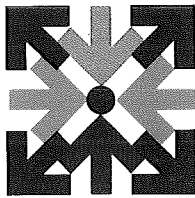


**PLANNING ANALYSIS
ON THE PROPOSED USE OF PART OF
NATIONAL SEWER PIPE LIMITED'S
LAND IN THE CITY OF BURLINGTON
FOR SANITARY LANDFILL AND OTHER PURPOSES**

**Prepared For:
NATIONAL SEWER PIPE LIMITED**

**THE PROCTOR & REDFERN GROUP
Consulting Engineers and Planners
45 Green Belt Drive
Don Mills, Ontario
M3C 3K3**



The
Proctor & Redfern
Group

Consulting Engineers and Planners

45 Green Belt Drive
Don Mills, Ontario, Canada M3C 3K3
Telephone (416) 445-3600
Fax (416) 445-5276 Telex 06-986173

January 15, 1988

DELIVERED BY COURIER

Mr. R. S. Christensen
President & Chief Executive
Officer
National Sewer Pipe Limited
1650 Lakeshore Blvd. West
Mississauga, Ontario
L5J 1J3

Dear Mr. Christensen:

**Re: Planning Report on the Proposed
Use of the NSP Land for Sanitary Landfilling**

We have pleasure in enclosing herewith our Planning Report concerning the proposal to use the NSP Land in the City of Burlington for sanitary landfill purposes.

Yours very truly,

M. J. Bacon, B.Arch., M.C.D., M.C.I.P.
Director of Planning and
Senior Consultant

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	(i)
1.0 INTRODUCTION	1
1.1 Historical Review	1
1.2 Nature of Analysis Conducted by Proctor & Redfern	8
2.0 SITE LOCATION, DESCRIPTION AND LAND USE	12
2.1 Surrounding Land Uses	13
2.2 Proposed Future Uses in the Vicinity of the NSP Land	14
3.0 SERVICING	16
3.1 Water	16
3.2 Sanitary Sewers	16
3.3 Storm Drainage	17
4.0 PLANNING POLICIES AND REGULATIONS	18
4.1 The Parkway Belt West Plan	18
4.2 The Regional Official Plan	24
4.3 City of Burlington Official Plan	30
4.4 City of Burlington Zoning Bylaw No. 4000-3	31
4.5 The Environmental Protection Act (Ontario) and the Environmental Assessment Act (Ontario)	32
4.6 The Pits and Quarries Control Act (Ontario)	33
4.7 Applicable Government Policy Statements and Guidelines	34

TABLE OF CONTENTS (cont'd)

	<u>Page</u>
5.0 PLANNING ANALYSIS	44
5.1 Existing Land Uses on the NSP Land	44
5.2 Surrounding Land Uses	48
5.3 Services	50
5.4 Transportation	50
5.5 Hydrology/Hydrogeology	53
5.6 Biophysical Features	57
5.7 Agricultural Factors	59
5.8 Noise, Dust, Odour and Visual Impacts	69
5.9 Social Planning Issues	77
5.10 Proximity to Source of Waste	80
5.11 Mineral Aggregate Resources	82
5.12 Ministry of the Environment Guidelines	84
5.13 Hazard Lands	86
6.0 ALTERNATIVE LAND USE	88
6.1 Provisions of the Parkway Belt West Plan	88
6.2 Industrial Development on "Special Complementary Use Area"	88
6.3 Industrial Development on "General Complementary Use Area"	90
6.4 Conclusions	93
7.0 SUMMARY AND CONCLUSIONS	95

EXECUTIVE SUMMARY

The Proctor & Redfern Group was retained by National Sewer Pipe Limited ("NSP") in May 1979 to review a 70.2 ha parcel of land in the City of Burlington located in Concession 1 part of Lots 2 and 3, and part of Lot 3, Concession 2. Our mandate was to investigate the feasibility of using the subject site for sanitary landfill and other purposes. About 30 ha of the site are licensed by the Ministry of Natural Resources for a shale quarry operation. Our analysis of the site's potential included consideration of normal planning matters including an investigation of planning legislation at all levels of government, and Provincial guidelines and policies from relevant Ministries. It also included consideration of various scientific studies prepared concerning the land owned by NSP or its environs.

Applications on behalf of NSP to permit a landfill operation were submitted in July 1981, January, 1982, April 1982, and December, 1986. The details of these applications are included in this report. Because the Region of Halton's Solid Waste Management Study was being conducted (1982-1987), consideration of NSP's applications was deferred.

It is Proctor & Redfern's opinion that NSP's land is ideally located for landfill purposes from a land use planning perspective. In summary the bases for this opinion are the following:

1. The site is located adjacent to the existing Regional landfill operation to the west and north. To the east and north the City of Burlington's former landfill site is now used for open space parkland.
2. The site is surrounded by public land uses including Highway 403, HEPC corridors, rail lines, parks, Bell Canada and gas line easements and a quarry operation. The effect of these uses is to buffer the site from urban land uses to the south, east and west so that a landfill operation will have minimal impact on the surrounding area.

3. The nearest residence to the area proposed by NSP for landfilling is over 900 metres distant; the nearest cluster of residences to the east and west is about 1.3 kilometres.
4. The Region of Halton's Official Plan and the City of Burlington's Official Plan have both incorporated the Parkway Belt West Plan. The latter Plan supercedes these Official Plans and as such is the overriding land use policy instrument governing the site.

If the land is used by NSP for sanitary landfilling an amendment to the Parkway Belt West Plan and Ontario Regulation 482/73 is required because NSP is a private sector proponent. However, the Minister of Municipal Affairs has stated that a public sector landfill proposal on the NSP site is within the intent and purpose of the policies of the Plan and no amendment is required. As a low-intensity, public-oriented land use, landfill is consistent with the Plan's designation for the site and area.

5. Proctor & Redfern has reviewed the Ministry of the Environment's and the Ministry of Natural Resources' Guidelines on landfill and mineral resources and believes the proposal conforms to the intent of the policies of both these agencies in terms of the location of landfill operations and the reuse and rehabilitation of quarries and landfills.
6. Selection of the NSP site for sanitary landfilling will meet and advance the objectives of the Food Land Guidelines and the policies of the Ministry of Agriculture and Food.
7. The site is well located in terms of transportation routes and access. In addition, because of the geographic location of residences and businesses in the area, landfill traffic will not impact negatively.

8. Based on the results of hydrogeology studies undertaken by Morrison Beatty Limited on behalf of NSP and subsequently by the Region of Halton in its studies, a safe and environmentally sound landfill operation can be accommodated on the site. Urban services are available in terms of sewer, water and stormwater facilities.
9. The Region of Halton Waste Management Study consultants recommended Site "F", the NSP site under review in this Report and previous studies, as the preferred location for a regional landfill operation.
10. For the reasons outlined in this Report, it is our opinion that there is limited potential for use of the NSP Land for industrial purposes and virtually no potential for its use for agricultural purposes.

1.0 INTRODUCTION

This Report outlines the history of the applications for and the proposal by National Sewer Pipe Limited ("NSP") to utilize a portion of its land in the City of Burlington for a sanitary landfill facility. It also sets out the results of the evaluation by The Proctor & Redfern Group ("Proctor & Redfern") of the suitability of the land, in a land use planning context, for use as a landfill site.

1.1 Historical Review

Proctor & Redfern was retained by NSP on May 2, 1979 to examine the potential use of a portion of NSP's Land in the City of Burlington for a landfill facility. The land then under consideration by NSP for such a proposed use comprised part of Lots 2 and 3, Concession 1 and part of Lot 3, Concession 2, in the former Township of East Flamborough, now in the City of Burlington. In total, those landholdings being so considered by NSP represented approximately a 70.23 ha site (173.54 acres) (the "NSP Land"). NSP has owned most of the NSP Land since the latter part of the 19th Century. As discussed later in this Report, approximately 30 ha (74 acres) of the site has been licensed since August, 1972 by the Ministry of Natural Resources pursuant to the Pits and Quarries Control Act (Ontario) for the operation of a shale quarry.

The NSP Land is located within the Parkway Belt Planning Area established pursuant to the Parkway Belt Planning and Development Act, 1973 (Ontario) and Ontario Regulation 473/73, as amended. Ontario Regulation 482/73 was introduced to control the use of land within the Parkway Belt Planning Area. It permits on land within the Planning Area the continuation of land uses existing at the time of introduction of the Regulation, as well as certain agricultural uses, but does not allow for any change in existing uses without amendment to the Regulation.

At the time of passage of Regulation 482/73, the NSP Land was primarily vacant save for the licensed quarry area referred to above. Accordingly, use by NSP of all or a portion of the NSP Land for landfilling would require amendment to that Regulation.

In July of 1981 Proctor & Redfern submitted an application on behalf of NSP to the Ministry of Housing to amend Ontario Regulation 482/73 and, if necessary, the Parkway Belt West Plan, to permit the use of approximately 28.56 ha (70.58 acres) of the NSP Land as a privately operated landfill site. A copy of this application, together with related correspondence, is attached to this Report as Appendix "A". As appears from these materials, it was then proposed by NSP that a sanitary landfill site be established on approximately 28.56 ha of the NSP Land to be operated by NSP concurrently with the shale quarrying activities on the site, as an integral part of the rehabilitation of the shale pits.

On January 15, 1982 the application submitted on behalf of NSP to the Ministry of Housing (by then renamed the Ministry of Municipal Affairs and Housing) was revised to reduce the extent of the area proposed to be utilized for landfilling and copies of the revised application were forwarded by Proctor & Redfern to the said Ministry, the Regional Municipality of Halton (the "Region") and the City of Burlington. These materials are attached to this Report as Appendix "B", together with a copy of the site plan, as revised, as then proposed by NSP. As appears from Appendix "B", the site area proposed at this time by NSP to be utilized for landfilling was reduced from 28.56 ha to approximately 20.6 ha (51 acres).

On April 14, 1982 Proctor & Redfern submitted an application on behalf of NSP to the Ministry of the Environment for a Certificate of Approval under the Environmental Protection Act (Ontario) for a Waste Disposal Site (that is, for a landfill facility). The application contemplated a landfill area of approximately 20.6 ha (51 acres) and an estimated waste capacity of approximately 1,600,000 tonnes. Copies of the application were provided in

the same month to the Region and the City of Burlington. A copy of this application and related correspondence is attached as Appendix "C" to this Report.

In support of this application Proctor & Redfern had delivered on behalf of NSP in March and April of 1982 a Design Report and an Environmental Appraisal Report.¹ In addition, hydrogeological studies and investigations had been undertaken on behalf of NSP by Morrison Beatty Limited. The written reports prepared by that firm setting out the results of its hydrogeological investigations of the site were also submitted to the Ministry of the Environment and to other interested parties, including the Region and the City of Burlington.²

Following delivery of NSP's application under the Environmental Protection Act (Ontario) for a landfill Certificate of Approval, applications were submitted on behalf of NSP in May, 1982 to the Region for an amendment to the Official Plan for the Halton Planning Area and to the City of Burlington for an amendment to its Official Plan and relevant Zoning By-law to permit landfilling on the NSP site. Copies of these materials are attached as Appendix "D".

-
1. The Environmental Appraisal Report, dated March, 1982 and prepared by Proctor & Redfern Limited, is Exhibit WB-107 before the Joint Board.
 2. The Phase III Report prepared by Morrison Beatty Limited in November, 1981 is Exhibit N-185 before the Joint Board. Excerpts from the Phase II Report prepared by Morrison Beatty Limited in June, 1980 are Exhibit N-186 before the Joint Board.

The application submitted by NSP to the Ministry of the Environment in April, 1982 had been prepared by Proctor & Redfern taking into account the presence on a portion of the NSP Land of a number of plant species then classified as "rare" in a list of vascular plants published by Argus and White in 1977. Subsequent to the submission by NSP of its application, the Argus and White classifications of rare plant species were revised and up-dated with the result that some plant species listed in 1977 as "rare" were no longer so regarded. Proctor & Redfern, accordingly, notified the Ministry of the Environment, the Ministry of Municipal Affairs, the Region and the City of Burlington in December, 1984 that NSP intended to further modify its applications so as to enlarge the area proposed for landfilling on the NSP Land. Attached as Appendix "E" is a copy of a letter dated December 4, 1984 from Proctor & Redfern to the Region, copied to other interested parties including the Ministry of the Environment, confirming NSP's intention to amend its applications to expand the area proposed for its landfill operation in recognition of the revised Argus and White classifications of rare plant species.³

At the time of submission of NSP's application to the Ministry of the Environment in April, 1982, it was Proctor & Redfern's opinion that the private operation of a landfill facility on the NSP Land did not require an amendment to the Parkway Belt West Plan. The Parkway Belt West Plan policies permit low-intensity, low-density urban uses on the NSP Land. Over the long term, it was proposed that the quarry and landfill operations on the

3. Extracts from the 1982 Edition of the Atlas of the Rare Vascular Plants of Ontario (Argus and White) are Exhibit WB-108 before the Joint Board. A copy of the letter dated December 4, 1984 from Proctor & Redfern to the Region comprises part of Exhibit H-299 before the Joint Board.

NSP Land be phased out and the land be rehabilitated for open space uses. From a land use perspective, it was Proctor & Redern's opinion that the location of the NSP Land:

- between an existing and former landfill operation,
- with excellent existing road access,
- with existing physical buffering features such as major roads, rail lines, hydro corridors and open space areas, and
- with physical separation from residential uses and population,

supported a landfill use in accordance with the policies of the Parkway Belt West Plan.

Notwithstanding the position taken by Proctor & Redfern on behalf of NSP regarding the necessity of an amendment to the Parkway Belt West Plan, the Minister of Municipal Affairs and Housing determined in September, 1982 that if the NSP Land was to be used for the operation of a private landfill site, an amendment to the Parkway Belt West Plan would be required. At the suggestion of that Ministry, Proctor & Redfern therefore prepared drafts of an amendment to the Plan and submitted them in November and December, 1982 to the Ministry for its consideration. Copies of the relevant correspondence relating to this draft amendment are attached as Appendix "F".

Processing of the amendment was deferred at the request of the Region, the Ministry of the Environment, the Ministry of Municipal Affairs and Housing and the City of Burlington pending the outcome of the Region of Halton's Environmental Assessment Study of the Landfill Component of its Solid Waste Management Program which was initiated in July, 1982. The correspondence relevant to this deferral is attached as Appendix "G".

Extensive research and investigations were carried out on behalf of the Region by various consultants to examine the Region's future Solid Waste Management Program. These activities were undertaken during the period from July, 1982 to January, 1987 pursuant to the Environmental Assessment Act (Ontario). Throughout virtually this entire period, NSP agreed to the deferral of any further processing of its application to the Ministry of the Environment for a Certificate of Approval for the private operation of a landfill facility on the NSP Land (together with related applications), pending the results of the various studies being undertaken on behalf of the Region.

The Region's work was not confined to the matter of landfill but, rather, addressed the whole spectrum of waste management issues in the Region. After investigating the entire Region for potentially suitable sites, the conclusion reached by the Region and its consultants was that a site in the City of Burlington known as Site "F" and comprised almost entirely of the NSP Land, was the preferred location for a Regional landfill facility.

The area proposed by the Region for landfilling at Site "F" comprises a larger acreage than proposed by NSP in its private application. On completion of the Region's Final Technical Reports during Phase 2 of its Stage 2C Studies, Proctor & Redfern was instructed by NSP to review these studies and related documents to determine, among other matters, if a larger acreage on the NSP Land could be similarly utilized by NSP for a privately operated landfill site, should it prove desirable to do so.

In consequence of this review, Proctor & Redfern determined and recommended to NSP that the application made in 1982 on behalf of NSP, as to be amended in accordance with the notification provided by Proctor & Redfern in December, 1984, be amended in a different fashion to further enlarge the boundaries of the area proposed by NSP for a landfill operation. Accordingly, in December, 1986, Proctor & Redfern submitted a revised application on behalf of NSP to the Ministry of the Environment regarding the Certificate of Approval previously requested by NSP for a Waste

Disposal Site on the NSP Land. The revised application contemplated an enlarged area for proposed landfilling. Pursuant to the December, 1986 revisions, some 40.5 ha (approximately 100 acres) of the NSP Land were proposed for landfilling, thus increasing the estimated capacity of the site from 1,600,000 tonnes to 3,754,000 tonnes. Attached as Appendix "H" to this Report is a copy of a letter dated December 18, 1986 from Proctor & Redfern to the Ministry of the Environment setting out NSP's revised application, together with a copy of the revised application itself.⁴

As a result of the revised application to enlarge the site area proposed by NSP for landfilling, Proctor & Redfern also submitted in December, 1986 a revised application to amend the Parkway Belt West Plan. The purpose of the revision was to ensure that the amendment to the Plan reflected the enlarged area proposed for landfilling, that is, the increase of the landfill area to 40.5 ha. At the same time, Proctor & Redfern requested the Region and the City of Burlington to amend NSP's previous applications for Official Plan Amendments and a Rezoning to reflect the amendment sought to the Parkway Belt West Plan. Attached as Appendix "I" is a copy of the letter from Proctor & Redfern to the Ministry of Municipal Affairs dated December 8, 1986 in this regard, together with a copy of the conceptual site plan submitted with it, and a copy of Proctor & Redfern's related correspondence to the Region and the City of Burlington.

4. A copy of this letter and the revised application are Exhibit H-299 before the Joint Board.

In January, 1987 the Comparative Analysis Report commissioned on behalf of the Region from Walker Wright Young Associates Limited, entitled "Comparative Analysis of Alternative Sites for Sanitary Landfilling in the Regional Municipality of Halton, Site 'D' and Site 'F'," was completed. ⁵ In this Final Comparative Report the Region's consultants proposed a slightly larger area for landfill operations on Site "F" than had been outlined at the Phase 2, Stage 2C Study stage. The rationale for the changes in the site area proposed in the Final Comparative Report are detailed in that Report.

It was the conclusion of the Region's Environmental Assessment Study Team, as set out in the Final Comparative Report, that (at p.40):

"Based on the above "pairing analysis", Site "F" in the City of Burlington is recommended as a preferred site for the sanitary landfilling component of Halton's solid waste management system."

1.2 Nature of Analysis Conducted by Proctor & Redfern

As earlier noted, Proctor & Redfern has been involved in evaluating the suitability of the NSP Land or part thereof for landfilling since 1979. In the course of its land use planning investigations of the NSP Land, Proctor & Redfern considered the following factors:

- a) Applicable governmental policies and guidelines: provincial, regional and local
- b) Existing land uses in the area
- c) Potential future land uses in the area

5. This Report is Exhibit H-14 before the Joint Board.

- d) Compatibility of proposed use with existing and potential future uses
- e) Existing population and future population forecasts
- f) Location of existing housing and its proximity to/distance from the NSP Land
- g) Existing and potential community facilities and public uses including parks, open space, churches, schools and other specific facilities
- h) Views of the site from various locations
- i) Flora and fauna on the site
- j) Landscape features of significance in the vicinity, such as the Niagara Escarpment (Bruce Trail)
- k) Potential noise, dust, odour and visual impacts
- l) Existing transportation facilities and potential transportation impacts on existing land uses and users
- m) Hydrogeology issues
- n) Design, including phasing
- o) Services:
 - water
 - sanitary sewerage
 - storm drainage

Some of these factors are not required elements of a land use planning analysis. However, inasmuch as detailed studies had been undertaken by a variety of consultants on these issues as they relate to the NSP Land, the results of those studies were considered by Proctor & Redfern in preparing our land use analysis report.

