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**PHASE I - ENVIRONMENTAL SITE ASSESSMENT  
PROPOSED RESIDENTIAL SUBDIVISION  
RICHARDSON SIDE ROAD  
EAST OF CARP RIVER  
CITY OF OTTAWA, ONTARIO**

**Prepared For**

**Uniform Urban Developments**

**July 23, 2009**

**Report E2504-2**



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## EXECUTIVE SUMMARY

On July 16, 2009, John D. Paterson and Associates Limited conducted a Phase I - Environmental Site Assessment of a parcel of vacant land situated on the north side of Richardson Side Road between the Carp River and Goulbourn Forced Road in the City of Ottawa (Kanata), Ontario.

Our findings regarding environmental issues at this property and any recommendations are tabulated below.

<b>Summary of Findings and Recommendations</b>				
<b>Potential Concern</b>	<b>Level of Concern</b>	<b>Findings</b>	<b>Recommended Plan of Action</b>	<b>Reference Section</b>
<b>Historical Review</b>				
Historical Land Use (Subject Property)	low	Farmed on the western side and forested with occasional fields on the eastern portion with the remnants of three structures. A farm waste dump is located in the centre of the property	Waste materials from the farm dump should be removed and transported to a registered landfill. Proper disposal of encountered building materials and scrap metal.	5.1
Historical Land Use (Adjacent Properties)	low	Agricultural and forested. Residential and farm structures southwest of property	none	5.1
<b>Exterior Assessment</b>				
Fuels and Chemicals	none	No visible fuel storage facilities exist on the property.	none	5.2
Radon	none	Not suspected to be a concern.	none	5.2
Waste Management	moderate	Old waste dump exists. Contains farm waste and old trees.	Waste materials from the farm dump should be removed and transported to a registered landfill.	5.2



<b>Summary of Findings and Recommendations</b>				
<b>Potential Concern</b>	<b>Level of Concern</b>	<b>Findings</b>	<b>Recommended Plan of Action</b>	<b>Reference Section</b>
<b>Exterior Assessment</b>				
Water Well	low	A potable well exists adjacent to an abandoned structure.	Proper abandonment.	5.2
Wastewater Discharges	low	No waste water discharge observed on site at the time of fieldwork.	None	5.2
<b>Adjacent Land</b>				
Current Use	low	Residential, agricultural, vacant lands and commercial / residential developments under construction.	none	5.3



## 1.0 INTRODUCTION

At the request of Uniform Urban Developments, Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (ESA) update for a vacant parcel of land located on the north side of Richardson Side Road (future Castlefrank Road) between the Carp River and Goulbourn Forced Road, in the City of Ottawa (Kanata), Ontario.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

## 2.0 SITE INFORMATION

<b>Owner:</b>	Richardson Development Group
<b>Address:</b>	No municipal address for site, City of Ottawa (formerly Kanata), Ontario.
<b>Location:</b>	North of Richardson Side Road, east of the Carp River and adjacent (east) to the proposed Terry Fox Drive extension, City of Ottawa (Kanata), Ontario. Refer to Figure 1 - Key Plan in Appendix 2 for the site location.
<b>Legal Description:</b>	Part of Lot 6 and Part of Lot 7, Concession 1, formerly City of Kanata, City of Ottawa, Ontario.
<b>Site Description:</b>	
Configuration:	rectangular,
Total Site Area:	98 hectares (approximate)
Current Use:	The western portion is being actively farmed and the remainder is vacant fields and forest.
Services:	The site is undeveloped with the exception of a barn and some former building foundations. An old well is present in the vicinity of the foundations. No municipal services are present on site.



### **3.0 SCOPE OF WORK**

The scope of work for this Phase I - Environmental Site Assessment was as follows:

- Investigate the existing conditions present at the subject site by carrying out a field study and historical review in accordance with CSA Z768-01.
- Present the results of our findings in a comprehensive report.
- Provide a preliminary environmental site evaluation based on our findings.
- Provide preliminary remediation recommendations and further investigative work if contamination is encountered or suspected.



## **4.0 METHOD OF INVESTIGATION**

### **4.1 Historical Research**

The methodology for the Phase I - Environmental Site Assessment program was carried out in two segments. The first consisted of a historical review which included a brief research of the past use of the site. This portion of the program was carried out by personnel from our environmental division. The following is a list of the key information sources reviewed by this firm along with other regulatory documents listed in Appendix 1 of this report.

