

# **City of Greater Sudbury 2001 Urban Soil Survey**

## **Appendix B**

### **School and Daycare**

#### **Results**

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## 1.0 METHODS

During the month of July 2001, MOE representatives collected soil, sand and gravel samples from each school and daycare within the City of Greater Sudbury. At each site, samples were collected in duplicate from all child play areas and especially from areas where school children could come in direct contact with bare soil. Samples were collected in different ways from different locations as described below. The sampling location and pattern of sampling is indicated on each school map attached in Section 2.0. The school maps are provided to indicate the sampling locations on the property and may not be spatially accurate.

Gravel playgrounds, containing slag in some instances, were prevalent at schools within the older urban areas of the Greater City of Sudbury. Since this was the only area for school children to play, duplicate samples were collected from the gravel playground by pushing aside the larger stones and, with a trowel, scraping the underlying fine gravel material. All samples were collected while walking in an "X" pattern across the gravel playground. For this type of sampling, the purpose was to collect the fine particles that would be air borne when school children run and/or slide on the gravel.

Sand samples were collected from all sanded play areas including those with play structures and sand boxes. Due to the constant mixing of sand and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. In most cases, one sample was collected from the interior of the play area in an "X" pattern below the play structure, while the other sample was collected from the perimeter of the sanded play area adjacent to the pressure treated wood border and/or soil. This type of sampling should indicate if there is a concentration gradient from the outside wood border and/or surrounding soil to the interior of the play area. If there was no wooden border, both sand samples were collected from the interior of the sanded play area in an "X" pattern. In most cases, duplicate sand samples were collected; however, at some locations single sand samples were collected.

Soccer and football fields were sampled in duplicate with a hand held soil corer in an "X" pattern of the entire length of the field. Cores were separated into three depths, 0-5 cm, 5 - 10 cm, and 10 - 20 cm where possible. In addition, duplicate samples were taken in any worn area where bare soil was visible; most predominately at soccer goal posts and centre field. Due to the compacted nature of these areas, surface soil samples were taken with a trowel to represent the 0-5 cm depth.

Baseball diamond infields were in most cases gravel and very compacted. Therefore, duplicate surface samples were taken with a trowel. In most cases, one surface sample was collected while walking along the baseline, while the other was collected while walking an "X" pattern from home base to 2<sup>nd</sup> base and from 1<sup>st</sup> to 3<sup>rd</sup> base. This type of sampling should indicate if there is an effect of the chalk lines applied to the baseline compared to the interior of the infield.

Baseball diamond outfields were sampled in duplicate with soil corers in an "X" or "W" pattern. Cores were separated into three depths, 0-5 cm, 5 - 10 cm, and 10 - 20 cm where possible. Where the infield was grassed, samples were collected with a soil corer either as a separate site or combined with the baseball diamond outfield.

Sand from long jump pit landing sites was sampled in duplicate in an "X" pattern. A hand trowel

was used to sample the 0 to 15 cm layer due to the constant mixing of the sand in this location.

Samples were also taken from any grassed greenspace area where school children would play. Cores were separated into three depths, 0-5 cm, 5 - 10 cm, and 10 - 20 cm where possible.

Outdoor ice rinks were not sampled based on the premise that they would only be used when the soil was covered by ice. The remaining paved areas were not sampled.

All samples were delivered to the MOE Phytotoxicology laboratory where they were organized and shipped to Agat Laboratories for Processing (MOE 2000, Appendix F). Agat followed MOE Standard Operating Procedures which included air drying and sieving samples to obtain the 2 mm size fraction, and then further grinding the sample in a mortar and pestle to pass through a Number 45 mesh (0.355 mm) sieve. Finally, the ground material was stored in glass jars. All soil samples were then forwarded to Lakefield Laboratory for chemical analysis including: arsenic (As), aluminum (Al), barium (Ba), beryllium (Be), calcium (Ca), cadmium (Cd), cobalt (Co), copper (Cu), chromium (Cr), iron (Fe), magnesium (Mg), manganese (Mn), molybdenum (Mo), nickel (Ni), lead (Pb), selenium (Se), strontium (Sr), vanadium (V), and zinc (Zn). MOE data management and quality control procedures for both sample processing and metals analysis carried out by contract laboratories is outlined in Appendix F.

All data are reported in  $\mu\text{g/g}$  dry weight and were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997). In addition, school and daycare property samples have been compared to undisturbed soil results from nearby sites sampled as part of the 2000 Sudbury Soils Report (MOE 2001). It is important to note that the 2000 Report documented metals concentrations in surface soils primarily from undeveloped areas which may not be representative of all materials sampled on the school and/or daycare properties. All of the data presented within this report will be used to support the Human Health Risk Assessment that will be conducted for the City of Greater Sudbury.

## 2.0 INDIVIDUAL SCHOOL RESULTS, DESCRIPTIONS AND MAPS

### 2.1 Rainbow District School Board

As of June 2001, the Rainbow District School Board provided the MOE with a list of 40 school properties. MOE representatives were able to collect samples from each property during the summer of 2001. For each school there is a section below describing the results, a table with a subset of the results, and a map showing the sampling locations. The maps were provided by the Rainbow District School Board and the locations of the sampling sites shown are only approximate. The schools are listed alphabetically. Complete results for each school are listed in Table 4.1 along with the results from the other school boards.

Table B2.1 summarizes the number of schools in Rainbow District School Board that were sampled and the number schools where at least one sample exceeded the MOE soil criteria for nickel, copper, cobalt, arsenic or lead (MOE 1997).

**Table B2.1:** Number of Rainbow District Schools where at least on sample exceed MOE soil criteria.

Number of Schools Sampled	Nickel Exceedences		Copper Exceedences		Cobalt Exceedences		Arsenic Exceedences		Lead Exceedences	
	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A
40	39	18	11	7	4	2	1	1	3	0

In order to fit all of the results data onto one table the standard chemical abbreviations had to used. To interpret the tables properly, the chart below can be used to translate the abbreviations.

Chemical Symbols Used in Results Tables				
<b>Al</b> - aluminum	<b>Sb</b> - antimony	<b>As</b> - arsenic	<b>Ba</b> - barium	<b>Be</b> - beryllium
<b>Cd</b> - cadmium	<b>Ca</b> - calcium	<b>Cr</b> - chromium	<b>Co</b> - cobalt	<b>Cu</b> - copper
<b>Fe</b> - iron	<b>Pb</b> - lead	<b>Mg</b> - magnesium	<b>Mn</b> - manganese	<b>Mo</b> - molybdenum
<b>Ni</b> - nickel	<b>Se</b> - selenium	<b>Sr</b> - strontium	<b>V</b> - vanadium	<b>Zn</b> - zinc

Please note as of 2004, Rainbow District School Board has closed Falconbridge Public School (2.2.13) and Robert Jack Public School (2.1.34) and has renamed Northeastern Secondary School (2.2.27) to Northeastern Elementary School.



### 2.1.1 Adamsdale Public School - Rainbow District School Board 181 1<sup>st</sup> Avenue, Sudbury

Adamsdale Public School was sampled on July 17, 2001. Figure 2.1.1 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to the baseball diamond outfield. Areas B and C correspond to the north and south baseball diamond infields, respectively. The north baseball diamond infield was grassed while the south infield was sand and gravel. Due to the compacted nature of Areas A, B, and C it was only possible to sample the surface soil (0 - 5 cm). Area D corresponds to sand samples that were taken from below the play structures. Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of all other locations at this property. Copper was also elevated above the Table F Ontario Soil Background Criteria in the surface soil of the baseball diamond outfield and the south baseball diamond infield. The highest nickel and copper concentrations, 130 and 100 ppm, respectively, occurred in the surface soil of the south baseball diamond infield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south and 1 km north of Adamsdale School, Stations 77 and 361, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 210 and 220 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037144	14299	0 - 5	< 0.8	< 5	41	< 0.8	41	6	<b>62</b>	49	< 1.5	<b>73</b>	< 1	29	30
		14300	0 - 5	< 0.8	6	44	< 0.8	43	7	<b>60</b>	34	< 1.5	<b>73</b>	< 1	33	36
Area B grass	5037145	14301	0 - 5	< 0.8	< 5	48	< 0.8	39	7	44	11	1.6	<b>65</b>	< 1	34	47
		14302	0 - 5	< 0.8	< 5	47	< 0.8	37	7	42	10	< 1.5	<b>60</b>	< 1	33	34
Area C gravel	5037146	14303	0 - 5	< 0.8	8	25	< 0.8	29	10	<b>100</b>	19	< 1.5	<b>120</b>	< 1	29	48
		14304	0 - 5	< 0.8	8	22	< 0.8	28	10	<b>92</b>	19	< 1.5	<b>130</b>	< 1	28	38
Area D sand	5037147	14305	0 - 15	< 0.8	< 5	23	< 0.8	29	7	17	2	< 1.5	19	< 1	28	17
		14306	0 - 15	< 0.8	5	22	< 0.8	29	8	18	3	< 1.5	20	< 1	29	17
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

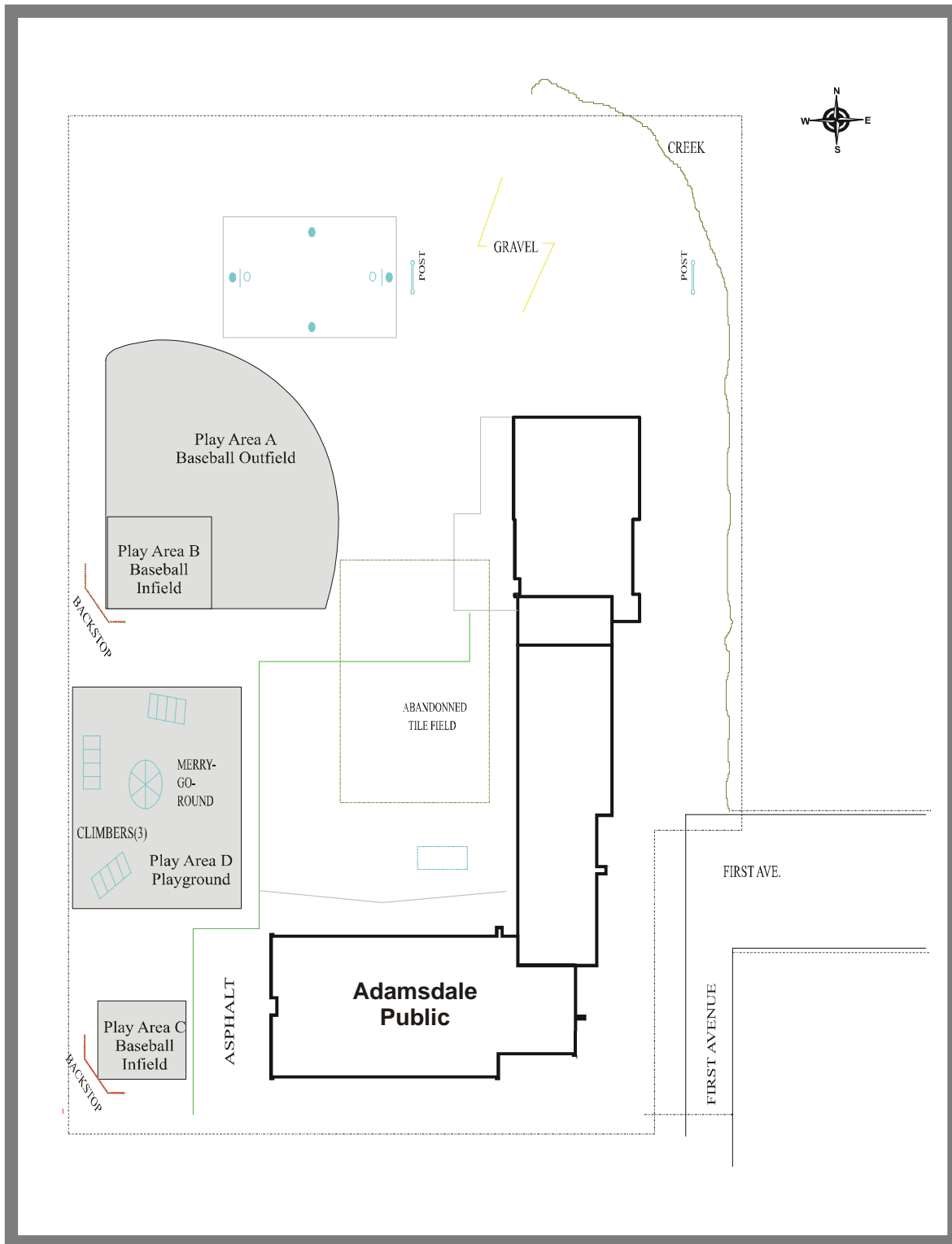


Figure B2.1.1: Adamsdale Public School Soil Sampling Locations - 2001

### 2.1.2 Alexander Public School - Rainbow District School Board 39 St. Brendan Street, Sudbury

Alexander Public School, in which Alexander Kids Daycare is located, was sampled on July 5, 2001. Figure B2.1.2 details the sampling locations at this property. Samples were collected from three areas on the school property, including the play area believed to be used by Alexander Kids Daycare. Areas A and B correspond to the northwest and southeast gravel playgrounds, respectively. Area C corresponds to the sand samples that were taken below the play structure. Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and the Table A Effects Based Soil Criteria (MOE 1997).

Metals concentrations were not elevated in the sand beneath the play structure in Area C. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metals concentrations. Copper (Cu), and nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at both gravel playgrounds, whereas cobalt (Co) was elevated above the Table F Ontario Soil Background Criteria at the northwest gravel playground only. Nickel concentrations were above the MOE Table A Effects Based Soil Criteria at the northwest gravel playground of this property as well. The highest nickel, copper, and cobalt concentrations, 180, 180, and 31 ppm, respectively, were found at the northwest gravel playground. All other metals were listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

The nickel and copper results from the gravel playgrounds are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km south and 1.5 km west of Alexander Public School and Alexander Kids Daycare, Stations 74 and 75, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 830 and 820 ppm, respectively. The cobalt results from the gravel playgrounds are similar to those reported historically. The highest cobalt soil concentration reported for Stations 74 and 75 of the MOE Sudbury 2000 Report for the City of Greater Sudbury

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037084	14166	0 - 5	< 0.8	< 5	34	< 0.8	47	<b>31</b>	<b>180</b>	14	< 1.5	<b>180</b>	< 1	35	73
		14167	0 - 5	< 0.8	< 5	40	< 0.8	47	<b>27</b>	<b>160</b>	14	< 1.5	<b>170</b>	< 1	36	61
Area B gravel	5037085	14168	0 - 5	< 0.8	< 5	29	< 0.8	26	8	<b>77</b>	6	< 1.5	<b>80</b>	< 1	25	26
		14169	0 - 5	< 0.8	< 5	35	< 0.8	29	11	<b>120</b>	9	< 1.5	<b>120</b>	< 1	27	40
Area C sand	5037086	14170	0 - 15	< 0.8	< 5	22	< 0.8	30	7	31	3	< 1.5	39	< 1	30	23
		14171	0 - 15	< 0.8	< 5	18	< 0.8	26	6	24	3	< 1.5	29	< 1	24	21
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

(MOE 2001) was 38 ppm. It is important to note that previous MOE sampling was of undisturbed soils, whereas, these results reported below are for small particles collected on gravel playgrounds.

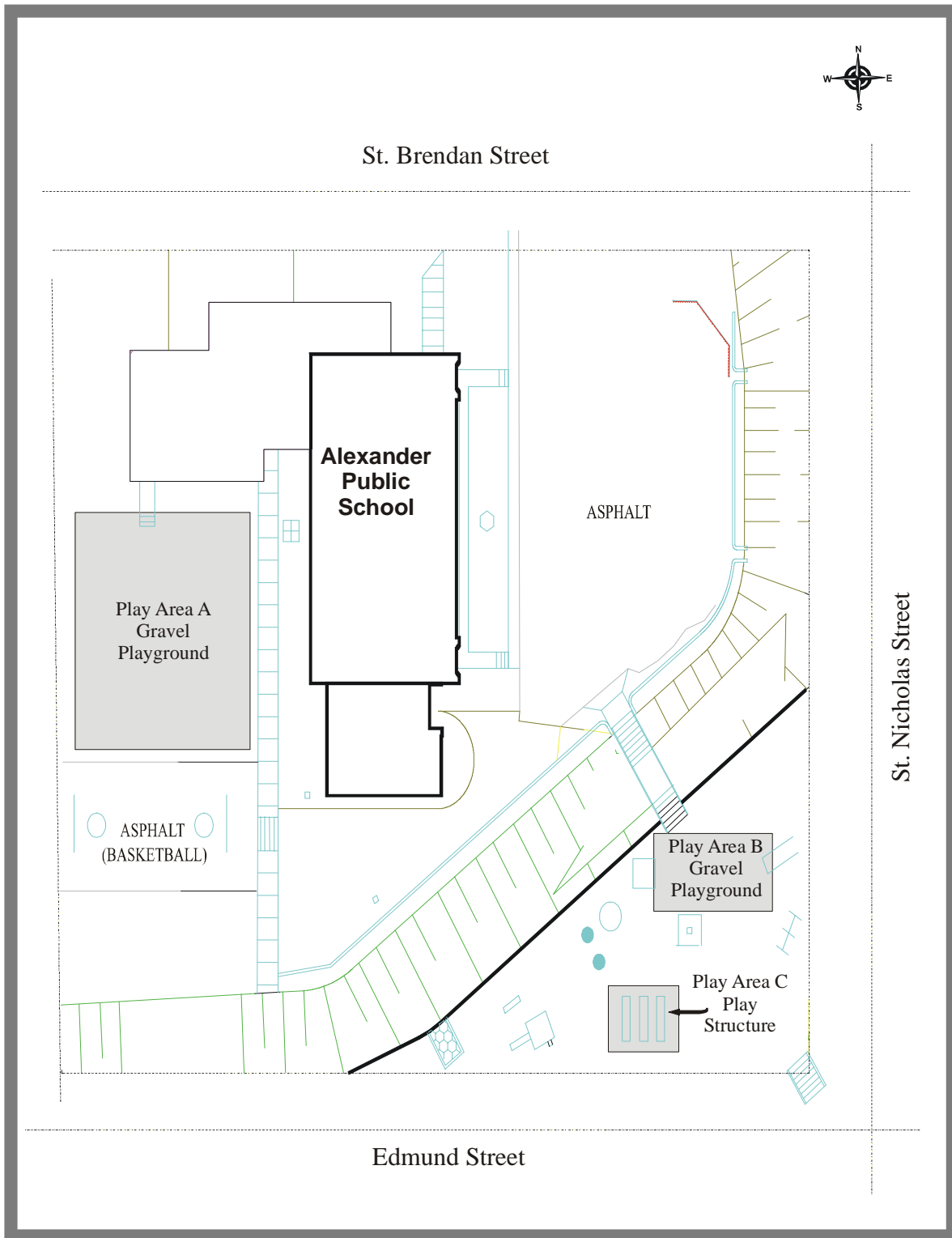


Figure B2.1.2: Alexander Public School Soil Sampling Locations - 2001

### 2.1.3 Algonquin Road Public School - Rainbow District School Board 2650 Algonquin Road, Sudbury

Algonquin Road Public School was sampled on July 3, 2001. Figure B2.1.3 details the sampling locations at this property. Samples were taken from five areas on the school property. Areas A and E correspond to the grassed play area north of the school and the baseball diamond outfield, respectively. Due to the compacted nature of these grassed areas, it was only possible to sample to a depth of 15 cm in the area north of the school and 10 cm in the baseball diamond outfield. Areas B and C correspond to the sand samples that were taken below the play structures. Due to the constant mixing of the sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area D corresponds to the baseball diamond infield. Due to the compacted nature of the gravel and sand infield, it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metals concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in Areas A and D. The highest nickel and copper concentrations, 85 and 74 ppm, respectively, occurred in the 5-10 cm depth of the grassed area north of the school (Area A). All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037016	14002	0 - 5	< 0.8	< 5	31	< 0.8	30	8	51	9	< 1.5	<b>63</b>	< 1	30	31
		14003	0 - 5	< 0.8	< 5	34	< 0.8	31	9	<b>58</b>	10	< 1.5	<b>71</b>	< 1	30	32
		14004	5 - 10	< 0.8	< 5	37	< 0.8	30	8	<b>71</b>	15	< 1.5	<b>85</b>	< 1	30	39
		14005	5 - 10	< 0.8	< 5	40	< 0.8	31	8	<b>74</b>	13	< 1.5	<b>80</b>	< 1	31	40
		14006	10 - 15	< 0.8	< 5	40	< 0.8	28	6	39	8	< 1.5	<b>49</b>	< 1	31	24
		14007	10 - 15	< 0.8	< 5	37	< 0.8	27	5	42	7	< 1.5	<b>46</b>	< 1	31	24
Area B sand	5037017	14008	0 - 15	< 0.8	< 5	22	< 0.8	29	7	23	4	< 1.5	24	< 1	30	16
		14009	0 - 15	< 0.8	< 5	21	< 0.8	30	7	23	3	< 1.5	24	< 1	32	16
Area C sand	5037018	14010	0 - 15	< 0.8	< 5	20	< 0.8	28	7	18	3	< 1.5	24	< 1	33	14
		14011	0 - 15	< 0.8	< 5	24	< 0.8	35	7	22	3	< 1.5	27	< 1	35	17
Area D gravel	5037019	14012	0 - 5	<b>1.1</b>	< 5	48	< 0.8	35	9	52	8	< 1.5	<b>62</b>	< 1	30	23
		14013	0 - 5	<b>1.5</b>	< 5	58	< 0.8	41	10	54	7	2.7	<b>68</b>	< 1	33	29
Area E grass	5037020	14018	0 - 5	< 0.8	< 5	41	< 0.8	33	7	45	9	< 1.5	<b>72</b>	< 1	30	31
		14019	0 - 5	< 0.8	< 5	41	< 0.8	35	7	47	9	< 1.5	<b>72</b>	< 1	31	33
		14020	5 - 10	< 0.8	6	50	< 0.8	46	8	47	10	< 1.5	<b>72</b>	< 1	37	37
		14021	5 - 10	< 0.8	< 5	45	< 0.8	47	8	41	10	< 1.5	<b>66</b>	< 1	37	32
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km north northeast and 1.5 km southwest of Algonquin Public School, Stations 366 and 365, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 170 and

190 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

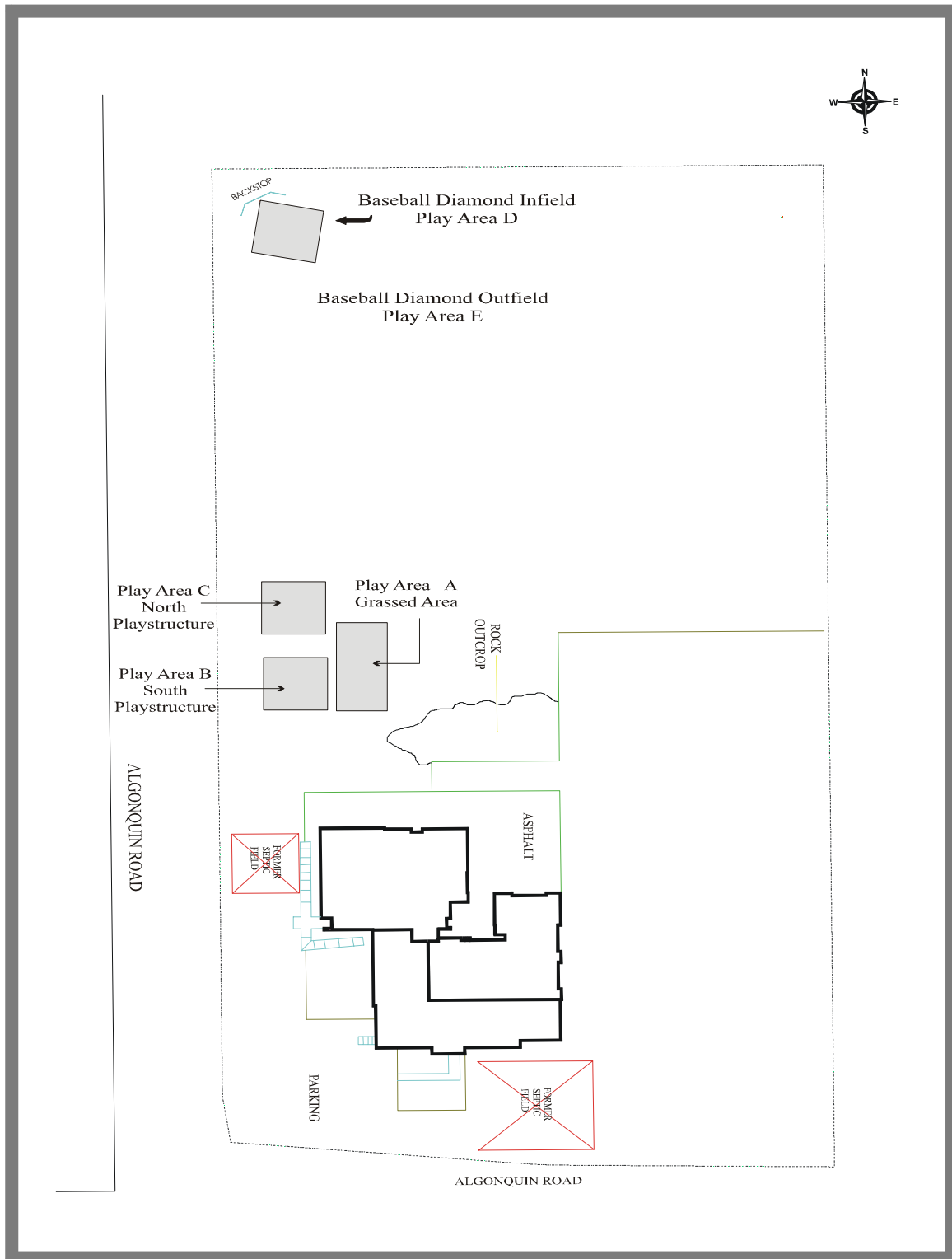


Figure B2.1.3: Algonquin Public School Soil Sampling Locations - 2001

### 2.1.4 C.R. Judd Public School - Rainbow District School Board 8 Lincoln Street, Capreol

C.R. Judd Public School, including C.R. Judd Daycare, was sampled on July 20, 2001. Figure B2.1.4 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the baseball diamond outfield. Due to the compacted nature of this area it was only possible to sample the surface soil (0-5 cm). Area B corresponds to the grassed football field southwest of the school. Soil samples from this location were taken at all three depths. Area C corresponds to sand taken from the sand boxes located on the east side of the school. Due to the constant mixing of sand and homogeneous nature of the sanded areas, a single sand sample was collected with a hand trowel to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand boxes. The sand present is not likely native to the school property and is believed to have been introduced when the sand boxes were constructed. Thus the sand was not expected to have elevated metal concentrations. Only one sample from this property had a nickel concentration that was slightly elevated above the MOE Table F Ontario Soil Background Criteria at 46 ppm. There were not any other exceedences of the MOE Table F Ontario Soil Background Criteria or the MOE Table A Effects Based Soil Criteria at this property. In addition, aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were also below the MOE Table F Ontario Soil Background Criteria.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north northwest of C.R. Judd Public School, Station 352 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 130 and 110 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.1.4:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at C.R. Judd Public School, 8 Lincoln Street, Capreol - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037354	14571	0 - 5	<0.8	6	33	<0.8	25	4	34	10	<1.5	<b>46</b>	<1	26	28
		14572	0 - 5	<0.8	6	34	<0.8	26	5	30	10	<1.5	41	<1	26	28
Area B grass	5037355	14573	0 - 5	<0.8	6	27	<0.8	31	4	30	32	<1.5	36	<1	24	26
		14574	0 - 5	<0.8	6	27	<0.8	36	4	31	49	<1.5	37	<1	23	27
		14575	5 - 10	<0.8	6	27	<0.8	24	4	19	9	<1.5	30	<1	22	22
		14576	5 - 10	<0.8	5	25	<0.8	24	4	16	5	<1.5	26	<1	21	19
		14577	10 - 20	<0.8	<5	25	<0.8	24	4	13	4	<1.5	21	<1	24	17
		14578	10 - 20	<0.8	<5	30	<0.8	26	4	17	5	<1.5	29	<1	26	22
Area C sand	5037356	14579	0 - 15	<0.8	<5	23	<0.8	25	6	12	2	<1.5	18	<1	25	16
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

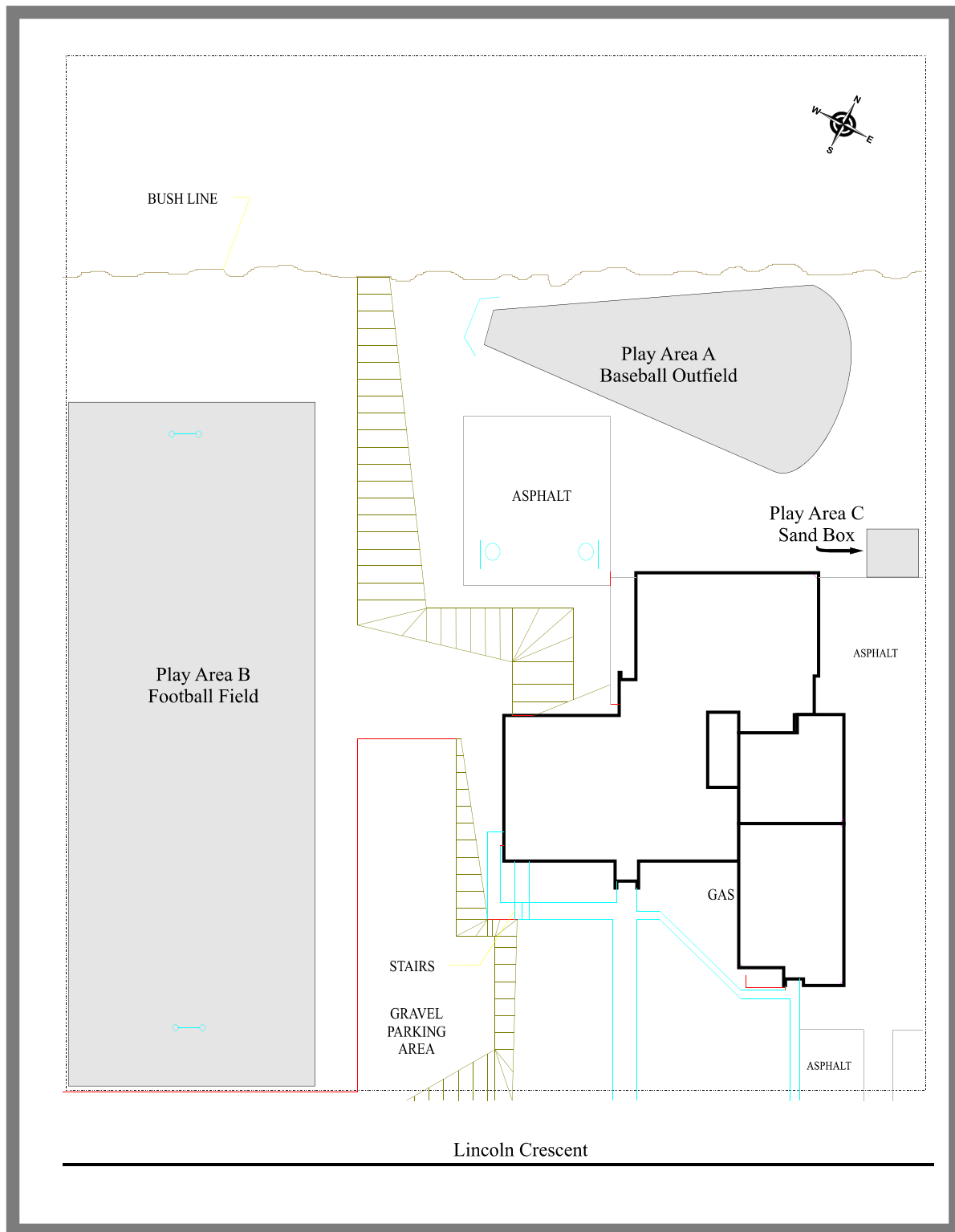


Figure B2.1.4: C.R. Judd Public School Sampling Locations - 2001.



### **2.1.5 Carl A. Nesbitt Public School - Rainbow District School Board 1241 Roy Street, Sudbury**

Carl A. Nesbitt Public School was sampled on July 17, 2001. Figure B2.1.5 details the sampling locations at this property. Samples were taken from nine areas on the school property. Area A corresponds to the grassed area of the south soccer field. Areas B and C correspond to the worn areas at the south and north goal posts, respectively. Area G corresponds to the worn area at the north goal post of the north soccer field. Area H corresponds to the baseball diamond infield. Due to the compacted nature of Areas A, B, C, G, and H, it was only possible to sample the surface soil (0 - 5 cm) layer. Areas D and E correspond to sand samples taken from below the play structure and from the sand box, respectively. Area I corresponds to a sand sample that was taken from the landing area of the long jump pit. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area F corresponds to the grassed area of the north soccer field. All depths were able to be collected from this area. All data was compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metals concentrations were not elevated in the sand samples that were taken from below the play structure (Area D), from the sand box (Area E), or from the landing area of the long jump pit (Area I). The sand present is not likely native to the school property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metals concentrations. Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at all other sampling locations and depths at this property. Copper was elevated above the Table F Ontario Soil Background Criteria for all sampling depths at both soccer fields. The highest nickel and copper concentrations, 120 and 110 ppm, respectively, occurred in the surface soil of the south soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These surface soil results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 1 east of Carl A. Nesbitt Public School, Station 43 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 190 and 210 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.

<b>Table B2.1.5: Concentration of 13 Elements in Soil in µg/g Collected at Carl A Nesbitt Public School, 1241 Roy Street, Sudbury - 2001</b>																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037184	14346	0 - 5	< 0.8	6	48	< 0.8	32	9	<b>110</b>	18	< 1.5	<b>120</b>	< 1	30	35
		14347	0 - 5	< 0.8	5	44	< 0.8	32	7	<b>100</b>	12	< 1.5	<b>77</b>	< 1	31	28
Area B soil	5037185	14348	0 - 5	< 0.8	6	44	< 0.8	35	7	50	11	< 1.5	<b>75</b>	< 1	34	27
Area C soil	5037186	14349	0 - 5	< 0.8	5	37	< 0.8	34	7	56	11	< 1.5	<b>74</b>	< 1	32	27
Area D sand	5037187	14350	0 - 15	< 0.8	< 5	23	< 0.8	26	6	14	2	< 1.5	22	< 1	33	16
		14351	0 - 15	< 0.8	< 5	24	< 0.8	27	6	15	2	< 1.5	22	< 1	33	17
Area E sand	5037188	14352	0 - 15	< 0.8	< 5	19	< 0.8	22	5	12	2	< 1.5	17	< 1	27	16
		14353	0 - 15	< 0.8	< 5	20	< 0.8	25	6	15	3	< 1.5	19	< 1	31	20
Area F grass	5037189	14357	0 - 5	< 0.8	< 5	41	< 0.8	36	8	<b>87</b>	16	< 1.5	<b>99</b>	< 1	30	34
		14358	0 - 5	< 0.8	< 5	44	< 0.8	35	8	<b>73</b>	13	< 1.5	<b>77</b>	< 1	33	31
		14359	5 - 10	< 0.8	6	38	< 0.8	34	7	<b>60</b>	10	< 1.5	<b>70</b>	< 1	31	27
		14360	5 - 10	< 0.8	< 5	34	< 0.8	30	7	47	7	< 1.5	<b>55</b>	< 1	31	24
		14361	10 - 20	< 0.8	8	40	< 0.8	33	8	<b>73</b>	11	< 1.5	<b>100</b>	< 1	29	27
		14362	10 - 20	< 0.8	7	42	< 0.8	34	8	<b>57</b>	9	< 1.5	<b>94</b>	< 1	30	24
Area G soil	5037190	14355	0 - 5	< 0.8	6	41	< 0.8	32	6	53	8	< 1.5	<b>60</b>	< 1	32	47
Area H soil	5037191	14354	0 - 5	< 0.8	< 5	46	< 0.8	32	7	51	10	< 1.5	<b>73</b>	< 1	31	41
Area I sand	5037192	14356	0 - 15	< 0.8	< 5	18	< 0.8	21	5	11	2	< 1.5	14	< 1	26	13
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

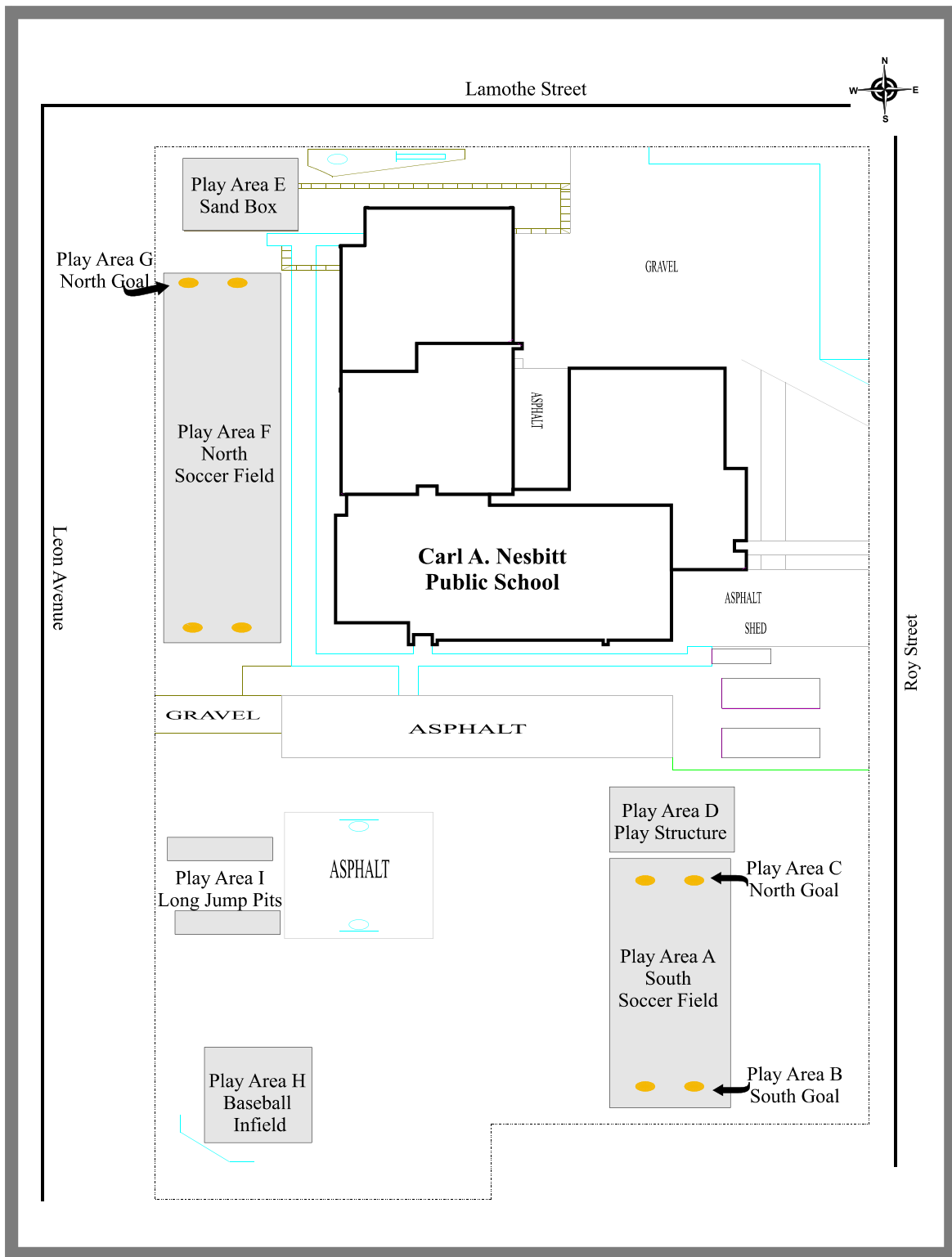


Figure B2.1.5: Carl A. Nesbitt Public School Sampling Locations - 2001.

### 2.1.6 Chelmsford Public School - Rainbow District School Board 121 Charlotte Street, Chelmsford

Chelmsford Public School, including Services de Garde Rayside-Balfour #2 Daycare, was sampled on July 19, 2001. Figure B2.1.6 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B, C, and D correspond to sand samples that were taken from the north, east and west sanded play areas, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures or in the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metals concentrations. Nickel concentrations were marginally elevated above the MOE Table F Ontario Soil Background Criteria in the soil samples collected from the soccer field, with the highest nickel concentration found, 49 ppm, in the surface soil layer (0-5 cm). All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are slightly lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 3 km southwest and 3 km northwest of Chelmsford Public School, Stations 385 and 386 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel concentrations as high as 83 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037388	14526	0 - 5	< 0.8	6	43	< 0.8	35	6	32	11	< 1.5	<b>47</b>	< 1	33	30
		14527	0 - 5	< 0.8	< 5	43	< 0.8	33	6	28	10	< 1.5	<b>49</b>	< 1	32	29
		14528	5 - 10	< 0.8	< 5	44	< 0.8	36	6	22	10	< 1.5	42	< 1	35	25
		14529	5 - 10	< 0.8	< 5	43	< 0.8	35	6	28	11	< 1.5	<b>47</b>	< 1	33	26
		14530	10 - 20	< 0.8	< 5	37	< 0.8	28	5	20	9	< 1.5	38	< 1	31	21
		14531	10 - 20	< 0.8	< 5	40	< 0.8	30	6	22	9	< 1.5	42	< 1	32	23
Area B sand	5037389	14523	0 - 15	< 0.8	< 5	18	< 0.8	26	6	15	4	< 1.5	16	< 1	31	21
Area C sand	5037390	14524	0 - 15	< 0.8	< 5	18	< 0.8	27	7	15	4	< 1.5	20	< 1	32	23
Area D sand	5037391	14525	0 - 15	< 0.8	< 5	16	< 0.8	25	6	17	4	< 1.5	16	< 1	33	20
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

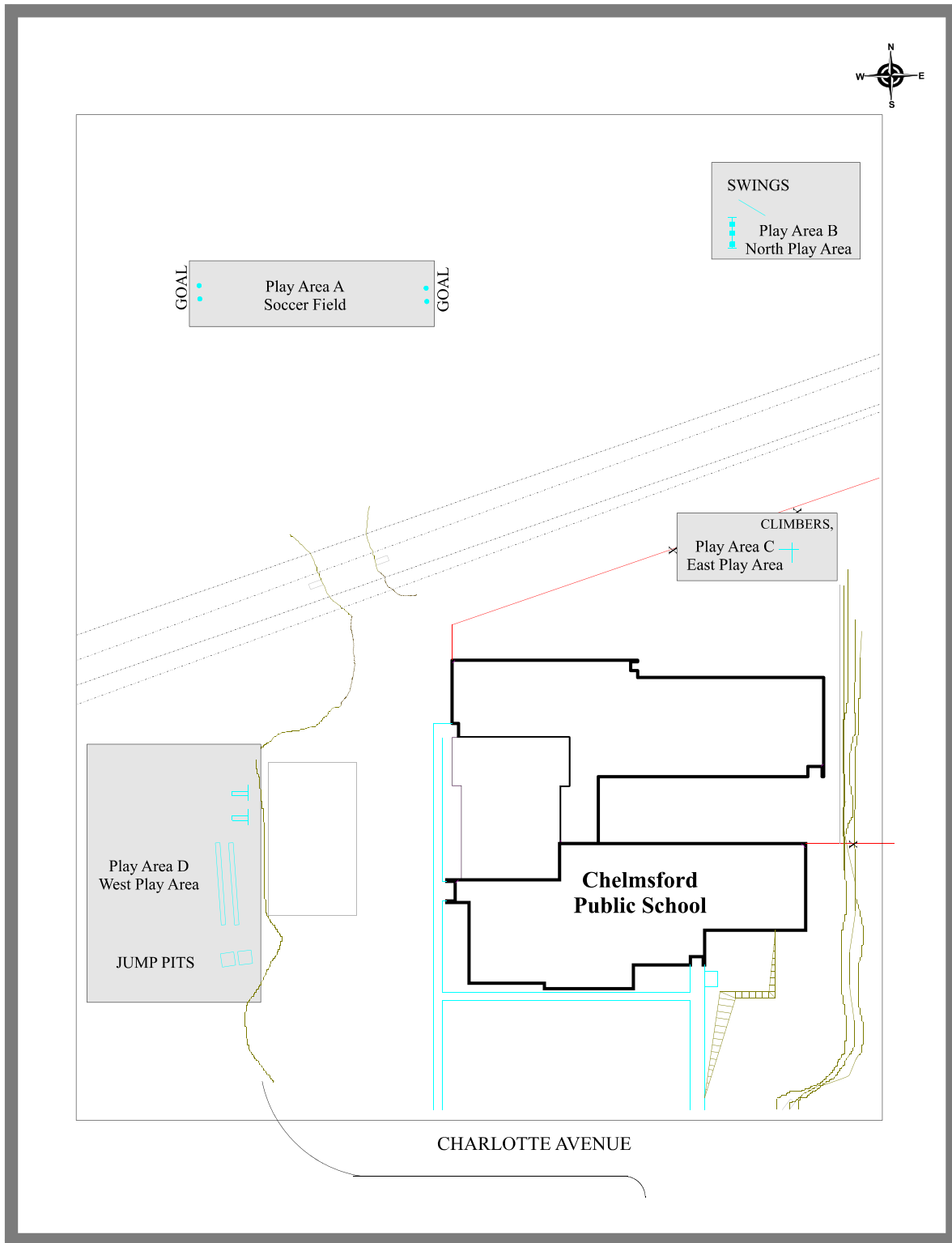


Figure B2.1.6: Chelmsford Public School Sampling Locations - 2001.

