of extending municipal services to the Annapolis lands and other lands in the vicinity in terms of costs to other candidate areas throughout the Municipality.
3. A master planning study could be initiated for the Annapolis land holdings, as well as surrounding properties in the vicinity. The study would be similar in scope and process to the one recently completed for Wentworth/Bedford South. This approach would facilitate proper design of municipal service systems, appropriate phasing of development and allocation of costs to benefiting property owners, as well as identify open space opportunities and environmental protection measures needed.

External consulting services would be needed to undertake the tasks associated with this work. A preliminary estimate of the cost is in the range of \$50,000 to \$75,000. Funds are available in a capital account created for the capital cost contribution program analysis. In addition, one planner would be assigned to this project for approximately 25 percent of their time for at least a one year period. This time allocation would reduce staff resources available to the regional planning program.

Annapolis has advised that it is prepared to pay for the study costs with the Municipality selecting the consultant and managing the study. If this option is chosen, staff would strongly recommend that the Municipality fund the study rather than have Annapolis pay. The Municipality can recoup the study cost from benefiting property owners if an

infrastructure charge area is established for this area. Funding by a potential beneficiary may result in perceived credibility problems.

From the staff perspective, this option is less preferable than the first two alternatives as both staff and financial resources would have to be dedicated to an exercise which may be premature. A more detailed master planning exercise should be deferred until the implications of extending services to this area can be compared to other candidate areas throughout the region as contemplated under the regional planning initiatives.

4. Council could direct staff to initiate a plan amendment for a 200 acre land area within the Annapolis land holdings. Staff have indicated that from a local servicing issue perspective, this can be accommodated. However, from the broader perspective this is the least desirable option. It does not permit a comprehensive look at important regional issues relating to the development area and also establishes development rights prior to calculation of the Capital Cost Contribution for the area. This could lead to the very undesirable situation of lands being subdivided before a charge area has been created making it impossible for the Municipality to recover the costs of oversized infrastructure from this portion of the development.

## **ATTACHMENTS**

- I Staff Report to Regional Council from Planning & Development Services re: Project 00382 - Request for a Plan Amendment to the Bedford Municipal Planning Strategy. Dated June 11, 2002
- II Interim Development Boundary Extension Proposed by SGE (option 3)
- III Jack's Lake land assembly and Annapolis lands
- IV Greenfield Development Study Terms of Reference

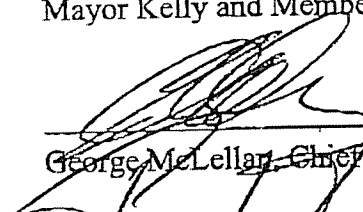
Additional copies of this report and information on its status can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208

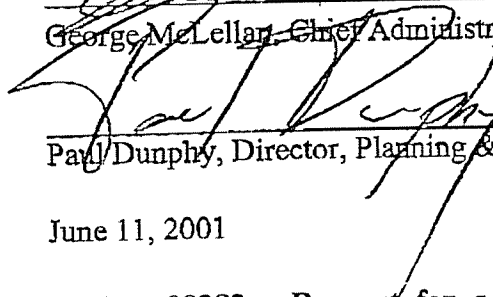
Report prepared by: Paul Morgan, Planner, Community/Regional Planning

Report reviewed by: Austin French, Manager of Community/Regional Planning

Halifax Regional Council  
June 18, 2002

**TO:** Mayor Kelly and Members of Halifax Regional Council

**SUBMITTED BY:**   
George McLellan, Chief Administrative Officer

  
Paul Dunphy, Director, Planning & Development Services

**DATE:** June 11, 2001

**SUBJECT:** Project 00382 - Request for a Plan Amendment to the Bedford  
Municipal Planning Strategy

**ORIGIN**

Annapolis Basin Group request to HRM in June 2001 for an amendment to the Bedford Municipal Planning Strategy.

Regional Council motion of July 17, 2001, approving that the SGE Group undertake a preliminary analysis of the Annapolis Group request for a plan amendment.

Presentation to Committee of the Whole Council by Annapolis Group Inc. and United Gulf Limited, on June 4, 2002. (Response to these issues are found in Attachment 4)

**RECOMMENDATION**

It is recommended that Regional Council defer the Annapolis Group Incorporated's request for amendments to the Bedford Municipal Planning Strategy until the request can be considered within the context of the Regional Planning program.

## **BACKGROUND**

Annapolis Group Inc. made a presentation to Council in January, 2001. They requested that a Master Plan study be undertaken, similar to the process that Council had previously initiated for four large areas, including Wentworth/Bedford South. Their request was for 1344 acres (680 in Bedford, 664 in the former County area). Council referred the matter to staff with no specific direction.

In June, 2001, Annapolis submitted a formal MPS application for a 480 acre portion within the Bedford Plan Area, (see attached map). This application was to expand the Residential Development Boundary to include 480 acres of their Bedford land holdings.

On July 17, 2001, Council approved that a contract be awarded to SGE Group Inc. to study the costs of infrastructure required to service the Wentworth /Bedford South master plan area and assist with calculation of the Capital Cost Contribution Charge. Further to a staff recommendation, Council authorized staff to expand the scope of work to include preliminary analysis of the concept plan submitted as part of the Annapolis Group request for an amendment to the Bedford MPS. In recommending that additional funds be included for the analysis of the Annapolis request staff stated:

**Staff are not prepared to recommend that a plan amendment be initiated at this time. This would in effect establish the lands as a priority growth area for HRM. It has been staff's intention that further recommendations on priority growth areas for HRM take place following from the municipal wide planning strategy process to take place over the next two to three years.**

**However staff support analysis of the concept plans completed by Annapolis because the information will be useful to Council's decision respecting the Wentworth Estates Planning Process and the Regional Planning program.**

**A recommendation concerning the appropriate time to initiate the Plan amendment process for the lands indicated in the request from Annapolis Group Inc. will be made following completion of the engineering analysis study.**

Approximately 280 acres of the lands in question are designated Residential Reserve in the MPS and about 200 acres are designated Information, Technology and Research. All of the lands are currently zoned Residential Reserve. The Residential Reserve Zone is intended to act as a holding zone restricting any significant level of development activity until such time as the land is required to accommodate development because there is insufficient land to accommodate growth. The holding zone also serves to restrict development until services can be provided.

## **DISCUSSION**



## DISCUSSION

In response to the developer's request, staff have concluded that, the Annapolis Group's lands may present opportunity for consideration of future residential development. There is, however, no strong evidence to suggest these lands should be given priority consideration relative to all other lands in the region. Undertaking an additional plan review of the scale requested by Annapolis Group Inc. would be inconsistent with Council's regional planning priority. The requested plan amendment for the Annapolis Group's lands may be worthwhile, but premature at this time.

Council recently initiated the "Greenfield Analysis" component of the regional planning process. The scope of work for this study is attached. The overall purpose of the study is to identify and analyse cost thresholds for several large greenfield vacant land areas on the perimeter of HRM's existing servicing boundaries. This analysis will assist HRM with the scenario modelling process which will identify priority growth areas for the Municipality. This process is expected to be completed in the spring of 2003 and form one of the first major deliverables of the regional planning process.

It should be noted that financial and servicing issues will not be the sole criteria for deciding where future development boundaries should be. Consideration will be given to environmental issues, strengthen existing communities, enhancing public transit and other factors. Regional planning will also incorporate many other factors relating to community values and community form. This will also be considered by Council in establishing future development boundaries.

### Bedford Plan Policy:

In May 1996, a revised planning strategy was adopted for the Town of Bedford. All lands within Bedford were considered, including the 687 acres of lands owned by Annapolis Group.

Primary goals of the plan review process included:

- to contain serviced residential growth to the portion of the Town which could most feasibly provide municipal services.
- to identify future priorities for serviced residential growth beyond the existing limits.

There was no priority assigned to the lands of Annapolis by the Bedford Town Council at that time.

Excerpts of the Bedford Municipal Planning Strategy pertaining to the Bedford Residential Development Boundary and policies R-2, R-2A and R-3 are presented in Attachment 1.

**Policy R-2** was maintained through the most recent plan review process to allow Council to

consider extensions to the Residential Development Boundary through plan amendment process in order to ensure it contains adequate lands to accommodate growth. The objectives of HRM's current master planning process conform with this policy.

