REGIONAL MUNICIPALITY OF OTTAWA-CARLETON
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf.
Your File/V/Réf.

DATE 19 June 1998

TO/DEST. Co-ordinator
Planning and Environment Committee

FROM/EXP. Environment and Transportation Commissioner

SUBJECT/OBJET **HILLSIDE GARDENS COMMUNAL WELL SYSTEM**

DEPARTMENTAL RECOMMENDATION

That the Planning and Environment Committee and Council approve:

1. **The reimbursement of the feedermain component of the original fire supply water works for Manotick to the original benefiting owners, as listed in Schedule "A" of Part 4.3 of the Regional Regulatory Code, in the amount of $128,615;**

2. **The revision of the dwelling unit capacities for Manotick in Table 14 of Section 10.3.7 of the Regional Official Plan to 730 dwelling units and 34,600 square metres of non-residential floor space;**

3. **The amendment of Part 4.3 of the Regional Regulatory Code to include a charge of $300 per residential unit for future connections to the Manotick Feedermain.**

BACKGROUND

The Hillside Gardens Subdivision is located in the northern part of Long Island in Manotick and is comprised of approximately 213 homes. The area is serviced by a communal well system, constructed in 1961, consisting of two production wells. Well No. 1 pumps to a ground surface reservoir, while Well No. 3 pumps directly to the distribution system (see Figure 1). A third well, Well No. 2, was abandoned in 1992 as a result of low yield. Although this system is located in Manotick, it is presently not connected to the Manotick Feedermain (see Figure 2).

Over the past several years production from Well No. 1 has been unreliable and in 1994 an effort was made to rehabilitate it in order to improve its yield. After rehabilitation the long-term yield of the well increased to 180 litres per minute (L/min.), up from 130 L/min. Since that time, the yield from this well has been constantly decreasing and is now estimated at approximately 90 L/min.

In the past Well No. 1 was the primary source of supply and discharged directly into the reservoir. Well No. 3 was used during peak demand periods and provided back up to the system. Presently, Well No. 3 is the primary source, providing peak domestic flows and filling the reservoir during low demand periods, since the yield from Well No. 1 is on the decline. Operating the system under these conditions is more onerous and costly as the water from the reservoir has to be pumped out every two to three days to keep the water fresh.

The water quality of Well No. 3 presently meets all health related parameters as listed in the Ontario Drinking Water Objectives. However, iron has been a problem in that it precipitates in the distribution mains and during high demand periods numerous complaints of stained plumbing fixtures and laundry are received from area residents.

In 1996, Robinson Consultants was engaged by Rideau Township to undertake the Manotick Servicing Options Study. This study was initiated to determine appropriate options for the delivery of potable water and sanitary service for the entire Village of Manotick. A secondary planning study was also initiated to consider future land use and development scenarios. As an addition to the Rideau Township Study, Regional staff requested Robinson Consultants to review the options for the servicing of the Hillside Gardens Community. The recommended alternative identified in the Environmental Screening Report is a connection to the Manotick Feedermain (see Figure 2).

Two public meetings were held at the Manotick Arena on 26 September 1996 and on 01 April 1997. The purpose of these meetings was to seek public input on the possible alternatives for the Servicing of Manotick, as well as the possible river crossings for the connection of the Hillside Gardens Communal Well System to the Manotick Feedermain. No objections to the river crossings were received.

DISCUSSION

In December 1991, The Ministry of the Environment (MOE) detected groundwater contamination in a number of wells within the core area of the Village of Manotick. Upon detailed investigation, the MOE delineated the area of contamination in the core area of the Village. Staff from the MOE, RMOC and Rideau Township met and determined that the most reliable solution to the groundwater contamination problem was the extension of a water feedermain from Barrhaven.

At its meeting of 24 June 1992, Regional Council approved the agreement in principle of a partnership among the MOE, Rideau Township and the Region to rectify the water problem in Manotick. Funding was to be provided by the MOE for all aspects of the project excluding fire supply. The Region was to supply project management services. It was the intention of the MOE to supply Manotick residents with domestic supply only. At the request and cost of the residents fire capacity was added to the project.

On 14 July 1993, Regional Council approved the enactment of a by-law (148 of 1993) to provide for the recovery of the cost of fire supply service through a charge to benefiting ratepayers with the following provision:

"That it is the intent of Regional Council that, should extra capacity be found in the fire supply water works to permit them to be extended, amounts will be recovered from the additional lands toward the cost of the original fire supply water works and be reimbursed to the original benefiting owners."

