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Ontario Municipal Board

IN THE MATTER OF Section 17(5) of The Planning Act (R.S.O. 1970, c. 349), ✓

- and -

IN THE MATTER OF a reference to this Board by the Honourable Claude F. Bennett, Minister of Housing, on a request by the Regional Municipality of Halton, to amend the Official Plan for the former Burlington Planning Area (now in the Town of Milton) to permit a sanitary landfill site and for agricultural purposes, where feasible, at the north-west corner of Britannia Road and Tremaine Road and being composed of part of Lots 6 and 7, Concession VII, N.S., in the Town of Milton - Site "F" Minister's File OPC-2919-17(3)A ✕

- and -

IN THE MATTER OF an appeal by the Regional Municipality of Halton for an order directing an amendment to By-law 1642 of the former Town of Burlington, now the Town of Milton, to change from "Conservation" and "Agricultural" to "sanitary landfill" the permitted use of lands comprising part of Lots 6 and 7, Concession 7, N.S., formerly in the Town of Burlington, now in the Town of Milton, to permit the establishment of a sanitary landfill operation on the said lands ✓

- and -

IN THE MATTER OF Section 64 of The Ontario Municipal Board Act (R.S.O. 1970, c. 323)

- and -

IN THE MATTER OF an application by The Regional Municipality of Halton for an order approving:

- (a) the acquisition of land and the design, and construction of a sanitary landfill site for the purpose of receiving, dumping and dispensing of waste located at the northwest corner of Tremaine and Britannia Roads in the Town of Milton at an estimated cost of \$3,700,000.00 and the borrowing of money by way of temporary advances not exceeding in the aggregate such estimated cost pending the sale of debentures, and

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- (b) the borrowing of money therefor,
and the issuance of debentures in
the sum of \$3,700,000.00 for a term
of five years

C O U N S E L :

J. Edgar Sexton, Q.C. - for The Regional Municipality of Halton
Fraser Berrill
D. Perlin

Frederick E. Leitch - for The Town of Milton
Larry S. Gangbar

David Estrin - for Tremaine-Britannia Citizens Group
Robert K. Timberg and others

Rodney H. Crown - for Hama Investments Limited and Wolf
Teichman

Gerard Balciunas - for J. Zabulionis and S. Kalytis

Richard R. Arblaster - for H. Reid and others

G. J. Smith, Q.C. - for Dufferston Holdings Limited
Jack D. Winberg

Mark T. Adamson - for Josephine Peric and others

Peter K. McWilliams, Q.C.- for Bessie Smith

DECISION OF THE BOARD delivered by W. T. SHRIVES AND
A.J.L. CHAPMAN

The public hearing of these applications was commenced on the 8th day of January, 1979 in the Town of Milton and completed on the 28th day of March, 1979.

The matter under Section 17(5) of The Planning Act was referred to this Board as indicated in the style of cause by the Honourable Claude F. Bennett, Minister of Housing, because the Council of the Town of Milton failed to act on a request from the Council of the Regional Municipality of Halton to amend its Official Plan. There is also a companion application under Section 35(22) made by the Regional Municipality of Halton requesting this Board to instruct the Town of Milton to amend By-law 1642 to implement the proposed Official Plan amendment. The third application simply seeks the necessary authorization to make the capital expenditures.

The Regional Municipality of Halton requested the Town of Milton to designate certain lands in the Town, namely, part of Lots 6 and 7, Concession 7, N.S. for the purpose of establishing a landfill site on the said lands. It is an

area of some 246 acres located at the north-west corner of Britannia Road and Tremaine Road to the south of the urban area of the Town of Milton. The existing designation on the subject lands is found in the Official Plan of the former Burlington Planning Area and is known as Amendment No. 49. This document was approved by an order of the Board dated the 16th day of June, 1971 and designates the subject lands as Agriculture. (For purposes of identification, these lands will be referred to as site "F" throughout the remainder of this decision.)

The permitted land use on site "F" is contained in By-law 1642, which is a by-law of the former Town of Burlington, and shows the zoning as agriculture and conservation.

The provisions of the existing Official Plan are silent with respect to a sanitary landfill site although By-law No. 1642 provides for a "dump" as a land use, permitting it in "M2", "M3" and "M4" zones. The Region takes the position that the provisions for a sanitary landfill should be spelled out both in the Official Plan and the restricted area by-law in order that the specific use can be detailed and also that a variety of other uses cannot be allowed.

In addition to the above, there are two other planning documents which, from a planning standpoint, have an influence on site "F". The first of these is the new proposed Official Plan for the Milton Planning Area which has been approved by Council but has not as yet been approved by the Minister. The new Milton Official Plan designates site "F" as agriculture. The second document filed as Exhibit No. 76 at the hearing is the draft Official Plan for the Regional Municipality of Halton which is again a document which has Council approval but as yet has not been approved by the Minister. It is intended that this latter Official Plan will be dealt with at some length later in the decision.

Section 131(2) of The Regional Municipality of Halton Act, 1973, reads as follows:

"(2) On and after the 1st day of January, 1974, the Regional Corporation shall provide facilities for the purpose of receiving, dumping and disposing of waste, and no area municipality shall provide such facilities."

This statute, therefore, clearly places the responsibility of providing the necessary facilities for receiving the waste materials of the four area municipalities on the Region. It is the exercise of this duty which brings these applications before this Board.

In order to more clearly understand the background, it is essential that the chronology of events be outlined leading up to the present.

The process seems to have started even before the Region come into existence when in 1972 the former County of Halton commissioned the firm of James F. MacLaren Limited to carry out a solid waste management study. This study, which was sponsored by the Government of Ontario, was completed in the summer of 1974 at which time the Region had come into existence. The study was filed as Exhibits No. 27A and No. 27B at the hearing and identified some 30 potential landfill sites in the Region. It is not intended to deal with this study in this decision because the Region, in presenting its case, did not rely on it other than to identify its existence. It is interesting to note, however, that at the time Regional Government come into existence, there were six landfill sites operating in the Region and this has now been reduced to three.

In the latter part of 1974, the Provincial Government offered to fund municipalities to study their waste management problems with a view to introducing resource recovery. As a result of this offer, the Region engaged the firm of M.M. Dillon Limited to carry out a Resource Recovery Study for the Region of Halton and an interim report was filed with the Region on the 6th of February, 1976 (Exhibit No. 9). This report, as well as others, will be dealt with in detail later in the decision but the report can really be identified as the starting point of the Region's search for a landfill site.

It should be pointed out that although the early intention of the

Region was to study the matter of landfill it also looked at the subject of resource recovery and while it is acknowledged by the Region that the study of resource recovery will continue, that subject did not form a part of this hearing and will not be considered in the decision. It is quite apparent that resource recovery is a matter which is still in its infancy and while it may some day become an integral part of waste management and to some extent reduce the need for landfill sites, it is not going to solve the immediate needs of the municipality.

In February, 1975, prior to the appointment of the Dillon firm, the Region, by a resolution, established a committee composed of elected representatives and staff of the Region and four area municipalities, as well as representatives of the Ministry of the Environment. This Committee became known as the Technical Co-ordinating Committee and was given the task of directing and monitoring the study carried out by the consultants.

A resolution of the Regional Council dated April 16, 1975 also set out certain terms of reference which were to be considered by the consultants. These are as follows:

1. Establishing more than one landfill site within the Region (possibly one in the north and one in the south).
2. Establishing a site or sites for the acceptance of any dry solid waste (demolition material etc.).
3. The feasibility of using quarries, the National Sewer property and the Milton Brick yard as landfill sites.
4. Using Class III, or lower agricultural lands only on which to locate landfill sites.
5. The matter of minimizing haulage costs to the area municipalities.

6. Extending the life of the existing sites.
7. The economies in relation to the operation and capital costs of the reclamation plant and transfer station.

It was as a result of these factors that Dillon decided to divide the study into two separate phases. The first phase dealt with the report which has already been mentioned and received by the Region in February, 1976. This report dealt mainly with the selection of a landfill site. The second phase of the Report was completed sometime later and presented to the Region in July of 1976 (Exhibit No. 10) and dealt with the feasibility of a resource recovery plant.

In August, 1975, the consultant Dillon began at once by organizing a team to carry out the first phase of the study. The engineering and planning was done by Dillon, the public participation portion by Connor Development Services Ltd., the environmental analysis by Ecoplans Ltd., and the hydrogeology by Gartner Lee Associates Limited. At the outset, the team set up certain parameters which it used in the process of selecting, acquiring, engineering and establishing a site suitable for landfill. These are as follows:

- terrain evaluation for selection of areas suitable for landfills.
- analysis of hydrogeologically suitable areas against existing and future land use.
- environmental analysis of related areas
- public response programs for rating alternatives
- analysis of transportation systems as related to the centre of waste generation and the potential landfill locations
- analysis of economic consideration of alternate locations.

These factors were the ones used in identifying landfill sites in the Dillon Interim Report of January, 1976 and clearly set out that following the choice of any site or sites that further studies would have to be carried out. These included such things as hydrogeology, ownership of land, engineering design and proposed operational methods.