In considering these factors, Proctor & Redfern had regard to our own investigations, site inspections and studies as well as the investigations and studies undertaken by others. These included:

- i) Report prepared by Proctor & Redfern entitled "National Sewer Pipe Proposed Sanitary Landfill Site", June, 1981;
- ii) Field visits conducted by Proctor & Redfern during the period 1979 to date;
- iii) Design Report by Proctor & Redfern Limited dated April, 1982;
- iv) Environmental Appraisal Report by Proctor & Redfern dated March, 1982;
- v) Phases I, II and III Reports on hydrogeology issues by Morrison Beatty Limited, 1980 and 1981;
- vi) Assessment of the sound environment in the vicinity of the NSP Land, Appendix 1 to the Design Report by Proctor & Redfern, dated April, 1982;
- vii) Transportation analyses concerning the NSP Land and its Environs, Appendix 2 to the Design Report by Proctor & Redfern, dated April, 1982;
- viii) Various studies and reports prepared on behalf of the Region of Halton as part of its Environmental Assessment Study of the Region's Solid Waste Management Program, 1982 to 1987.

As a result of the planning analysis carried out by Proctor & Redfern regarding the NSP Land, it is Proctor & Redfern's opinion that:

- i) use of the NSP Land for sanitary landfilling, as proposed by NSP in its application under the Environmental Protection Act (Ontario) and as proposed by the Region for Site "F", is the most appropriate land use for the Land and is consistent with sound planning principles; and
- ii) the planning context of the NSP Land renders the site unusually suitable for sanitary landfilling; and
- iii) sanitary landfilling on the NSP Land can be carried out in an environmentally sound and prudent manner with little disruption, if any, to existing land uses and users.

The basis for these opinions are detailed in the remainder of this Report.

2.0 SITE LOCATION, DESCRIPTION, AND LAND USE

The NSP Land is located in the Regional Municipality of Halton and the City of Burlington on part of Lots 2 and 3, Concession I and part of Lot 3, Concession 2, in the former Township of East Flamborough. Schedule "A", attached, indicates the regional context of the Land.

As noted earlier, NSP has owned most of the Land since the latter part of the 19th century. A portion of the site has been licensed since August, 1972 by the Ministry of Natural Resources for the operation of a shale quarry. The area licensed for extraction comprises about 30 ha (74 acres) of the NSP Land. Schedule "B", attached, outlines the property boundaries of the subject site and the area licensed for extraction.

It is important from a land use planning perspective to note that the site is located between the City of Burlington's former Bayview landfill site to the east and north and the current Regional landfill site to the west and north. The latter site is projected to reach capacity early this year.

NSP owns several other parcels of land in the immediate area. These are indicated on the land use map attached as Schedule "C" to this Report, as are the existing land uses surrounding the NSP Land.

The NSP land is characterized by ravines, intermittent streams and wooded areas. The site is currently vacant land save for the quarry licensed area referred to above. Until recently, the unauthorized use of the site by all-terrain vehicles has resulted in a random pattern of trails and bike paths throughout the property. This use of the Land has now, as far as possible, been terminated. An overhead Bell Canada easement crosses the northern part of the site and a HEPC line traverses the southwesterly part of the property.

2.1 Surrounding Land Uses

The immediately surrounding land uses are predominantly open in character and not urbanized. Apart from two light industrial/office uses some 700 m to the west, the nearest urban uses are almost 1100 m distant to the east.

Adjacent to the west and north is the existing Region of Halton landfill operation. To the east and in part north is the City of Burlington's former landfill site which is now used for passive parkland and recreational purposes, namely, Bayview Park. Uses associated with this property include a horse riding ring with ancilliary wood structure and pavilion, and the Burlington Rifle and Revolver Club. The Park is also used by model airplane enthusiasts.

North of the site the land uses are predominantly rural in character including some single family homes along King Road. The nearest residence in this direction is approximately 650 m away from the NSP Land boundary. The Niagara Escarpment is yet further to the north. The Burlington-Guelph Hydro transmission line and a Trans-Canada Gas pipe line are located about 600 m north of the site.

To the south, the site is bounded by the North Service Road and Highway 403. Beyond the Highway is a parcel of vacant land owned by NSP and a large HEPC corridor which are bounded on the south by a C.N. Railway rail line.

Further away from the site the surrounding uses are as follows: East of Bayview Park is another NSP quarry which is the site of active extraction activities. Further east, beyond a wide HEPC high voltage line easement, NSP owns a large tract of vacant land which, in part, is heavily wooded. Adjacent to it is another arm of the HEPC corridor. Still further to the east a low density residential development is located in the Forestvale community. A Stelco research building is located on the North Service Road near this community.

To the west, beyond the Regional landfill operation, strip residential development occurs on Waterdown Road, about 1650 m away from the site. The Falcon Creek ravine and dense bush in a large open space area separate these residential uses from the NSP Land. Along the North Service Road two industrial office buildings are located and are occupied by the Cumis and Tridon corporations. Immediately to the north of these facilities is another HEPC corridor.

To the immediate north of the NSP Land is a parcel of vacant land owned by Azova Investments Limited. According to the Region's consultants, approximately 12% of Site "F" is comprised of lands owned by Azova Investments Limited; all of this property is currently vacant. To the north of the lands owned by Azova Investments Limited a HEPC corridor and a Trans-Canada Gas Pipe Line are located. North of this is the Niagara Escarpment. Part of the Bruce Trail is located in this segment of the Escarpment. The NSP Land is not visible from the Bruce Trail in summer due to distance, topography and existing woodlots. In the winter, when many of the non-coniferous trees are leaf-free, the Land can be seen from some places.

The effect of these surrounding land uses is to create around the NSP Land, on all sides, physical barriers in one or more forms separating and shielding the Land from the closest population areas.

2.2 Proposed Future Uses in the Vicinity of the NSP Land

As at January 12, 1988 the only pending future development proposals in the vicinity of the NSP Land on record with the City of Burlington Planning Department involved a proposal for offices, a church and an elementary school to be located approximately 1 mile to the east of the NSP Land and a proposed low density residential development still further to the east. The proposal for offices, a church and elementary school for 240 students from junior kindergarten to Grade 8 with possible expansion to Grade 10 has been

approved by the City of Burlington. These uses are part of the same development. Additional future expansion options for this development include a day care centre or nursery school for 150 children and a senior citizens residence. The site is located at the north-west quadrant of Kerns Road and the North Service Road. The City of Burlington Planning Department has informed Proctor & Redfern that zoning is in place, plans have been approved and a site plan agreement has been processed. Construction has started.

In addition, Stelco is developing approximately 20 acres of land for low-density residential development north of its research facility located north of the North Service Road, to the east and south of the Forestvale community. A subdivision plan has been approved and construction is underway. The site is located on the east side of Kerns Road north of the North Service Road and north of the Stelco building.

Apart from these development activities, there are no new applications for development in the immediate vicinity of the NSP Land on file with the City of Burlington Planning Department according to information provided by it to Proctor & Redfern.

3.0 SERVICING

The following outlines the location, size and capability of existing services in the area of the NSP Land.

3.1 Water

A Region of Halton 355 mm (14") watermain is located on the North Service Road and serves the Tridon and Cumis buildings. It terminates approximately 550 m west of the NSP Land. A second Regional watermain on the North Service Road terminates just west of Kerns Road approximately 1500 m to the east of the NSP Land.

3.2 Sanitary Sewers

A 300 mm (12") sanitary sewer on the North Service Road now serves the Tridon and Cumis buildings. It was extended in approximately 1980 to within approximately 200 m of the NSP Land to collect potential leachate from the Regional landfill site.

Recently a 450 mm (18") sewer was constructed under Highway 403 to the south east corner of the NSP Land. In addition, in 1987 a 200 mm (8") pipe was extended up the west side of King Road to collect leachate from the former Bayview landfill site.

It is thus important to note that adjacent to the NSP Land are sanitary sewer pipes which were extended to the area specifically to collect surface leachate flows. These would be available to carry any potential emanations from a landfill operation on the NSP Land. The Region, in the various reports of its consultants, has made specific proposals regarding the servicing of Site "F" which are designed in part to utilize the existing servicing network.

3.3 Storm Drainage

A number of culverts under Highway 403 now drain surface water from the NSP Land and other properties. If the NSP Land is developed for a landfill operation, appropriate storm water management practices would be used, including retention ponds, and water would subsequently flow through the existing conduits. Subsurface drainage would be picked up and taken to the sanitary sewage pipes referred to above.

4.0 PLANNING POLICIES AND REGULATIONS

Several levels of government exercise planning jurisdiction over the NSP Land. These include the Province of Ontario, the Region and the City of Burlington.

Provincial jurisdiction is exercised through the Ministry of Municipal Affairs as the site lies within the Parkway Belt West Plan which was approved in 1978. The Region of Halton and the City of Burlington have approved Official Plans with land use policies that govern the site. Finally, the City of Burlington's Comprehensive Zoning Bylaw No. 4000-3 (which is approved by the Ontario Municipal Board) includes a zoning designation on the site. As previously stated, the NSP Land includes a 30 ha shale pit which is licensed under the Pits and Quarries Control Act (Ontario), administered by the Ministry of Natural Resources, and is subject in part to the regulations and policies of that legislation. In addition there are a number of provincial regulations, policies and guidelines that have a bearing on the use of the NSP Land.

The following Section of this Report sets out the relevant planning policies, regulations and guidelines which pertain to the NSP Land, with specific reference to the approvals required for a landfill facility. Proctor & Redfern's planning analysis is set out in Section 5.

4.1 The Parkway Belt West Plan⁶

This Provincial planning legislation is designed to achieve four goals within the Parkway Belt West Planning Area, as set out in Part 2 of the Plan:

1. Identification of Urban Areas;
2. Integration of the System of Urban Areas;

6. The Parkway Belt West Plan is Exhibit H-319 before the Joint Board.

3. Provision of a land reserve for future linear facilities and unanticipated activities requiring sites of high accessibility and substantial land area; and
4. Provision of a linked open space and recreational facilities system.

Map 1 to the Plan outlines the areas constituting the Parkway Belt West Planning Area. The NSP Land, in its entirety, forms part of this Planning Area. Map 2 to the Plan, entitled "ESCARPMENT LINK", designates the northerly portion of the NSP Land in Concession II as a **General Complementary Use Area** and the remainder of the Land, in Concession I, as a **Special Complementary Use Area**.

4.1 (a) **General Complementary Use Area**

Pursuant to Section 5.5.1 of the Plan, the "General Complementary Use Area" designation essentially permits all legally existing uses as well as agricultural, institutional and recreational uses, public uses such as roads and utilities, residential uses subject to certain conditions and "other uses", except residential and industrial, subject to certain criteria. In general terms the designation thus protects existing uses in place at the time of the introduction of the Plan and permits other specified uses of a low-density and low-intensity character. Subsection 5.5.1 (j) permits changes to uses of land, so long as certain specified conditions are satisfied.

4.1 (b) **Special Complementary Use Area**

Uses permitted on lands designated under the Plan as "Special Complementary Use Areas" are set out in Section 5.5.2 of the Plan. In addition, special provisions of the Plan apply to certain Special Complementary Use Areas, including the Area within which the NSP Land is located. Pursuant to Section 5.5.2, legally existing uses of land, identified

public uses, specified residential uses, additions to uses and stipulated changes to existing uses are all expressly permitted. In addition, however, other specified uses as set out in Part 6 of the Plan are permitted for the Special Complementary Use Area as set out in that Part of the Plan.

Under Section 6.2.3 of Part 6 of the Plan, subsection (q) provides, in part, as follows:

"In cases of discrepancy between the following specific implementing actions for this Link and the provisions of Part 5, the following implementing actions will prevail.

...

- q) In the Special Complementary Use Area located north of Highway 403, between the Burlington Landfill Site and the Burlington-Guelph Electric Transmission Line, permit uses set out in Subsection 5.5.1.

Subject to Subsection 5.1.3, the Plan permits some further industrial development in this area. The Plan does not permit uses beyond those set out in Subsection 5.5.1 until a comprehensive restricted area by-law and development agreements under Section 35a of the Planning Act have been prepared in consultation with municipal authorities, Provincial ministries, and other concerned persons or agencies, and subsequently approved by the appropriate authorities.

...

"

The southern portion of the NSP Land is situate in the Special Complementary Use Area described in subsection (q). Accordingly, on this portion of the NSP Land, the uses set out in Section 5.5.2 of the Plan and those set out in Subsection 6.2.3(q) of the Plan are permitted. This latter Subsection authorizes as permissible uses the General Complementary Use Area land uses and, subject to the conditions set out in the Subsection,

"some further industrial development". In the case of the latter use, such is authorized only after preparation and approval of a comprehensive restricted area by-law and development agreements.

Attached as Schedule "D" is a map of the Parkway Belt West Plan showing the designations applicable to the NSP Land.

4.1 (c) Ontario Regulations 482/73 and 263/79

Regulation 482/73, referred to earlier, is a land use regulation under the Parkway Belt Planning and Development Act, 1973 (Ontario), to implement a development control mechanism in the Plan Area in Burlington. This Regulation remains in effect until the provisions of the Parkway Belt West Plan are incorporated into local Official Plans and zoning bylaws. It essentially permits legal existing uses, agricultural uses and accessory uses. Thus, all proposals for significant new development require an amendment to this Regulation unless the proposed development or developer is specifically exempted from the application of the Regulation.

The Regulation provides, in Sections 3 and 4:

- "3. No land shall be used and no building or structure shall be erected or used except in accordance with the terms of this Regulation, but nothing in this Regulation prevents the use of any land, building or structure for a purpose prohibited by this Regulation if such land, building or structure was lawfully used for such purpose on the day this Regulation comes into force, or prevents the erection or use of any building or structure the plans for which have, prior to the day this Regulation comes into force, been approved by the municipal building inspector.

PERMITTED USES

4. Every use of land and every erection or use of buildings or structures to which this Regulation applies within the Town of Burlington is prohibited, except agricultural uses, and buildings and structures accessory thereto, including one single-family dwelling used in connection with each agricultural operation."

Thus, all proposals for significant new, non-agricultural development on lands in the Plan Area require an amendment to this Regulation, except as noted below.

On April 6, 1979 Regulation 482/73 was amended by Regulation 263/79 to, essentially, exempt the Region of Halton from its application. As amended by Regulation 263/79, Section 9 of Regulation 482/73 now provides:

"9. Notwithstanding anything contained in this Regulation,

...

(g) The Regional Municipality of Halton

may use land or erect any building or structure for the purpose of providing a service to the public."

The effect of this Regulation, as amended, is to permit the Region to utilize land falling within the Parkway Belt Planning Area in the City of Burlington without regard to the prohibitions set out under the Regulation, so long as the intended land use is for the purpose of providing a public service. Use of the NSP Land, which form part of the lands governed by the Regulation, for sanitary landfilling is thus permitted if so used by the Region. Attached to this Report as Appendix "J" are copies of Regulations 482/73 and 263/79.⁷

7. Copies of these Regulations are Exhibits H-320 and H-321 before the Joint Board.

A major review of the Parkway Belt West Plan has been underway by the Province for some time and the results are still not forthcoming as at the date of this Report. Nevertheless, the Parkway Belt West Plan, which is fully in effect at this time on the NSP Land, supercedes all Regional and local planning policies and regulations. As discussed below, both the Region and the City of Burlington have incorporated the Parkway Belt West Plan, as appropriate, into their Official Plans. The City of Burlington, however, has yet to implement the Plan in its Comprehensive Zoning By-law 4000-3.

From a land use planning perspective, it is important to emphasize that amendments to the Parkway Belt West Plan and Regulation 482/73 are required to permit a landfill operation on the NSP Land only if the landfill facility is privately operated. In the instance of Regulation 482/73, its provisions do not apply to a Regionally undertaken landfill on the NSP Land, as the Region is exempted from its application pursuant to Regulation 263/79.

The Region has maintained that a regionally operated landfill facility, as a public undertaking and public land use, does not require an amendment to the Parkway Belt West Plan. Although this view was opposed by some, the Region's position was confirmed in a letter to the Region from the Minister of Municipal Affairs dated June 24, 1986. The letter states that the proposed use is in conformity with the intent and purpose of this Plan, specifically Goal 3 noted above. A copy of the June 24, 1986 letter to the Region is attached as Appendix "J-1" to this Report.⁸

8. A copy of this letter is also Exhibit H-6 before the Joint Board.

4.2 The Regional Official Plan⁹

The Official Plan for the Halton Planning Area (the "Regional Plan") was adopted by Regional Council on September 6, 1978, by By-Law No. 69-78. It was approved in part by the Minister of Housing on August 1, 1980 with modifications; certain policies were referred to the Ontario Municipal Board while others were deferred for further study.

4.2 (a) Incorporation of the Parkway Belt West Plan

Pursuant to Part III, Section B1 of the Regional Plan, the development of the land in the Halton Planning Area that is affected by the Parkway Belt West Plan is to be governed by the provisions of the Parkway Belt West Plan. This Section specifically incorporates, as part of the Regional Plan, the provisions of the Parkway Belt West Plan and provides that in the case of any discrepancy between The Parkway Belt West Plan and the Regional Plan, the provisions of The Parkway Belt West Plan are to prevail. The language of Section B1 in this regard is mandatory. Map 1 to the Regional Plan shows the location of the NSP Land in the regional context (see Schedule "E", attached).

9. A copy of the Regional Plan is Exhibit H-87 before the Joint Board.

4.2 (b) Growth Management Policies - Solid Waste Management

The policies of Part III of the Plan relate to "Growth Management". The policies of Part III, Section D3 relate to "Solid Waste Management". Those relevant portions of Section D3 that pertain to the NSP Land are as follows:

"THE POLICY OF THE REGION IS TO:

- D3.8) 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 end uses suggested by local Plans, and in accordance with the requirements of the Ontario Ministry of the Environment.
- D3.9) Locate sanitary landfills where feasible on lands less suited to other purposes, but recognize that the nature of the operation of landfills, including the need to protect ground and surface water, may require locations for landfills which according to other policies of this Plan may be best suited for other purposes."

These policies have been referred to the Ontario Municipal Board.

The Regional Plan does not specifically designate areas for sanitary landfill use. However, the general policies of the Plan, noted above, do pertain to the siting of a landfill in the Region and its treatment as a land use. The Regional Plan determines that sanitary landfilling is an "interim" land use requiring ultimate rehabilitation. It further recognizes, specifically, that in appropriate circumstances sanitary landfills may be located on land best suited for other purposes.

4.2 (c) Resource Management Policies - Mineral Resources

MAP 4 to the Regional Plan identifies part of the NSP Land as a "Mineral Resource Extractive Area" and part as a "Protection Area". Neither term is defined under the Regional Plan.

The policies of Part IV of the Plan concern "Resource Management". Section "C" addresses "Mineral Resources" which are defined in Part VI of the Regional Plan as:

"... those naturally occurring inorganic elements and compounds which form and are located in, the ground area of Halton".

Those parts of Section "C" relevant to the NSP Land are as follows:

"C. MINERAL RESOURCES

THE POLICY OF THE REGION IS TO:

- C1 Recognize Mineral Resources as a major Regional concern, and to this end:
- C1a Support plans and programs which protect Mineral Resources and encourage their wise management.
- ...
- C3 Conserve Halton's Mineral Resources to ensure their availability for possible future extraction and development, and to this end:
- C3a Manage Halton's Mineral Resources in accordance with their relative importance, as follows ...
- ...