### 2.1.7 Chelmsford Valley District School - Rainbow District School Board 3594 Highway 144, Chelmsford

The property of Chelmsford Valley District School, which is also utilized by students of E.P. Pavillion de l'avenir of the Conseil Scolaire du District de Grand Nord de L'Ontario, was sampled on July 19, 2001. Figure B2.1.7 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to grassed football field located inside of the running track. Area B corresponds to grassed areas of the soccer fields at the north end of the property. Area C corresponds to the baseball diamond infield. Due to the compacted nature of Area C, it was only possible to sample the surface soil (0 - 5 cm), while all other grassed areas were sampled at three depths. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the soccer fields only. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are slightly lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 3 km southwest and 3 km northwest of Chelmsford Valley District School, Stations 385 and 386, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel concentrations as high as 83 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037375	14503	0 - 5	< 0.8	< 5	36	<0.8	34	5	23	46	< 1.5	36	< 1	28	21
		14504	0 - 5	< 0.8	6	35	<0.8	36	5	19	55	< 1.5	32	< 1	28	21
		14505	5 - 10	< 0.8	< 5	37	<0.8	30	5	16	8	< 1.5	30	< 1	30	20
		14506	5 - 10	< 0.8	5	39	<0.8	33	7	23	15	< 1.5	38	< 1	31	25
		14507	10 - 20	< 0.8	< 5	36	<0.8	30	6	27	17	< 1.5	43	< 1	29	23
Area B grass	5037376	14508	0 - 5	< 0.8	6	32	<0.8	24	5	38	14	< 1.5	<b>54</b>	< 1	26	22
		14509	0 - 5	< 0.8	< 5	30	<0.8	22	5	37	14	< 1.5	<b>55</b>	< 1	24	21
		14510	5 - 10	< 0.8	< 5	33	<0.8	25	5	18	7	< 1.5	33	< 1	27	18
		14511	5 - 10	< 0.8	5	34	<0.8	26	5	22	9	< 1.5	39	< 1	27	19
		14512	10 - 20	< 0.8	< 5	35	<0.8	27	4	17	7	< 1.5	35	< 1	26	18
Area C soil	5037377	14513	0 - 5	< 0.8	< 5	37	<0.8	29	6	17	6	< 1.5	27	< 1	28	22
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

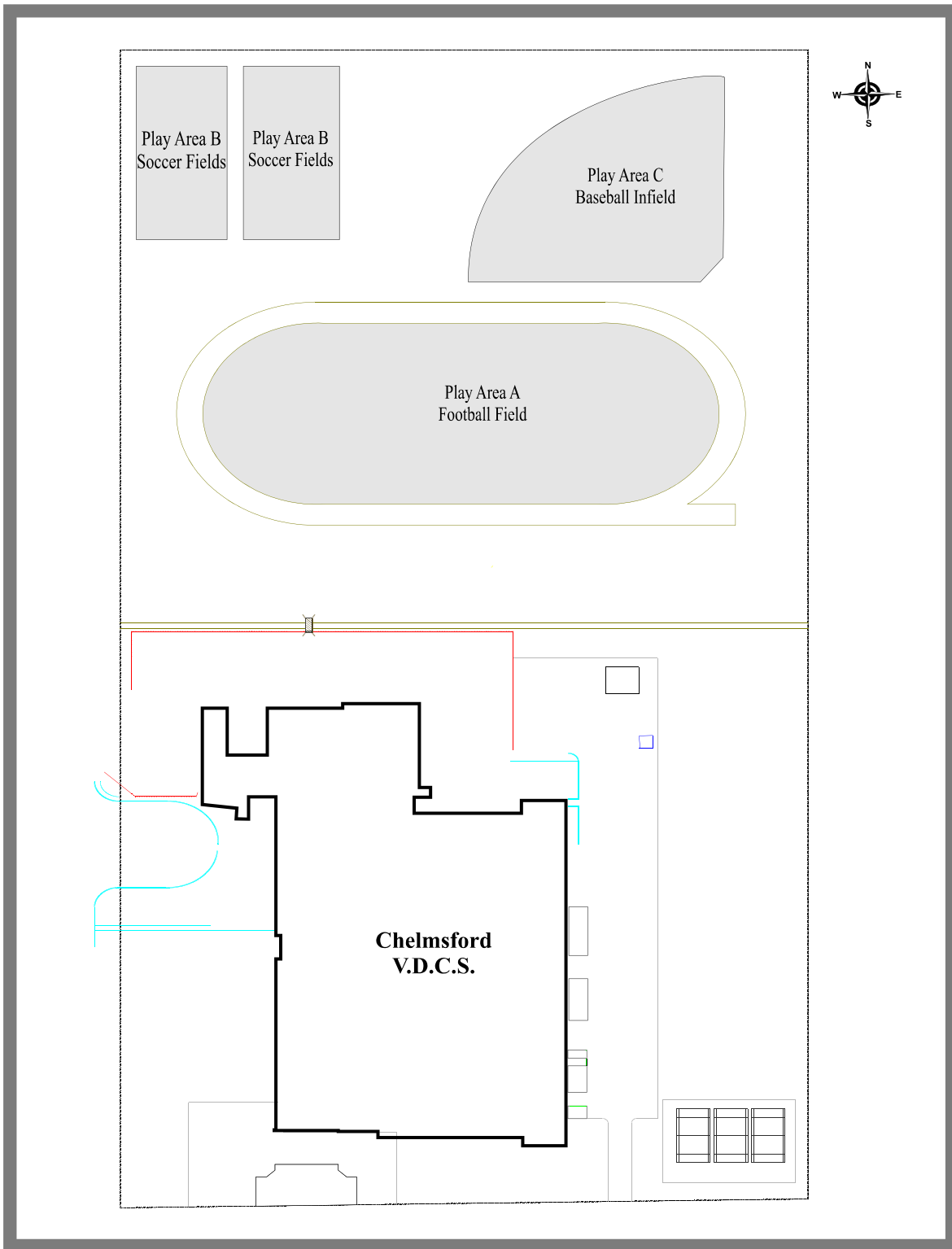


Figure B2.1.7: Chelmsford Valley District School Sampling Locations - 2001.

### 2.1.8 Churchill Public School - Rainbow District School Board 1722 Fielding Street, Sudbury

Churchill Public School was sampled on July 28, 2001. Figure B2.1.8 details the sampling locations at this property. Samples were taken from six areas on the school property. Area A corresponds to the shared baseball diamond outfields on the west side of the school building. Areas B and C correspond to the south and north baseball diamond infields, respectively. Area E corresponds to the baseball diamond outfield on the north east end of the school property and Area F corresponds to the baseball diamond infield at the same location. Due to the compacted nature of these baseball diamonds, it was only possible to sample the surface soil (0-5 cm). Area D corresponds to the sand in the landing area of the long jump pit. Due to the constant mixing of the sand and homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand of the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at all other soil sampling locations at this property. Nickel, copper, and cobalt (Co) concentrations were also elevated above the MOE Table A Effects Based Soil Criteria in the grassed area of the baseball diamond outfield located on the northeast end of the school property. The highest nickel, copper and cobalt concentrations found on this property were 420, 300, and 42 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These results are higher than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north of Churchill Public School, Station 43 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel, copper, and cobalt surface soil concentrations as high as 190, 210, and 12, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.18:** Concentration of 13 Elements in Soil in µg/g Collected at Churchill Public School, 1722 Fielding Street, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037166	14448	0 - 5	<0.8	6	39	< 0.8	30	8	<b>100</b>	18	< 1.5	<b>120</b>	1	27	28
		14449	0 - 5	<0.8	< 5	44	0.8	36	9	<b>130</b>	28	< 1.5	<b>140</b>	1	29	32
Area B soil	5037167	14450	0 - 5	<0.8	< 5	40	< 0.8	41	13	<b>100</b>	14	< 1.5	<b>120</b>	< 1	31	42
Area C soil	5037168	14451	0 - 5	<0.8	< 5	26	< 0.8	25	8	52	7	< 1.5	<b>59</b>	< 1	26	23
Area D sand	5037169	14452	0 - 15	<0.8	< 5	18	< 0.8	22	5	12	2	< 1.5	18	< 1	23	14
Area E grass	5037170	14453	0 - 5	<0.8	8	40	< 0.8	38	<b>42</b>	<b>300</b>	34	< 1.5	<b>420</b>	1	32	69
		14454	0 - 5	<0.8	6	44	< 0.8	34	<b>34</b>	<b>220</b>	21	< 1.5	<b>320</b>	1	33	54
Area F soil	5037171	14455	0 - 5	< 0.8	7	40	< 0.8	34	14	<b>110</b>	17	< 1.5	<b>120</b>	1	32	75
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



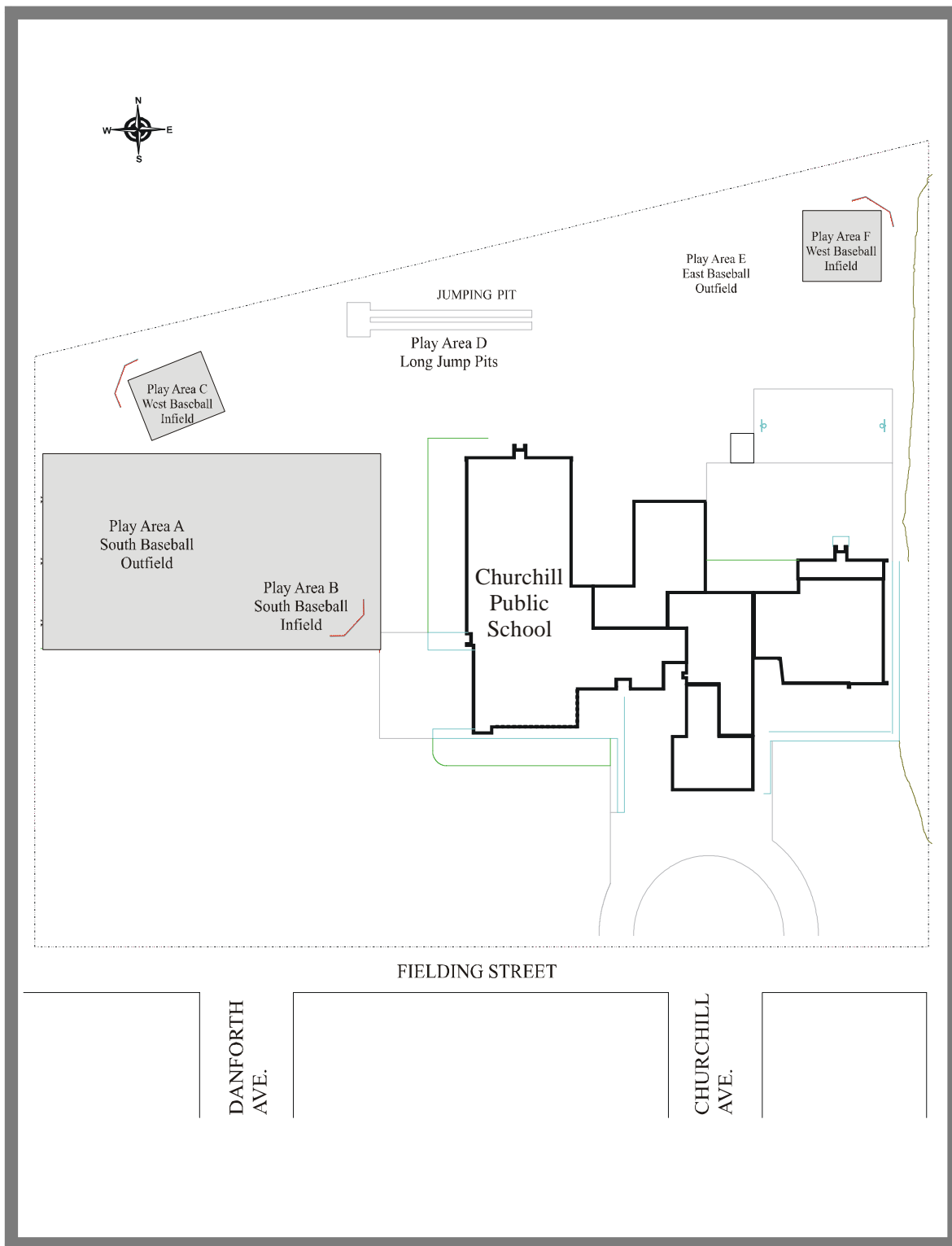


Figure B2.1.8: Churchill Public School Sampling Locations - 2001

### 2.1.9 Confederation Secondary School - Rainbow District School Board 1918 Main Street West, Val Caron

Confederation Secondary School was sampled on July 23, 2001. Figure B2.1.9 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area of the soccer field and Area B corresponds to the worn areas at the north and south goal posts. Due to the compacted nature of the soccer field, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel and lead concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the grassed soccer field, with the highest nickel and lead concentrations being 74 and 170 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel soil results are lower than those reported historically, while the lead soil results are higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1 km northwest and 2 km south southeast of Confederation Secondary School, Stations 15 and 340, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and lead concentrations of 140 and 90 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037294	14797	0 - 5	< 0.8	< 5	35	<0.8	57	5	40	<b>170</b>	< 1.5	<b>54</b>	< 1	22	23
		14798	0 - 5	< 0.8	< 5	38	<0.8	36	5	52	<b>77</b>	< 1.5	<b>74</b>	< 1	20	26
Area B soil	5037295	14799	0 - 5	< 0.8	< 5	27	<0.8	26	3	26	21	< 1.5	38	< 1	26	17
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

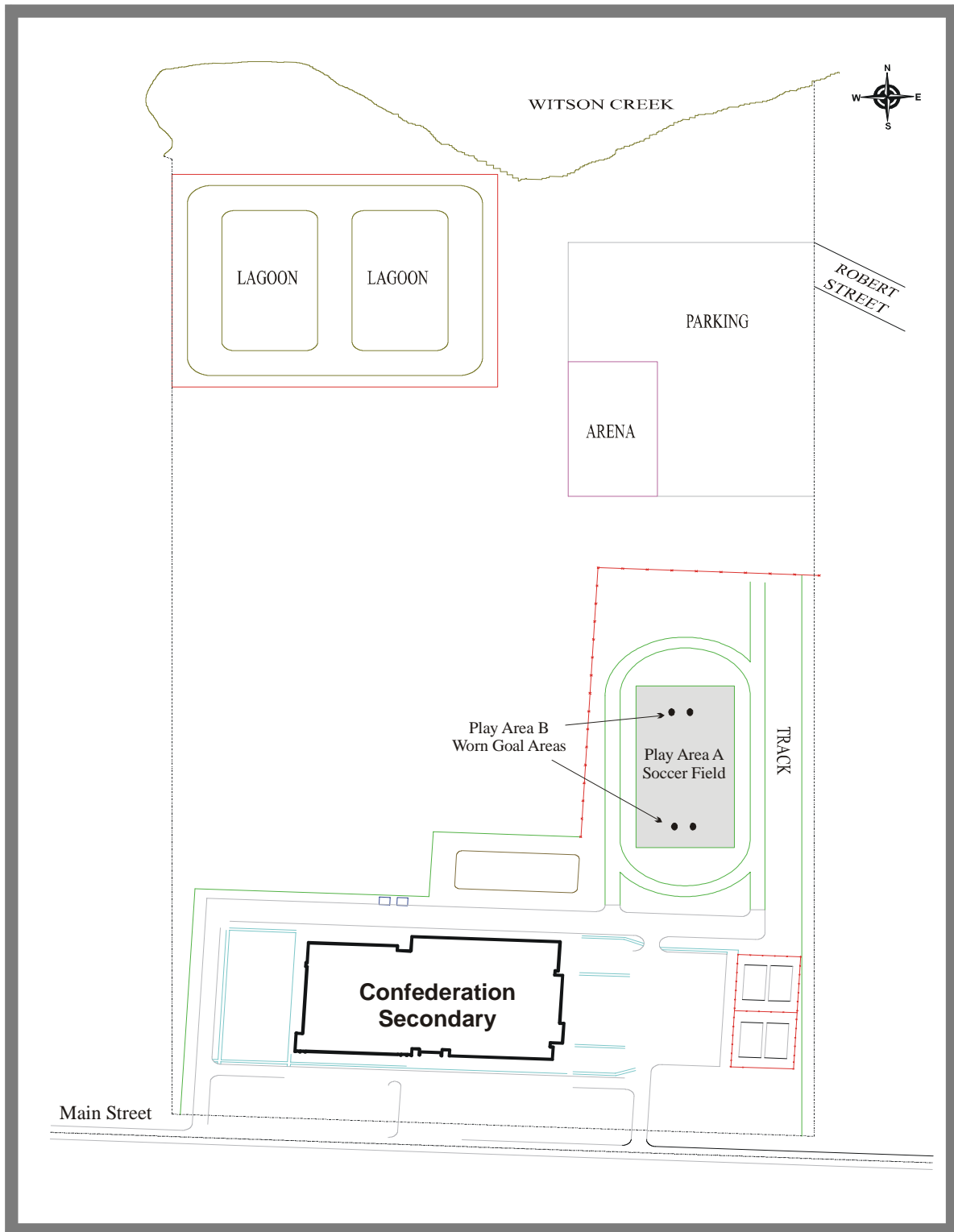


Figure B2.1.9: Confederation Secondary School Sampling Locations - 2001

### **2.1.10 Copper Cliff Public School - Rainbow District School Board 50 School Street, Copper Cliff**

Copper Cliff Public School was sampled on July 21, 2001. Figure B2.1.10 details the sampling locations at this property. Samples were taken from five areas on the school property. Area A corresponds to the large grassed area in the centre of the property. Areas B and C correspond to sand samples beneath the north and south play structures, respectively. Due to the constant mixing of sand and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area D corresponds to the baseball diamond outfield and Area E corresponds to the grassed baseball diamond infield. Due to the compacted nature of Area E, it was only possible to sample the surface soil (0-5 cm). Areas D and E were sampled again on September 17<sup>th</sup>, 2001 as part of Gerry Mills Memorial Park. See Appendix C for re-sampling results. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel and copper concentrations were elevated above the MOE Table A Effects Based Soil Criteria at all other soil locations at this property. Arsenic, cobalt and selenium were also elevated above the Table A Effects Based Soil Criteria at selected sites, while antimony, cadmium, and lead exceeded the Table F Ontario Soil Background Criteria at selected sites. The highest nickel and copper concentrations, 2500 and 2900 ppm, respectively, occurred in the surface soil of the large grassed area (Area A). Depth samples were collected for Areas A and D only and in both cases, nickel and copper concentrations were highest at the surface and decreased with increasing depths. This observation is indicative of atmospheric deposition. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These soil results are consistent with those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north, 1 km east southeast, and 1 km southeast of Copper Cliff Public School, Stations 87, 96, and 106, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated soil nickel and copper levels as high as 2125 and 2800 ppm, respectively. The nickel and copper levels found in the surface soil of the grassed area at the Copper Cliff Public School are slightly higher than those found historically. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.1.10:</b> Concentration of 13 Elements in Soil in µg/g Collected at Copper Cliff Public School, 50 School Street, Copper Cliff - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037254	14670	0 - 5	< 0.8	<u>32</u>	82	3.1	48	<u>80</u>	<u>2900</u>	100	1.6	<u>2500</u>	<u>12</u>	28	110
		14671	0 - 5	< 0.8	<u>37</u>	76	2.6	54	<u>80</u>	<u>2500</u>	90	< 1.5	<u>2500</u>	8	33	110
		14672	5 - 10	1.5	<u>65</u>	83	1.1	39	<u>38</u>	<u>1100</u>	34	< 1.5	<u>1600</u>	4	31	51
		14673	5 - 10	1.6	<u>77</u>	97	1.4	45	<u>46</u>	<u>1300</u>	41	< 1.5	<u>1900</u>	6	34	68
		14674	10 - 20	1	<u>35</u>	63	< 0.8	28	11	190	7	< 1.5	<u>260</u>	1	28	30
		14675	10 - 20	1.1	<u>44</u>	58	< 0.8	27	14	<u>260</u>	11	< 1.5	<u>370</u>	1	27	27
Area B sand	5037255 Slide	14676	0 - 15	< 0.8	< 5	28	< 0.8	35	9	47	4	< 1.5	43	< 1	37	24
		14677	0 - 15	< 0.8	< 5	26	< 0.8	35	9	36	4	< 1.5	34	< 1	36	23
	5037256 Climbers	14678	0 - 15	< 0.8	< 5	26	< 0.8	33	8	43	4	< 1.5	38	< 1	33	22
		14679	0 - 15	< 0.8	< 5	22	< 0.8	32	8	27	3	< 1.5	28	< 1	32	21
	5037257 Swings	14680	0 - 15	< 0.8	< 5	25	< 0.8	34	8	39	4	< 1.5	34	< 1	36	23
14681		0 - 15	< 0.8	< 5	24	< 0.8	33	8	26	3	< 1.5	24	< 1	34	22	
Area C sand	5037258 Climbers	14682	0 - 15	< 0.8	< 5	27	< 0.8	35	8	34	4	< 1.5	27	< 1	36	21
		14683	0 - 15	< 0.8	< 5	27	< 0.8	32	9	29	4	< 1.5	30	< 1	33	21
	5037259 Climbers	14684	0 - 15	< 0.8	< 5	26	< 0.8	34	9	32	3	< 1.5	29	< 1	34	21
		14685	0 - 15	< 0.8	< 5	27	< 0.8	34	9	34	3	< 1.5	33	< 1	34	21
Area D grass	5037260* Baseball Outfiled	14686	0 - 5	< 0.8	<u>24</u>	37	3.1	24	<u>54</u>	<u>2000</u>	96	< 1.5	<u>1700</u>	7	16	49
		14687	0 - 5	< 0.8	<u>28</u>	32	2.6	20	<u>45</u>	<u>1600</u>	51	< 1.5	<u>1500</u>	5	16	39
		14688	5 - 10	1.4	<u>66</u>	81	1.6	33	<u>39</u>	<u>980</u>	33	< 1.5	<u>1100</u>	7	34	57
		14689	5 - 10	1.8	<u>94</u>	76	2.4	38	<u>42</u>	<u>940</u>	55	< 1.5	<u>1100</u>	9	33	67
		14690	10 - 20	< 0.8	<u>36</u>	36	< 0.8	23	15	190	11	< 1.5	<u>250</u>	3	26	26
		14691	10 - 20	0.9	<u>52</u>	42	1.1	15	23	<u>540</u>	19	< 1.5	<u>710</u>	4	22	19
Area E grass	5037261* Infield	14692	0 - 5	< 0.8	6	85	< 0.8	30	11	<u>250</u>	11	< 1.5	<u>250</u>	1	27	26
		14693	0 - 5	< 0.8	6	110	< 0.8	32	11	<u>270</u>	12	< 1.5	<u>260</u>	1	29	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												
* - the baseball diamond was sampled twice. Once as part of the school and the second time as Gerry Mills Memorial Park. (see Appendix C)																

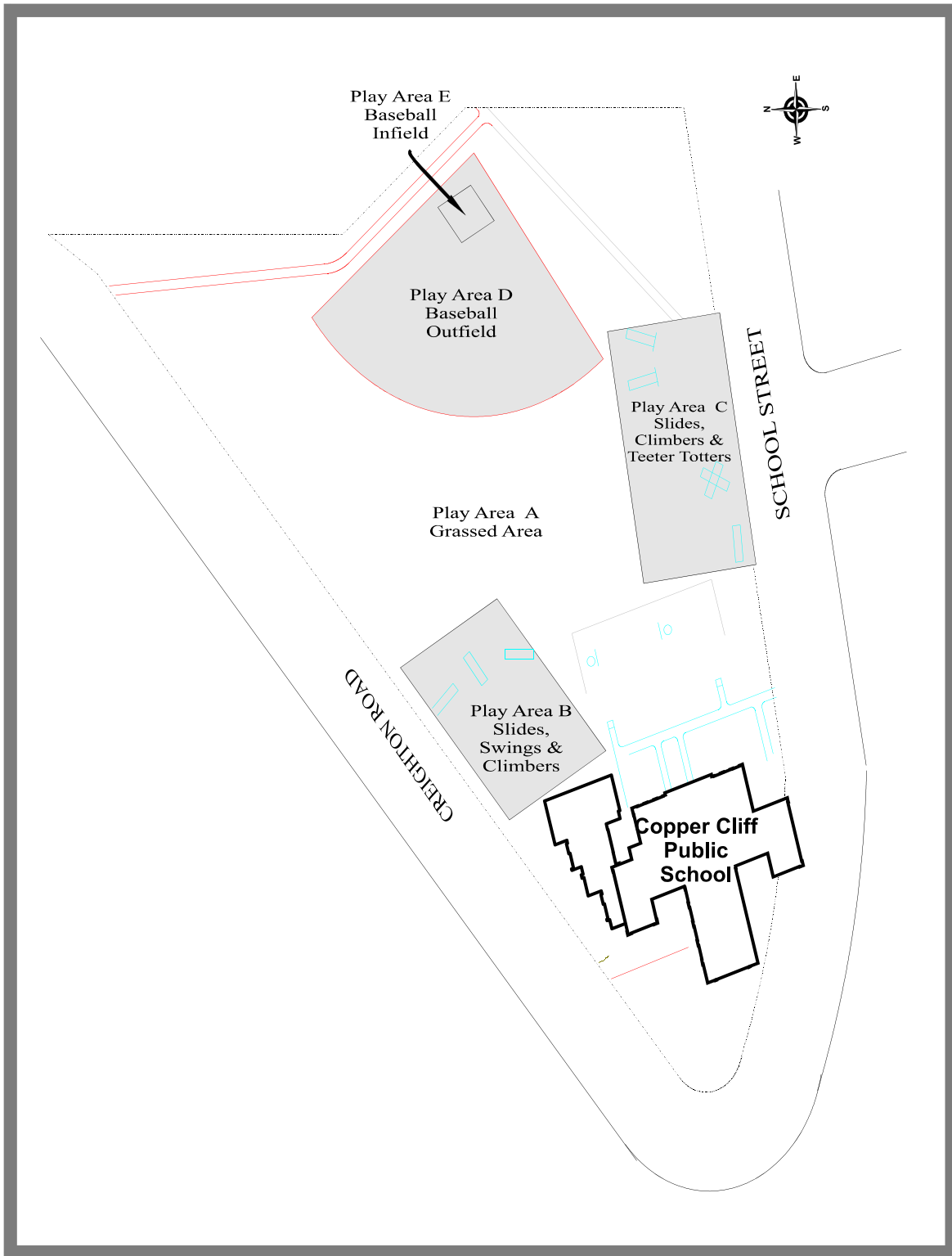


Figure B2.1.10: Copper Cliff Public School Sampling Locations - 2001.

### 2.1.11 Cyril Varney Public School - Rainbow District School Board 1545 Gary Street, Sudbury

Cyril Varney Public School was sampled on July 18, 2001. Figure B2.1.11 details the sampling locations at this property. Samples were taken from seven areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the north and south soccer goal posts, respectively. Area D corresponds to the baseball diamond infield. Area F corresponds to the grassed area on the north side of the school building. Due to the compacted nature of Areas A, B, C, D, and F it was only possible to sample to depth (10 - 20 cm) in one replicate of the soccer field and the surface soil layer (0 - 5 cm) at the goal posts, baseball diamond infield, and north grassed area, respectively. Areas E and G correspond to the sand samples that were collected below the play structure and at the landing area of the long jump pit, respectively. Due to the constant mixing of the sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0 - 15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037220	14367	0 - 5	<0.8	7	41	< 0.8	28	6	46	11	< 1.5	<b>66</b>	< 1	26	27
		14368	0 - 5	<0.8	7	37	< 0.8	29	6	38	10	< 1.5	<b>60</b>	< 1	26	24
		14369	5 - 10	<0.8	< 5	23	< 0.8	22	5	22	5	< 1.5	35	< 1	21	15
		14370	5 - 10	<0.8	7	39	< 0.8	34	7	25	9	< 1.5	<b>45</b>	< 1	32	22
		14380	10 - 20	<0.8	< 5	21	< 0.8	28	11	<b>92</b>	12	< 1.5	<b>87</b>	< 1	27	28
Area B soil	5037221	14371	0 - 5	<0.8	< 5	23	< 0.8	28	8	26	4	< 1.5	28	< 1	31	20
Area C soil	5037222	14372	0 - 5	<0.8	6	39	< 0.8	29	7	<b>77</b>	25	< 1.5	<b>78</b>	< 1	25	24
Area D soil	5037223	14373	0 - 5	<0.8	5	43	1	35	11	<b>160</b>	54	< 1.5	<b>160</b>	2	24	36
		14374	0 - 5	<0.8	< 5	32	< 0.8	33	6	51	29	< 1.5	<b>67</b>	< 1	27	23
Area E sand	5037224	14375	0 - 15	<0.8	< 5	17	< 0.8	22	7	35	<b>82</b>	< 1.5	<b>80</b>	< 1	13	13
		14376	0 - 15	<0.8	< 5	15	< 0.8	11	4	9	9	< 1.5	27	< 1	11	9
Area F grass	5037225	14377	0 - 5	<0.8	< 5	32	< 0.8	24	4	26	12	< 1.5	35	< 1	24	18
		14378	0 - 5	<0.8	5	31	< 0.8	27	6	39	12	< 1.5	<b>53</b>	< 1	26	21
Area G sand	5037226	14379	0 - 15	<0.8	5	30	< 0.8	21	6	39	6	< 1.5	<b>51</b>	< 1	23	18
Table F (results in bold)				1	14	190	1	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the sand beneath the play structure and at the landing of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), copper (Cu), and lead (Pb) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at selected sites at this property. There was only one sample with a nickel concentration which was elevated above the MOE Table A Effects Based Soil Criteria at 160 ppm. The highest nickel and copper concentrations were found in the surface soil of the baseball diamond infield (Area D) both with concentrations of 160 ppm. The highest lead value,

82 ppm, was found in the first replicate of the sampling of sand from below the play structure. This replicate was collected from the perimeter of the sanded play area which is in close proximity to the natural soil and grassed areas (Areas D and F) of the property. Therefore, it is possible that soil particles may have been sampled along with the sand. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These soil nickel and copper results are slightly lower than those reported historically, while the elevated lead result in higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1.5 km northwest and 1 km southwest of Cyril Varney Public School, Stations 6 and 43 of the MOE 2000 Sudbury Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soils concentrations as high as 190 and 210 ppm, respectively. The highest lead concentration found historically at these sites was 39 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

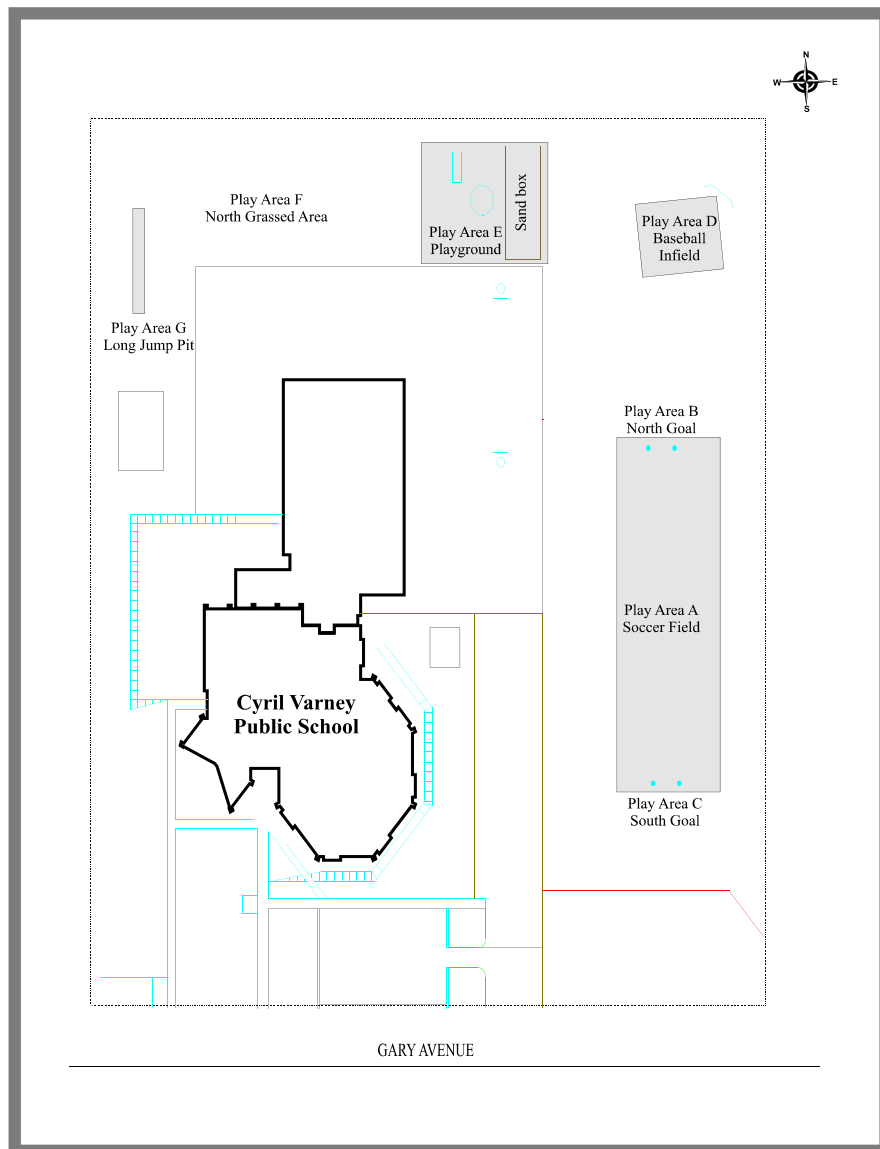


Figure B2.1.11: Cyril Varney Public School Sampling Locations - 2001.



### 2.1.12 Ernie Checkeris Public School - Rainbow District School Board 1570 Agincourt Avenue, Sudbury

Ernie Checkeris Public School was sampled on July 22, 2001. Figure B2.1.12 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds the grassed area of the soccer field. Area B corresponds to the baseball diamond infield. Due to the compacted nature of this area, it was only possible to sample the surface layer (0-5 cm). Areas C and D correspond to sand samples that were taken below the play structure and in the landing area of the long jump pit, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with a hand trowel to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure or at the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at all other sampling locations at this property. Nickel concentrations in the surface soil of the soccer field were also elevated above the MOE Table A Effects Based Soil Criteria. The highest nickel and copper concentrations, 160 and 130 ppm, respectively, were found in the surface soil of the soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These nickel and copper soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northeast and 1.5 km south of Ernie Checkeris Public School, Stations 6 and 86, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations as high as 230 and 200 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037208	14762	0 - 5	< 0.8	5	43	< 0.8	29	8	<b>120</b>	31	< 1.5	<u>160</u>	< 1	28	33
		14763	0 - 5	< 0.8	6	43	< 0.8	29	7	<b>130</b>	27	< 1.5	<b>150</b>	< 1	29	37
		14764	5 - 10	< 0.8	< 5	36	< 0.8	26	5	56	7	< 1.5	<b>70</b>	< 1	30	34
		14765	5 - 10	< 0.8	< 5	33	< 0.8	20	5	<b>67</b>	7	< 1.5	<b>96</b>	< 1	25	23
		14766	10 - 20	< 0.8	< 5	33	< 0.8	21	4	34	5	< 1.5	<b>66</b>	< 1	26	19
		14767	10 - 20	< 0.8	5	37	< 0.8	23	5	50	7	< 1.5	<b>67</b>	< 1	28	21
Area B gravel	5037209	14768	0 - 5	< 0.8	5	38	< 0.8	22	5	<b>61</b>	8	< 1.5	<b>93</b>	< 1	29	35
Area C sand	5037210	14769	0 - 15	< 0.8	< 5	22	< 0.8	25	6	21	3	< 1.5	27	< 1	34	21
		14770	0 - 15	< 0.8	< 5	21	< 0.8	24	6	19	3	< 1.5	24	< 1	28	21
Area D sand	5037211	14771	0 - 15	< 0.8	< 5	25	< 0.8	26	6	24	3	< 1.5	30	< 1	34	20
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
				< - less than the Method Detection Limit.												
													Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.			

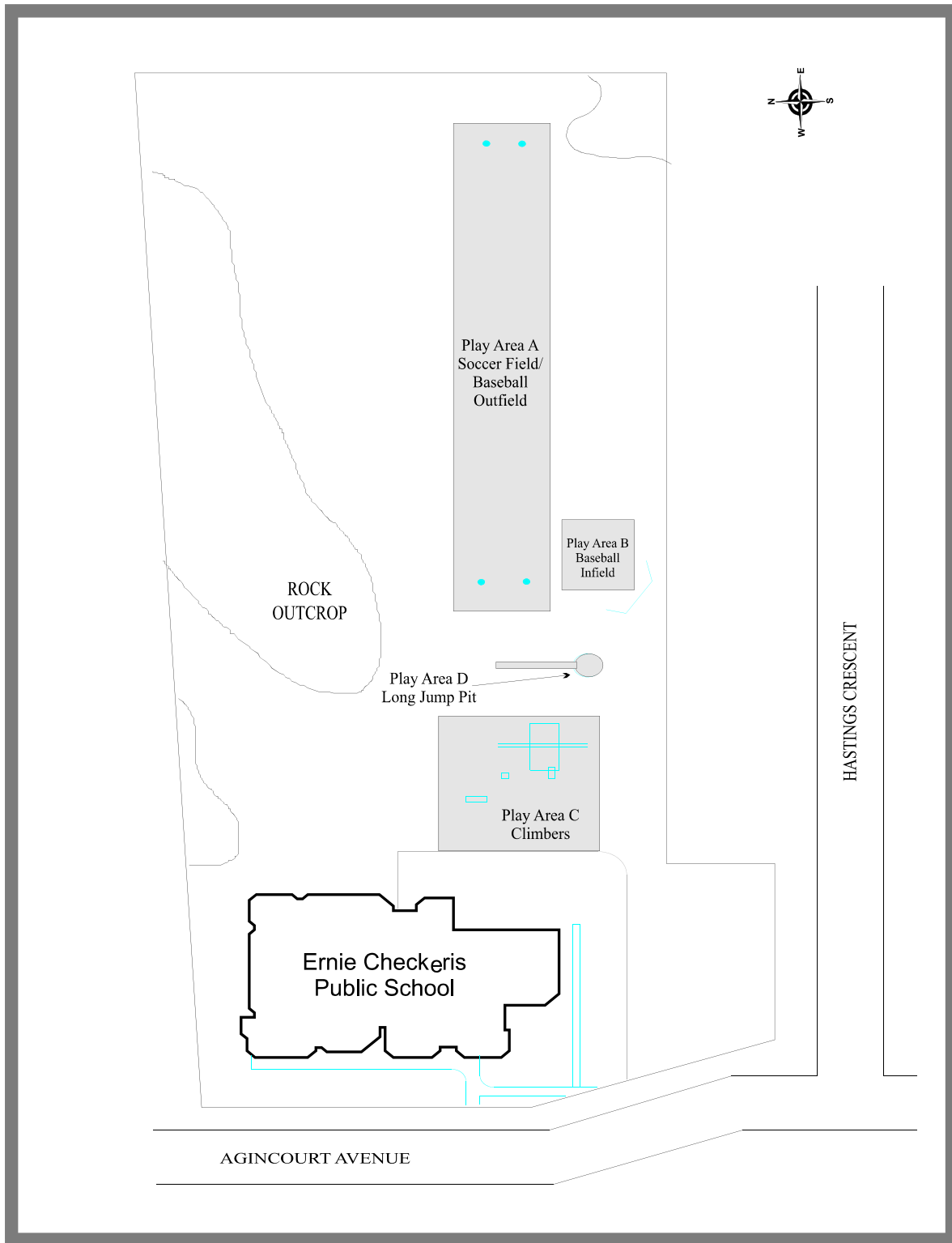


Figure B2.1.12: Ernie Checkeris Public School Sampling Locations - 2001.

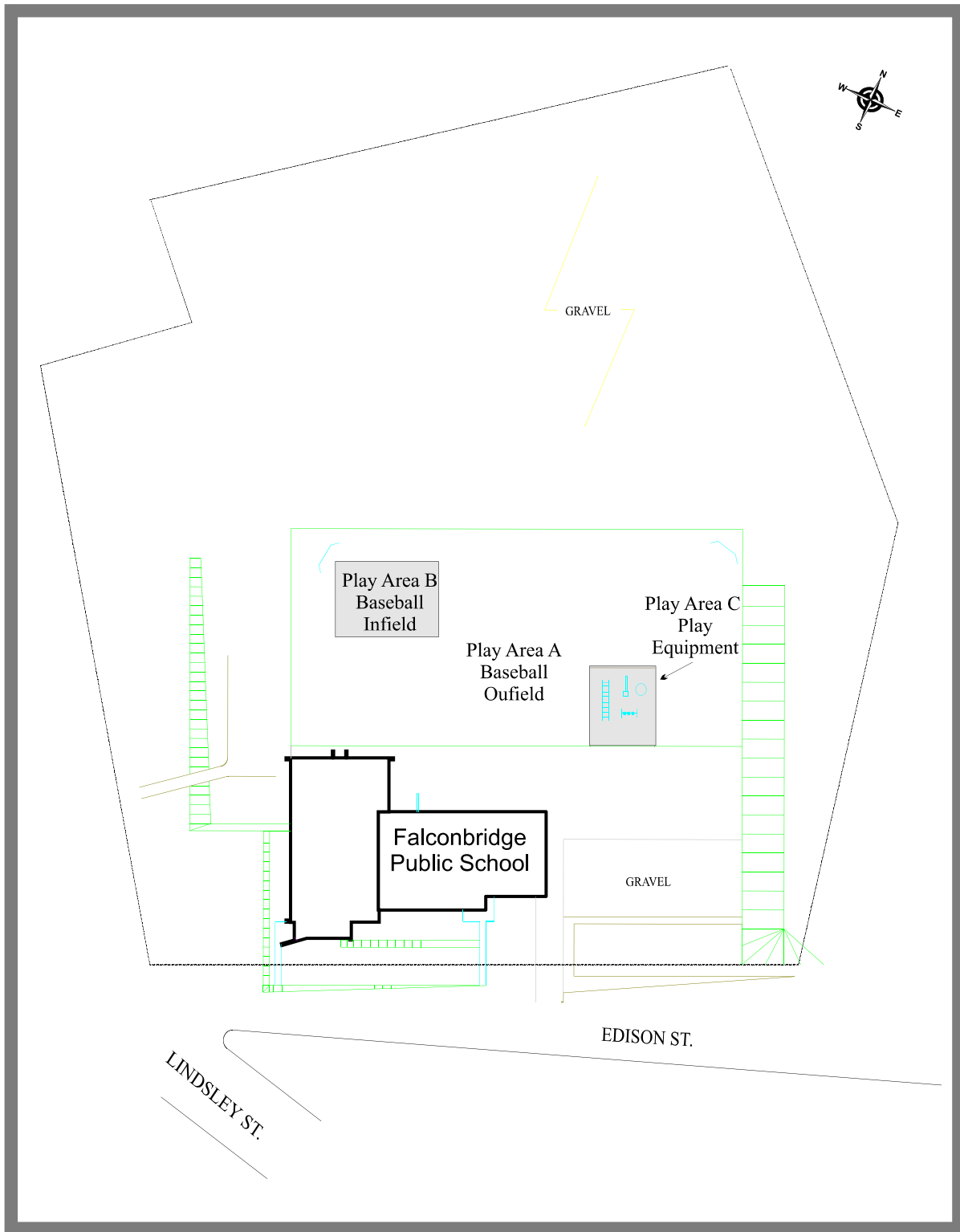
### 2.1.13 Falconbridge Public School - Rainbow District School Board 72 Edison Street, Falconbridge

Falconbridge Public School was sampled on July 22, 2001 and has since closed at this location. Figure B2.1.13 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the baseball diamond outfield. Area B corresponds to the baseball diamond infield. Due to the compacted nature of Areas A and B, it was only possible to sample the surface soil (0 - 5 cm) layer. Area C corresponds to the sand samples that were taken from the sanded play area. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sanded play area, Area C. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at all other sample locations at this property, while copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at the baseball diamond outfield. The highest nickel and copper concentrations, 120 and 66 ppm, respectively, were found in the surface soil of the baseball diamond outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southeast, 0.5 km northeast, and 0.5 km south of Falconbridge Public School, Stations 44, 22, and 36, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicate nickel and copper concentrations as high as 810 and 920 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037357	14755	0 - 5	< 0.8	< 5	46	< 0.8	35	11	<b>58</b>	21	1.5	<b>110</b>	< 1	30	36
		14756	0 - 5	< 0.8	< 5	43	1	31	12	<b>66</b>	20	1.8	<b>120</b>	< 1	26	35
Area B soil	5037358	14757	0 - 5	< 0.8	< 5	26	< 0.8	31	13	46	11	< 1.5	<b>61</b>	< 1	32	27
Area C sand	5037359	14758	0 - 15	< 0.8	< 5	18	< 0.8	22	6	17	2	< 1.5	37	< 1	28	14
		14759	0 - 15	< 0.8	< 5	21	< 0.8	25	6	21	3	< 1.5	34	< 1	30	15
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.1.13:** Falconbridge Public School Sampling Locations - 2001.