It is quite clear that the public participation aspect of these studies was commenced at an early stage as evidenced in the resolution of Regional Council dated October 15, 1975 and filed as Exhibit No. 7 at the hearing. Examples of the brochures and the newspaper tabloid were entered at the hearing and it was explained that they tried to give these as wide distribution as possible but there were certain difficulties due to an ongoing mail strike. During the month of December, 1975, public meetings were held in Milton, Oakville, Georgetown and Burlington to familiarize the public with the waste management studies.

Regional Council had also narrowed down the original 11 sites proposed in Exhibit No. 9 to six sites, at this time, and these were sites "A", "B", "D", "F", "G" and "H". It should be pointed out that site "A", referred to here for the first time, should be identified since it will be subsequently referred to many times in this decision. It is in fact the existing landfill site in Burlington and any reference to site "A" is that site or the land immediately surrounding it.

On the 15th day of September, 1976, the Council of the Region passed a resolution which authorized Stage II drilling on site "F" and at the same time Dillon was authorized to prepare an initial conceptual design of "B", "D" and "F", a Stage I study on site "D" and a Stage II study on sites "B" and "D". The same resolution authorized the Tremaine-Britannia Citizens' Group the opportunity of having a report prepared by their consultant, Dr. A. Benedet, on site "A" as an alternative to consider.

In June, 1977, the consultant Dillon presented a Stage III Report to the Region with respect to site "F". This report presented a three-dimensional

interpretation of groundwater movement in the site "F" area. It also reduced the size which had been considered as site "F" up until that time to a much smaller acreage and identified the area as being north of Britannia Road and west of Tremaine Road.

The record indicates that on the 6th day of September, 1977, the Regional Council requested the Town of Milton to amend its Official Plan in order that a landfill site could be established at site "F". The Council of the Town of Milton, by a resolution dated April 3, 1978, requested further information from the Region with respect to site "F" as well as information on alternative sites.

On the 17th of May, 1978, the Council of the Regional Municipality of Halton passed the following resolution:

"That for the purposes of clarity this council hereby confirms that the applications for Official Plan amendments and for restricted area by-law amendment to permit a proposed regional sanitary landfill waste disposal site at 'Site F' only encompasses approximately 246 acres consisting of the lands of Mogil Properties Limited with an acreage of approximately 102.129 acres and the lands of Kowal and Micallef with an approximate acreage of 143.534 acres with the life of proposed site to be for a tonnage of not more than 2,000,000 tons (1,814,000 metric tons) of waste."

This same resolution also authorized the staff and Dillon to prepare a response to the Town's request in the hope that the Town would change the decision and approve the Region's request to amend the Official Plan and the zoning by-law. In a resolution dated July 5, 1978, Regional Council recognized the fact that a crisis may develop before the longer term plan could be implemented and authorized the Dillon firm to carry out an Interim Waste Disposal Feasibility Study. The resolution set out certain parameters which Council wanted further study on. These included such items as updating refuse projection, maximizing the three existing sites as well as expanding the existing sites onto small portions of available adjacent lands. This report was forwarded by Dillon to Regional Council on the 29th day of August, 1978. The report set out seven options which the Region could choose from to give the

Region additional waste disposal capacity.

The Region, by a resolution dated September 6, 1978, selected the 2nd option proposed and this was the expansion of the existing Burlington and Oakville sites together with a stream diversion at the Oakville site. The resolution further authorized Dillon to carry out all the necessary studies to implement these expansions.

In a letter from the Region to the Town of Oakville dated September 15, 1978, the Region asked the Town of Oakville for its comments on the proposal of expanding the existing site in Oakville. Oakville responded to this proposal with a recommendation from the General Committee of Oakville which was endorsed by Council on the 20th of November, 1978 and this read as follows:

"That this Committee recommended to Council that it notify the Region that Oakville is strongly opposed to any expansion of the Fourth Line Sanitary Landfill Site."

In October, 1978, Dillon submitted a final report entitled "Review of Landfill Alternatives" and this in effect was a follow-up on the 11 sites identified in the January, 1976 report (Exhibit No. 9). This report again re-evaluated the potential landfill sites but this time based their analysis on an alternate capacity of two million tons. It again identified and recommended the selection of site "F" based on the knowledge at hand as the more preferable alternative at the present.

In the months that followed, many reports were prepared by the consultant Dillon and the other consulting firms engaged by them. Following is a list of these reports:

1. Hydrogeological Study (Gartner Lee Associates)
2. Design Operations Report (M.M. Dillon Limited)

3. Planning Report (M. M. Dillon Limited)
4. Review of Waste Quantities and Characteristics (M.M. Dillon Limited)
5. Woodlot Vegetation Analysis (Ecoplan Limited)
6. Transportation Analysis (M.M. Dillon Limited)
7. Noise Impact Analysis (Valcoustics Canada Limited)
8. Potential Bird Hazards to Aircraft (L.G.L. Ltd. Environmental Research Associates)
9. Study For Agricultural Rehabilitation (Ecological Services for Planning Ltd.)

The foregoing chronology of events and list of studies are set out to indicate the extensive input which must go into the selection of a site for sanitary landfill.

This chronology does not in any way reflect the list of documents which were filed as exhibits during the course of the hearing and which detail such things as reports, submissions to council and minutes of council.

There is no doubt in the mind of the Board that garbage is one of those facts of life that, although it is acknowledged, no one wants anything to do with it. It is probably the natural reaction of any municipality that it does not want it located in its backyard and this view is reflected in the reaction of the Council of the Town of Oakville concerning the expansion of the existing site in that municipality.

The Region, in presenting its case, called many qualified witnesses on such matters as engineering, land use planning and environmental aspects. In dealing with the evidence adduced by these witnesses, the Board does not

intend to review this evidence in great detail. A great deal of this evidence is of a highly technical nature and will no doubt form an integral part of future approvals, but needless to say, it was evidence which aided the Board in reaching its conclusions.

The present Director of Public Works, Mr. Robert Moore, was called to outline to the Board the history of the applications at hand. In tracing the history, he emphasized such matters as need and related it to his former position in the Town of Oakville and, in addition, filed many of the main reports from the Dillon firm, which laid the foundation for the decision of the Regional Council in selecting site "F".

Mr. Hubert Borque, who is an engineer and a former employee of the Region, was the author of a report placed in evidence as Exhibit No. 31. During the time of his employment with Halton, he was responsible for the planning, design and operation of sanitary landfill sites as well as any sampling or testing at the three existing sites. It is also interesting to note that Mr. Borque has a continuing association with sanitary landfill in Halton in that his present firm has assigned him as project engineer for designing a leachate collector system for the existing Burlington landfill site.

The report of this witness (Exhibit No. 31), details such matters as site operations at the existing landfills, operational improvements to existing landfill sites, site record keeping and operating plans, and site capacity estimates. This latter portion of the report is the critical one in establishing the urgent need to find a new and suitable site. Based on the calculations which Mr. Borque made, it is expected that the three existing sites will close on the following dates:

March 1979 for Halton Hills (Georgetown) (It has in fact been closed.)

October 1979 for Oakville

December 1979 for Burlington

It should be noted that Mr. Borque did not include in his capacity estimates any additional capacity either at Burlington or Oakville with respect to the proposed extensions. He felt that since these applications had not been made they should not be included. He also strongly emphasized the problems which are encountered when filling takes place beyond the final contours such as erosion.

It probably can be safely said that the key witness called by Mr. Sexton to support the Region's position in these appeals was Mr. W.F. Wells of the M.M. Dillon firm. Mr. Wells has an extensive background in the field of solid waste management not only with Dillon whom he joined in 1973 but also as an employee of the Ministry of the Environment in the Province of Ontario.

The Dillon firm was retained by Halton in August, 1975 and the complete terms of reference covering this retainer are shown under Appendix "A", Exhibit No. 10, filed at the hearing. This was the second and the last of the two Resource Recovery Studies done by Dillon. This latter report dealt primarily with resource recovery while the earlier report of February, 1976 dealt with the problem of landfill. The report of February, 1976, which was marked as Exhibit No. 9, set out to identify locations within the Region which could be used for landfilling and did not attempt to identify a particular site. In this connection, the following quote is taken from this report:

"This Report does not recommend a specific solution to the landfill situation but presents four alternative solutions which are acceptable from a technical point of view. Obviously, the final decision rests with the Region and should take into account the social concerns which were generated as a result of the public participation program."

Mr. Wells emphasized that the costs of extensive drilling to prove the hydrogeological capabilities of a site are quite expensive and caution must be exercised. This may have influenced Council in making its decision to proceed with detailed drilling at site "F" and if the results were satisfactory, it would not be necessary to drill at the other sites which were still under consideration. In any event, Regional Council, by a resolution dated the 5th day of July,

1978, directed the Dillon firm to carry out the necessary work which led to the Interim Waste Disposal Feasibility Study (Exhibit No. 19) forwarded to the Region under cover of a letter dated August 29, 1978.

The Study (Exhibit No. 19) identified the fact that the need for interim waste disposal was apparent and looked at the problem under the following headings:

- recommend additional landfill capacity in areas physically suitable
- recommend a program that will permit approval of new capacity at the earliest possible dates
- recommend a program that provides sound waste management practices and is compatible with Regional policies on waste management.

Four specific locations were selected for review in the Study and these are the existing Burlington and Oakville landfill sites, the Milton brick yard and the NATCO quarry in Burlington. The report set out the technical feasibility of extending the life of the Burlington and Oakville sites and although data was provided on the NATCO quarry it seems to have been dropped because of development problems.