C3e Discourage land uses and activities deemed incompatible with extractive operations from locating within Mineral Resource Protection Areas. Incompatible land uses will be permitted within such areas only if it is proven, through detailed studies by the proponents of such uses, that:

C3e(i) The resources are not geologically or economically suited for extraction.

C3e(ii) Extraction would irrevocably damage a regionally significant geologic formation, or create a regionally significant hazard.

C3e(iii) Extraction is not feasible due to the prevalence of existing surrounding incompatible land uses.

...

C4h Restrict extractive operations to lands identified as Mineral Resource Extractive Areas. New pits and quarries and extensions to existing pits and quarries into areas not herein identified as Mineral Resource Extractive Areas will require amendment to the Official Plan.

...

C5c Recognize Mineral Resource Extraction as an interim land use which, through proper rehabilitation, can lead to a desirable or even improved end land use. Master rehabilitation plans will thus be encouraged to show agriculture, forestry, recreational-open space uses, as interim and/or end uses."

These policies have been referred to the Ontario Municipal Board.

4.2 (d) Resource Management Policies - Hazard Lands

MAP 5 to the Regional Plan designates part of the NSP Land as "Hazard Land". This designation appears to be due to the warm climate conditions that support a number of plant species in the area between the Escarpment and Lake Ontario and because of several intermittent streams running through the site. Pursuant to Part IV, Section F of the Regional Plan, the erection of permanent structures on designated Hazard Land is not permitted.

In addition, Section F7 of the Regional Plan outlines policies related to privately owned lands designated as "Hazard Land". Such lands may be redesignated subject to the following policy and criteria:

"F7 Accept, notwithstanding the above policy statements Numbers 1 to 6 inclusive, that where land identified as Hazard Lands is under private ownership, this Plan does not intend that such land necessarily remain so defined indefinitely, nor imply that it is open to the public nor imply that it will be purchased by any public agency. An application for redesignation of Hazard Lands for other purposes may be approved by the proper authorities after having considered:

F7a The nature and severity of the existing physical hazards.

F7b The potential impacts of these hazards.

F7c The degree to which these impacts could be overcome by the application of accepted engineering and resource management techniques and practices."

Therefore, an application to alter this designation "for other purposes" may be approved subject to the conditions noted. In any event, however, the provisions of the Parkway Belt West Plan supercede the provisions of the Regional Plan. Accordingly, as no hazard land protective provision is set out in the Parkway Belt West Plan applicable to the NSP Land, an application to alter the "Hazard Land" designation under the Regional Plan is not required.

As part of its application for a Certificate of Approval under the Environmental Protection Act (Ontario), NSP applied in April, 1982 for an Official Plan Amendment to the Regional Plan. This application was revised by NSP in December, 1986 so as to enlarge the extent of the area proposed for landfilling.

In December, 1985 the Region prepared a draft Official Plan Amendment to the Regional Plan to permit Site "F" to be utilized for landfill. In its "Land Use and Planning Assessment Report" dated June, 1985.¹⁰ Walker Wright Young Associates Limited stated (at p. 9-34):

"An amendment to the Regional Plan should be requested, in the opinion of Halton Regional staff, to designate the selected site for sanitary landfill purposes. Also indicated within the amendment would be the rehabilitation and after use plans for the site. Halton Regional staff feel that a Regional Official Plan Amendment would clarify the use of the lands in the future."

10. This Report, being Final Technical Report No. 12, Phase 2, Stage 2C of the Region's Environmental Assessment Study, is Exhibit H-51 before the Joint Board.

4.3 The City of Burlington Official Plan

4.3 (a) Incorporation of the Parkway Belt West Plan

Pursuant to Amendment No. 49 to the City of Burlington Official Plan, approved by the Ontario Municipal Board on June 16, 1971, the NSP Land was designated as a "Development Area".

Section 2 of the Official Plan sets out the City's land use plan. The policies applicable to Development Areas are set out in Section 2.18. That section essentially provides that special land use studies must be prepared for a Development Area before general or detailed land use policies can be established for a Development Area.

On August 26, 1980 the Minister of Housing approved Amendment No. 101 to the City's Official Plan. That Amendment incorporated the policies of the Parkway Belt West Plan into the Official Plan of the City of Burlington. Section 2.1 of the City's Official Plan provides:

"2.1 Parkway Belt West Plan

The development of those lands in the Burlington Planning Area that are affected by The Parkway Belt West Plan shall be governed by the provisions of the Parkway Belt West Plan, July 1978 which forms part of the Official Plan, and in case of any discrepancy between The Parkway Belt West Plan and the remainder of this Official Plan, the provisions of The Parkway Belt West Plan shall prevail".

In consequence of Amendment No. 101 and Section 2.1, the NSP Land is now designated as "Parkway Belt West". Attached as Schedule "F" to this Report is an extract from Map No. 2 to the City's Official Plan, identifying the location of the NSP Land and its land use designation.

4.3 (b) Land Use Plan - Extractive Industry

In addition to the provisions of Sections 2.18 and 2.1, regard must also be had to Section 2.10 of the Official Plan, entitled "Extractive Industry". Under this Section "Extractive Industry" is defined as an "industrial operation where the predominant activity is for the extraction of minerals which are found in a natural state on the site". The Section recognizes that certain areas in the City are endowed with specified raw materials and states that existing extractive operations in these areas will be able to continue "under the guidance of the Official Plan" and, finally, that "mined out" or abandoned extractive areas are to be in-filled and re-graded. Conversion to a recreational use in these circumstances, is to be encouraged.

As earlier noted, NSP applied to the City of Burlington in April, 1982, for an Official Plan Amendment to permit landfilling on the NSP Land. This application was revised in December, 1986 to reflect an enlarged proposed landfilling area.

4.4 City of Burlington Zoning Bylaw No. 4000-3

The City's Comprehensive Zoning Bylaw was approved in part by the Ontario Municipal Board on October 16, 1970 and December 31, 1970. Part VIII of this Bylaw zones the NSP Land almost entirely as a "Development Zone". This is, in essence, a holding designation that permits existing uses plus low-intensity urban uses, such as golf courses, nursing homes and single family residences. A small triangular portion of land at the southwest corner of the site is zoned "T-MR1", industrial. The "T" represents a transitional designation which requires a rezoning to remove the "T". The "MR1" zone is an industrial zoning which permits such uses as clothing industries, furniture and fixture industries, some paper industries and transportation equipment industries.

The Bylaw has not yet been amended to implement the Parkway Belt West Plan policies. Ontario Regulations 482/73, as amended, and 263/79, referred to above, supercede the zoning under Bylaw No. 4000-3. NSP applied to amend Bylaw No. 4000-3 in May 1982; this application was revised in December, 1986, together with the other applications noted above. Schedule "G" to this Report shows the zoning on the site under Bylaw No. 4000-3.

If the NSP Land is utilized for a privately operated landfill site, it is likely that the City would utilize Section 40 of The Planning Act 1983, (Ontario), which applies to all zoned areas in the Municipality, to request a site plan development agreement. This Section of the Act permits the Municipality to require, as a condition of approval, details of development proposals such as landscaping, parking, buffering, access and building locations. These elements can be set out in one or more agreements between the owner and Municipality and registered on title.

4.5 The Environmental Protection Act (Ontario) and the Environmental Assessment Act (Ontario)

To permit a privately operated landfill use on the NSP Land, a Certificate of Approval under Part V of the Environmental Protection Act (Ontario) is required. The Ministry of the Environment must be satisfied that the undertaking will fulfill the requirements of the Act in a number of technical respects and that the natural environment will be protected and conserved. The Act differs from the Environmental Assessment Act (Ontario) in that the latter requires more comprehensive studies in support of a proposed undertaking. The Region of Halton undertook its Waste Management Study from 1982 to 1987 under the Environmental Assessment Act (Ontario) which requires the review of alternate sites and alternate methods of accomplishing the proposed undertaking.

As earlier noted, in April of 1982, NSP applied for a Certificate of Approval under Part V of the Environmental Protection Act (Ontario). Subsequently the Region commenced its Environmental Assessment Study. NSP's application was revised and resubmitted in December, 1986 together with the other revised applications outlined above.

4.6 The Pits and Quarries Control Act (Ontario)

As noted in Section 2.0 herein, NSP has owned most of the land that is the subject of this Report since the latter part of the 19th century. It has been extracting shale from the site from time to time for approximately 80 years. About 30 ha (74 acres) of the NSP Land has been licensed by the Ministry of Natural Resources since August, 1972 pursuant to the Pits and Quarries Control Act (Ontario) for the operation of a shale quarry.

That Act applies, pursuant to Section 2, to only those parts of Ontario as are designated under regulation. Pursuant to Ontario Regulation 784/80 and 157/81, the Act applies to all of the Region.

Section 4 of the Act prohibits the operation of a pit or quarry except where authorized by a license issued by the Minister of Natural Resources. On August 1, 1972 NSP obtained a license from the Minister for part of the NSP Land. A copy of NSP's pit license is attached as Appendix "K".¹¹ No terms or conditions attach to NSP's license.

Subsection 4(2) of the Act requires that an application for a license to operate a pit or quarry be accompanied by a site plan which, in part, must address such issues as location of buildings, the use of lands within 150 m of the proposed pit, the topography of the proposed pit lands, ultimate

11. A copy of this license is Exhibit N-306 before the Joint Board.

rehabilitation and intended use and ownership of the land after extraction operations have ceased. Regulation 784/80 provides for the form and content of licenses issued under the Act as well as the requirements of the application for a license. Under Subsection 2(2) of the Regulation, the application must be accompanied by a description of the proposed rehabilitation of the property and intended use of the property after the termination of pit operations.

The Act and the Regulations thus require ultimate rehabilitation of a licensed pit or quarry. A copy of the Act and the relevant Regulations under it are attached as Appendix "L".

4.7 Applicable Government Policy Statements and Guidelines

4.7 (a) The Food Land Guidelines - Policy Statement

Pursuant to Section 3 of the Planning Act, 1983 (Ontario), the Minister of Municipal Affairs together with any other Minister of the Crown may from time to time issue Policy Statements that have been approved by the Lieutenant-Governor-in-Council on matters relating to municipal planning that in the opinion of the Minister are of Provincial interest.

Prior to the enactment of the 1983 legislation the then Minister of Agriculture and Food issued the "Food Land Guidelines - a Policy Statement for the Government of Ontario on Planning for Agriculture 1978."¹²

12. A copy of these Guidelines is Exhibit M-114 before the Joint Board.

The Food Land Guidelines are intended to assist municipalities in planning for "ongoing agriculture". The Guidelines are a statement of government policy to assist local governments in planning for agriculture in the preparation of Official Plans or amendments which may affect rural land. In other words, the Guidelines "provide a method to incorporate agricultural considerations into local plans".

The general area within which the NSP Land is situated, and including the NSP property, is shown as 1.6-3.4-T under the Guidelines. This means that 60% of the land in the area is classified as Class 1 and 40% Class 3, with adverse topography. This does not mean that those specific classifications apply to the NSP Land but rather, that they apply to the area shown in that classification which is generally bounded on the south by 403 Highway and extending north of the Escarpment and Highway No. 5. The classification extends several kilometres to the west of the NSP Land and east of the old Halton-Wentworth county line. The classifications are based in part on the Canada Land Inventory of Soil Capability for Agriculture. The Inventory Map for the NSP area is at a scale of 1:250,000; accordingly, the classifications shown must be carefully evaluated before specific judgments are made respecting the suitability of individual parcels of land for agricultural production.

As noted, both the Regional Official Plan and the City of Burlington's Official Plan now incorporate the provisions of the Parkway Belt West Plan. The specific provisions of the Parkway Belt West Plan affecting the NSP Land are set out in Section 4.1 herein. From that discussion it can be seen that the Plan does not envisage an agricultural use for the NSP Land in the long term although such a use would be permitted. The Plan also requires low-intensity, low-density uses.

Prior to the enactment of the Parkway Belt West Plan in July 1978, the City of Burlington's Official Plan designated the NSP Land as a "Development Area". Development Area Policies, as set out in Section 2.18 of the City's Plan, which formerly applied to the NSP Land, permit a very limited number of uses which contemplate restricted urban development in the future.

It is thus clear that the existing and prior policies affecting the NSP Land do not contemplate the agricultural use of the property in the long term. Indeed, the Development Area Policies of the City's Official Plan do not provide at all for agricultural uses. Moreover, it should be noted that as NSP has utilized the site for shale extraction over the past 80 years, the land has not been in agricultural use or production. Therefore, use of the site for landfill purposes would not take productive agricultural land out of use or production.

The implications of the Food Land Guidelines for the NSP Land and the Region's sanitary landfilling proposal for Site "F" are further discussed in Section 5.7.2 of this Report.

4.7 (b) Foodland Preservation Policy Statement - Proposed Government Policy

In April of 1986 the Ministers of Agriculture and Municipal Affairs issued a new policy statement entitled "Foodland Preservation, A Proposed Policy Statement of the Government of Ontario Issued For Public Review". This proposed statement has not yet been approved by the Provincial Cabinet. Accordingly, the 1978 Food Land Guidelines continue to apply and constitute current Government policy.

The relevant provisions of the proposed Foodland Preservation Policy Statement are discussed in Section 5.7.3 of this Report.

4.7 (c) Agricultural Assessment Requirements for Major Projects
- Evaluation Criteria of the Ministry of Agriculture and Food

The Ministry of Agriculture and Food has formulated certain evaluation criteria that are applied by its staff in assessing the potential impacts of land use proposals. These criteria, known as the "Agricultural Assessment Requirements for Major Projects" delineate the issues particular to agricultural concerns which must be addressed in respect of major land use proposals. To a large extent they are irrelevant to the use of the NSP Land for a sanitary landfill as they contemplate the measurement of anticipated impact on existing agricultural facilities, communities or land uses. Nonetheless, they were considered by Proctor & Redfern during the course of our preparation of our planning analysis regarding the NSP Land and, accordingly, they are discussed in Section 5 of this Report.

4.7 (d) Mineral Aggregate Resources - Policy Statement¹³

Pursuant to Section 3 of the Planning Act, 1983 (Ontario), the Minister of Municipal Affairs, together with the Minister of Natural Resources, issued a policy statement entitled "Mineral Aggregate Resources" which was approved by the Lieutenant-Governor-in-Council by Order-in-Council No. 1249-86 on May 9, 1986.

13. This Policy Statement is Exhibit N-305 before the Joint Board.

The purpose of the Policy Statement, as described therein, is expressed as follows:

"This document is prepared under the authority of Section 3 of the Planning Act and is the Province of Ontario's policy statement on planning for mineral aggregate resources."

General provincial policy on planning for mineral aggregate resources is set out in Section 1 of the Policy Statement in the following language:

"1. GENERAL

It is the policy of the Province of Ontario that:

- 1.1 All land use planning and resource management agencies within the province have regard for the implications of their actions on the availability of mineral aggregate resources to meet future local, regional and provincial needs.
- 1.2 Any planning jurisdiction, including municipalities and planning boards, identify and protect as much of its mineral aggregate resources as is practicable, in the context of other land use planning objectives, to supply local, regional and provincial needs."

In addition to this general policy approach, the Statement contains the following provincial policy pronouncements relevant to the NSP Land:

"2. OFFICIAL PLANS

It is the policy of the Province of Ontario that official plans:

- 2.1 Identify and protect legally existing pits and quarries from incompatible land uses.
- 2.2 Identify and protect from land uses, which are incompatible with possible future extraction, as much of the mineral aggregate resources occurring in the municipality as is realistically possible in the context of the municipality's other land use planning objectives, and in recognition of the continuing local, regional and provincial need for mineral aggregates.
- 2.3 May establish policies to permit non-aggregate land uses or developments in areas of mineral aggregate resources, which are protected in the official plan, where it can be shown that:
 - (a) extraction would not be feasible; or
 - (b) the proposed land use or development serves a greater long term interest of the general public than does aggregate extraction; or
 - (c) the proposed land use or development would not significantly preclude or hinder future extraction.

...

- 2.6 May require rehabilitation to an after use compatible with the long term uses permitted by the plan.

3. ZONING BYLAWS

It is the policy of the Province of Ontario that zoning bylaws:

- 3.1 Regulate all legally existing pits and quarries in such a way that these operations are a permitted activity with no uses or other activities permitted within the zoning category, that would be incompatible with mineral aggregate operations.

...

"

The Policy Statement also specifically addresses issues related to the implementation of the provincial policies set out in the Statement and further, expressly recognizes certain planning principles as the basis for the policies set out in the Statement. On the issue of "Implementation" the following provisions of the Statement are significant:

"4. IMPLEMENTATION

...

- o The Ministry of Natural Resources, within the context of its mandate to manage mineral aggregate resources at the provincial level, will:

...

- (g) encourage the concept of extraction as an interim land use activity. Toward this end, the Ministry shall:
 - o encourage operators of extraction sites to make the most effective use of the land resource;
 - o encourage sequential land use and progressive and ultimate rehabilitation with the active extraction area limited to a minimum practical size;

- o encourage operation of the site in a manner as compatible as possible with surrounding land uses and activities; and
- o encourage all depleted extractive sites, including wayside pits and quarries, to be returned to a condition suitable for an acceptable after use and compatible with adjacent land uses."

Amongst the planning principles recognized in the Statement as forming the basis for the provincial policies set out in it, are:

"The following mineral aggregate resource planning principles are recognized as the basis for the policies contained in this document.

...

- o Other land uses may in specific instances, take precedence over aggregate extraction, including wayside pits and quarries.

...

- o Municipalities have an important role in planning for mineral aggregate resources and aggregate operations and should encourage the concept of extraction as an interim land use activity."

Regard must be had to the provisions of this Policy Statement in assessing the land use implications of a sanitary landfill on the NSP Land.

4.7 (e) Guidelines of the Ministry of the Environment

The Ministry of the Environment has adopted a number of policies for use when considering matters falling within its area of jurisdiction. Two of these have relevance to the proposal for a landfill facility on the NSP Land.

i) Land Use Compatibility Guideline No. 07-03-01

The objective of the Guideline is stated as being "to minimize the exposure of humans, including existing and future residents, to the adverse environmental effects of certain incompatible land uses".

The Guideline goes on to say "It is the policy of the Ministry of the Environment to recommend the separation of incompatible land uses, where necessary, in the review of land use plans as a preventive means of achieving environmental objectives of the Ministry. ... "

The Guideline deems land uses which "are known or expected to cause environmental problems for one another, when in proximity ..." to be "incompatible" and provides for the introduction of "environmental control measures" to minimize significant adverse effects. The policy set out under the Guidelines applies:

" ... in all cases where a proposed change in land use has the potential to create significant adverse environmental effects on another land use(s)."

"Environmental control measures" include buffering areas between emission sources and residential or sensitive land uses.

The full text of the document is included as Appendix "M" to this Report. It is discussed further, in relation to the NSP Land, in Section 5.12 of this Report.

ii) Guidelines for Land Use On or Near Landfills and Dumps
No. 07-07-01

The objective of these Guidelines are stated as being "to protect the health, safety, convenience and welfare of residents from potential adverse environmental effects of landfills and dumps, by restricting or controlling land use".