In the December 1998 report to Regional Council regarding initiation of four master planning studies, staff advised as follows:

*Based on a preliminary evaluation, the four areas appear to present either infill opportunities or the potential for extensions to developments which could strengthen links between established communities. Allowing for central service extensions within these areas therefore offers the possibility of satisfying future housing demands at reasonable locations.*

The objectives for the Master Plan studies are appended as Attachment II.

Policy R2A was added to indicate the Town's intent to undertake a study pertaining to the development boundary. And policy R-3 indicates that some priority in review of the Bedford Development Boundary be given to the Jacks Lake land assembly.

SGE Group Inc. Study:

The intent of expanding the terms of reference to include the Annapolis lands was to determine:

- 1) Would proceeding with the Wentworth/Bedford South Master Plan process negatively impact the long run development capacity on the Annapolis Property?
- 2) How would proceeding with the Annapolis property plan amendment request potentially impact HRM's regional planning initiative.

The SGE Group study found that there is limited interaction and therefore impact on Bedford West by proceeding with the Wentworth/Bedford South plan amendment and Capital Cost Contribution policy charge area. An outline of the SGE report as it addresses Question one is appended (Attachment Four) and the entire SGE report relating to Bedford West is provided to Council under separate cover. The SGE Group study specifically addresses four main areas of infrastructure: Sanitary Sewer, Storm Sewer, Water Service and Transformation Services. The primary concern respecting the long-term potential for the Annapolis Group Lands is sanitary sewer treatment, due to limited capacity at the Mill Cove Sewage Treatment Plant. The SGE study states, regarding Wentworth/Bedford South that

"this project will have minimal impact on the Mill Cove STP".

The proposed policy set for Wentworth/Bedford South limits the effluent to the Mill cove to 2,900 people.

*The "Bedford" sewershed shown on Schedule "IV" shall be limited to a maximum of 2,900*

*people in recognition of the limited capacity of the Mill Cove Sewage Treatment Plant and the need to reserve capacity for other areas currently outside the serviceable boundary. Additional density may be considered in the future should the Municipality determine that sufficient capacity exists at the Mill Cove treatment plant and that other areas currently outside the serviceable boundary have been evaluated for future development potential.*

The SGE Group study also poses two questions regarding the implications concerning the possible development of the Annapolis Group Lands.

- Should these lands remain unserviced while the results of the Regional Plan and other background studies are completed in the short to medium term?
- Can HRM allow service extensions to the developer's holdings without providing similar extensions to other land owners in the surrounding area west of the Bicentennial Highway?

The conclusion reached was that:

"In SGE's opinion, these questions cannot be answered without a new regional plan for HRM and an integrated servicing strategy that considers the full build out costs and benefits of alternative growth areas in suburban and rural locations."

The SGE Group study found that "it appears that there is an opportunity to transfer the flows generated in the pumped portion of the Bedford West development to the Fairview Tunnel system. This strategy would reduce the potential wastewater load on the Bedford STP." It is staff's view that analysis of this option is crucial to the future disposition of the Annapolis lands.

SGE does not recommend that servicing be provided for those portions of the Annapolis Group Lands that could link to the former City of Halifax systems until after the offsite impacts of developing these lands can be known. This will be known through the Greenfield analysis indicated above.

SGE also recommended that HRM should require more detailed traffic analysis than provided to date concerning the Annapolis proposal particularly concerning potential impacts on the Kearney Lake Road, Hammonds Plains Road and Bedford Highway.

The concept plan submitted by the developer suggests that the development would ultimately benefit from the proposed collector roadway contemplated by the Province of Nova Scotia as Highway 113. Additional discussion with the province is required concerning its intention to build this roadway.

The SGE Group study recommends three possible options for HRM to consider:

3. Apply the policies of the former Town of Bedford MPS and LUB as they stand, which limits activity by the developer.

2. Wait until the regional planning process is complete prior to making any amendments.
3. Permit limited servicing (no direct cost to HRM) into a limited part of the Annapolis Group lands which would represent the initial stage of possible development and is serviceable by spare capacity in the former Town of Bedford system.

In staff's view, Option Two is the most reasonable course of action for HRM at this time, for reasons indicated earlier in this report.

The Annapolis Group maintains the right to proceed with Option One, however, the existing development rights are extremely limiting.

In presenting Option Three, SGE Group was examining hard servicing issues only. HRM must also consider other factors, the most significant being the integrity of the regional planning process. The Greenfield Analysis and scenario process, mentioned above, is a major new initiative for HRM and should be allowed to run its full course before new planning initiatives leading to service boundary extensions are undertaken. Also, there are other land owners requesting expansion of the Bedford Residential Development Boundary. Option Two creates a precedent which others will see as an opportunity to open discussions on additional service boundary extensions.

SGE recommends several items for special consideration should Council choose to follow Option Three. These are included as attachment III.

### **BUDGET IMPLICATIONS**

There are no budget implications associated with staff's recommendation.

### **MULTI-YEAR FINANCIAL STRATEGY IMPACTS**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves as well as any relevant legislation.

### **ALTERNATIVES**

1. Council may choose to proceed to initiate a plan amendment process to consider expanding the Residential Development Boundary in the Bedford Municipal Planning Strategy to

include approximately 90 acres, as indicated as Option 3 by the SGE Group. This is not recommended for reasons described in this report. However, should Council choose to instruct staff to follow this option, the SGE recommendations found in Attachment 3 should guide the planning process,

2. Council may choose to initiate a plan amendment process for the 680 acre parcel as originally requested by Annapolis Group Inc. This is not recommended for the reasons indicated in this report.

### **ATTACHMENTS**

#### **Map 1**

Attachment 1 - Excerpt from Bedford Municipal Planning Strategy

Attachment 2- Master Plan Objectives

Attachment 3- SGE Recommendations Concerning Option Three

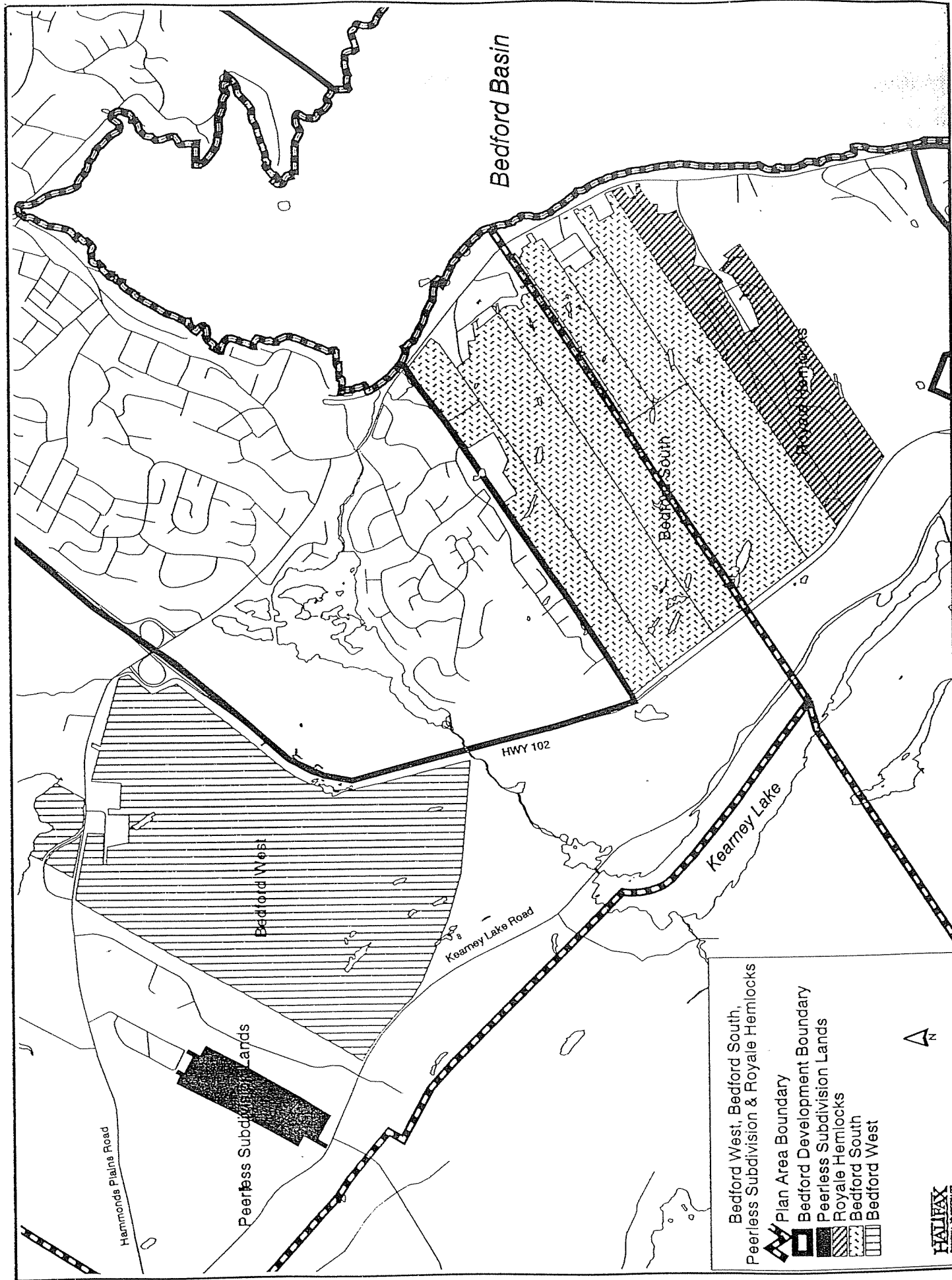
Attachment 4 - Response to issues raised by the Annapolis Group Inc and United Gulf Ltd. at the June 4, Committee of the Whole Council