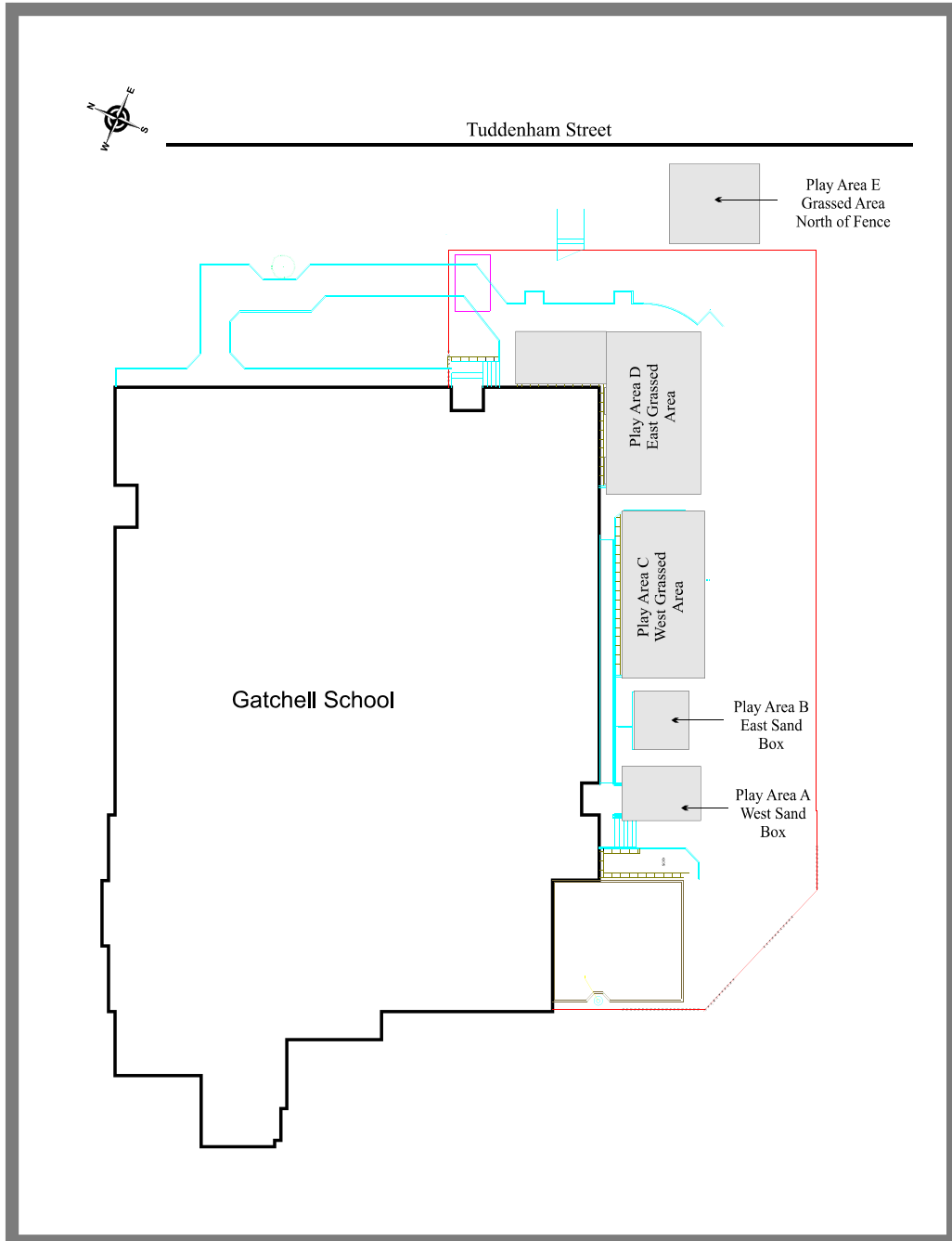
### 2.1.14 Gatchell School - Rainbow District School Board 31 Tuddenham Avenue, Sudbury

Gatchell School was sampled on July 6, 2001. Figure B2.1.14 details the sampling locations at this property. Samples were taken from five areas on the school property. Areas A and B correspond to sand samples that were taken from the west and east sand boxes on the south side of the school building, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Areas C and D correspond to the west and east grassed areas, respectively, on the south side of the school building. Areas A, B, C, and D were separated from the parking lot and surrounding property by a chain linked fence. Following a discussion with the custodian of this property, it was learned that two years ago new fill, sand, and sod had been introduced to the property within the chain linked fence for landscaping purposes. For this reason, it was decided that soil samples should be taken of the grassed area outside of the fenced play area, Area E, to gain an understanding of undisturbed soil concentrations at this location. Due to the compacted nature of these grassed areas, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the sand collected from the west sand box but not from the east sand box. The sand present in not likely native to the school property and is known to have been introduced when these play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were slightly elevated above the MOE Table F Ontario Soil Background Criteria for most of the samples from the grassed play areas within the chain link fence. Since new fill, sod, and sand had been recently added, none of the areas within the chain link fence was expected to have elevated metal concentrations. The highest concentrations of nickel (Ni), cobalt (Co), copper (Cu), lead (Pb), and selenium (Se), 380, 21, 530, 75, and 3.1 ppm, respectively, occurred in the grassed area outside of the chain link fence, Area E. This soil is believed to be native to the area and thus, it is not surprising that the metal concentrations, especially nickel and copper, are elevated above the MOE Table A Effects Based Soil Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037098	14208	0 - 15	< 0.8	< 5	33	< 0.8	32	9	<b>85</b>	7	< 1.5	<b>59</b>	< 1	39	32
Area B sand	5037099	14209	0 - 15	< 0.8	< 5	24	< 0.8	22	6	26	3	< 1.5	31	< 1	28	14
Area C grass	5037100	14210	0 - 5	< 0.8	< 5	32	< 0.8	26	5	43	7	< 1.5	<b>51</b>	< 1	26	19
		14211	0 - 5	< 0.8	< 5	24	< 0.8	32	7	27	3	< 1.5	29	< 1	31	21
Area D grass	5037101	14212	0 - 5	< 0.8	< 5	31	< 0.8	26	5	38	7	< 1.5	<b>47</b>	< 1	25	18
		14213	0 - 5	< 0.8	< 5	31	< 0.8	25	5	43	6	< 1.5	<b>54</b>	< 1	24	18
Area E grass	5037102	14214	0 - 5	< 0.8	8	45	< 0.8	51	<b>20</b>	<b>530</b>	<b>71</b>	< 1.5	<b>360</b>	<b>3.1</b>	32	96
		14215	0 - 5	< 0.8	7	41	< 0.8	49	<b>21</b>	<b>480</b>	<b>75</b>	< 1.5	<b>380</b>	<b>2.8</b>	33	99
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

The soil metals concentrations from the play areas within the chain link fence are much lower than those reported historically, whereas the results from the original grassed area, Area E, are similar to those previously reported. Previous MOE sampling of undisturbed soils approximately 1.1 km west and 0.5 km south of Gatchell School, Stations 72 and 73, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations as high as 370, and 340 ppm, respectively. The cobalt and lead results found at Area E of this site are higher than those reported historically. The highest surface soil concentrations of cobalt and lead previously reported were 16, and 21 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.



**Figure B2.1.14:** Gatchell School Sampling Locations - 2001.

### 2.1.15 George Vanier Public School - Rainbow District School Board 249 6<sup>th</sup> Avenue, Lively

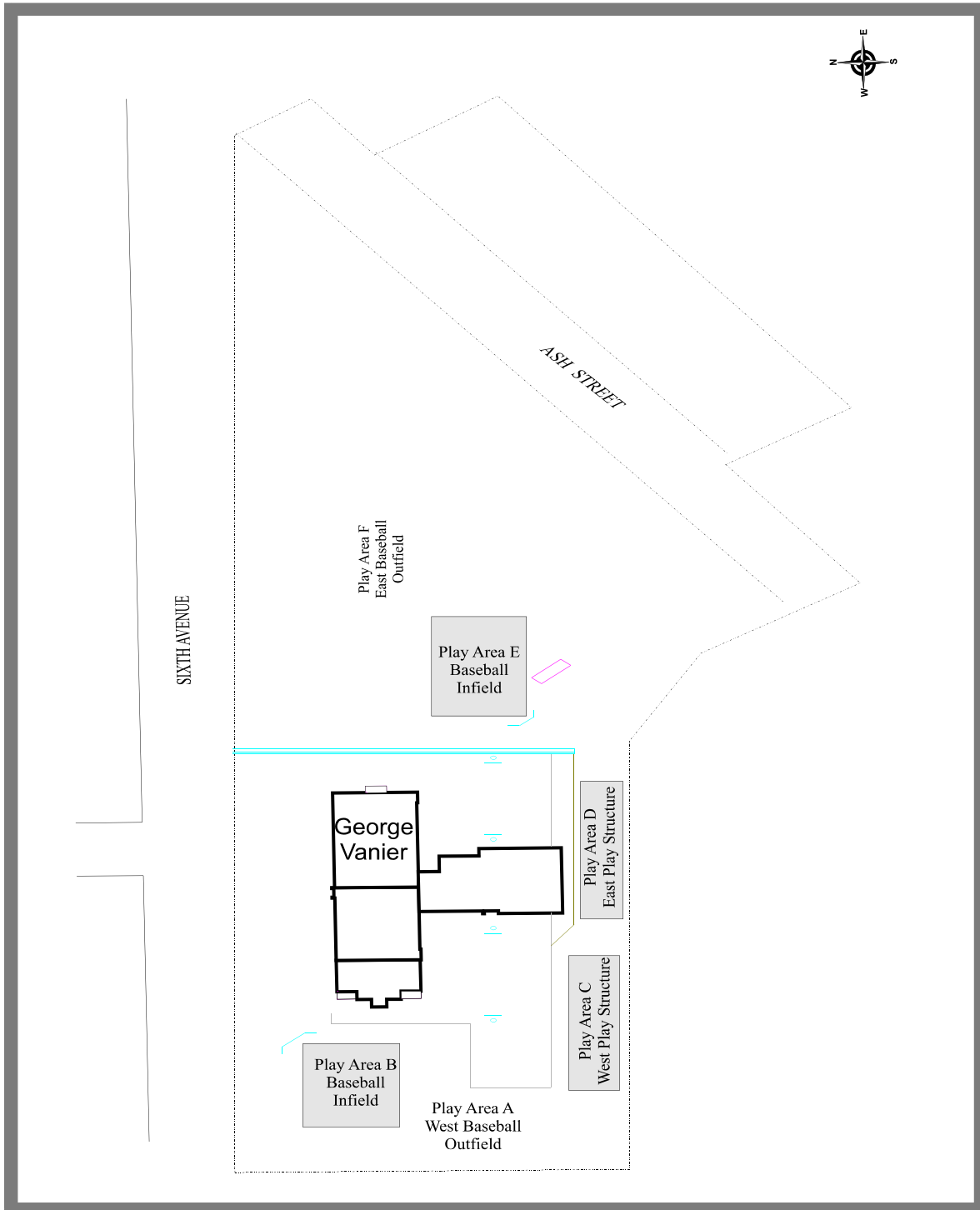
George Vanier Public School was sampled on July 21, 2001. Figure B2.1.15 details the sampling locations at this property. Samples were taken from six areas on the school property. Areas A and F correspond to the west and east baseball diamond outfields, respectively. Areas B and E correspond to the west and east baseball diamond infield, respectively. Due to the compacted nature of the baseball diamonds, it was only possible to sample the surface soil (0-5 cm). Areas C and D correspond to the sand samples that were taken from below the west and east play structures, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metals concentrations were not elevated in the sand beneath the two play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of all other sampling locations at this property. Copper (Cu), lead (Pb), cobalt (Co), cadmium (Cd), and selenium (Se) were also elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the west baseball diamond outfield. This play area, Area A, also had the highest metals concentrations with nickel and copper concentrations, 630 and 370 ppm, respectively, elevated above the MOE Table A Effects Based Soil Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037248	14726	0 - 5	< 0.8	< 5	45	0.9	29	17	<b>190</b>	<b>65</b>	< 1.5	<b>320</b>	<b>2</b>	24	39
		14727	0 - 5	< 0.8	7	70	<b>1.6</b>	39	<b>27</b>	<b>370</b>	<b>110</b>	< 1.5	<b>630</b>	<b>4</b>	31	56
Area B gravel	5037249	14728	0 - 5	< 0.8	< 5	17	< 0.8	26	8	<b>60</b>	6	< 1.5	<b>120</b>	< 1	28	30
Area C sand	5037250	14729	0 - 15	< 0.8	< 5	23	< 0.8	29	7	19	3	< 1.5	26	< 1	28	19
Area D sand	5037251	14730	0 - 15	< 0.8	< 5	20	< 0.8	25	7	17	2	< 1.5	27	< 1	28	17
Area E gravel	5037252	14731	0 - 5	< 0.8	< 5	34	< 0.8	25	6	35	7	< 1.5	<b>57</b>	< 1	25	21
Area F grass	5037253	14732	0 - 5	< 0.8	< 5	24	< 0.8	21	6	43	8	< 1.5	<b>68</b>	< 1	20	21
		14733	0 - 5	< 0.8	< 5	32	< 0.8	24	7	<b>67</b>	13	< 1.5	<b>110</b>	< 1	23	26
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

For Area A, the copper results are similar to those reported historically, whereas the nickel and lead results are higher than those reported historically. The remaining sampling locations have metals concentrations that are well below the concentrations reported previously for nearby locations. Previous MOE sampling of undisturbed soils approximately 0.8 km northwest of George Vanier Public School, Station 376 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE

2001), indicated nickel, copper and lead concentrations of 310, 350, and 46 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.1.15: George Vanier Public School Sampling Locations - 2001**



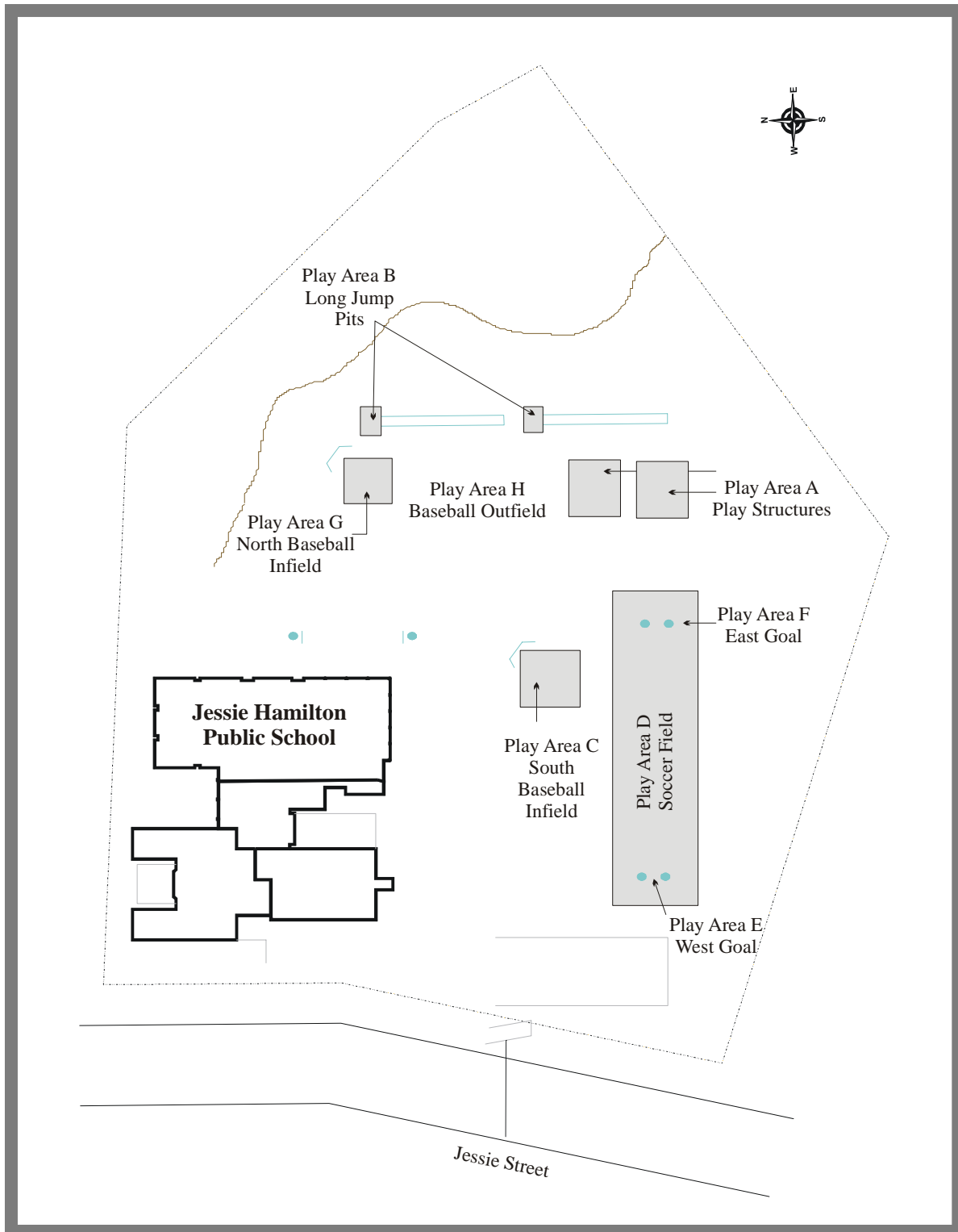
### **2.1.16 Jessie Hamilton Public School - Rainbow District School Board 16 Jessie Street, Lively**

Jessie Hamilton Public School was sampled on July 21, 2001. Figure B2.1.16 details the sampling locations at this property. Samples were taken from eight areas on the school property. Areas A and B correspond to sand samples that were taken from below the play structure and from the landing areas of the long jump pits, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area C corresponds to the west baseball diamond infield. Area D corresponds to the grassed area of the soccer field. Areas E and F correspond to the worn areas around the west and east soccer goal posts, respectively. Areas G and H correspond to the east baseball diamond infield and outfield, respectively. Due to the compacted nature of the baseball diamonds and soccer field, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures; however, nickel and copper concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the sand from the landing areas of the long jump pits. The sand present is not likely native to the school property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. The sanded landing areas of the long jump pits did not have a border separating them from the surrounding soils. Due to the close proximity of the long jump pits to the natural soil and grassed areas (Areas G and H) of the property, it is possible that soil particles may have been sampled along with the sand. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of all other locations at this property, and above the MOE Table A Effects Based Soil Criteria in the surface soil of the soccer field and east baseball diamond outfield. Copper (Cu) was also elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the soccer field and east baseball diamond. The highest nickel and copper concentrations, 260 and 130 ppm, respectively, were found in the surface soil of the soccer field and east baseball diamond. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These soil results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 100 m north of Jessie Hamilton Public School, Station 100 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentration ranges of 57 to 700, and 35 to 568 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.1.16:</b> Concentration of 13 Elements in Soil in µg/g Collected at Jessie Hamilton Public School, 16 Jessie Street, Lively - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037227	14694	0 - 15	< 0.8	< 5	22	< 0.8	27	7	17	3	< 1.5	22	< 1	27	18
		14695	0 - 15	< 0.8	< 5	24	< 0.8	30	6	16	3	< 1.5	22	< 1	34	21
Area B sand	5037228	14696	0 - 15	< 0.8	< 5	23	< 0.8	31	10	<b>60</b>	5	< 1.5	<b>150</b>	< 1	33	40
		14697	0 - 15	< 0.8	< 5	25	< 0.8	31	7	47	6	< 1.5	<b>67</b>	< 1	30	25
Area C soil	5037229	14698	0 - 5	< 0.8	< 5	46	< 0.8	24	5	36	7	< 1.5	<b>60</b>	< 1	26	27
		14699	0 - 5	< 0.8	< 5	46	< 0.8	25	5	37	7	< 1.5	<b>63</b>	< 1	27	37
Area D grass	5037230	14700	0 - 5	< 0.8	< 5	65	< 0.8	30	10	<b>130</b>	18	< 1.5	<b>260</b>	< 1	28	43
		14701	0 - 5	< 0.8	< 5	49	<b>1.5</b>	38	10	<b>110</b>	17	< 1.5	<b>240</b>	< 1	33	42
Area E soil	5037231	14702	0 - 5	< 0.8	< 5	46	< 0.8	42	8	<b>60</b>	10	< 1.5	<b>96</b>	< 1	36	49
Area F soil	5037232	14703	0 - 5	< 0.8	< 5	46	< 0.8	26	6	52	9	< 1.5	<b>84</b>	< 1	27	39
Area G gravel	5037233	14704	0 - 5	< 0.8	< 5	34	< 0.8	34	12	<b>61</b>	7	< 1.5	<b>100</b>	< 1	32	31
Area H grass	5037234	14705	0 - 5	< 0.8	< 5	40	< 0.8	30	9	<b>110</b>	16	< 1.5	<b>260</b>	< 1	29	30
		14706	0 - 5	< 0.8	5	40	< 0.8	30	8	<b>110</b>	17	< 1.5	<b>250</b>	< 1	30	29
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.1.16:** Jessie Hamilton Public School Sampling Locations - 2001

### 2.1.17 Lansdowne Public School - Rainbow District School Board 185 Lansdowne Street North, Sudbury

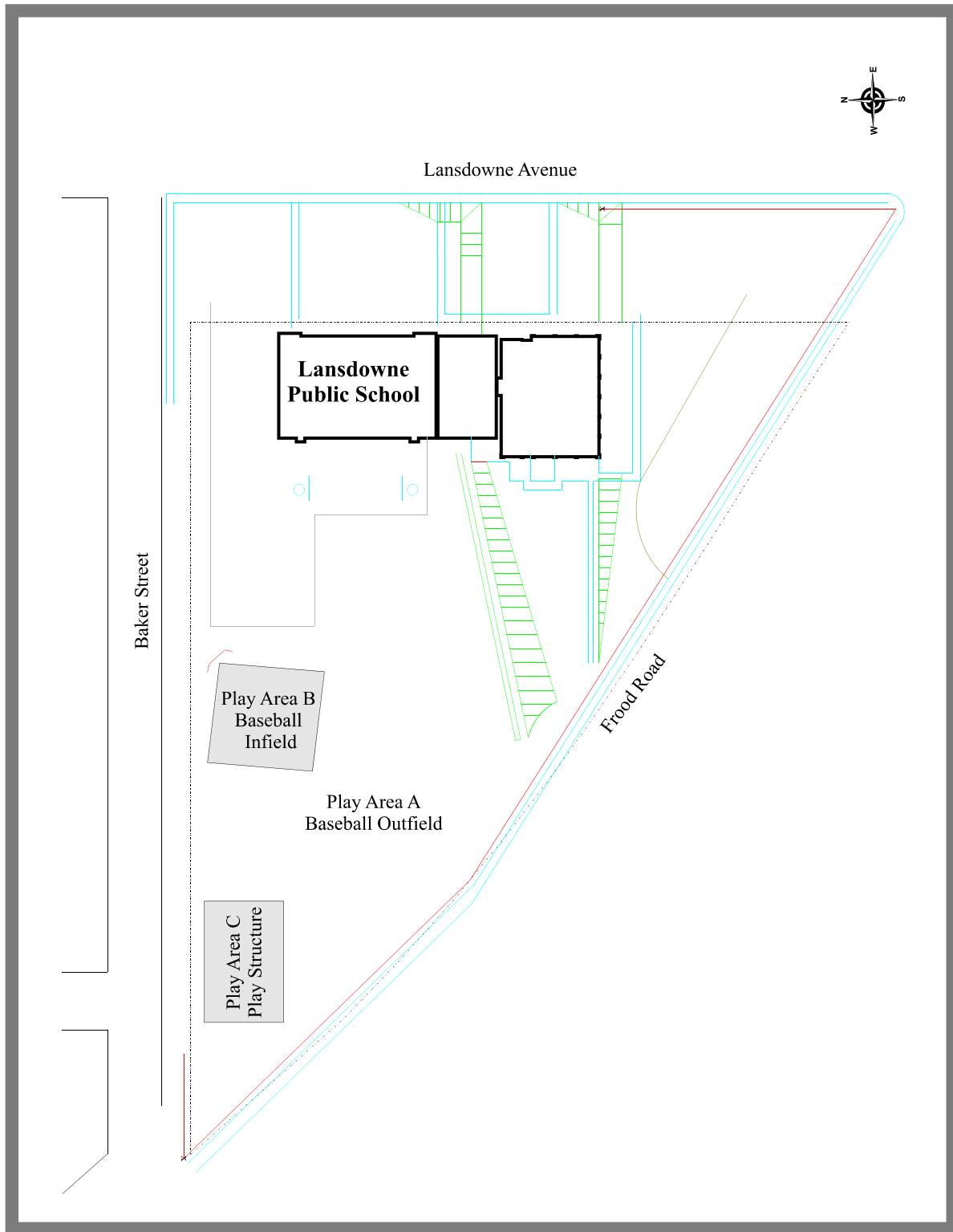
Lansdowne Public School was sampled on July 16, 2001. Figure B2.1.17 details the sampling locations at this property. Samples were taken from three areas on the school property. Areas A and B correspond to the baseball diamond outfield and infield, respectively. Area C corresponds to the gravel playground at the northwest corner of the school property. Due to the compacted nature of all areas, it was only possible to sample the surface soil layer (0 -5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface layer of all sampling locations on this property and concentrations were also elevated above the MOE Table A Effects Based Soil Criteria at the baseball diamond infield and outfield. Copper concentrations were also elevated above the MOE Table F Ontario Soil Background Criteria at the baseball diamond infield and outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km north of Lansdowne Public School, Station 84 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations as high as 490 and 520 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037115	14261	0 - 5	< 0.8	6	52	< 0.8	34	9	<b>150</b>	23	< 1.5	<u><b>170</b></u>	1	30	39
		14262	0 - 5	< 0.8	6	53	< 0.8	35	9	<b>130</b>	18	< 1.5	<u><b>160</b></u>	< 1	29	38
Area B gravel	5037116	14263	0 - 5	< 0.8	5	47	< 0.8	31	10	<b>150</b>	18	< 1.5	<u><b>170</b></u>	< 1	29	53
		14264	0 - 5	< 0.8	5	47	< 0.8	33	10	<b>120</b>	18	< 1.5	<b>140</b>	< 1	30	33
Area C gravel	5037117	14265	0 - 5	< 0.8	< 5	24	< 0.8	33	7	52	4	< 1.5	<b>67</b>	< 1	35	28
		14266	0 - 5	< 0.8	< 5	19	< 0.8	30	7	45	4	< 1.5	<b>57</b>	< 1	34	25
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.1.17:** Lansdowne Public School Sampling Locations - 2001.

### 2.1.18 Larchwood Public School - Rainbow District School Board Box 220 Main Street, Dowling

Larchwood Public School was sampled on July 19, 2001. Figure B2.1.18 details the sampling locations at this property. Samples were taken from three areas on the school property. Areas A and C correspond to the grassed area of the soccer field and the worn area around the west goal post, respectively. Due to the compacted nature of the soccer field, it was only possible to sample the surface soil (0-5 cm). Area B corresponds to the sand samples that were taken below the play structure. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play structure was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel concentrations were slightly elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria.

These soil results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 3.5 km southwest of Larchwood Public School, Station 391 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations of 25 and 14 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.1.18:** Concentration of 13 Elements in Soil in µg/g Collected at Larchwood Public School, Box 220 Main Street, Dowling - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037402	14557	0 - 5	< 0.8	< 5	50	< 0.8	46	6	23	30	< 1.5	<b>44</b>	< 1	33	34
		14558	0 - 5	< 0.8	< 5	54	< 0.8	53	7	25	51	< 1.5	<b>49</b>	< 1	35	38
Area C sand	5037403	14559	0 - 15	< 0.8	< 5	20	< 0.8	26	6	19	4	< 1.5	19	< 1	34	23
Area B soil	5037404	14560	0 - 5	< 0.8	< 5	44	< 0.8	37	5	24	14	< 1.5	38	< 1	30	37
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

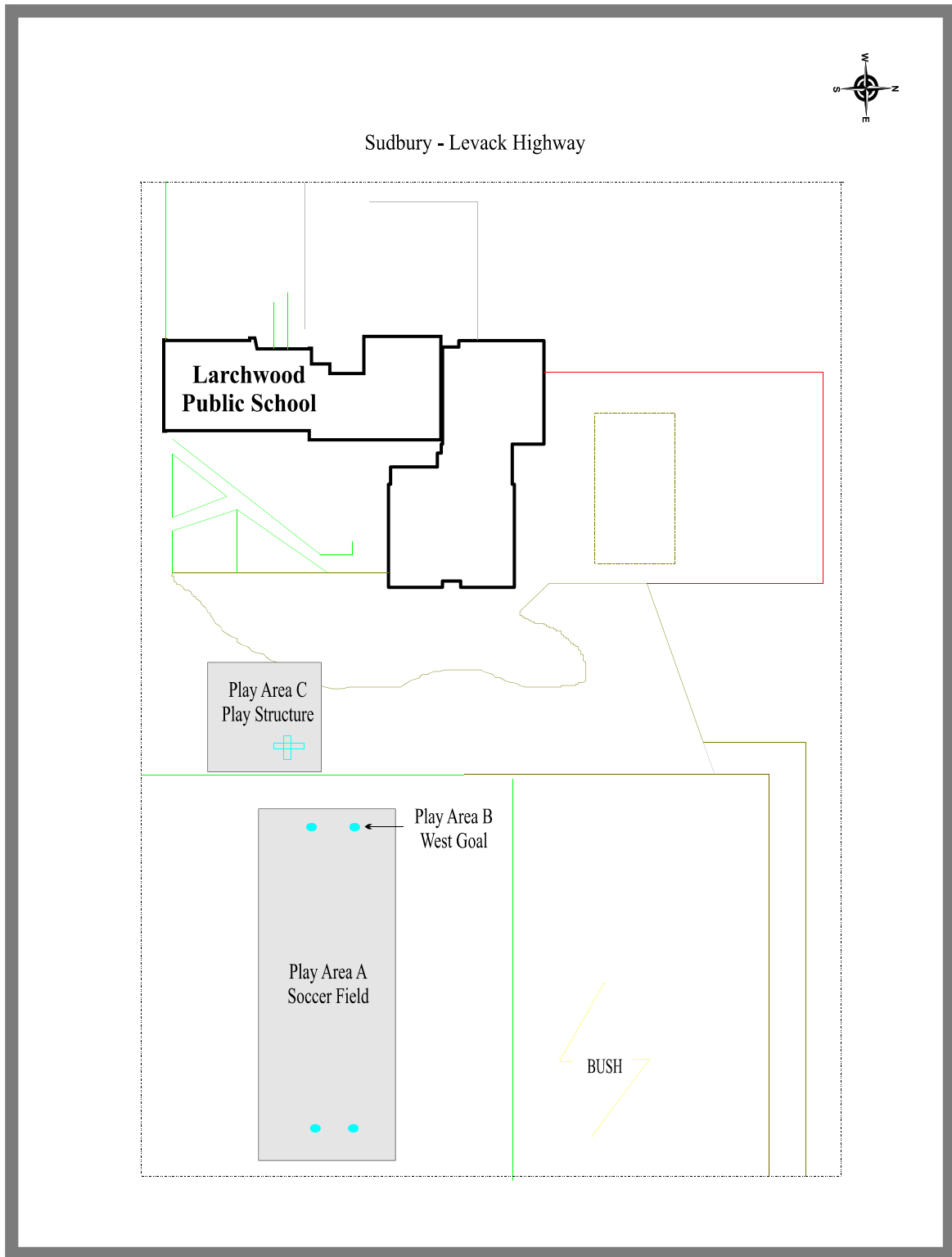


Figure B2.1.18: Larchwood Public School Sampling Locations - 2001.

### 2.1.19 Lasalle Secondary School - Rainbow District School Board 1545 Kennedy Street, Sudbury

Lasalle Secondary School was sampled on July 17, 2001. Figure B2.1.19 details the sampling locations on this property. Samples were taken from four areas on the school property. Areas A and B correspond to the grassed areas of the north and south soccer fields, respectively. Areas C and D correspond to the worn areas around the west and east goal posts of the soccer fields, respectively. Due to the compacted nature of these soccer fields, it was only possible to collect one replicate of depth samples from the south soccer field and only surface sample (0-5 cm) from the other sampling locations. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all soil samples collected from the north and south soccer fields. There was only one sample that had a nickel concentration slightly elevated above the MOE Table A Effects Based Soil Criteria at 160 ppm. Concentrations of copper (Cu), lead (Pb), and selenium (Se) were also elevated above the MOE Table F Ontario Soil Background Criteria at some sampling depths of the soccer fields. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These soil results are within the lower end of the concentration ranges reported historically. Previous MOE sampling of undisturbed soils approximately 0.2 km northeast and 1.5 km southwest of Lasalle Secondary School, Stations 43, and 86, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations ranges of 28 to 375, and 33 to 305 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037215	14333	0 - 5	< 0.8	6	42	< 0.8	30	7	<b>83</b>	26	< 1.5	<b>90</b>	< 1	29	26
		14334	0 - 5	< 0.8	< 5	46	1	37	10	<b>160</b>	53	< 1.5	<u><b>160</b></u>	<b>2</b>	27	38
Area B grass	5037216	14335	0 - 5	< 0.8	< 5	36	< 0.8	35	6	55	28	< 1.5	<b>73</b>	< 1	31	25
		14336	0 - 5	< 0.8	< 5	36	< 0.8	45	7	<b>66</b>	<b>77</b>	< 1.5	<b>84</b>	< 1	30	26
		14339	5 - 10	< 0.8	5	32	< 0.8	29	6	40	9	< 1.5	<b>55</b>	< 1	29	22
		14340	10 - 20	< 0.8	5	30	< 0.8	21	5	41	6	< 1.5	<b>56</b>	< 1	24	18
Area C soil	5037217	14337	0 - 5	< 0.8	< 5	31	< 0.8	22	3	20	9	< 1.5	29	< 1	23	17
Area D soil	5037218	14338	0 - 5	< 0.8	< 5	32	< 0.8	25	4	26	12	< 1.5	35	< 1	25	19
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



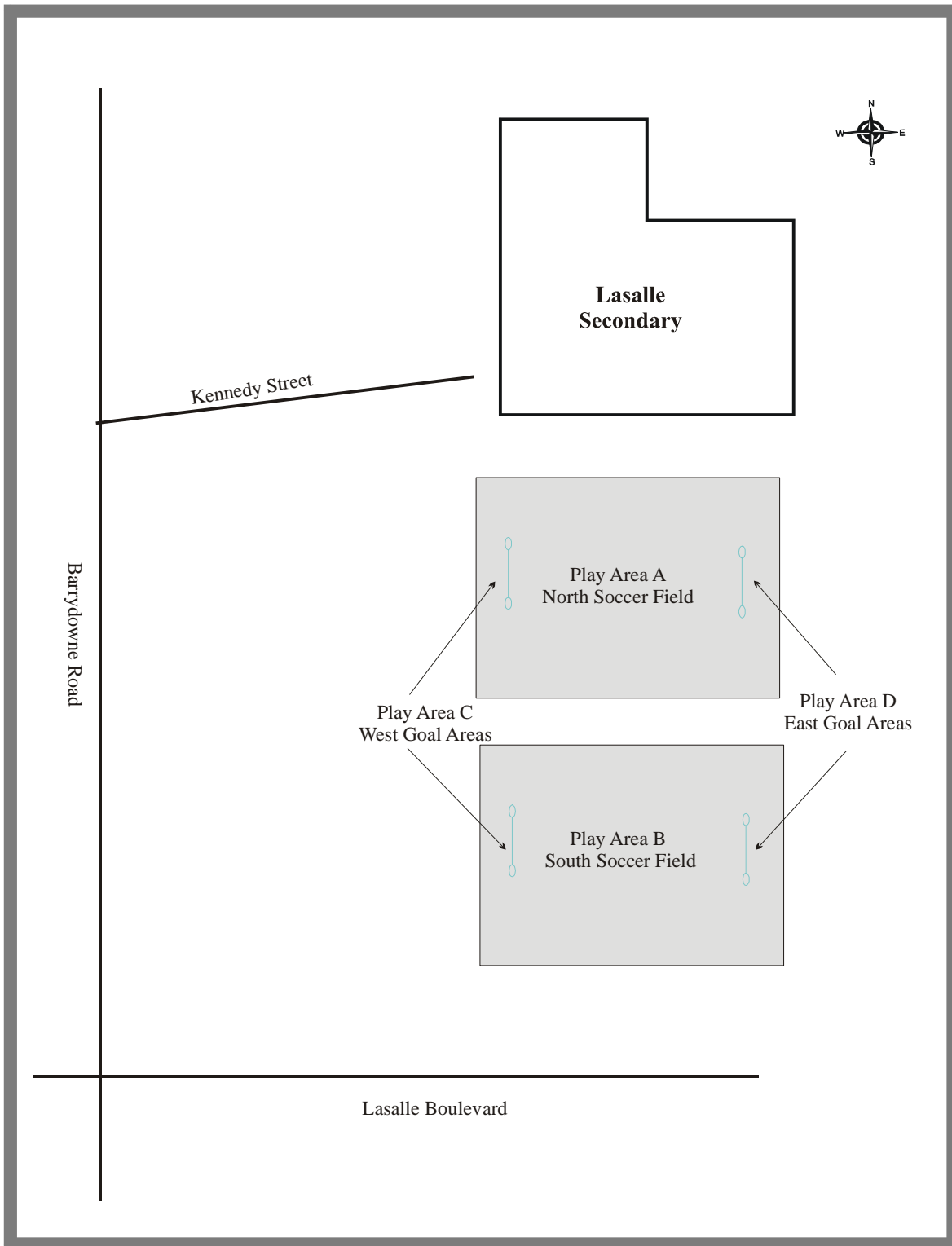


Figure B2.1.19: Lasalle Secondary School Sampling Locations - 2001.

### 2.1.20 Levack Public School (formerly) - Rainbow District School Board 38 School Street, Levack

Levack Public School was sampled on July 19, 2001 and has since closed at this location. Figure B2.1.20 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel baseball diamond in the northwest corner of the school property. Area B corresponds to the sand beneath the play structure located on the south side of the school building. Due to the constant mixing of sand and the homogeneous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play structure was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria in the fine gravel particles of the baseball diamond. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

The results from the gravel baseball diamond are much higher than soil results reported historically. Previous MOE sampling of undisturbed soils approximately 5 and 4 km southeast of Levack Public School (formerly), Station 390 and 388, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 80 and 56 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037406	14568	0 - 5	< 0.8	< 5	28	< 0.8	27	7	43	23	< 1.5	<b>50</b>	< 1	27	30
		14569	0 - 5	1	5	35	< 0.8	23	17	<b>670</b>	32	< 1.5	<b>350</b>	1	26	46
Area B sand	5037407	14570	0 - 15	< 0.8	< 5	18	< 0.8	23	6	15	2	< 1.5	16	< 1	29	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

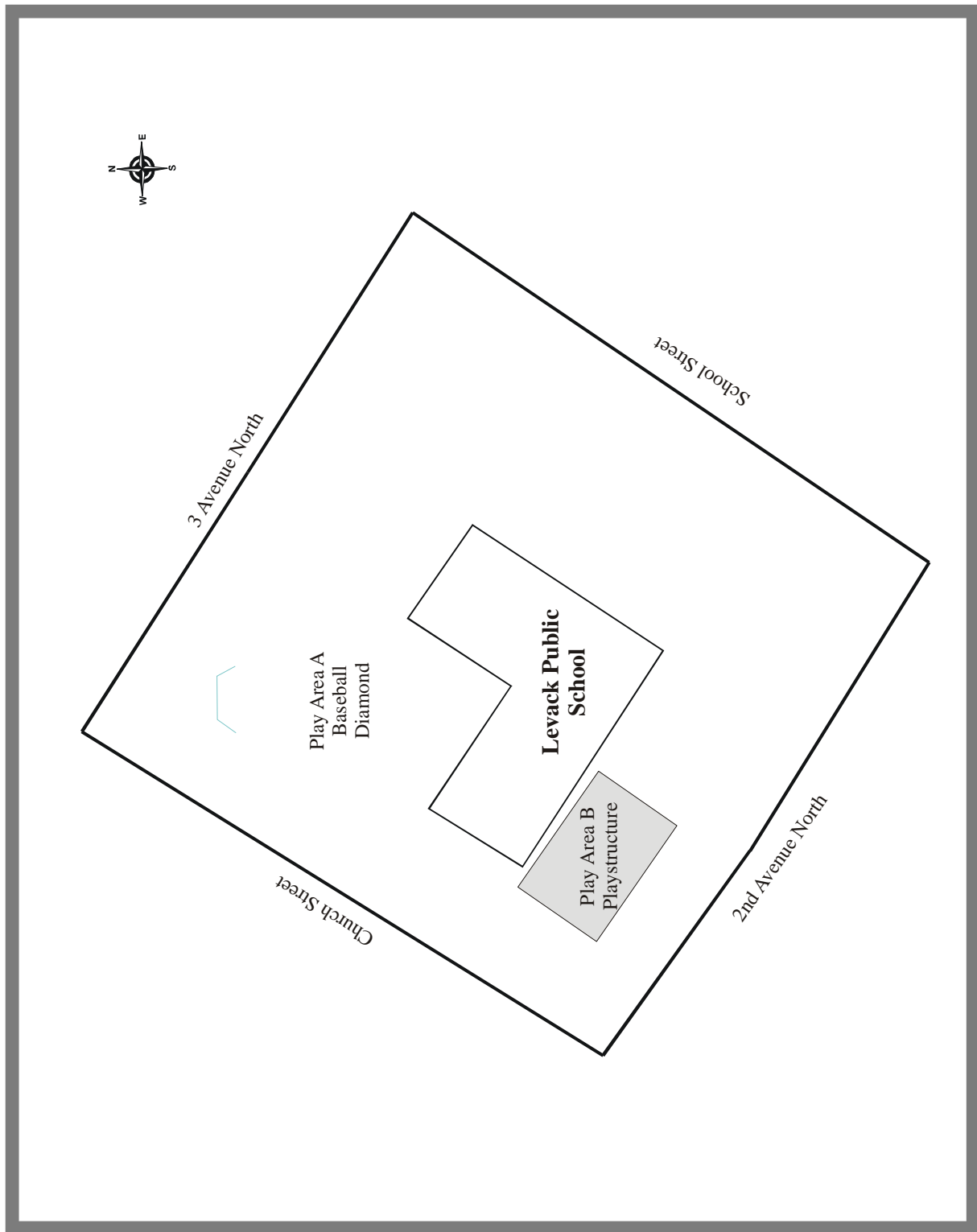


Figure B2.1.20: Levack Public School (formerly) Sampling Locations - 2001.

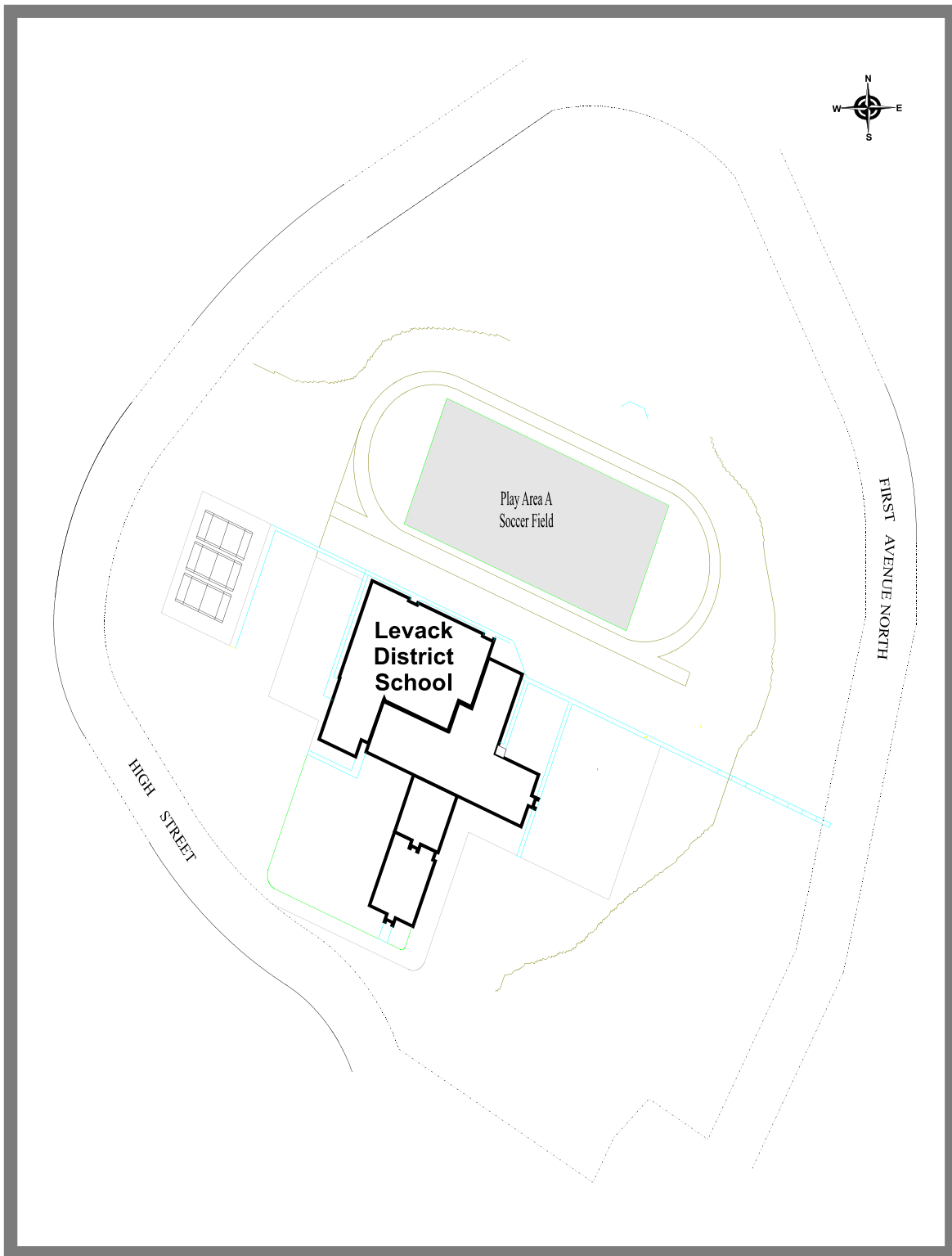
### 2.1.21 Levack District High School (now Levack Public School) - Rainbow District School Board 100 High Street, Levack

Levack District High School was sampled on July 19, 2001 and has since been replaced by Levack Public School at this location. Figure B2.1.21 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the soccer field north of the school property. Due to the compacted nature of this area, it was only possible to sample the 10 - 20 cm depth for one replicate. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in all depth samples collected from the soccer field. The highest nickel concentration, 73 ppm, was found in the surface soil layer (0-5 cm). All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 5 and 4 km southeast of Levack District High School (now Levack Public School), Stations 390 and 388, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations as high as 80 and 56 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037408	14563	0 - 5	< 0.8	< 5	54	< 0.8	33	8	48	21	< 1.5	<b>72</b>	1	28	62
		14564	0 - 5	< 0.8	< 5	53	< 0.8	33	9	44	16	< 1.5	<b>73</b>	< 1	29	40
		14565	5 - 10	< 0.8	< 5	46	< 0.8	34	7	29	7	< 1.5	40	1	34	24
		14566	5 - 10	< 0.8	< 5	46	< 0.8	34	7	36	8	< 1.5	<b>53</b>	< 1	33	27
		14567	10 - 20	< 0.8	< 5	38	< 0.8	33	6	28	7	< 1.5	<b>45</b>	< 1	31	26
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.1.21:** Levack District High School (now Levack Public School) Sampling Locations - 2001.