The Guidelines set out factors to be considered when a land use is proposed on or near operating or non-operating landfills and dumps. Section 5 of the Guidelines is concerned with Land Use Considerations. It states that the Ministry of the Environment" will normally recommend against proposals for sensitive land use adjacent to operating landfills and dumps, and land used for waste disposal purposes where there are completed or partially completed fill areas".

The Guidelines do not specifically address the appropriate location for a landfill or dump. Rather, they are concerned with the factors to be considered when a land use is proposed for lands adjacent to or near a landfill or dump. Nevertheless, it is prudent in a planning context to consider the provisions of the Guidelines when it is proposed to locate a new landfill or dump in the vicinity of potentially incompatible uses. The full text of the Guidelines are attached as Appendix "N" to this Report. Their relevance to the NSP Land is discussed in Section 5.12 of this Report.

5.0 PLANNING ANALYSIS

5.1 Existing Land Uses on the NSP Land

5.1 (a) The Parkway Belt West Plan

As earlier noted, part of the NSP Land has been licensed for shale extraction since 1972. Pursuant to the relevant provisions of the Pits and Quarries Control Act (Ontario), such a use is an interim one and when the quarry operation is terminated site rehabilitation must occur. The balance of the Land is vacant.

Under the Parkway Belt West Plan almost the entirety of the land subject to NSP's quarry license falls within areas designated for "General Complementary Uses". Pursuant to Subsection 5.5.1(e) of the Plan, public uses are specifically permitted in General Complementary Use Areas so long as the public use is of a "low-density, low-intensity character". On the remainder of the NSP Land, designated "Special Complementary Use Area", the uses authorized for "General Complementary Use Areas" are permitted. Hence, such public uses are also permitted on this portion of the Land.

The term "public use" is not defined under the Plan. However, "low-density use" and "low-intensity use" are defined in Section 1.1:

"Low-Density Use

A use of land that has only a small part of the site covered by structures or equipment of limited height and low mass appearance.

Low-Intensity Use

A use of land that has an average low level of activity: e.g. small number of employees, few visitors per acres, low traffic generation."

Subsection 5.5.1(j) governs changes of uses in General Complementary Use Areas. It authorizes changes of uses of land, buildings and structures subject to compliance with the following three conditions:

- "(i) New uses are as compatible with the provisions of the Plan as existing uses, or more compatible.
- ii) All natural features are preserved to the maximum possible degree.
- (iii) Any other conditions required to secure the provisions of this Plan are satisfied."

In planning terms, use by the Region of the NSP Land for sanitary landfilling would constitute a public use as the purpose of the use is to fulfill a public purpose to be carried out by a public authority. The proposals put forward by NSP and by the Region for use of the NSP Land contemplate that only a small portion of the Land would be covered by structures or equipment. Further, landfilling in the manner proposed would involve low level activity on the lands within the meaning of the term "low-intensity use". It is Proctor & Redfern's opinion, therefore, that landfilling on the NSP Land by the Region would be a land use permitted under the relevant designations stipulated under the Parkway Belt West Plan. The applicable Parkway Belt Plan policies further support the notion that landfill is an appropriate interim use for land that will ultimately revert to open space or low - intensity, low-density uses; the landfilling proposal is thus consistent with the policies applicable to General and Special Complementary Use Areas.

As discussed in Section 4.1 (c) of this Report, no amendment to Regulation 482/73 is required to permit the Region to use the NSP Land for sanitary landfilling as such a use, by the Region, represents the provision of a public service.

5.1 (b) The Regional Plan

The Region of Halton's Official Plan specifically recognizes, in its as yet unapproved policies on Resource Management, that mineral resource extraction is an interim land use which, upon proper ultimate rehabilitation, can lead to a more desirable land use or an "improved end land use" (Section C5c, p. 84). The Plan provides that for mineral extraction areas, such as the quarry licensed area on the NSP Land, master rehabilitation plans proposing agriculture, forestry or recreational open space uses as interim and/or end uses are to be encouraged.

Thus, under the Regional Plan, the present use of the quarry licensed area on the NSP Land constitutes a recognized interim land use requiring ultimate rehabilitation. Sanitary landfilling is also specifically characterized under Section D3.8 of Part III of the Regional Plan, as being an interim land use requiring ultimate rehabilitation. The introduction of sanitary landfilling on that portion of the NSP Land now subject to a quarry license would thus represent, under the Regional Plan, substitution of one interim land use for another, both subject to mandatory rehabilitation requirements. This view is supported, as well, by the terms of the Provincial Policy on mineral aggregate resources set out in the Province's Mineral Aggregate Resources Policy Statement under which it is specifically recognized that:

- o extraction is an interim land use activity;
- o the concept of extraction as an interim land use activity is to be encouraged; and
- o official plans may require rehabilitation of extraction areas.

The Region's proposal to utilize the NSP Land for sanitary landfilling includes an after-use proposal under which reforestation and open space land uses are contemplated. Such after-uses fall within the category of rehabilitation uses identified under the Regional Plan as those to be encouraged for mineral extractive areas. Such after uses, as well, satisfy the low-density, low-intensity use criteria provided for under the Parkway Belt West Plan.

Landfill on the NSP Land, as an acknowledged interim land use, effectively ensures that rehabilitation of the site will occur in the future by a specified post-landfill closure date. Certainty is thus provided to the rehabilitation requirement and its timing. Under the Region's proposal for landfilling at Site "F", specific after-uses have been identified and detailed design work has been undertaken to accommodate them. Thus, the approval of landfilling on this site provides clarification and certainty as to the form of site-rehabilitation that will take place. Pursuant to the Region's proposed undertaking on Site "F" there is also assurance that funding will be in place to implement the preferred after-use program. These elements of certainty positively respond to the rehabilitation requirements of the Regional Plan and the Parkway Belt West Plan objectives for the area and lend predictability and accountability to the planning process for this land.

There is considerable support in the planning and engineering fields for the use of quarry sites for sanitary landfill purposes. For example, landfill has been undertaken or is in process at the following quarry locations in Ontario: the former Springbank Sand and Gravel Pit in Mississauga; The Walker Brothers Quarry in Niagara Falls; the former Glandridge Quarry in St. Catharines; the Steepley Quarry in Flamborough Township; and the Cope Quarry on Highway 20, south of the Queen Elizabeth Way.

5.2 Surrounding Land Uses

The current Regional landfill operation adjoins the NSP Land to the west and north, and the former City of Burlington landfill site adjoins part of the Land to the east and north. From this perspective alone, the NSP Land invites landfilling, as such a land use is identical to the current or past immediately adjacent land uses.

There is no population in the immediate area that could be adversely affected by a landfill operation. The NSP Land is separated from neighbouring population to the south by Highway 403, a CN Railway line, and a HEPC corridor.

A hydro corridor exists to the north of the site, and there are only a few single family homes on King Road in this direction at a distance from the site of approximately 650 m.

To the east, Bayview Park and a vacant parcel of land, which is owned by NSP and which is heavily wooded, separate the site from the existing Forestvale Community.

To the west the Regional landfill site will likely be rehabilitated for open space use when it reaches capacity in 1988. Beyond this, the Falcon Creek ravine and an additional wooded open space area separate the site from residential uses on Waterdown Road. Schedule "C" to this Report shows the land uses in the site area.

The Evaluation and Summary Report of the Region's consultants, dated June 1985, and prepared as the Final Report in Phase 2, Stage 2C of the Region's Study¹⁴ rated population impacts lowest at Site "F", as did the final Comparative Analysis Report prepared by Walker, Wright, Young Associates Limited on behalf of the Region in January 1987.¹⁵ Chart 6 from the January 1987 Comparative Analysis Report is attached as Appendix "O" hereto, ranking various factors on the two final candidate sites considered by the Region's Environmental Assessment Study Team.

It is clear from a review of the surrounding land uses that the NSP Land is virtually surrounded on all sides by public uses. These include the Regional landfill operation, a former municipal landfill operation (now a public park), Ontario Hydro lines, a major Provincial Highway, and a C.N. rail line. The land use pattern in the site area is unusual in terms of this agglomeration of public uses which separate the site from the remaining urban populated areas of the City of Burlington. As such, landfill is an appropriate use in this land use context based on the fact that it is a public use intended to provide a public service and to respond to a public need. It is consistent and compatible with the surrounding public uses and does not in planning terms create or establish negative impacts on any of these surrounding uses.

14. This Report is Exhibit H-13 before the Joint Board.

15. This Report is Exhibit H-14 before the Joint Board.

5.3 Services

Sanitary sewers are immediately available in the vicinity of the NSP Land and have capacity to serve a landfill operation on the Land. Water supply is also immediately available to the site. Storm water conduits are available to accept flows from the property and with appropriate storm water management facilities and practices would be satisfactory.

5.4 Transportation

Landfill operations have been carried out in this area for many years without transportation problems.

1983 statistics completed for the Region for its landfill site adjacent to the NSP Land indicate that the maximum number of large trucks arriving on a weekday was 148 and the maximum number of cars was 65. On a Saturday, the corresponding maximum volumes were 41 and 168.¹⁶ Since these volumes are spread out over at least 10 hours, it can be seen that, even allowing for peaks, the number per hour is small in comparison with the capacity of the road system, and specifically, the North Service Road.

The transportation impacts of a landfill use on the NSP Land were reviewed by Proctor & Redfern in our 1982 Design Report. In that Report we concluded that "traffic generated by the NSP site, even under conditions of intense use, would have no significant impact on the traffic operations of roads and intersections providing access to the site. For this reason no road improvements are recommended".¹⁷

16. This data is derived from Tables 1 and 2 of Exhibit H-31 before the Joint Board.

17. See p. B-16 of Design Report by Proctor & Redfern Limited, April 1982.

Since Proctor & Redfern's 1982 studies, which investigated the possibilities of a direct link to the North Service Road from westbound Highway 403 traffic, a number of improvements have been proposed for the Q.E.W. - Highway 403 system in the area. Some construction has taken place to the east and it is expected that in late 1988 or early 1989 work will begin on a new interchange at Brant Street and the Q.E.W. These works will further improve access to the NSP Land from the Provincial, Regional and local road networks.

The Region of Halton's Environment Assessment Study Team examined the potential traffic impacts of a landfill operation on Site "F". Giffels Associates Limited, the traffic and transportation consultants retained by the Region, concluded that no major or significant negative transportation or traffic safety impacts could be identified in respect of the site.¹⁸.

The positive features related to the NSP Land from a traffic safety perspective include the following:

- (i) The entrance to the site has excellent visibility as the North Service Road is relatively level and is essentially horizontal both to the east and west;
- (ii) There is a signalized three-way intersection at the southeast corner of the site, at the North Service Road and King Road adjacent to the site;
- (iii) The majority of access to the site is via Provincial Highways which are being improved in the area;

18. Comparative Analysis Report, Exhibit H-14 before the Joint Board, Appendix "B", p. B-11.

- (iv) Access to the NSP Land is available entirely from arterial roads (rather than collector or local roads) with the sole exception of the North Service Road;
- (v) Neither the Region's consultants (Giffels Associates Limited) nor Proctor & Redfern identified any safety concerns at the site entrance; and
- (vi) According to the transportation experts, haulage truck routing to the existing adjacent Regional landfill site can be maintained, thus creating the least amount of change to existing conditions.

Current routes to the adjacent Regional landfill site include only one road that is not classified as an arterial in the Region's Official Plan, namely the North Service Road. There are no residences fronting on or close to this section of the North Service Road between Waterdown Road and Brant Street. Only one farmhouse gains access to the Service Road in this area.¹⁹

The Region's transportation analysis of the existing Regional site noted that trucks passed through the existing King Road/North Service Road intersection which has "restricted approach widths and reduced sight lines from the south". This was not a major concern, "due to the existence of traffic signals and relatively good east to west travel characteristics through the intersection".²⁰

19. Based on field observations made by Proctor & Redfern.

20. Transportation Assessment Giffels Associates Limited, Final Technical Report No. 1, Phase 2, Stage 2C, Selection of Preferred Site - January, 1985, p. 6-8, Exhibit H-31 before the Joint Board.

The Region's consultants also noted that access to the North Service Road from Highway 403 is via an interchange at Brant Street which is, as noted above, to be improved by reconstruction. It is also an arterial road. No problems with the existing situation were indicated.

5.5 Hydrology/Hydrogeology

The Region of Halton's Environmental Assessment Study Team rated public health and safety as the first priority in the review of all sites considered by them. In this category Site "F" was determined to be the preferred site for Regional landfilling.²¹

Morrison Beatty Limited, in their hydrogeology investigations of the NSP Land, concluded that the hydrogeological conditions at the NSP site were "ideal for a landfill operation".²² They also indicated in their Phase II Report:

"In summary, we conclude that the NSP property is hydrogeologically suitable for the proposed landfill. There will be no adverse impacts on water resources in the vicinity of the site providing the methods of infiltration control and leachate control and treatment outlined in this report are carried out."²³

21. See Appendix "O" to this Report (Chart 6, Comparative Analysis Report, p. 56, Exhibit H-14 before the Joint Board).

22. p. iii, of Exhibit N-186 before the Joint Board.

23. p. iv, of Exhibit N-186 before the Joint Board.

Some of the advantageous hydrogeologic factors applicable at Site "F" and identified by Morrison Beatty Limited were as follows:

" ... Some of the hydrogeologic factors that make the site ideal are:

- (i) large buffer zone which extends over 1000 m southward (the direction of lateral leachate migration);
- (ii) absence of aquifers and private water supplies south of the site;
- (iii) natural poor quality groundwater;
- (iv) low permeability of shale;
- (v) presence of a shale resource which can be extracted simultaneously with the landfill operation;
- (vi) presence of landfills on both sides of the site that have not caused significant impacts on water resources beyond the NSP property;
- (vii) presence of on-site marshes that can be utilized for natural leachate treatment, if required; and
- (viii) the presence of an extensive buffer zone, a shale formation and marshes which can be used for natural on-site treatment of leachate."²⁴

24. p. iii, of Exhibit N-186 before the Joint Board.

In their Phase III Report, completed in November, 1981, concerning the NSP Land, Morrison Beatty Limited stated:

"The findings of our Phase III investigation support our conclusion in the Phase II report that the hydrogeologic conditions at the NSP site are ideal for landfilling operations."²⁵

Trow Hydrology Consultants Ltd., the Region's hydrogeology consultants, also concluded that Site "F" was suitable for sanitary landfilling. Indeed, it was their conclusion that of all sites considered by the Region as prospective candidate sites for Regional landfilling, Site "F" was the preferred site. They expressed their final conclusion in these words:

"Considering the advantages of each site, we feel that those of Site F outweigh those of Site D. In particular, Site F is better from the point-of-view of public health and safety because there are no groundwater and surface water users. Therefore, we favour Site F over Site D."²⁶

25. This Report is Exhibit N-185 before the Joint Board, see p. 2.

26. Comparative Analysis Report, January, 1987, Appendix "A", p. 4, Exhibit H-14 before the Joint Board.

Trow Hydrology Consultants Ltd. listed the advantages of Site "F" as follows:

- "1. There are no downgradient groundwater users.
2. The groundwater at the site is of poor quality and essentially non-potable.
3. A municipal, piped water supply is available to all residents downgradient of the site.
4. There are no surface water users downstream of the site.
5. There is no foreseeable future use for groundwater or surface water resources.
6. The groundwater flow system is nearly unidirectional and control systems would be easier and cheaper to install if required.
7. A sewer is available near the site to receive leachate."²⁷

On the basis of these detailed hydrogeologic investigations, the NSP Land thus appears to be suitable and environmentally safe from a hydrogeological perspective for sanitary landfilling.

27. Comparative Analysis Report, January, 1987, Appendix "A", p. 3., Exhibit H-14 before the Joint Board.

5.6 Biophysical Features

During 1981 and 1982, Proctor & Redfern undertook a study of the natural environment of the NSP Land. Initially, a resource inventory of the site was carried out; this was then compared with the preliminary engineering design and operation plans for a landfill facility formulated by Proctor & Redfern. As a result, the engineering design put forward by NSP as part of its application for approval to operate a private landfill site was modified to retain certain wood lots on the site.

The Region's Environmental Assessment Study Team ranked "Natural Environment" as the second priority factor in assessing the suitability of various proposed sites for landfilling. Within this category biophysical and agricultural factors were considered.

The Region's biophysical analysis of Site "F" was conducted by Bird and Hale Limited. In their Final Comparative Evaluation Report they concluded that landfilling on Site "F" in accordance with the design proposed by the Region would:

- o result in the loss of a wide range of vegetation habitat types not well represented elsewhere;
- o not result in significant adverse impact to wildlife populations;
- o not affect managed woodlots on site;
- o result in the loss of representatives of three provincially rare species and other species of regionally significant plants; and

- o not adversely affect wildlife habitats or aquatic systems.²⁸

It was the final conclusion of Bird and Hale Limited with respect to Site "F" that:

" ... there are no biological conditions within the proposed area for landfilling that would absolutely preclude the use of Site "F" as a landfill site, since none of the biological resources, although very significant, are categorized as endangered."²⁹

In late 1981 and early 1982 Proctor & Redfern undertook an environmental appraisal of the NSP Land on behalf of NSP. Our Report, dated March, 1982 and entitled "Environmental Appraisal -Sanitary Landfill Proposal, Burlington, Ontario"³⁰ sets out our findings, as at March, 1982, concerning biophysical features of the NSP Land and our recommendations for the protection of significant plant communities on site. These recommendations resulted in a reconfiguration of the area originally proposed by NSP for landfilling so as to preserve certain plant species. It was also confirmed in that Report (as was also found by Bird and Hale Limited) that there are no rare or regionally significant mammals, birds, fish, amphibians or reptiles on the NSP Land.³¹

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- 28. Comparative Analysis Report, January, 1987, Appendix "C", pp. 14 to 16, Exhibit H-14 before the Joint Board.
 - 29. Comparative Analysis Report, January, 1987, Appendix "C", p. C18, Exhibit H-14 before the Joint Board.
 - 30. This Report is Exhibit WB-107 before the Joint Board.
 - 31. See Environmental Appraisal Report, Proctor & Redfern, March, 1982, p. V (Exhibit WB-107).

As discussed earlier, subsequent to completion by Proctor & Redfern of its Environmental Appraisal Report in 1982, applicable classifications of rare plants in Ontario were revised. In consequence, the number of rare plant species found on the NSP Land has been significantly reduced.

5.7 Agricultural Factors

5.7.1 Results of the Region's Studies

Site "F" was considered by the Region's consultants to have low potential for negative impact on long-term agricultural viability and to have "low potential" for agricultural production.³² The NSP Land, in fact, has not been used for agricultural purposes in this Century. Considering its location, topography and soil conditions, it is difficult to conceive of any part of the NSP Land being used for agricultural production.

Ecological Services for Planning Ltd., the Region's consultants on agricultural issues, concluded that Site "F" was the "most preferred" of all those considered by the Region for a landfill site.³³ They indicated:

"Site "F" has the following constraints to agricultural development:

- o The site is isolated from large contiguous blocks of agricultural lands by urban and industrial development, transit corridors, the Parkway Belt and the Niagara Escarpment;

32. Agricultural Assessment, Phase 2, Stage 2C, Final Technical Report No. 4, Exhibit H-19 before the Joint Board.

33. Agricultural Assessment, Phase 2, Stage 2C, Final Technical Report No. 4, Exhibit H-19 before the Joint Board, p. 3-1.

