

REGION OF OTTAWA-CARLETON  
RÉGION D'OTTAWA-CARLETON

REPORT  
RAPPORT

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Our File/N/Réf.  
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DATE 04 February 1999

TO/DEST. Co-ordinator  
Planning and Environment Committee

FROM/EXP. Director, Engineering Division  
Environment and Transportation Department

SUBJECT/OBJET **ZONE 2C ELEVATED WATER STORAGE TANK**  
**ENVIRONMENTAL ASSESSMENT**

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### **DEPARTMENTAL RECOMMENDATION**

**That Planning and Environment Committee recommend that Council confirm the preferred location for the new Zone 2C Elevated Water Storage Tank as outlined in the recently completed Environmental Screening Report dated January 1999, that being, Site 11B located west of Conroy Road and immediately east of the Region's snow disposal facility located at Conroy Road and Thurston Drive.**

### **BACKGROUND**

The Alta Vista elevated storage tank currently provides balancing storage and pressure modulation to customers in Zone 2C in the Region of Ottawa-Carleton's central water supply system.

In 1992, the Region undertook a cursory study of the condition of the tank and determined that the tank required recoating and that more extensive rehabilitation would be required by approximately 1998. To better assess the amount of deterioration in the existing tank and the rehabilitation required, a detailed inspection of the 46 year old Alta Vista tank was undertaken in 1997. The evaluation concluded that the tank was badly corroded and nearing the end of its service life. In addition, the cost to rehabilitate the tank was high and the remaining service life would be moderate in comparison to the cost and service life of a new tank. On that basis, it was recommended that the Region consider replacing the existing elevated storage tank with another elevated storage tank.

The Region's 1997 Water Master Plan was prepared based upon the service provided by the Alta Vista Elevated Tank.

On 16 June 1998, Corporate Services and Economic Development Committee approved the appointment of R.V. Anderson Associates Limited, Ottawa to undertake the environmental assessment studies for the Alta Vista Tank Replacement. The purpose of the study was to prepare an assessment of alternatives and the recommendation of the best alternative for a Zone 2C elevated tank taking into account the recent evaluation of the existing Alta Vista Tank. This assessment followed the Municipal Engineers Association Class EA process for water and wastewater infrastructure and proceeded as a Schedule 'B' activity.

## DISCUSSION

A two-stage evaluation approach was used for the Zone 2C Elevated Storage Tank Study. The first set of criteria were used to identify sites that could meet the fundamental requirements of the project, and screened out sites that did not warrant further investigation. Four key criteria were used to identify potential tank sites:

- Land equal to or greater than 90 metres elevation;

To maintain system pressures equal or greater to 275 kPa, the top water level in the tank should be approximately 131 metres above sea level. Sites were sought with an elevation of 90 metres above sea level since construction costs begin to escalate significantly when a tank approaches 50 meters in height.

- Vacant parcels with dimensions equal to or greater than 100 metres by 100 metres;

While the new tank itself will be approximately 30 metres in diameter, a larger site area is needed to allow for construction and maintenance activities.

- Land within 1.5 kilometres of existing watermains 600 mm in diameter or greater;

The further the tank is from a major watermain, the greater the infrastructure costs to connect it to the existing system. This cost can increase the total project value significantly. Furthermore, tanks are best if located near the area of greatest demand. For both these reasons, sites beyond a 1.5 kilometre radius of major mains were not considered.

- All Regionally-owned properties within the study area.

Using the above criteria, twelve new possible tank sites were identified. The locations of these various sites are shown on Figure 1 (attached).

The second set of criteria were used to further evaluate the relative merits of the twelve new potential tank sites as well as the existing site. The detailed criteria were taken and modified somewhat from the 1997 RMO *Planning & Environmental Assessment Summary Report* prepared for the Regional Water, Wastewater, and Transportation Master Plans, and the Regional Official Plan. The modifications to the detailed criteria were required because not all of the master planning criteria were applicable or appropriate, because of the much reduced scale and more finite scope of this project.

The evaluation criteria and their respective weightings used in this study included the Natural Environment (15%), Community (55%) and Economic (30%). The weightings reflect the high visibility of storage tanks and the difficulty in situating this type of infrastructure in any established community.