#### **Federal Records**

- Maps and photographs, (Geological Survey of Canada surficial and subsurface mapping).
- Air photos at the Energy Mines and Resources Air Photo Library.

#### **Provincial Records**

- MOE document titled "Waste Disposal Site Inventory in Ontario".
- Office of Technical Standards and Safety Authority, Fuels Safety Branch.

#### **Municipal Records**

- City of Ottawa (Kanata), Zoning Department.
- City of Ottawa, Taxation Department.

#### **Local Information Sources**

- Personal interviews.
- Geotechnical and environmental reports conducted by our firm for the subject and/or adjacent properties.



## 4.2 Field Assessment

The second segment of the assessment consisted of a field investigation which included a cursory inspection and assessment of the environmental conditions of the subject property. The field assessment was carried out on July 16, 2009 by personnel from our Environmental Division.

As part of the field investigation, the site was carefully inspected for signs of the following:

- Evidence of previous or existing fuel storage tanks.
- On-site use or storage of hazardous materials.
- On-site handling or disposal of liquid or solid waste materials.
- Above-ground piping systems, including pumps, valves and joints.
- Truck or rail loading or unloading areas.
- Electrical conduits, abandoned pipelines or pumping stations.
- Remnants of old buildings.
- Signs of surficial contamination (ie. staining, distressed vegetation).
- Unnaturally discoloured, ponded or flowing waters.
- Surficial drainage, wetlands, natural waterways or watercourses through the property (ie. ditches, creeks, ponds, poor drainage).
- Any evidence of potable water supply wells or groundwater monitoring wells (such as leak detection monitoring wells for underground storage tank systems, or abandoned systems).
- Any abnormal odours associated with the site, whether from on-site or off-site sources.
- The presence of any recent soil disturbances such as soil removal, filling, tilling, grading, etc.
- Asbestos containing materials (ACM).
- Urea formaldehyde foam insulation (UFFI).
- PCB containing products.
- Ozone depleting substances (ODSs).
- Lead-containing materials.
- Presence of radon.
- Current use of neighbouring properties.





## **5.0 ENVIRONMENTAL ASSESSMENT FINDINGS**

### **5.1 Historical Review**

#### **Air Photo Research**

Historical air photos of the subject site obtained at the National Air Photo Library were reviewed. Based on the review, the following observations have been made:

- 1963 The northwestern portion of the subject site appears to have been utilized for agricultural purposes, while the eastern portion of the site consists of forested areas, suspected to be areas of shallow bedrock, unsuitable for agricultural purposes. A farm complex, with access from Richardson Side Road, is present just south west of the subject property, with an associated barn present on the subject site. The majority of the surrounding lands are vacant and forested with some minor agricultural use. Richardson Side Road and the Carp River border the property to the south and west, respectively.
- 1968 Only partial coverage of the site was available on this photo. No significant changes were observed on the 1968 aerial photograph in the area available.
- 1977 There are no significant changes to the subject property in the 1977 photo. Significant development south of the subject property has occurred. Highway 417 and the interchange, known as the Terry Fox Drive interchange, have been constructed further to the south. No other significant changes were observed.
- 1999 There has been no significant change on the subject property. However, there has been significant residential development further to the south and east of the subject property.

Laser copies of some of the aerial photographs taken in the above years are included in Appendix 2 of this report.



### **Ontario Ministry of Environment (MOE)**

The Ontario Ministry of Environment document entitled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario.

Based on the available information, there appears to be no evidence of the above-noted sites within the vicinity of the subject site.

### **Technical Standards and Safety Authority (TSSA)**

The TSSA, Fuels Safety Branch in Toronto, formerly the Ontario Ministry of Consumer and Commercial Relations was contacted by phone. There are no underground storage tanks recorded in the TSSA registry for the subject property. The subject site is not registered with the TSSA as a private fuel outlet. None of the neighbouring properties are registered with the TSSA.

### **Personal Interviews**

Mr. Will Richardson stated that the subject property has been in his family for five generations and that the only area of concern would be the old farm dump in the centre of the property, which he mentioned contained three car wrecks, old fencing material, cans, and elm trees removed from Richardson Side Road in the early part of the century to prevent the spread of elm disease.