- o Site access for farm machinery is along paved arterial roads such as King Road and North Service Road;
- o The majority of the site is primarily low to moderate quality for agricultural production of common field crops;
- o Major ravines which originate from the escarpment face dissect the area and are responsible for the small, irregular shaped fields which reduce efficient use of farm machinery; and
- o Several fields contain an old field complex of trees and scrubland and have not been used for agricultural production for several years.

Based on the foregoing, the future potential of Site "F" for agricultural production is limited."³⁴

The recommendation by Ecological Services for Planning Ltd. that Site "F" be chosen as the location for future Regional landfilling did not change subsequent to completion of the Region's Stage 2C Studies. At the comparative analysis stage of the Region's Environmental Assessment Study, Ecological Services for Planning Ltd. again expressed the opinion that the impact on long-term agricultural viability, if a landfill was located at Site "F", would be low. This contrasted with that firm's opinion that

34. Agricultural Assessment, Phase 2, Stage 2C, Final Technical Report No. 4, Exhibit H-19 before the Joint Board at pp. 3-1 to 3-2.

such adverse impact at Site "D" (the only other site then under consideration by the Region) would be "high-moderate" even if Site "D" was rehabilitated after landfilling for an arable agricultural after-use.³⁵

5.7.2 Government Policy - The Food Land Guidelines

As earlier noted, the Ontario Food Land Guidelines were introduced by the Government of Ontario in 1978. These Guidelines require that the agricultural implications of various land use proposals be considered in the formulation of regional and local municipal planning documents as well as by appropriate government agencies in the carrying out of their duties.

Under the land classifications relevant to the Guidelines part of the NSP Land is characterized as suitable for agricultural use. However, the general area comprised of the NSP Land and its immediate environs is clearly not part of an existing or planned agricultural community. This is evidenced by the fact that:

- o The Regional Official Plan and the City of Burlington's Official Plan do not encourage or require agricultural uses on the NSP Land;
- o The NSP Land is surrounded on every side by natural or man-made physical barriers which prevent the development of a continuous agricultural environment: south of the Land, Highway 403 forms a substantial barrier between the site and urban areas further to the south; this barrier effect is strengthened by the presence

35. Comparative Analysis Report, Exhibit H-14 before the Joint Board, Appendix "D", p. 1.

of a HEPC corridor and a C.N. Railway line. To the north a, HEPC corridor, the Trans-Canada Pipe Line facility and the Niagara Escarpment function as similar barriers. To the east and the west are located the current Regional landfill and Bayview Park, the City of Burlington's former landfill;

- o Immediately surrounding the NSP Land in every direction are existing non-agricultural land uses; and
- o No agricultural uses are in place or contemplated for any part of the NSP Land proper, nor has such a use existed historically.

All available information thus clearly indicates that the NSP Land is not conducive to agricultural production. There is no land use history of the Land actually being used for agricultural purposes, there is no recorded planning intention by the involved regional and local governments to utilize the Land (or any part thereof) for agricultural uses and the entire area is not part of an agricultural community.

The intent of the Food Land Guidelines is to preserve an adequate and suitable land base in the Province to service the future agricultural production needs of Ontario residents. To that end, the Guidelines seek to preclude the diminution of available high priority agricultural lands by preventing the introduction, in such areas, of non-agricultural land uses. The Guidelines thus encourage and require the protection and preservation of communities within which agricultural activities can occur.

It follows, in a land use planning context, that the allocation of land for public services, such as landfilling, outside areas most suitable for agricultural production complies with and advances the stated objectives of the Food Land Guidelines by preventing the introduction of incompatible land uses in existing or potential agricultural communities. Use of the NSP

Land for sanitary landfilling would thus advance the purpose and goals of the Food Land Guidelines by not taking lands suitable for agricultural purposes out of production and by preserving agricultural communities elsewhere in the Region.

5.7.3 Proposed Government Policy - Foodland Preservation Policy Statement, 1986

The proposed Policy Statement is based on the Food Land Guidelines with modifications to clarify and strengthen certain policies in light of some years of experience with the Guidelines in their current form.

The basis for the identification and evaluation of prime agricultural land is similar under the existing Guidelines and the proposed Policy Statement. The method of protection of agricultural lands is strengthened and the implementation of policies is clarified under the proposed Policy Statement.

An evaluation of the proposal to locate a sanitary landfill on the NSP Land, undertaken in light of the provisions of the proposed Policy Statement, raises the same issues as those addressed in Section 5.7.2 above. The use of the NSP Land for landfill would not offend the policies set out under the proposed Statement; to the contrary, such use of the NSP Land would further the objectives for which the Policy Statement was formulated.

5.7.4 Provincial Evaluation Criteria - Agricultural Assessment Requirements for Major Projects, Ontario Ministry of Agriculture and Food

In addition to the Food Land Guidelines and the Ontario Government's proposed Foodland Preservation Policy Statement, the criteria applied by the Ministry of Agriculture and Food in assessing the potential impacts of proposed projects on agriculture are relevant. A copy of these criteria are attached as Appendix "P" to this Report.

The Ministry has directed itself to identifying the criteria which should be considered in determining the impact of a proposed project upon agricultural resources and communities. Eight general criteria have been identified by the Ministry. They are:

1. Potential loss of agricultural land
2. Potential loss of existing agricultural facilities
3. Impact on on-site and off-site farm operations
4. Impact on agricultural communities
5. Compatibility of land uses
6. Possible spin-off effects
7. Mitigation measures
8. Other.

These criteria are to be considered by Ministry staff in evaluating any development proposal. The intent of utilizing these criteria has been expressed by the Ministry as follows:

"The intent of attaining and evaluating the above-noted criteria is to locate a site that has the least impact on agriculture, in terms of loss of potential agricultural land and minimization of conflict with the agricultural community. When the above-noted information is gathered, some form of weighting or assessment of this criteria will, therefore, be required."³⁶

36. Ontario Ministry of Agriculture and Food, "Agricultural Assessment Requirements for Major Projects" Evaluation Criteria, p. 3.

Approval of sanitary landfilling on the NSP Land would meet the stated intent of the Ministry's evaluation criteria as locating a landfill on the NSP Land would have virtually no impact on agriculture. This is so because:

- Criteria No. 1 - Potential Loss of Agricultural Land

According to the Region's consultants, over half of Site "F" is comprised of soils with little, if any, soil capability for agriculture (53%). The remaining portion of Site "F" is classified as Classes 3 and 4 (26%) and Classes 1 and 2 (21%). Overall, the quality of the land for agricultural use is low;³⁷

- Criteria No. 2 - Potential Loss of Existing Agricultural Facilities

There are no existing agricultural facilities on Site "F" or on that part of Site "F" comprising the NSP Land;

- Criteria No. 3 - Impact on On-Site and Off-Site Farm Operations and Criteria No. 4 - Impact on Agricultural Communities

The NSP Land is not located in an existing or intended agricultural community. Therefore, there would be no adverse impact on farming operations or on an agricultural community by landfilling at Site "F";

37. Agricultural Assessment, Phase 2, Stage 2C, Final Technical Report No. 4, Exhibit H-19 before the Joint Board, p. 3-5(e)

- Criteria No. 5 - Compatibility of Land Uses

There are no surrounding farming operations in the vicinity of Site "F" against which the compatibility of a landfill use can be assessed. The predominant surrounding land uses at Site "F" are, in fact, of the identical character to the proposed use, namely a current and a former landfill site;

- Criteria No. 6 - Possible Spin-Off Effects

There is no surrounding agricultural community in the vicinity of Site "F". Accordingly, the growth patterns of farming operations and farmland values will not be affected and no new demand for farming services will arise as a result of landfilling.

- Criteria No. 7 - Mitigation Measures

Introducing a landfill at Site "F" would not involve the introduction of landfilling in an agricultural community; therefore, no mitigation measures designed to minimize impact on surrounding farm operations would be necessary.

As is apparent from the foregoing, application of the Ministry of Agriculture and Food's evaluation criteria to the proposal for landfilling at Site "F" (on the NSP Land) clearly supports approval of the proposal as all of the Ministry's criteria are either completely satisfied or are not applicable from the outset.

5.7.5 The Position of the Ministry of Agriculture and Food

The Ministry of Agriculture and Food, along with other government agencies, was informed of the status of the studies being conducted by the Region's Environmental Assessment Study Team from time to time and commented, as part of the government review of the Region's proposed undertaking, on the suitability of Site "F" as a proposed regional landfill site. In September, 1983 the Ministry indicated that it was "strongly opposed to landfilling on good agricultural land" and urged the use of pits and quarries for landfilling.³⁸ In March, 1985, during the Region's Phase 2, Stage 2C Studies, the Ministry wrote to the Region and stated:

"With regard to the Draft Summary Report we support the recommendation of Site "F" as the preferred alternative, as it most clearly has the least impact on agriculture."³⁹

The Ministry again confirmed this position in writing to the Region in November, 1985 and December, 1986. Copies of the Ministry's letters to the Region in this regard are attached as Appendix "Q".

38. Exhibit H-65 before the Joint Board.

39. A copy of these letters, from the Director of the Foodland Preservation Branch of the Ministry of Agriculture and Food to the Region, is Exhibit H-71, p. 279 and Exhibit E-109, p. 88 and p. 40, respectively, before the Joint Board.

Also in March, 1985 the Ministry's Agricultural Representative in the Region wrote to the Region supporting the selection of Site "F" on the basis that its selection would have the least impact on the agricultural community in the Region. A copy of this letter is attached to this Report as Appendix "R". In that letter it was stated:

"Many people in Halton rely on agricultural production to earn a living. In the past few years the Region has introduced policies and programs to control non-agricultural growth on prime agricultural land. I would like to encourage the Region to select Site "F" as the final landfill location and to preserve the larger agricultural areas for production of agricultural products, and to encourage and show the next generation that there is a future for farming in Halton."⁴⁰

The Ministry of Agriculture and Food has thus confirmed, throughout the course of the Region's Environmental Assessment Study, that the NSP Land is the preferred location for Regional landfilling when agricultural impacts are considered.

It is Proctor & Redfern's opinion that the existing and proposed provincial government policies clearly support the selection of Site "F" (the NSP Land) as the site for future Regional landfilling. The relevant policy documents and applicable Ministerial guidelines establish that sites such as Site "F" are to be chosen for land uses such as landfilling in preference to prime agricultural lands. As is apparent from the foregoing discussion, there is no impediment under the Regional Plan or the City of Burlington's Official Plan to the use of Site "F" for non-agricultural purposes. Indeed, under the latter Plan such a non-agricultural use is mandated.

40. A copy of this letter is part of Exhibit H-71 before the Joint Board, p. 275.

5.8 Noise, Dust, Odour and Visual Impacts

5.8.1 Noise

Sound investigations were undertaken as part of the studies leading to the 1982 Design Report prepared by Proctor & Redfern in which it was concluded that the operation of a proposed landfill would not adversely affect the residential areas nearest the site. We observed in our Design Report that the activities then occurring in the vicinity of the NSP Land, namely, the quarrying activities on the site, the landfill operations at the adjacent Regional landfill site to the east, the NSP quarrying operations to the west and vehicular traffic on Highway 403 and nearby roads, all contributed to the background noise levels experienced in the area.⁴¹ All of these activities have continued in the vicinity of the site since 1982 to date and continue to account for background noise levels.

In carrying out its sound analysis Proctor & Redfern measured existing sound levels in a number of areas, including levels at the existing Regional landfill, at various locations on the NSP Land and in residential areas closest to the site. Consideration was also given to the noise that would be generated by traffic to and from the proposed landfill and by equipment and landfilling activities on-site. As a result of its investigations Proctor & Redfern concluded that the operation of a landfill on the NSP Land would not adversely affect the residential areas closest to the site. We noted that when the Regional landfill site operations cease (as is anticipated in the near future) there would be less traffic on nearby roads, thus reducing existing background noise levels. In consequence, the sound levels that would result from landfilling on the NSP Land might in fact not increase over the sound levels associated with the existing Regional landfill site.⁴²

41. Design Report by Proctor & Redfern, April, 1982 at p. 5.3.

42. Design Report by Proctor & Redfern, April, 1982, Appendix "A", p. A15.

The Region of Halton's noise assessment consultants, in their Final Technical Report in Phase 2, Stage 2C of the Region's studies, prepared in June, 1985, concluded that all sites being considered by the Region, with the sole exception of Site "F", would exceed the applicable Ministry of Environment criterion for noise unless mitigated. Landfilling at Site "F", they concluded, would satisfy Ministry noise criterion for residential areas without mitigation measures. They therefore recommended Site "F" as the preferred location for Regional landfilling, over all other candidate sites being considered.⁴³

In January, 1987 the same consultants reported upon their noise impact comparison analysis of Site "F" and Site "D". They concluded:

" ... a comparison of the number of residents exposed to sound levels above each area's background sound level, and the length of time that they are exposed to this sound demonstrates noticeable differences between the sites.

...

On the basis of the above comparisons of:

1. the long term exposure to the landfill noise and,
2. the small increment in traffic noise

we reconfirm our findings during the Environmental Assessment Phase (2C report) for the selection of Halton's new landfill site; that Site "F" is the preferred location over Site

43. Noise Assessment Report, Final Technical Report No. 9, Phase 2, Stage 2C, June 1985, Exhibit H-34 before the Joint Board, pp. (i) and (ii).

"D" as far as noise impact is concerned. The concerns of the Stage 2C report about the impact of Site "F" on the Bayview Park have been reduced to low levels after detailed analysis of Saturday operations at the Site. Site "F" can operate virtually without mitigation and meet the noise criterion of the Ministry of the Environment."⁴⁴

In light of these findings by both the Region's consultants and Proctor & Redfern, it is clear that no adverse noise impacts will result if landfilling on the NSP Land is approved.

5.8.2 Dust, Odour and Visual Impacts

5.8.2(a) The Results of the Region's Studies

Proctor & Redfern did not undertake independent dust, odour and visual impact analyses with respect to the NSP Land. We have reviewed, however, the reports prepared by the Region's consultants on these issues with reference to Site "F". In addition, during site visits on the NSP Land since 1979 to date, regard has been had to existing odour and dust conditions and the views of the site available from various locations at different times of the year were ascertained by visual inspection.

44. Comparative Analysis Report, January 1987, Appendix "H", p. H-1 and H-3, Exhibit H-14 before the Joint Board.

In forming our conclusions regarding the planning implications of landfilling on the NSP Land we have considered:

- (i) the conclusion reached by Senes Consultants Limited in their Air Quality Assessment Report prepared on behalf of the Region, namely, that Site "F" was considered to be the most preferable site of those considered by the Region for landfilling.⁴⁵

In January, 1987 Senes Consultants Limited reconfirmed their earlier recommendation regarding the selection of Site "F" and stated that Site "F" was preferable for Regional landfilling because:

- "- a berm would not be necessary, and therefore the impacts associated with moving large volumes of earth would be avoided;
- wind speeds are generally lower which would reduce possible litter problems;
- the nearest residences are further away than at Site "D" so that TSP concentrations would be reduced by additional dilution that takes place;

45. Air Quality Assessment, Final Technical Report No. 6, Phase 2, Stage 2C, Exhibit H-28 before the Joint Board, p. 5-2.

- the Bayview Park area is used primarily on weekends when landfill activity would be much reduced and the resulting impacts would be lower."⁴⁶

(ii) the conclusions reached by The Landplan Collaborative Ltd. in their Visual Assessment Report prepared on behalf of the Region, namely that Site "F" was more preferred, from a visual impact perspective, for Regional landfilling than was Site "D" in Milton.⁴⁷ We noted particularly their findings that of the final six candidate sites considered by the Region's Study team:

- the range of high visual impacts on existing residences was the lowest at Site "F" where only 9 residences would be potentially affected compared to significantly higher numbers of residences at the other sites;⁴⁸
- the number of motorists travelling by Site "F" who potentially would experience negative visual impacts was lower at Site "F" than at four of the other sites, including Site "D";⁴⁹

46. Comparative Analysis Report, January 1987, Appendix F6, p.6, Exhibit H-14 before the Joint Board.

47. Visual Assessment Final Technical Report No. 10, Phase 2, Stage 2C, Exhibit H-22 before the Joint Board, p.(i).

48. Visual Assessment Report, Exhibit H-22, p. 6-1.

49. Visual Assessment Report, Exhibit H-22, p. 6-2.

- Site "F" was adjacent to Bayview Park which is used as a viewing area and for recreation. It, like two of the other candidate sites, was associated with a "provincially significant visual resource", namely, the Niagara Escarpment.⁵⁰

In January, 1987 The Landplan Collaborative Ltd. reported to the Region that Site "F" was preferred over Site "D" in Milton for landfilling from a visual impact perspective. They stated:

" ... The greater overall visual impact at Site "D" is a result of three features (visual characteristics, residences and medium to low impact roadways) receiving higher impacts at Site "D". Conversely only two features (designated viewing areas and other visual concerns) were rated as receiving high visual impacts at Site "F".

For comparison purposes, the visual impacts associated with Site "D" have worsened slightly when compared to Site "F".⁵¹

Attached to this Report as Schedule "H" is an extract from Map F2 prepared by The Landplan Collaborative Ltd. as part of its Visual Assessment Report. The map demonstrates the substantial distance from Site "F" of residential communities.

50. Visual Assessment Report, Exhibit H-22, p. 6-3.

51. Comparative Analysis Report, January 1987, Exhibit H-14 before the Joint Board, Appendix "I", p. 12.

5.8.2(b) Odour

Prior to and after the availability of the Region's consultants' reports concerning air quality and visual impacts, Proctor & Redfern conducted inspections of the NSP Land and surrounding area. Since 1979 Proctor & Redfern representatives have visually inspected the NSP Land on dozens of occasions. During some of these site visits, views of the NSP Land from various locations and dust and odour conditions were observed.

In regard to odour, Proctor & Redfern concluded, on the basis of these site visits, that since odours from the Region's landfill operation were not evident on the NSP Land, even when the wind was from the northwest, a properly operated landfill on the NSP Land would be unlikely to affect residences in the area, the nearest of which is about 650 m from the boundary of the NSP Land and approximately 920 m from the area proposed by NSP for landfilling. The closest group of residences to the east or west is approximately 1.3 km distant from the area proposed by NSP for landfilling. It was our conclusion therefore, that negative odour impacts from a landfill operation on the NSP Land on those residential communities closest to the site was unlikely.

5.8.2(c) Dust

Observations were also made by Proctor & Redfern during their site attendances of foliage on the NSP Land east of the Region's landfill operation to determine if dust residue was evident. On one such occasion it was noted that immediately adjacent to the westerly boundary of the NSP Land some deposition had occurred, probably of dust from the Regional landfill. Assuming appropriate landfilling practices and buffer areas around the landfill on the NSP Land, Proctor & Redfern concluded that there would be little if any dust deposited on residential properties by any landfill on the NSP Land. This view was formed having regard to the topography, vegetation and intervening land uses applicable at the NSP Land.