Each site was evaluated against the other sites using the criteria listed above to produce a relative Low, Medium, and High Preference rating for each site and each criteria. This method of comparison allows for a relative comparison of the different sites. Once the evaluation was completed, each L, M, and H was converted to a 1, 2, 3 respectively, and multiplied by the weighting of each of the evaluation criteria. On this basis, sites with higher scores are considered to be preferred. The maximum possible score was 300.

The sites rated as follows:

Site	1	2	3	4	5	6	7	8	9	10	11A	11B	exist
<b>Weighted Score</b>	160	210	240	145	150	180	190	115	155	190	205	275	190

## CONSULTATION

A public consultation strategy was developed consisting of two components.

Firstly, the draft detailed evaluation criteria were circulated to agencies, community associations and made available to the general public for comment prior to identification of potential sites, so that an unbiased means of comparing sites would result. Comments were received and were subsequently incorporated into the criteria.

Secondly, after the individual sites were assessed and a relative order of preference had been determined, a series of three open houses were held to solicit public input on the evaluation results.

The majority of comments received from the public supported the installation of an elevated tank next to the Region's snow disposal facility on Conroy Road. Strong opposition to the Nos. 2 and 3 Sites was expressed by many Alta Vista residents and their Community Association. However, residents from the Hunt Club/Greenboro area and their Community Association expressed concern regarding the potential visual impacts of an elevated tank in close proximity to Conroy Road (Site 11B), as this is a key entrance to their community. They indicated a preference to a previously unconsidered site located immediately west of the snow disposal facility. This site, identified as Site 11C, was subsequently evaluated and received 250 points. A tank at this location would reduce the visual impact for motorists driving along Conroy Road but would increase the visual impact to the existing Fairlea residential community located to the northwest.

Staff were informed by members of the Fairlea Community Association that the community would be willing to accept a tank at the 11C location, provided that the lands surplus to the snow disposal facility were retained as greenspace.

The Region presently owns approximately 25 ha. of land at 3100 Conroy Road (also known as the Conroy Woods). The Region's Conroy Road Snow Disposal Facility occupies approximately 9 ha. of this area. The remaining lands, presently zoned light industrial, are considered as surplus to the Region and have received Draft Approval of Subdivision as of 06 October 1996 (revised to include additional conditions relating to the protection of specific types of vegetation and groundwater flow to the Conroy Swamp to settle the appeal to the Ontario Municipal Board filed against Zoning By-law 77-93).

The Conroy Woods were included in the recently completed City of Ottawa's Natural & Open Spaces Study (NOSS), NOSS ID No. 3403. The following excerpts were taken from that study:

*"The Conroy Woods scored moderate in the environmental values evaluation, moderate in the social value evaluation, low (zero) in the recreational linkage evaluation and low in the feasibility evaluation. This natural area is a valuable asset within the urban community."*

*"The feasibility of maintaining the Conroy Woods area was ranked low. The area is in public ownership, however, the Regional Municipality of Ottawa-Carleton has declared the lands surplus to their needs. There is a draft Plan of Subdivision Approval for light industrial development. Within the conditions of subdivision approval, it states that protection of significant natural features as well as maintenance of groundwater flows to Conroy Swamp must be respected."*

## CONCLUSION

After a thorough evaluation of the service requirements and potential visual, environmental and economic impacts, staff recommend that the new Zone 2C elevated water storage tank be located at Site 11B, west of Conroy Road and immediately east of the Region's snow disposal facility located at Conroy Road and Thurston Drive. Staff do not recommend the construction of an elevated tank on Site 11C as it will require an additional capital cost of approximately \$500,000 for the construction of a watermain and gravel access road from Conroy Road to the site and will result in lost revenue from the potential sale of these lands. In addition, a tank at Site 11C will increase the visual impacts to the Fairlea Community and will only be supported by them if a commitment is made by the Region to retain this property as greenspace.

The next step in the environmental assessment process is the advertisement of the Notice of Completion. Should no bump-up requests be received within the 30 day notice period, the project will be deemed approved and will proceed to the design and construction phases.