Additional copies of this report and information on its status can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report prepared by: Austin French, Manager, Community/Regional Planning

Report approved by:

\_\_\_\_\_  
Paul Dunphy, Director of Planning & Development Services



- Bedford West, Bedford South, Peerless Subdivision & Royale Hemlocks
- Plan Area Boundary
- Bedford Development Boundary
- Peerless Subdivision Lands
- Royale Hemlocks
- Bedford South
- Bedford West



Attachment 1  
Excerpts from Bedford MPS

*(1) Location Of New Development*

*The Town's first plan established the Residential Development Boundary to direct new growth to the portion of the Town which could most feasibly be provided municipal services. Properties outside this Residential Development Boundary may also be developed, but the range of possible uses and the intensity of development are more limited than for properties within the Boundary. The Town is able to place controls on development through the provisions of the Municipal Planning Strategy and the various By-Laws enacted by Council. Policy R-1 states Council's intention to continue to maintain a Residential Development Boundary approach.*

*Much of the land identified for infilling in the 1982 MPS has been developed with new subdivisions such as Ridgevale, Oakridge, Bedford Hills, Basinview and Admiral's Cove. In order to ensure that there is adequate land within the development boundary to accommodate growth and to ensure that there is competition in the supply of serviced land, it may be necessary to include more area within the primary development boundary.*

*Policy R-2 states the criteria for considering expansion of the boundary. Policy R-2A recommends the immediate commitment of a study to determine where future residential growth should occur in the Town and in which direction the Residential Development Boundary should be expanded when it is deemed necessary. Policy R-3 recognizes the major investment by the senior levels of government in acquiring the Jack Lake Land Assembly and in undertaking an environmental impact assessment. The Jack Lake Land Assembly is one of the areas which Council may consider for inclusion within an expanded Residential Development Boundary.*

*Policy R-2:*

*Before approving a strategy amendment to change the location of the Residential Development Boundary, Town Council shall give consideration to:*

- (1) requirements and capabilities to provide hard and soft services, such as water and sewer, schools, fire and police protection;*
- (2) population and housing forecasts so as to avoid shortages of serviced land and resulting inflated land costs;*
- (3) remaining supply of residential land in relation to the anticipated rate of its consumption;*
- (4) adequacy of existing or proposed community and recreational facilities;*
- (5) the financial impact upon the Town in terms of capital and operating costs;*
- (6) any environmental impacts that may occur due to the increase of permitted development activity; and,*

- (7) adequacy of existing and proposed access routes;
- (8) all other applicable policies.

Policy R-2A:

*It shall be the intention of Town Council to immediately commence a study to determine where future residential growth should occur in the Town and in which direction the residential development boundary should be expanded when it is deemed necessary. The criteria in Policy R-2 shall be addressed in the study.*

Policy R-3:

*The Town of Bedford recognizes the existence of the Jack Lake Land Assembly and its suitability for future residential development, as substantiated in studies undertaken by the Nova Scotia Department of Housing and Consumer Affairs. It shall be the intention of Town Council to consider this parcel of land known as the Jack Lake Land Assembly for inclusion within the Residential Development Boundary if and when a strategy amendment to expand the Boundary is contemplated. As part of this exercise, the Town shall request the N.S. Department of Housing and Consumer Affairs to update the socio-economic analysis and master plan prepared in 1986 for Jack Lake.*



Attachment 2

**Master Planning Studies:  
Terms of Reference and Procedures**

**Objectives:** to prepare conceptual community plans which

- anticipate future community needs having regard for trends in demographics, housing affordability, building technologies, economics and social issues with specific consideration given to how the community proposed could fulfill a role in responding to needs within a regional context;
- integrate design with established neighbouring communities in terms of the natural and man made environment;
- reduce travel time and energy requirements, encourage the use of public transit, pedestrian and cycling facilities and enhance public safety through innovative integration of land use components with the transportation and open space systems;
- preserve sensitive environmental areas and unique cultural features and responds to the opportunities and constraints imposed by the environment;
- maintain adequate service levels for municipal infrastructure (sanitary sewer, storm drainage, potable water and road systems) both within the area of new development and off-site while minimizing costs to all parties;
- allow for design flexibility in recognition of future changes to external circumstances/market conditions
- minimize future demands on the Municipality's fiscal resources (capital and operating budgets) and provide fair and predictable cost-sharing of community infrastructure costs between the Municipality and individual property owners in terms of division and timing;
- provide policy guidance for more detailed negotiations with property owners/developers with specific consideration given to phasing of development with associated community infrastructure and the responsibilities of each party (property owners/developers and the Municipality).

**Attachment 3**

**SGE recommends the following in relation to Option Three:**

- a) The Bedford West lands on the southside of Hammonds Plains Road that flow to the Sandy Lake watershed be considered as an interim extension to the Town of Bedford development boundary.
- b) An interim extension should have a sunset date which coincides with completion of the Regional Plan and related documents on the costs of service extension.
- c) The Bedford West lands within the Sandy Lake watershed area should be allocated capacity in the existing Mill Cove Sewerage Treatment Plant. This capacity will be negotiated with HRM.
- d) The Bedford West lands should not be allocated possible future capacity in and expanded Mill Cove Sewage Treatment Plant until the Regional Plan is completed and the longer-term infrastructure requirements for the larger Bedford West area is determined.
- e) HRM should ensure that any off-site transportation and infrastructure costs of Bedford West development will be the responsibility of the developer. The timing and type of off-site improvements will be negotiated between HRM and the developer, or the Province of Nova Scotia for the portion of Hammonds Plains Road under provincial jurisdiction.
- f) Interim service extensions to Bedford West should be given similar densities (average of 20 persons per acre or six units per acre) as those lands within the development boundary.
- g) The interim service extension area contains  $\pm 22$  acres on the southside of Hammonds Plains Road, as shown in Exhibit 3.2. Of this total, approximately  $\pm 90$  acres are owned by the Annapolis Group and  $\pm 22$  acres by HRM. The HRM holdings were the planned site for a blood fractionation plant that has been abandoned. The  $\pm 15$  acres on the northside of Hammonds Plains Road should be reviewed by HRM for regional parkland designation prior to consideration for residential development.

Attachment 4

Response to issues raised by the Annapolis Group Inc and United Gulf Ltd. at the  
June 4, Committee of the Whole Council

**Issue:**

The submission from the Annapolis Group Inc. indicated that the company would be placed at a significant disadvantage concerning the potential for development of the Bedford West lands if HRM approves a plan amendment leading to development at Wentworth/Bedford South. The company stated in its June 11, 2002, submission to Council that staff have ignored Annapolis Lands and seemingly dealt with Wentworth/Bedford South Lands exclusively.

