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

REPORT
RAPPORT

Our File/N/Réf. 03 07-97-0119
Your File/V/Réf.

DATE 16 June 1997

TO/DEST. Chair and Members of the Planning and Environment Committee

FROM/EXP. Co-ordinator, Planning and Environment Committee

SUBJECT/OBJET **MUNSTER HAMLET CLASS ENVIRONMENTAL ASSESSMENT**

REPORT RECOMMENDATION

That the Planning and Environment Committee receive this report for information.

BACKGROUND

At the 10 June 1997 meeting of Planning and Environment Committee, Councillor Alex Cullen requested that the above-noted item, listed as "Information Previously Distributed" be brought back to the Committee's next regular meeting for discussion.

Approved by
Dawn Whelan

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

MEMORANDUM
NOTE DE SERVICE

Our File/N/Réf. **14** 19-92-0027-V
Your File/V/Réf.

DATE 11 April 1997

TO/DEST. The Chair and Members of Council

FROM/EXP. Director Engineering Division
Environment and Transportation Department

SUBJECT/OBJET **MUNSTER HAMLET**
CLASS ENVIRONMENTAL ASSESSMENT

INTRODUCTION

In fulfilment of our commitment to report to Planning and Environment Committee upon completion of the Class Environmental Assessment process, this report, prepared for information purposes, will outline the Environmental Study Report highlights as well as the process followed to conform with the Class Environmental Assessment requirements.

BACKGROUND

The sewage collection system for Munster Hamlet is owned and operated by the Township of Goulbourn. The lagoons and adjoining spray-irrigation system for effluent disposal are owned and operated by the Regional Municipality of Ottawa-Carleton.

Over the past several years, the Ministry of Environment and Energy has documented through several compliance inspection reports, that the facilities do not conform with the Certificate of Approval control documents mainly as a result of capacity limitations.

The Regional Municipality of Ottawa-Carleton retained the services of Totten Sims Hubicki Associates to complete an Environmental Assessment on upgrading the sewage treatment facilities serving Munster Hamlet. This Environmental Study Report consolidates a compendium of technical studies, investigations and stakeholder consultations, following the Class Environmental Assessment Act for Municipal Water and Wastewater Projects.

PROBLEM DESCRIPTION

A detailed evaluation of the existing sewage treatment facilities has been conducted. Inadequacies which have been identified with the current facilities are threefold: insufficient hydraulic capacity in the lagoons compounded by high historical flows, excessive leaking through the lagoon cells and an undersized spray irrigation field. It has been documented that the lagoon is seasonally operated with an insufficient freeboard.

DEVELOPING A SOLUTION

In order to develop a solution for Munster Hamlet, the study team prepared a list of all of the possible options for correcting the problems being experienced. The attached Annex A, Table 5.1 (from ESR) describes all of the options considered and comments on their viability. It was decided to further evaluate options 3, 4, 5, 6, 7 and 9. In order to complete a thorough evaluation it was necessary to develop a list of factors and subfactors and to assign a weight to each of these. This assignment of weights for factor categories was based on a survey of residents in Munster Hamlet and on input from the study team members. Both groups were asked to indicate the priority ranking for each of the factors. The combined results of the Public and Study Team weights are presented in Annex B, Figure 5.2 (from ESR).

Each of the viable options was then ranked by the Study Team. A detailed sensitivity analysis was then conducted to ensure the integrity of the evaluation. The ranking of the proposed options are listed below:

Options	**Total Score**
Spray Irrigation	67.37
Constructed Wetland	64.34
Do Nothing	60.81
Trucking	59.00
Snow Making	58.38
Solar Aquatic	55.37

The results of the evaluation indicate the preferred waste treatment solution is to repair and expand the existing lagoons and spray irrigation area. Selection of the preferred alternative is not sensitive to changes in the ultimate capacity of the sewage treatment facility. The ultimate capacity of the sewage treatment facilities in Munster Hamlet will be based on monitored average daily flows including the resulting decrease expected as a result of the flow reduction measures implemented in the last two years.

CHRONOLOGICAL SUMMARY

The Environmental Study Report was completed on 20 January 1996. The Notice of Completion was published on 7 February 1996 with a copy of the Notice being hand delivered to each of the directly affected homeowners.

Over the next two months several letters of concern were received by the Project Manager. As well, several requests for a 'Bump-up' to an individual Environmental Assessment were received by the Minister of the Environment and Energy from local residents unhappy with the recommendation of the report. They also indicated in their correspondence their concern that the required process had not been followed in this case.