Again in October, 1978, Mr. Wells sent a report to the Regional Council which updated the information on the 11 sites identified in the January, 1976 report. This report (Exhibit No. 41) attempted to answer the specific points raised in Resolution No. 671 dated April 3, 1978 of the Council of the Town of Milton. It again concluded that for all the reasons cited in the report that site "F" was the most desirable site for sanitary landfill.

Mr. Wells pointed out to the Board that in the beginning of study the area identified as site "F" consisted of some 2500 acres. This much larger

acreage was as a result of the early studies which dealt with an area on the east side of Tremaine Road and north of Britannia as well as the area west of Tremaine and north of Britannia. The hydrogeological results, however, reduced the area and the land on the west side of Tremaine Road was the final choice.

In December, 1978, a report entitled "Design and Operations Report", which was prepared under the supervision of Mr. Wells, was received by the Region. This is a crucial document in that it details the actual operation of the site from its very beginning to the final day when the site closes and the after use begins. The latter point is a very important one because it is one on which a great deal turns. The number of options open to the after use of the landfill site are quite limited. In the instant case, it was first felt that upon completion of the landfill the site could be used for recreation purposes. It was found, however, after investigation that nobody seemed interested in the recreational aspects of the site. In the final analysis, therefore, it was decided to put the site back into an agricultural use and this had a very strong influence on the Design and Operations Report (Exhibit No. 42). In order to prepare the design it was necessary to have the input of the various experts such as the hydrogeologist for the leachate collection system, the planner for visual considerations, an engineer for surface drainage, a traffic engineer and several other persons qualified in their own fields. It has already been pointed out that each of these experts dealt with their concerns in great detail and this decision does not intend to review this evidence unless it applies to specific points raised by the objectors.

In the opinion of the Board, Mr. Wells appeared to be completely confident that site "F" could be engineered to meet all the requirements demanded by the Ministry of the Environment in establishing a landfill site. It should also be borne in mind that the proposed design details presented by Mr. Wells are not considered by him to be the final design details. These details will have to be available at a later date when application is made to those who have the jurisdiction of approving them.

In the event that one set out to make a list of points in their order of importance concerning the establishment of a sanitary landfill site, there is no doubt that ranking number one would be hydrogeology. The Board, having heard this important evidence, is convinced that although many sites may be found in a municipality which could meet all of the criteria essential to establishing a landfill site, if the hydrogeological conditions were unfavourable, the site in all probability would not be approved. Mr. Grant Anderson of the firm of Gartner Lee Associates Limited gave extensive technical evidence on this subject at the hearing and the details of that evidence are contained in his report filed as Exhibit No. 51.

It was under his supervision that all of the testing and drilling was done at site "F". The Board cannot help but note that the job of testing groundwater in the vicinity of site "F" was made much more difficult by the circulation of a notice to ratepayers in the area. This notice was filed as Exhibit No. 182 at the hearing and is signed simply as "Interested Citizens' Group". The notice points out that Gartner Lee will seek to investigate every well in the area before it can effectually evaluate the site for landfill. The following is extracted from the notice:

"We feel that to cooperate with Gartner Lee Associates would be an admission of consent to the landfill. We feel that to not cooperate with them will serve to delay their decision. As you know, their decision has to be made within a specific period of time. Do not let them come on your property."

The memo then goes on to advise the residents to inform the land agent of the Region that they will not grant permission to come on their property.

This seems like a rather unusual step for people who may have certain fears about groundwater pollution and could have their fears supported through technical engineering information and thus rule out the possibility of site "F" being further considered as a landfill site.

In spite of this hurdle, however, Mr. Anderson was able to carry out his drilling program and where necessary do it within the road allowances.

A great deal of evidence was adduced with respect to the generation and collection of leachate which will occur at site "F", and the large annual cost of removing it from the site. There was, however, no disagreement with the fact that when the generation of leachate reaches its peak some years hence that steps would be taken to connect it with one of the existing sanitary sewers at that time.

Mr. Anderson concluded that because site "F" is located on a glacial clayey silt till in a discharge area that a properly designed and operated landfill will have no adverse impact on the ground and surface water quality in the area.

In view of the fact that these appeals are made under the pertinent sections of The Planning Act, the evidence given by qualified planners at the hearing becomes extremely important. The Board also feels that because of its ruling, which allowed the Town of Milton to introduce evidence on other sites, it had a much broader scope to assess the planning details.

The planning evidence in support of the Region's case was given by Mr. James Balfour and Mr. Edward Cumming.

Mr. Balfour, who is a qualified planner, is a member of the Dillon Staff and prepared a report which was entered as Exhibit No. 66.

Mr. Balfour approached the matter first of all from the various planning documents which are presently in force on the subject lands. This investigation revealed the fact that it was necessary to amend the Official Plan to set out the specific proposed use of the site and amend the land use by-law and set out a special landfill site use.

In addition to the local Official Plan and by-law presently in force, there are two other planning documents which have a bearing on the subject

site and one of these is the new Official Plan for The Milton Planning Area (Exhibit No. 75). This document is approved by the local council but is still before the Minister pending approval. The second document is the new proposed Official Plan for The Regional Municipality of Halton (Exhibit No. 76), which is also before the Minister awaiting approval. It is the intention of the Board to deal with this latter Official Plan in some detail because of its references to such matters as Agriculture, Environmental Protection, Solid Waste Management and Resource Management Policies. Mr. Balfour also had the input of other specialists such as traffic, site operation, site rehabilitation and woodlot vegetation.

The site consists of some 246 acres of which 136 acres will be used for landfill and 110 acres surrounding the interior lands will be used for buffering etc. At the present time, 64 percent of the site is used for forage production, pasture and 17 percent for corn and cereal grain production. The remaining 48 acres or 19 percent of the site is comprised of farm buildings, a woodlot and old fields which are out of production. Ninety six percent of the site is made up of Classes 1 to 3 soils but since 65 percent of rural Halton possesses these 1 to 3 capability soils, this is not unusual. The subject site would represent about 0.2 percent of the good farmland in the Region.

The present predominant use of land in the area is agriculture although there are a number of small holdings in the area which have been improved by residences and show up quite visibly on Figure 4 of Exhibit No. 66. As a matter of fact, there are 25 residences with 2/3 of a mile of site "F" and of these residences only about five are farm residences. There appears to be an attempt now to stop the creation of these small lots for urban type residences since most recent applications for severances have been denied.

Mr. Balfour described the area as one where the agricultural economy is relatively stable. The evidence, however, indicates that many farms in the area have been sold in recent years, including the subject site, and are now in the ownership of non-farmers. This means that although large acreages are still actively farmed, it is on a short-term lease basis and the continued use is

not at the discretion of the farmer.

The report also deals with the problem of the possible conflict of removing good farmland even in a temporary basis and the need to establish adequate waste disposal facilities. Mr. Balfour recognized the problem and dealt with it on the basis of there having to be a trade-off between the requirements of the proposed Regional Official Plan and also the Food Land Guidelines (1978). It is quite clear that both of these documents emphasize the need to keep good farmland in production.

Section 3 subsection 9 of the proposed Regional Official Plan under the heading of Solid Waste Management reads as follows:

"Recognize that, in Halton, the nature of the operation of landfills and the need to protect ground and surface water supplies may conflict with the need to preserve agricultural land expressed elsewhere in this Plan."

There was also reference to Section 3.12 of the Guidelines (Exhibit No. 77) which deals with the matter of competing uses for land, which in this case would be agriculture versus landfill. It points out that it may be necessary to make certain trade-offs in such cases but again it must be recognized that the landfill use is a temporary one and that it will ultimately return to a farm use after rehabilitation.

Mr. Balfour recognized the possibility of a conflict between the movement of farm machinery on Britannia Road and the increase of traffic between Highway No. 25 and the site. It is pointed out, however, that even if these applications are not allowed, there will be an increase in the traffic on Britannia Road in this area because the road has been upgraded on both the proposed Regional Official Plan and the Milton Plan to the status of an arterial road.

The planner also dealt with the effect on the residential uses situated within 2/3 mile of the area of actual landfill operation. He pointed out that there may well be some disruption of the rural lifestyle and their reliance on a

quiet pastoral atmosphere. This is met, however, with the point that the use is an interim use only and with proper operation of the site, these matters can be controlled.

Mr. Balfour, as a result of his study, drew some 10 conclusions, which in his opinion, justified the proposed land use on site "F". These are as follows:

1. Site "F" is an acceptable site for a regional landfill operation from a land use planning point of view.
2. The potential effects of the landfill operation on agricultural uses are not significant.
3. The potential effects of the landfill on agricultural operation in the vicinity of the site are minimal.
4. The small size of the Smith property, its proximity to the landfill operation and the potential noise effects of the operation on the residence make it advantageous for the Region to acquire the property and develop it in conjunction with the proposed agricultural after-use of the site.
5. Other residences in the vicinity of the landfill will not be significantly affected by allowing dust and litter or noise from the landfill operation.
6. Residences along the major access routes to the site will not be adversely affected by truck traffic volumes or noise.
7. The shape of the landform and sequence of landfill operation have been designed with various screening and operating techniques to minimize disruption to the visual quality of the area.
8. The landfill operation will not have an adverse effect on the quality of the existing woodlot on the site provided that the

recommended management guidelines are implemented.

