

*McGlone & Associates Ltd.*

3300 Merrittville Hwy., Unit #5  
S.S. #1, Thorold, Ontario L2V 4Y6  
Telephone: 905-687-6616 Facs: 905-687-6620

94101/3

LEVEL ONE ENVIRONMENTAL SITE ASSESSMENT

17 SYDENHAM STREET      MEDIUM

FORMER CROWN ELECTRICAL MANUFACTURING CO.

CITY OF BRANTFORD

2-5-214

TAX DATE FEB 93

For: City of Brantford  
City Hall  
100 Wellington Square  
Brantford, Ontario  
N3T 2M3

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94 06 10

City of Brantford  
City Hall  
100 Wellington Square  
Brantford, Ontario  
N3T 2M3

Attention: William K. Cheevers, CRA, Real Estate Officer

Re: Level One Environmental Site Assessment  
17 Sydenham Street  
Former Crown Electrical Manufacturing Co.  
City of Brantford

Dear Sir:

As authorized by your letter of 94 05 02, McGlone & Associates Ltd. have undertaken a Level One Environmental Site Assessment, for the above noted property. An inspection of the site was not included in this assessment. A location plan is appended on page A-1.

**METHODOLOGY:**

The Level One Assessment is to address the question of potential contamination of the site. This has been accomplished through review of available information and with an inspection of the vicinity of the site. Professional judgement was exercised in gathering and analysing the information obtained and in the formulation of our recommendations and conclusions. It is intended that this investigation assist in reducing the Client's risk associated with environmental impairment. This document reports the findings with recommendations regarding further study.

The review of available information for this site has included an inspection of the vicinity of the site, an air photo history, a review of historic maps (including topographic and perspective), a review of historic Fire Insurance Plans, a review of land ownership at the land registry office in Brantford, a review of the book

entitled "History of the County of Brant" and solicited comments from the Ministry of the Environment & Energy, Environment Canada and the City of Brantford regarding possible environmental concerns associated with this property.

**GENERAL DESCRIPTION OF SITE:**

The site, the former location of Crown Electric, is located in central Brantford, in a small industrial area that is largely surrounded by residential development. The general area is bounded by Dundas Street to the north, West Street to the east, Brant Street to the south and St. Paul Avenue to the west. The CNR is to the north of the site under review, and Pearl Street to its southwest. Northern Globe is immediately opposite, on the west side of Sydenham and Mott Manufacturing is adjacent to its north side. Residential development is situated behind (east of) and south of the property. Page A-2 appended shows the site in relation to the surrounding area.

Preliminary Geological Map No. P582, Pleistocene Geology of the Brantford area, issued by the Ontario Department of Mines in 1970, describes the soil in the area as older alluvium - gravel and sand.

**HISTORY OF THE COUNTY OF BRANT:**

According to the "History of the County of Brant, Vol. II", by F. Douglas Reville, published by the Hurley Printing Co. Ltd., 1920, the Crown Electrical Manufacturing Co. was formed in 1910. A factory was built on Sydenham Street at that time, with the buildings being enlarged in 1912 and 1920. Lighting fixtures, portable table lamps and brass art ware were produced. In 1920, it was reported to be the "largest light fixture plant in Canada".

Across Sydenham Street, Mr. Reville indicated that the

Brantford Roofing Co. Ltd. established production in 1906, expanding over the years. Roofing materials and roofing paints were manufactured. Asphalt was imported from Mexico and the United States.

In the February 13th 1980 edition of the Brant News, the electro plating of copper, chrome and brass were reported as historic operations at Crown Electric, along with painting, glass staining, metal cutting and soldering. Component parts reportedly were manufactured for aircraft during the Second World war.

AIR PHOTO REVIEW:

The air photo review of the history of this site was undertaken. Air photos showing this property were reviewed for the years 1945 (Altitude 15,300 ft.), 1951 (1:40,000), 1961 (1:25,000), 1966 (1:20,000), 1975 (1:25,000), 1982 (1:25,000) and 1989 (1:50,000).