5.8.2(d) Visual Impact

With respect to visual impact, it was Proctor & Redfern's conclusion based on our field observations that:

- a) parts of the site could be seen from some sections of the North Service Road, King Road and the Bruce Trail. However, views of a sanitary landfill operation on the site would not negatively impact on the use of those routes;
- b) views of a landfill operation from residences on King Road would not be continuous over a long period of time if fill operations were staged and appropriate buffering techniques were used. In addition, existing trees block most views of the site from these houses;
- c) the site could be seen from Bayview Park but there would not be a substantially greater visual impact from it than currently exists because of views of the final stages of the Region's existing landfill operation. The views that will obtain can be buffered during most of the life time of the operation;
- d) assuming that the final contours of a landfill on the NSP Land do not exceed those applicable at the adjacent Regional landfill site, views of the landfill on the NSP Land will not negatively affect views of the Escarpment, Highway 403 or other roads in the area;
- e) a landfill on the NSP Land could probably be seen from high buildings to the south and east of Highway 403 but the distances would be so great that the effect would be negligible; and,

- f) it is possible that the site and landfill operations on the NSP Land could be seen from the Burlington Skyway but the view would be in the far distance and would likely only affect pedestrians on the bridge and stopped motorists. In these instances, the heavy industrial operations of Dofasco, Stelco and others would be in the foreground and the appearance of a landfill operation several miles away would not be of great significance.

In essence, the field observations made by Proctor & Redfern during our site attendances on the NSP Land confirm the conclusions reached by the Region's air quality and visual impact consultants after their more detailed studies of the area.

5.9 Social Planning Issues

Any proposal to locate a landfill site anywhere will evoke a negative response from certain residents in the proposed area whether or not they can see the site and whether or not they are likely to be affected by noise, dust, odour, traffic or other matters. The response from those not likely to be physically affected will be emotional; they will perceive problems. In planning terms, landfilling is an unpopular and unwanted land use. It is, nonetheless, a necessary land use for public purposes. It is in this sense that social impacts of a proposed landfill can be relevant to proper land use planning. It is also for this reason that it is important for the proponent of a landfill to ascertain the perceptions of those likely to be affected by the landfill, try to alleviate their concerns and, most importantly, ensure that any physically deleterious effects of the landfill are mitigated insofar as possible.

The potential social impacts of a landfill site on the NSP Land must be assessed in light of surrounding residential populations. As discussed in Section 2 of this Report, the land uses in the general area of the NSP Land are rural in nature or of low-intensity public use character. There is no

residential development in close proximity to the proposed site. The nearest residential areas to the area proposed by NSP for landfilling in its application for landfill approval are as follows (these distances vary when measured from the boundary of the NSP Land as opposed to the fill area):

To the North: the nearest individual residence is located approximately 920 m (3,000 feet) away from the proposed landfill area;

To the East: the Forestvale single family housing development is located approximately 1,300 m (4,250 feet) away from the proposed landfill area and approximately 1,800 m (5,900 feet) from the current Regional landfill site;

To the West: strip residential development is located on Waterdown Road, approximately 1,650 m (5,400 feet) away from the proposed landfill area. The Sassafrass woods are situate between these residences and the proposed and existing landfill sites;

To the South: the nearest residential area is approximately 1,700 m (5,600 feet) from the landfill area. These residences are separated from the NSP Land by the North Service Road, Highway 403, a HEPC corridor, the C.N. Railway tracks and additional NSP property.⁵²

52. Design Report by Proctor & Redfern, April 1982, Appendix 1, p. A-4.

The Region of Halton retained Myra Schiff Consultants Limited to conduct a social impact assessment of various candidate sites proposed for consideration for Regional landfilling. That firm concluded in its Final Technical Report during the Region's Phase 2, Stage 2C Study that Site "F" was the most preferred site for landfilling with respect to population impacts inasmuch as there are no households on-site and the fewest number of households in the area studied. Site "F" was also found to be preferable to Site "D" in Milton in terms of emotional impact.⁵³ The Region's consultants found that:

- only 39 people in 14 households would be disrupted by landfilling at Site "F"; there would thus be a low impact occasioned if landfilling were to be approved; and,
- landfilling at Site "F" would result in "low-moderate" negative impact on established communities compared to "high" negative impact at almost every other site considered.⁵⁴

In the final report delivered by Myra Schiff Consultants Limited to the Region concerning social impacts, that firm concluded:

"Site F is preferred over Site D with respect to population impacts, but Site D is preferred over Site F with respect to impacts on community servicing facilities. Since the effects on population are more significant and of greater duration than the impact on users of community facilities, it is my opinion that Site F is preferred over Site D as the location of a landfill for Halton Region.

53. Social Impact Assessment, Final Technical Report No. 5, Phase 2, Stage 2C, Exhibit H-37 before the Joint Board, p. (i) and (ii).

54. Social Impact Assessment, Exhibit H-37, p. 2-13 (a) and p. 2-24.

Because there are higher population impacts at Site D now than there were at the time of the Environmental Assessment Report, particularly with respect to measures of disruption (i.e. effect on people on site), I would say that the gap between Sites D and F has widened since that time."⁵⁵

5.10 Proximity to Source of Waste

An examination of the demographic structure of the Region indicates that the NSP Land is located in the main areas of current and future urbanization in the Region. Attached as Schedule "I" is an excerpt from Figure 4 to the Regional Official Plan, to which Regional population projections to the year 2001 have been added. Part III of the Regional Official Plan, in which the Region's Growth Management Policies are set out, delineates the Region's growth strategy to the year 2001. According to section A2(c) of Part III, the Region's growth strategy involves:

- (i) a regional population by 1986 of 313,000
a regional population by 2001 of 398,000
- (ii) a rural population by 2001 of nearly 36,000⁵⁶

55. Comparative Analysis Report, January 1987, Exhibit H-14, Appendix "E", p. E3.

56. Regional Official Plan, Exhibit H-87 before the Joint Board, p. 28, Sections A2c, A2c (i) and A2c (ii).

The regional population element of this strategy, set out above, has been deferred by the Region as a result of objections taken to the applicable sections of the Regional Plan. The population projections set out on Figure 4 of the Regional Plan, however, indicate that Oakville and Burlington are the predominant areas of future growth in the Region, while Milton and Halton Hills will retain a strong rural character. On these projections, Oakville and Burlington are expected to grow to 311,000 people by 2001, while Halton Hills and Milton are anticipated to reach 87,000 people by 2001.

In materials prepared by the Region in December, 1985 and filed before the Joint Board concerning the Region's proposed landfill undertaking, the medium population forecasts for the Region for the years 2001 and 2011 were as follows:⁵⁷

	<u>1986</u>	<u>2001</u>	<u>2011</u>
Milton	31,100	35,800	42,900
Burlington	117,000	144,500	163,900
Oakville	85,300	115,500	134,500
Halton Hills	35,700	43,000	47,700

These forecasts confirm that Oakville and Burlington are anticipated to experience the greatest future population growth in the Region. By the year 2011 Burlington will remain the most densely populated section of the Region although the percentage growth over the next 25 years is expected to be greater in Oakville (Burlington: 40% growth over 1986, Oakville: 57.6% growth over 1986). The population in Burlington is expected to increase by 46,900 persons by the year 2011 from 1986 figures, while the population in Oakville is expected to increase by 49,200 persons over the same period.

57. Exhibit H-292 before the Joint Board

This spatial distribution of growth and population suggests that the NSP Land is an appropriate location for Regional landfilling as it is located in that area of the Region where the population is now greatest and where it will be greatest over the next 25 years and hence, where the highest volume of domestic waste is likely to be generated in the future. This conclusion was further supported by evidence given before the Joint Board by the Region's economic consultant who testified that industrial waste generation in the Region over the last five years has centred more in Burlington than in Oakville. When this industrial waste data is taken into account, the appropriateness of locating a new Regional landfill site on the NSP Land is further reinforced.⁵⁸

5.11 Mineral Aggregate Resources

The Provincial Mineral Aggregate Resources Policy Statement indicates that Official Plans may establish policies to permit non-aggregate land uses or developments in areas of mineral aggregate resources, which are protected in the relevant Official Plan, where extraction is not feasible, the proposed land use or development serves a greater long term interest of the general public than does aggregate extraction or where the proposed land use or development would not significantly preclude or hinder future extraction.

The long-term public interest criteria set out under the Policy Statement must be considered in terms of the need for a Regional landfill facility in the Region of Halton. The need for this facility is now well documented as the Region has been pursuing this objective for over 10 years and the existing Regional landfill site is expected to reach capacity in the very near future.

58. Evidence of C.N. Watson before the Joint Board, November 10, 1987.

As earlier noted, the northern portion of the NSP Land which is currently subject to NSP's quarry license, is designated under the Regional Plan as a "Mineral Resource Extractive Area". Part of the NSP Land is also designated under the Plan as a "Protection Area". The Regional Plan specifically recognizes, in its Solid Waste Management Policies, Section D3.9, that the nature of the operation of landfills:

"...may require locations for landfills which according to other policies of this Plan may be best suited for other purposes".

Further, the Regional Plan expressly provides that mineral resource extraction is an interim land use, as is landfilling.

The general policy of the Province of Ontario, as set out in the Mineral Aggregate Resources Policy Statement, expressly provides that protection of mineral aggregate resources is to be undertaken so far as it is "practicable in the context of other land use planning objectives, to supply local, regional and provincial needs".

It is our opinion, based on the Resource Management and Solid Waste Management Policies of the Regional Plan, that approval of a landfill operation on the NSP Land is consistent with the intent of the Regional Plan and would constitute an appropriate non-aggregate interim land use of a Mineral Resource Extractive and Protection Area prior to ultimate rehabilitation. Further, as provision by the Region of sanitary landfilling is in the long-term interests of the general public and is itself an interim land use requiring rehabilitation, it is our opinion that landfilling on the NSP Land would meet the provisions of the Mineral Aggregate Resources Policy Statement. In this regard we note that the Policy Statement indicates that "other land uses may in specific instances, take precedence over aggregate extraction including wayside pits and quarries". It is thus clear that the Provincial Policy Statement allows for alternative uses to extractive

operations on sites in certain circumstances. This particular site, adjacent to the existing Regional landfill site and the former Bayview Park landfill site, represents an unusual land use situation for a quarry operation that makes it appropriate for the alternative use proposed, particularly one that serves the long-term public interests of the Region.

5.12 Ministry of the Environment Guidelines

The Ministry of the Environment is concerned to protect the health, safety, convenience and welfare of residents and to that end prevent the establishment of incompatible land uses.

The two Guidelines noted in Section 4.7(e) of this Report and included as Appendices "N" and "M", are documents intended to be used by Ministry staff in assessing various development proposals. They are not Provincial policy statements passed pursuant to the Planning Act, 1983 (Ontario), nor do they have any binding affect on Municipalities or private developers. Nonetheless, it is prudent for anyone contemplating a landfill project to consider the contents of these documents.

The Land Use Compatibility Guideline No. 07-03-01 defines compatability and states that incompatible land uses should be separated and that necessary environmental control measures, such as placing buffer areas between emission sources and residential or sensitive land uses, should be applied to supplement practicable emission controls, but not to take the place of such controls.

The Guidelines for Land Use On or Near Landfills or Dumps, No. 07-07-01, set out more specific criteria than does Guideline No. 07-03-01, while embracing the same general principles of the latter document.

The environmental and land use factors that the Guidelines state should be considered in assessing a landfill proposal are, generally:

1. Landfill generated gases
2. Ground and surface water contamination by leachate
3. Odour
4. Litter
5. Traffic
6. Visual impact
7. Dust
8. Noise
9. Other air emissions
10. Fires
11. Surface run-off
12. Vectors and Vermin
13. Ground settlement
14. Soil contamination

The investigations carried out by Proctor & Redfern for NSP and those carried out by other consultants for the Region of Halton, the latter as in part referred to in this Report, have involved the consideration either directly or indirectly of all of the factors set out in the Ministry of the Environment Guidelines. Proctor & Redfern have concluded, based on these investigations and studies that:

- a) Existing land uses that might be considered incompatible with a landfill operation on the NSP Land would either not be affected or would only be affected to a negligible degree by landfilling at that site;
- b) Potential land uses either would not be affected or could be provided with mitigation measures such that they would either not be affected negatively by landfilling on the NSP Land or would only be affected to a negligible degree; and

- c) Having regard to the existing land uses in the area of the NSP Land (i.e., the former Bayview landfill site, the existing Region of Halton landfill facility, the existing NSP Quarries, the Niagara Escarpment, Highway 403, operating industrial/office uses, HEPC lines and the TransCanada PipeLine corridor), a landfill use on the NSP Land would not constitute an incompatible land use in the area.

We have thus concluded in respect of Ministry Guidelines Nos. 07-07-01 and 07-03-01, that the establishment of a landfill site on the NSP Land is appropriate and will not adversely affect the environment.

5.13 Hazard Lands

As noted in Section 4.2(d) of this Report, Map 5 of the Regional Plan designates part of the NSP Land as "Hazard Lands". This basis for the designation appears to be a concern for plant species in this area which exist due to warm climatic conditions on lands located between Hamilton Harbor and the Niagara Escarpment. In addition, there are several intermittent water courses running through the site.

The Region of Halton's Resource Management Policies applicable to Hazard Lands, as set out in Section F of Part IV of the Regional Plan, provide for the control of development on lands designated as Hazard Lands so as to protect against and minimize flooding and erosion. As earlier set out, there are also specific policies in Section F7 regarding privately held lands and their redesignation for other purposes subject to certain criteria.

The Hazard Land designation applicable to part of the NSP Land appears to apply to that part of the Land characterized by significant topographical features and the site of the plant species found in this area. The ravines and

intermittent streams on site are not part of an ecologically valuable resource nor are they part of a significant drainage system. They exist as part of the natural features of the site or as a consequence of the extraction operations carried out on the site over the years.

On a practical level, with application of proper stormwater management and site drainage techniques any risk of flooding or erosion hazard can be controlled and monitored. It is Proctor & Redfern's opinion that with the use of such techniques, landfilling on the NSP Land, with the concomitant topographical modifications that would result, would not offend good conservation practices nor the policies of the Regional Plan.

In any event, however, as noted earlier in this Report, the provisions of the Parkway Belt Plan supercede the provisions of the Regional Plan with reference to the Hazard Lands designation. Accordingly, this designation treatment of part of the NSP Land does not prevent or impede use of the Land for landfilling purposes.

6.0 ALTERNATIVE LAND USE

As part of its planning analysis of the NSP Land, Proctor & Redfern also examined the potential use of the Land by NSP for industrial and related purposes. The results of this analysis are set out below.

6.1 Provisions of the Parkway Belt West Plan

The land use policies, regulations and guidelines applicable to the NSP Land have been identified earlier in this Report. As noted, the Parkway Belt West Plan is the primary land use control mechanism in place at this time. The "Special Complementary Use Area" designation which governs that part of the NSP Land in Concession I, adjacent to the North Service Road, permits "some further industrial development in this area". This land comprises approximately one-half of the entirety of the NSP Land. The "General Complementary Use Area" designation applicable to the balance of the NSP Land does not permit industrial development unless the conditions set out in subsection 5.5.1(j), governing "Change of Use", can be satisfied. None of the expressly permitted uses include industrial development and the provisions of subsection 5.5.1(g), dealing with "Other Uses", specifically exclude industrial uses. The criteria applicable to support a "Change of Use", as set out in subsection 5.5.1(j), cannot realistically be met by a proposed industrial use. Accordingly, under the Parkway Belt West Plan, industrial development on the NSP Land would only be permitted in the southern portion of the Land, to which the "Special Complementary Use Area" designation applies.

6.2. Industrial Development on "Special Complementary Use Area"

6.2(a) Planning Context

There are a number of factors, in a planning context, which would support the development of the southern portion of the NSP Land for industrial uses. These include the following:

- (i) the land fronting on the North Service Road has the advantage of ready road access;
- (ii) water services are available on the North Service Road, sanitary sewers exist at the south-east corner of the NSP Land and storm drainage outlets exist at the North Service Road;
- (iii) some of the present surrounding land uses are of a light industrial/office character: the Cumis and Tridon buildings exist to the west of the site while Stelco currently operates a research facility at Kerns Road and the North Service Road; some of the planned future land uses in the area are also of an industrial/office character; and
- (iv) as noted earlier in this Report, an office/church/elementary school development is currently under construction approximately 1 mile to the east of the NSP Land, at the northwest quadrant of Kerns Road and the North Service Road. In addition, Stelco is developing approximately 20 acres of land for low-density residential development north of its research facility north of the North Service Road.

6.2(b) Constraints to Industrial Development

The provisions of Subsection 6.2.3(q) of the Parkway Belt West Plan have been referred to earlier in this Report. It is pursuant to the authority of that Subsection that "some further industrial development" is permitted in the "Special Complementary Use Area" of the NSP Land. Such a development, however, is subject to a number of express constraints pursuant to Subsection 6.2.3(q), namely, it could not occur,

- (i) until a comprehensive restricted area by-law and development agreements under Section 35a of the Planning Act (Ontario) have been prepared;
- (ii) until the necessary consultation process with appropriate municipal, provincial and other authorities and agencies has been undertaken concerning the proposed restricted area by-law and development agreements;

- (iii) until the comprehensive restricted area by-law and development agreements have been approved by the appropriate authorities; and
- (iv) unless specific development criteria are met.

The special development criteria which are stated to apply are very restrictive and include such items as a maximum lot coverage of 20% excluding parking, a maximum height limit of one storey for industrial buildings or structures and two storeys for office uses, no outside storage of goods or materials, the maintenance to the "maximum possible degree" of the open-space character of the area and setbacks of not less than 400 feet from the centreline of the North Service Road and King Road which setbacks must be landscaped, treed and bermed. As well, the creation of new lots is controlled.

The City of Burlington Comprehensive Zoning By-law prohibits industrial development in the Special Complementary Use Area covering the NSP Land.

Any proposal to subdivide the southern portion of the NSP Land for industrial lots would require subdivision plan approval from the Region and zoning approval from the City of Burlington. Even if a single use and lot was proposed for the land, it is likely the site would be severed from the remainder of the NSP Land to the north, thus requiring approvals from both the Region and the City of Burlington. In addition, a HEPC corridor traverses part of the site near the North Service Road; an easement might therefore be required if access across the corridor was proposed. An amendment to Regulation 482/73 would also be required.

Finally, development of the southern portion of the NSP Land in isolation from development of the northern portion could severely restrict the future development potential of the northern portion.

6.3 Industrial Development on "General Complementary Use Area"

The potential industrial development of the remainder of the site to the north, which is now in part licensed for a shale quarry operation, has also been considered by Proctor & Redfern.

6.3(a) Planning Context

Only some of the factors set out in 6.2(a) above, with respect to industrial development of the southern portion of the NSP Land, are of relevance to industrial development on the northern portion of the Land. The present existence nearby of water, sanitary and storm sewers is an advantage to the northern half of the NSP Land only if one assumes that appropriate hook-up connections at an affordable cost could be made. Those surrounding land uses that are of an industrial character are situated closest to the southern portion of the NSP Land, as are the future industrial uses now planned for the area. As well, road access via the North Service Road to the northerly NSP Land would be difficult if not impossible to design unless it was determined that the entirety of the NSP parcel was to be developed at the same time or in stages.

6.3(b) Constraints to Industrial Development

There are a number of constraints that exist to the development of the northern portion of the NSP Land for industrial purposes. Foremost of these are the provisions of the Parkway Belt West Plan. As discussed above, as this portion of the Land is designated a "General Complementary Use Area" under the Parkway Belt West Plan, in which industrial uses are not permitted, an amendment to that Plan would be required to permit industrial development. The seeking of such an amendment is a lengthy and complex exercise requiring the appointment of citizen and local staff review committees by the Minister. The committees are required to report within 3 months and a hearing officer is appointed within another 3 months. A recommendation is made to the Minister following a hearing. If the Minister concurs with the recommendation, he recommends it to the Lieutenant-Governor-in-Council. The Minister has the power to recommend approval, reject a proposed amendment or approve the proposal with modifications.