9. The fencing and supervision of the landfill site, and the routes, traffic pattern and stops of the school buses will minimize potential hazards to children posed by the landfill operation and truck traffic to the site.
10. The landfill operation will not adversely affect commercial activities in the vicinity of the site or along the major access routes.

Mr. Edward Cumming, the Director of Planning for the Region, gave evidence as to his involvement in the selection of a landfill site for the Region. It was his opinion that sufficient comparative studies had been done in connection with the selection of site "F" to satisfy any requirements. He also felt that based on the information which the Region had that it had made a reasonable decision in selecting site "F" and he was not aware of any better location.

Mr. Charles R. Smith of Ecoplans Limited, prepared a report at the request of the Dillon firm which described and evaluated the woodland vegetation on the site. Mr. Smith looked at this from the point of view of its environmental sensitivity and made recommendations for the appropriate management and protection of this vegetation.

This witness concluded that the woodland located on site "F" is of high aesthetic quality and made certain recommendations for its preservation.

Another member of the Dillon Staff, Mr. Paul Hill, who is a qualified traffic engineer, and heads up the transportation planning and traffic engineering for that firm, did the transportation analysis. His report entitled "Transportation Analysis" was filed as Exhibit 88.

In preparing his report, Mr. Hill used three criteria which he listed as

classification, geometries and physical condition of the roads. The purpose was to determine the road requirement necessitated by the additional loading because of trips to and from the proposed landfill site. He pointed out that Mr. Wells had supplied certain information such as the number of trucks which will be generated by the landfill and also indicated that all of the traffic counts which were taken were done during the hours when the site would be open.

His conclusions indicate that it will be necessary to improve certain roads such as Britannia and other changes in the Highway No. 25 intersection to ensure the flow of traffic north and south will not be disrupted. Generally the witness felt that the additional traffic generated on the selected routes would not overtax the capacity for which they are designed.

In view of the fact that there is an existing airport within 1½ miles of the proposed site, it became necessary to take a close look at the probable results of opening a landfill site and its effect on aircraft. In order to study this matter the Dillon firm engaged the services of Dr. W. John Richardson of LGL Limited, who is an ornithologist, and one who has done considerable work in the field of bird migration.

Dr. Richardson's Report, (Exhibit No. 90), spells out quite clearly the potential problem between birds and aircraft and there is no doubt that when site opens and birds are attracted, the potential danger will increase. The witness pointed out, however, that the danger to small piston type aircraft is far less than to jet type aircraft. The only type of aircraft at the Burlington Air Park is the smaller piston type plane because of the limited length of the grass runways.

Dr. Richardson stated that since the beginning of flight there have been only 12 recorded accidents caused by birds in which there were fatalities. He also pointed out that there is a very high population of gulls at the Toronto Island Airport and several thousand takeoffs and landings and this does not seem to hamper the operation of the airport.

The report also contained certain mitigative measures which may be taken and five of these are suggested in Section 5.4. These measures, if taken, may reduce the potential bird hazard but will not entirely eliminate them.

Dr. A.D. Lightstone of Valcoustics Canada Ltd., prepared a study (Exhibit No. 99) on the aspects of the noise impact of the proposed landfill operation at site "F". The primary purpose of the study is to look at the potential noise effects on the surrounding residential uses in the vicinity of the site as well as the approaches to the site.

There are two important criteria which Dr. Lightstone uses in preparing his report and these are that first of all a landfill operation is not a stationary sound source and secondly the acceptable maximum L_{eq} level in a rural area is 55. He draws comfort in using these standards because they are acceptable to the Ontario Ministry of the Environment.

In his conclusions, Dr. Lightstone stated that the traffic noise generated by the landfill operation will affect some eight residences but in no case will the sound exposure exceed an L_{eq} of 55. There are a total of 21 existing residences within a radius of 3000 feet of the operational boundary of the site. In many cases there will be no significant noise increase from the site operation. The sound environment for some of these residences, however, will experience a noticeable temporary increase but not above the L_{eq} 55 level. Two homes, namely, the Smith and Katz residences, will likely exceed L_{eq} 55 and a third home may exceed that level in a minor amount.

It has already been stated previously in this decision that the intended after use of the proposed landfill site is to be an agricultural use. In order to investigate this possibility, the Dillon firm engaged the services of Dr. Erven Mackintosh, a member of Ecological Services for Planning Ltd. The report of this witness was filed as Exhibit No. 103 at the hearing. Dr. Mackintosh whose qualifications were filed as Exhibit 101, is a qualified soil scientist and at the present time is studying the reclamation of land in both England and Germany. The state of the art in both of these countries is much

more advanced than in this country and in the case of Germany, several thousand acres have already been reclaimed to agricultural uses.

The report recognizes the fact that because this is a landfill site, certain problems may be encountered but he feels that there is enough technology available to take care of them. It also recommends that the whole project be carefully monitored throughout the course of the operation of the site and in this connection, he makes some 45 recommendations leading up to the actual cropping operation on the site.

This, in summary, was the evidence adduced by the Region in support of its appeals to this Board. The only other witness called and not referred to above was Donald Farmer, who is the Regional Treasurer, and gave evidence with respect to the financial capability of the Region regarding the capital expenditure application. This evidence was not seriously challenged during the course of the hearing so it was felt that it was unnecessary to deal with it.

We turn now to consider the concerns and objections raised by the Town of Milton, the Tremaine-Britannia Citizens' Group, the farmers in the immediate area and the public, to establishing a sanitary landfill site at site "F". No particular significance should be attached to the order in which we deal with these concerns and objections, but as the public indicated in their answers to a questionnaire circulated by the Region that a site for a garbage landfill was useless unless it was a safe site, we will start there.

The precipitation that falls on site "F" either evaporates or goes into the ground and eventually becomes part of the groundwater system or drains away on the surface and eventually ends up in the Indian Creek which flows into the Bronte Creek which drains into Lake Ontario. Several wells in the area of the Bell School Line, north and south of Britannia Road, produced water from a layer of sand and gravel located about 18 feet more or less below the surface. This layer, or seam of sand and gravel, appeared from the well records to be from 0 feet to 10 feet thick and to be more or less continuous for some distance. Every spring at the time of the spring runoff when the

snow melts, and after a very heavy rain, ponding occurs on site "F", as it does on most fields in the area, and the Bell School Line is flooded near and at its intersection with Britannia Road and just south of its intersection with Derry Road. There was not enough information in the M.M. Dillon design and operations report to determine, firstly, if you could keep all the sediment the construction of the landfill would produce out of the Indian Creek, and secondly, if construction of the berms and operation of the landfill would contribute to greater flooding in the area. To some the drilling program carried out by Gartner Lee Associates Limited seemed haphazard, inadequate and more related to the area east of Tremaine Road than the area west of that road.

From this, the objectors reasoned that leachate and methane gas could migrate from the site via the sand and gravel seams to their land and wells, polluting their drinking water and causing vegetable kill. From this, the farmers worried that leachate could be carried from site "F" via the surface runoff to the Indian Creek, in which they watered their cattle, causing pollution of the creek with the resultant danger of sickness breaking out in the dairy herds sufficient to put a dairy farmer out of business. From this, some objectors were concerned that sediment would be carried from the landfill site by the surface runoff to the Indian Creek, which could affect the quality of the water resulting in possible harmful effects on the fish population of the Bronte and Indian Creeks.

Two persons gave evidence, on behalf of the objectors, who could be described as having some knowledge of hydrogeology and groundwater in the area. One of them, Mr. B.W. Beatty, is a qualified hydrogeologist and a man with knowledge of methane gas. Mr. Beatty had made no study of site "F" and he was unable to help the Board as to the easterly extent of these sand and gravel seams that appeared in the area of the Bell School Line north and south of Britannia Road. He could not say if these layers of sand and gravel extended in an easterly direction as far as site "F", a distance of over 2000 feet, so as to act as a conduit for leachate from site "F" to the objectors' wells. He did say that even if the sand seams extended to site "F", something

he did not know and would not speculate on from the evidence of the well records, they would not carry methane gas as they were below the water table and methane will not pass through water.

The other witness was Mr. Marcel Peltier, a well digger who drilled many of the wells in the area. Mr. Peltier is not an hydrogeologist and he had no information about where the sand and gravel seams came from or went to or their extent. He would not even guess how far easterly they extended let alone whether they extended as far east as site "F".

On behalf of the Region, Mr. Grant Anderson, an hydrogeologist with Gartner Lee Associates Limited, had made a study of site "F". His firm had drilled the test holes that Mr. Stuart MacFadden, the President of the Tremaine-Britannia Citizens' Group and a layman, had felt were inadequate and more related to the area east of Tremaine Road than site "F". It was Mr. Anderson's professional opinion that the holes his firm had drilled told him all he needed to know about the stratigraphy of site "F" and that the information revealed by the well records and the evidence of Mr. Peltier correlated well with the stratigraphy he had plotted from information obtained through his bore holes. Mr. Anderson knew of the existence of these sand seams through his test drilling. He found them much more common in the sandy silt till than in the clayey silt till, but regardless of where they occurred it was his professional opinion that because of the nature of the deposition, that is because the till was put down by glacial ice on the ground and not in water, while you have a mixture of soils in the glacial till the sand seams are not likely to have large lateral extent and certainly not from the wells on the Bell School Line to the proposed landfill site.