### 2.1.22 Lively District High School - Rainbow District School Board Box 430 5<sup>th</sup> Avenue, Lively

Lively District High School was sampled on July 21, 2001. Figure B2.1.22 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the soccer field east of the school building. Due to the compacted nature of this area, it was only possible to sample the 5-10 cm and 10-20 cm depths for one replicate. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), and lead (Pb) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil samples collected from the soccer field. The highest nickel, copper and lead concentrations found in the surface soil were 140, 93, and 120 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southeast of Lively District High School, Station 376 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations as high as 310 and 350 ppm, respectively. The lead concentrations at this site are higher than the historic sampling indicated. The highest lead concentration found at Station 376 was 46 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.

<b>Table B2.1.22:</b> Concentration of 13 Elements in Soil in µg/g Collected at Lively District High School, Box 430 5th Avenue, Lively - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037247	14734	0 - 5	< 0.8	6	42	< 0.8	60	6	<b>60</b>	<b>120</b>	< 1.5	<b>85</b>	< 1	31	31
		14735	0 - 5	< 0.8	< 5	47	< 0.8	47	8	<b>93</b>	<b>85</b>	< 1.5	<b>140</b>	1	29	34
		14736	5 - 10	< 0.8	7	28	< 0.8	24	5	37	11	< 1.5	<b>54</b>	< 1	26	23
		14737	10 - 20	< 0.8	5	31	< 0.8	22	4	30	6	< 1.5	42	< 1	25	23
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.																

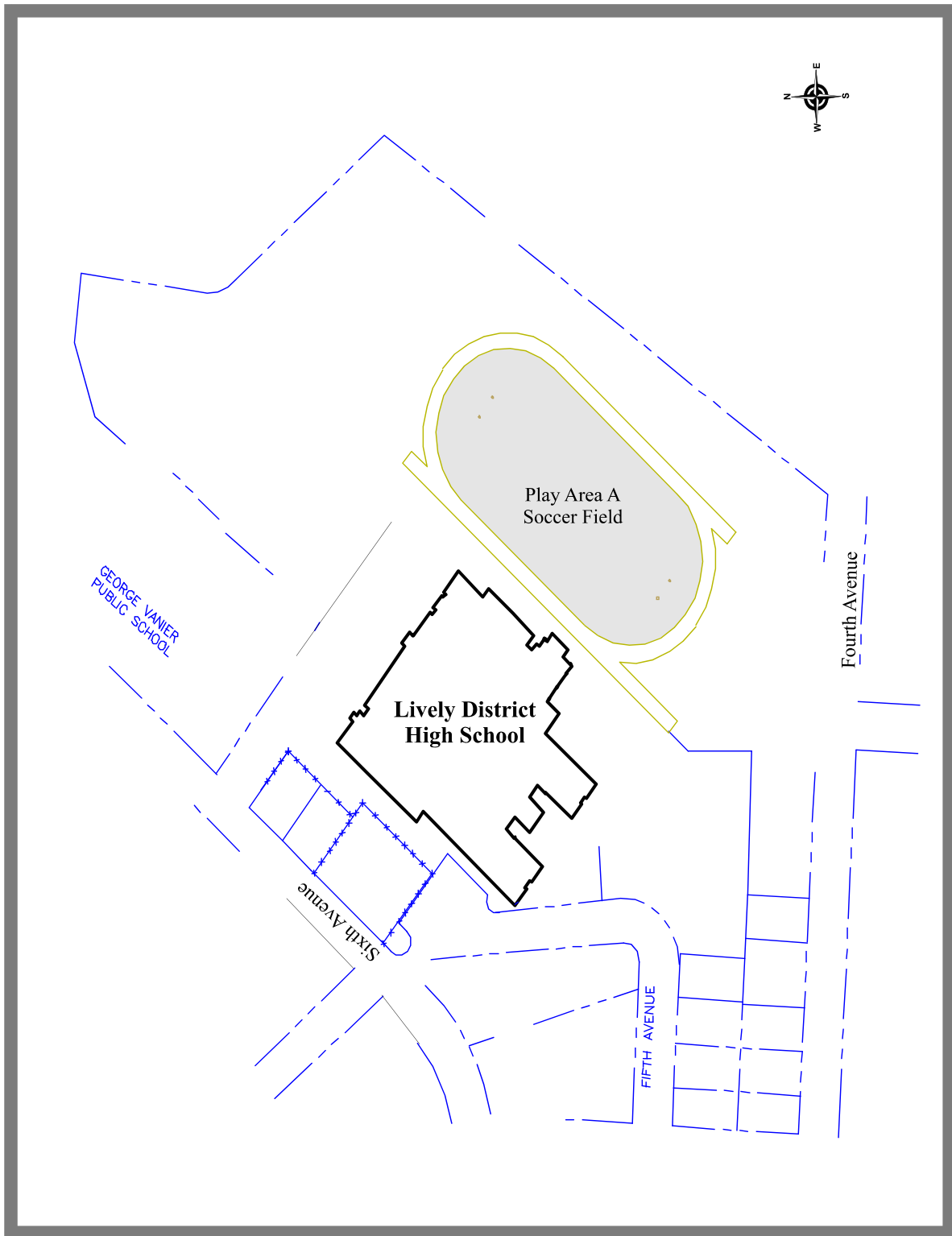


Figure B2.1.22: Lively District High School Sampling Locations - 2001.

### 2.1.23 Lockerby Composite School - Rainbow District School Board 1391 Ramsey View Court, Sudbury

Lockerby Composite School was sampled on July 15, 2001. Figure B2.1.23 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the north and south goal posts of the soccer field, respectively. Due to the compacted nature of these areas, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), lead (Pb), and antimony (Sb) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil samples collected from the soccer field. The highest nickel, copper and lead concentrations found in the surface soil were 120, 110, and 200 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km south of Lively District High School, Station 364 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations as high as 210 and 280 ppm, respectively. The lead concentrations at this site were higher than the historic sampling indicated. The highest lead concentration found at Station 364 was 22 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037055	14111	0 - 5	<b>1.3</b>	< 5	48	< 0.8	36	7	<b>75</b>	<b>75</b>	< 1.5	<b>87</b>	< 1	28	25
		14112	0 - 5	0.9	< 5	39	< 0.8	67	8	<b>110</b>	<b>200</b>	< 1.5	<b>120</b>	< 1	28	30
Area B soil	5037056	14113	0 - 5	<b>3.2</b>	< 5	35	< 0.8	39	7	<b>62</b>	<b>110</b>	< 1.5	<b>85</b>	< 1	31	26
Area C soil	5037057	14114	0 - 5	<b>4.4</b>	< 5	32	< 0.8	33	6	50	<b>150</b>	< 1.5	<b>70</b>	< 1	30	25
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



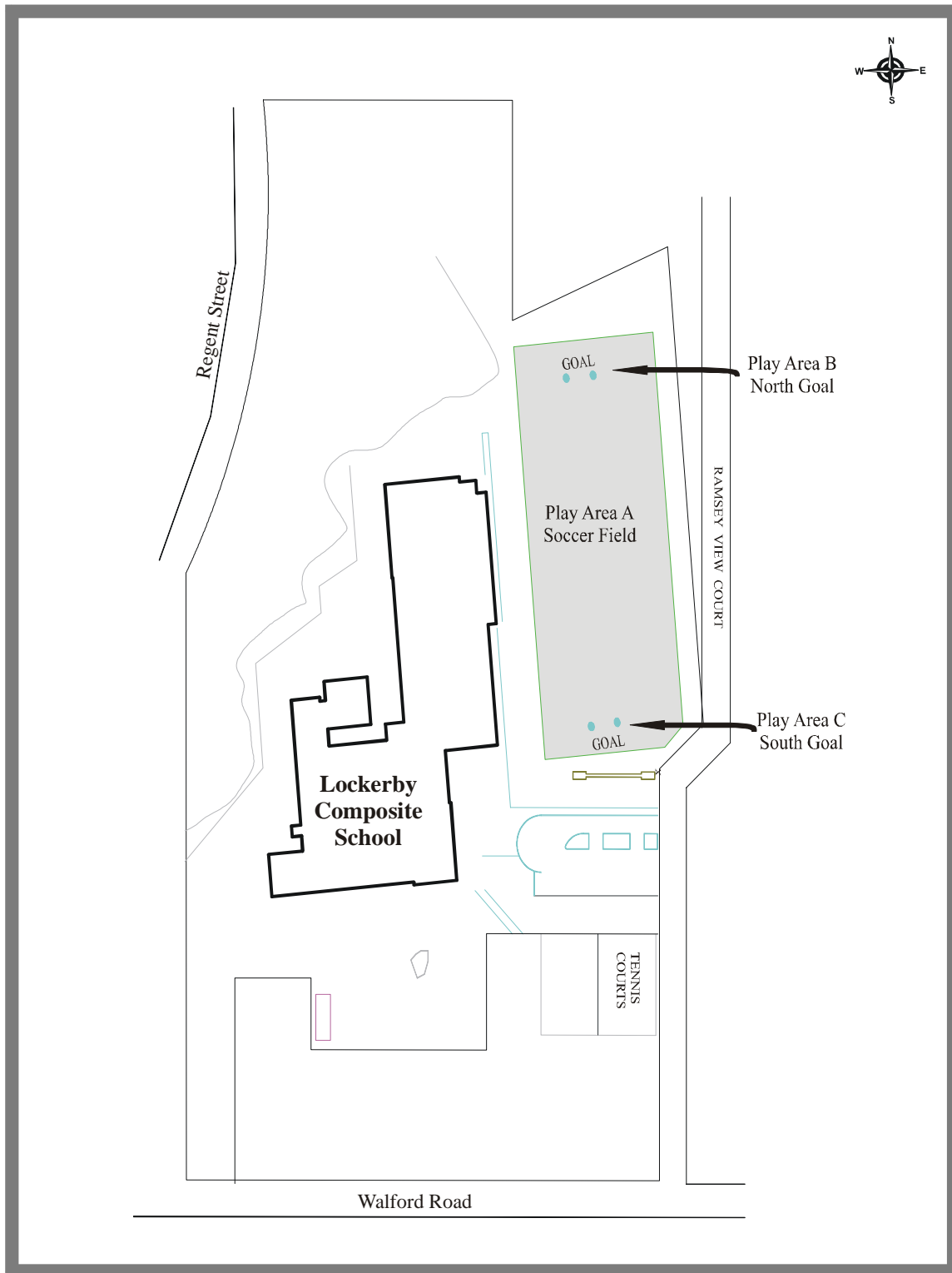


Figure B2.1.23: Lockerby Composite School Sampling Locations - 2001

### 2.1.24 Lo-Ellen Park Secondary School - Rainbow District School Board 275 Loach's Road, Sudbury

Lo-Ellen Park Secondary School was sampled on July 4, 2001. Figure B2.1.24 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the east and west goal posts of the soccer field, respectively. Due to the compacted nature of the areas around the goal posts, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), and lead (Pb) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil samples collected from the soccer field. The highest nickel, copper and lead concentrations found in the surface soil were 160, 120, and 140 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil nickel and copper results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 300 m northeast of Lively District High School, Station 365 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper concentrations of 190 ppm each. The lead concentrations at this site are higher than the historic sampling indicated. The highest lead concentration found at Station 365 was 21 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037029	14078	0 - 5	< 0.8	< 5	41	< 0.8	54	10	<b>120</b>	<b>140</b>	< 1.5	<b>160</b>	< 1	27	25
		14079	0 - 5	< 0.8	< 5	37	< 0.8	51	10	<b>120</b>	<b>120</b>	< 1.5	<b>140</b>	< 1	26	24
		14080	5 - 10	< 0.8	8	36	< 0.8	27	8	<b>91</b>	11	< 1.5	<b>130</b>	< 1	29	21
		14081	5 - 10	< 0.8	< 5	34	< 0.8	27	8	<b>89</b>	12	< 1.5	<b>110</b>	< 1	28	20
		14082	10 - 20	< 0.8	< 5	30	< 0.8	23	6	53	7	< 1.5	<b>78</b>	< 1	26	15
		14083	10 - 20	< 0.8	< 5	21	< 0.8	19	5	29	4	< 1.5	40	< 1	22	12
Area B soil	5037030	14084	0 - 5	< 0.8	< 5	37	< 0.8	27	6	45	14	< 1.5	<b>53</b>	< 1	28	21
Area C soil	5037031	14085	0 - 5	< 0.8	< 5	48	< 0.8	34	9	<b>110</b>	29	< 1.5	<b>130</b>	< 1	31	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

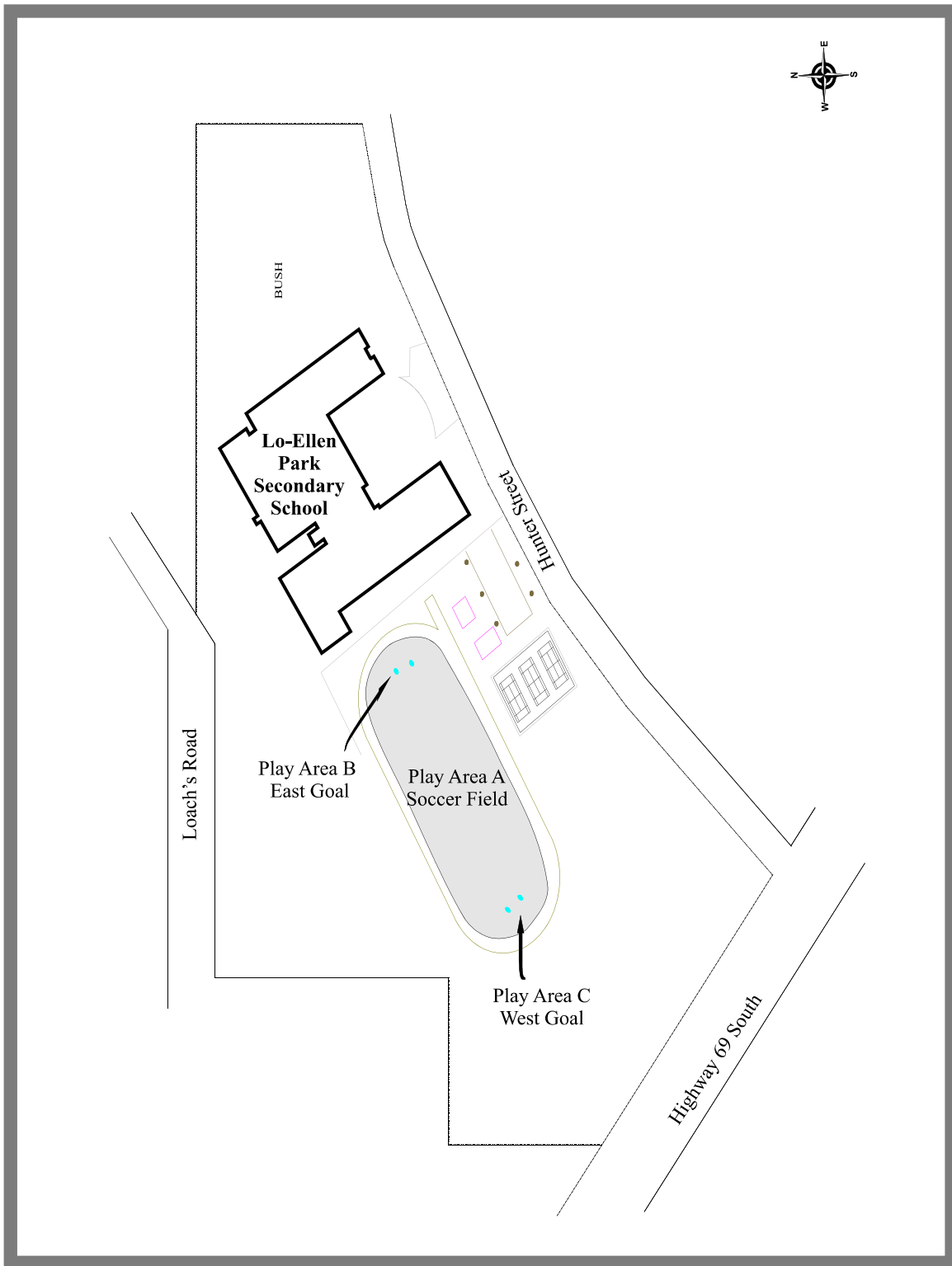


Figure B2.1.24: Lo-Ellen Park Secondary School Sampling Locations - 2001.

### 2.1.25 Long Lake Public School - Rainbow District School Board 4420 Long Lake Road, Sudbury

Long Lake Public School was sampled on July 5, 2001. Figure B2.1.25 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed play area on the east side of the school building. Area B corresponds to the sand samples that were taken below the play structures. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in all samples from the grassed play area. The highest nickel and copper concentrations, 110 and 92 ppm, respectively, were found in the surface soil layer (0-5 cm). All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2.5 km north and 2 km west of Long Lake Public School, Stations 366 and 429, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 480 and 440 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037021	14197	0 - 5	< 0.8	6	33	< 0.8	23	7	<b>92</b>	15	< 1.5	<b>110</b>	< 1	23	26
		14198	0 - 5	< 0.8	6	28	< 0.8	21	6	<b>82</b>	10	< 1.5	<b>84</b>	< 1	22	22
		14201	5 - 10	< 0.8	7	37	< 0.8	24	5	<b>60</b>	8	< 1.5	<b>74</b>	< 1	26	24
		14202	5 - 10	< 0.8	9	34	< 0.8	22	5	<b>82</b>	10	< 1.5	<b>78</b>	< 1	20	23
		14203	10 - 20	< 0.8	< 5	38	< 0.8	27	5	18	5	< 1.5	<b>44</b>	< 1	25	22
		14204	10 - 20	< 0.8	6	39	< 0.8	26	5	28	6	< 1.5	<b>59</b>	< 1	28	23
Area B sand	5037022	14199	0 - 15	< 0.8	< 5	29	< 0.8	27	7	21	3	< 1.5	21	< 1	25	23
		14200	0 - 15	< 0.8	< 5	33	< 0.8	28	8	41	3	< 1.5	24	< 1	28	24
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

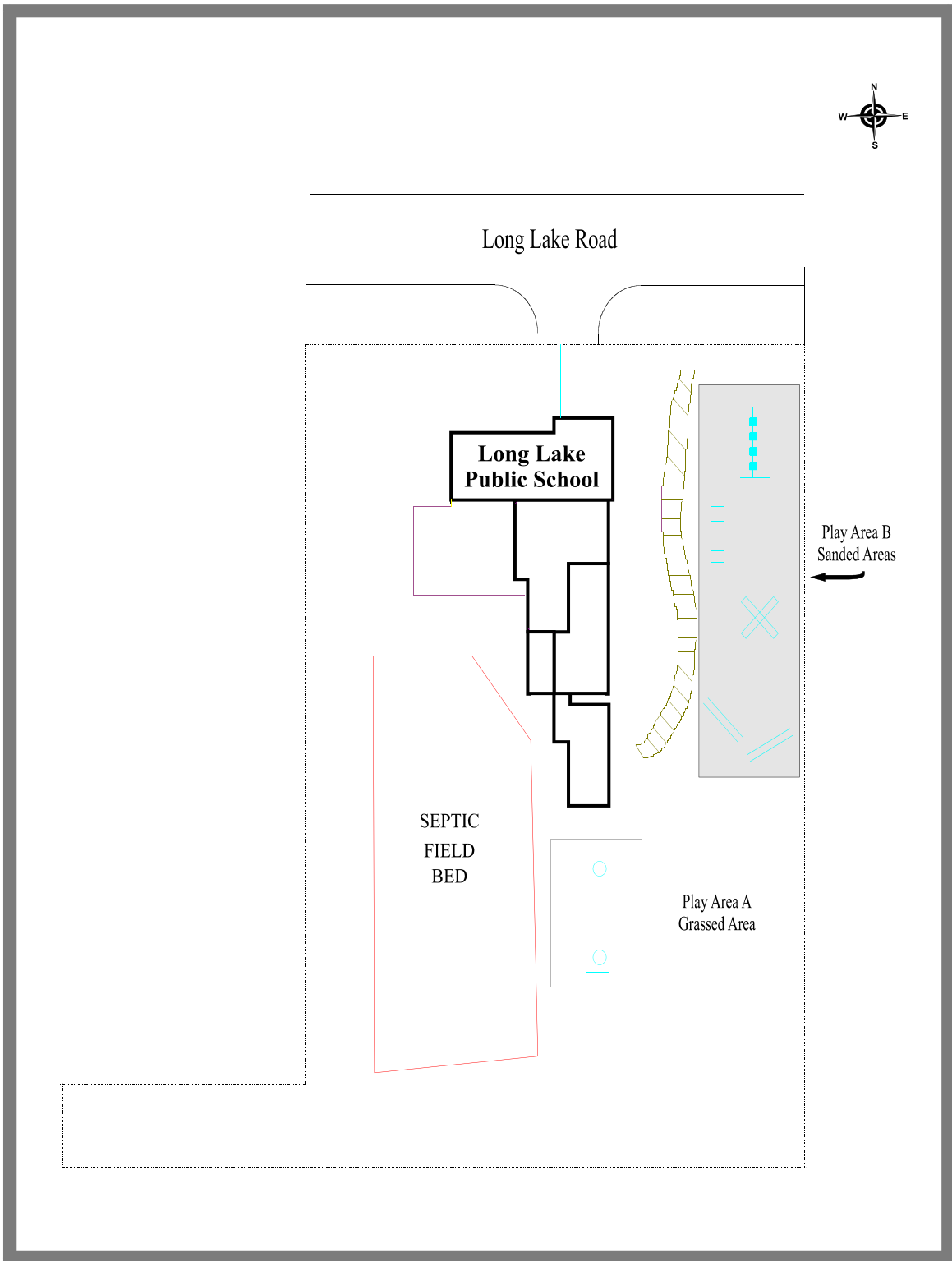


Figure B2.1.25: Long Lake Public School Sampling Locations - 2001.

### 2.1.26 MacLeod Public School - Rainbow District School Board 310 Anthony Street, Sudbury

MacLeod Public School was sampled on July 4, 2001. Figure B2.1.26 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the sand samples that were taken below the play structure. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area B corresponds to the gravel samples that were taken over the entire baseball diamond. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. Area C corresponds to the grassed play area on the east side of the basketball court. Due to the compacted nature of the grassed areas, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in all surface samples from the grassed and gravel play areas. The highest nickel and copper concentrations were found in the surface soil layer (0-5 cm) of the grassed area with concentrations of 160 and 150 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There was one exceedences of the MOE Table A Effects Based Soil Criteria for nickel at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south of MacLeod Public School, Station 364 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 210 and 280 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037047	14104	0 - 15	< 0.8	< 5	31	< 0.8	25	5	33	7	< 1.5	43	< 1	26	17
		14105	0 - 15	< 0.8	< 5	26	< 0.8	35	7	22	3	< 1.5	28	< 1	33	21
Area B gravel	5037048	14100	0 - 5	< 0.8	< 5	68	< 0.8	29	12	<b>100</b>	9	< 1.5	<b>81</b>	< 1	68	34
		14101	0 - 5	< 0.8	< 5	65	< 0.8	29	15	<b>96</b>	8	< 1.5	<b>64</b>	< 1	66	29
Area C grass	5037049	14102	0 - 5	< 0.8	< 5	52	< 0.8	41	10	<b>130</b>	16	< 1.5	<b>160</b>	1.1	35	40
		14103	0 - 5	< 0.8	< 5	47	< 0.8	39	9	<b>150</b>	19	< 1.5	<b>140</b>	1.1	33	38
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

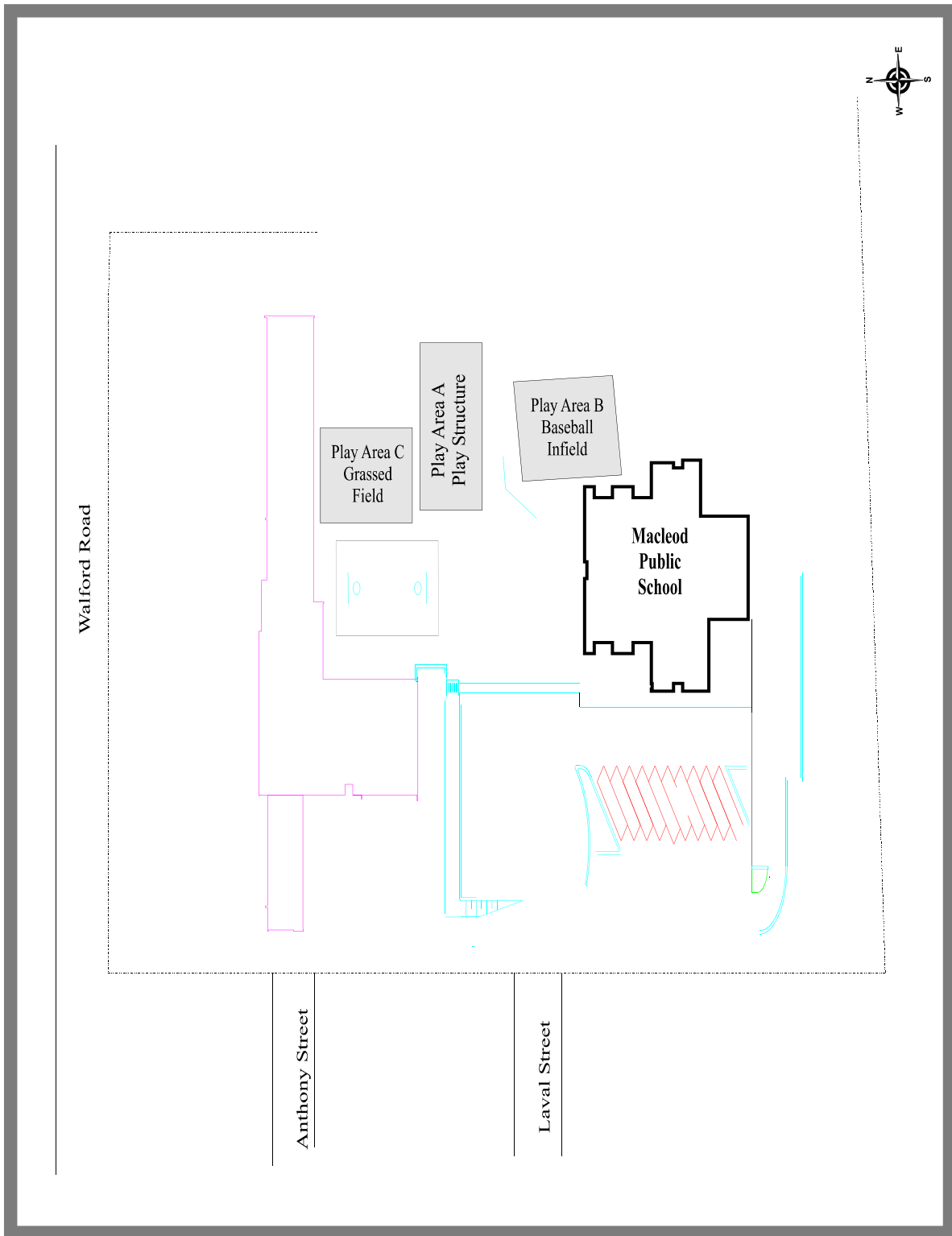


Figure B2.1.26: MacLeod Public School Sampling Locations - 2001.

### 2.1.27 Northeastern Secondary School - Rainbow District School Board 45 Spruce Street, Garson

Northeastern Secondary School was sampled on July 18, 2001 and has since been renamed Northeastern Elementary School. Figure B2.1.27 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to samples taken from the grassed area of the football field. Area B corresponds to samples taken from the baseball diamond outfield. Due to the compacted nature of Areas B, it was only possible to sample the surface soil (0-5 cm). Area C corresponds to the gravel samples that were taken from the baseball diamond infield. Hand trowels were used to collect gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in most samples from this property. The highest nickel and copper concentrations on this property were found in the surface soil layer (0-5 cm) of the baseball diamond outfield with concentrations of 250 and 210 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. Nickel concentrations exceeded the MOE Table A Effects Based Soil Criteria at two locations at this property.

These nickel surface soil results are slightly higher than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south of Northeastern Secondary School, Station 39 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel surface soil concentrations of 100 to 130 ppm. These copper surface soil results are similar to what has been reported historically for this site, with the highest concentrations being 200 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037322	14407	0 - 5	< 0.8	8	32	< 0.8	26	8	<b>88</b>	27	< 1.5	<b>120</b>	< 1	26	37
		14408	0 - 5	< 0.8	9	39	< 0.8	30	10	<b>140</b>	51	< 1.5	<b>180</b>	< 1	27	45
		14409	5 - 10	< 0.8	6	28	< 0.8	28	5	30	11	< 1.5	<b>52</b>	< 1	30	27
		14410	5 - 10	< 0.8	8	36	< 0.8	31	5	31	10	< 1.5	<b>51</b>	< 1	36	33
		14413	10 - 20	< 0.8	6	35	< 0.8	28	5	25	9	< 1.5	38	< 1	31	25
		14414	10 - 20	< 0.8	6	24	< 0.8	21	4	16	4	< 1.5	26	< 1	23	15
Area B grass	5037323	14405	0 - 5	< 0.8	9	48	0.9	26	15	<b>210</b>	45	< 1.5	<b>250</b>	1	25	72
		14406	0 - 5	< 0.8	7	37	< 0.8	25	8	<b>81</b>	15	< 1.5	<b>110</b>	< 1	27	35
Area C gravel	5037324	14411	0 - 5	< 0.8	7	30	< 0.8	27	6	37	8	< 1.5	<b>58</b>	< 1	29	30
		14412	0 - 5	< 0.8	6	29	< 0.8	28	6	33	9	< 1.5	<b>58</b>	< 1	30	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



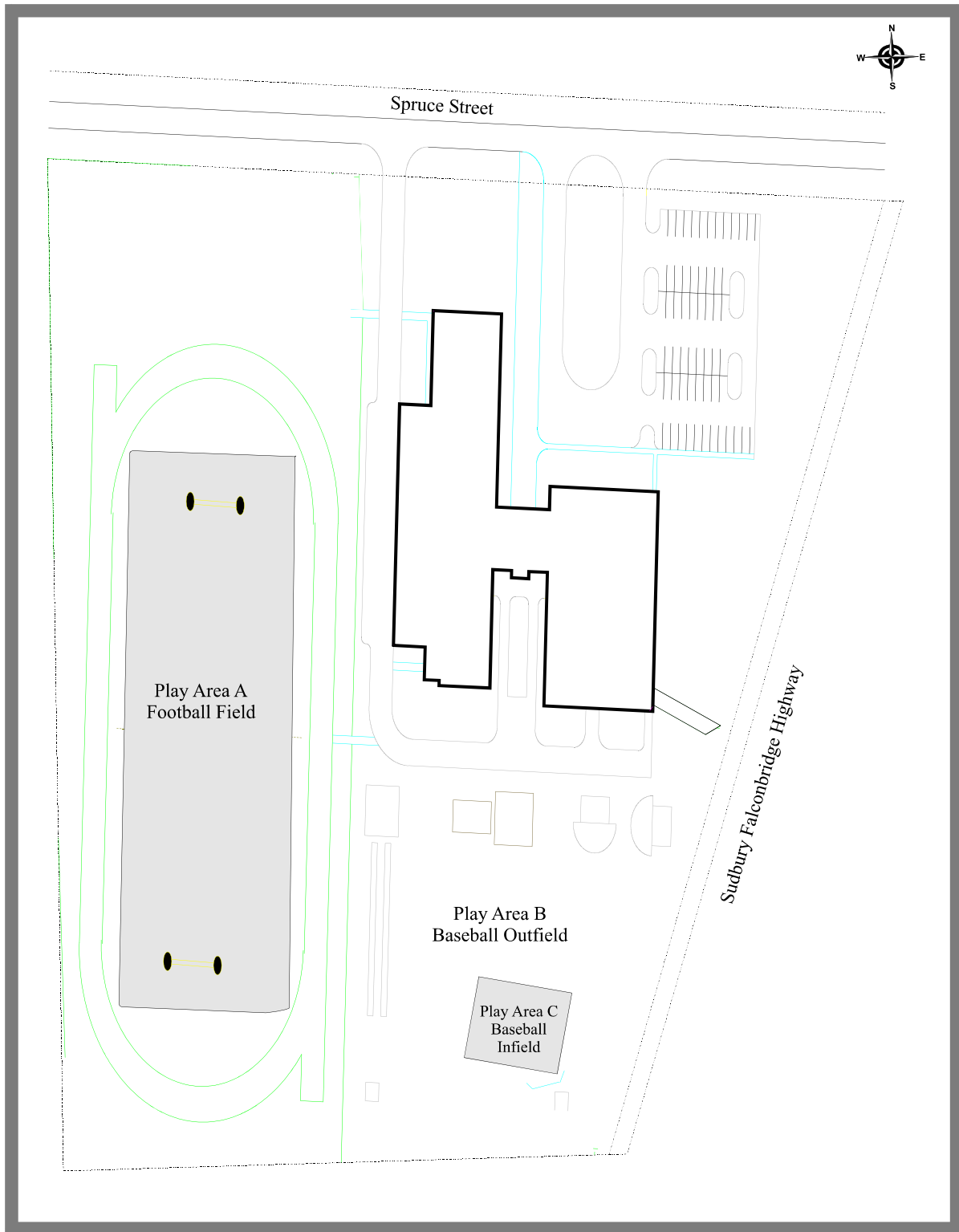


Figure B2.1.27: Northeastern Secondary School Sampling Locations - 2001.

### 2.1.28 Pinecrest Public School - Rainbow District School Board 1650 Dominion Drive, Hanmer

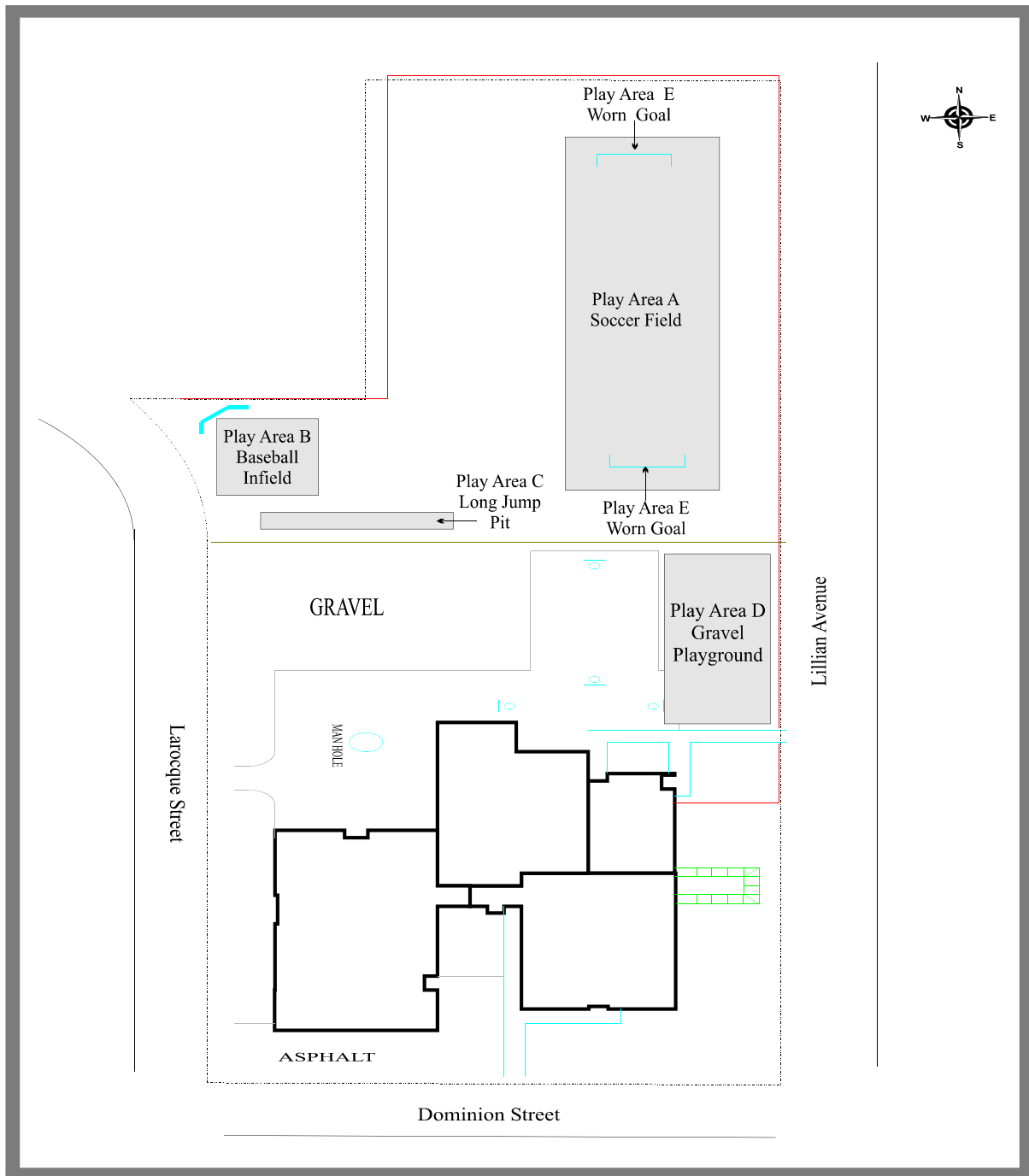
Pinecrest Public School was sampled on July 20, 2001. Figure B2.1.28 details the sampling locations at this property. Samples were taken from five areas on the school property. Area A and E correspond to samples taken from the grassed area of the soccer field and the worn areas around the goal posts, respectively. Area B corresponds to samples taken from the baseball diamond infield. Due to the compacted nature of Areas A, B and E, it was only possible to sample the surface soil (0-5 cm). Area C corresponds to sand samples taken from the landing area of the long jump pit. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area D corresponds to the gravel playground. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand of the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples from the soccer field, baseball diamond infield, and gravel playground. Copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both samples taken from the gravel playground. The highest nickel and copper concentrations on this property were found in the gravel from the playground with concentrations of 130 and 83 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037318	14661	0 - 5	< 0.8	6	34	< 0.8	27	5	40	12	< 1.5	<b>54</b>	< 1	28	26
		14662	0 - 5	< 0.8	< 5	36	< 0.8	27	4	37	9	< 1.5	<b>44</b>	< 1	28	24
		14663	5 - 10	< 0.8	6	31	< 0.8	26	5	39	11	< 1.5	<b>52</b>	< 1	26	29
		14664	5 - 10	< 0.8	5	35	< 0.8	27	5	31	9	< 1.5	<b>45</b>	< 1	27	24
Area B soil	5037319	14669	0 - 5	< 0.8	5	29	< 0.8	27	4	38	14	< 1.5	41	< 1	26	34
Area C sand	5037320	14666	0 - 15	< 0.8	< 5	20	< 0.8	25	7	12	3	< 1.5	17	< 1	28	15
Area D gravel	5037321	14667	0 - 5	< 0.8	5	49	< 0.8	46	16	<b>81</b>	11	< 1.5	<b>130</b>	< 1	44	42
		14668	0 - 5	< 0.8	< 5	49	< 0.8	46	15	<b>83</b>	10	< 1.5	<b>120</b>	< 1	45	41
Area E soil	5030971	14665	0 - 5	< 0.8	5	31	< 0.8	28	5	35	10	< 1.5	<b>49</b>	< 1	27	33
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

The nickel and copper results from the gravel playground are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km east and 3 km southwest of Pinecrest Public School, Stations 15 and 344, respectively, of the MOE Sudbury 2000 Report for

the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 84 and 100 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.1.28: Pinecrest Public School Sampling Locations - 2001.**

### 2.1.29 Princess Anne Public School - Rainbow District School Board 500 Douglas Street, Sudbury

Princess Anne Public School, including Princess Anne Kids, was sampled on July 5, 2001. Figure B2.1.29 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to samples taken from the gravel of the baseball diamond infield. Area B corresponds to samples taken from the grassed area of the baseball diamond outfield. Due to the compacted nature of Areas A, and B, it was only possible to sample all three depths for one replicate of the outfield and the surface (0-5 cm) layer of the infield. Area C corresponds to sand samples taken from the sand box. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand of the sand box. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria, and in most cases for nickel, above the MOE Table A Effects Based Soil Criteria, for all other samples collected from this property. The highest nickel and copper concentrations on this property were found in the 5 - 10 cm depth sample of the baseball diamond outfield with concentrations of 370 and 240 ppm, respectively. The presence of darkly stained rocks, believed to be slag, was noted on the east side of the baseball diamond. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These nickel and copper soil results are higher than those reported historically. Previous MOE sampling of undisturbed soils approximately 70 m north of Princess Anne Public School, Station 378 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 250 and 180 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037106	14134	0 - 5	< 0.8	6	34	< 0.8	35	17	<b>220</b>	18	< 1.5	<b>200</b>	<b>2</b>	30	28
		14135	0 - 5	< 0.8	6	31	< 0.8	32	13	<b>200</b>	13	< 1.5	<b>170</b>	< 1	29	25
Area B grass	5037107	14136	0 - 5	< 0.8	7	46	< 0.8	39	11	<b>200</b>	43	< 1.5	<b>280</b>	< 1	31	33
		14137	0 - 5	< 0.8	7	45	< 0.8	35	13	<b>240</b>	21	< 1.5	<b>300</b>	<b>2</b>	31	37
		14139	5 - 10	< 0.8	8	56	< 0.8	38	13	<b>240</b>	17	< 1.5	<b>370</b>	1	33	38
		14140	10 - 20	< 0.8	< 5	41	< 0.8	29	8	<b>120</b>	10	< 1.5	<b>170</b>	< 1	27	27
Area C sand	5037108	14138	0 - 15	< 0.8	< 5	23	< 0.8	31	8	36	4	< 1.5	34	< 1	31	22
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

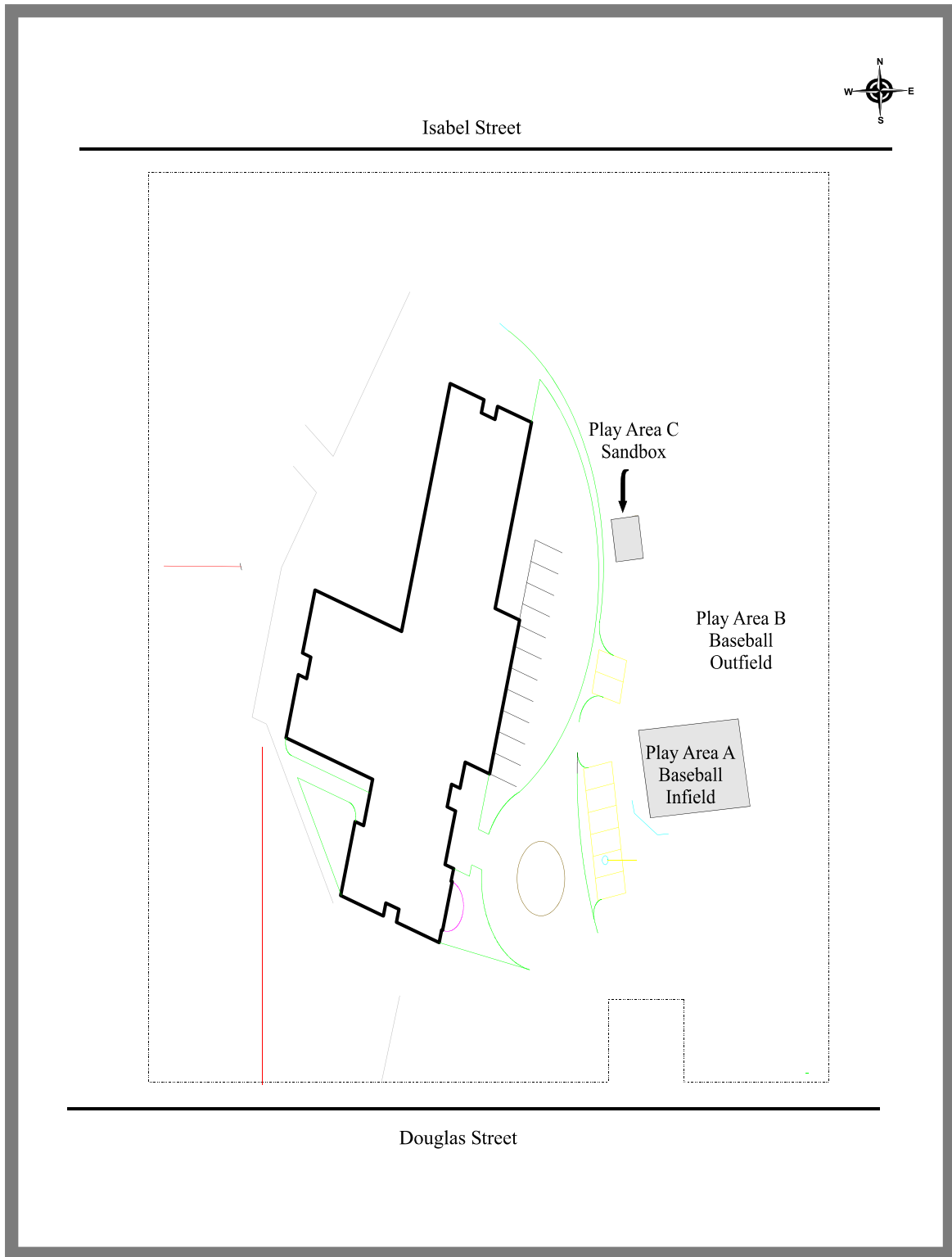


Figure B2.1.29: Princess Anne Public School Sampling Locations - 2001.