In 1945, a large 'U' shaped building was located on the site. Industrial buildings were also located to the north, between the site and the railroad tracks. On the north side of the tracks there was an extensive industrial complex. While houses fronted on the west side of Sydenham, to the dog's leg, there was industrial development behind it and to its north. No houses fronted on the east side of Sydenham, between Pearl Street and Crown Electric. Development to the south and east was generally residential.

By 1961, the houses on the west side of Sydenham had gone, having been replaced by a large industrial building. The building on the site under review had been expanded on its south-east corner by then. There was a new building, on the north side of the lot behind Crown, between Crown and the houses fronting on the west side of Richmond. The large complex on the north side of the railroad appeared to have been demolished. By 1966, two much

smaller buildings had been erected on this latter site.

A small addition had been made to the south side of the south arm of the 'U' by 1975. It started about half way along the length of that side. The building in the rear yard, first noted in 1961, had been expanded by then as well. It almost joined the Crown building at the rear of the north arm of the 'U'. Its west end appeared to occupy the same lot as the main Crown building. This suggests that it may have been part of the Crown facilities. The remainder of the rear yard between Crown and the houses on Richmond Street appeared to be parking lot. There was little other change evident through 1989, except for another addition to the building in the rear yard.

Thus the air photo history suggests that the site and the lands immediately to the west and north have enjoyed industrial development since at least 1945 and that many of the facilities were expanded over the years. To the south and east, the predominant land use has been residential.

#### **TOPOGRAPHIC MAP REVIEW:**

Topographic maps for the years 1875 (perspective), 1875 (1 inch = 400 ft.), 1875 (1 inch = 10 chains), 1893 (perspective), 1908 (1 inch = 1 mile), 1908 ( $\approx 1:8450$ ), 1914 (1 inch = 1 mile), 1951 (1:50,000), 1964 (1:25,000), 1974/76 (1:25,000) and 1982 (1:25,000) were reviewed. In 1875, they showed the east side of Sydenham Street split into three lots, two south of the dog's leg. The two southerly lots extended one third the way to Richmond Street to the east. The third extended to the rear lots of the development fronting on Penfold Alley (then Joseph St.). This latter lot was adjacent to the station grounds of the Grand Trunk Railroad (also known as the Buffalo and Lake Huron Railroad at that time, now CNR).

The 1875 perspective map showed three houses at the dog's leg, but there was no development shown between them and Pearl Street to the south. To the west, the land was open. On the north side of the tracks, between Sydenham and West Street, were the car shop and other buildings associated with the railroad's station yard. On the south side of the tracks, industrial development extended between Richmond and West Streets. South of Pearl St. to Brant, development was shown as largely residential.

In 1893, housing was shown on both sides of Sydenham. There was a large factory on the east side of Sydenham, abutting the south side of the railroad. The development on the north side of the tracks had been enlarged.

In 1908, an industrial development was located on the west side of Sydenham, south side of the tracks. It was identified as Brantford Roofing. In 1914, a large triangular shape industrial development was shown on the west side of Penfold Alley, north side of Halls Avenue. It was not shown in 1951.

In 1951, the block of land on the west side of Sydenham was almost entirely in industrial use, having been expanded to Pearl Street. The east side of Sydenham, south of Halls Ave., was shown as developed.

The site under review was shown with a large building in 1964. A large building was also shown on the site to the north, now Mott Manufacturing. Additional development had also occurred on the Brantford Roofing site. The development associated with the railway had been scaled back considerably by that time. There was little change evident on any of the four main industrial sites there-after.

Thus the map history of the site suggests that the land immediately to the west (Brantford Roofing) has been used for

industrial purposes since at least 1908. Industry has also been located on the north side of the site, the south side of the railroad, since at least 1893. There was extensive industrial development associated with the GTR's station yard and siding as early as 1875.

Although the 1914 historical map did not show the site under review as being developed, Crown Electric was reported by Reville to have been constructed at 17 Sydenham in 1910, and enlarged in 1912 and 1920. It was shown on the 1911 Fire Insurance Plan.