On 23 April 1996, at the request of the Township of Goulbourn, RMOC officials attended a public meeting at which the members of the community put forward a list of concerns they had with the process and its result. After a review of the concerns it was decided to request a four month extension to the review period in order that we might address the concerns raised in amore detailed manner. This request was made on 29 April 1996 and was granted by the M.O.E.E.

Over the next eight weeks a report was prepared to address each of the issues and concerns raised by the residents at the 23 April 1996 meeting entitled 'A Review of Issues and Concerns.' This report was distributed to all of the affected residents prior to a fourth public information session held on 26 June 1996. A companion report was also prepared, outlining the costs associated with the option of pumping the sewage to Richmond entitled 'Cost Analysis to Connect Munster Hamlet Into Regional Sewage System.' This was an option that was not evaluated in the Environmental Study Report as there was no capacity in Richmond to accept the sewage from Munster Hamlet based on the current development allowances in the Region's Official Plan. This companion report was also presented at the public information session. Based on the additional research and information contained in these reports and the absence of any evidence that the information presented was incorrect, on 2 July 1996, the M.O.E.E. was requested to resume the review of the 'Bump-up' requests. In late January of 1997 the residents and the RMOC were informed that the 'Bump-Up' requests had been denied by the Minister. In his letter to the residents, the Minister stated:

'The Regional Municipality of Ottawa-Carleton has followed the approved planning and design process outlined in the Municipal Engineers Association's Class Environmental Assessment for Municipal Water and Wastewater Projects, which included public consultation and adequate notification.'

Subsequent to this notification, an increase in the scope of Contract CC-2058 with Totten Sims Hubicki was approved by Council to allow for the detailed design of the facilities outlined in the Environmental Study Report. The first stage of the design assignment will be to confirm existing flow information, as well as to provide support to our Planning and Development Approvals Department with respect to acquiring property required to implement the preferred option. Detailed design of the preferred option is scheduled to begin in May 1997.

PUMPING TO RICHMOND

The companion report outlining the alternative costs for pumping the sewage to Richmond compared three scenarios. The first was to design a facility in Munster Hamlet that could pump all sewage as received, to Richmond, with no storage in Munster Hamlet. The detailed cost analysis for this option, based on a 25 year service period produced a present worth value of $9,955,000. The significant concerns with this option are that, development in Richmond would be frozen, an Ontario Municipal Board hearing would likely be required, an additional Class Environmental Assessment would be required an upgrades to the system downstream of the Richmond system would also be required. Costs to address all of these concerns would add significantly to the cost of this option and have not been included in this exercise.

The second option considered was to construct a pumping station designed to pump only the average daily flow to Richmond. This would require some storage capacity (lagoons) in Munster Hamlet to handle peak events, however only two lagoons would be required and there would be no requirement for spray irrigation. The present worth of this option was calculated as $11,373,000. Some of the significant concerns associated with this option are similar to the first option considered, an additional Class Environmental Assessment and an Ontario Municipal Board Hearing would be required as growth in Richmond would be significantly affected. The cost is also significantly higher than the other options considered.

The third alternative reviewed is the preferred alternative described in the Environmental Study Report. This option of repairing and expanding the existing lagoon and spray irrigation facilities has a present worth value of $7,312,000. This option will not in any way affect the growth potential in Richmond. In fact, we have included in this analysis the cost of adding a Booster Station in Richmond to allow for the full projected growth anticipated until the year 2021. There would be no Ontario Municipal Board Hearing required and no further Environmental Assessments would be required.

RECOMMENDED SOLUTION

After a thorough and detailed review of all of the options presented, it appears conclusive that the option of repairing and expanding the existing lagoons and spray irrigation fields is the preferred method for addressing the deficiencies in the Munster Hamlet Sewage Treatment Facility. Copies of the 'Environmental Study Report', the 'Issues and Concerns' report, the 'Cost Analysis to Connect Munster Hamlet into Regional Sewage System' report and the M.O.E.E. response to 'Bump-Up' requests are available.

A properly designed and operated system of wastewater treatment lagoons and spray irrigation is a proven method of handling and treating municipal sewage in an environmentally responsible manner and meets all the requirements of the Ontario Water Resources Act.

While pumping sewage to Richmond (and therefore treatment at the R.O. Pickard Environmental Centre) is also a practical and responsible manner of dealing with the sewage generated in Munster Hamlet, it is also significantly more expensive than the preferred option. Given the fact that both methods are environmentally acceptable and equally as effective, the fiscally responsible choice would be the option with the least cost to the taxpayers of Ottawa-Carleton. This is clearly the option of repairing and expanding the existing lagoons and spray irrigation site.