## **5.2 Exterior Assessment**

The subject lands are currently either farmed, vacant fields, marshland, or forested. In the west central area of the property there is a remnant farmhouse, an old barn foundation and an old potable well. In the centre of the property there is an old farm dump located on the edge of a ravine. The southern half of the property contains a number of old abandoned metal farming implements and used tires. The high point of the land was located on the south east portion of the site and slopes down towards the Carp River in the west. There were no signs of surficial staining or ponded water observed at the time of the investigation.



## Potential Environmental Concerns

### Fuels and Chemical Storage

There were no fuel or chemical storage containers observed on the subject property.

### Radon

Radon occurs in a gaseous state and is the product from the decay of radium commonly associated with shale, sandstone and/or granite bedrock deposits. Radon is commonly found in poorly ventilated basements where the geological terrain includes the previously mentioned types of bedrock. A combination of metamorphic rock types are expected to underlie the site. Therefore, radon is not considered to be a concern.

### Waste Management

Currently there is no waste being generated on the property. However, in the past, a small area in the centre of the property on the edge of a rock escarpment was used as a waste dump. Field investigation revealed that the dump contained approximately 1000 m<sup>3</sup> of assorted waste and sandy fill including old trees, 3 car wrecks, cans and bottles (glass and plastic), barbed wire, old tires, newspaper, appliances, nylon fabrics and pieces of scrap metal. This waste material will need to be removed and transported to a registered landfill. Throughout the southern half of the property are the remnants of old farming implements and used tires which should also be removed to a landfill.

### Wastewater Discharges

There were no signs of wastewater emerging or entering the subject property at the time of the investigation. It is suspected that a private sewage system is present on the property adjacent to the site. The presence of such a system is not a concern for the subject site.



**Private Water Well**

A water well is present on site adjacent to the old farmhouse foundation in the west central area of the property. The water well should be properly abandoned according Ontario regulations during the future development of the site.

**5.3 Adjacent Properties**

Land use adjacent to the subject site was as follows:

- North - Vacant forest and farm land;
- South - Farmstead at 1655 Richardson, Richardson Side Road and wooded/marsh land.
- East - Cleared vacant land under development;
- West - Carp River and environmental wetlands.

None of the immediately adjacent lands were considered to have the potential to impact the subject land. An inspection of properties beyond the adjacent lands did not reveal any properties that were considered to have an impact on the subject property. Land use adjacent to the subject site is illustrated on Drawing E2504-2 - Site Plan in Appendix 2 of this report.



## 6.0 ASSESSMENT AND RECOMMENDATIONS

### **Assessment**

A Phase I - Environmental Site Assessment was carried out on a vacant parcel of land located on the north side of Richardson Side Road between the Carp River and Goulbourn Forced Road, in the City of Ottawa (Kanata), Ontario. The purpose of this environmental assessment was to research the past use of the site and identify any potential concerns associated with the site or adjacent properties that could potentially impact the subject property.

The historical data researched for this site did not reveal any environmental concerns with the exception of the reported dumping of waste materials by the land owners/occupants. The site was formerly utilized for limited agricultural purposes, with the majority of the property covered with intermixed forest areas while the neighbouring lands were vacant forested lands.

Following the historical research, a site inspection was conducted to assess current areas of concern. The old waste dump on the property was the only area considered to have had the potential to impact the subject site. However, the excavations conducted through the waste materials during the geotechnical investigation did not identify any suspected contaminated soil. No suspected contaminants were identified in the remaining test pits conducted for the geotechnical investigation.

Remnants of three structures, an old water well and an existing barn were present on site, which will require decommissioning during future site development, as detailed below.

The current use of the neighbouring properties were not considered to have had an environmental impact on the subject site.

Based on our findings, it is our opinion that the subject property has not been significantly impacted by previous or current on-site or off-site activities and **will not require a Phase II - Environmental Site Assessment.**



## **Recommendations**

The old water well on site will have to be abandoned according to subsection (1). R.R.O. 1990, Reg. 903, s. 21, during future development of the property.

Waste materials, such as old farm equipment, old foundations, used tires, and the refuse associated with the dump on site will require off-site disposal at the time of the development of the property. Recyclable materials such as metal should be disposed of at appropriate recycling facilities, while general refuse will require disposal at a landfill site. It is recommended that our firm be contacted to provide supervision during the removal of the waste materials from the area of the dump, in order to determine appropriate handling and disposal requirements.



## **7.0 STATEMENT OF LIMITATIONS**

This Phase I - Environmental Site Assessment update report has been prepared in general accordance with the agreed scope-of-work and the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject site that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Uniform Urban Development. Permission and notification from Uniform Urban Development and this firm will be required to release this report to any other party.