Mr. Anderson advised the Board that the proposed landfill would be situated in a glacial clayey silt till that was presently under groundwater discharge conditions. As such, there was very little risk of contaminating groundwater supplies even if groundwater mounding in the fill occurred which would tend to reverse the present groundwater discharge conditions. Even under these conditions the risk would be minimal because the downward

movement of leachate would be very slow due to the composition of the till and the leachate would be attenuated. To be absolutely safe he recommended an under drain system for leachate collection which is described in Exhibit No. 51. This system if operated as Mr. Anderson recommends, would, if it was so desired, maintain the groundwater discharge conditions that presently exist and provide for the total collection of leachate. Mr. Anderson was firm that the groundwater would not be contaminated by the operation of a landfill at site "F" and the Board accepts his evidence. It was not shaken by cross-examination or other evidence and at the end of the hearing little creditable attack was being made on it by anyone.

Two witnesses with expertise in surface drainage were called by the objectors and gave evidence. They were Mr. Gus Ribeiro, an engineer retained by the Halton Conservation Authority to study the floodplain of the Indian Creek and to examine the site "F" proposal, and Mr. Murray Stephen, the General Manager of the Halton Conservation Authority.

They had four concerns, namely; that more leachate would be produced, and produced sooner, than Dillon had calculated; that leachate would get into the Indian Creek; that sediment from the construction of the landfill site would get into the Indian Creek; and that the contours of the site could alter the drainage patterns and possibly affect flooding in the area.

They were handicapped in that neither man had ever designed a landfill site, nor were they experts on leachate, nor had either of them ever made a study of a landfill site. They were further handicapped in that neither man had really had much of an opportunity to study the region's proposal as evidenced by the fact that they had not seen the drainage maps, they had not appreciated until it was pointed out to them that the design and operations report was conceptual in nature and not the final design, and in the case of Mr. Ribeiro, he had not appreciated the fact that the Ministry will not let anyone landfill garbage into water.

We have no doubt that the final design of M.M. Dillon will solve all

these problems. Mr. Wells said it would, and both Mr. Stephen and Mr. Ribeiro stated that they had confidence in M.M. Dillon and believed that firm was "quite competent to design a safe site".

We are inclined to think that more leachate will be produced than Dillon predicted because of the groundwater coming up from below and passing through the garbage, and it may have to be drawn off sooner than expected, but it is not a matter of concern because the leachate collection system will look after it. From the very beginning Messrs. Anderson and Wells recognized that there was a risk of contaminating surface water unless engineered controls were used in the landfill operations. The leachate monitoring and collection system was designed to eliminate that risk. Mr. Anderson, when asked to comment on the concerns expressed at the hearing about the possibility of leachate being carried by surface drainage to the Indian Creek, said this:

"Yes, I described at length in evidence in chief the type of leachate containment system which we recommended and it essentially precludes the movement of leachate away from the site in both the groundwater and surface water. It has a built-in monitoring program that will act as an early warning system with regard to when we might have to start taking leachate away from the site; so we are not going to be allowing leachate built up in the site and overflowing the edge of the landfill and getting into the stream and moving into Indian Creek. We are going to intercept it at the site in an engineered collection system in the bottom of the landfill."

As we have already stated, the concern about sediment originating on the site getting into the creek, the concern about altering the drainage patterns, the concern about increasing the flooding in the area, all these concerns will be taken into account in the final design which all competent witnesses admitted Dillon could do. There is sufficient land available to construct the necessary facilities such as holding ponds to collect runoff and sediment to meet any reasonable requirement by any authority. The drainage patterns will not be altered. In our view, the drainage, ponding and flooding in the area is more likely to be improved.

Before leaving the concern about flooding, we should say that the

flooding which occurs on the Bell School Line will not reach site "F" because site "F" is so much higher than the area where the flooding occurs and no contaminated water will leave site "F".

The Board is satisfied that site "F" is safe.

Some people objected to increased traffic due to the landfill site. It was pointed out that road traffic was light at the moment on Britannia and Tremaine Roads; just people going to and coming from work, shopping, etc. The only heavy vehicles on those roads at the moment were trucks on delivery, school buses and farm machinery in the summer.

The evidence of the witnesses with knowledge about roads and traffic volumes was that there was no road in the vicinity of the site that did not have the capacity to handle easily this increased traffic once the recommended road improvements had been made. Indeed we do not recall a single witness who was concerned about the capacity of the road system to take the traffic generated by a landfill at site "F".

Mr. Holmes was a little concerned about the possible effect of traffic on his horses. He resides on the east side of Bell School Line and trains trotters and pacers there. Trucks carrying garbage will not be using the Bell School Line and while there may be some increase in motor cars going to and from the landfill it is not expected to be great. In any event Mr. Holmes admitted horses get used to traffic noise very quickly and conceded that traffic to and from the landfill was not really much of a problem or concern to him or his operation.

A number of persons were concerned about the increased traffic and the safety of their children. The children are bussed to school. The school buses do not use Britannia Road between the landfill and Highway No. 25. The school buses only stop when there is good visibility for a very considerable distance in either direction. The routes and travel times of the school buses are such that there is little conflict with users of the landfill. Like so many of

the concerns expressed in this hearing this is a problem that could exist at just about any location in Halton. In our view, the danger is minimal at this location. While we understand the concerns we feel the danger to children as a result of increased traffic due to the landfill is remote and minimal.

Some of the farmers in the area were worried about the possible conflict between the increased traffic and slow moving farm machinery, some of it quite large, entering onto, moving along, and exiting from roads in the area. This would affect particularly Mr. Earl Snow who owns a farm south of Britannia Road and rents land on the north side of Britannia Road. He uses Tremaine Road and Britannia Road to move his farm equipment. Again this is a problem that could exist at just about any location in rural Halton. While we recognize the possibility of conflict we do not find it as something that should be the cause of undue concern. The only road that could be a problem is that short stretch of Britannia between Highway 25 and the entrance to the landfill site. Very few farmers will be moving equipment along that road. Considering the hours the farmer has available to him to move his equipment, and the hours of operation of the landfill, and the expected peak hours of landfill traffic, we feel conflict will be minimal. Undoubtedly, there will be the odd time when the farmer, for some reason, has to move equipment along Britannia Road during an hour when landfill traffic is heavy. This may result in some inconvenience and annoyance to each side. But that would happen just about anywhere you put the landfill in a rural area and at this location we believe the suggested conflict is minimal and not as bad as perceived. It must be remembered that Milton and the Region have designated this road to be an arterial road, not a road restricted to slow moving vehicles, or the few.

Witnesses for the Region explained to the Board the routes traffic using the landfill site would use. While small private vehicles may come to and leave the site from and in any direction, it was felt the bulk of the traffic, and certainly all the heavy commercial vehicles, would travel north or south on Highway No. 25, and west and east along that stretch of Britannia Road lying between the entrance to the site and No. 25 Highway. Not too much concern was shown about small private cars, but fear was expressed that the

heavy commercial vehicles would use other routes such as the Bell School Line, Tremaine Road, to get to and from the site. We do not think that will happen for two reasons. First Highway 25 is a short distance east of site "F". No north-south road closer to site "F" than No. 25 is within "a country mile" of No. 25 for moving traffic. When Britannia Road is straightened and improved, as will be done, and when changes in the Highway No. 25 intersection to ensure the flow of traffic north and south will not be disrupted have been completed, the fastest, safest, most economical way of getting to site "F" from any point in Halton that generates garbage is north or south on No. 25 and west to the site on Britannia. Garbage truck owners and operators will be looking for the fast, safe, most economical route. The Board was taken on a bus tour of the area which proved most helpful. The second reason is that the region has a great deal of control over these big commercial garbage trucks. Many of these vehicles will be owned and operated by or under contract to the Region or the area municipalities. It will be a condition to being allowed to use the landfill that the prescribed routes are followed. If the rules are broken, pressure can be brought to bear to ensure the rules are followed, and if that does not work there are still other means that appropriate authority can impose to make sure the heavy trucks stay off the more residential streets and roads of the area.

We have every confidence the heavy truck traffic will be restricted to Highway No. 25, a provincial highway, and the material section of Britannia Road. It is of considerable significance to the Board that not one single residence is located on Britannia Road between the westerly limit of the landfill site and Highway No. 25.

From conflicts due to traffic generated by the landfill, we believe site "F" to be an excellent choice.

The fear that the proposed landfill would attract rodents such as mice and rats, and birds, mainly seagulls, was a concern of a number of people for different reasons.

John Hughes maintains 3500 cherry trees on his farm on the Bell School Line 1/2 mile north of Derry Road, a fair distance north of site "F". He spends up to \$5,000.00 a year now in measures to keep birds away from his fruit. The measures are reasonably effective. Dorothy Walker raises chickens on her farm on Derry Road at Tremaine. Rats are dangerous to chickens and attracted to them. At the present time, she is taking steps to control this rat problem and these steps are proving effective. Eleanor Bousfield has a fruit farm, mainly apples and pears, on the south side of Derry Road, north of site "F". She was worried about birds and rodents attacking her fruit. H. Craig Reid has a farm between Appleby Line and the Bell School Line and farms other land in the area. He was also concerned about rodents and birds being attracted to the dump. They are a problem now, nesting and eating the grain, and he fears location of the dump will make matters worse.