### **2.1.30 Queen Elizabeth II Public School - Rainbow District School Board 32 Dell Street, Sudbury**

Queen Elizabeth II Public School was sampled on July 17, 2001. Figure B2.1.30 details the sampling locations at this property. Samples were taken from eight areas on the school property. Area A corresponds to samples taken from the grassed area of both soccer fields. Areas B and C correspond to samples taken from the worn areas around the west and east goal posts of both fields, respectively. Due to the compacted nature of Areas B and C, it was only possible to sample the surface soil (0-5 cm) layer. Area D corresponds to sand samples taken from below the play structure. Area E corresponds to sand samples taken from the landing area of the long jump pit. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Areas F, G, and H correspond to gravel samples taken from the shared baseball diamond outfield, and west and east infields, respectively. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from below the play structure or from the landing area of the long jump pit. The sand present is not likely native to the school properties and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and in most cases copper (Cu), concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other samples taken from this property. Nickel and copper concentrations were elevated above the MOE Table A Effects Based Soil Criteria for the gravel samples taken from the baseball diamonds. The highest nickel and copper concentrations on this property were found at the east baseball diamond infield with concentrations of 370 and 300 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These nickel and copper soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.4 km northwest and 1.4 km southwest of Queen Elizabeth II Public School, Stations 362 and 84, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 490 and 520 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.1.30:</b> Concentration of 13 Elements in Soil in µg/g Collected at Queen Elizabeth II Public School, 32 Dell Street, Sudbury - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037119	14269	0 - 5	< 0.8	7	35	< 0.8	29	8	<b>120</b>	15	< 1.5	<b>120</b>	< 1	29	28
		14270	0 - 5	< 0.8	9	37	< 0.8	25	8	<b>130</b>	17	< 1.5	<b>130</b>	< 1	28	29
		14271	5 - 10	< 0.8	7	34	< 0.8	25	7	<b>92</b>	12	< 1.5	<b>99</b>	< 1	28	26
		14272	5 - 10	< 0.8	6	33	< 0.8	25	6	<b>73</b>	9	< 1.5	<b>83</b>	< 1	28	25
		14280	10 - 20	< 0.8	6	35	< 0.8	27	6	43	7	< 1.5	<b>54</b>	< 1	31	24
		14281	10 - 20	< 0.8	< 5	32	< 0.8	28	6	49	7	< 1.5	<b>61</b>	< 1	27	23
Area B soil	5037120	14273	0 - 5	< 0.8	8	30	< 0.8	24	5	45	9	< 1.5	<b>63</b>	< 1	27	22
Area C soil	5037121	14274	0 - 5	< 0.8	6	37	< 0.8	27	7	<b>100</b>	14	< 1.5	<b>120</b>	< 1	28	26
Area D sand	5037122	14275	0 - 15	< 0.8	< 5	20	< 0.8	31	7	32	3	< 1.5	37	< 1	33	42
		14276	0 - 15	< 0.8	6	20	< 0.8	27	7	23	3	< 1.5	26	< 1	29	22
Area E sand	5037123	14277	0 - 15	< 0.8	< 5	20	< 0.8	25	7	26	3	< 1.5	34	< 1	29	17
Area F gravel	5037124	14282	0 - 5	< 0.8	7	36	< 0.8	32	16	<b>210</b>	19	< 1.5	<b>240</b>	< 1	30	38
		14283	0 - 5	< 0.8	8	39	0.8	31	17	<b>260</b>	26	< 1.5	<b>270</b>	1	29	58
Area G gravel	5037125	14278	0 - 5	< 0.8	7	34	< 0.8	29	16	<b>210</b>	23	< 1.5	<b>240</b>	< 1	31	110
Area H gravel	5037126	14279	0 - 5	< 0.8	9	40	1	29	<b>20</b>	<b>300</b>	30	< 1.5	<b>370</b>	1	29	65
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

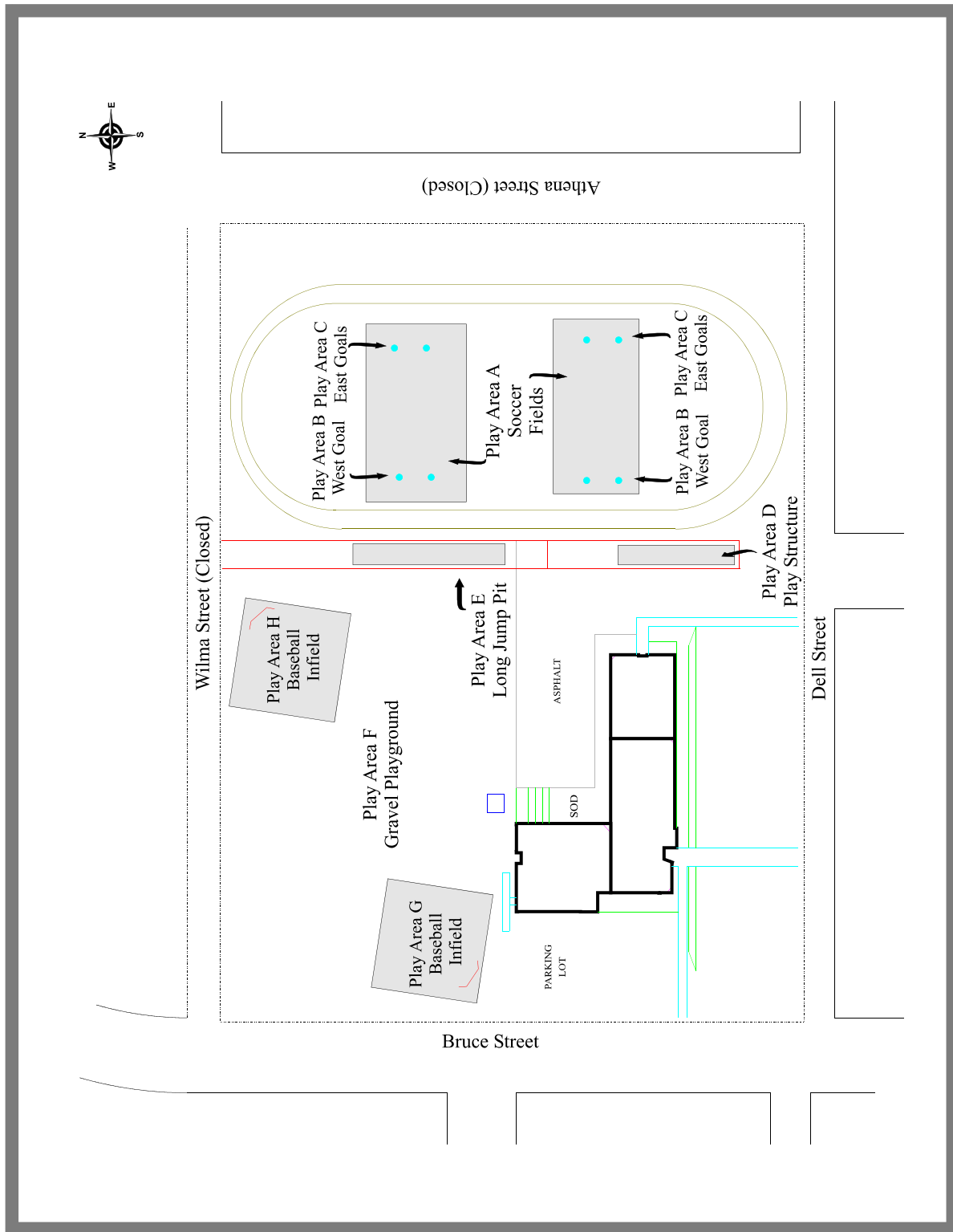


Figure B2.1.30: Queen Elizabeth II Public School Sampling Locations - 2001.



### 2.1.31 R. H. Murray Public School - Rainbow District School Board 3 Henry Street, Whitefish

R. H. Murray Public School was sampled on July 21, 2001. Figure B2.1.31 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the soccer field. Area B corresponds to the worn areas at the north and south goal posts. Due to the compacted nature of these areas it was only possible to sample the surface soil (0 - 5 cm). Area C corresponds to sand samples that were taken from below the play structure. Due to the constant mixing of sand and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. None of the samples from this property were found to have metal concentrations above the MOE Table F Ontario Soil Background Criteria. In addition, aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were also below the MOE Table F Ontario Soil Background Criteria.

These soil results are similar to those reported historically for the City of Greater Sudbury (MOE 2001). Previous MOE sampling of undisturbed soils approximately 2.5 km northwest, 2.2 km north and 0.5 km southwest of R.H. Murray Public School, Stations 394, 397, and 103, respectively, of the MOE Sudbury 2000 Report (MOE 2001), indicated nickel and copper concentration ranges of 20 to 76, and 21 to 100 ppm, respectively. As indicated on the R.H. Murray school map provided, the soccer field has been built above a septic field. Therefore, the soil history at this site is not known due to the potential soil disturbance during installation of the septic tank. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037409	14744	0 - 5	< 0.8	< 5	62	< 0.8	23	5	24	11	< 1.5	32	< 1	29	45
		14745	0 - 5	< 0.8	< 5	74	< 0.8	27	6	29	13	< 1.5	37	< 1	31	53
Area B soil	5037410	14746	0 - 5	< 0.8	< 5	81	< 0.8	37	6	22	9	< 1.5	27	< 1	38	47
Area C sand	5037411	14747	0 - 15	< 0.8	< 5	31	< 0.8	31	6	16	3	< 1.5	17	< 1	31	19
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

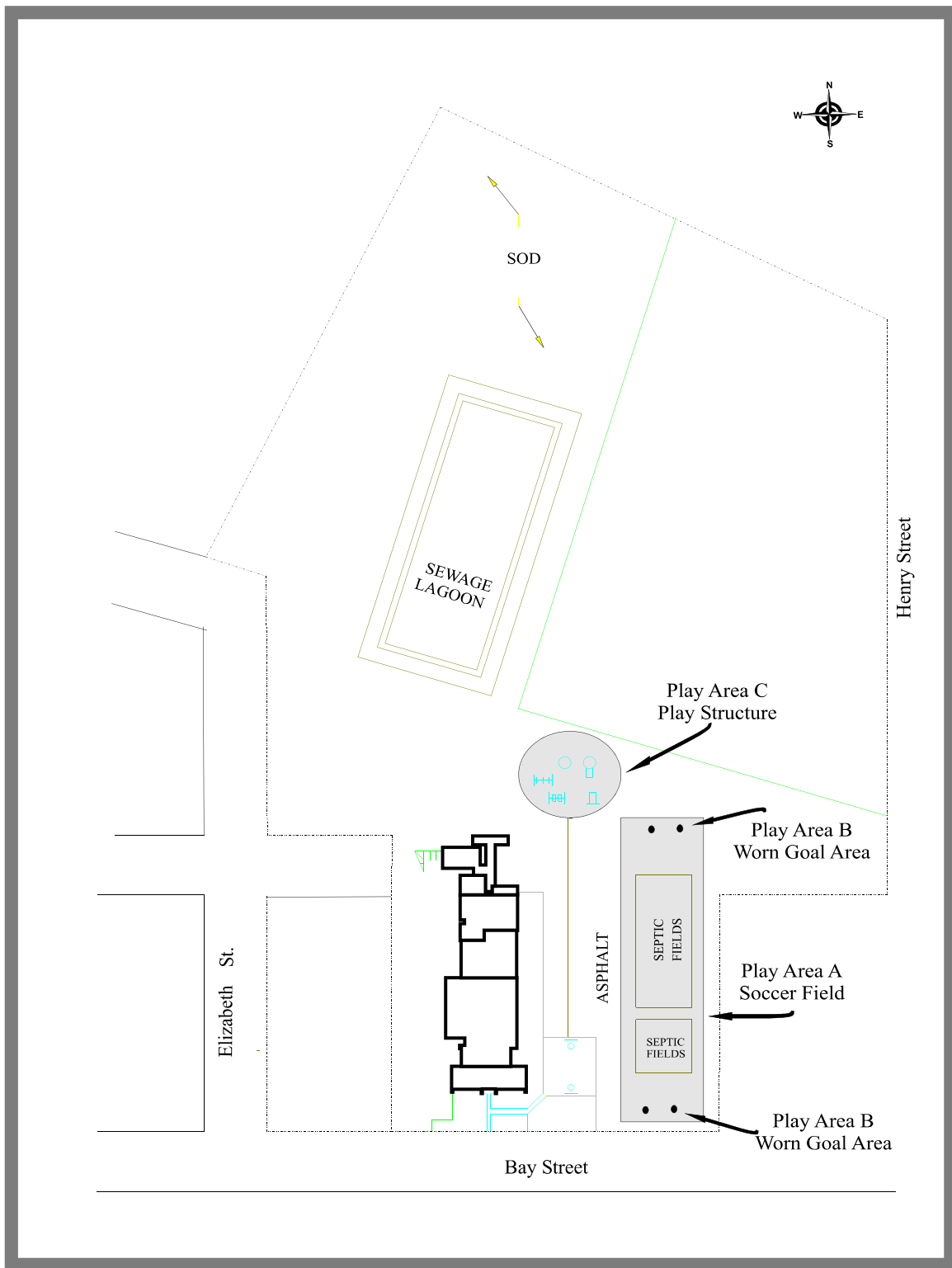


Figure B2.1.31: R. H. Murray Public School Sampling Locations - 2001.

### 2.1.32 R.L. Beattie Public School - Rainbow District School Board 102 Loach's Road, Sudbury

R. L. Beattie Public School, including Beattie Kids Daycare, was sampled on July 4, 2001. Figure B2.1.32 details the sampling locations at this property. Samples were taken from seven areas on the school property. Area A corresponds sand samples from below the climbers on the west side of the property. Area B corresponds sand samples from below the playground equipment on the north side of the school building. Area G corresponds to sand samples collected from below the play structure on the east side of the school property. Due to the constant mixing of sand and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Area C corresponds to the grassed area of the soccer field. Areas D and E correspond to the worn areas around the west and east soccer goal posts, respectively. Area F corresponds to the gravel sample of the baseball diamond infield. Due to the compacted nature of Areas C, D, E, and F it was only possible to sample the surface layer (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in any of the sand samples from beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other grass and gravel samples taken from this property. The highest nickel and copper concentrations on this property were found at the worn area around the west soccer goal post with concentrations of 110 and 87 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

**Table B2.1.32:** Concentration of 13 Elements in Soil in µg/g Collected at R.L. Beattie Public School, 102 Loach's Road, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037032	14072	0 - 15	< 0.8	< 5	23	< 0.8	31	7	23	3	< 1.5	25	1	32	17
		14073	0 - 15	< 0.8	< 5	21	< 0.8	28	7	24	3	< 1.5	27	< 1	28	16
Area B sand	5037033	14074	0 - 15	< 0.8	< 5	20	< 0.8	30	7	25	3	< 1.5	28	< 1	29	17
		14075	0 - 15	< 0.8	< 5	20	< 0.8	30	6	21	3	< 1.5	23	< 1	28	17
Area C grass	5037034	14068	0 - 5	< 0.8	< 5	42	< 0.8	33	7	<b>77</b>	13	< 1.5	<b>97</b>	< 1	32	31
		14069	0 - 5	< 0.8	< 5	42	< 0.8	32	7	<b>83</b>	13	< 1.5	<b>100</b>	< 1	32	31
Area D soil	5037035	14071	0 - 5	0.9	< 5	52	< 0.8	36	8	<b>87</b>	15	< 1.5	<b>110</b>	< 1	32	36
Area E soil	5037036	14070	0 - 5	< 0.8	< 5	54	< 0.8	33	7	<b>61</b>	11	< 1.5	<b>84</b>	< 1	33	51
Area F gravel	5037037	14076	0 - 5	< 0.8	< 5	27	< 0.8	32	9	<b>82</b>	11	< 1.5	<b>82</b>	< 1	28	27
Area G sand	5037038	14077	0 - 15	< 0.8	< 5	22	< 0.8	29	7	19	3	< 1.5	21	< 1	28	16
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These nickel and copper soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km southeast of R.L. Beattie Public School, Station 365 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 190 ppm each. Historic MOE sampling in the

Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

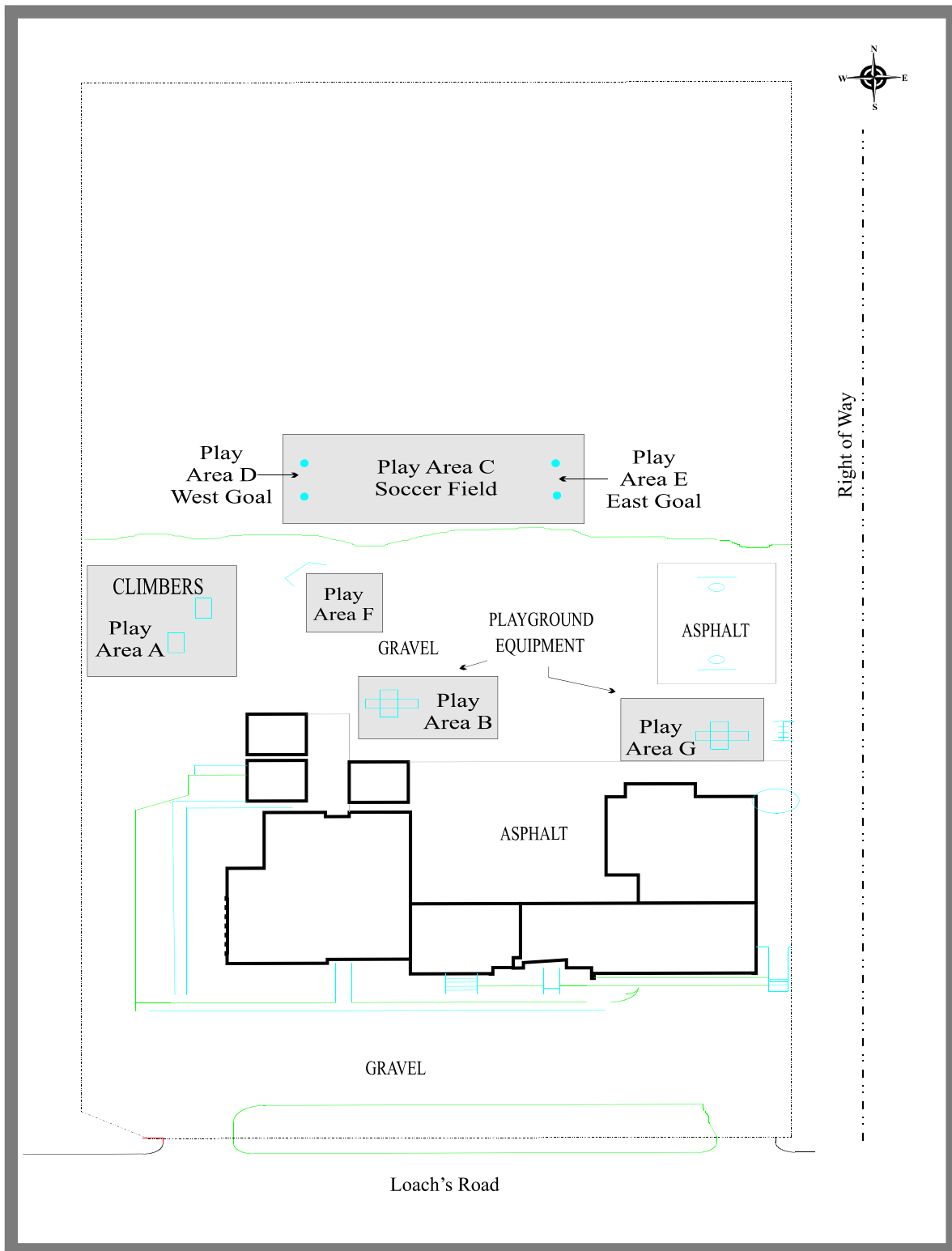


Figure B2.1.32: R.L. Beattie Public School Sampling Locations - 2001.

### 2.1.33 Redwood Acres Public School - Rainbow District School Board 4625 Carl Street, Hanmer

Redwood Acres Public School was sampled on July 20, 2001. Figure B2.1.33 details the sampling locations at this property. Samples were taken from seven areas on the school property. Area A corresponds to the grassed area of the north soccer field. Areas B and C correspond to the worn areas around the east and west goal posts of the north soccer field, respectively. Due to the compacted nature of Areas A, B, and C, it was only possible to sample to 10 cm for the north grassed soccer field and the surface soil (0 - 5 cm) layer around the worn goal posts. Area G corresponds to the grassed area of the south soccer field. Areas D and E correspond to samples taken from the south and north baseball diamond infields, respectively. Area F corresponds to sand samples collected from sand boxes on the east side of the school property. Due to the constant mixing of sand and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

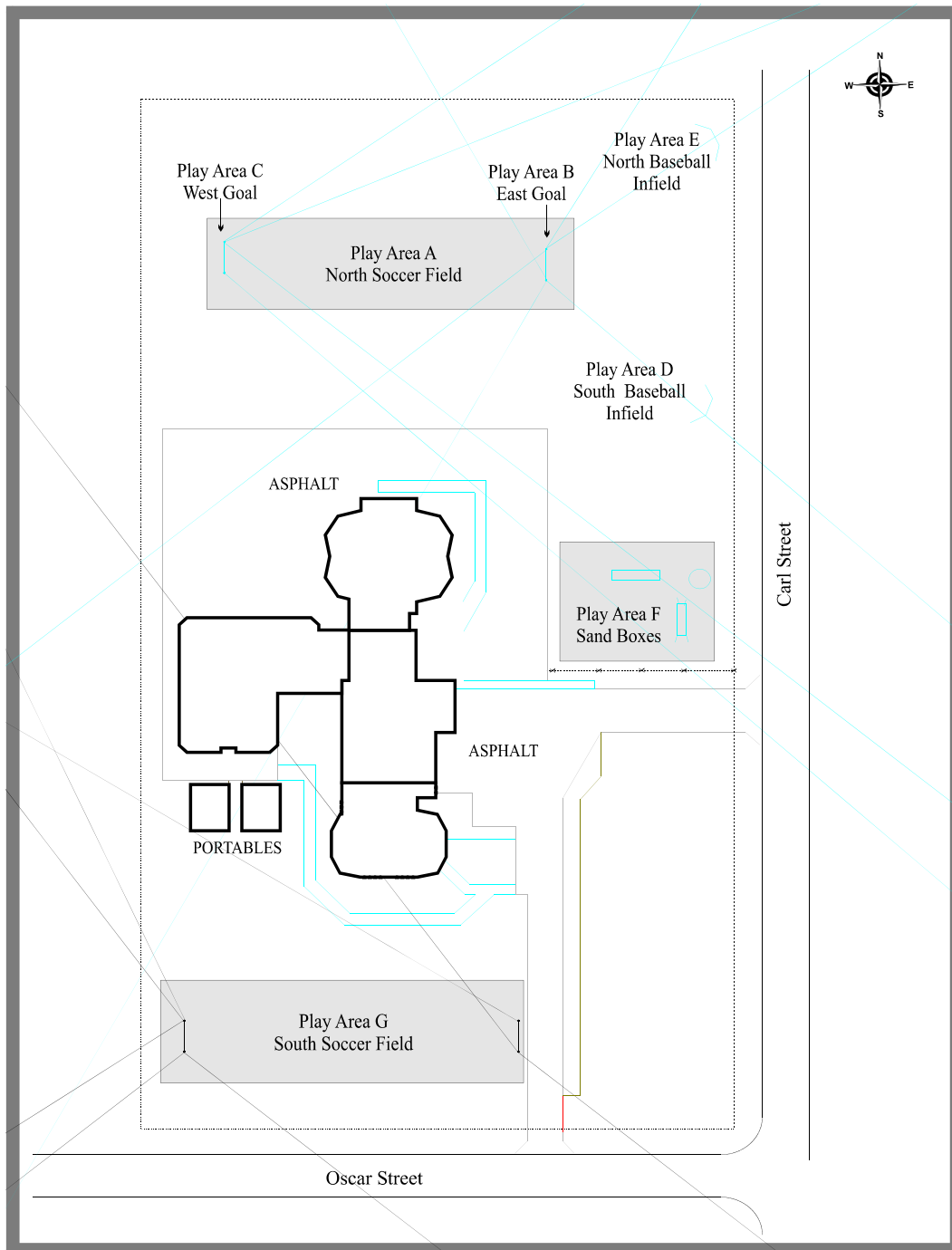
Metal concentrations were not elevated in the sand samples from the sand boxes. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at selected surface soil sites of the south grassed soccer field. The highest nickel concentrations on this property was found in the surface soil (0-5 cm) layer of the south soccer field with a concentration of 72 ppm.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037332	14612	0 - 5	< 0.8	< 5	32	< 0.8	26	4	21	15	< 1.5	34	1	26	21
		14613	0 - 5	< 0.8	< 5	31	< 0.8	26	5	25	43	< 1.5	40	< 1	25	22
		14614	5 - 10	< 0.8	< 5	29	< 0.8	25	4	24	8	< 1.5	32	< 1	25	19
		14615	5 - 10	< 0.8	< 5	28	< 0.8	24	4	22	7	< 1.5	31	< 1	24	19
Area B soil	5037333	14607	0 - 5	< 0.8	< 5	28	< 0.8	25	5	20	9	< 1.5	32	< 1	24	21
Area C soil	5037334	14608	0 - 5	< 0.8	< 5	27	< 0.8	26	4	21	7	< 1.5	36	< 1	25	27
Area D soil	5037335	14609	0 - 5	< 0.8	< 5	35	< 0.8	34	10	44	7	< 1.5	40	< 1	35	31
Area E soil	5037336	14610	0 - 5	< 0.8	6	35	< 0.8	32	10	43	6	< 1.5	41	< 1	33	27
Area F sand	5037337	14611	0 - 15	< 0.8	< 5	20	< 0.8	23	6	15	3	< 1.5	16	< 1	29	20
Area G grass	5037338	14616	0 - 5	< 0.8	7	31	< 0.8	24	5	54	18	< 1.5	<b>72</b>	< 1	23	24
		14617	0 - 5	< 0.8	6	30	< 0.8	27	4	43	11	< 1.5	<b>52</b>	< 1	26	24
		14618	5 - 10	< 0.8	< 5	30	< 0.8	25	4	27	7	< 1.5	<b>44</b>	< 1	24	21
		14619	5 - 10	< 0.8	< 5	25	< 0.8	23	4	18	5	< 1.5	32	< 1	21	18
		14620	10 - 20	< 0.8	< 5	24	< 0.8	23	4	13	4	< 1.5	23	< 1	22	17
		14621	10 - 20	< 0.8	< 5	22	< 0.8	22	4	15	4	< 1.5	22	< 1	23	14
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil

Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel soil results are similar those reported historically. Previous MOE sampling of undisturbed soils approximately 2.5 km northwest, 2 km southwest, and 1.5 km southeast of Redwood Acres Public School, Stations 346, 347, and 350, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel surface soil concentrations of 43 to 150 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.1.33: Redwood Acres Public School Sampling Locations - 2001.**

### 2.1.34 Robert Jack Public School - Rainbow District School Board 7 Margaret Street, Garson

Robert Jack Public School, including R.J. Kids Daycare, was sampled on July 18, 2001 and has since closed at this location. Figure B2.1.34 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed baseball diamond outfield. Area B corresponds to the baseball diamond infield. Due to the compacted nature of Areas A and B, it was only possible to sample all three depths for one replicate of the outfield and the surface soil (0 - 5 cm) layer for the infield. Area C corresponds to the gravel playground. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu) and arsenic (As) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for selected sites of the baseball outfield and gravel playground. The highest nickel concentration on this property, 69 ppm, was found in the surface soil (0-5 cm) layer of the outfield, while the highest copper and arsenic concentrations, 71 and 15 ppm, respectively, were found in the 5-10 cm depth. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel soil results are similar those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south of Robert Jack Public School, Station 40 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel surface soil concentrations of 37 to 87 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037272	14420	0 - 5	< 0.8	9	33	< 0.8	24	5	51	10	< 1.5	<b>54</b>	< 1	24	29
		14421	0 - 5	< 0.8	9	38	< 0.8	30	6	51	14	< 1.5	<b>69</b>	< 1	29	33
		14426	5 - 10	< 0.8	<b>15</b>	32	< 0.8	21	4	<b>71</b>	9	< 1.5	<b>47</b>	< 1	26	22
		14427	10 - 20	< 0.8	8	31	< 0.8	21	5	18	7	< 1.5	41	< 1	24	23
Area B soil	5037273	14422	0 - 5	< 0.8	5	35	< 0.8	29	6	26	6	< 1.5	41	< 1	28	70
		14423	0 - 5	< 0.8	< 5	32	< 0.8	28	6	23	5	< 1.5	35	< 1	29	29
Area C gravel	5037274	14424	0 - 5	< 0.8	7	34	< 0.8	32	15	45	6	< 1.5	<b>56</b>	< 1	33	29
		14425	0 - 5	< 0.8	6	34	< 0.8	32	15	<b>61</b>	6	< 1.5	<b>61</b>	< 1	31	30
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

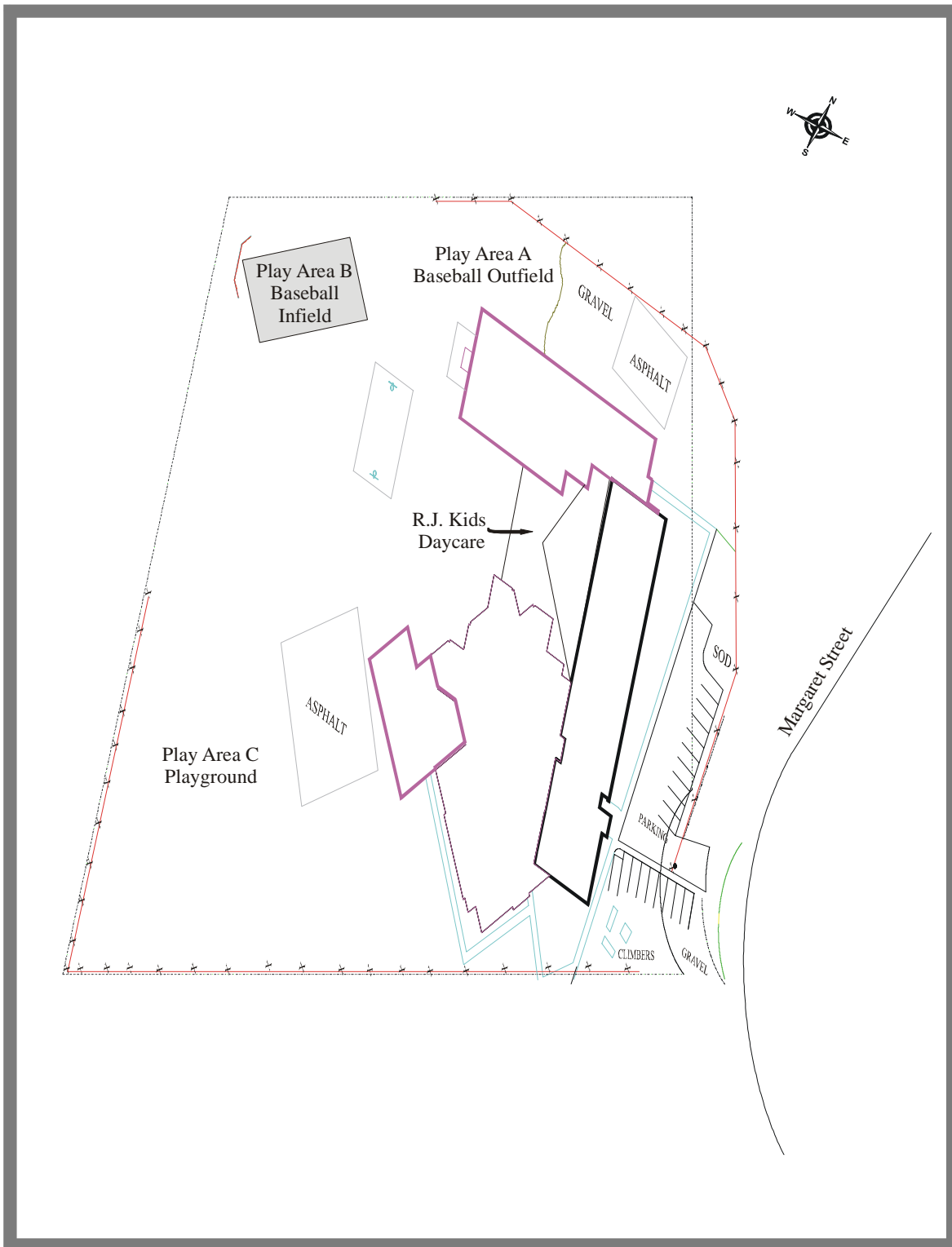


Figure B2.1.34: Robert Jack Public School Sampling Locations - 2001.



### 2.1.35 Sudbury Secondary School - Rainbow District School Board 85 Mackenzie Street, Sudbury

Sudbury Secondary School was sampled on July 16, 2001. Figure B2.1.35 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the east and west goal posts, respectively. Due to the compacted nature of Areas B and C, it was only possible to sample the surface soil (0 - 5 cm) layer. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all sites sampled on this property. The highest nickel and copper concentrations, 170 and 150 ppm, respectively, were found in the surface soil (0-5 cm) layer of the soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There was one exceedence of the MOE Table A Effects Based Soil Criteria for nickel at this property.

These nickel and copper results are lower those reported historically. Previous MOE sampling of undisturbed soils approximately 0.8 km northwest of Sudbury Secondary School, Station 84 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 490 and 520 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037131	14249	0 - 5	< 0.8	6	43	0.8	34	9	<b>150</b>	29	< 1.5	<u><b>170</b></u>	1	30	40
		14250	0 - 5	< 0.8	7	37	< 0.8	30	8	<b>110</b>	21	< 1.5	<b>130</b>	< 1	28	32
		14251	5 - 10	< 0.8	6	36	< 0.8	32	7	<b>62</b>	13	< 1.5	<b>76</b>	< 1	33	27
		14252	5 - 10	< 0.8	7	37	< 0.8	32	7	<b>73</b>	19	< 1.5	<b>92</b>	< 1	31	29
		14253	10 - 20	< 0.8	5	42	< 0.8	33	8	<b>97</b>	20	< 1.5	<b>110</b>	< 1	33	30
		14254	10 - 20	< 0.8	< 5	37	< 0.8	33	8	<b>76</b>	22	< 1.5	<b>98</b>	< 1	31	31
Area B soil	5037132	14255	0 - 5	< 0.8	6	39	< 0.8	32	8	<b>85</b>	16	< 1.5	<b>100</b>	< 1	33	31
Area C soil	5037133	14256	0 - 5	< 0.8	7	42	< 0.8	37	7	<b>65</b>	19	< 1.5	<b>86</b>	< 1	37	31
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

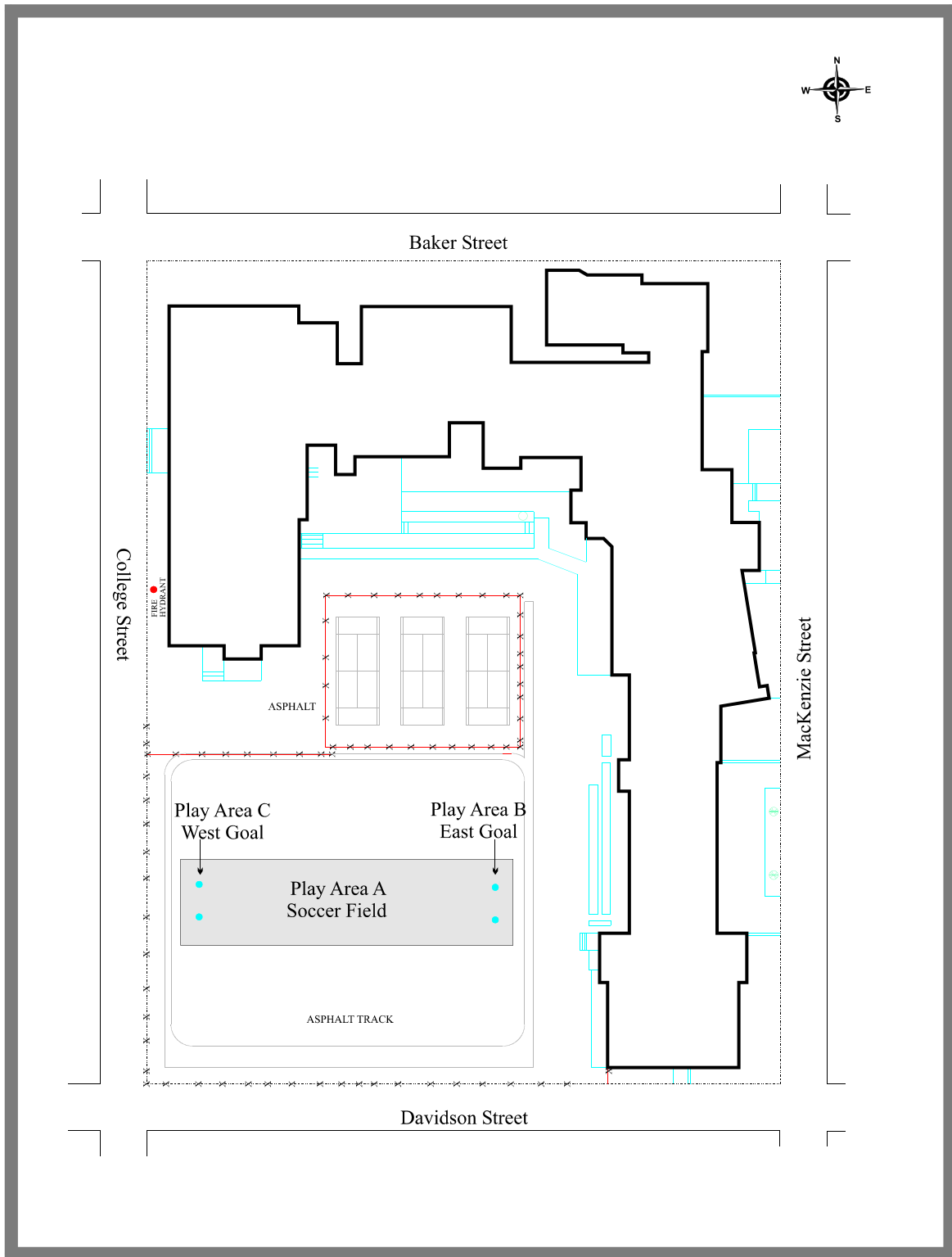


Figure B2.1.35: Sudbury Secondary School Sampling Locations - 2001.

### 2.1.36 Val Caron Public School - Rainbow District School Board 1555 Main Street East, Val Caron

Val Caron Public School was sampled on July 23, 2001. Figure B2.1.36 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area on the east side of the school building. Area B corresponds to sand samples collected from beneath the play structures. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples collected from the grassed area (Area A) of this property. The highest nickel concentration, 62 ppm, was found in the surface soil (0-5 cm) layer of the grassed play area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel results are lower those reported historically. Previous MOE sampling of undisturbed soils approximately 1.8 km south of Val Caron Public School, Station 340 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration of 140 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.1.36:** Concentration of 13 Elements in Soil in µg/g Collected at Val Caron Public School, 1555 Main Street East, Val Caron - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037286	14778	0 - 5	< 0.8	< 5	46	< 0.8	36	7	47	16	< 1.5	<b>62</b>	< 1	34	43
		14779	0 - 5	< 0.8	< 5	48	< 0.8	37	7	42	14	< 1.5	<b>55</b>	< 1	35	37
		14780	5 - 10	< 0.8	< 5	44	< 0.8	35	6	42	14	< 1.5	<b>58</b>	< 1	32	41
		14781	5 - 10	< 0.8	< 5	46	< 0.8	38	7	41	15	< 1.5	<b>56</b>	< 1	35	43
		14782	10 - 20	< 0.8	< 5	36	< 0.8	28	5	42	12	< 1.5	<b>57</b>	< 1	27	26
		14783	10 - 20	< 0.8	< 5	40	< 0.8	35	6	45	12	< 1.5	<b>52</b>	< 1	33	39
Area B sand	5037287	14784	0 - 15	< 0.8	< 5	21	< 0.8	23	5	11	2	< 1.5	17	< 1	25	18
		14785	0 - 15	< 0.8	< 5	18	< 0.8	23	5	12	2	< 1.5	17	< 1	29	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

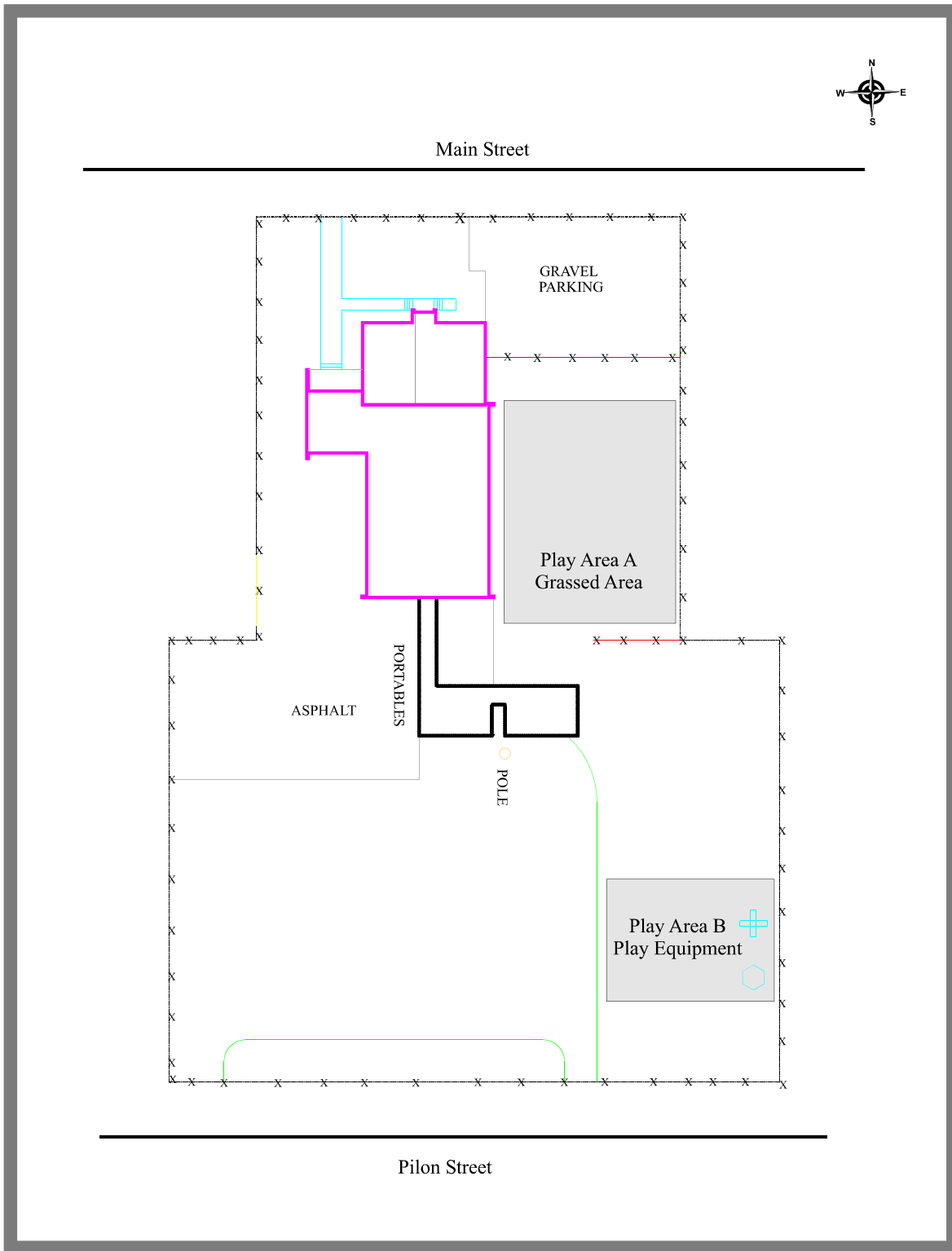


Figure B2.1.36: Val Caron Public School Sampling Locations - 2001.