### **JOHN D. PATERSON AND ASSOCIATES LIMITED**

Mark S. D'Arcy, P. Eng.

Carlos P. Da Silva, P.Eng.

#### **Report Distribution:**

Uniform Urban Developments (3 copies)  
John D. Paterson and Associates Limited (1 copy)

# **APPENDIX 1**

## **REGULATORY DOCUMENTS**



# **APPENDIX 1**

## **REGULATORY FRAMEWORK**

### **FEDERAL**

#### **Legislation:**

Canadian Environmental Protection Act, 1988:

- Chlorobiphenyl Regulation, 1991
- Regulation for the Registration of Underground Storage Tank Systems Containing Petroleum Products or Allied Petroleum Products
- Storage of PCB Material Regulations, 1992

Pest Control Products Act, 1985

Transportation of Dangerous Goods Act/Regulations, 1992

Canada Labour Code

- Occupational Safety and Health Regulations

Hazardous Products Act, 1988

- Controlled Products Regulations
- Hazardous Products Regulations

Canadian Environmental Assessment Act, 1994

#### **Canadian Council of Ministers of the Environment (CCME)**

National Action Plan for the Environmental Control of Ozone Depleting Substances and their Halocarbon Derivatives, 1997

Environmental Code of Practice for Reduction of Solvent Emissions from Dry Cleaning Facilities, 1992

Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks, 1995

Canadian Soil Quality Guidelines for Copper: Environmental and Human Health, 1997

Canadian Soil Quality Guidelines for Pentachlorophenol: Environmental and Human Health, 1997

**APPENDIX 1**  
**REGULATORY FRAMEWORK**

**FEDERAL (CONTINUED)**

Environmental Code of Practice for Aboveground Storage Tank Systems  
Containing Petroleum Products, 1994

Environmental Code of Practice for Underground Storage Tank Systems  
Containing Petroleum Products and Allied Petroleum Products, 1993

A Framework for Ecological Risk Assessment: General Guidance, 1996

Guidance Document on the Management of Contaminated Sites in Canada,  
1997

Guidance Manual for Developing Site-specific Soil Quality Remediation  
Objectives for Contaminated Sites in Canada, 1996

Guidance Manual on Sampling , Analysis and Data Management for  
Contaminated Sites, 1993

National Classification System for Contaminated Sites, 1992

Recommended Canadian Soils Quality Guidelines, 1997

Subsurface Assessment Handbook for Contaminated Sites, 1994

PCB Transformer Decontamination: Standards and Protocols, 1995

Canadian Water Quality Guidelines, 1997

## **APPENDIX 1 REGULATORY FRAMEWORK**

### **PROVINCIAL - ONTARIO**

#### **Legislation:**

Environmental Protection Act, 1990

- General: Air Pollution Regulation Reg. 346, 1990
- Sulphur Content of Fuels Regulation Reg. 361, 1990
- Boilers Regulation Reg 338, 1990
- General Waste Management Regulation Reg. 347, 1990
- Waste Management PCBs Regulation Reg. 362, 1990

General Regulation - Reg. 914

Spills Regulation - Reg 360

Boilers and Pressure Vessels Act, 1997

Dangerous Goods Transportation Act - Reg. 261/90

Gasoline Handling Act, 1990

- Gasoline Handling Code, 1993

Energy Act

- Ontario Fuel Oil Code Regulation 288

Fish and Wildlife Conservation Act, 1997

Occupational Health and Safety Act

- Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations - Reg. 838, 1990
- Regulation Respecting Lead

Ontario Water Resources Act

Conservation Authorities Act

Planning Act

Pesticides Act

Environmental Assessment Act, R.S.O. 1990

**APPENDIX 1**  
**REGULATORY FRAMEWORK**

**PROVINCIAL - ONTARIO (CONTINUED)**

Municipal Board Act

Management of Underground Petroleum Storage Tanks at Federal Facilities in Ontario, Environment Canada, 1991

**Policies, Guidelines and Codes:**

Guidelines for Use at Contaminated Sites in Ontario, June 1996

Ontario Drinking Water Objectives, Revised 1994

Ontario Fire Code, 1998

Environmental Site Assessments, CMHC, 1993

Phase I Environmental Site Assessment, CSA - Z768-94, 1994

Identification of Lamp Ballasts Containing PCBs, Environmental Protection Series, 1991

PCB Site Listings - Ottawa-Carleton, Ontario Ministry of the Environment, 1998

Mapping and Assessment of Former Industrial Sites - City of Ottawa, Intera Technologies Limited, 1988

Waste Disposal Site Inventory, Ontario Ministry of the Environment, 1991

**APPENDIX 1**  
**REGULATORY FRAMEWORK**

**MUNICIPAL**

Chapter 5 Sewer and Waste Disposal, Part 5.2 Sewers, Sewer Treatment Works  
& Discharge of Industrial Waste into Municipal Sewers.