The total project cost for the Manotick feedermain was $5,034,561.50, of which $538,587.13 was assessed to Manotick residents for fire supply. This fire supply amount consisted of two components, the feedermain oversizing component and the distribution/hydrants component, at a cost of $254,240 and $284,347 respectively. The latter is totally attributable to the presently serviced Manotick residents while the first would benefit additional residents, e.g., Hillside Gardens if connected to the feedermain. Supported by the analysis and design criteria at the time, the Manotick feedermain was increased in size from a 203 mm watermain to a 406 mm watermain to obtain required fire flows. Besides the public safety issue, the benefits of fire supply can be the significant reduction in fire insurance premiums.

Staff are aware of two commercial property owners presently serviced from the Manotick feedermain where the annual benefit that they receive from lower insurance rates is greater than the annual cost incurred for the repayment of the fire supply costs.

Based upon operating experience over the past five years, a hydraulic analysis was performed by staff and it has been confirmed that, based on actual demands being experienced in Manotick, the existing feedermain could supply up to a total of 730 residential units and 34,600 square metres of non-residential floor space without negatively impacting the domestic and fire supply to Manotick. This was arrived at by adding the capacities shown in Table 14 of Section 10.3.7 of the Regional Official Plan of 300 dwelling units and 34,600 square metres of non-residential floor space (420 equivalent residential dwelling units), to the surplus capacity as outlined in Appendix "A."

In keeping within the intent of by-law 148 of 1993, should the Region wish to connect the Hillside Gardens distribution system to this Manotick feedermain, then a sharing of the $254,240 feedermain component is in order and a reimbursement to Manotick residents of $128,615 would be required. This amount would be reimbursed based upon percentages as listed in Schedule "A" of Part 4.3 of the Regional Regulatory Code. This would allow for the connection of the 213 units in Hillside, and a potential recovery of approximately $65,000 by the Region from individuals who may wish to connect in the future.

It should be pointed out, however, that the Hillside Gardens Subdivision is a serviced community per the definition of the Regional Official Plan, i.e., it is serviced with a Regional Communal Water System. As with all serviced communities in Ottawa-Carleton, replacement and/or rehabilitation of infrastructure is a financial responsibility of the RMOC e.g., watermain replacement/rehabilitation in a municipal road is funded by the Region. Consequently, the

$128,615 attributable to the Hillside Gardens Subdivision and future development that must be refunded to the existing Manotick residents should be funded by the RMOC. Recovery of the future development portion could be recovered based upon a per unit charge of $300 per unit.

In dealing with this issue staff have reviewed Regional Policy for communal water systems. The communal water systems for Vars and Carp were funded from three sources, MOE grants, resident contribution, and future development. The approach being recommended by staff is consistent with this policy in that the contribution being made by the Region is required to rectify a problem in Hillside Gardens where a water system presently exists. This is not a contribution towards the establishment of a new water system.

EXPENDITURE JUSTIFICATION

The 1997 annual operating and maintenance costs for the Hillside Gardens Communal Water System was approximately $50,000. Since the majority of these costs were related to the operation of the wells/pumping station and will no longer be required, a payback of the reimbursement amount to the Manotick residents is expected within three to four years. Should developers wish to connect in the near future, the payback period could be reduced by half.

Numerous water quality complaints have been received from Hillside residents and efforts to rehabilitate Well No. 1 have been unsuccessful. Hence, implementation of the Hillside Garden connection to the Manotick feedermain would enhance water quality and reliability to the Hillside Gardens Community.

CONSULTATION

This project falls under the Schedule "B" category of the Class Environmental Assessment process as defined through the *Environmental Assessment Act*. In this case, the process provides for two mandatory public contact points, including the Notice of Completion which gives the opportunity for "bump-up" requests to be made to the Minister of the Environment. The Environmental Assessment for this project is nearing completion and a notice of completion will be advertised in the near future. Consultation was carried in conjunction with the open houses held by the Township of Rideau for the Manotick Servicing Options Study. Staff recently met with the Manotick On-Tap representatives who expressed their support for this proposal. In addition, staff will notify affected residents prior to the commencement of construction.

CONFORMITY WITH THE OFFICIAL PLAN

Since the Hillside Gardens Subdivision is presently serviced with water, an Official Plan amendment is not required for the connection to the Manotick Feedermain. In addition, Table 14 of Section 10.3.7 of the Regional Official Plan can be amended without an Official Plan amendment provided that "additional capacity can be demonstrated."

FINANCIAL STATEMENT

	$
Approved Budget To Date	730,000
Total Paid and Committed	(25,415)
Balance Available	704,585
THIS REQUEST	(128,615)
Balance Remaining	575,970

Funds have been provided in the 1998 Capital Budget, Account No. 922-41761, Hillside Gardens System Servicing Assessment.

Approved by A. Proulx on behalf of
M.J.E. Sheflin, P.Eng.