**FIRE INSURANCE PLANS:**

Fire insurance plans for the years 1911, 1935 and 1950 were reviewed. The Crown Electric Manufacturing Co. was shown on the east side of Sydenham in 1911. Three buildings, an office on the north side of the main plant, a moulding shop and a machine/plating/polishing shop were shown. In addition, there was a "transformer house", at the rear. A coal and wood yard was located on the south side of the site. Houses were shown immediately opposite on Sydenham and along Pearl Street.

In 1935, the plant was approximately double its 1911 size, with a second building having been constructed to the south of the original. It abutted the McKeeman's Coal and Wood yard. Crown's street address was given as number 21. A new storage building, north of the original building, was identified as number 23 Sydenham. The moulding shop was then identified as a brass foundry.

Housing still fronted the west side of Sydenham, but behind this were the emulsion building and asphalt product storage tanks of Brantford Roofing. Their main plant was immediately to the north of this.

North of the site under review was R.E. Sayles Transport and Warehouse. A brass foundry was attached to the east end of the south building on this site. Warehouses and storage were the identified uses of the north building.

In 1950, a new building joined the rear of the two manufacturing buildings on the site under review. Plating and buffing was undertaken in this new building. A warehouse was shown farther to the rear (east), along with a small building for paint storage. These latter two buildings were between the original plant buildings and the rear of the houses fronting on Richmond Street.

Brantford Refrigeration Ltd. occupied the site to the north in 1950. The building on that site was larger than that shown in 1935. Identified were such operations as welding and painting. To the south of Crown Electric, reference to the coal yard had disappeared. Houses still fronted the west side of Sydenham.

Thus a review of historic Fire Insurance Plans suggests that the site has been used for industrial purposes by Crown Electric since at least 1911. A brass foundry was associated with the industrial activities undertaken on the site along with metal polishing, machining, painting and metal plating.

The lands to the north of the site have also enjoyed a lengthy industrial history, including such operation as painting and welding and a brass foundry. Those to the west house a roofing company, with large storage facilities for asphalts. To the south, the lands immediately adjacent enjoyed several decades of use as a coal and wood yard. Farther south, the development has been residential.

VERNON DIRECTORIES:

Nineteen editions of Vernon Directories were reviewed, covering the period 1900 through 1993/94. In 1900, Farmer's Binder Twine Co. was listed at 23-31 Sydenham, a residence at 21, and south of this, Widdup Macfarlane Coal. In 1905, this latter business was listed at 11 Sydenham.

Crown Electrical Manufacturing Co. was listed at 17-21 Sydenham in 1916. A coal merchant was listed at number 11 and the Farmer's Binder Twine Co. was still at 23-31, just before the tracks of the Grand Trunk Railroad (now CNR). The Brantford Roofing Co. was listed opposite, at 8-22 Sydenham.

In 1920, 11 Sydenham was vacant. The Monarch Co. Ltd. was listed at number 31 and residences at 22 and 22½. In 1925, number 31 was listed as Monarch Tractor Ltd. The coal listing reappeared at 11 Sydenham in 1925, but was gone again by 1940. In 1930, number 31 was vacant while number 23 was listed as a residence. In 1935, number 27 was listed as a warehouse.

Crown Electrical Manufacturing remained listed at 17-21 Sydenham Street through at least 1980, after which time number 21 was no longer listed. In 1985, the listed name had changed to Crown Manufacturing Inc., at 17 Sydenham, and in 1990, to the Crown Building of Brantford. It was listed as vacant in 1993/94, but was co-listed with Harolds Haulage. For a period of time around 1985, it shared the site with Fab Print Co. Ltd. and Can-Wear Casuals.