**Response:**

Council approved the initiation of work on four master plan areas including Bedford South in 1998. The Bedford West request was received approximately three years later. On July 17, 2001, staff recommended and Council approved a contract for SGE Group Inc. to study the costs of infrastructure required to service the Wentworth /Bedford South master plan area and assist with calculation of the Capital Cost Contribution Charge. Council authorized staff to expand the scope of work to include preliminary analysis of the concept plan submitted as part of the Annapolis Group request for an amendment to the Bedford MPS. It was indicated that this information would be brought to Council at the time that the plan amendment for Wentworth/Bedford South was to be considered.

The staff report recommending that the scope of work be expanded to include the Annapolis Lands stated:

**Staff are not prepared to recommend that a plan amendment be initiated at this time. This would in effect establish the lands as a priority growth area for HRM. It has been staff's intention that further recommendations on priority growth areas for HRM take place following from the municipal wide planning strategy process to take place over the next two to three years.**

**However staff support analysis of the concept plans completed by Annapolis because the information will be useful to Council's decision respecting the Wentworth estates Planning Process and the Regional Planning program.**

**A recommendation concerning the appropriate time to initiate the Plan amendment process for the lands indicated in the request from Annapolis Group Inc. will made following completion of the engineering analysis study.**

This statement was included in the report to make sure it was clear to all concerned that

the Annapolis lands did not have the same status as the Wentworth/Bedford South lands going through the plan amendment process. In addition, there was no instruction from Regional Council to staff, the Community Councils or their committees to suspend work on Wentworth/Bedford South or expand the scope of work for Annapolis' Bedford West lands. Staff and HRM's solicitor have confirmed this by reviewing the tape of the minutes of Regional Council for July 17, 2001.

Further the Council resolution of July 17, 2001, HRM contracted the SGE Group Inc. to analyze the inter-relationship between the Wentworth/Bedford South project and Annapolis Group Inc.'s lands from the perspective of hard services including sanitary sewer, storm sewer, water service and transportation.

The study indicates that there is opportunity for the Annapolis Group Inc. to develop its lands in Bedford West if Council chooses to proceed with the proposed plan amendment for the Wentworth/Bedford South Lands.

### Sanitary Sewer Analysis

The primary concern respecting the long-term potential for the Annapolis Group Lands is sanitary sewer treatment, due to limited capacity at the Mill Cove Sewage Treatment Plant. The SGE study states, regarding Wentworth/Bedford South that

“this project will have minimal impact on the Mill Cove STP”.

The proposed policy set for Wentworth/Bedford South limits the effluent to the Mill cove to 2,900 people.

*The “Bedford” sewershed shown on Schedule “IV” shall be limited to a maximum of 2,900 people in recognition of the limited capacity of the Mill Cove Sewage Treatment Plant and the need to reserve capacity for other areas currently outside the serviceable boundary. Additional density may be considered in the future should the Municipality determine that sufficient capacity exists at the Mill Cove treatment plant and that other areas currently outside the serviceable boundary have been evaluated for future development potential.*

It should also be pointed out that HRM staff have concerns respecting total flows to the Mill Cove Plant in that a substantial portion emanate from inflow and infiltration problems. This will impede the ability of the plant to accommodate new development over the long term. HRM has budgeted for a study into inflow and infiltration problems to identify potential solutions.

The SGE study also states:

“It appears that there is an opportunity to transfer flows at the pumped portion of the Bedford West development to the Fairview Tunnel System. This strategy would

reduce the potential wastewater load on the Bedford STP”

The Fairview tunnel system is a large diameter gravity conduit that starts at the intersection of Kearney Lake Road and the Bedford Highway. The tunnel discharges to the HRM pumping station at the intersection of Duffus and Barrington Street and flows to Halifax Harbour.

The majority of sanitary sewage emanating from Wentworth/Bedford South will be handled through a relatively new pipe in the Bedford Highway. HRM contributed approximately \$500,000 to the sanitary sewer pipe project to oversize the pipe to the benefit of the Wentworth/Bedford South lands. Relative to this factor the SGE study concludes:

“ access to this system by Wentworth Estates/Bedford South will not impact on the future plans by the Annapolis Group Inc. to use this system”

SGE does not recommend that servicing be approved for those portions of the Annapolis Group holdings that could link into the former City of Halifax system. The offsite impacts of developing these lands cannot be determined without additional integrated services analysis. This is currently underway through the Greenfield Analysis.

### **Storm Sewer Analysis**

The SGE study explains that storm drainage from Wentworth/Estates Bedford South will ultimately discharge to either the Bedford Basin, which will receive drainage from the eastern portion of the study area, or to Kearney Lake, which will receive drainage from the western portion of the study area...”there are no expected impacts on Bedford West”.

### **Water System Analysis**

The water system servicing Wentworth Estates/Bedford South will ultimately be serviced by the Bedford South Reservoir. The capital cost contribution for this work is estimated by the Halifax Regional Water Commission to be \$506 per acre. Based on the work carried out the Annapolis Group they anticipate that a new reservoir will be required to service Bedford West. This new reservoir and other infrastructure requirements would be funded through an entirely separate capital cost contribution charge.

### **Transportation System Analysis**

The SGE Group focused on the following transportation elements:

- . Bicentennial Highway Interchange
- . Internal Roads
- . Intersections
- . Transit Facilities
- . Existing Network

Regarding the Interchange the SGE study finds the new interchange is a fundamental requirement for Wentworth/Bedford South but that "only a small portion of Bedford West will benefit from the interchange."

SGE assessed the internal roads in Wentworth/Bedford South and concluded there are no cost impacts on Bedford West.

There is one major intersection within Wentworth/Bedford South. This is the intersection of Larry Uteck Drive and Nine Mile Drive/Starboard. SGE analyzed this intersection and concluded there are no cost impacts on Bedford West.

SGE also analyzed the Bedford Highway adjacent to Wentworth/Bedford South and found that there is no cost impact on Bedford West.

Regarding the existing road network, the SGE group recommends that a more rigorous analysis be undertaken of the proposed Annapolis Development than has been submitted to date. The form sites the study undertaken from Wentworth/ Bedford South as an example of the type of study which should be done.

**Issue:           The Master Planning Process for Wentworth/Bedford South contravenes policies R-2, R-2A and R-3 of the Bedford Municipal Planning Strategy.**

Excerpts of the Bedford Municipal Planning Strategy pertaining to the Bedford Residential Development Boundary and policies R-2, R-2A and R-3 are presented as follows:

*(1) Location Of New Development*

*The Town's first plan established the Residential Development Boundary to direct new growth to the portion of the Town which could most feasibly be provided municipal services. Properties outside this Residential Development Boundary may also be developed, but the range of possible uses and the intensity of development are more limited than for properties within the Boundary. The Town is able to place controls on development through the provisions of the Municipal Planning Strategy and the various By-Laws enacted by Council. Policy R-1 states Council's intention to continue to maintain a Residential Development Boundary approach.*

*Much of the land identified for infilling in the 1982 MPS has been developed with new subdivisions such as Ridgevale, Oakridge, Bedford Hills, Basinview and Admiral's Cove. In order to ensure that there is adequate land within the development boundary to accommodate growth and to ensure that there is competition in the supply of serviced land, it may be necessary to include more area within the primary development boundary.*

*Policy R-2 states the criteria for considering expansion of the boundary. Policy R-2A recommends the immediate commitment of a study to determine where future residential*

*growth should occur in the Town and in which direction the Residential Development Boundary should be expanded when it is deemed necessary. Policy R-3 recognizes the major investment by the senior levels of government in acquiring the Jack Lake Land Assembly and in undertaking an environmental impact assessment. The Jack Lake Land Assembly is one of the areas which Council may consider for inclusion within an expanded Residential Development Boundary.*

Policy R-2:

*Before approving a strategy amendment to change the location of the Residential Development Boundary, Town Council shall give consideration to:*

- (1) requirements and capabilities to provide hard and soft services, such as water and sewer, schools, fire and police protection;*
- (2) population and housing forecasts so as to avoid shortages of serviced land and resulting inflated land costs;*
- (3) remaining supply of residential land in relation to the anticipated rate of its consumption;*
- (4) adequacy of existing or proposed community and recreational facilities;*
- (5) the financial impact upon the Town in terms of capital and operating costs;*
- (6) any environmental impacts that may occur due to the increase of permitted development activity; and,*
- (7) adequacy of existing and proposed access routes;*
- (8) all other applicable policies.*