A further constraint to the development of the northern part of the site are Guidelines 07-07-01 of the Ministry of the Environment, dealing with land uses on or near landfills, as earlier discussed and attached as Appendix "N" to this Report. The northern portion of the NSP Land is immediately adjacent, on the north and west, to the present Regional landfill

site. On the east is Bayview Park, the former landfill facility of the City of Burlington. The Guidelines indicate that:

- (i) the Ministry considers the most significant adverse environmental effects to be normally within 500 m. of the perimeter of a fill area;
- (ii) no land use at all may take place within 30 m. of the perimeter of a fill area; and
- (iii) in some situations Ministry staff will recommend that hydrogeologic and/or engineering studies be carried out for land use proposals beyond 500 m. of a fill area, where it is anticipated that leachate or gas could migrate beyond 500 m. and pose a problem.

It is possible that item (iii) above could be seen to apply to any proposed industrial development of the southern portion of the NSP Land. If so, development of it would be subject to first satisfying the requirements of the Guidelines regarding engineering, hydrogeologic and other studies. It is beyond doubt, however, that items (i) and (ii) above would apply to any proposed development of the northern part of the NSP Land for industrial purposes. In order to proceed with such a development, therefore, appropriate studies as outlined by the Guidelines would have to be undertaken and Ministry staff would have to be satisfied that NSP (or any other developer of the Land) had properly evaluated "the presence and impact of any adverse environmental effects and necessary remedial measures" (per Section 5.3 of the Guidelines).

The City of Burlington Comprehensive Zoning By-law prohibits industrial uses in the General Complementary Use Area of which the northerly portion of the NSP Land is a part; hence an amendment to this By-law would be required to permit such uses.

The natural topography of the land designated as a "General Complementary Use Area" presents physical constraints to industrial development. The area is characterized by steep, rolling, irregular terrain, and part of the existing quarry operation. While modern engineering techniques permit solutions to the design and engineering difficulties presented by such features, it is probable that the implementation of engineered solutions would be quite costly.

Finally, site preparation and servicing costs may be such that the marketability of an industrial development between a former and existing landfill site may be questionable.

6.4 Conclusions

Some industrial development, of a defined character and form, is a permitted land use of the southern portion of the NSP Land pursuant to the provisions of the Parkway Belt West Plan, subject to amendment of Regulation 482/73. In land use planning terms there is some support for such a development having regard to existing services, existing land uses and future committed land uses in the area. There are, however, a number of significant constraints to such a development including the restrictive provisions of the Parkway Belt West Plan itself and the existence to the east and west of a former landfill site and an operating landfill site, respectively. Appropriate approvals from the Region and the City of Burlington would be necessary. In addition, the development of the southern part of the NSP Land, in isolation from development of those to the north, could sterilize the potential of the remaining land for any type of development. The marketability of the southern portion of the land, if developed for industrial purposes, would have to be investigated in detail having regard to the site's proximity to landfill areas.

The industrial development potential of the northern portion of the NSP Land is severely restricted. Industrial uses are prohibited under the Parkway Belt West Plan for this area, as they are under the City of Burlington Comprehensive Zoning By-law. Use of the land for this purpose would therefore require an amendment to the Plan and to Regulation 482/73 and zoning approvals. Applicable Ministry of Environment Guidelines impose further limitations on development. In any event, the natural character of the northern portion of the NSP Land is not suitable for industrial development absent extensive and costly engineered reconstruction.

The development impediments applicable to the northern portion of the NSP Land further constrain any potential for development of the entirety of the NSP Land for industrial purposes.

It is Procter & Redfern's opinion, from a land use compatibility and efficiency perspective, that sanitary landfilling on the NSP Land is a more appropriate, desirable and realistic land use for this property than is industrial development. This opinion takes into account the

topography and site characteristics of the NSP Land, the compatibility of proposed and existing land uses, the policy and practical constraints that apply to potential industrial development, and the goals and policies of the Parkway Belt West Plan.

7.0 SUMMARY AND CONCLUSIONS

As a result of the planning analysis carried out by Proctor & Redfern regarding the NSP Land, as detailed in Sections 1 to 6 of this Report, it is Proctor & Redfern's opinion that:

- (i) use of the NSP Land for sanitary landfilling, as proposed by NSP in its application under the Environmental Protection Act (Ontario) and as proposed by the Region for Site "F", is the most appropriate land use for this Land and is consistent with sound planning principles;
- (ii) the planning context of the NSP Land renders the site unusually suitable for sanitary landfilling;
- (iii) sanitary landfilling on the NSP Land can be carried out in an environmentally sound and prudent manner with little, if any, disruption to existing land uses and users.

In forming our opinions in this matter we have had regard to those factors particularly relevant to land use planning considerations and, in addition, where appropriate, have considered the results of various other studies and investigations undertaken by the Region of Halton's Environmental Assessment Study Team in its evaluation of Site "F".

In forming these opinions Proctor & Redfern concluded:

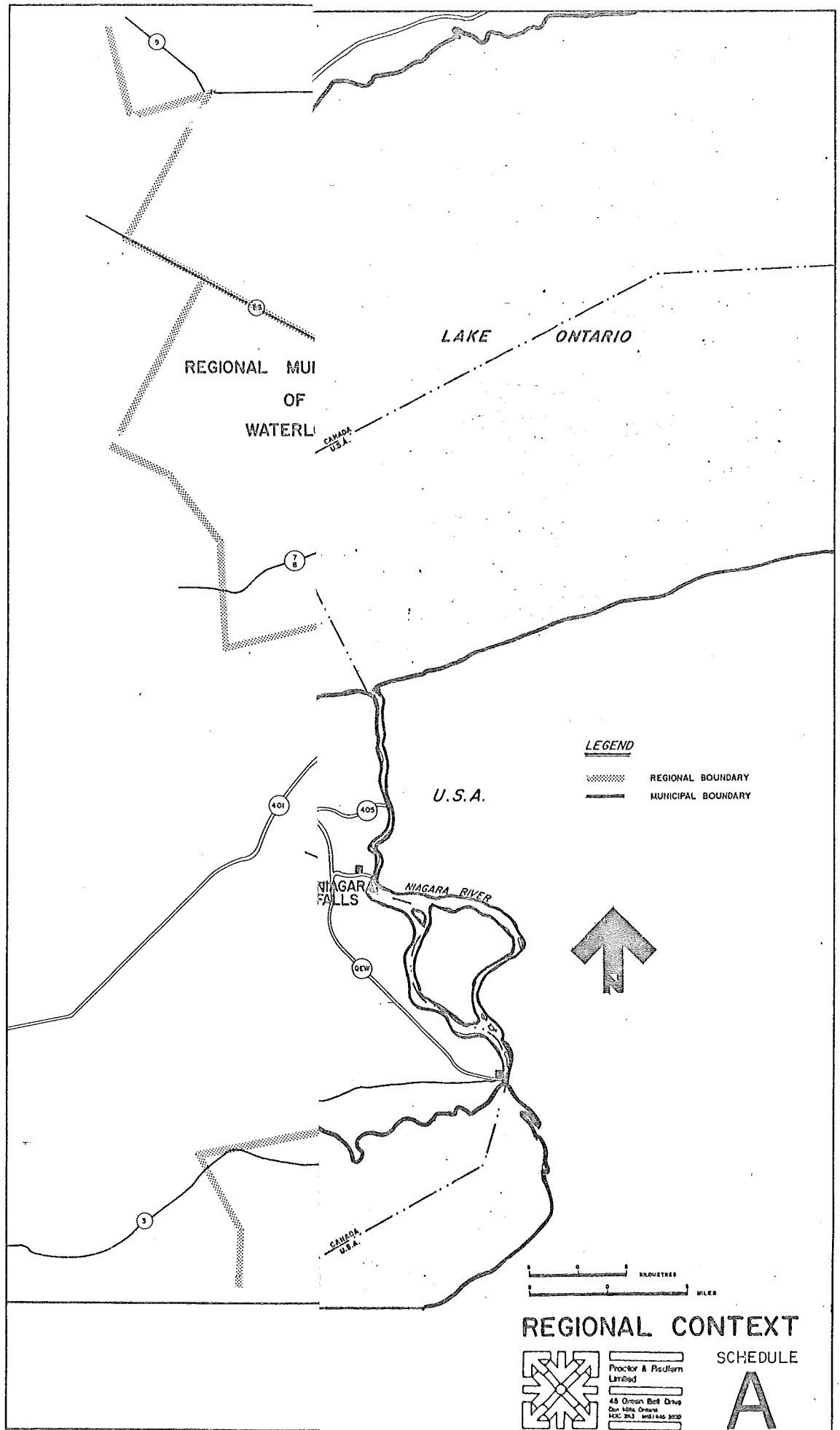
- (iv) the use by the Region of the NSP Land for sanitary landfilling would constitute a public use of the Land, consistent with the policies and goals of the Parkway Belt West Plan and the Regulations related to it;
- (v) use at present of part of the NSP Land for shale extraction activities is an interim use of the Land as contemplated by the Official Plan of the Region of Halton and the Mineral Aggregate Resources Policy Statement of the Province of Ontario. Similarly, sanitary landfilling on the NSP Land would constitute an interim land use pursuant to the Regional Plan. In essence, the proposal for sanitary landfilling represents a substitution of one permitted interim land use for another, pending ultimate mandatory rehabilitation of the Land;

(vi) the Region's proposed after-use of the NSP Land, following completion of landfilling, will meet the low-density, low-intensity criteria of the Parkway Belt West Plan policies and, further, is supported by the provisions of the Regional Plan and the general goals of the Parkway Belt West Plan;

(vii) use of the NSP Land for sanitary landfilling has the following advantages:

- (a) such a use will be compatible with surrounding land uses;
- (b) such a use is consistent, in planning terms, with efficient use of the Land;
- (c) such a use will provide clarification and greater certainty regarding the rehabilitation of the site as required under Provincial legislation (the Pits and Quarries Act (Ontario)) and under the Regional Plan and the Mineral Aggregate Resources Policy Statement;
- (d) such a use will comply with and advance the stated objectives of the Food Land Guidelines and the proposed Foodland Preservation Policy Statement, 1986, by preventing the removal of lands suitable for agricultural purposes out of production and by preserving agricultural communities elsewhere in the Region;
- (e) such a use will advance the stated goals and objectives of the Ministry of Agriculture and Food;
- (f) approval of the NSP Land for sanitary landfilling will not result in any significant negative impacts on residential populations or communities;
- (g) the Land can be easily serviced;
- (h) selection of the NSP Land as the appropriate location for Regional landfilling would have the effect of locating the Region's new landfill in the area where the highest volume of domestic waste is likely to be generated in the future and where it can be expected that a large proportion of future industrial waste generation in the Region will occur;

- (i) based on detailed studies conducted by the Region's Environmental Assessment Study Team and those investigations carried out by Proctor & Redfern, it is probable that no negative noise, transportation, odour, dust or visual impacts will be occasioned by selection of the NSP Land for sanitary landfilling; if any negative impact does obtain, it is probable that the strength of the impact will be negligible; and
- (j) based on studies conducted by Morrison Beatty Limited and the Region of Halton's hydrogeology consultants, landfilling at Site "F" (and, therefore, on the NSP Land) will not result in any negative hydrogeological impact. Indeed, there is evidence to suggest that the NSP Land may be unusually suitable, in a hydrogeological context, for landfilling;
- (viii) no amendment to the Parkway Belt West Plan or the relevant Regulations thereunder is required to permit use by the Region of the NSP Land for sanitary landfilling. An amendment to the Regional Official Plan to clearly designate Site "F" as the location for a Regional landfill may be appropriate. No amendment to the City of Burlington's Official Plan or Comprehensive Zoning By-law is required to permit sanitary landfilling on the NSP Land as the policies and provisions of the Parkway Belt West Plan are paramount; and
- (ix) while a portion of the NSP Land could be utilized, in accordance with applicable planning policies and regulations, for industrial uses if the appropriate amendments and approvals were obtained, there are severe planning and practical constraints imposed upon such a use, rendering the alternate use of sanitary landfilling more appropriate, desirable and feasible.





REGION OF HALTON
EXISTING LANDFILL SITE

REGION OF HALTON
EXISTING LANDFILL SITE

SITE LICENCED
FOR EXTRACTION
30 ha

BAYVIEW PARK
(FORMER BURLINGTON
LANDFILL SITE)

CONCESSION

LOT 4

LOT 2

LOT 1

LOT 4

LOT 2

LOT 1

CONCESSION

HYDRO ELECTRIC POWER COMMISSION
INSTRUMENT 249080 H.L.

AREA 8.75 Ha
NATIONAL SEWER PIPE LIMITED

NORTH SERVICE ROAD

HIGHWAY No. 403

KING ROAD

LOT 4

LOT 3

LOT 2

LOT 1

CONCESSION

THE N.S.P. PROPERTY



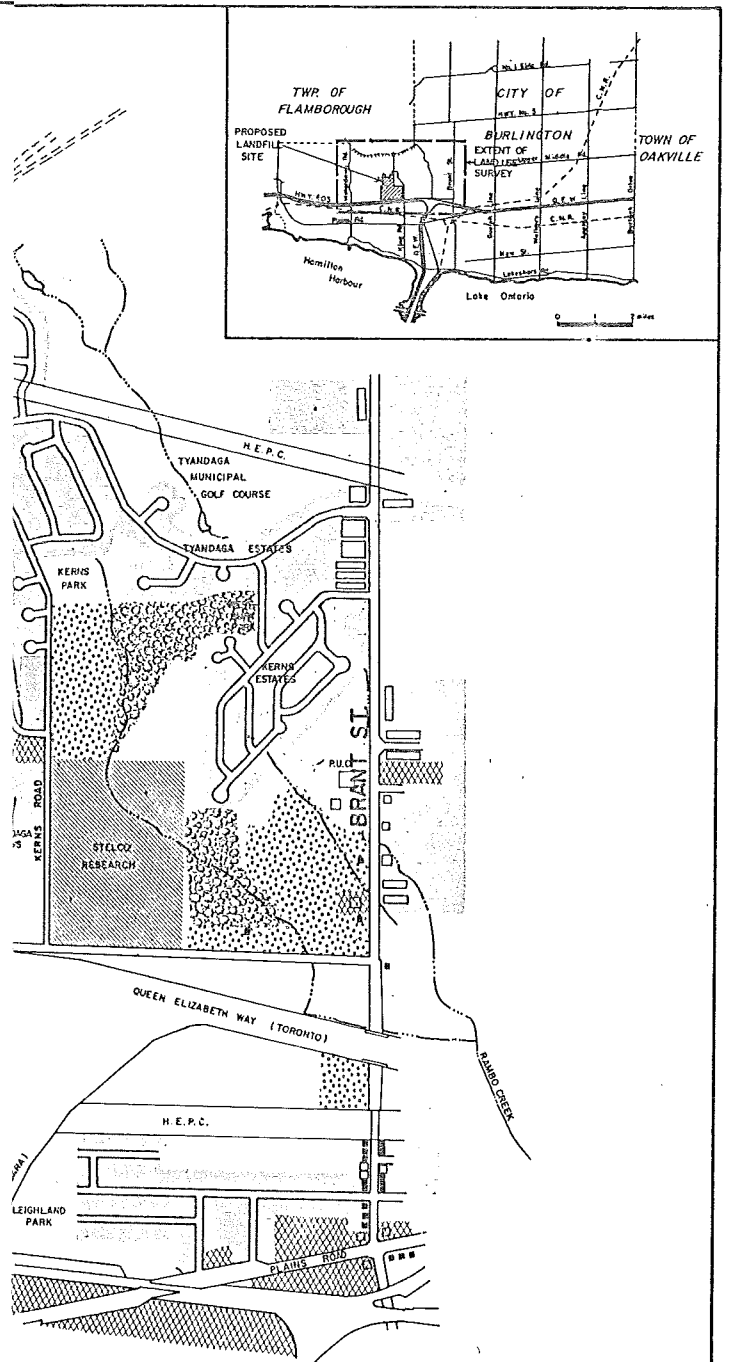
Proctor & Radtke
Limited
45 Green Bell Drive
Oak Mills, Ontario
M2C 3P3 (416) 445-2000

SCHEDULE

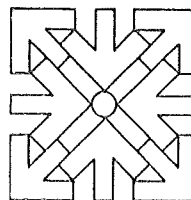
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JAN. 1988

BOUNDARY OF N.S.P. PROPERTY



LAND USE



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REGION OF HALTON
EXISTING LANDFILL SITE

REGION OF HALTON
EXISTING LANDFILL SITE

BAYVIEW PARK
(FORMER
BURLINGTON
LANDFILL SITE)

LOT 3

LOT 1

N.S.P.