The Brantford Refrigeration Co. was listed at 21 Sydenham in 1940 and again in 1945. In 1940, warehouses were listed at both 25 and 27 Sydenham. These had changed to the Sherer Gillette Co. Ltd. and Gowman Grocers, warehouse, respectively by 1945. Neither address was listed in 1950, or the following years. Twenty three was still listed as a residence in 1980. In 1990, HD Power Train

was listed at this latter address, but the site was listed as vacant again in 1993/94.

Brantford Roofing Co. continued to be listed at 22 Sydenham Street until sometime between 1955 and 1960, at which time it was identified as Murray-Brantford Ltd. In 1965, it was listed as Domtar Construction Materials. Between 1990 and 1993/94 it became Northern Globe.

Thus a review of Vernon Directories suggests that the site under review has been occupied by the Crown Electrical Manufacturing Co. from at least 1916 through 1980. Thereafter, although the Crown name continued to be associated with the property, it was co-occupied by other concerns. The Brantford Refrigeration Co. was also listed at 21 Sydenham in 1940 and 1945.

A coal yard was operated on the south side of Crown Electric from at least 1900 through 1935. On the north side of the site, manufacturing (binder twine and tractors in the early years and now office furniture) and warehousing operations have been undertaken, since at least 1900.

Across Sydenham Street from the site, roofing materials have been manufactured since at least 1916. The operation continues still. Considerable asphalt and emulsion storage and usage has been associated with this industry.

**PREVIOUS OWNERSHIP:**

A search at the land registry office in Brantford was undertaken for this property, which is a 2.102 acre parcel comprising Lots B & C and Part of Lot A on East Sydenham St. and Part of Lots 1 to 5 on North Richmond St in the City of Brantford.

The lots on East Sydenham were part of the Smith & Kerby

Tract, granted by the Crown to Wm. K. Smith and Margaret Kerby in 1835. They remained in private ownership until Lot B was sold by John. S. Dowling to the Crown Electrical Manufacturing Co. Ltd. in 1910. The lots on North Richmond, also part of the Smith & Kerby Tract, remained in private ownership until Crown Electrical bought Part of Lots 3 and 4 in 1913 from John Dowling.

This parcel (Lot B on East Sydenham and Part Lots 3 and 4 on North Richmond) passed to the City of Brantford after Crown Electrical went into Bankruptcy in 1936. The parts of Lots 3 & 4 were bought from the City of Brantford by Crown Electrical in 1942 and Lot B from the City of Brantford by the Brantford Refrigerator Company also in 1942.

Crown Electrical bought the parts of Lots 1 and 2 on Richmond Street and the part of Lot A on Sydenham Street from Malcolm & Mary McGregor in 1944 and part of Lot 5 on Richmond Street in 1946 from George S. Pettite. These lots had all been in private ownership since being granted by the Crown in 1835.

Lot B on Sydenham was returned by the Brantford Refrigerator Company to Crown Electrical in 1946. Lot C on Sydenham remained in private ownership from the time it was granted by the Crown until 1968 when it was purchased by Burtch Investments. It was sold by Burtch Investments to Crown Electrical in 1972.

The complete 2.102 acre parcel was sold to Trunor Investments Inc. in 1988 and then to 785589 Ontario Ltd. also in 1988. A Tax Arrears Certificate was issued by the City of Brantford in March 1993.

**RECORD REQUESTS:**

A further component of this audit involves soliciting the local Ministry of the Environment & Energy, Environment Canada and

the City of Brantford for a search of their records for possible known environmental concerns regarding the property.

The City have verbally advised they have no information on the site.

The M.O.E.E. have verbally advised that they are not aware of any particular environmental concerns at the site under review. They reported the property was currently occupied by a used tire processor, but noted that only physical operations were undertaken.

According to the M.O.E.E., a hydrogeological investigation was undertaken at the time Domtar sold the plant at 22 Sydenham to Northern Globe. Trichloroethylene was found in groundwater samples, taken near the railroad tracks. Its concentration was less than the drinking water criteria. Its source has not been determined.

The M.O.E.E. also advised that they have received odour complaints against Northern Globe - asphalt smell- and Mott Manufacturing, the latter 2 or 3 years ago.