Policy R-2A:

*It shall be the intention of Town Council to immediately commence a study to determine where future residential growth should occur in the Town and in which direction the residential development boundary should be expanded when it is deemed necessary. The criteria in Policy R-2 shall be addressed in the study.*

Policy R-3:

*The Town of Bedford recognizes the existence of the Jack Lake Land Assembly and its suitability for future residential development, as substantiated in studies undertaken by the Nova Scotia Department of Housing and Consumer Affairs. It shall be the intention of Town Council to consider this parcel of land known as the Jack Lake Land Assembly for inclusion within the Residential Development Boundary if and when a strategy amendment to expand the Boundary is contemplated. As part of this exercise, the Town shall request the N.S Department of Housing and Consumer Affairs to update the socio-economic analysis and master plan prepared in 1986 for Jack Lake.*

In the December 1998 report to Regional Council regarding initiation of four master planning studies , staff advised as follows:

*Based on a preliminary evaluation, the four areas appear to present either infill opportunities or the potential for extensions to developments which could strengthen links between established communities. Allowing for central service extensions within these areas therefore offers the possibility of satisfying future housing demands at reasonable locations.*

The recommendation to proceed with a master planning study to test this preliminary evaluation is consistent with the directive of policy R-2A of the Bedford Municipal Planning Strategy. Furthermore, when the public participation program for the Wentworth/Bedford South was adopted by Regional Council in June 1999, the study objectives were also adopted. These objectives, presented as Attachment 2 to this report, conform with the matters of consideration identified under policy R-2 of the Bedford MPS.

The draft secondary planning strategy proposed for Bedford South includes an explicit policy which restricts the population for which sewage can be directed to the Mill Cove sewage treatment plant to 2,900 persons in recognition of the need to reserve capacity for lands currently outside the development boundary established for Bedford. Allowing for the development of Bedford South will therefore not prejudice the potential for considering inclusion of the Jack's Lake land assembly within the Bedford Development Boundary and therefore does not violate the intent of policy R-3.

Knowing that the relevance of policies R-2A and R-3 may be perceived as an issue, staff brought these policies to the attention of the North West Community Council and its Planning Advisory Committee. Staff also recommended that these policies be deleted so that there was no appearance of policy inconsistency. Having said that, both the PAC and Community Council are comfortable with retaining these policies and simultaneously proceeding with the Plan amendments for Bedford South. Staff is comfortable with the fact that this issue was highlighted, debated and a decision reached by Community Council. In any event, it should also be noted that the Greenfield Analysis recently approved by Regional Council also addresses the issue of further study of the Bedford Servicing Boundary.

**Issue: The Annapolis Group indicates it has relied on Bedford's MPS for its long term planning.**

The very nature of a plan amendment process is to consider new policy. Staff feel that HRM's intention to amend the Bedford MPS has been well known in the community for some time. Council adopted a public participation process and public meetings to review draft policy have been ongoing. This process has been extensive and ongoing for years.



**Issue: The Annapolis Group suggests that Council's recent decision to reject an application to consider a plan amendment at Moirs Mills is a precedent which should be followed in relation to the Wentworth/Bedford South Plan Amendment request.**

It should be pointed out that Council initiated the plan amendment for Wentworth / Bedford South in late 1998 and adopted a public participation strategy for the process in July of 1999. Further, it is not reasonable to suggest that Council not consider plan amendments because they contradict existing plan policy. It is circuitous reasoning to suggest Council cannot consider an amendment which changes the status quo. The very nature of a plan amendment process is to consider new policy. It should also be pointed out that although Council rejected the request to consider amendments respecting Moirs Mills, Council has initiated two other amendments to the Bedford MPS within the past two months. First, a request to amend the Bedford MPS and LUB to enable dwelling units to exceed 50 percent of the gross floor area of a commercial/residential mix building in the mainstreet commercial zone along the Bedford Highway and second to consider redevelopment of the Glen Moir School.

#### **Submission from United Gulf.**

The Submission from United Gulf indicated that the company is concerned that it was not consulted along with landowner stakeholders directly participating in the Wentworth/Bedford South process.

It is not staff's intention to include United Gulf Lands in the proposed charge area for Wentworth/Bedford South. The only cost factor linking the Paper Mill Lake community with the proposed Bedford South plan amendment process identified in the SGE study is the proposed Highway 102 Interchange. Based on the CCC policy as presented to Council, the cost burden related to the interchange which could be required of United Gulf lands would be between \$250,000 and \$280,000. With an estimated 800 lots left to be developed this would yield a relatively minor average lot cost of just over \$300.

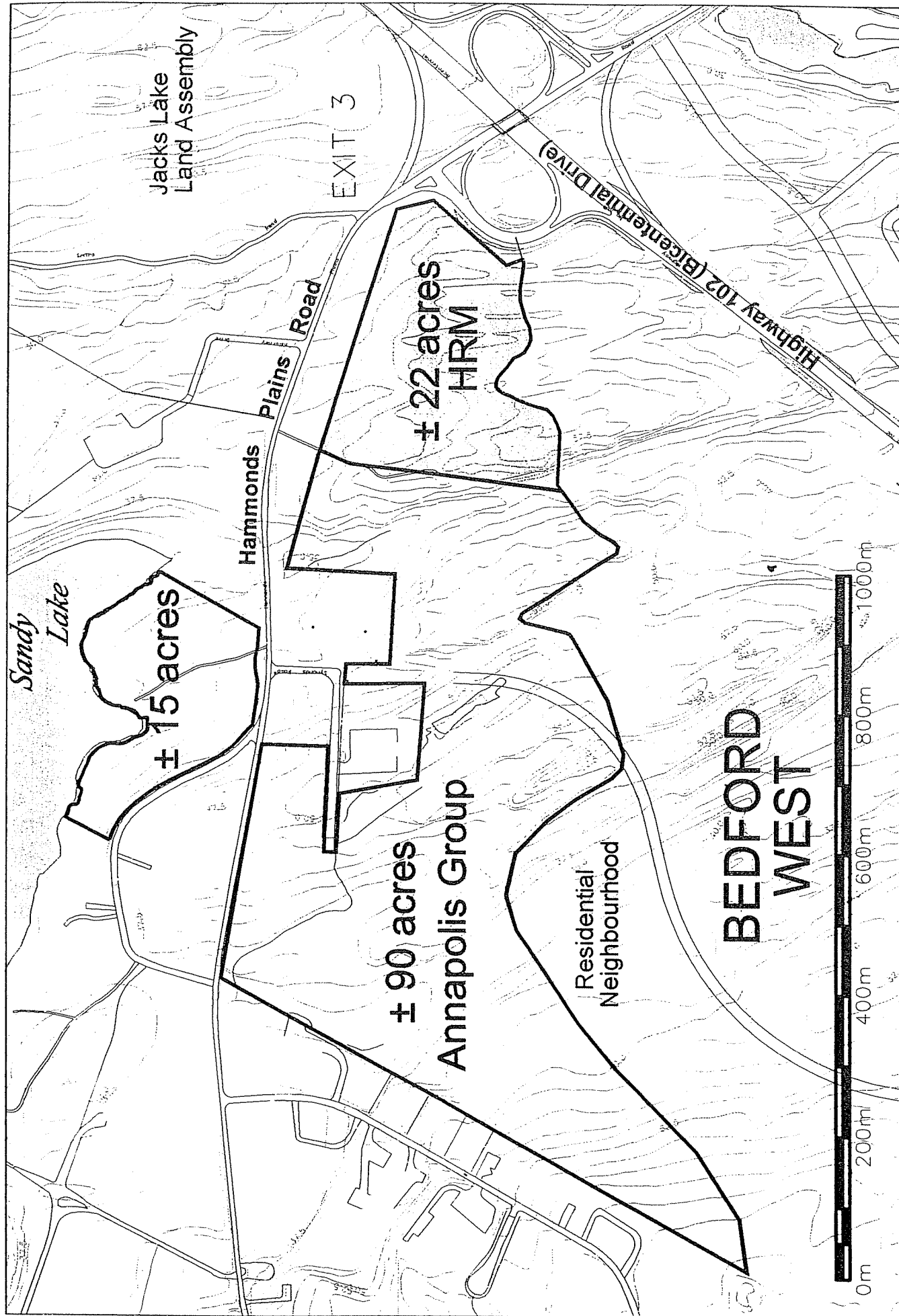
The SGE study finds that approximately 21 percent of the cost of the interchange is directly attributable to the Bedford community including Paper Mill Lake. However, the CCC policy as presented to Council indicates that HRM must absorb the cost of regional impacts for any portion of the Paper Mill Lake community already developed. Trip generation analysis conducted by SGE attributes 50 percent of the trips to lands already developed reducing the portion that can be attributed to future development in the community to one half of 20 percent or 10 percent.