HIGHWAY No. 403

LOT 3

LOT 2

LOT 1

CONCESSION



PUBLIC OPEN SPACE AND BUFFER AREA



UTILITY



ELECTRIC POWER FACILITY



INTER-URBAN TRANSIT



GENERAL COMPLEMENTARY USE AREA



SPECIAL COMPLEMENTARY USE AREA



BOUNDARY OF N.S.P. PROPERTY

(EXTRACT OF MAP 2)
PARKWAY BELT WEST PLAN
DESIGNATIONS

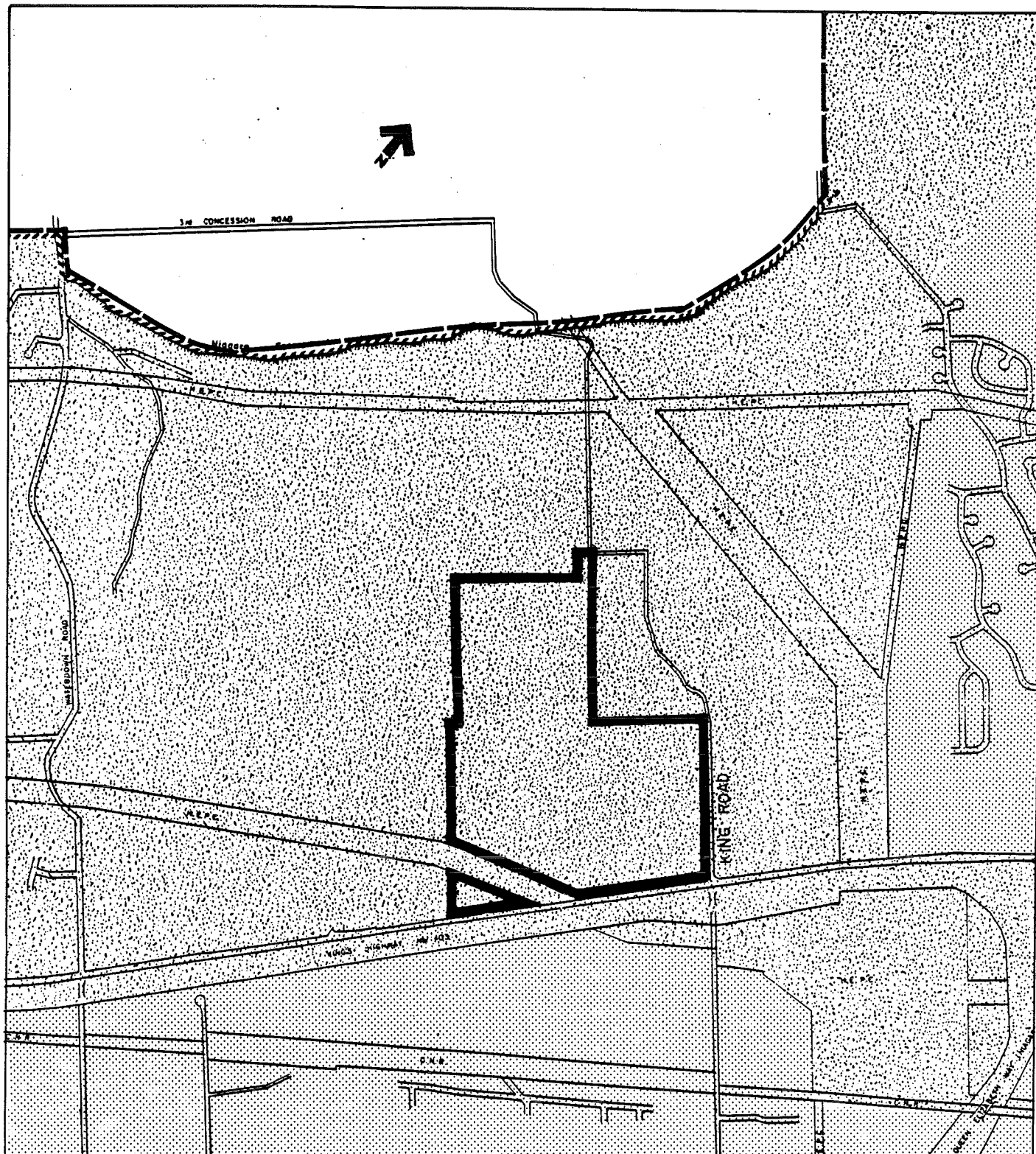


Procter & Redfern
Limited
44 Green Bell Drive
Scarborough, Ontario
M1S 2B5
Tel: (416) 291-1000

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PROVINCIAL POLICY AREAS



PARKWAY BELT



BOUNDARY OF NIAGARA ESCARPMENT
COMMISSION'S PROPOSED PLAN

REGIONAL POLICY AREAS



URBAN AREA



BOUNDARY OF N.S.P. PROPERTY

REGION OF HALTON OFFICIAL PLAN

(EXTRACT OF MAP I,
THE REGIONAL CONTEXT)

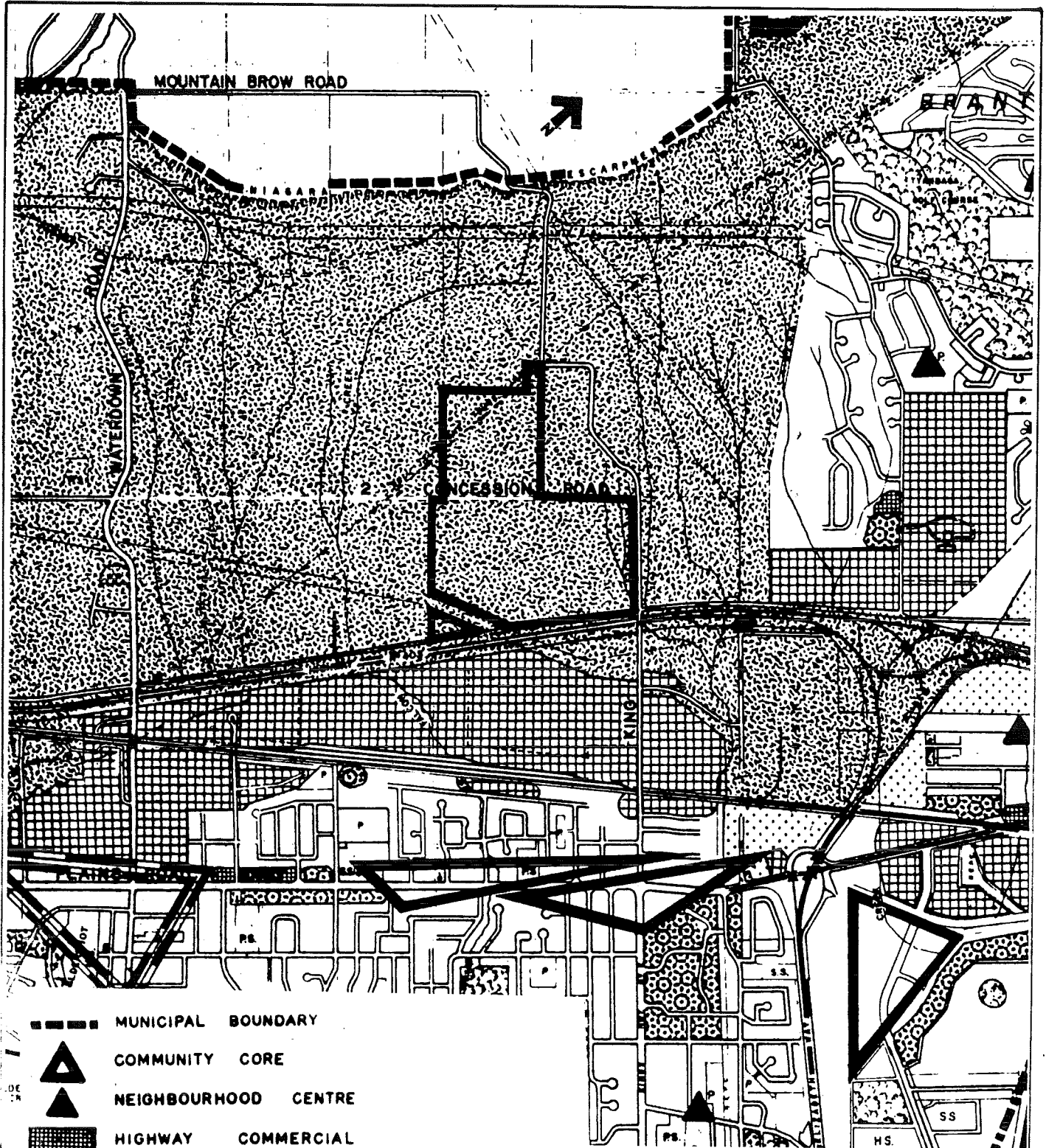


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by
44 Green Belt Drive
Burlington, Ontario
N7S 2G5
905-335-8000

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**CITY OF BURLINGTON
OFFICIAL PLAN
(EXTRACT OF MAP No. 2)**

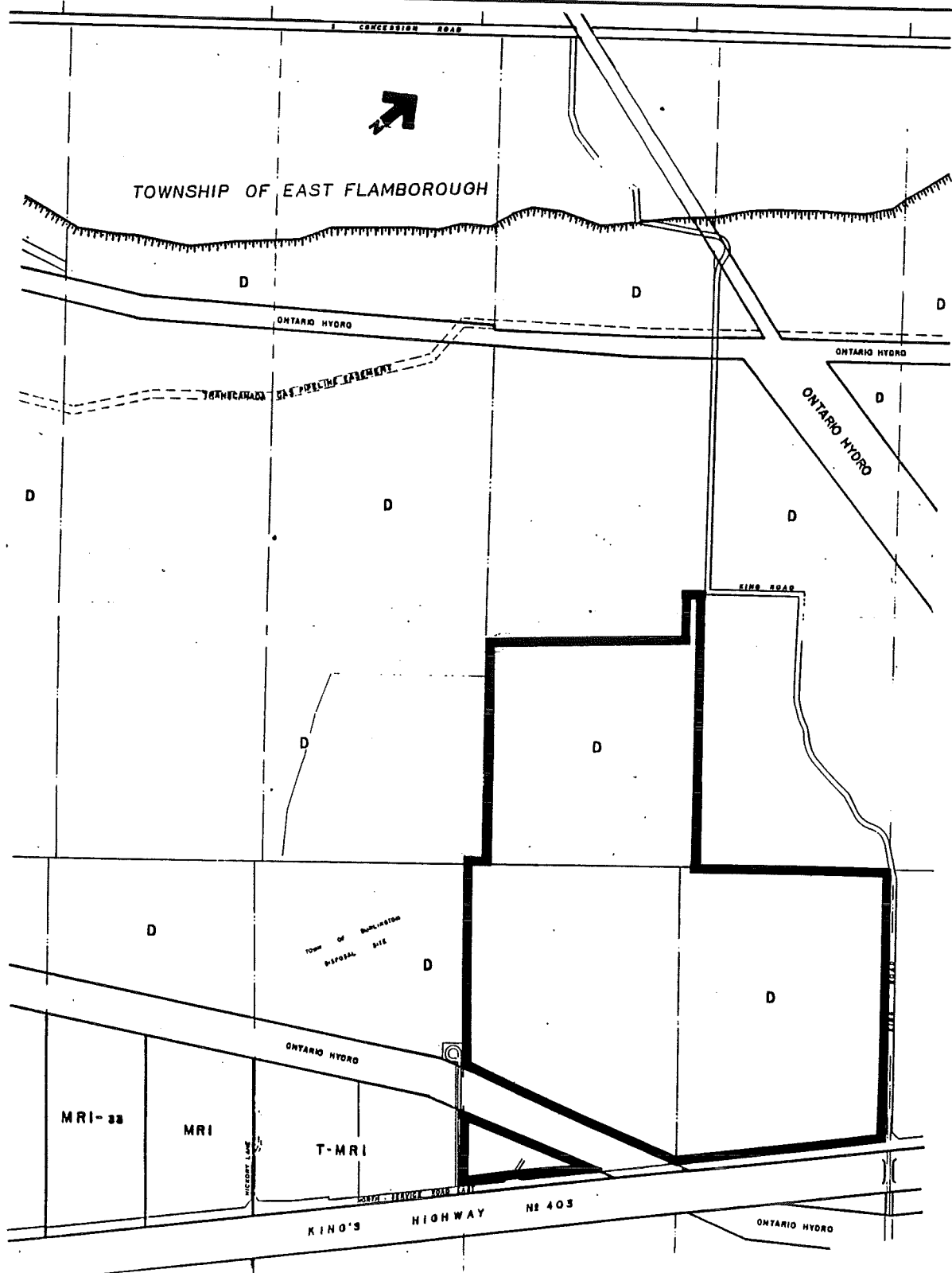


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Limited
45 Green Belt Drive
Scarborough, Ontario
M1S 2K2 (416) 291-1000

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CITY OF BURLINGTON
ZONING BYLAW No. 4000-3
 (EXTRACT OF ZONING MAPS
 No. 24 & 32)

MRI - INDUSTRIAL
 T-MRI INDUSTRIAL (TRANSITIONAL ZONE)
 D - DEVELOPMENT
 ——— BOUNDARY OF N.S.P. PROPERTY

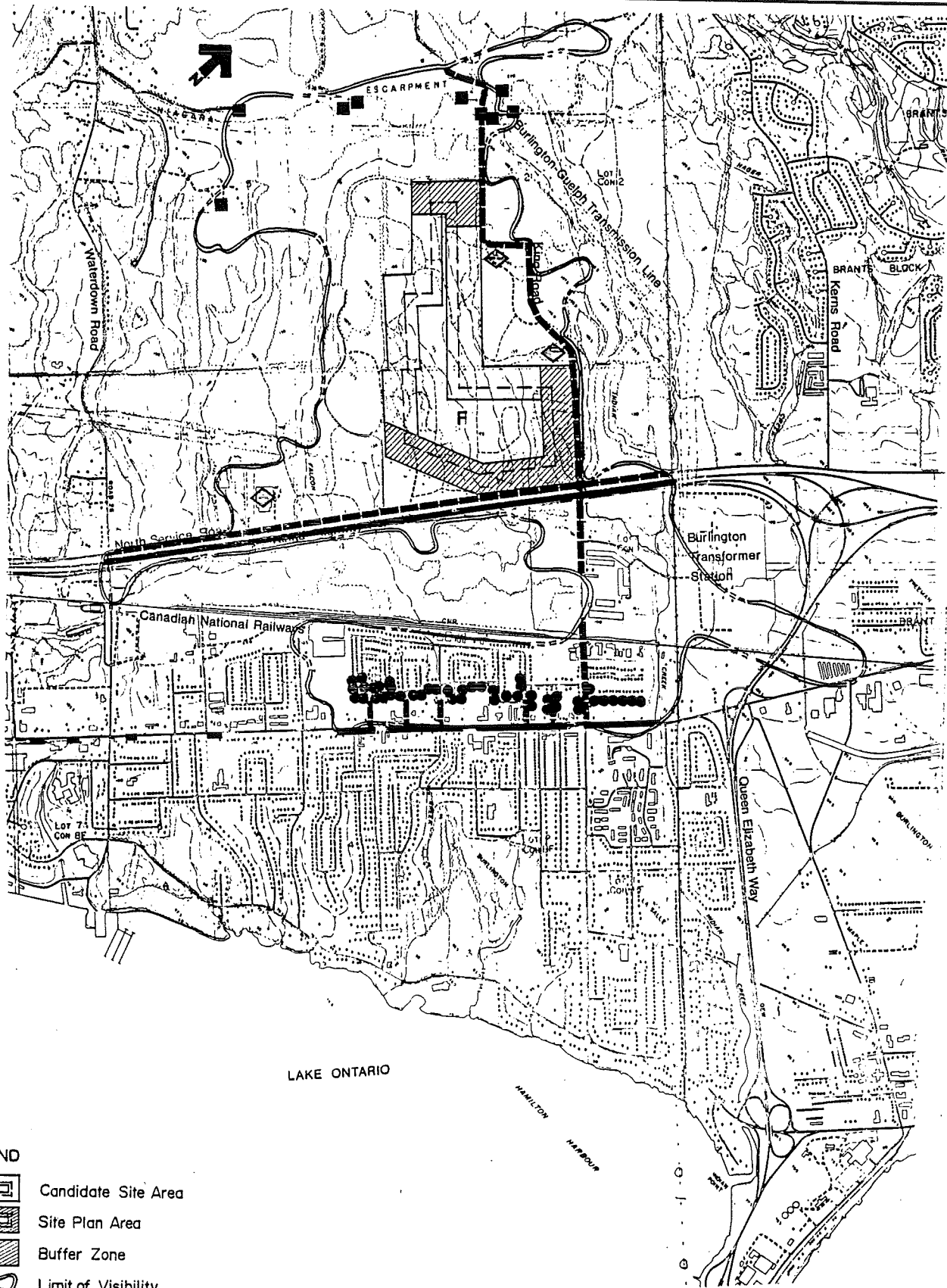


Proctor & Radtke
 Limited
 48 Green Bell Drive
 Oak Mills, Ontario
 M9C 2P2 (416) 462-2020

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LEGEND

-  Candidate Site Area
-  Site Plan Area
-  Buffer Zone
-  Limit of Visibility
-  Residences in High Visual Impact Area
-  Residences in Medium - Low Visual Impact Area
-  Other Land Uses in High Visual Impact Area
-  Major Roadway in High Visual Impact Area
-  Major Roadway in Intermittent High Impact Area
-  Secondary Roadway in High Visual Impact Area

VISUAL ASSESSMENT
 (EXTRACT OF MAP F.2 REGION OF
 HALTON, REGIONAL ASSESSMENT)

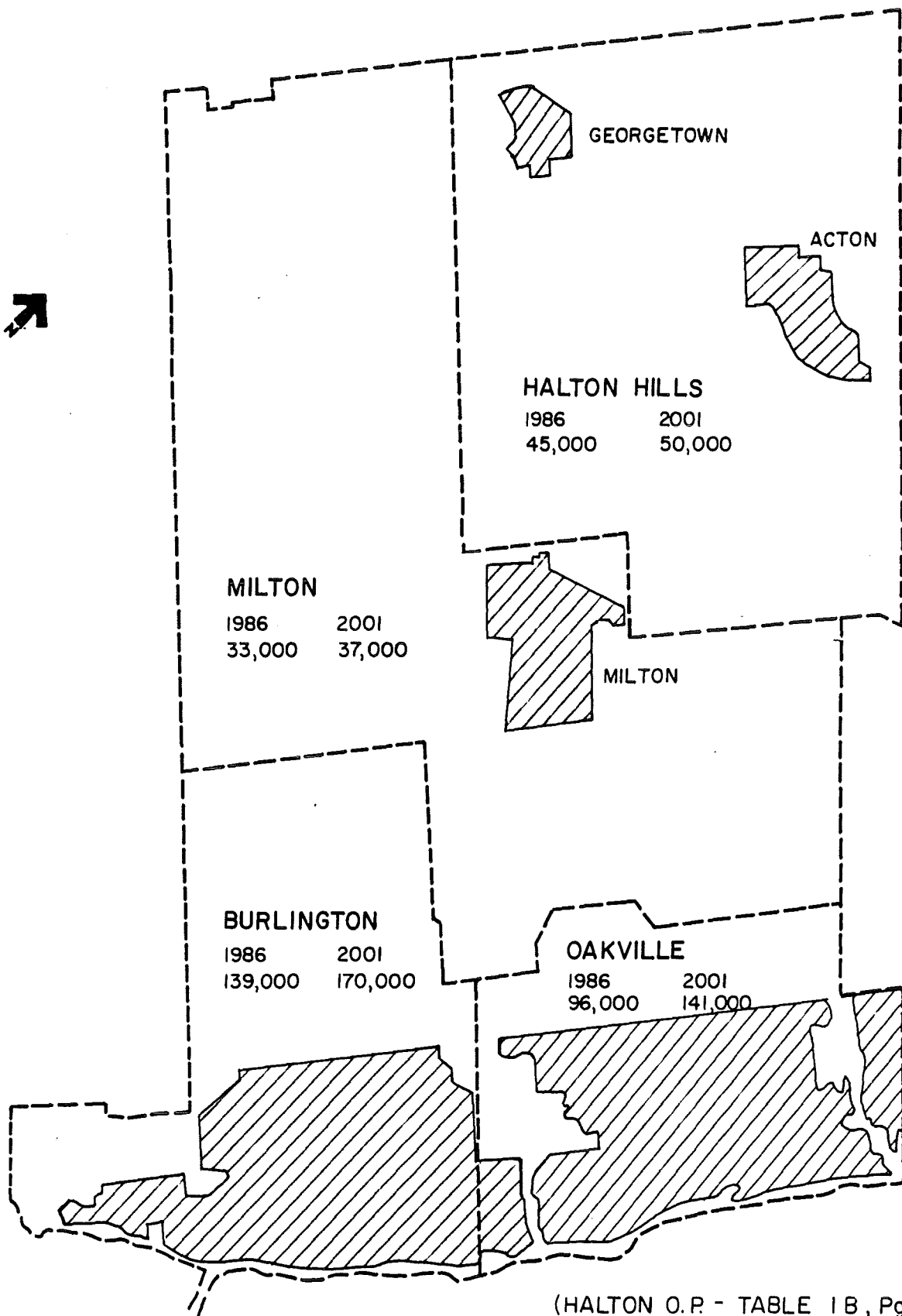


Project & Roadway Limits
48' Green Belt Drive
20' Yellow Zone
10' White Zone

SCHEDULE

H

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(HALTON O.P. - TABLE 1 B, Pg. 51)

REGION OF HALTON POPULATION PROJECTIONS 1986 - 2001

 RURAL AREA
 URBAN AREA



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48 Green Bell Drive
Oakville, Ontario
L6C 3K3 (905) 846-3000

SCHEDULE



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