Environment Canada, in their letter of May 18th, advised they have no record of in service PCB equipment at this site. A copy of their letter is appended on page A-3. The M.O.E.E. in their letter of June 14th, advised they have no record of registered PCB storage at this site. Their letter is appended on pages A-4 and A-5.

**ON-SITE INSPECTION:**

No on-site inspection was conducted as permission to enter the property was not obtained by the Client. A cursory inspection of the area was made from the public right of way, however, on May 10th.

Pearl Street was largely residential. A house occupied the north-east corner of the intersection of Sydenham and Pearl Streets. The site under review was listed for sale. It was paved along its south side. Immediately north of it was HD Power Tools, at number 23, and then Mott Manufacturing. The latter was set back considerably from the street and had a gravel yard in front. Immediately north of Mott was the railroad. On the west side of Sydenham, Northern Globe fronted the length of the street.

LEVEL ONE SUMMARY:

A summary of this Level One assessment suggests that the site has been in industrial use, by Crown Electric, since 1910. Various plating, soldering, metal finishing, painting and foundry operations were undertaken over the years. This suggests the potential for contamination by metals and organic compounds. A tire recycling business is currently operated at this address, but is not felt by the M.O.E.E. to represent an environmental hazard.

Although the buildings were not inspected, given their age they may contain asbestos building materials, lead paint and PCB's, for example in fluorescent lighting ballasts. No registered PCB storage sites or in-service equipment are however, recorded at this address.

The lands immediately across the street have been the home of Northern Globe, or its predecessors, since approximately 1906. Asphalt roofing products have historically been manufactured at the location. The lands to the immediate north of the site under review have enjoyed various industrial uses since at least 1893. Along the railroad tracks, industrial activity has been underway since at least 1875. The lands to the immediate south were occupied by a coal yard for 40-50 years.

The Ministry of the Environment and Energy verbally advise

that trichloroethylene, an industrial solvent, was detected at low levels on the Northern Globe property. It's source and extent have not been established. Odour complaints have been lodged against that plant, and against Mott Manufacturing on the north side of the site under review.

Based on the findings of the Level One assessment, we consider the potential for contamination of the site to be medium. For comparison purposes, page A-6 appended lists the rating system used by McGlone & Associates Ltd. to describe the potential for contamination.

**LEVEL TWO RECOMMENDATIONS:**

We recommend an investigation of the site to determine its status regarding potential contamination from past on site industrial activities and from adjacent industries. It would be prudent to inspect the site and buildings for designated substances, obvious signs of spills, waste storage, equipment potential containing PCB's and so forth.

**CONSULTANT QUALIFICATIONS:**

McGlone & Associates Ltd. is an APEO licensed consulting/engineering firm which has been providing consulting services for about 20 years. Our field of expertise includes geotechnical, hydrogeological, environmental and construction testing services. We have been performing environmental site assessments for about 6 years and are experienced in the normal standards and procedures used.

**REPORT LIMITATIONS:**

This work has been performed in accordance with normal standards and procedures. It is an assessment of the environmental

conditions on the site and its results do not preclude the possibility of unobserved contamination. Therefore, if any suspicious conditions are observed in the future they should immediately be reported to McGlone & Associates Ltd. and the M.O.E.E. in order that a further investigation may be carried out.

A further limitation is that an on site inspection was not conducted. In addition, only verbal comments have been received from the M.O.E.E. and the City of Brantford. If their written responses are materially different, they may have a significant impact on our recommendations.

We trust this report satisfies our present terms of reference. If you should have any questions regarding the above, please feel free to contact this office at your convenience.

Yours very truly,

MCGLONE & ASSOCIATES LTD.