## FINANCIAL IMPLICATIONS

The 1999 Draft Capital Budget had identified a total authority of \$3,500,000 for this project.

*Approved by  
J. Miller, P.Eng.*

ZAG/jw

# Zone 2C Elevated Storage Reservoir Environmental Assessment

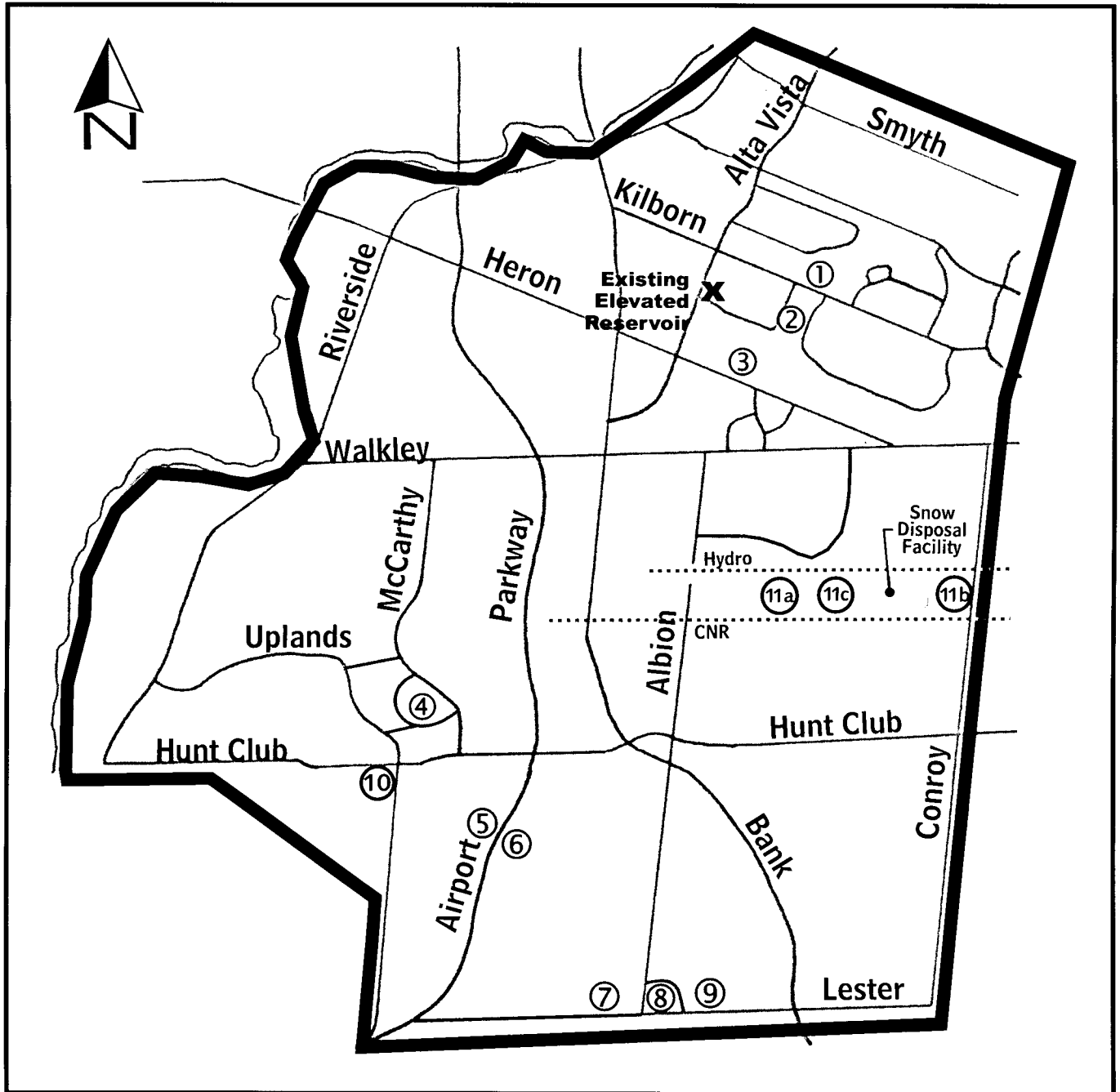


Figure 1