### 2.1.37 Valleyview Public School - Rainbow District School Board 1840 Valley View Road, Val Caron

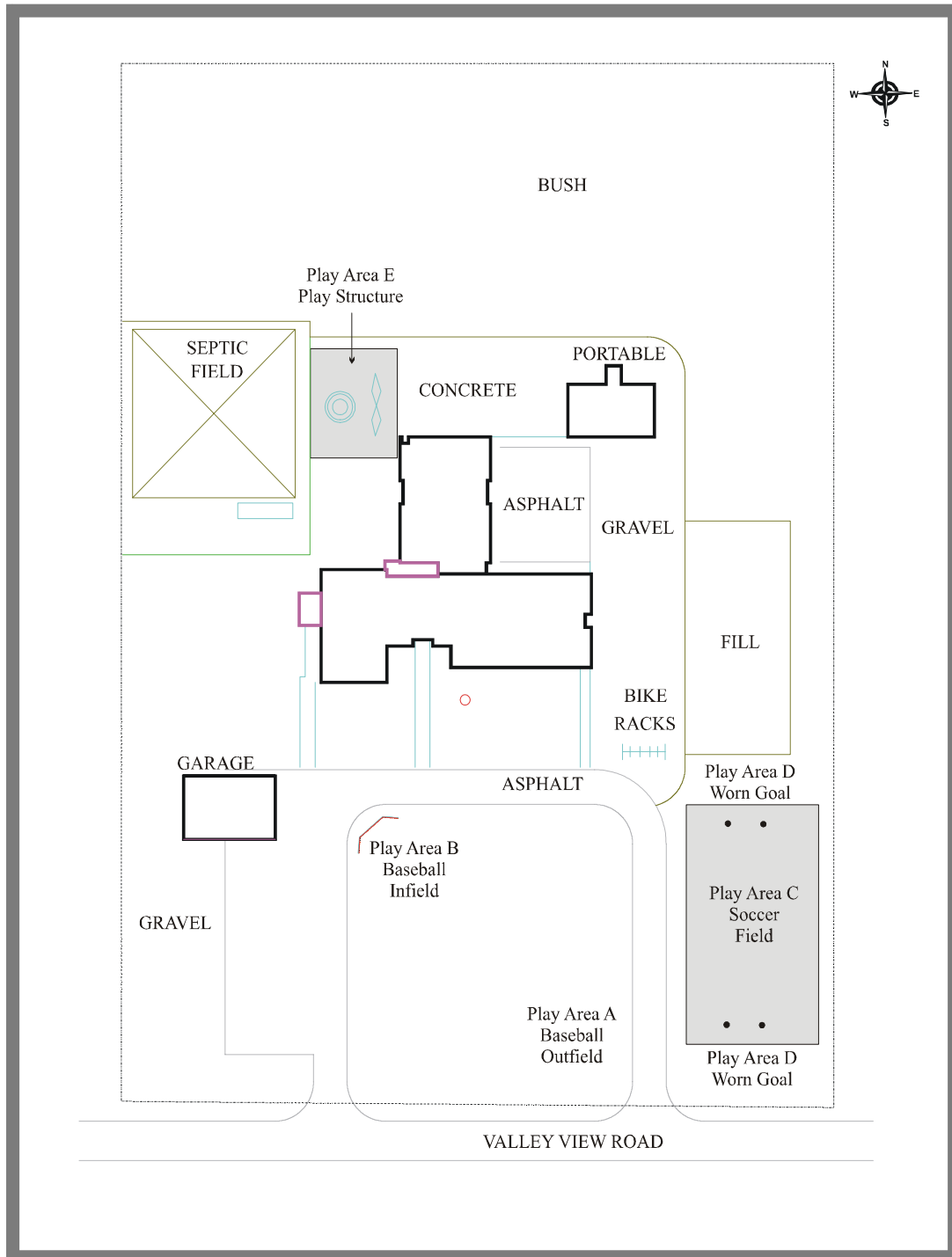
Valleyview Public School was sampled on July 23, 2001. Figure B2.1.37 details the sampling locations at this property. Samples were taken from five areas on the school property. Areas A and B correspond to the grassed area of the baseball diamond outfield and surface soil of the baseball diamond infield, respectively. Areas C and D correspond to the grassed area of the soccer field and the worn areas around the goal posts, respectively. Due to the compacted nature of Areas A, B, C, and D, it was only possible to sample to depth for one replicate of the baseball diamond outfield and the surface soil (0 - 5 cm) layer of the baseball diamond infield and soccer field. Area E corresponds to sand samples that were taken below the play structure on the north side of the school building. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples collected from the baseball diamond and soccer field. Copper (Cu) concentrations were also elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the baseball diamond infield and grassed area of the soccer field. The highest nickel and copper concentrations, 120 and 91 ppm, respectively, were found in the surface soil (0-5 cm) layer of the grassed soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037281	14826	0 - 5	< 0.8	< 5	45	< 0.8	37	7	48	14	< 1.5	<b>65</b>	< 1	36	31
		14827	0 - 5	< 0.8	< 5	43	< 0.8	37	7	46	14	< 1.5	<b>64</b>	< 1	34	31
		14828	5 - 10	< 0.8	< 5	42	< 0.8	37	7	38	12	< 1.5	<b>59</b>	< 1	33	29
		14829	10 - 20	< 0.8	< 5	39	< 0.8	35	7	31	10	< 1.5	<b>57</b>	< 1	35	28
Area B soil	5037282	14832	0 - 5	< 0.8	< 5	51	< 0.8	40	12	<b>76</b>	9	< 1.5	<b>110</b>	< 1	43	38
		14833	0 - 5	< 0.8	< 5	50	< 0.8	41	11	<b>59</b>	10	< 1.5	<b>55</b>	< 1	41	38
Area C grass	5037283	14834	0 - 5	< 0.8	< 5	53	< 0.8	40	10	<b>90</b>	21	< 1.5	<b>120</b>	1.2	32	51
		14835	0 - 5	< 0.8	< 5	54	< 0.8	41	9	<b>91</b>	22	< 1.5	<b>120</b>	1.2	33	56
Area D soil	5037284	14836	0 - 5	< 0.8	< 5	45	< 0.8	36	6	47	11	< 1.5	<b>71</b>	< 1	30	43
Area E sand	5037285	14837	0 - 15	< 0.8	< 5	23	< 0.8	25	6	13	2	< 1.5	23	< 1	31	17
		14838	0 - 15	< 0.8	< 5	20	< 0.8	23	5	12	2	< 1.5	20	< 1	22	16
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These nickel and copper results are similar to those reported historically. Previous MOE sampling

of undisturbed soils approximately 0.7 km southeast of Valleyview Public School, Station 340 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 140 and 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.1.37:** Valley View Public School Sampling Locations - 2001

### 2.1.38 Wanup Public School - Rainbow District School Board 4543 Highway 537, Sudbury

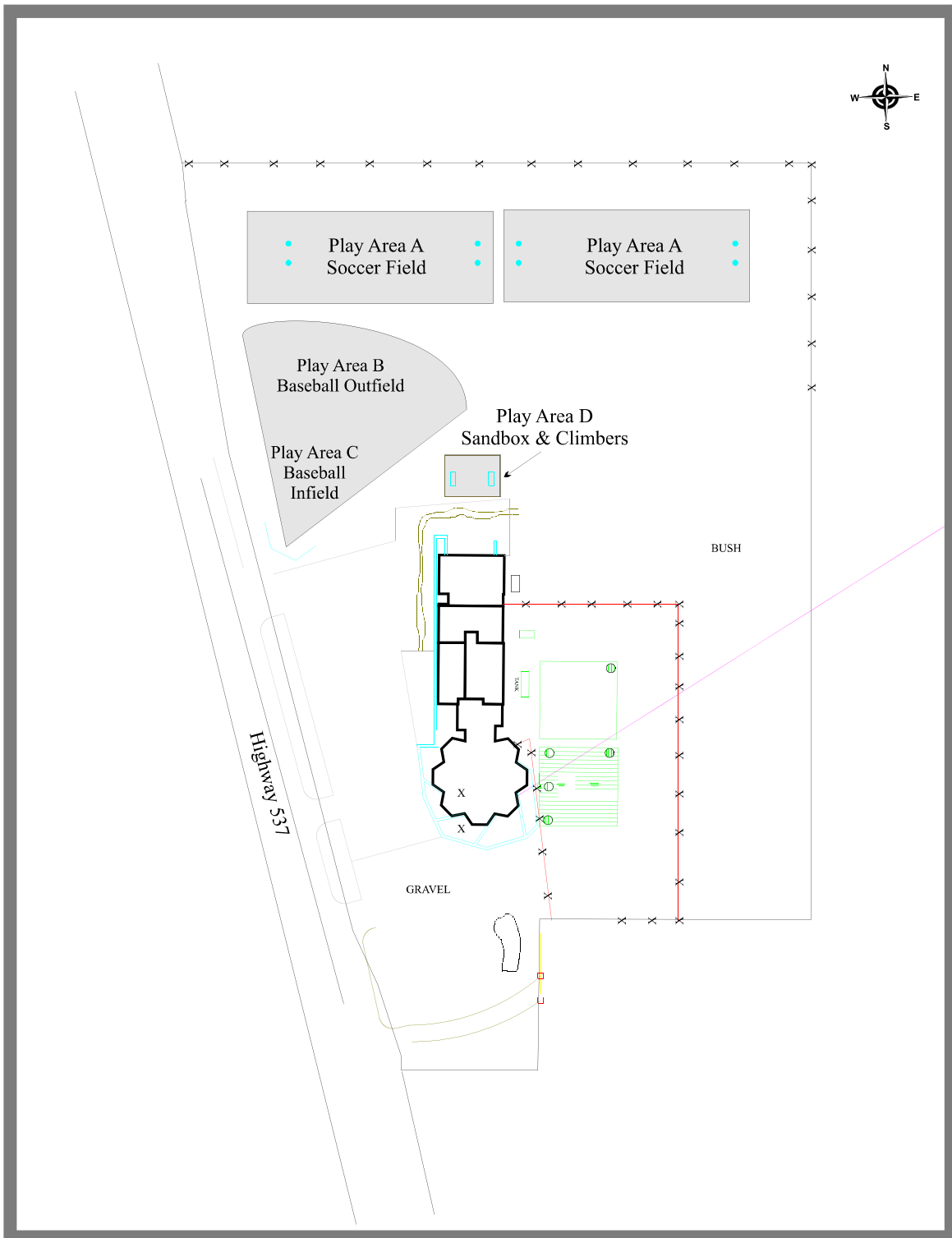
Wanup Public School was sampled on July 6, 2001. Figure B2.1.38 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to the grassed area of both soccer fields. Areas B and C correspond to the grassed baseball diamond outfield and soil baseball diamond infield, respectively. Due to the compacted nature of Area C, it was only possible to sample the surface soil (0 - 5 cm) layer. Area D corresponds to the sand samples that were taken from the sanded play area. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand box. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other sites sampled on this property. Copper (Cu) was elevated above the MOE Table F Ontario Soil Background Criteria for one sample only. The highest nickel concentrations, 66 ppm, were found in the surface soil (0-5 cm) layer of the baseball diamond outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria for nickel at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037002	14223	0 - 5	< 0.8	< 5	30	< 0.8	21	5	56	13	< 1.5	<b>65</b>	< 1	23	22
		14224	0 - 5	< 0.8	< 5	29	< 0.8	22	5	<b>58</b>	12	< 1.5	<b>59</b>	< 1	25	25
		14225	5 - 10	< 0.8	< 5	32	< 0.8	20	4	45	9	< 1.5	<b>58</b>	< 1	24	24
		14226	5 - 10	< 0.8	< 5	32	< 0.8	22	5	45	9	< 1.5	<b>64</b>	< 1	25	25
		14227	10 - 20	< 0.8	< 5	32	< 0.8	21	4	34	7	< 1.5	<b>56</b>	< 1	24	24
		14228	10 - 20	< 0.8	< 5	29	< 0.8	20	4	24	6	< 1.5	<b>48</b>	< 1	22	21
Area B grass	5037003	14229	0 - 5	< 0.8	< 5	35	< 0.8	25	5	51	13	< 1.5	<b>66</b>	< 1	28	23
		14230	0 - 5	< 0.8	< 5	36	< 0.8	24	5	53	12	< 1.5	<b>66</b>	< 1	28	24
		14231	5 - 10	< 0.8	< 5	36	< 0.8	24	4	41	9	< 1.5	<b>53</b>	< 1	29	25
		14232	5 - 10	< 0.8	< 5	33	< 0.8	23	4	38	8	< 1.5	<b>50</b>	< 1	28	25
		14233	10 - 20	< 0.8	< 5	38	< 0.8	24	4	32	7	< 1.5	<b>48</b>	< 1	28	25
		14234	10 - 20	< 0.8	< 5	34	< 0.8	25	4	25	6	< 1.5	<b>44</b>	< 1	28	24
Area C soil	5037004	14235	0 - 5	< 0.8	< 5	36	< 0.8	30	9	27	4	< 1.5	27	< 1	31	27
		14236	0 - 5	< 0.8	< 5	34	< 0.8	36	9	38	4	< 1.5	<b>55</b>	< 1	34	24
Area D sand	5037005	14237	0 - 15	< 0.8	< 5	23	< 0.8	33	7	19	3	< 1.5	21	< 1	33	24
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These nickel results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south of Wanup Public School, Station 58 of the MOE

Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel surface soil concentrations from 31 to 130 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.1.38:** Wanup Public School Sampling Locations - 2001.



### 2.1.39 Wembley Public School - Rainbow District School Board 408 Wembley Drive, Sudbury

Wembley Public School was sampled on July 5, 2001. Figure B2.1.39 details the sampling locations at this property. Samples were taken from six areas on the school property. Areas A, B, and C correspond to the grassed area of the soccer field and the worn areas around the northeast and southwest soccer goal posts, respectively. Area D corresponds to the north baseball diamond infield. Due to the compacted nature of Areas A, B, C, and D, it was only possible to sample the surface soil (0 - 5 cm) layer. Areas E and F correspond to the sand samples collected from the sanded play areas on the northwest and southeast corners of the property, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other samples collected from this property. Aside from the northeast soccer goal post, copper (Cu) concentrations were also elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of all other samples from this property. The highest nickel and copper concentrations, 180 and 160 ppm, respectively, were found in the surface soil (0-5 cm) layer of the grassed soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There was one exceedence of the MOE Table A Effects Based Soil Criteria for nickel at this property.

**Table B2.1.39:** Concentration of 13 Elements in Soil in µg/g Collected at Wembley Public School, 408 Wembley Drive, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037077	14159	0 - 5	< 0.8	< 5	37	< 0.8	31	16	<b>160</b>	16	< 1.5	<u>180</u>	1	26	37
		14160	0 - 5	< 0.8	< 5	33	< 0.8	29	7	<b>81</b>	11	< 1.5	<b>88</b>	1	27	30
Area B soil	5037078	14161	0 - 5	< 0.8	< 5	30	< 0.8	30	5	41	8	< 1.5	<b>60</b>	< 1	29	22
Area C soil	5037079	14162	0 - 5	< 0.8	< 5	34	< 0.8	29	8	<b>120</b>	16	< 1.5	<b>130</b>	1	27	40
Area D soil	5037080	14163	0 - 5	< 0.8	< 5	27	< 0.8	25	9	<b>66</b>	7	< 1.5	<b>63</b>	< 1	27	20
Area E sand	5037081	14164	0 - 15	< 0.8	< 5	19	< 0.8	28	7	24	3	< 1.5	29	< 1	29	18
Area F sand	5037082	14165	0 - 15	< 0.8	< 5	21	< 0.8	30	7	35	4	< 1.5	43	< 1	33	23
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southeast of Wembley Public School, Station 74 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 790 and 740 ppm, respectively. Historic MOE

sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

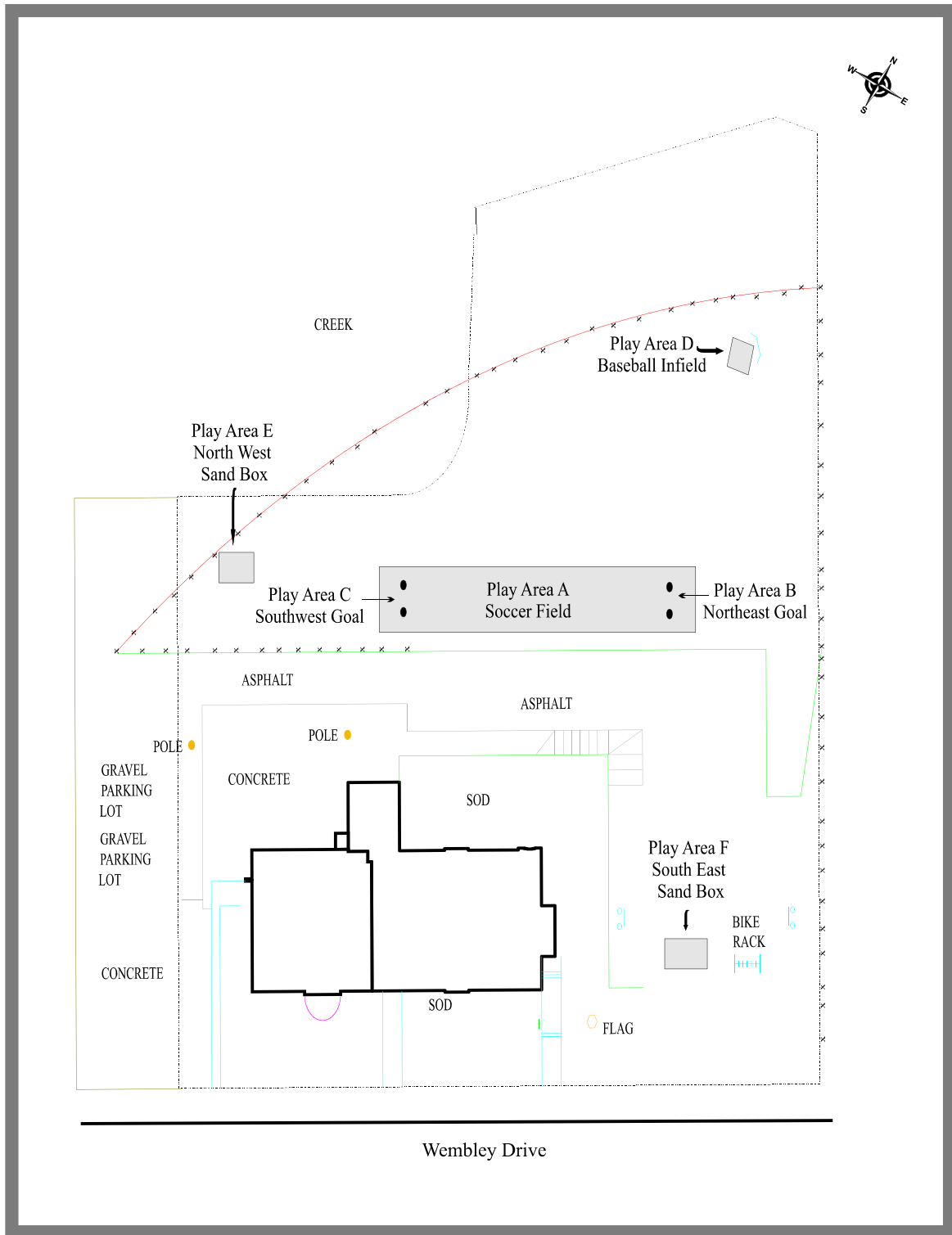


Figure B2.1.39: Wembley Public School Sampling Locations - 2001

### **2.1.40 Westmount Avenue Public School - Rainbow District School Board**

#### **511 Westmount Avenue, Sudbury**

Westmount Avenue Public School was sampled on July 17, 2001. Figure B2.1.40 details the sampling locations at this property. Samples were taken from seven areas on the school property. Area A corresponds to the grassed play area in the southeast corner of the school property. Areas B, E, and G correspond to sand samples collected from the sanded play area on the south side of the property, from beneath the play structures in the northwest corner of the school property, and from beneath the swing set on the north end of the property, respectively. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Areas C and D correspond to the gravel baseball diamond infield and grassed baseball diamond outfield, respectively. Area F corresponds to the grassed area of the soccer field. Due to the compacted nature of Areas C, D, and F, it was only possible to sample the surface soil (0 - 5 cm) layer of the baseball diamond and the 10 - 20 cm depth for one replicate of the soccer field. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria at selected sites from this property. The highest nickel and copper concentrations, 130 and 110 ppm, respectively, were found in the surface soil (0-5 cm) layer of the grassed baseball diamond outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are higher than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km southeast of Westmount Avenue Public School, Station 361 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 66 and 52 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.1.40:</b> Concentration of 13 Elements in Soil in $\mu\text{g/g}$ Collected at Westmount Avenue Public School, 511 Westmount Avenue, Sudbury - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037174	14311	0 - 5	< 0.8	6	32	< 0.8	29	7	<b>70</b>	15	< 1.5	<b>81</b>	< 1	29	25
		14312	0 - 5	< 0.8	7	30	< 0.8	27	6	<b>63</b>	13	< 1.5	<b>66</b>	< 1	28	25
		14313	5 - 10	< 0.8	6	25	< 0.8	27	6	36	7	< 1.5	<b>42</b>	< 1	30	21
		14314	5 - 10	< 0.8	6	30	< 0.8	27	7	41	8	< 1.5	<b>54</b>	< 1	29	22
		14315	10 - 20	< 0.8	6	30	< 0.8	25	5	25	5	< 1.5	38	< 1	30	16
		14316	10 - 20	< 0.8	9	43	< 0.8	30	7	40	8	< 1.5	<b>58</b>	< 1	34	22
Area B sand	5037175	14317	0 - 15	< 0.8	< 5	19	< 0.8	28	7	15	3	< 1.5	21	< 1	34	14
Area C gravel	5037176	14318	0 - 5	0.8	6	38	< 0.8	29	9	<b>77</b>	13	< 1.5	<b>95</b>	< 1	28	27
		14319	0 - 5	< 0.8	7	33	< 0.8	28	10	<b>84</b>	13	< 1.5	<b>100</b>	< 1	28	29
Area D grass	5037177	14320	0 - 5	< 0.8	< 5	34	< 0.8	26	6	53	12	< 1.5	<b>66</b>	< 1	25	28
		14321	0 - 5	< 0.8	5	48	< 0.8	36	9	<b>110</b>	23	< 1.5	<b>130</b>	1	30	38
Area E sand	5037178	14322	0 - 15	< 0.8	5	28	< 0.8	30	9	35	4	< 1.5	34	1	36	23
		14324	0 - 15	< 0.8	6	28	< 0.8	31	9	34	4	< 1.5	31	< 1	35	25
Area F grass	5037179	14325	0 - 5	< 0.8	5	39	< 0.8	33	7	<b>71</b>	16	< 1.5	<b>86</b>	< 1	29	30
		14326	0 - 5	< 0.8	< 5	33	< 0.8	26	6	54	11	< 1.5	<b>68</b>	< 1	26	25
		14327	5 - 10	< 0.8	< 5	36	< 0.8	26	5	30	7	< 1.5	42	< 1	27	21
		14328	5 - 10	< 0.8	< 5	33	< 0.8	24	5	39	8	< 1.5	<b>50</b>	< 1	25	21
		14329	10 - 20	< 0.8	< 5	36	< 0.8	26	5	33	9	< 1.5	<b>49</b>	< 1	25	20
Area G sand	5037180	14331	0 - 15	< 0.8	6	29	< 0.8	28	9	42	5	< 1.5	37	< 1	32	22
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

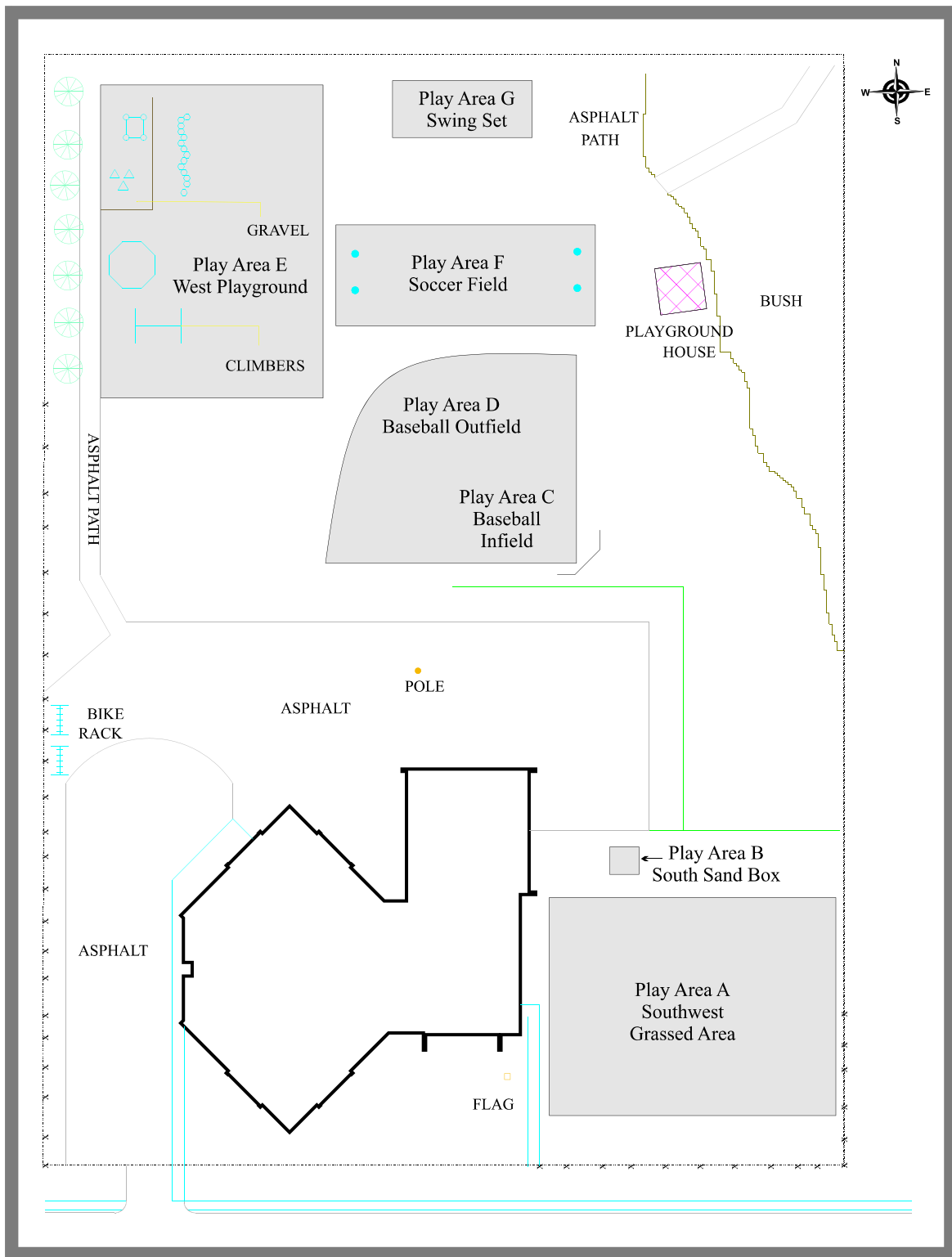


Figure B2.1.40: Westmount Avenue Public School Sampling Locations - 2001.

## 2.2 Sudbury Catholic District School Board

As of June 2001, the Sudbury Catholic District School Board provided the MOE with a list of 26 school properties. MOE representatives were able to collect samples from all but one property during the summer of 2001. St. Albert Adult Centre was paved; however, the St. Albert Child Care Centre at the same location did have one grassed child play area which was sampled and is discussed in the daycare section of this report. For each school there is a section below describing the results, a table with a subset of the results, and a map showing the sampling locations. The maps were provided by the Sudbury Catholic District School Board and the locations of the sampling sites shown are only approximate. The schools are listed alphabetically. Complete results for each school are listed in Table 4.1 along with the results from the other school boards.

**Table B2.2:** Number of Sudbury Catholic District Schools where at least on sample exceed MOE soil criteria.

Number of Schools	Nickel Exceedences		Copper Exceedences		Cobalt Exceedences		Arsenic Exceedences		Lead Exceedences	
	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A
26	23	5	4	2	4	0	0	0	1	0

In order to fit all of the results data onto one table the standard chemical abbreviations had to used. To interpret the tables properly, the chart below can be used to translate the abbreviations.

Chemical Symbols Used in Results Tables				
<b>Al</b> - aluminum	<b>Sb</b> - antimony	<b>As</b> - arsenic	<b>Ba</b> - barium	<b>Be</b> - beryllium
<b>Cd</b> - cadmium	<b>Ca</b> - calcium	<b>Cr</b> - chromium	<b>Co</b> - cobalt	<b>Cu</b> - copper
<b>Fe</b> - iron	<b>Pb</b> - lead	<b>Mg</b> - magnesium	<b>Mn</b> - manganese	<b>Mo</b> - molybdenum
<b>Ni</b> - nickel	<b>Se</b> - selenium	<b>Sr</b> - strontium	<b>V</b> - vanadium	<b>Zn</b> - zinc

Please note as of 2004, the Sudbury Catholic District School Board has closed St. Anthony (2.2.9) and St. Kevin (Bishop Alexander Carter Secondary School) (2.2.19) and has renamed St. Anne (2.2.8) Bishop Alexander Carter Secondary School. One school has also been purchased from Le Conseil Scolaire Catholique du Nouvel-Ontario, St. Michel (2.2.25) and has been renamed St. Anne.

### 2.2.1 Corpus Christi - Sudbury Catholic District School Board 811 Robinson Drive, Sudbury

Corpus Christi was sampled on July 4, 2001. Figure B2.2.1 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the baseball diamond infield and Area B correspond to the baseball diamond outfield. Due to the compacted nature of Areas A, and B it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil in all of the samples collected from this property. The highest nickel concentration, 74 ppm, occurred in the surface soil of the baseball diamond infield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north and 1 km southwest of Corpus Christi, Stations 73 and 368, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 490 and 400 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.2.1:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Corpus Christi, 811 Robinson Drive, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037039	14086	0 - 5	< 0.8	< 5	40	<0.8	34	7	50	10	< 1.5	<b>74</b>	< 1	31	34
		14087	0 - 5	< 0.8	< 5	42	<0.8	35	7	48	11	< 1.5	<b>71</b>	< 1	32	37
Area B gravel	5037040	14088	0 - 5	< 0.8	< 5	43	<0.8	36	7	49	11	< 1.5	<b>71</b>	< 1	34	40
		14089	0 - 5	< 0.8	< 5	41	<0.8	35	7	46	10	< 1.5	<b>67</b>	< 1	31	32
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

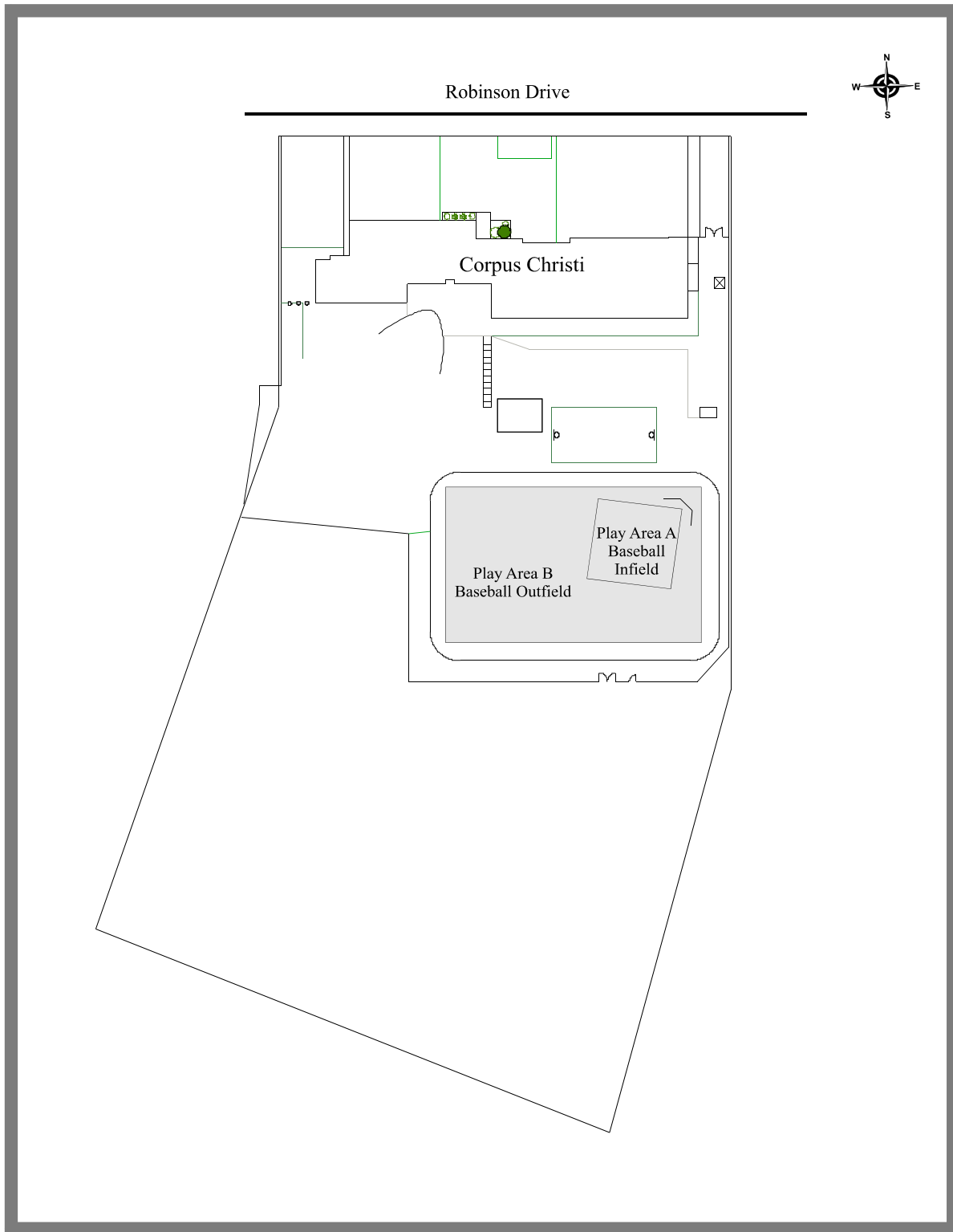


Figure B2.2.1: Corpus Christi Sampling Locations - 2001.



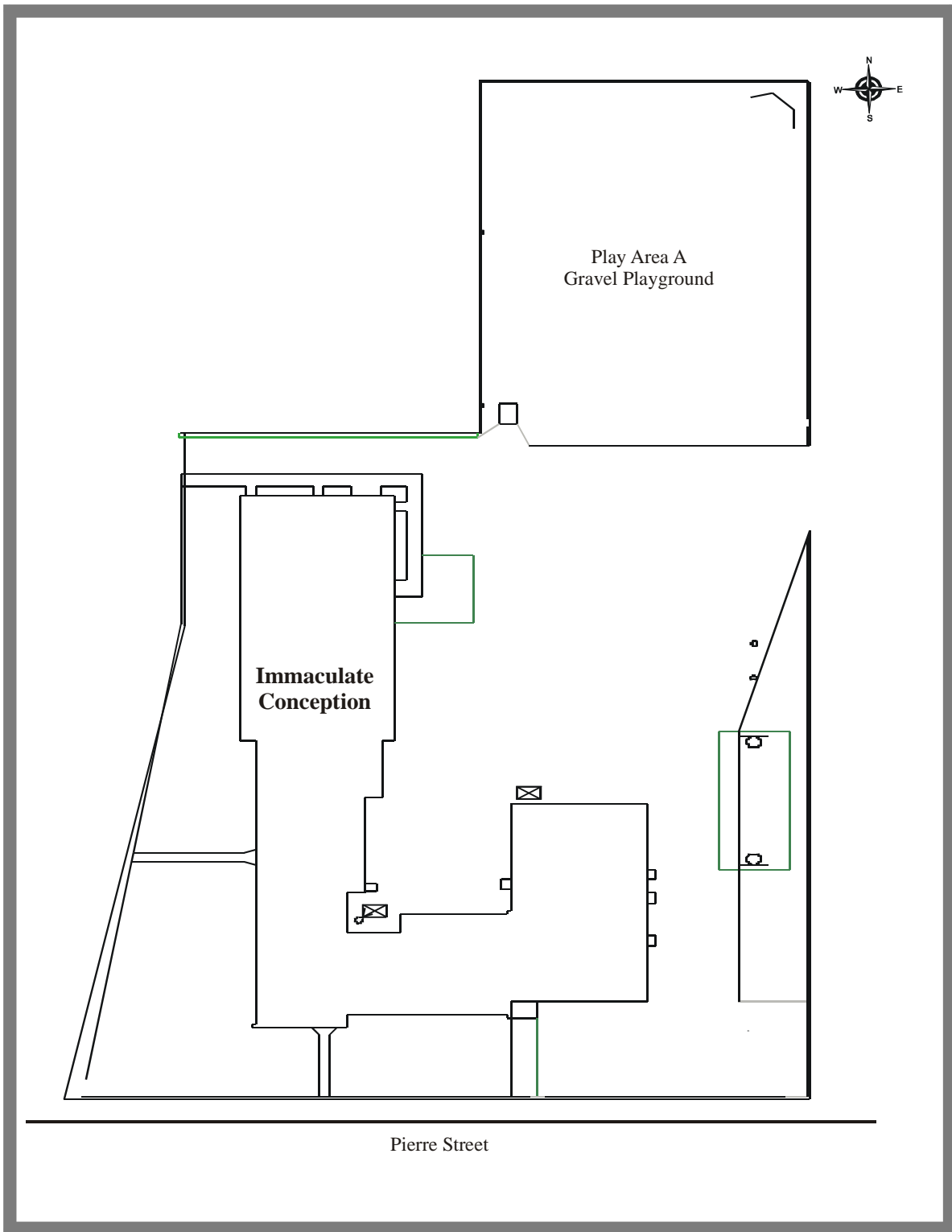
### 2.2.2 Immaculate Conception - Sudbury Catholic District School Board 1748 Pierre Street, Val Caron

Immaculate Conception was sampled on July 23, 2001. Figure B2.2.2 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground behind the school building. Due to the constant mixing of the gravel and the homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm layer. There were not any other play areas present on this property to sample. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both gravel samples. The highest nickel and copper concentrations found were 79 and 84 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northwest and 2 km south of Immaculate Conception School, Stations 15 and 340, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 140 and 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037293	14786	0 - 5	< 0.8	6	38	< 0.8	39	9	<b>84</b>	16	1.6	<b>79</b>	1	38	53
		14787	0 - 5	< 0.8	< 5	34	< 0.8	40	9	<b>70</b>	12	< 1.5	<b>67</b>	< 1	39	43
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.2:** Immaculate Conception Sampling Locations - 2001.

### 2.2.3 Marymount Academy - Sudbury Catholic District School Board 165 D'Youville Street, Sudbury

Marymount Academy was sampled on July 16, 2001. Figure B2.2.3 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the grassed area surrounding the picnic tables on the front lawn of the school. Due to the compacted nature of this grassed area, it was only possible to sample the 5 - 10 cm depth for one replicate. There were not any other play areas present on this property to be sampled. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), lead (Pb), cadmium (Cd), and selenium (Se) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the grassed play area. Nickel and copper concentrations were also elevated above the MOE Table A Effects Based Soil Criteria in the surface soil samples. The highest nickel, copper, lead, cadmium, and selenium concentrations found in the surface soil were 660, 510, 70, 1.3, and 4 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

The nickel, copper, and selenium soil results are similar to those reported historically, whereas the lead concentrations are higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1 km northwest, and 1.75 km southwest of Marymount Academy, Stations 84, and 378, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 230 to 490, and 180 to 520 ppm, respectively. The highest surface soil selenium and lead concentrations previously reported for Station 84 were 3.5 ppm and 35 ppm, respectively. The highest surface soil cadmium concentration previously reported for Station 378 was 0.35 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037134	14246	0 - 5	< 0.8	14	53	<b>1.3</b>	26	22	<b>500</b>	<b>70</b>	< 1.5	<b>510</b>	<b>3</b>	28	50
		14247	0 - 5	< 0.8	14	51	<b>1.3</b>	26	28	<b>510</b>	<b>65</b>	< 1.5	<b>660</b>	<b>4</b>	28	52
		14248	5 - 10	< 0.8	10	31	< 0.8	18	8	<b>150</b>	30	< 1.5	<b>160</b>	< 1	23	37
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

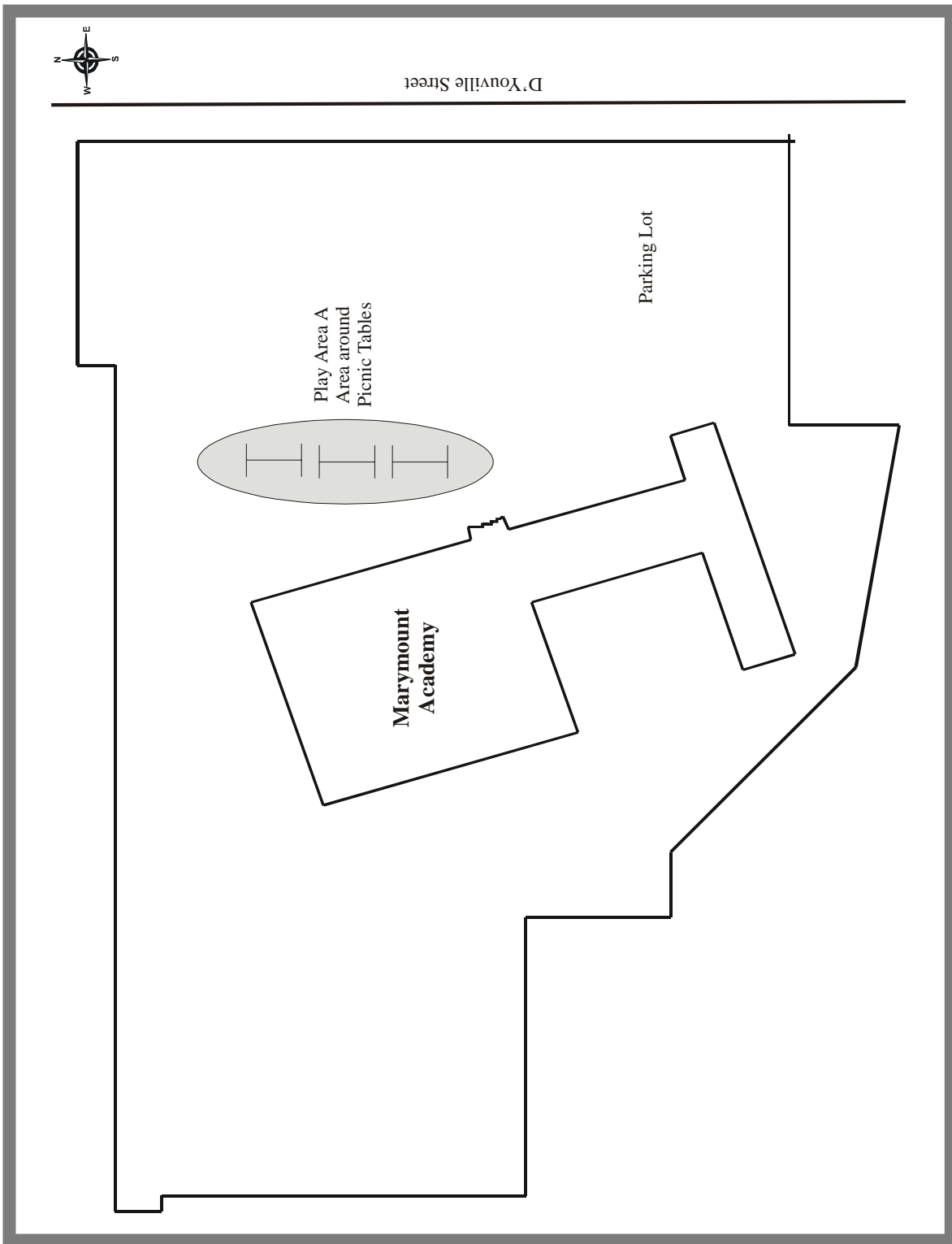


Figure B2.2.3: Marymount Academy Sampling Locations - 2001.