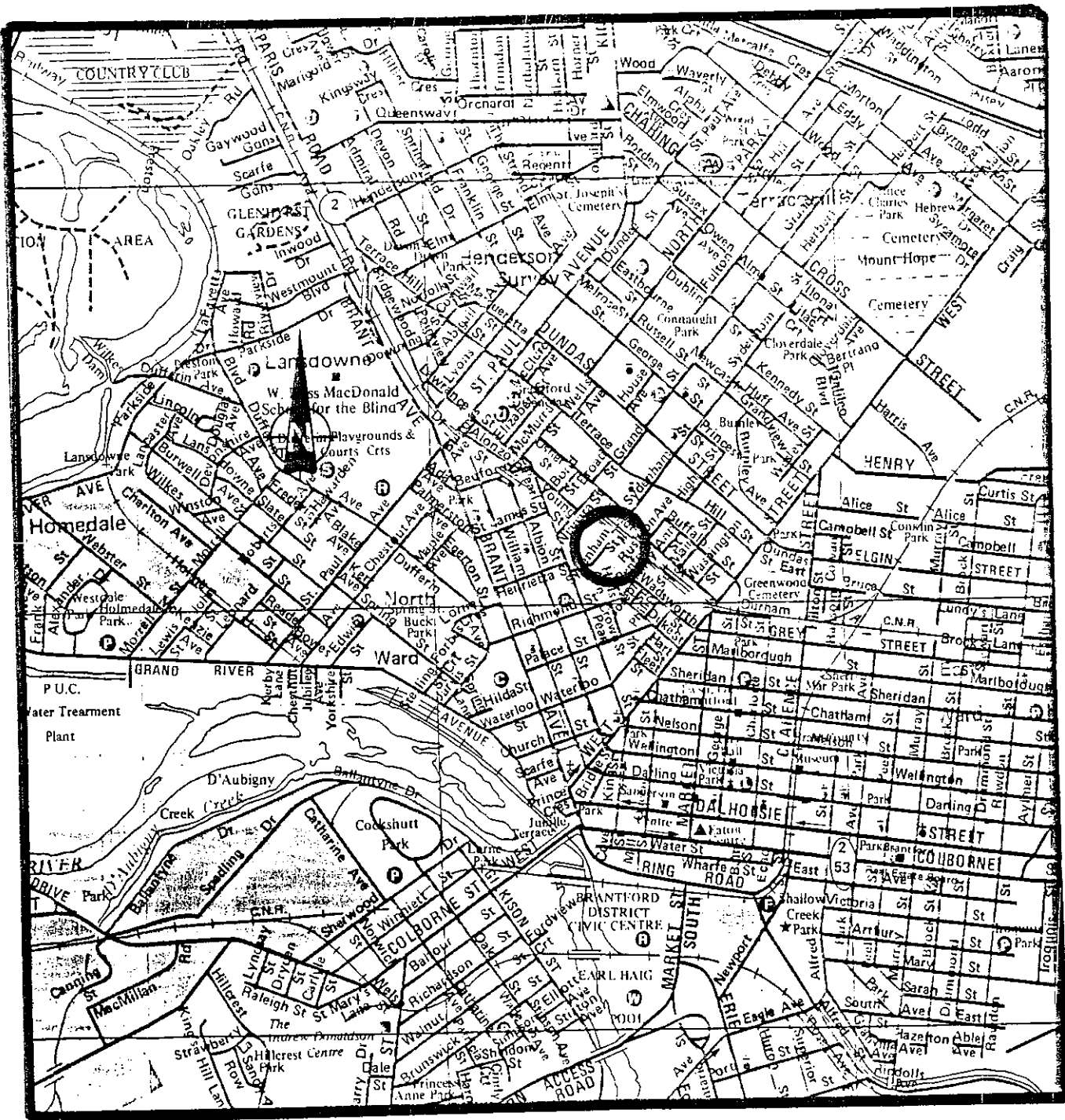


A handwritten signature in cursive script that reads "Mike Lywood".