The total amount of the interchange is now estimated at 5.7 million. It is assumed for the purposes of the Capital Cost Contribution calculations that 50 percent to 66 percent of this amount will be realized through contributions from senior levels of government.

Having said all of this, it is ultimately Council's decision as to whether or not there is sufficient justification to include Paper Mill Lake. A much more detailed and focused

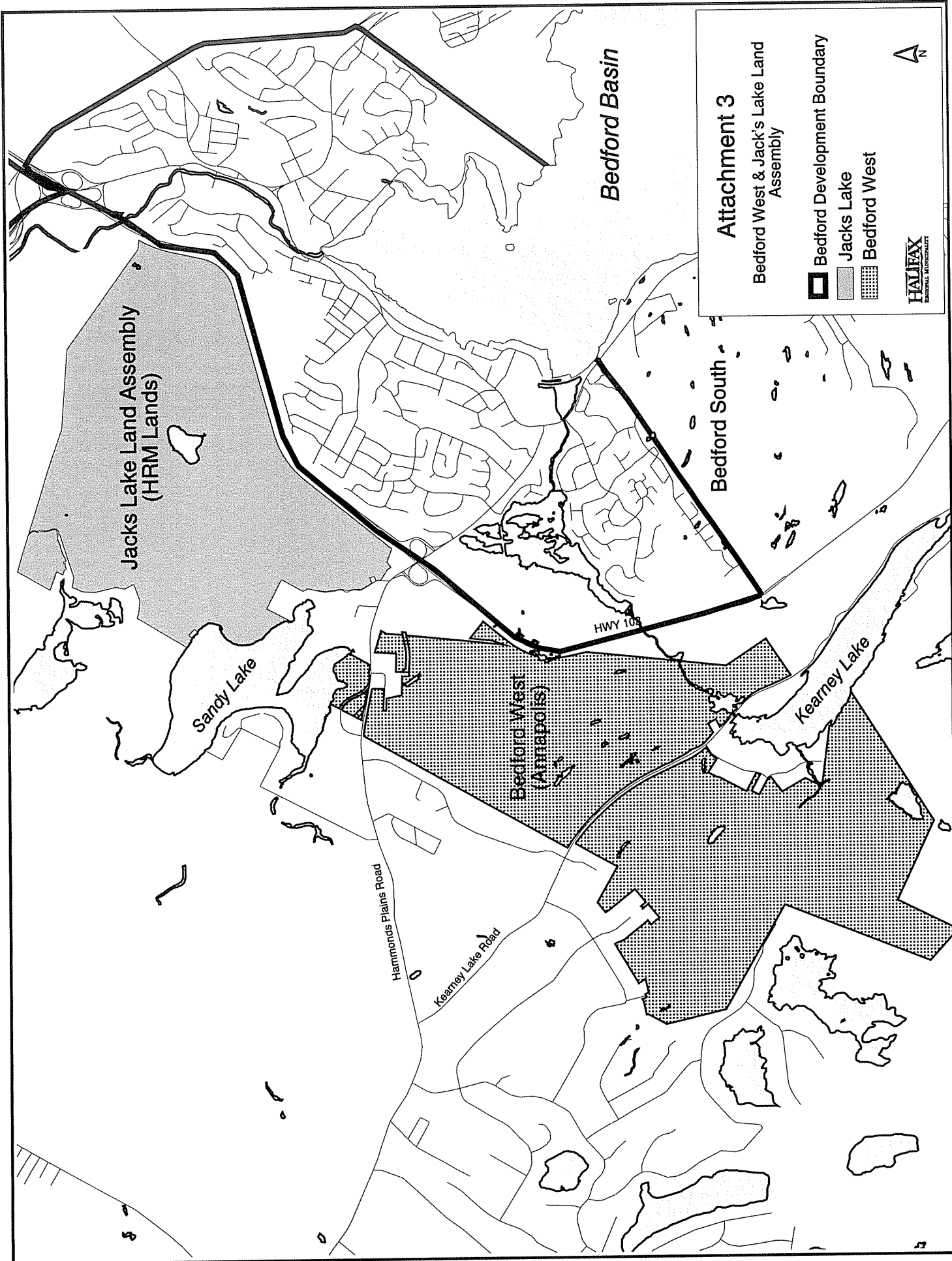
discussion of this will take place with the affected property owners in advance of a staff recommendation to Council. Any costs which cannot be attributable to development within Wentworth/Bedford South and which cannot reasonably be attributable to another development will be borne by the Municipality.

The work to date is not a final analyses / recommendation on the Capital Cost Charge area or rates for Wentworth/Bedford South. It was intended to determine the order of magnitude of those costs. The inclusion or exclusion of the Paper Mill Lake development does not affect the order of magnitude.



### EXHIBIT 3.2

## PROPOSED BEDFORD WEST INTERIM SERVICING BOUNDARY



### Attachment 3

Bedford West & Jack's Lake Land Assembly

- Bedford Development Boundary
- Jacks Lake
- Bedford West



**HALIFAX**  
METROPOLITAN MUNICIPALITY

## Regional Planning Project

**Halifax Regional Municipality has embarked upon a long-term regional plan for growth management and development.** The purpose of this plan is to promote "Healthy Growth" by supporting a vibrant economy, building strong, healthy and safe communities, effectively managing environmental assets, increasing efficiency in municipal expenditures, and building civic pride. The Plan will address growth management, transportation, vibrant communities and environmental management. Much of the work is being undertaken by staff from relevant departments under the leadership of a Regional Planning Manager who has recently been retained by the Municipality. The three-year project includes opportunities for consultation with other levels of government, local agencies, interest groups and the general public.

**A major component of the regional planning process will be a comparative analysis of alternative scenarios** which HRM might choose to pursue in terms of future development locations, densities and transportation choices. The work described here feeds directly into the scenario building process.

## Development Locations

**A critical part of the analysis is understanding the capital and operating costs, opportunities and constraints** associated with different possible locations for development. The scenarios will include, but not necessarily be limited to, five development contexts:

- a. **Greenfield Development:** Serviced residential development in new locations which have not been previously urbanized.
- b. **Greyfield Development:** Redevelopment in established suburban locations currently dominated by surface parking, first-generation shopping centres, abandoned service stations and other declining low-density uses.
- c. **Brownfield Development:** Redevelopment in urban locations currently dominated by declining industrial uses, surplus railway or military properties, or vacant lands resulting from previous demolition.
- d. **Rural Community:** New development clusters surrounded by rural land.
- e. **Exurban Growth Areas:** Unserved large-lot residential subdivisions in the rural commutershed.

## 2. INTENT:

The Halifax Regional Municipality wishes to contract for qualified individual(s)/firm(s) for the furnishing and delivering of consulting services to provide a comparative analysis for Greenfield development.

3. BUDGET:

The municipality has established a budget limit of \$150,000 inclusive of HST for this project.

4. SCOPE OF THE WORK:

***This Call for Proposals addresses the first item only: Greenfield development.*** Greyfields, Brownfields, Rural Communities and Exurban Growth Areas will be studied separately.

a) Purpose

Information provided to HRM as a result of this study will be used for public education purposes and form an integral component of HRM's current Regional Planning Initiative. The Scope of Work is intended to serve as a guideline only, and may not be all inclusive.