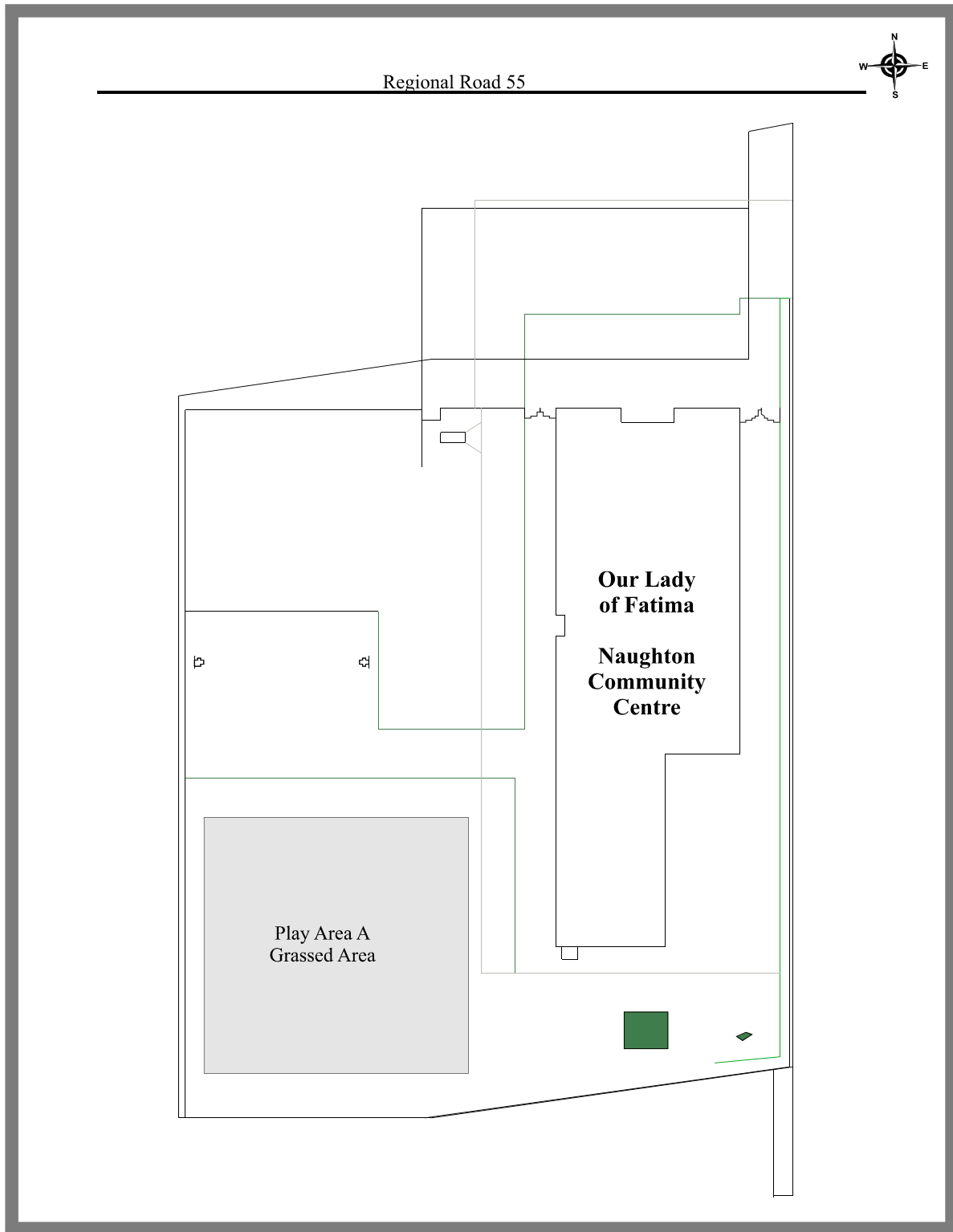
## 2.2.4 Our Lady of Fatima - Sudbury Catholic District School Board 1755 R.R. 55, Naughton

Our Lady of Fatima was sampled on July 21, 2001. Figure B2.2.4 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the grassed soccer field on the south side of the property. There were not any other play areas on this property to sample. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil (0-5 cm) and the 5-10 cm depth of the grassed soccer field. The nickel concentrations were higher in the surface soil and decreased with increasing depth. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.7 km northeast and 2.5 km northeast of Our Lady of Fatima, Stations 403 and 379, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 230 and 250 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037262	14738	0 - 5	< 0.8	< 5	29	< 0.8	23	5	45	14	< 1.5	<b>71</b>	< 1	23	25
		14739	0 - 5	< 0.8	< 5	29	< 0.8	23	5	44	12	< 1.5	<b>68</b>	< 1	23	25
		14740	5 - 10	< 0.8	6	29	< 0.8	22	5	35	8	< 1.5	<b>55</b>	< 1	23	27
		14741	5 - 10	< 0.8	< 5	27	< 0.8	22	4	37	8	< 1.5	<b>50</b>	< 1	21	25
		14742	10 - 20	< 0.8	< 5	28	< 0.8	21	4	21	5	< 1.5	36	< 1	21	22
		14743	10 - 20	< 0.8	< 5	29	< 0.8	20	4	18	5	< 1.5	33	< 1	21	23
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.4:** Our Lady of Fatima Sampling Locations - 2001.

### 2.2.5 Pius XII - Sudbury Catholic District School Board 44 3<sup>rd</sup> Avenue, Sudbury

Pius XII was sampled on July 17, 2001. Figure B2.2.5 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the south side of the property. Due to the constant mixing of gravel and the homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample on this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel concentrations were slightly elevated above the MOE Table F Ontario Soil Background Criteria in both the gravel playground samples. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.7 km west, and 1.5 km southwest of Pius XII, Stations 77, and 78, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 360 and 350 ppm, respectively. However, nickel and copper concentrations found at historical Station 361, 1.5 km north of Pius XII, are similar to those found at Pius XII. The highest nickel and copper concentrations reported were 66 and 52 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037148	14297	0 - 5	< 0.8	< 5	35	< 0.8	32	11	52	8	< 1.5	<b>59</b>	< 1	30	28
		14298	0 - 5	< 0.8	< 5	33	< 0.8	33	9	51	7	< 1.5	<b>53</b>	< 1	31	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

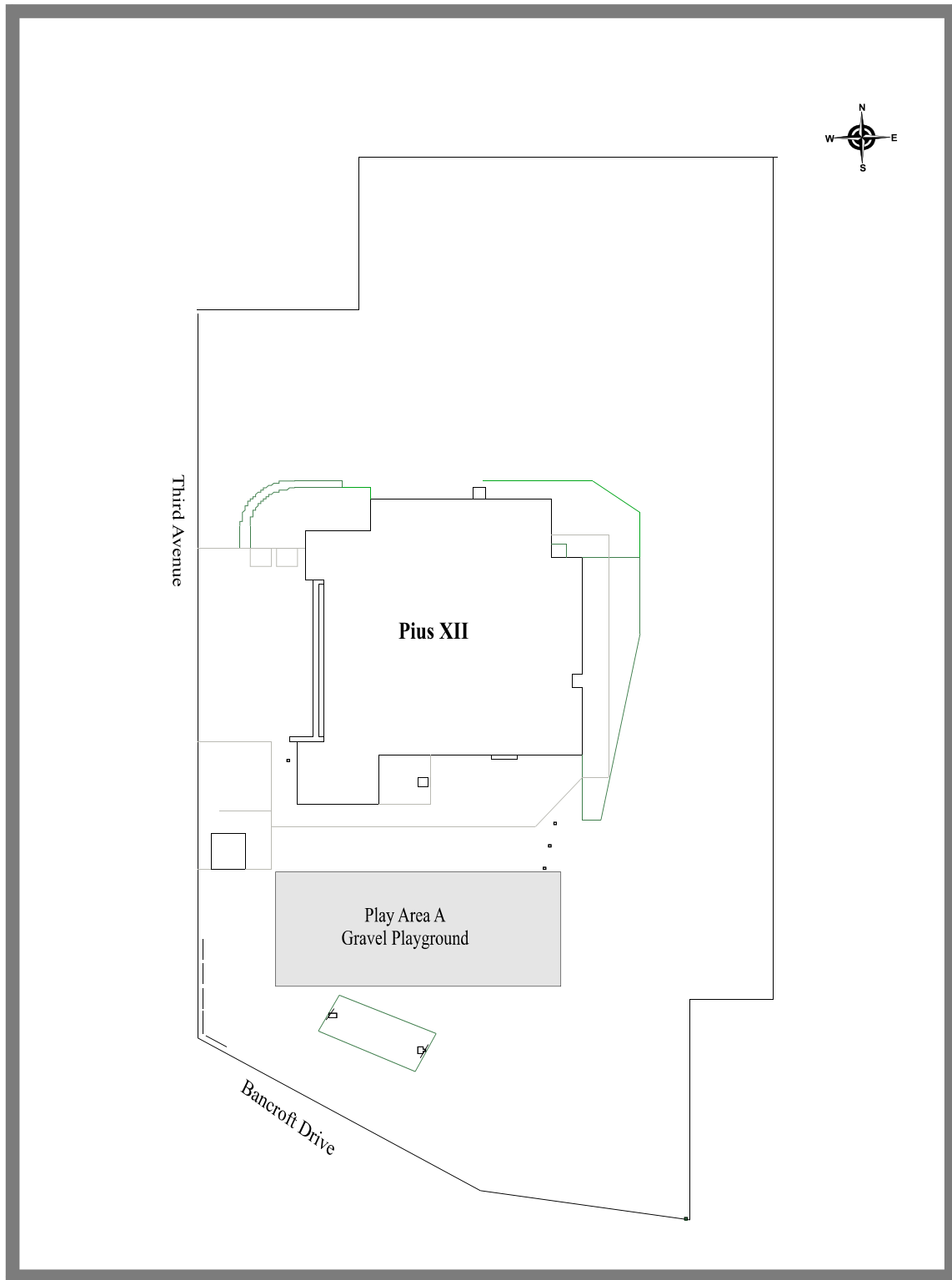


Figure B2.2.5: Pius XII Sampling Locations - 2001.



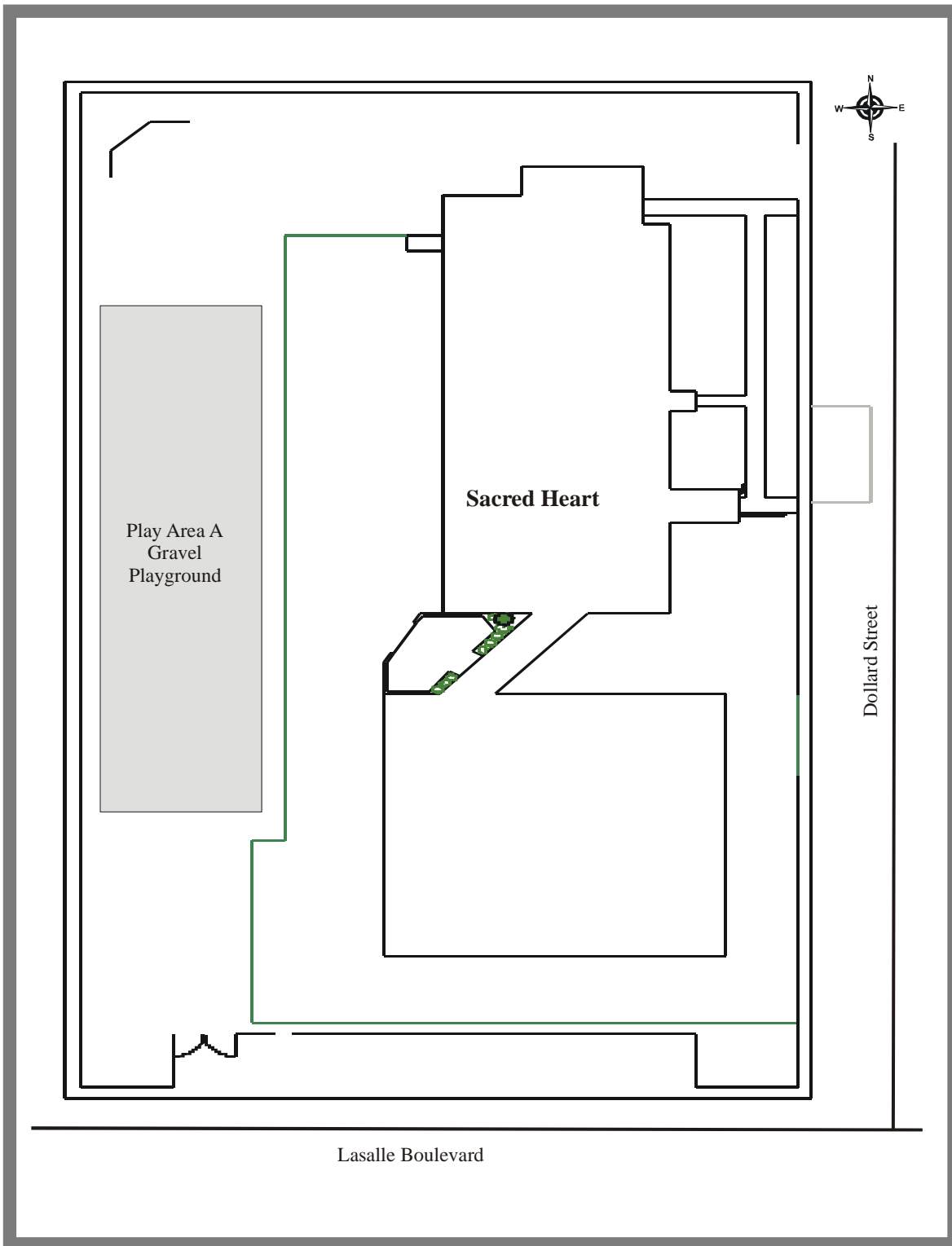
### 2.2.6 Sacred Heart - Sudbury Catholic District School Board 1169 Dollard Avenue, Sudbury

Sacred Heart was sampled on July 18, 2001 and has since been sold. Figure B2.2.6 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the west side of the school building. Due to the constant mixing of gravel and the homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample on this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel and copper concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both of the gravel samples. The highest nickel and copper concentrations found were 90 and 72 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northeast and 1 km northwest of formerly Sacred Heart School, Stations 42 and 43, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 190 and 210 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037219	14365	0 - 5	< 0.8	< 5	23	< 0.8	27	12	<b>62</b>	9	< 1.5	<b>76</b>	< 1	29	44
		14366	0 - 5	< 0.8	< 5	29	< 0.8	26	11	<b>72</b>	16	< 1.5	<b>90</b>	< 1	28	52
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.6:** Sacred Heart (formerly) Sampling Locations - 2001.

### 2.2.7 St. Andrew - Sudbury Catholic District School Board 1305 Holland Road, Sudbury

St. Andrew School was sampled on July 17, 2001. Figure B2.2.7 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel playground at the south side of the property. Area B corresponds to the sand samples taken from the sand boxes behind the school building. Due to the constant mixing of the sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect gravel samples to represent the 0-5 cm depth. Area C corresponds to the baseball diamond infield. Due to the compacted nature of Area C it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand boxes. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel and copper concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface layer of the both the gravel playground and the baseball diamond infield. Nickel concentrations were elevated above the MOE Table A Effects Based Soil Criteria in the surface samples collected from the baseball diamond infield. The highest nickel and copper concentrations found at this property were 170 and 160 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

Previous MOE sampling of undisturbed soils approximately 1 km east of St. Andrew School, Station 83 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations that are similar to those found on the school property; nickel and copper concentration ranges of 90 to 180 ppm and 74 to 210 ppm, respectively. However, Station 86, located approximately 1 km southwest of the Sacred Heart, indicated nickel and copper concentrations as high as 375 and 305 ppm, respectively.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037212	14341	0 - 5	< 0.8	< 5	27	< 0.8	28	10	<b>91</b>	12	< 1.5	<b>93</b>	< 1	30	30
		14342	0 - 5	< 0.8	< 5	24	< 0.8	30	11	<b>100</b>	15	< 1.5	<b>100</b>	< 1	30	36
Area B sand	5037213	14343	0 - 15	< 0.8	< 5	19	< 0.8	23	6	20	3	< 1.5	29	< 1	28	16
Area C soil	5037214	14344	0 - 5	< 0.8	8	44	< 0.8	33	15	<b>160</b>	20	< 1.5	<u><b>170</b></u>	< 1	39	40
		14345	0 - 5	< 0.8	8	42	< 0.8	32	16	<b>160</b>	20	< 1.5	<u><b>160</b></u>	< 1	32	38
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

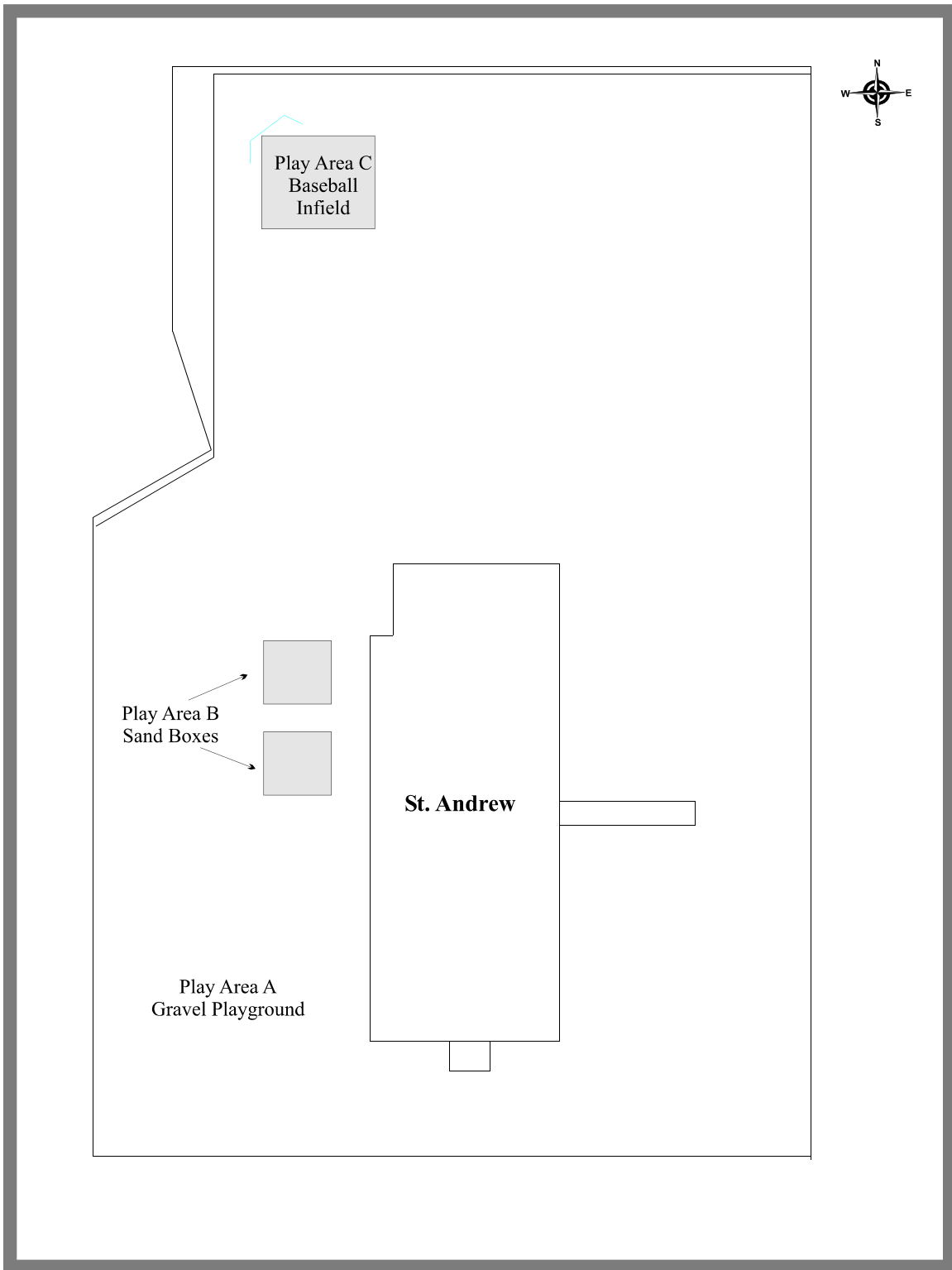


Figure B2.2.7: St. Andrew Sampling Locations - 2001.

### 2.2.8 St. Anne - Sudbury Catholic District School Board 539 Francis Street, Hanmer

St. Anne School was sampled on July 20, 2001 and has since been renamed Bishop Alexander Carter Secondary School. Figure B2.2.8 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to sand samples taken from the sanded play areas. Area B corresponds to the gravel playground at the south side of the property. Due to the constant mixing of the sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect gravel samples to represent the 0-5 cm depth. Areas C and D correspond to the baseball diamond infield and outfield, respectively. Due to the compacted nature of Areas C and D it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sanded play areas. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. None of the other samples from this property were found to have elevated metal concentrations above the MOE Table F Ontario Soil Background Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2.5 km southwest, 1.5 km north and 1 km southeast of St. Anne School, Stations 344, 346, and 347, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 43 to 150 ppm and 35 to 110 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.2.8:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at St. Anne, 539 Francis Street, Hanmer - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037347	14637	0 - 15	< 0.8	< 5	21	< 0.8	32	6	17	4	< 1.5	22	< 1	38	25
Area B gravel	5037348	14638	0 - 5	< 0.8	< 5	23	< 0.8	30	7	29	7	< 1.5	34	< 1	32	32
		14639	0 - 5	< 0.8	< 5	23	< 0.8	31	7	29	8	< 1.5	35	< 1	31	35
Area C gravel	5037349	14640	0 - 5	< 0.8	< 5	27	< 0.8	19	5	13	3	< 1.5	17	< 1	22	15
Area D grass	5037350	14641	0 - 5	< 0.8	< 5	32	< 0.8	25	4	22	7	< 1.5	33	< 1	25	30
		14642	0 - 5	< 0.8	< 5	34	< 0.8	27	5	26	8	< 1.5	37	< 1	29	34
		14643	5 - 10	< 0.8	< 5	32	< 0.8	26	5	20	7	< 1.5	32	< 1	27	23
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

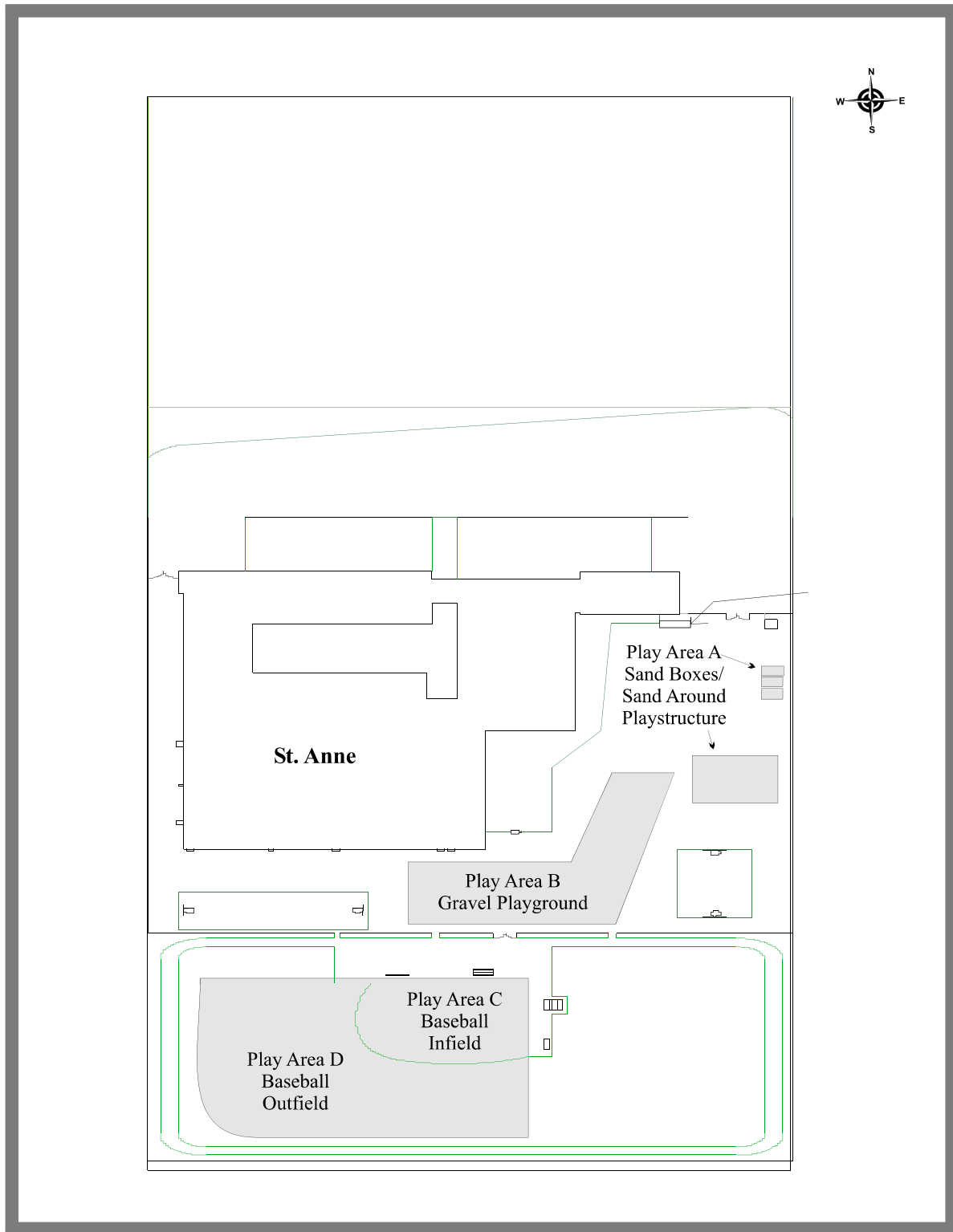


Figure B2.2.8: St. Anne Sampling Locations - 2001.

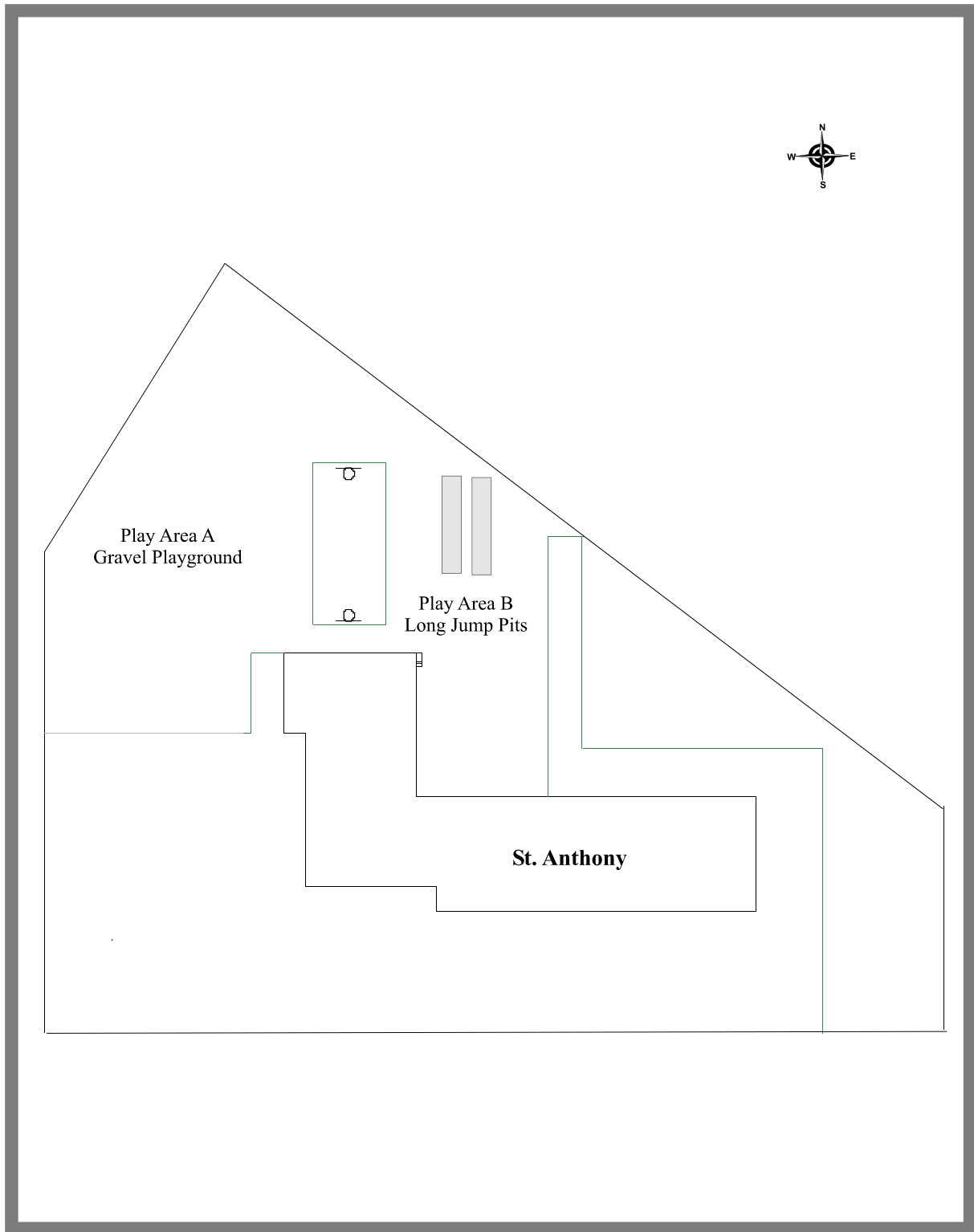
## 2.2.9 St. Anthony - Sudbury Catholic District School Board 11 Mary Street, Sudbury

St. Anthony was sampled on July 6, 2001 and has since been closed. Figure B2.2.9 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground on the north side of the school building. Area B corresponds to the sand collected from the landing area of the long jump pits. Due to the constant mixing of the sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), cobalt (Co), molybdenum (Mo), and selenium (Se) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in gravel and sand samples collected from this property. Nickel and copper concentrations were also elevated above the MOE Table A Effects Based Soil Criteria in the gravel playground samples. The highest nickel, and copper concentrations found in the gravel samples were 290 and 310 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

The nickel concentrations are similar to those reported historically, whereas the copper concentrations at this site are higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1.4 km northeast and 1.5 km north of St. Anthony, Stations 378 and 83, respectively, of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 90 to 250, and 74 to 210 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037103	14205	0 - 5	< 0.8	6	39	< 0.8	36	<b>20</b>	<b>310</b>	15	< 1.5	<b>290</b>	<b>2</b>	33	40
		14206	0 - 5	0.9	5	35	< 0.8	34	17	<b>270</b>	13	<b>4.3</b>	<b>260</b>	<b>1.6</b>	32	32
Area B sand	5037104	14207	0 - 15	< 0.8	6	29	< 0.8	40	11	<b>86</b>	6	< 1.5	<b>77</b>	< 1	42	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.9:** St. Anthony Sampling Locations - 2001.



### 2.2.10 St. Benedict Secondary School - Sudbury Catholic School Board 2993 Algonquin Road, Sudbury

St. Benedict Secondary School, including Maple Tree Preschool Inc. #2, was sampled on July 4, 2001. Figure B2.2.10 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the north and south goal posts, respectively. Due to the compacted nature of the soccer field, it was only possible to sample the surface soil (0 - 5 cm) layer. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Only one sample from the grassed area of the soccer field had a nickel (Ni) concentration that was slightly elevated above the MOE Table F Ontario Soil Background Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria (MOE 1997).

These results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km west, 2 km southwest, and 2 km north of St. Benedict Secondary School, Stations 404, 366, and 365, respectively, of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration range of 120 to 170 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037023	14058	0 - 5	< 0.8	< 5	32	< 0.8	29	6	29	7	< 1.5	<b>46</b>	< 1	29	19
		14059	0 - 5	< 0.8	< 5	29	< 0.8	25	5	26	6	< 1.5	40	< 1	23	17
Area B soil	5037024	14060	0 - 5	< 0.8	< 5	29	< 0.8	22	4	25	7	< 1.5	30	< 1	24	17
		14061	0 - 5	< 0.8	< 5	28	< 0.8	22	4	19	7	< 1.5	31	< 1	24	15
Area C soil	5037025	14062	0 - 5	< 0.8	< 5	32	< 0.8	28	6	25	4	< 1.5	40	< 1	30	16
		14063	0 - 5	< 0.8	< 5	36	< 0.8	30	6	24	4	< 1.5	39	< 1	33	16
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

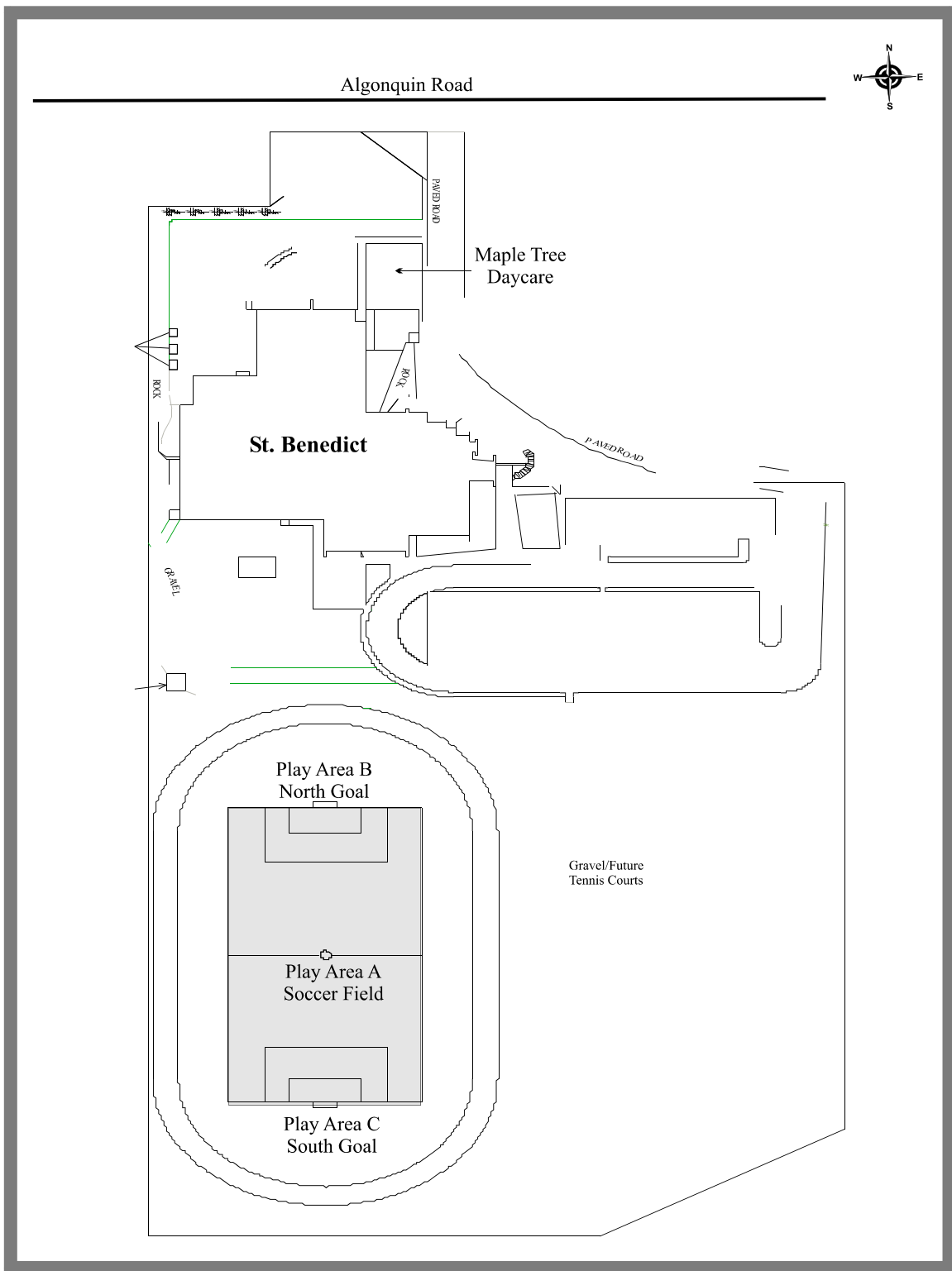


Figure B2.2.10: St. Benedict Secondary School Sampling Locations - 2001.

### 2.2.11 St. Bernadette - Sudbury Catholic District School Board 870 Auger Avenue, Sudbury

St. Bernadette was sampled on July 18, 2001. Figure B2.2.11 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel baseball diamond infield. Area B corresponds to the gravel playground. Due to the constant mixing of gravel and the homogenous nature of the gravel areas, samples were collected with hand trowels to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), and cobalt (Co) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the gravel samples collected from this property. The highest nickel, cobalt, and copper concentrations found in the gravel samples were 100, 21 and 100 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results are higher than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest of St. Bernadette, Station 361 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel, copper, and cobalt surface soil concentrations of 66, 52, and 9.3 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037164	14444	0 - 5	< 0.8	8	30	< 0.8	28	11	<b>86</b>	16	< 1.5	<b>93</b>	< 1	32	24
		14445	0 - 5	< 0.8	8	26	< 0.8	26	11	<b>81</b>	15	< 1.5	<b>85</b>	< 1	29	24
Area B gravel	5037165	14446	0 - 5	< 0.8	7	28	< 0.8	28	<b>21</b>	<b>100</b>	11	< 1.5	<b>100</b>	< 1	26	32
		14447	0 - 5	< 0.8	< 5	23	< 0.8	29	<b>26</b>	<b>79</b>	10	< 1.5	<b>91</b>	< 1	28	33
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

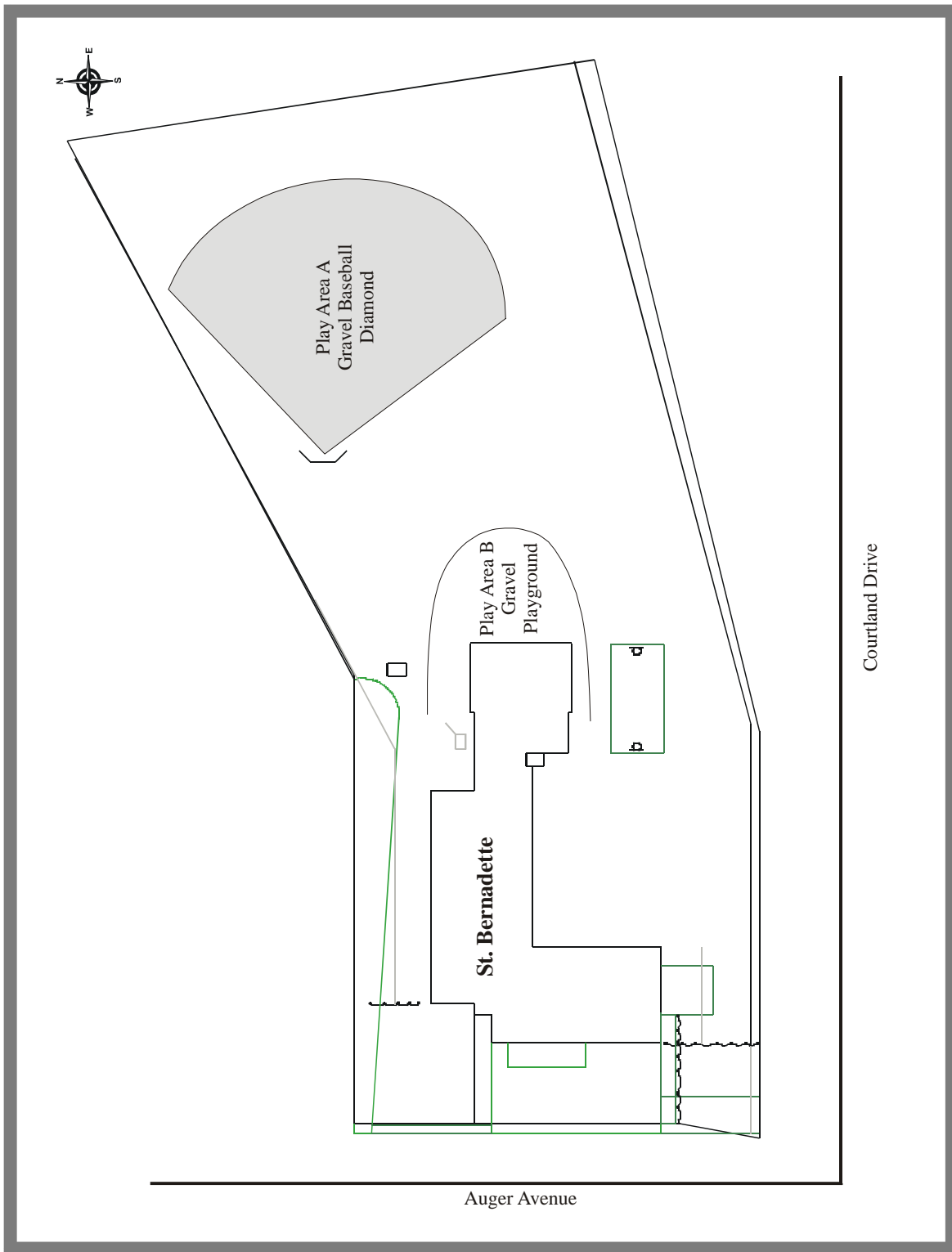


Figure B2.2.11: St. Bernadette Sampling Locations - 2001.

### 2.2.12 St. Charles - Sudbury Catholic District School Board 26 Charlotte Street, Chelmsford

St. Charles School was sampled on July 19, 2001. Figure B2.2.12 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground on the east side of the school building. Area B corresponds to sand samples collected from below the play structure. Due to the constant mixing of the sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the gravel samples, with the highest nickel concentration being 63 ppm. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 4 km southwest and 2.5 km northwest of St. Charles School, Stations 385 and 386, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration range of 65 to 83 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037394	14520	0 - 5	< 0.8	< 5	25	< 0.8	27	7	35	6	< 1.5	<b>59</b>	< 1	30	25
		14521	0 - 5	< 0.8	< 5	25	< 0.8	26	7	44	6	< 1.5	<b>63</b>	< 1	31	27
Area B sand	5037395	14522	0 - 15	< 0.8	< 5	13	< 0.8	24	4	11	3	< 1.5	13	< 1	24	21
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

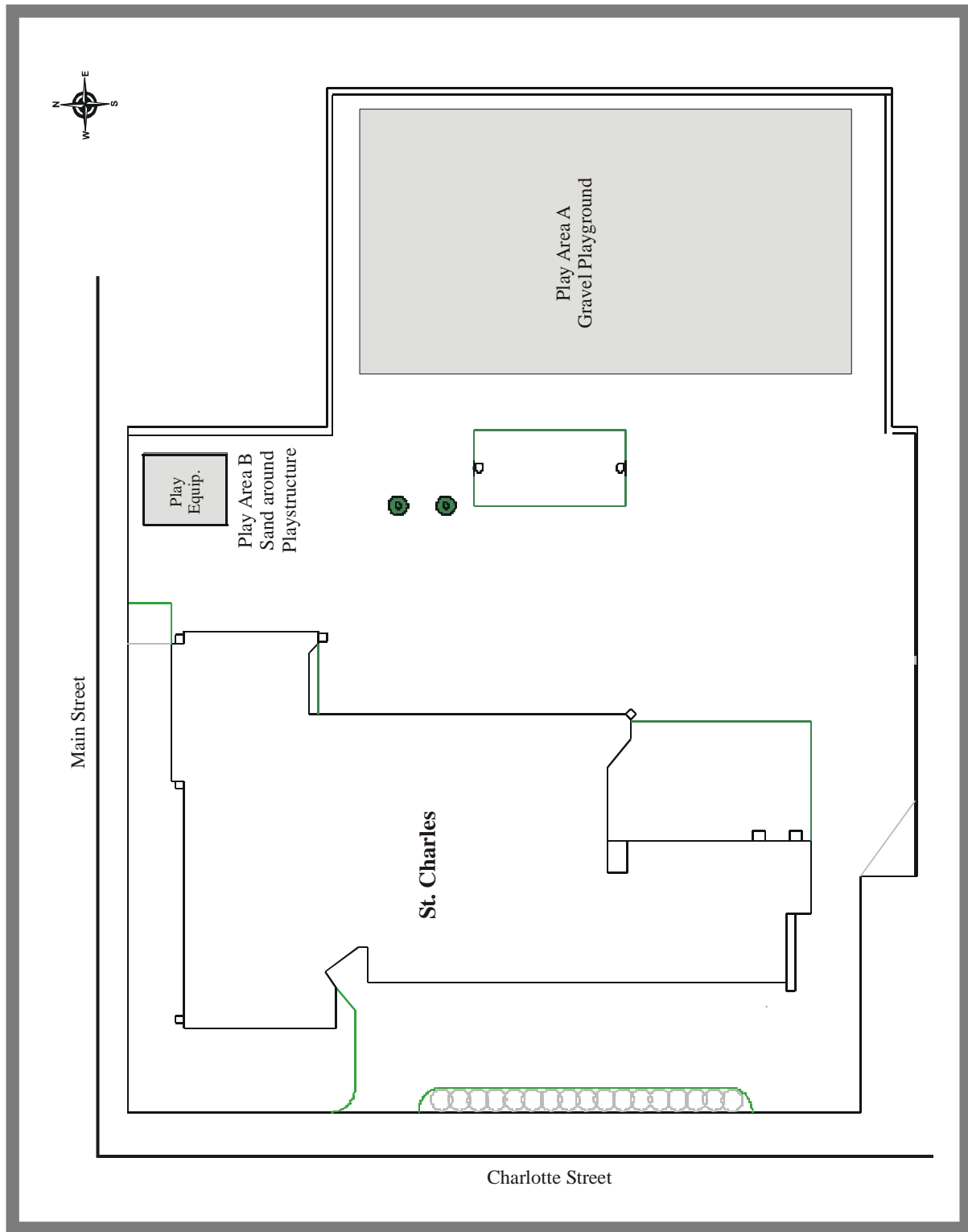


Figure B2.2.12: St. Charles Sampling Locations - 2001.