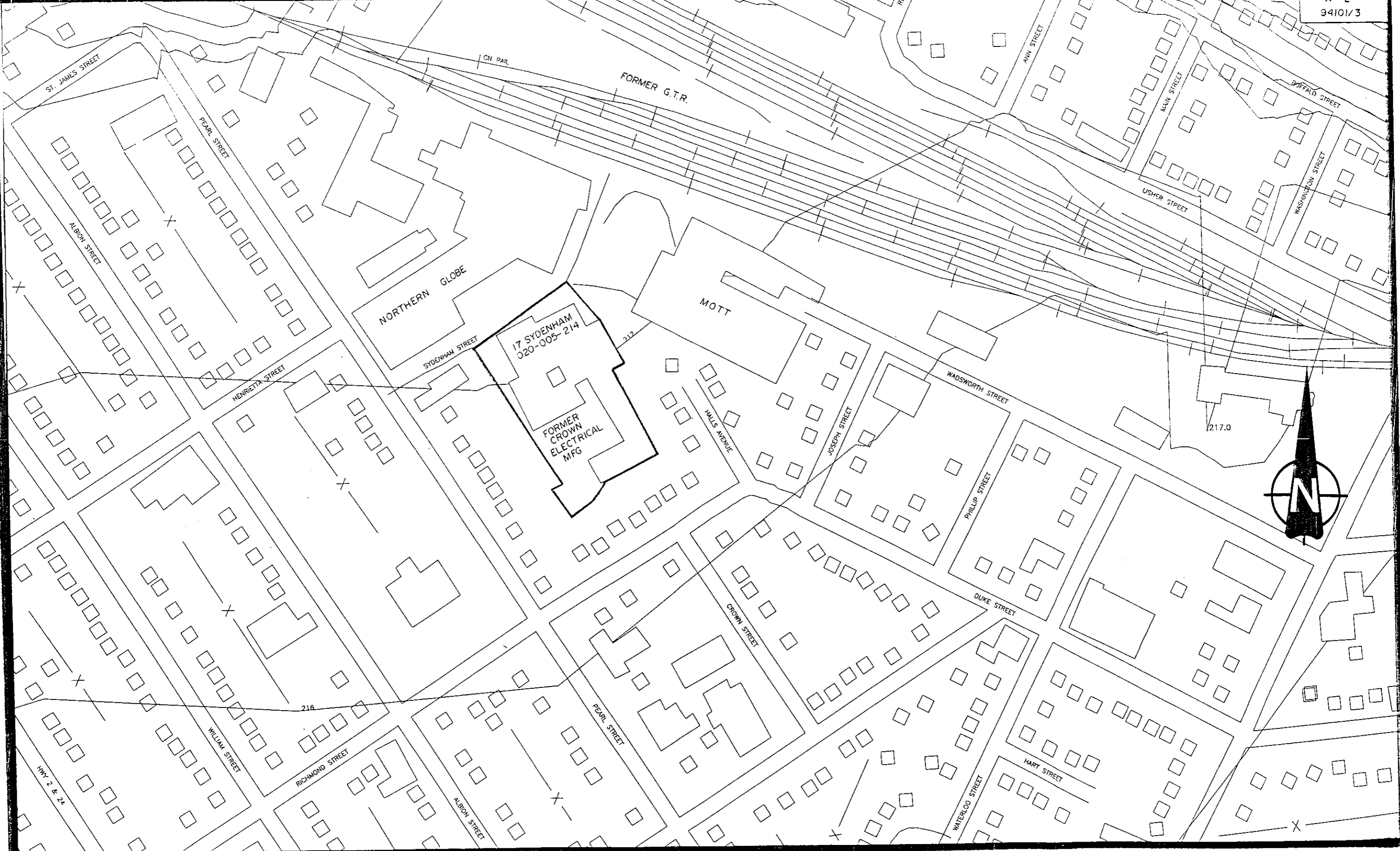
Mike Lywood, P.Eng.

4 copies Client  
ML:lg  
Encl.