ZAG/jw

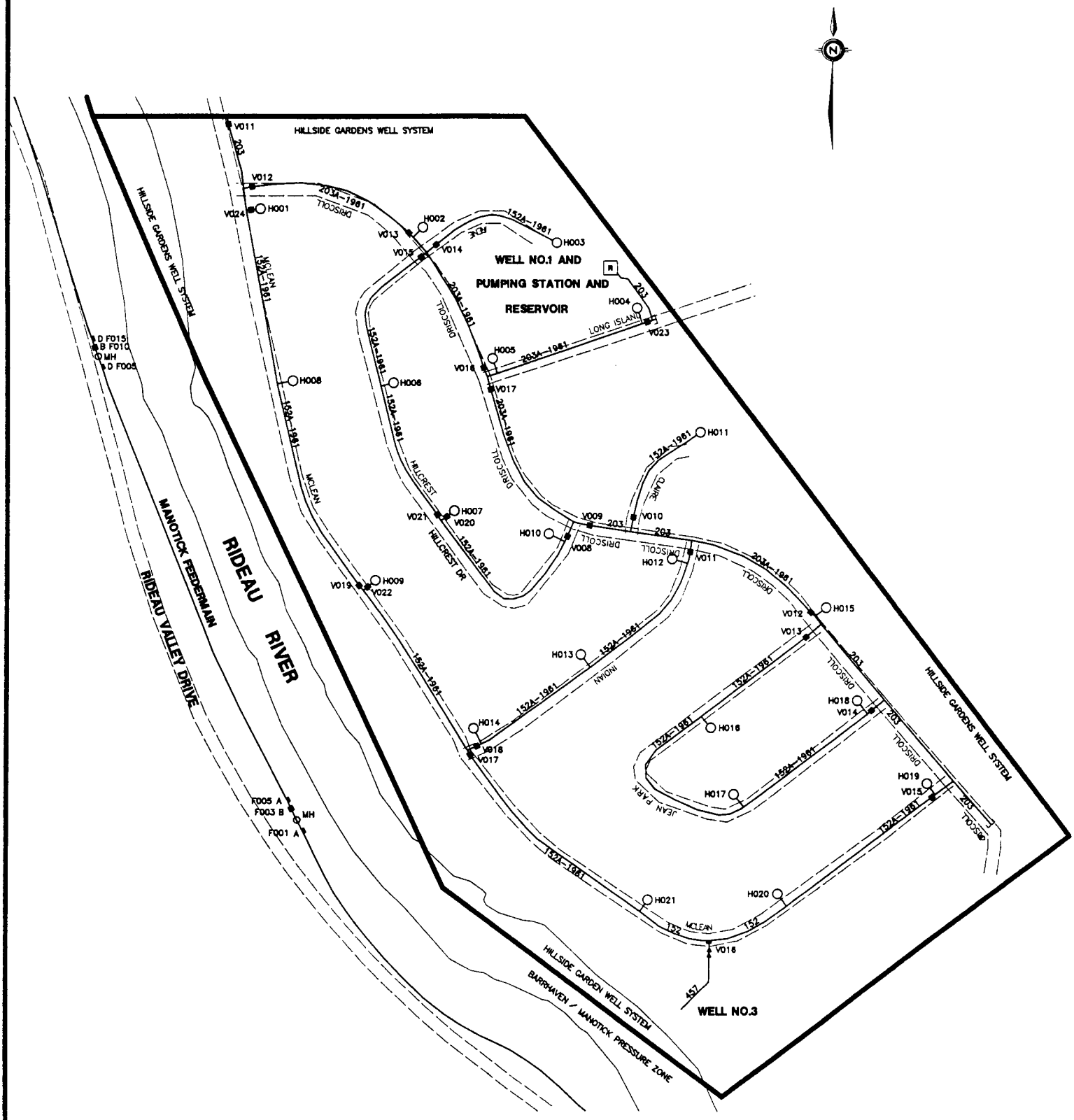
FINANCE DEPARTMENT COMMENT

Funds are available as indicated.

Approved by T. Fedec
on behalf of the Finance Commissioner

APPENDIX A

Design Average Day Flow for the Manotick Feedermain.	562,000 litres per day
Measured Average Day Flow for the Manotick Feedermain	160,000 litres per day
Surplus Average Day Capacity (existing)	402,000 litres per day
Allowance for future Village Court Development	65,000 litres per day
Surplus Average Day Capacity (future)	**337,000 litres per day**
Hillside Gardens Average Day Demand (213 units)	170,000 litres per day
Equivalent Residential Units (Based on the Average Day flows presently being experienced Hillside Gardens (213 units))	430
Existing Residential Capacity for Manotick per Table 14 of section 10.3.7 of the Regional Official Plan	300
Existing Equivalent Non-Residential Capacity for Manotick per Table 14 of section 10.3.7 of the Regional Official Plan (Based upon 34,600 square metres of non-residential floor space)	120
Total Available Capacity in Manotick Feedermain	**850 units**