We have used the word "dump", deliberately, because there is really no comparison between the old municipal "dumps" we all know, some alas of fairly recent memory, and more unfortunately, some still operating, and the fairly recent development of the professionally engineered sanitary landfill site. The state of the art has advanced tremendously. Richard Block told us about a dump still operating in Mississauga just north of the Queen Elizabeth Way. Here they are putting garbage in a worked out quarry and there have been many problems. But to make the point here, it is sufficient to say that at that dump garbage was at one time being filed 40 to 75 feet away from Mr. Block's parent's home and that kind of a design, if you can call it that, is a long way from the design and operations report of Mr. Wells that represents a modern landfill site and which is before the Board in this application. We do not intend to go into detail as to how the site will be opened, operated and finally closed and rehabilitated. It is in the exhibit to read. We wish to point out here that one of the important procedures is that at the end of each day's operations the garbage deposited that day will be covered, not with sand that tends to blow away and leave the garbage exposed as happens at the North Bay dump, but with a sufficient cover of earth that will stay put so that at any time the only garbage that will be exposed will be the garbage deposited that day, and that will be covered before the workmen leave for the day. We

believe this will discourage rodents and birds. The "pickings" will be pretty slim.

It is expected, however, that large numbers of birds, particularly gulls, will be attracted by the landfill on a daily basis through much of the year. Dr. John Richardson, in his evidence, suggested a number of other methods that should be used at the landfill site to keep the bird population as small as possible. He explained that the gulls nest at Lake Ontario and would fly north in the morning to the landfill, spend some hours at the landfill, and fly back to Lake Ontario in late afternoon or evening. They would not, it would appear, pose much of a treat to the farms of John Hughes and Eleanor Bousfield whose farms lie some distance north of the landfill and not in the path of the gulls. There was also no evidence that gulls were a problem in fruit orchards.

These gulls and their habits are of considerable concern to Victor Kovachik, the owner of the Burlington Air Park. Mr. Kovachik owns 140 acres of land 1½ miles south-west of site "F". On this land are located two houses, two hangers, two storage buildings, a paint shop, an office building, and two landing strips, one 2300 feet long, soon to be extended to 3000 feet, and the other 1700 feet long. At this site Mr. Kovachik's main business is the servicing, modifying and repairing of aircraft. This operation accounts for about 80 percent of his business. About 65 aircraft are based there and parking fees account for further 10 percent of his business. The remaining 10 percent of his income comes from honorariums paid for instruction, etc. The Burlington Air Park is a licenced airport, but it is not licenced for night flying. Many of the gulls coming from and going to Lake Ontario would fly over his airport and planes taking off from and landing at the Air Park and using circuits in usual use at that Air Park would be in the vicinity of the landfill at 500 feet to 1000 feet. Mr. Kovachik was concerned that he would lose business because pilots would not want to fly into and out of his airport due to increased danger from the presence of these birds. There was no evidence that he would lose business.

There was evidence that the Federal Government has a guideline that airports should not be located within 5 miles of a landfill and landfill should not be located within 5 miles of an airport. Mr. Andrew Carswell, the safety officer in Ontario for the Federal Department of Transport, made it quite clear however that it was only a guideline. That same guideline was anxious not to have airports near fruit and cattle farms. You use, as Mr. Carswell said, common sense. To Mr. Carswell's knowledge, the Department of Transport had never revoked a licence for being too near a landfill site nor had the department ever refused to issue a licence for being too close to a landfill site. The Board learned there are airports near landfill sites, for example, at Maple and at Trenton, and there have been no complaints concerning birds received from those airports.

There is a "dump" within 1/2 to 3/4 of a mile of the North Bay Airport. That is a large municipal airport. Air Canada and the airforce use the North Bay Airport and the birds constitute a much greater hazard to jet aircraft than to propeller driven aircraft. It is also a bad "dump". Sand was used to cover the garbage and the wind blew the sand cover away exposing the garbage. As a result, very large numbers of birds are attracted to that "dump" - 100,000 to 200,000 birds in the immediate area is the estimate with at times as many as 15,000 birds actually nesting on the runway.

The Board is entirely satisfied that the proposed landfill at site "F" cannot be compared with the landfill at North Bay. Our knowledge of how to locate, design and operate landfill has improved beyond measure since the North Bay "dump" was started. Covering the garbage each day, and other methods such as the use of falcons, if necessary, will keep the bird population at site "F" to a minimum. In no way will their numbers approach the numbers found at North Bay or at the Island Airport in Toronto.

While the Board accepts the evidence that garbage attracts birds and birds in great numbers constitute a hazard to aircraft when in the vicinity, the question still remains, how great is the hazard? The evidence was that no accident had occurred at North Bay due to the presence of birds in the area in

spite of a much greater risk there than that expected at the Burlington Air Park - there are two private flying schools at North Bay, the airport is used by jets, etc.

Dr. Richardson's evidence that in the history of flight, there had only been 12 recorded accidents anywhere in the world in which there were fatalities caused by birds was not challenged. Pilots using the Burlington Air Park would be aware of the possible presence of birds in the area through the books they carry and consult and would, in the opinion of the pilots who gave evidence, be able to adjust accordingly - for example, they could make their turns before or after the area of the landfill, thus avoiding site "F".

At the hearing, Dr. Richardson explained his report, Exhibit No. 90, on this point by saying that while the location of a landfill at site "F" would increase the hazard rating of the airport, the risk of an accident due to the presence of birds at that airport was still no higher than a mere possibility. The Region had that evidence and decided to choose site "F". The Board agrees with the Region's decision. In our view, a proposal so entirely acceptable from other points of view should not be put off by a remote possibility.

Nobody wants a landfill and several objectors wanted some other method of disposing of the area's garbage. Many felt it should be reduced at source, that is by the garbage maker. Still more people wanted some form of resource recovery. Mr. Julian Reid was anxious that the Board not approve the Region's proposal, reasoning that lack of approval would keep the pressure on the Region to move faster toward resource recovery. Desirable as these goals are, the better evidence was that for the foreseeable future a landfill site would be required and to decide otherwise at this time would mean staggering costs at best and, regardless of costs, considerable risk of garbage filing up in the streets if the bugs in the resource recovery could not be ironed out in time.

There were objections, particularly from persons living and working

near the proposed site, as to litter, odours, the visual aspects that they feared the landfill would produce. Having listened to these worried people, we believe that their concerns here are largely based on their idea of a garbage "dump". We are satisfied, having heard the Region's evidence, that what will be produced here will be far better in appearance, far better in controlling litter and odours, than the old dumps where one just dumped the garbage. While no one would expect it to be a thing of beauty, it will not be anything like as bad as the objectors fear. The provisions for berms, the landscaping, fencing, the method of dumping and covering the garbage, the control and maintenance of the site, all of which the engineers are capable of designing and we have every confidence the Region will carry out, will assure this. In addition, the location of the existing houses re the woodlots, trees and shrubs that exist today, their distances from the site, the prevailing winds, all assure much less impact from site "F" than is feared, with one exception, and that is the home of Miss Smith which the Region has offered to buy if she wishes to sell.

One objector felt that Milton had been unfairly "ganged up on" by the other municipalities, but when asked to give one example of this, he was unable to do so. The evidence was that the objectors had numerous occasions to present their views to Regional Council and did so. The objectors received answers to their questions and material was supplied to them on request by the Region. We believe they were kept informed and listened to by the Region. The fact that the Region did not accept their submissions is not evidence that Milton was "ganged up on".

Dr. Derek Coleman did not agree with the study process adopted by M.M. Dillon. He felt the selection process used was one of "elimination" rather than "evaluation". In Dr. Coleman's view, there was too much importance given to hydrogeology; too much engineering and not enough planning. He would have done it differently. He would have considered expanding the existing sites more and evaluated all sites under a number of different headings. When you look at Dr. Coleman's headings, however, you find they are not very different from the ones Dillon used and M.M. Dillon did

consider expanding the existing sites. We cannot agree with Dr. Coleman's lack of concern for the leachate landfills produce. He is on record as saying he did not care if the site "spewed leachate" as long as there was no one around to be bothered. Unfortunately, it is not possible to find a site in Halton where there is not somebody around. M.M. Dillon have selected sites for landfills in the past. They have designed landfills. Dr. Coleman has done neither. We see nothing wrong with the process adopted by Dillon and we prefer the evidence of the Region to that of Dr. Coleman. Dr. Coleman was an advocate for a cause - nothing wrong with that - but his facts and reasoning in support of that cause on this point did not stand up to Mr. Sexton's cross-examination.

Mrs. Ethel Gudgeon and others were concerned that the view from the escarpment, particularly the view from Mount Nemo and Rattlesnake Point, where considerable sums of money have been spent to develop the areas, would be ruined. Many others felt the winds in this area were greater than anywhere else in Halton. We believe these people to be sincere, but while one can say something often enough to come to sincerely believe it, that does not make it so. We do not think, having heard all the evidence, that the view from the escarpment will be destroyed. It is quite a considerable distance away and the working face is not that large. The existing woodlots, the plans for opening and closing the site a little at a time, the landscaping as the site is closed, the return to an agricultural use, will all help to hide the landfill operation and site. Nor do we think there was any credible evidence to suggest the wind is stronger at site "F" than anywhere else in Halton on any given day. It is recognized that there will be windy days and it is intended to shut the site down if the wind is too strong to control litter and garbage on the site.