SCHEDULING

Scheduling for this project will be highly dependent on several activities. These include, property negotiations with existing landowners, obtaining necessary design reviews from the M.O.E.E. and other governing bodies, as well as weather conditions during key phases of the construction period. However, we anticipate that we will be able to implement the modifications by the end of 1998.

Approved by
J. Miller, P.Eng.

SF/jb

cc: M.J. Woollam, Regional Clerk
M.J.E. Sheflin, Environment and Transportation Commissioner
J. Yelle-Weatherall, Director Finance and Operations Support Division
R. Dolan, Director Information and Public Affairs

ANNEX A

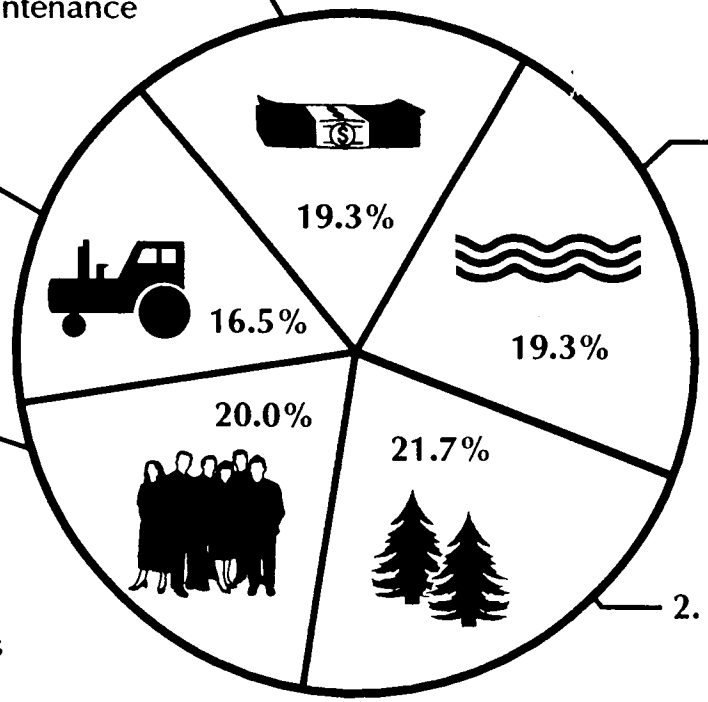
Table 5.1
Environmental Study Alternatives

Option	Description	Comments
1	Conveyance - pump sewage to Stittsville	No sewer capacity, this option was rejected.
2	Conveyance - pump sewage to Richmond	No sewer capacity, this option was rejected.
3	Conveyance - trucking	Evaluate
4	Repair/enlarge lagoon / expand spray irrigation area	Evaluate
5	Repair/enlarge lagoon / constructed wetland	Evaluate
6	Repair/enlarge lagoon / snow making facility	Evaluate
7	Repair/enlarge lagoon / solar aquatic system	Evaluate
8	Sewage treatment plant	Will not meet Provincial Water Quality Objectives, option rejected.
9	Do nothing (existing condition)	Evaluate to show consequences of the do nothing option.
10	Restrict community growth	Community growth is considered restricted, therefore not evaluated further.
11	Sewage flow reduction programs	Proceeding independent of the study, therefore not evaluated further.

FIGURE 5.2

ANNEX B

EVALUATION OF ALTERNATIVES
WEIGHTS OF FACTORS AND SUB-FACTORS



5. Economics (19.3%)
- Capital Cost (8.4%)
- Operation & Maintenance Cost (10.9%)

1. Wastewater Treatment (19.3%)
- Treatment Process (9.6%)
- Treatment Experience (4.2%)
- Process Operation/Complexity (5.4%)
- System Expansion (3.3%)

4. Land Use (16.5%)
- Official Plan/ Zoning By-Law Changes (7.8%)
- Agriculture Land Use Changes (8.7%)

3. Social Environment (20.0%)
- Aesthetics Impacts (2.1%)
- Construction Disruption (1.4%)
- Displacement of Livelihood (2.5%)
- Recreation Opportunities Impacts (1.5%)
- Noise/Vibration Impacts (2.9%)
- Air Quality (2.9%)
- Climatic Changes (1.5%)
- Public Health Risk Exposure (3.7%)
- Traffic Impacts (1.5%)

2. Natural Environment (21.7%)
- Aquatic Habitat (2.7%)
- Surface Water Quality (3.9%)
- Terrestrial Wildlife Habitat (3.2%)
- Construction Timing on Terrestrial Habitat (2.1%)
- Groundwater Quality Impacts (7.5%)
- Surface Ersosion Impacts (2.3%)