HILLSIDE GARDENS WELL SYSTEM
WELL NO.1 AND
PUMPING STATION AND
RESERVOIR
WELL NO.3
RIDEAU RIVER
MANOTICK FEDERMAN
RIDEAU VALLEY DRIVE
HILLSIDE GARDENS WELL SYSTEM
HILLSIDE GARDEN WELL SYSTEM
BARRHAVEN / MANOTICK PRESSURE ZONE
DRISCOLL
MCLEAN
HILLCREST
HILLCREST DR
LONG ISLAND
OLMIC
INDIAN
JEAN PARK
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F005 A
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152A-1981
203A-1981
152
457

FIGURE - 1

Manotick and Hillside Gardens Communities Water Systems

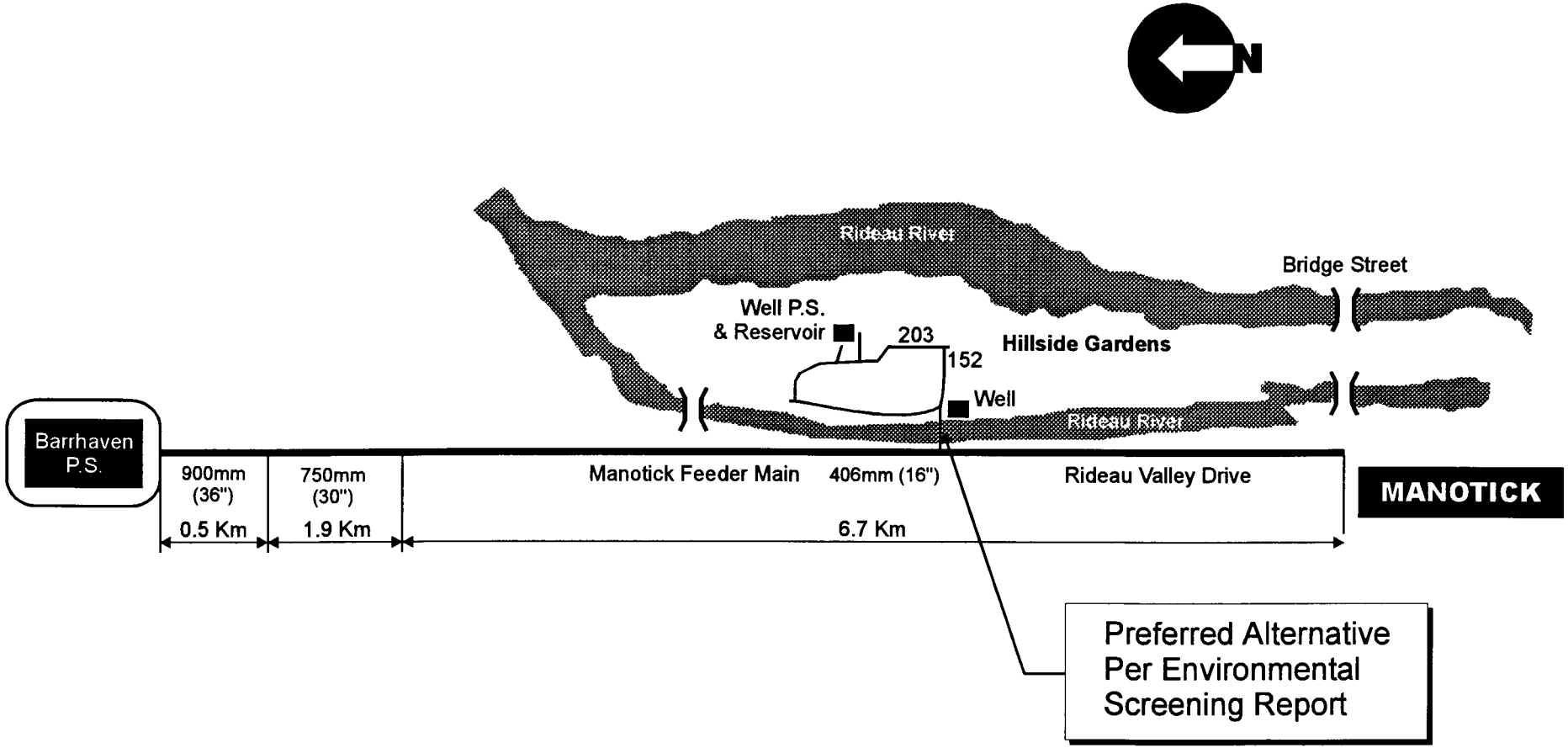

Figure - 2

Not to Scale