Harold Middlebrook, the past President of the Halton Federation of Agriculture, Craig Reid, Richard Sovereign, Dr. Coleman, and others, were worried about the loss of good farmland and the effect the landfill might have on the continuation of farming in Milton. In our view, it is desirable that good farmland which forms part of a viable farming operation, should be kept as

farmland. But desirable as this is, it is, as the Region of Halton draft Official Plan recognizes, not always possible. The Food Land Guidelines, in Section 3.12, also recognizes that "A parcel of land may be suitable for several uses, or several uses may be competing to locate on it. The municipality must decide which use will be permitted. These trade-offs must be made for all land on which more than one use might be feasible". In this case, the Region of Halton, who have the responsibility of picking and developing a site for a sanitary landfill, decided the trade-off must be made and we think they were right. Land that is within the urban area, like land that has not yet been mined of its mineral assets, is very expensive to buy. Here we are dealing with about 0.2 percent of a good farmland in the Region. It will not be permanently lost to agriculture. Section 3.8 of the Region's draft Official Plan reads as follows:

"View the use of land for landfill during the operational life of the site as an interim use until such time as the land is rehabilitated in accordance with the long term and uses suggested by local plans, and in accordance with the requirements of the Ontario Ministry of the Environment."

Here the long term end use suggested by the Milton Official Plan is agriculture, and that is the use the Region proposes for the land when the landfill is closed. Dr. Mackintosh told the Board about landfill sites in Germany and Britain that had been successfully rehabilitated for an agricultural use. While initially the yields that may be obtained from a rehabilitated site "F" might not be as great as Dr. Mackintosh contemplates, we have no doubt the site can be rehabilitated to an agricultural use. Dr. Mackintosh gave one the feeling that in his quiet way, he knew what he was talking about. He knows what has to be done to make it work and we are satisfied it will work.

So, in our view, we have the temporary loss of a very tiny portion of the farmland of Halton to set off against an inexpensive but safe site for a needed municipal facility. We believe the trade-off is justified.

We cannot agree that the location of a landfill at site "F" will deter the continuation of farming in Milton. We are convinced that the final design

for development and operation of site "F" will be entirely satisfactory in the sense that it will be a safe site, there will be no pollution of the ground and surface water due to site "F", litter, birds and rodents can be and will be controlled, and like traffic will not prove to be the bugbear the farmers fear. We do not think a sanitary landfill is an incompatible use in an agricultural community. If it is a safe site, and it is, it will not interfere with the growing of crops or the maintenance of cattle. Crops and cattle are not much interested in what is in the field next door. Estate residential development, with all the resulting conflicts between City folk and farmers, with increasing land costs which make farming uneconomical eventually, is a greater deterrent to the farming community than a sanitary landfill, in our view.

The point was made by Dr. Coleman and Mr. Zaradanyi, the planner for the Town of Milton, that the Region's proposal did not conform with the Region's draft Official Plan or the existing or proposed local Official Plans or the present zoning by-law. We can find no conflict with the Region's draft Official Plan, indeed that Plan actually contemplates the situation we have here. With regard to conflict with the zoning by-law and local plan, that is the reason for the applications under Sections 17 and 35 of The Planning Act.

It was also suggested that Milton had the right to know that site "F" was the best location for a landfill in the Region. Put another way, it was suggested that the Region must show that other sites in Halton could not be made to meet its needs before Milton should be obliged to accept site "F". With great respect we cannot agree. We do not think the legislature, when it gave the Region the job of disposing of the Region's garbage, placed upon it the burden of proving that the site chosen was the best site, or the only site that could be found in Halton for that purpose. Such a process could cost a fortune and go on forever and even then somebody would probably come forward with a site that had not been proven inferior to the selected site. We believe the job of the Board is to hear the evidence for and against the proposal, to hear the objections to the proposal, to hear the argument for and against, and then to approve or not approve the site selected by the elected representatives of the Region, the body charged with disposing of the garbage.

In spite of this, the Board did hear evidence concerning site "A" because it was the position of the Town that site "A" was at least as good as, and probably better than, site "F" and Regional Council knew or could have known this, but nevertheless chose site "F". The Town said they would prove that, and if they did, then site "F" ought not to be approved. We turn therefore to consider site "A" and compare it to site "F".

The exact location of the landfill at site "A" seemed to move around a little. At one time, the Town seemed to be suggesting the lands to the west of the Bayview Park Landfill known as the Natco property, but this location was abandoned perhaps because the valuable shale it contained had not yet been removed and perhaps for other reasons. The part of site "A" that the Town chose at the hearing to advance was the property to the north of the Natco property, referred to at the hearing and in this decision as the "Goodings Site". We mentioned this because one of the points advanced by the planners for the Town was that site "A" did not require the destruction of farmland. This is certainly true if one is advocating the Natco property or the so-called "bad lands", but it is not true of the "Goodings Site". The "Goodings Site" consists of 60 acres more or less and fully 51 acres of that are Class 1 soils with the remaining 9 acres being Class 3 soils.

Another point advanced by the Town planners in support of site "A" was that it was located in the Parkway Belt and therefore no rezoning was needed. We are not at all sure about this; certainly, the Parkway Belt regulations would have to be amended to permit a landfill at site "A" and we can see no advantage to site "A" over site "F" on this point.

Another factor advanced by the planners for the Town was that because there were fewer people around site "A" than "F", the impacts on people are less. As site "A" was not before the public, we really do not know how much opposition there would be to it if the Region had chosen site "A". There may well be more people within a mile of site "F" than within a mile of site "A" but that does not mean the impacts will be less at "A" than "F". When one considers that the traffic will move along Britannia Road from No. 25

Highway to and from the site on which there is not a single home located; when one considers the location of the homes near site "F" and the woodlots, etc., we are satisfied not as many people will be adversely affected by the landfill at "F" as they honestly think at the moment. On the other hand, we cannot say the same thing about site "A".

Even if one concedes that there is a greater detriment to farming with a landfill at "F" than "A", we feel because it is minimal, because it is temporary, at "F", it is worth the trade-off when one considers the disadvantages of "A". Even if one concedes that there is adverse impact on more people at "F" than "A", something we do not feel is at all established simply by showing that more people live within say a mile of site "F" than site "A", because it is minimal, because it is temporary, we do not feel it is worth taking the chance on "A". Because "chancy" site "A" surely is from the hydrogeological and costs' point of view.

We do not intend to review in detail the highly technical evidence of Mr. Beatty and Mr. Anderson on the hydrogeology of site "A". Mr. Beatty made a brief field study, not a detailed study. The site was the Natco property. He did not study the "Goodings Site". He attempted to study the migration of leachate from the Bayview Park Landfill and to draw certain conclusions about the landfill at site "A". He admitted that landfills in gravel pits are difficult to engineer. He admitted that there were few if any studies of landfills on Queenston shale. The only landfills on Queenston shale he was aware of are all in Halton and all of them have problems with leachate migration.

Mr. Beatty argued that the bulk of water movement in shale is in the shallow or local groundwater flow, that is the upper 20 feet, perhaps 30 feet of the shale, and because of the many streams that run through site "A", that is the Natco property, site "A" is a discharge area and any leachate produced would be carried by the local groundwater flow to the streams and by the streams to a sanitary sewer.

Mr. Anderson was not so sure that the Natco property was a discharge area. We prefer his theory on the migration of leachate in shale,

which put simply, amounted to the very distinct possibility that some of the leachate would get into the Regional groundwater flow. In any event to be sure you had to know the groundwater flow and the kind of testing that required had not been done by Mr. Beatty at the Natco property.

Mr. Beatty had not tested the "Goodings Site" at all. But he agreed on cross-examination that the "Goodings Site" was an area of local recharge. In our view, that admission makes the construction of a liner of some sort absolutely necessary at the "Goodings Site". Mr. Beatty also admitted that without extensive controls leachate would get to the property of Natco where valuable deposits of shale are located and he knew of no tests on the effect of leachate on Queenston shale.

Mr. Beatty stated: "I would not recommend site "A" on what we know now". What we do know is that site "A", the "Goodings Site", because it is small in area, the landfill would have to be at least 60 feet high and perhaps higher; because it will be a landfill on Queenston shale in a recharge area, the site will require very extensive and expensive controls to make it safe, and even then it might not get the approval of the appropriate authority.

What the evidence clearly revealed was that while the "Goodings Site" might be approved for a landfill, it was by no means certain. There appeared to the Board a very good chance that after spending considerable money on the "Goodings Site", the necessary approvals might not be forthcoming. The chances were much better at site "F". What the evidence also indicated was that even if the "Goodings Site" could be approved, the costs of engineering would be higher than at site "F". Which leads us to another factor advanced by the Town as being favourable to site "A".