**APPENDIX**



SITE LOCATION PLAN



17 SYDENHAM STREET

McGLONE & ASSOCIATES LTD  
3300 MERRITTVILLE HIGHWAY  
THOROLD ONTARIO

DETAILED SITE LOCATION PLAN



Environment Canada  
Conservation and Protection

Environnement Canada  
Conservation et Protection

Ontario Region  
25 St. Clair Avenue East  
Toronto, Ontario  
M4T 1M2

Région de l'Ontario  
25, avenue St. Clair est  
Toronto (Ontario)  
M4T 1M2

Your file    *Voire référence*

Our file    *Notre référence*

May 18, 1994

Mr. Mike Lynwood, P.Eng.,  
MCGLONE & ASSOCIATES LTD.,  
3300 Merrittville Hwy. Unit 5  
Thorold, Ontario  
L2V 4Y6

Dear Mr. Lynwood;

Further to your letter of May 11, 1994 requesting information on six sites in Brantford and their in service PCB equipment, please be advised that we have information reported to us for only one of the sites.

The current information we have shows 198 capacitors now in storage and 2 transformers still in service at 347 Greenwich St. (formerly owned by Massey Ferguson).

If you have any questions please contact me.

Yours truly,

Nancy McGill (Mrs)  
Contaminants Clerk,  
Environment Canada  
Environmental Protection Branch  
Ontario Region

# Ontario

Ministry of  
Environment  
and Energy

Ministère de  
l'Environnement  
et de l'Énergie

119 King St W  
12th floor - Box 2112  
Hamilton ON L8N 3Z9

119 rue King ouest  
12<sup>e</sup> étage - Casier 2112  
Hamilton ON L8N 3Z9

14 June 1994

McGlone & Associates Ltd.  
3300 Merrittville Hwy., Unit #5  
S. S. #1  
Thorold, Ontario L2V 4Y6

Att'n: Mr. M. Lywood

Dear Mr. Lywood:

**Re: Level One Environmental Audit  
Six Properties  
City of Brantford**

Further to your letter dated May 11, 1994, and our telephone conversation of June 3, 1994, a review of our files has indicated that there are no registered PCB storage sites at five of the properties listed in your letter.

Of the companies/addresses listed in your letter of May 11, 1994, only 347 Greenwich Street has a registered PCB storage site - Site No. 20291A005.

I recommend that you contact Environment Canada, who maintain an inventory of in-service PCB (askarel) equipment, for any additional information which you may require.

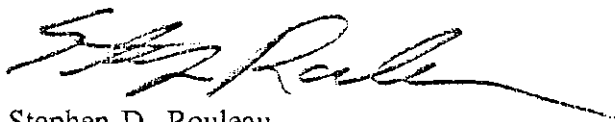
Environment Canada  
25 St. Clair Ave. E., 7th Fl.  
Toronto, Ontario M4T 1M2

If you require any additional information with regard to these properties, please contact:

Ministry of Environment and Energy  
Cambridge District Office  
320 Pine Bush Road, P.O. Box 219  
Cambridge, Ontario N1R 5T8  
Telephone: (519)622-8150

If I can be of any further assistance, or if you have any questions in regard to PCB waste management, please do not hesitate to call me at (905)521-7194.

Yours truly



Stephen D. Rouleau  
Environmental Officer  
Regional Inspection Program  
West Central Region

SR/en

SRIWP  
SR-14F.LET

PHASE ONE AUDIT  
POTENTIAL FOR CONTAMINATION  
SUMMARY DESCRIPTION

The purpose of a Phase One Audit is to address the potential for contamination of a site. This is accomplished through the application of professional judgement to the collection and analysis of historical information pertaining to the site and the immediate surrounding area. Our Phase One conclusions are not warrants as to site condition but rather carefully considered opinions. We have developed the following ranking system to facilitate the interpretation of our conclusions.

Potential For Contamination

Interpretation

Very Low	We are reasonably sure the site is clean, but can not definitively prove it.
Low	We consider the site to probably be clean, but potential for contamination does exist.
Medium	We are of the opinion that a definite potential exists for contamination.
High	We believe there is unsubstantiated evidence that the site is contaminated.
Very High	We are almost sure that the site is contaminated, but we lack definite proof.