Sewer Use By-Law number 163-73

Zoning By-Law number Z2-K

# **APPENDIX 2**

**AERIAL PHOTOGRAPHS**

**FIGURE 1 - KEY PLAN**

**DRAWING E2504-2 - SITE PLAN**

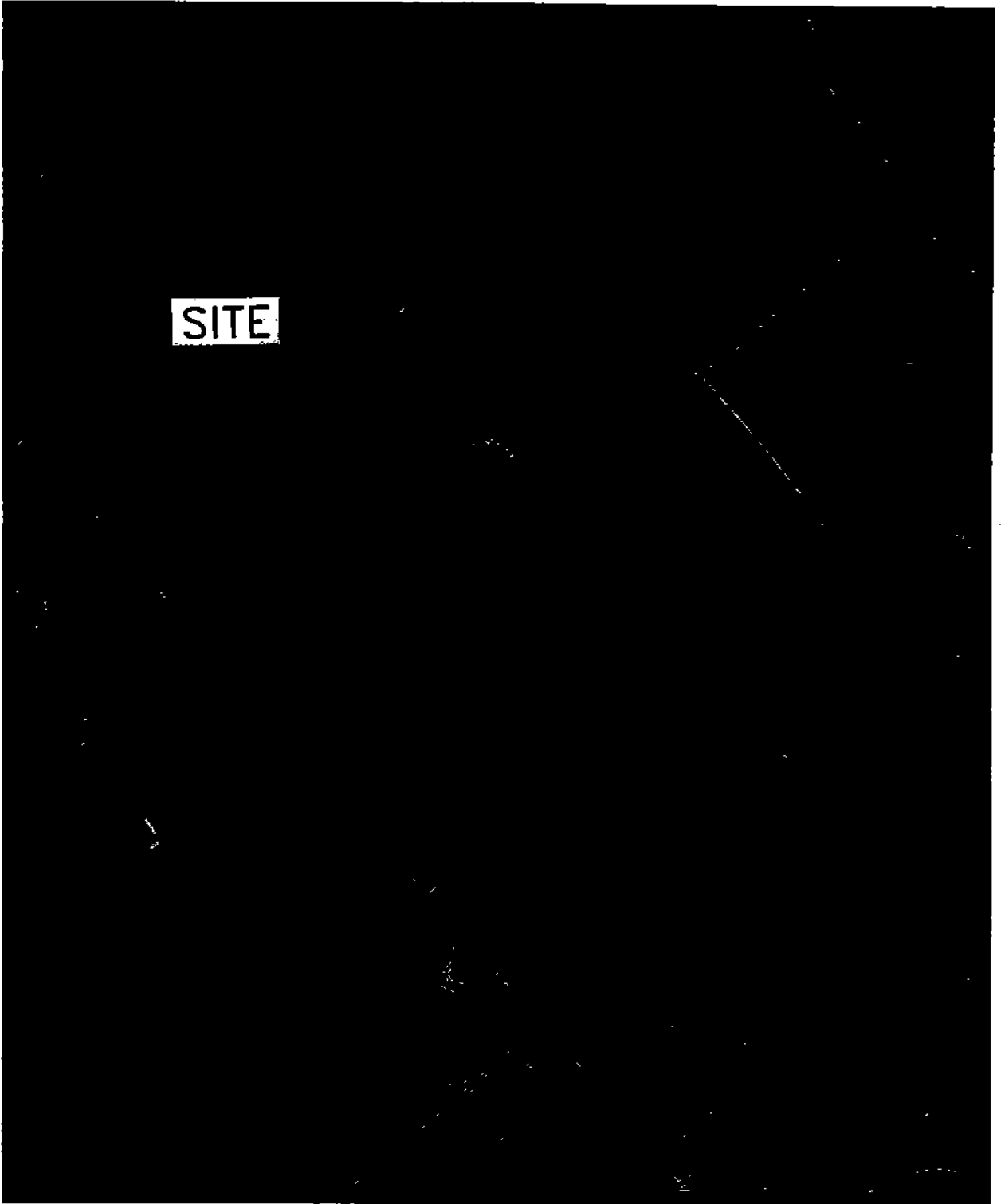


AERIAL PHOTOGRAPH  
1963



AERIAL PHOTOGRAPH  
1977





AERIAL PHOTOGRAPH  
1999

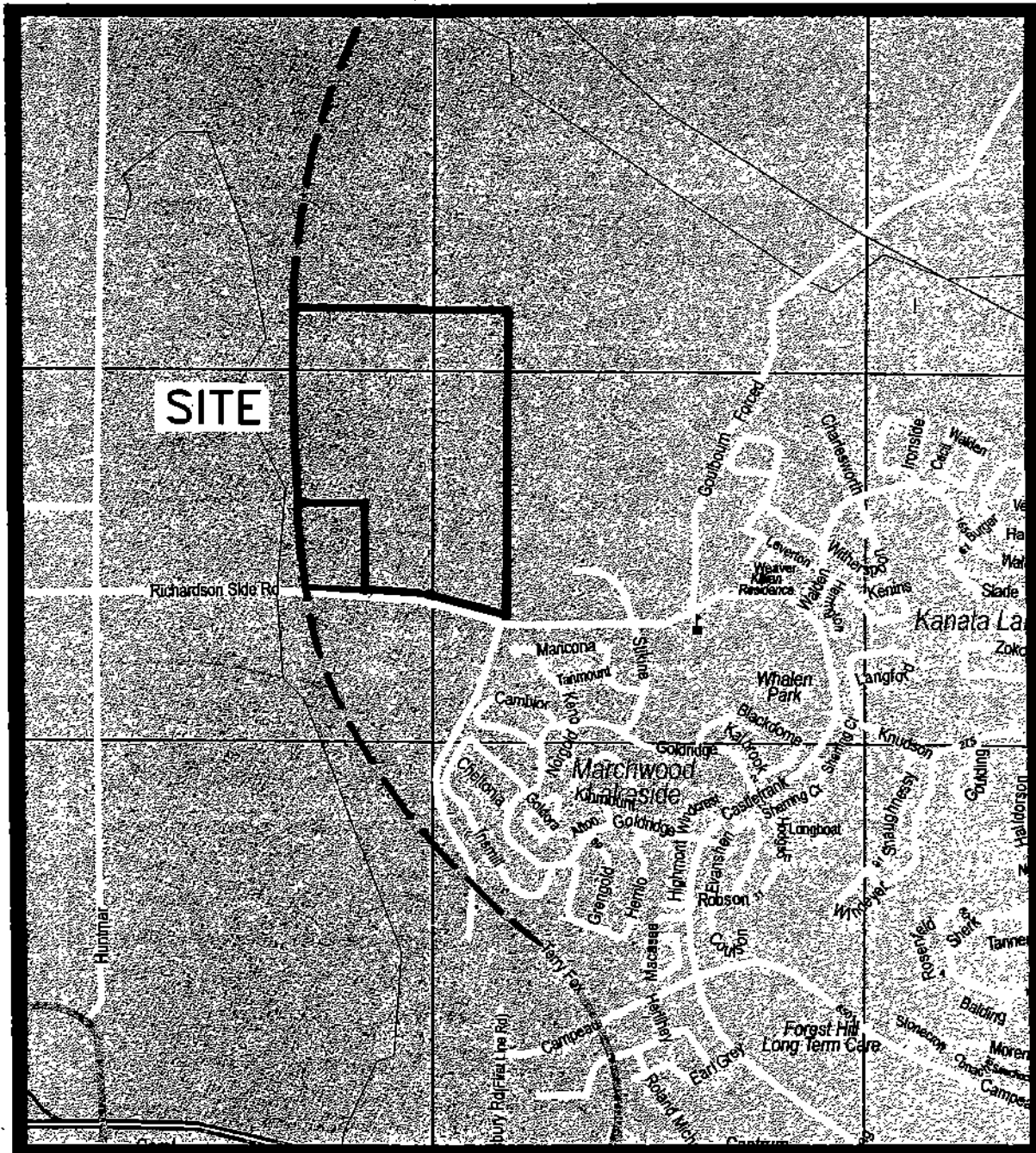


FIGURE 1  
KEY PLAN