The overall purpose of this study will be to:

- ▶ **identify and estimate cost thresholds** for each of the ten Greenfield Sites listed below, in terms of piped services, treatment plants, roads and transit systems
- ▶ **identify any additional greenfield sites** which may merit further investigation
- ▶ **select and delineate at least six Study Areas** drawn from the above Greenfield Sites, based on the cost thresholds, and in consultation with HRM staff
- ▶ **estimate, compare and explain costs** associated with development in each of the six or more selected Study Areas assuming conventional density and modal split
- ▶ **determine the sensitivity of these costs** to cost thresholds and changes in density and modal split, based on the scenarios set forth in Table 1 below.

b) Greenfield Sites and Study Areas

The ten Greenfield Sites are listed below and indicated conceptually on the attached map indicated as Attachment I. Boundaries will be resolved in consultation with HRM staff. The consultant may recommend including one or two additional sites in consultation with HRM staff. Following identification of cost thresholds for each site, ***at least six of these locations and their boundaries (which will be referred to as Study Areas) will be identified for in-depth costing, through discussion between the consultants and HRM staff.***

Mainland South Backlands  
Ragged Lake  
Birch Cove Lakes/Governors Lake

Bedford West/Bedford South  
Jack's Lake  
Sackville/Beaver Bank  
Dartmouth North/Anderson Lake  
Port Wallace/Dartmouth East  
Nova Scotia Home for Coloured Children Lands  
Morris - Russell Lake/Shearwater - Eastern Passage

**c) Degrees of Development**

Development costs are affected by cost thresholds determined by capacities of existing piping, treatment and transportation facilities. The point at which these thresholds arise depends on the degree and type of development in relation to the various system capacities. This Call for Proposals addresses three assumptions about the degree of development:

- i) **Baseline:** assumes a continuation of past trends, allocated in the region according to the assumptions used in the HRM Integrated Servicing Study (ISS). The ISS provides the starting point for this Call for Proposals by allocating growth costs for piped services under a baseline assumption. The consultant will go beyond the work of the ISS by proposing and costing basic concept plans including major servicing elements. In addition, the consultant will allocate the ISS traffic data to individual traffic zones associated with each Greenfield Site, will update the traffic data and will provide a recalibrated model.
- ii) **Threshold:** assumes that development in a Greenfield Site continues up to, but not including, the first major capacity improvement that would be required in terms of treatment plants, piped services, roadways or transit. The nature and cost of this first threshold must be finalized for each Greenfield Site in consultation with HRM staff. The maximum amount of development that can be accommodated in each location without having to make this first major investment to increase capacity defines the Threshold assumption.
- iii) **Buildout:** This is based on development of all available land at a Greenfield Site, regardless of cost thresholds. All necessary investment to attain full buildout must be identified and costed (+/-20%). Full buildout assumes that zoning would be amended to allow development of all lands except for conservation and recreation areas, and except for hazard lands, all to be determined in consultation with relevant HRM staff (e.g., Parkland Planning, Planning and Development Services, Engineering and Public Works).

**d) Development Densities**

**On a per-unit basis, density affects the costs** of infrastructure, maintenance and operations. Density also determines the usage and efficiency of public transit, reducing the need for roadway expansion. To test the impact of density on costs, the present study will compare costs for two density assumptions at Greenfield Sites:

- i) **Conventional:** Low-density residential development averaging 5 units per acre and dominated by large-lot single-family dwellings, segregated from large-footprint, low-rise commercial uses.

- ii) **Alternative:** Medium-density residential development averaging 9 units per acre, with a mix of smaller-lot single-family dwellings, duplexes, townhouses and low-rise apartments, with some commercial uses integrated with apartments, and with other commercial uses in nearby smaller-footprint, mid-rise buildings.

e) **Transportation Choices**

**The degree to which residents choose alternative travel modes to driving affects traffic volume/capacity ratios and the cost of roadways.** To test the impact of alternative transportation usage on costs, the study will compare development costs for current levels of automobile use and for significantly reduced automobile use such as might arise through any future policy shift in favour of higher density, pedestrian oriented design, cycling facilities and public transit investment. Research suggests that when residential density is doubled, a 20 to 30% decline in drive-alone auto commuting is observed.<sup>1</sup> The comparison will be done by using two different modal split assumptions at Greenfield Sites:

- ▶ **75% of peak-hour trips by automobile:** This is close to current modal splits found in some suburban and most semi-rural portions of HRM for driving to work. For example, the ratio is 70% in Eastern Passage/Cow Bay and 79% in Hammonds Plains.
- ▶ **60% of peak-hour trips by automobile:** This is close to the current average modal split for some well-established suburban communities in HRM. For example, the ratio is 63% for the Halifax Mainland and 60% for Dartmouth. Achieving such ratios in greenfield locations would require careful attention to density, design and transit service levels.

f) **Community Design**

Community design interacts with development density and transportation investment to determine public acceptability of alternative development forms and transport modes. These factors lie beyond the scope of the present study.<sup>2</sup> Because of their complexity and the need for specialized expertise, *community design factors will be examined separately.*

g) **Costing Assumptions**

The assumptions for the degree of development, its density and modal split are combined below in Table 1, to produce six Costing Assumptions:



TABLE 1: COSTING ASSUMPTIONS

Density/Modal Split >>> Degree of development vvv	Conventional 5 units per acre 75% peak-hr auto trips	Alternative 9 units per acre 60% peak-hr auto trips
Baseline Trend (ISS)	Conventional Baseline	Alternative Baseline
Threshold	Conventional Threshold	Alternative Threshold
Buildout	Conventional Buildout	Alternative Buildout

## 5. DUTIES OF HRM:

- ▶ **HRM will provide an information package** containing background information.
- ▶ **Preliminary capital cost analysis for piped services** on a region-wide basis has already been done through the Integrated Services Study (ISS). The ISS did not allocate transportation costing to individual traffic zones. Allocation of the ISS traffic data to each Greenfield Site will be the responsibility of the consultant (see below).
- ▶ **The HRM traffic model** which was built and calibrated using QRSII version 5.0.3, and has 190 zone centroids, 1700 links, and 1200 nodes. The capacity constraint feature is employed at all major street intersections. There is no transit modeling component to the model. The consultant will be required to update and recalibrate the model (see below).
- ▶ **Additional information** available through HRM will include relevant MPS Policy, land ownership patterns; topography; soil and geological conditions; hydrology; vegetation; existing infrastructure; watershed boundaries; sewershed boundaries; and environmentally sensitive areas.
- ▶ **HRM studies and/or planning guidelines for:**
  - Land use planning and zoning
  - Subdivision
  - Transportation (including provincial highways, transit, parking, cycling and walking)
  - Environmental planning
  - Parkland
  - Recreation

Fire and police protection  
Waste management  
Engineering design  
Capital Cost Contribution (CCC)

- ▶ **Relevant reports/studies prepared by or for HRM** will also be available (see Appendix A). The availability of relevant data and background studies may differ between sites. Some data and environmental feature mapping may be obtainable from the Regional Open Space Plan being undertaken by Recreation Services. Use of this data would be subject to provincial and municipal data sharing agreements.
- ▶ **Meetings with HRM planning, engineering, transit and parkland planning staff** as required to resolve locations and boundaries of Greenfield Sites, Study Areas, conservation areas, regional parks, transportation elements, developable lands, recreation needs and other assumptions. HRM staff will also meet with the consultant at the completion of each of the project steps (see below).

## 6. DUTIES OF CONSULTANT

### a) Step One: Opportunities and Constraints

#### 1) Objectives:

- i) **Re-calibrate and update the transportation model:** The model must represent the current population and employment of the region and include the current major roadway network.
- ii) **Allocate traffic data** from the Integrated Servicing Study (ISS) for traffic zones associated with each Greenfield Site, using the recalibrated QRSII traffic model, based on each of the six assumptions set forth in Table 1.
- iii) **Identify opportunities and constraints** for optimizing land development costs for each of the ten Greenfield Sites under each of the six assumptions in Table 1 above, giving consideration to:
  - ▶ integration with established neighbouring communities
  - ▶ preservation of environmentally sensitive areas
  - ▶ existing servicing studies relevant to the study area
  - ▶ approved and proposed subdivision development
  - ▶ existing and proposed HRM and Nova Scotia parkland and open space plans
  - ▶ existing and proposed HRM and Nova Scotia transportation plans
  - ▶ existing and proposed HRM transit services, including Metro Transit Strategy Phase I and ferry/commuter rail proposals
- iv) **Identify population/cost thresholds** for each Greenfield Site which would necessitate major upgrades or extensions of piped services, treatment plants, roads and transit services. Include costs of these thresholds and possible trade-offs (e.g., transit in lieu of roads).

- v) **Compile a package** portraying a reasonable understanding of the development potential of each Greenfield Site.
- vi) **Choose and map at least six Study Areas** from among the Greenfield Sites with a view to minimizing public costs and environmental impacts.