We do not intend to deal at great length with the considerable evidence of Mr. Goodings and Mr. Wells as to the costs to the municipalities of a landfill at "A" and a landfill at "F". Mr. Goodings, in his evidence, presented a picture that on the surface clearly indicated the costs being much greater at "F" than at "A". But as a result of the Region's cross-examination the cost gap

between the two sites was narrowed dramatically and after Mr. Wells had given his evidence in reply and been cross-questioned, we are satisfied it will be more expensive to the municipalities to construct and operate a landfill at "A" with a transfer station at Highway 401 and No. 25 Highway than a landfill at site "F". We do not intend to go into detail on this, but a few examples will demonstrate what we mean. Mr. Goodings' land requirements at site "A" and the price per acre, rose from 60 acres and \$4,500.00 per acre to 113.74 acres and \$5,500.00 per acre or from \$270,000.00 to \$625,600.00 and we feel these figures could be low. It does not include the purchase of land for a transfer station. Mr. Goodings' site clearance allowance for site "A" went from \$22,000.00 to \$62,000.00. His allowance for leachate collection system at "A" went from \$100,000.00 to \$1,700,000.00, if you needed a liner, and we are sure you will. Road reconstruction at site "A" from \$240,000.00 to \$355,000.00. His allowance from contingencies went from \$234,000.00 to \$533,000.00 if you allow something for a transfer station. These are just examples of increases in the cost of site "A", admitted to by Mr. Goodings in cross-examination, over his original figures.

In a like manner, Mr. Goodings, under cross-examination, reduced the costs of several items charged to site "F". For example, screening and planting was reduced to \$370,000.00 from \$805,000.00. Much more serious was the reduction in costs for leachate removal. There it went from \$273,500.00 a year for perhaps 100 years to a one time figure of \$423,000.00 and we believe that figure will turn out to be high.

Mr. Wells considered a number of items as well - for example, site rehabilitation, that in the case of site "F" was reduced from \$1,825,000.00 to \$259,000.00. In our view, Mr. Wells' conclusions were not shaken in cross-examination.

We could go on, but the evidence that we accept, having heard the witnesses, comes down to this, that it is more probable that a landfill at the "Goodings Site" will cost more to locate and operate than a landfill at site "F".

Having heard the evidence and studied all the exhibits, we cannot agree with the Town's submission that site "A", the "Goodings Site", is as good as, let alone better than, site "F" for a sanitary landfill. At first blush it appeared so, but when site "A" was subjected to the scrutiny that site "F" received, it began to look more and more like second best.

We wish to touch on one other objection raised and that is to the noise the landfill would produce at site "F". Professor Keeler gave evidence on behalf of the Tremaine-Britannia Citizen's Group. He had been retained shortly before he gave evidence to consider Dr. Lightstone's report and to comment upon it.

Professor Keeler had three concerns. First, what was a proper guideline to assess the noise that would be produced. He felt an hourly L_{eq} of 48 decibels should be the maximum with the preferred hourly L_{eq} of 45 decibels. Dr. Lightstone had suggested an hourly L_{eq} of 55 decibels was acceptable. We do not find it necessary to spend much time on this as Professor Keeler admitted on cross-examination that he would accept the guidelines of the Ministry of the Environment on this; their guideline should be applicable was his view. Later in the hearing we heard that the Ministry guideline was an hourly L_{eq} of 55 decibels.

We are not prepared to accept Professor Keeler's findings about the number of homes that would experience noise levels greater than 45 or 48 d BA, because the correct guideline is 55 d BA. We accept Dr. Lightstone's evidence already referred to in this decision on that point.

In passing we note that Professor Keeler regarded the noise produced by operations at the landfill face as coming from a stationary source and therefore a lower guideline should be applied, but we cannot agree. We accept the evidence of Dr. Lightstone and the Model Municipal Noise Control By-law that the operations of the face are best described as a non-stationary source and the guideline of L_{eq} = 55 d BA should apply.

Professor Keeler's next concern was that much more noise would be produced at the working face than Dr. Lightstone had anticipated. He felt that all the vehicles and equipment using the site would not conform to the present regulations. He felt that even if the vehicles and equipment did conform when new, they would not be maintained and thus be noisier than Dr. Lightstone allowed. Professor Keeler did not hear Dr. Lightstone's evidence. We are satisfied having read Exhibit No. 99 and heard Dr. Lightstone that there is nothing wrong with Table 4 on page 26 of Exhibit No. 99. All new equipment is being designed and built to meet, and more than meet, the proposed guidelines. Apart from trucks, it will be all new equipment working in the landfill. Table 4 is dealing with a 1991 peak hour and it can be assumed that by then many trucks on the road today will not be operating. Most of the trucks and all of the equipment will be post 1977 and therefore designed and built to meet the proposed guideline. We note that the range for the truck sound output allows for the presence of older vehicles which may have been manufactured prior to 1979 or have grown noisier - see page 16 of Exhibit No. 99. We also note that most of the equipment will be under the control of the Region and, therefore, we assume well maintained. We also note that Table 4 assumes all equipment is working at full blast steadily for one hour and this simply will not be the case. We find that Dr. Lightstone has in Table 4 allowed for the worst possible situation and that in actual fact the noise produced will not be as great as Dr. Lightstone has estimated. For instance, all Dr. Lightstone's trucks are operating with open throttle. In actual fact, only a few trucks will be in the landfill site at any given time and they will be operating at slow speeds and this will not produce the noise of trucks operating at open throttle.

Professor Keeler was also critical of Table 5 on page 27 of Exhibit No. 99. He felt that total attenuation of sound was not as great as Dr. Lightstone had estimated it to be. He felt that "Total Attenuation", being the sum of "Geometric Attenuation" and "Ground Attenuation", is about 6 to 8 decibels for every doubling of distance and he had conducted measurements to confirm this. Dr. Lightstone, in reply, did not agree with this. He thought it might be accurate for short distances from the sound source, but the further

out you went, the more credit you had to give to ground attenuation and this Professor Keeler was not doing by giving only two decibels for each doubling of distance due to ground attenuation. Dr. Lightstone felt it might work out if you are in a vast paved parking lot, but it did not work out in a field with berms and woodlots and growing grass, etc.

Both men are well qualified, but because Dr. Lightstone had had much more time to study site "F" than Professor Keeler, because Lightstone had heard all of Keeler's evidence and was still unshakeable in his opinion whereas Keeler had not had an opportunity to hear Lightstone, and because it makes sense that grass and trees must absorb sound better than a concrete parking lot, we are inclined to prefer Dr. Lightstone's view on this point. When all is said and done, the two men are probably not that far apart for at the two critical homes, the Smith home at about 350 feet and the Katz home at about 850 feet, Lightstone has total attenuation at 15 to 16 decibels and 23 to 26 decibels, respectively, and Keeler at 12 to 16 and 18 to 24 decibels, respectively.

We accept Dr. Lightstone's evidence that based on the very worst situation, two homes, namely, the Smith and Katz homes, will experience for short periods noise levels exceeding $L_{eq} 55$. Because of the distance and trees in front of the Katz home, the problem will only be severe at the Smith home in our view, and the Region has offered to buy that property. While this is not ideal, it may well be as good as you are likely to get. Like the temporary loss of good farmland, this is a trade-off.

After considering all the evidence, the advantages and disadvantages of site "F", the objection and concerns of the Town and the citizens, we have come to the conclusion that the Region has made out a sound case for approval of its proposal which has not been weakened by those in opposition.

It is probably trite to say that in the case of many land uses some ratepayers are going to be more directly affected than others and indeed in the instant case the most direct effect will be on the Smith property and to

some extent the Katz property. The Region has recognized this in the case of Bessie Smith and offered to acquire that property and it may well be that the Katz property will also have to be given some consideration. In any event the benefit to be derived from this facility will accrue to all of the residents of the Region.

It should also be borne in mind that up until now all of the other three area municipalities have shared the responsibility in receiving the Region's waste. It may now be time for the Town of Milton to assume some of that responsibility.

It is also clear to the Board that although there may be small inaccuracies in estimating the remaining life of the existing sites that immediate steps must be taken to provide for the future. It is quite obvious that the matter of resource recovery is too indefinite at the present time to rely on it as an alternative.

The Board accepts the argument made by Mr. Sexton that these applications differ greatly from those usually brought under the pertinent sections of The Planning Act. In this case, the appellant does not come as a volunteer seeking something which the land use provisions do not provide for but rather as one seeking to fulfill a statutory requirement of the legislation.

In the circumstances, therefore, the Board is going to approve the proposed amendment to the Official Plan of the former Burlington Planning Area (now in the Town of Milton) which will permit an area composed of part of Lots 6 and 7, Concession VII N.S. in the Town of Milton for the purpose of a sanitary landfill and for agricultural purposes.

The Board will also direct that the Council of the Town of Milton amend Restricted Area By-law No. 1642, which is a by-law of the former Town of Burlington relating to lands formerly in the Town of Burlington to permit a sanitary landfill.



The Board suggests that both the Official Plan amendment and the amending by-law follow the draft form submitted by the Region. If there is any difficulty with either the form or the wording of these documents, the Board may be spoken to. In any event, the Board's order will not issue until the draft of the by-law and amendment to the Official Plan approved by both parties have been received.

The Board is also going to approve the application by the Regional Municipality of Halton to acquire the land, design and construct the site at an estimated cost of \$3,700,000.00. The Board also authorizes the issuance of debentures for a term of five years to cover the above amount.

There will be no order as to costs in this matter.

DATED at Toronto this 15th day of June, 1979.

W. T. SHRIVES
VICE-CHAIRMAN

A.J.L. CHAPMAN
MEMBER