2) **Deliverables:**

- ▶ **Re-calibrated and updated transportation model** representing the current population and employment of the region and including the current major roadway network.
- ▶ **Allocated QRSII traffic modeling data** for all zones affected by each Greenfield Site, under each of the six assumptions set forth in Table 1.
- ▶ **Opportunities & Constraints Report** describing and evaluating each of the ten Greenfield Sites, identifying population/cost thresholds, and estimating the threshold costs in terms of piped services, treatment plants, roads and transit systems. Major environmental assets and constraints should also be noted for each Greenfield Site.
- ▶ **Study Area Selection Report** delineating at least six study areas drawn from the ten greenfield sites, based on the findings of the Opportunities & Constraints Report and in consultation with HRM staff
- ▶ **Study Area Maps** showing 10-metre contour intervals, shorelines, water features, wetlands, forested areas, major rock outcrops, roads, railways, major wearpaths, buildings, parks and public land holdings.

b) **Step Two: Land Use and Transportation Concepts**

1) **Objectives:**

- i) **Consult stakeholders (land owners) for the six or more Study Areas** in accordance with the draft Capital Cost Contribution Policy.
- ii) **Prepare basic land use and transportation concept maps for each of the six or more Study Areas.** A separate concept should be prepared for each of the two density/modal split scenarios set forth in Table 1 above. The concepts should reflect the above opportunities and constraints, while bearing in mind the results of the stakeholder consultation.

2) **Deliverables:**

- ▶ **Stakeholder meeting** for each of the six or more selected Study Areas
- ▶ **Concept Report including high level concept land use maps** for each of the six or more

Study Areas. This must indicate basic land uses, open space, transportation routes/modes and basic inter-relationships with existing communities and infrastructure. The consultants will portray conceptual land use patterns outlining a reasonable approach to development for each study area as defined by each of the Development Assumptions set forth in Table 1. Overall residential and commercial densities in each proposed neighbourhood of the Study Area shall be indicated in units per acre, with no requirement to show individual lots.

**c) Step Three: Servicing Analysis**

**1) Objectives:**

- i) Develop recommendations and costs for each of the six or more study areas** with respect to existing, proposed and possible future developments of the trunk sewer and water systems including:
  - ▶ **areas capable of being serviced** from the present systems, or expansion of the present systems, with emphasis on trunk needs, preferred locations and integration with the other elements of the system
  - ▶ **feasibility of servicing options for areas that are presently unserviceable** by the present systems
  - ▶ **specific conclusions** on trunk sewer needs (storm and wastewater) and wastewater treatment needs
  - ▶ **preparing and utilizing hydraulic network computer models** (in consultation with the Halifax Regional Water Commission) to assess/determine the water system infrastructure that is required to service the Study Areas
- ii) Study and state conclusions on the configuration and costs of existing, proposed and possible future transportation systems** for each Study Area and each Costing Assumption, including but not limited to:
  - ▶ **allocation of projected traffic** using QRSII model
  - ▶ **road network requirements**, including provincial highways, using the QRSII model and estimated demands in the study area plus traffic generated outside the study area, including traffic likely to be induced by any network improvements
  - ▶ **location of new elements for road network components**, including provincial highways, taking into account the topography and environmental sensitivity of the area
  - ▶ **location of serviceable connections to all 100 series highways** in consultation with the Nova Scotia department of Highways and HRM staff in the context of the

road network needs for the area

- ▶ **estimated relative impact on parking demand** in the downtown and at park-and-ride transit terminals
- ▶ **transit options** that show potential locations of main transit corridors, major stops and feeder routes. These options should include estimates of capacities, levels of service and integration of transit services into the overall transportation strategy
- ▶ **order-of-magnitude estimate of reductions in roadway and parking needs** (including downtown parking demand) attributable to reducing automobile modal split from 75% to 60% of peak-hour trips

iii) **Comment on the appropriateness of HRM design guidelines and policies** for planning, transportation, parking, environmental, parkland and engineering for each Study Area.

## 2) Deliverables:

- ▶ Servicing Report identifying service system concepts, designs and current-dollar costs for each Study Area including cost sensitivity analysis based on each of the six Costing Assumptions defined in Table 1. It is important for HRM to understand which of these patterns produces the least cost concept for development. The cost of providing "hard" services must be determined by analyzing the infrastructure requirements for development of each study area. Cost estimates are required to be in the category of ( +/- ) 20 percent and expressed in current dollars. Hard services include water transmission and distribution, sanitary sewage collection and treatment, transportation systems (including non-automobile modes and provincial highways), and storm water management. Hard service costs will include initial capital costs and periodic rehabilitation costs. HRM requires a break-out of the oversizing cost component for each servicing type. Infrastructure requirements include both oversized components of the "trunk" or "collector" systems within the area, as well as new or upgraded requirements external to the study area. The report will define the servicing element(s) which form the most significant constraint to future development for each Study Area.
- ▶ **Maps showing the general locations of potential new servicing elements** such as sewer lines, water lines, transit routes, transit terminals and roadways using 1:1000 scale.
- ▶ **Digital copy of hydraulic network computer model, modeling results and applicable summary report(s)** for the water system, to be provided to HRM and the Halifax Regional Water Commission.
- ▶ **Capital Cost Estimate Spreadsheet expressed in current dollars**, in the category of (+/-) 20 per cent, with supporting documentation. Capital costs must include, as a separately itemized amount, the cost of anticipated periodic rehabilitation. Costs for provincial highways must be included but tabulated separately from costs for municipal roadways.
- ▶ **Appendix showing order-of-magnitude estimates of the relative impact on the municipal**

**operating budget** among the development assumptions and study area locations. Operating costs will be estimated on a comparative basis, including on-going maintenance. This information will provide input to a separate study which will compare operating costs in more detail among alternative development scenarios.

- ▶ **Appendix outlining implications for non-municipal utilities** such as electricity and gas supply, in terms of land requirements for trunk routes, major capital cost and maintenance thresholds, and applicable fees.
- ▶ **Appendix outlining the impact on "soft" services** such as regional parks and trails, recreation facilities, schools, medical facilities, libraries, garbage collection, police and fire protection, estimated on a comparative basis in terms of capital and operating requirements.

**d) Step Four: Capital Cost Contribution Comparison:**

**1) Objectives:**

HRM's proposed Capital Cost Contribution (CCC) program has been designed to identify and capture costs of new infrastructure (both on and off-site) necessary to provide reliable service to a proposed area.

- i) **Prepare comparative Capital Cost Contribution calculations** for each Study Area, following the attached HRM CCC Best Practices Guide indicated as Attachment II . Calculation of the actual charges for levying purposes will require more detailed analysis beyond the scope of this study.
- ii) **Conduct a sensitivity analysis** on the impact on the CCC charge for each Study Area, based on the six Costing Assumptions in Table 1. The purpose is to provide comparative calculations indicating relative differences between CCC charges in each study area under each set of assumptions.
- iii) **Prepare preliminary high-level maps** integrating land use, service schematics and phases.

**2) Deliverables:**

- ▶ **Capital Cost Contribution Report, including a detailed spreadsheet**, identifying comparative costs and relative changes to charge rates over time with respect to each of the Costing Assumptions in Table 1 for each of the Study Areas.
- ▶ **Preliminary high-level maps** integrating land use, service schematics and phases.

**e) Meetings and Reports**

**1) Meetings:**

- ▶ The Consultant shall meet with HRM planning, engineering, transit and parkland planning staff as required to resolve locations and boundaries of Greenfield Sites, Study Areas, conservation areas, regional parks, transportation elements, developable lands, recreation needs and other assumptions. The Consultant shall also meet with designated HRM staff at the completion of each of the project steps, prior to commencing work on the subsequent step.

**2) Maps:**

- ▶ must be delivered to HRM in an electronic format compatible with Arc View/ Geographic Information Systems software currently used by HRM.
- ▶ must be provided in two presentation-quality colour printed copies.

**3) Spreadsheets:**

- ▶ must be delivered to HRM in an electronic format using Lotus 1-2-3 97 software currently used by HRM.
- ▶ must be provided in ten printed copies

**4) Reports:**

- ▶ must be delivered to HRM in an electronic format using WordPerfect 8.0 software.
- ▶ must be provided in ten printed copies including colour report-sized maps