### 2.2.13 St. Charles College - Sudbury Catholic District School Board 1940 Hawthorne Drive, Sudbury

St. Charles College was sampled on July 18, 2001. Figure B2.2.13 details the sampling locations at this property. Samples were taken from four areas on the school property. Areas A and B correspond to the grassed area of the east soccer field and the worn areas around the east soccer field goal posts, respectively. Areas C and D correspond to the west soccer field and the worn areas around the west soccer field goal posts, respectively. Due to the compacted nature of both soccer fields, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), copper (Cu), lead (Pb), and antimony (Sb) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the gravel samples. The highest nickel and copper concentrations, 120 and 93 ppm, respectively, were found in the surface soil of the west soccer field while the highest lead and antimony concentrations, 130 and 2.1 ppm, respectively, were found in the surface soil of the east soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are similar to those reported historically, while these lead results are higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1 km northwest and 2 km west of St. Charles College, Stations 43 and 86, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 28 to 375 and 33 to 305 ppm, respectively. The highest lead concentration found at these historic sites was 39 ppm. Unfortunately, these historical samples were not analyzed for antimony. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037160	14438	0 - 5	<b>2.1</b>	6	38	< 0.8	30	7	<b>67</b>	<b>130</b>	< 1.5	<b>86</b>	< 1	25	29
		14439	0 - 5	<b>1.6</b>	6	46	< 0.8	30	6	<b>67</b>	<b>92</b>	< 1.5	<b>85</b>	< 1	25	29
Area B soil	5037162	14442	0 - 5	0.8	5	34	< 0.8	31	6	41	24	< 1.5	<b>59</b>	< 1	27	26
Area C grass	5037161	14440	0 - 5	< 0.8	8	31	< 0.8	30	6	<b>89</b>	49	< 1.5	<b>100</b>	< 1	22	24
		14441	0 - 5	< 0.8	7	34	< 0.8	45	7	<b>93</b>	<b>120</b>	< 1.5	<b>120</b>	< 1	21	28
Area D soil	5037163	14443	0 - 5	< 0.8	5	45	< 0.8	38	8	43	13	< 1.5	<b>69</b>	< 1	32	28
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

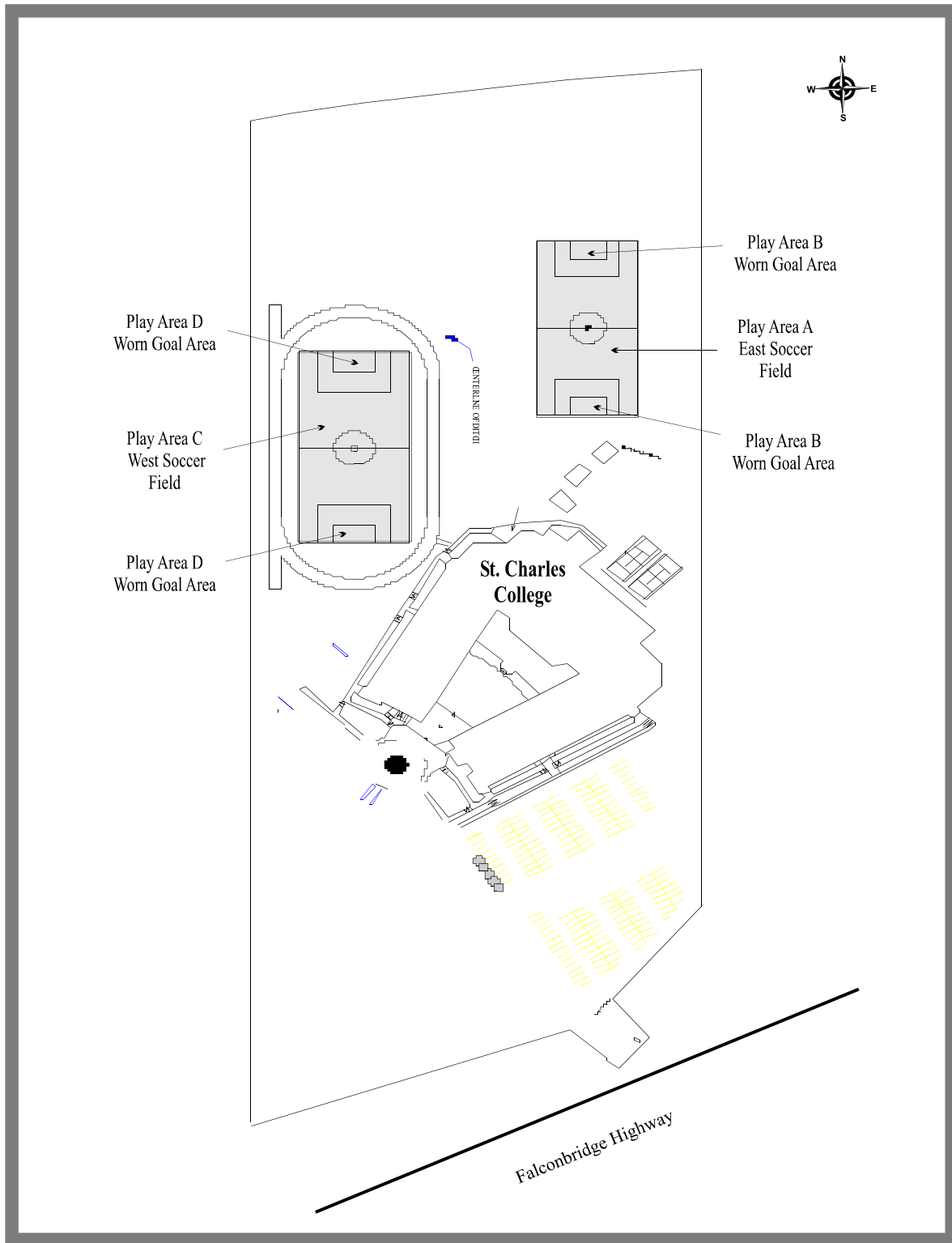


Figure B2.2.13: St. Charles College Sampling Locations - 2001.



### 2.2.14 St. Christopher - Sudbury Catholic District School Board 2843 CKSO Road, Sudbury

St. Christopher School, including All Nations Daycare, was sampled on July 4, 2001. Figure B2.2.14 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to sand samples that were collected below the play structure. Area B corresponds to the gravel baseball diamond infield. Due to the constant mixing of the sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect gravel samples to represent the 0-5 cm depth. Area C corresponds to the grassed baseball diamond outfield. Due to the compacted nature of the grassed area and/or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Neither nickel (Ni), copper (Cu) nor cobalt (Co) concentrations were elevated in the sand beneath the play structure. It is not clearly understood why molybdenum (Mo) was elevated above the MOE Table F Ontario Soil Background Criteria in one replicate of the sand samples since this metal is not associated with the local industries. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. There were no other exceedences of the MOE Table F Ontario Soil Background Criteria at this property. All metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Aside from the elevated molybdenum result, all other results from this property are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km northwest and 2 km northeast of St. Christopher School, Stations 404 and 406, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration range of 58 to 120 ppm and a maximum molybdenum concentration of less than 0.5 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037013	14052	0 - 15	< 0.8	< 5	25	< 0.8	53	8	23	30	<b>4.1</b>	25	< 1	48	110
		14053	0 - 15	< 0.8	< 5	24	< 0.8	32	9	23	3	< 1.5	22	< 1	33	19
Area B gravel	5037014	14054	0 - 5	< 0.8	< 5	39	< 0.8	36	8	27	8	< 1.5	35	< 1	41	30
		14055	0 - 5	< 0.8	< 5	38	< 0.8	38	7	26	7	< 1.5	37	< 1	41	29
Area C grass	5037015	14056	0 - 5	< 0.8	< 5	40	< 0.8	33	7	23	4	< 1.5	30	< 1	32	19
		14057	0 - 5	< 0.8	< 5	40	< 0.8	31	7	25	5	< 1.5	34	< 1	32	20
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

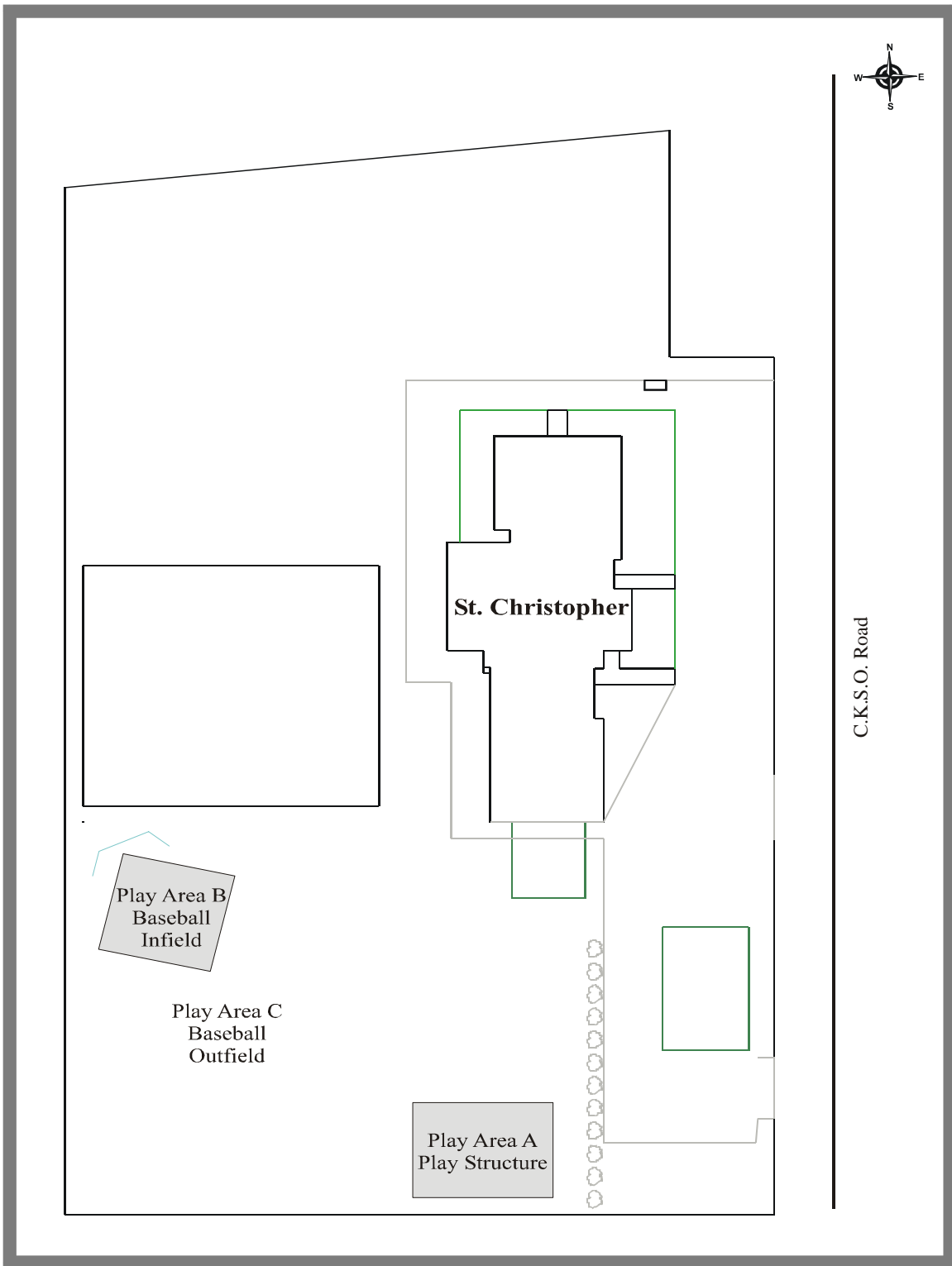


Figure B2.2.14: St. Christopher Sampling Locations - 2001.

### 2.2.15 St. David - Sudbury Catholic District School Board 350 Jean Street, Sudbury

St. David School was sampled on July 17, 2001. Figure B2.2.15 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the north side of the school building. Due to the constant mixing of the gravel and the homogenous nature of the gravel area, samples were collected using hand trowels to represent the 0-5 cm depth. There were no other play areas on this property to sample. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in one replicate of the gravel samples. The highest nickel and copper concentrations found were 92 and 88 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south, 2 km west, and 1.5 km north of St. David School, Stations 84, 363, and 362, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 230 to 490 and 230 to 450 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037118	14267	0 - 5	< 0.8	< 5	18	< 0.8	20	6	18	3	< 1.5	27	< 1	24	17
		14268	0 - 5	< 0.8	< 5	29	< 0.8	28	13	<b>88</b>	8	< 1.5	<b>92</b>	< 1	30	42
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

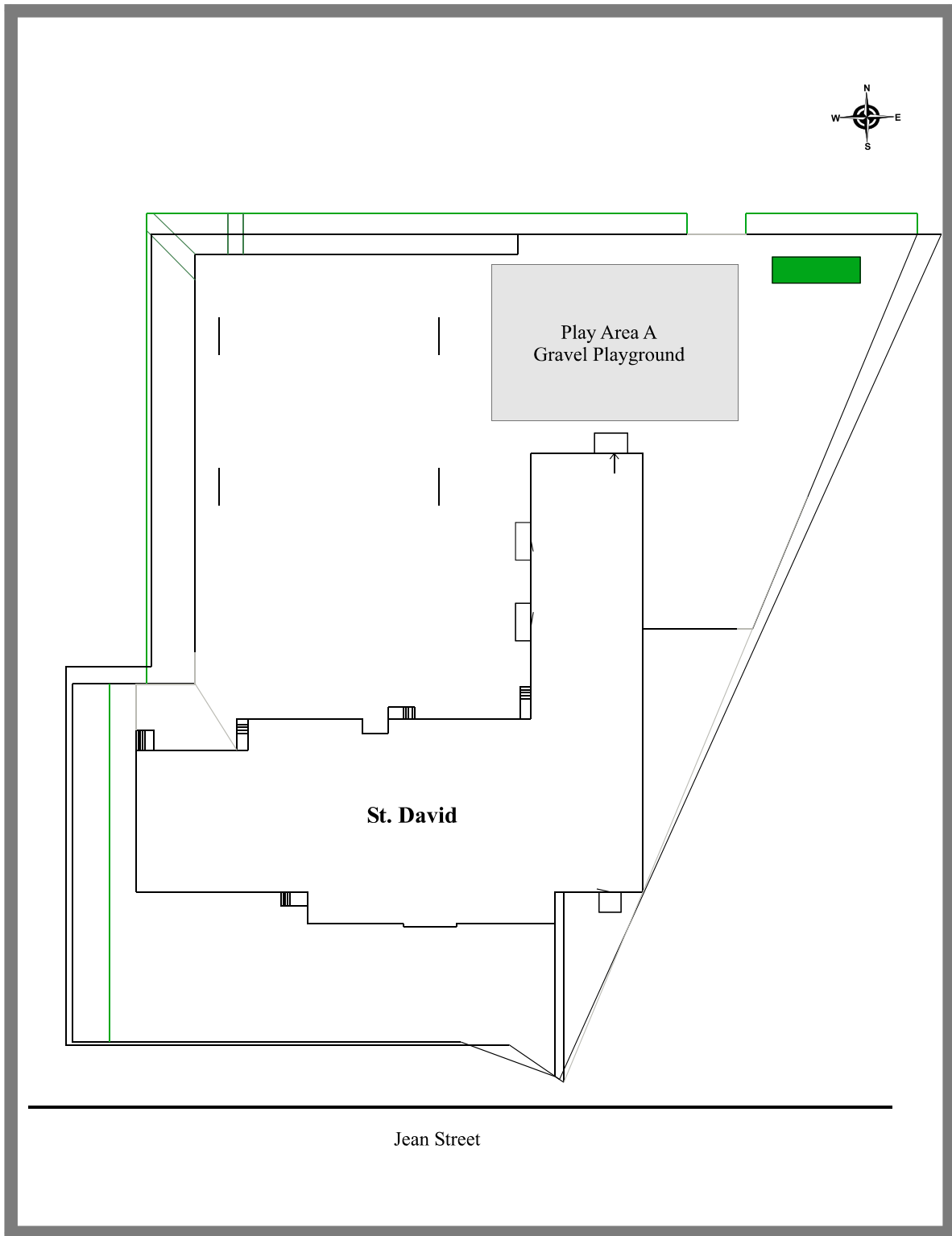


Figure B2.2.15: St. David Sampling Locations - 2001.

### 2.2.16 St. Francis - Sudbury Catholic District School Board 691 Lilac Street, Sudbury

St. Francis School, including the formerly Jubilee Heritage Centre Daycare, was sampled on July 5, 2001. Figure B2.2.16 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel baseball diamond infield. Area B corresponds to sand samples collected from the landing area of the long jump pits. Area C corresponds to the gravel playground to the northwest side of the school building. Due to the constant mixing of the sand and the homogenous nature of the sanded area, samples were collected using hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in all other samples from this property. The highest nickel and copper concentrations, 170 and 180 ppm, respectively, were found in the gravel playground samples. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There was only one sample from the gravel playground that had a nickel concentration elevated above the MOE Table A Effects Based Soil Criteria (MOE 1997).

These nickel and copper results fall in the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 1 km north, and 1 km west of St. Francis School, Stations 73, 378, and 74, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 790 and 158 to 740 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037069	14141	0 - 5	< 0.8	< 5	24	< 0.8	31	12	<b>140</b>	15	< 1.5	<b>150</b>	< 1	27	40
		14142	0 - 5	< 0.8	< 5	25	< 0.8	30	13	<b>160</b>	15	< 1.5	<b>150</b>	< 1	26	40
Area B sand	5037070	14143	0 - 15	< 0.8	< 5	21	< 0.8	32	8	30	4	< 1.5	32	< 1	34	21
Area C gravel	5037071	14144	0 - 5	< 0.8	< 5	39	< 0.8	35	13	<b>140</b>	10	< 1.5	<b>130</b>	< 1	29	56
		14145	0 - 5	< 0.8	< 5	39	< 0.8	38	15	<b>180</b>	15	< 1.5	<b>170</b>	< 1	32	110
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

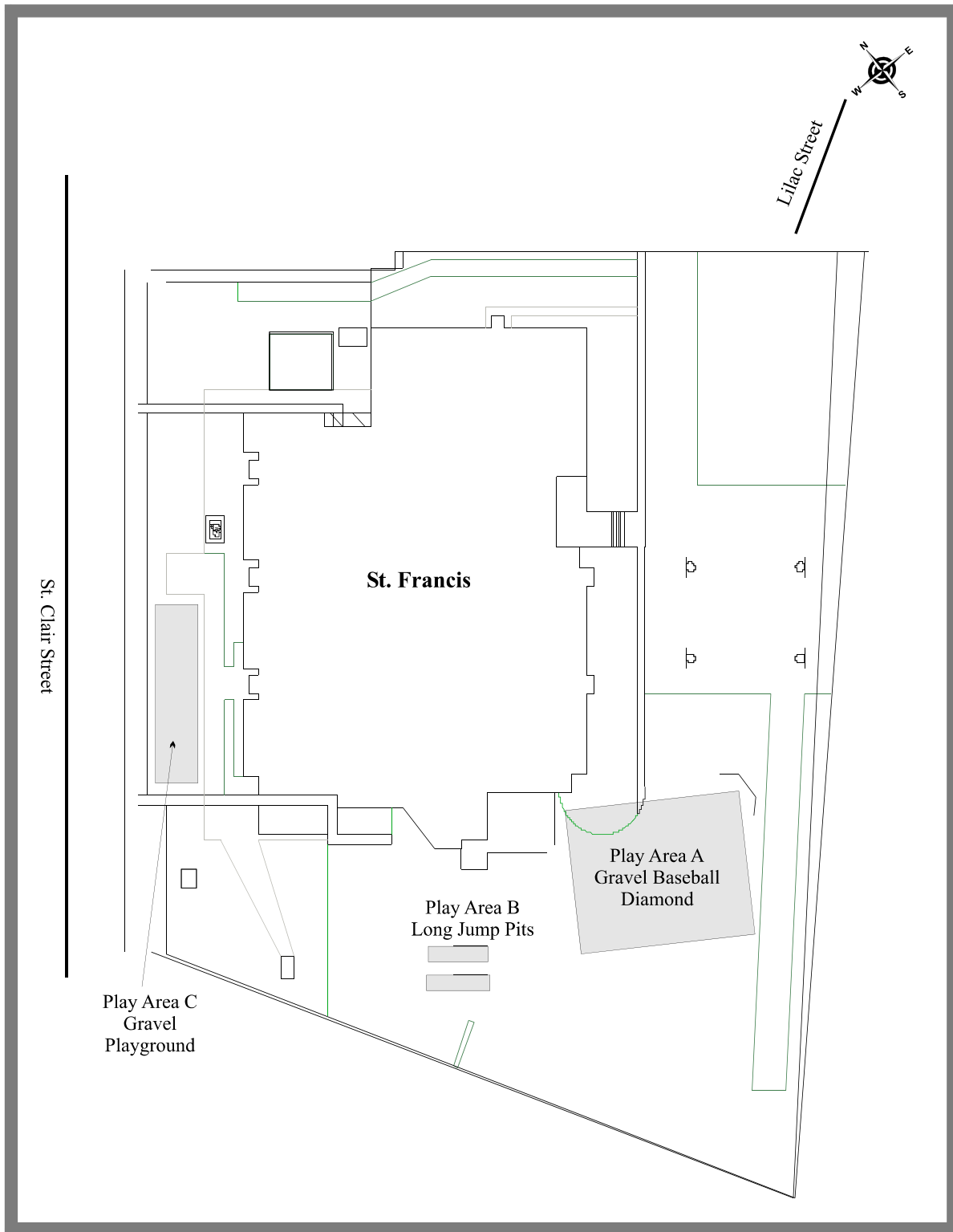


Figure B2.2.16: St. Francis Sampling Locations - 2001.

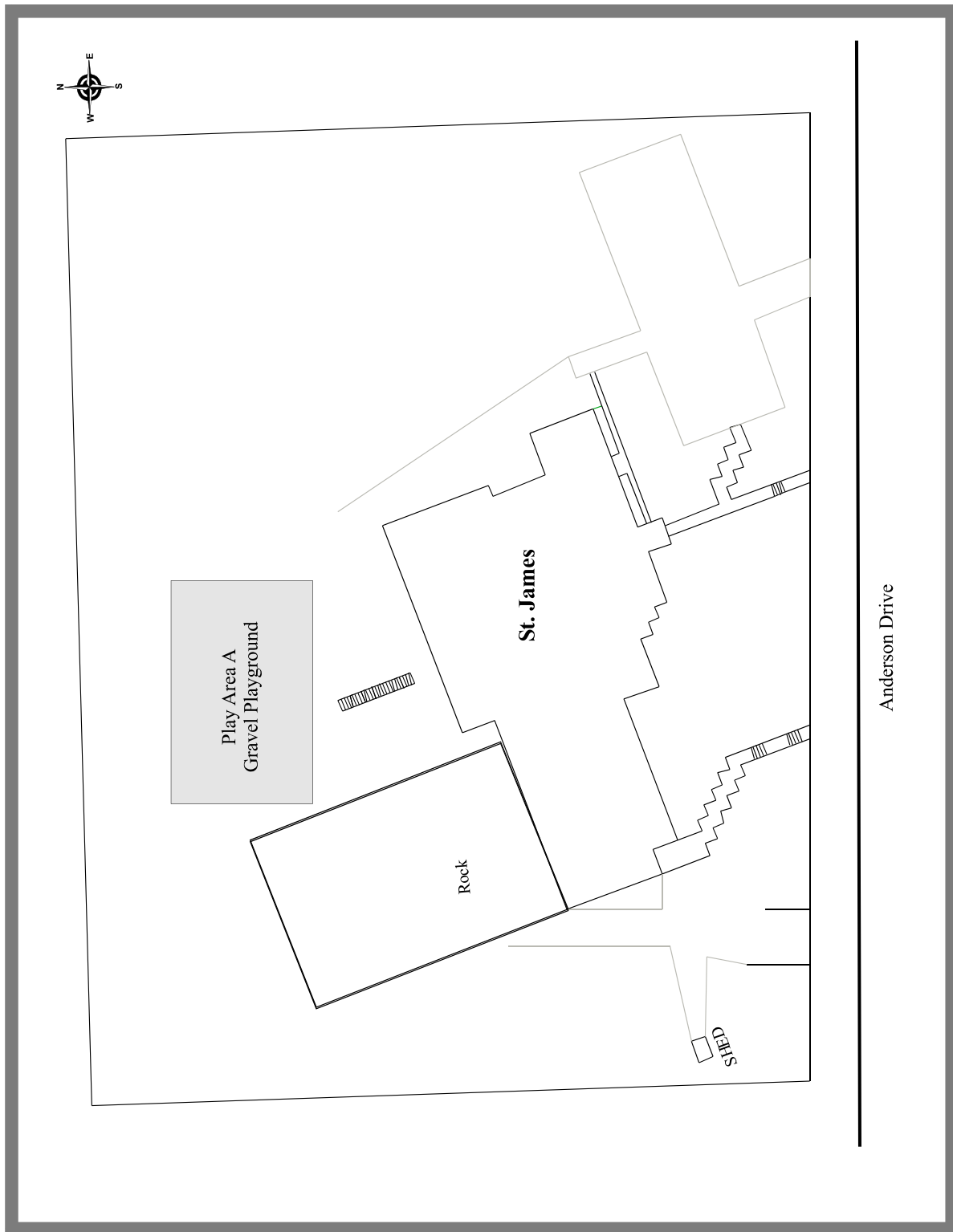
### 2.2.17 St. James - Sudbury Catholic District School Board 280 Anderson Drive, Lively

St. James School, including Walden Daycare Centre #2, was sampled on July 21, 2001. Figure B2.2.17 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the north side of the school property. Due to the constant mixing of the gravel and the homogenous nature of the gravel areas, samples were collected using hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample at this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the gravel samples. The highest nickel and copper concentrations found were 70 and 64 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall in the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north, 2 km southwest, and 2 km southeast of St. James School, Stations 376, 375, and 101, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 69 to 340 and 61 to 350 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037244	14719	0 - 5	< 0.8	5	30	< 0.8	32	11	<b>64</b>	9	< 1.5	<b>70</b>	< 1	31	34
		14720	0 - 5	< 0.8	< 5	30	< 0.8	29	10	48	7	< 1.5	<b>47</b>	< 1	32	30
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.17:** St. James Sampling Locations - 2001.



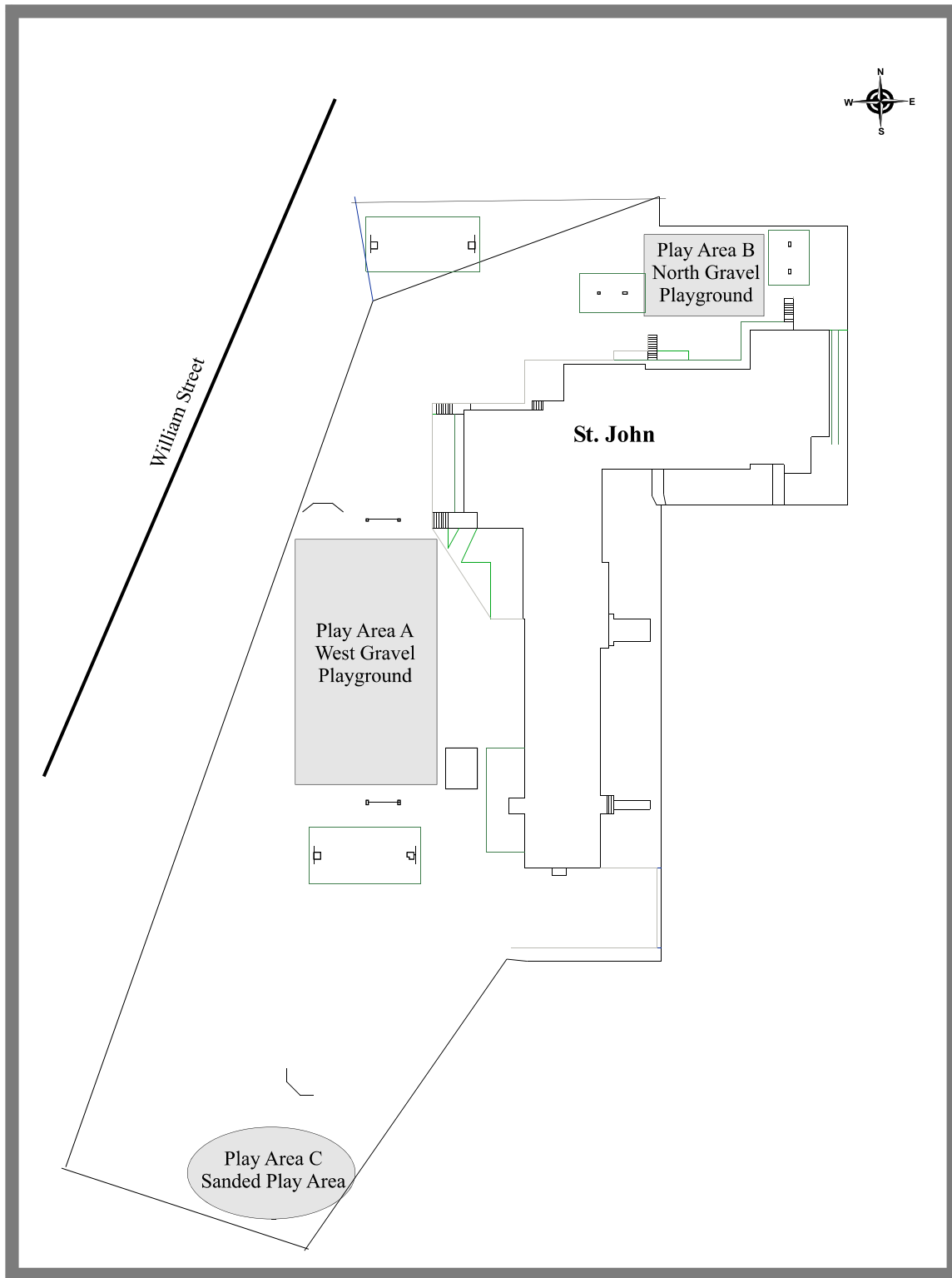
### 2.2.18 St. John - Sudbury Catholic District School Board 181 William Street, Garson

St. John School, including Teddy Bear Daycare #3, was sampled on July 18, 2001. Figure B2.2.18 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel playground on the west side of the school property. Area B corresponds to the gravel playground on the north side of the school building. Area C corresponds to the sand samples collected from the sanded play area on the south edge of the school property. Due to the constant mixing of the sand and the homogenous nature of the sanded area, sand samples were collected using hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand samples collected from the sanded play area. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in samples collected from both gravel playgrounds. The highest nickel and copper concentrations, 73 and 59 ppm, respectively, were found in the north gravel playground samples. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, and 0.5 km southeast of St. John School, Stations 40 and 39, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 37 to 130 and 24 to 200 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037276	14415	0 - 5	< 0.8	8	27	< 0.8	27	8	<b>57</b>	10	< 1.5	<b>68</b>	< 1	29	28
		14416	0 - 5	< 0.8	9	25	< 0.8	26	9	<b>59</b>	10	< 1.5	<b>73</b>	< 1	30	28
Area B gravel	5037277	14417	0 - 5	< 0.8	7	29	< 0.8	24	7	43	7	< 1.5	<b>62</b>	< 1	26	25
		14418	0 - 5	< 0.8	6	29	< 0.8	24	8	51	7	< 1.5	<b>71</b>	< 1	24	24
Area C sand	5037278	14419	0 - 15	< 0.8	< 5	19	< 0.8	20	5	12	2	< 1.5	18	< 1	23	16
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.18: St. John Sampling Locations - 2001.**

### 2.2.19 St. Kevin (Bishop Alexander C.C.S.S.) - Sudbury Catholic District School Board 3075 River Road, Val Caron

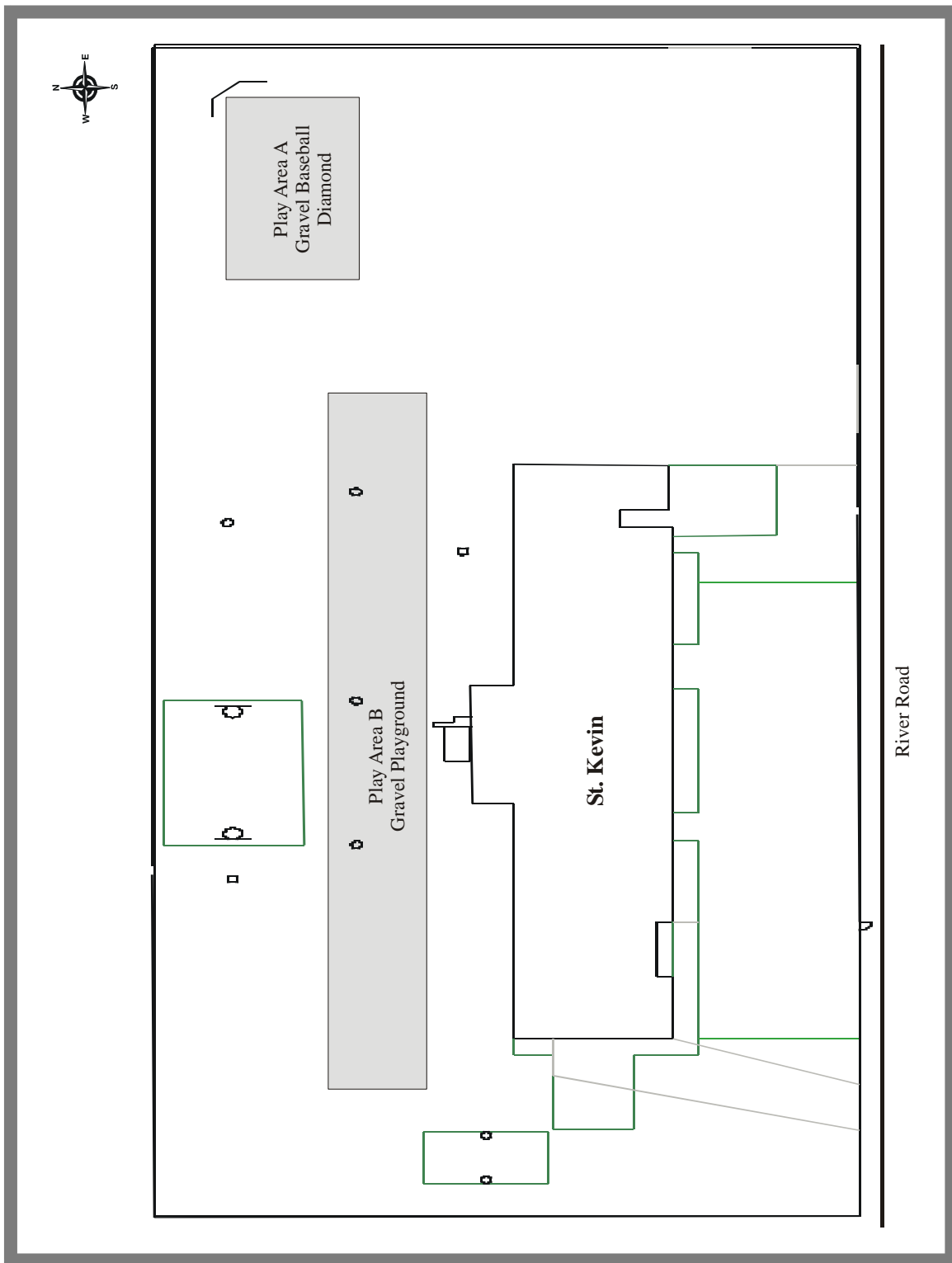
St. Kevin School was sampled on July 23, 2001 and is now the temporary location of Bishop Alexander C.C.S.S. within the Sudbury Catholic District School Board. A permanent location for this school has been found at St. Anne (2.2.8) and this location has since been closed. Figure B2.2.19 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel baseball diamond on the east side of the property. Area B corresponds to the gravel playground on the north side of the school building. Due to the constant mixing of the gravel and the homogenous nature of the gravel areas, all samples from this property were collected using hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample at this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples collected from this property. The highest nickel and copper concentrations, 92 and 82 ppm, respectively, were found in the north gravel playground samples. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northwest, 2 km southwest, and 3 km northeast of St. Kevin (Bishop Alexander C.C.S.S.) School, Stations 15, 340, and 344, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 66 to 140 and 57 to 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.2.19:** Concentration of 13 Elements in Soil in µg/g Collected at St. Kevin (Bishop Alexander C.C.S.S.), 3075 River Road, Val Caron - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037288	14774	0 - 5	< 0.8	< 5	31	< 0.8	42	12	<b>59</b>	12	< 1.5	<b>57</b>	< 1	38	38
		14775	0 - 5	< 0.8	< 5	29	< 0.8	40	15	<b>64</b>	10	< 1.5	<b>63</b>	< 1	38	39
Area B gravel	5037289	14776	0 - 5	< 0.8	< 5	37	< 0.8	42	10	<b>71</b>	14	< 1.5	<b>68</b>	< 1	39	37
		14777	0 - 5	< 0.8	< 5	36	< 0.8	44	11	<b>82</b>	12	< 1.5	<b>92</b>	< 1	46	38
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.19:** St. Kevin (Bishop Alexander C.C.S.S.) Sampling Locations - 2001.

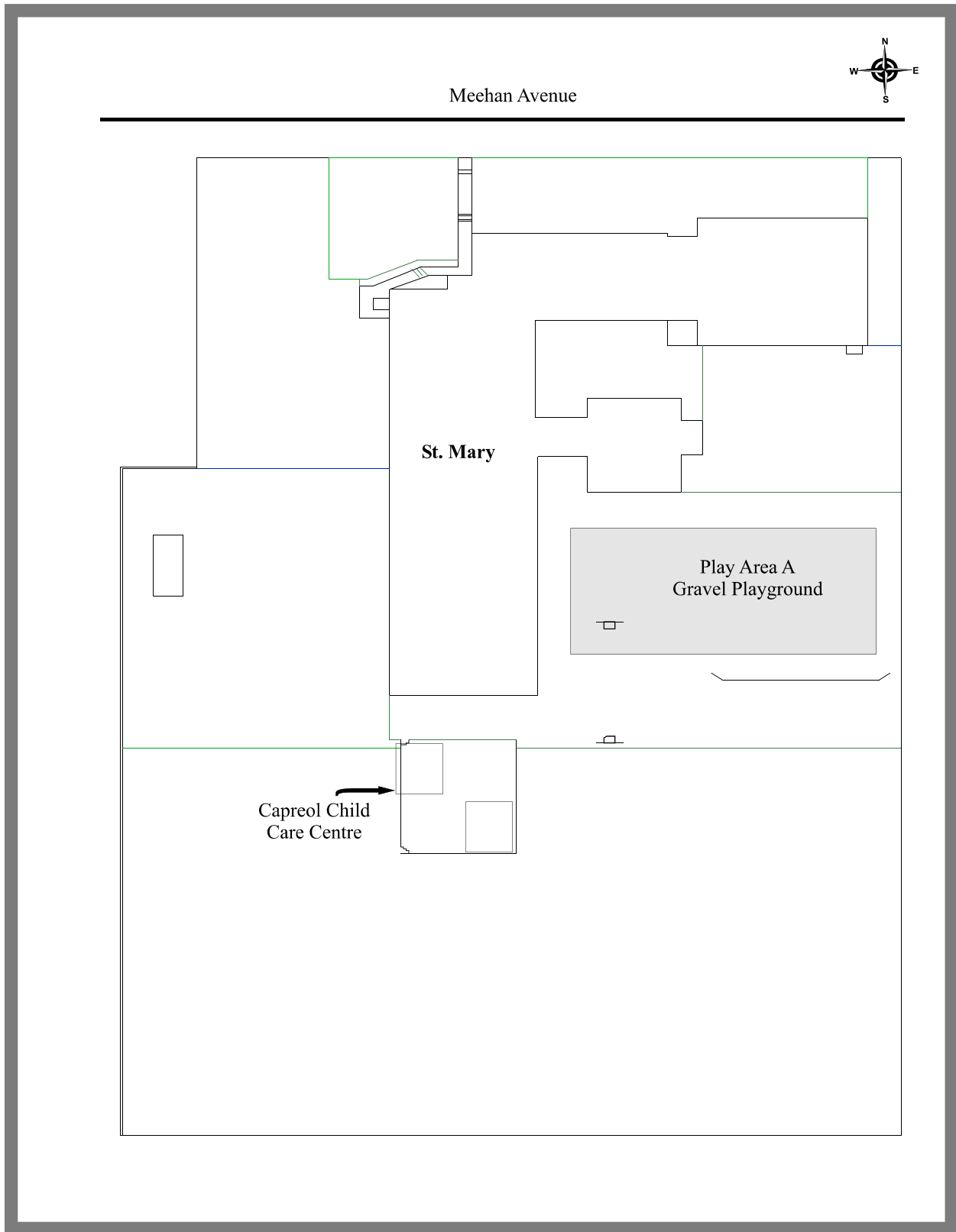
### 2.2.20 St. Mary - Sudbury Catholic District School Board 26 Meehan Avenue, Capreol

St. Mary School was sampled on July 20, 2001. Figure B2.2.20 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the south side of the school. Due to the constant mixing of the gravel and the homogenous nature of the gravel areas, all samples from this property were collected using hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample at this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples collected from this property. The highest nickel and copper concentrations found were 72 and 97 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km north and 0.5 km south of St. Mary School, Stations 352 and 351, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 130 to 330 and 110 to 300 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Table B2.2.20: Concentration of 13 Elements in Soil in µg/g Collected at St. Mary, 26 Meehan Avenue, Capreol - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037352	14582	0 - 5	< 0.8	6	32	< 0.8	27	8	<b>69</b>	22	< 1.5	<b>69</b>	< 1	34	46
		14583	0 - 5	< 0.8	8	31	< 0.8	26	7	<b>97</b>	25	< 1.5	<b>72</b>	< 1	33	48
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.20:** St. Mary School Sampling Locations - 2001.

### 2.2.21 St. Michael - Sudbury Catholic District School Board 41 Samson Street, Sudbury

St. Michael School was sampled on July 5, 2001. Figure B2.2.21 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the west side of the school building. Due to the constant mixing of the gravel and the homogenous nature of the gravel areas, all samples from this property were collected using hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample at this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples collected from this property. The highest nickel and copper concentrations found were 140 and 120 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km south of St. Michael School, Station 74 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 790 and 220 to 740 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037083	14132	0 - 5	< 0.8	< 5	26	< 0.8	29	11	<b>120</b>	11	< 1.5	<b>130</b>	< 1	30	32
		14133	0 - 5	< 0.8	< 5	29	< 0.8	29	11	<b>120</b>	11	< 1.5	<b>140</b>	< 1	27	65
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

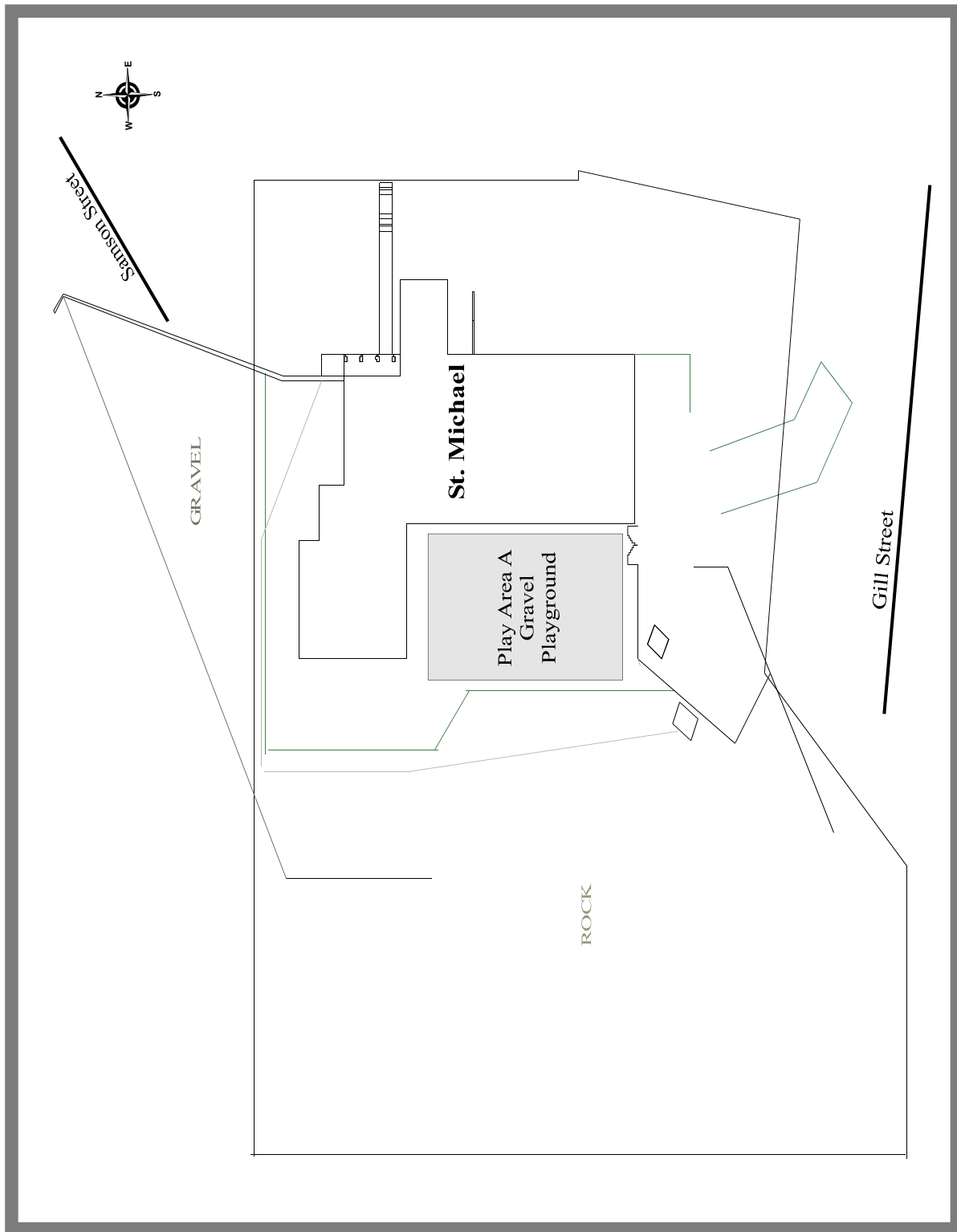


Figure B2.2.21: St. Michael Sampling Locations - 2001.



### 2.2.22 St. Paul - Sudbury Catholic District School Board 1 Edward Avenue North, Coniston

St. Paul School was sampled on July 22, 2001. Figure B2.2.22 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground on the east side of the school building. Area B corresponds to the sand collected from the landing area of the long jump pit. Due to the constant mixing of the sand and the homogenous nature of the sanded area, sand samples were collected using hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand collected from the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for both gravel playground samples. The highest nickel and copper concentrations found were 120 and 100 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 0.8 km northeast, and 1 km southwest of St. Paul School, Stations 81, 49, and 48, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 70 to 970 and 54 to 780 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037263	14752	0 - 5	< 0.8	6	43	< 0.8	35	14	<b>99</b>	12	< 1.5	<b>120</b>	< 1	34	42
		14753	0 - 5	< 0.8	6	45	< 0.8	43	14	<b>100</b>	14	< 1.5	<b>120</b>	< 1	32	46
Area B sand	5037264	14754	0 - 15	< 0.8	< 5	26	< 0.8	18	6	15	2	< 1.5	17	< 1	23	13
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				<u>13</u>	<u>20</u>	<u>750</u>	<u>12</u>	<u>750</u>	<u>40</u>	<u>225</u>	<u>200</u>	<u>5.0</u>	<u>150</u>	<u>10</u>	<u>200</u>	<u>600</u>
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

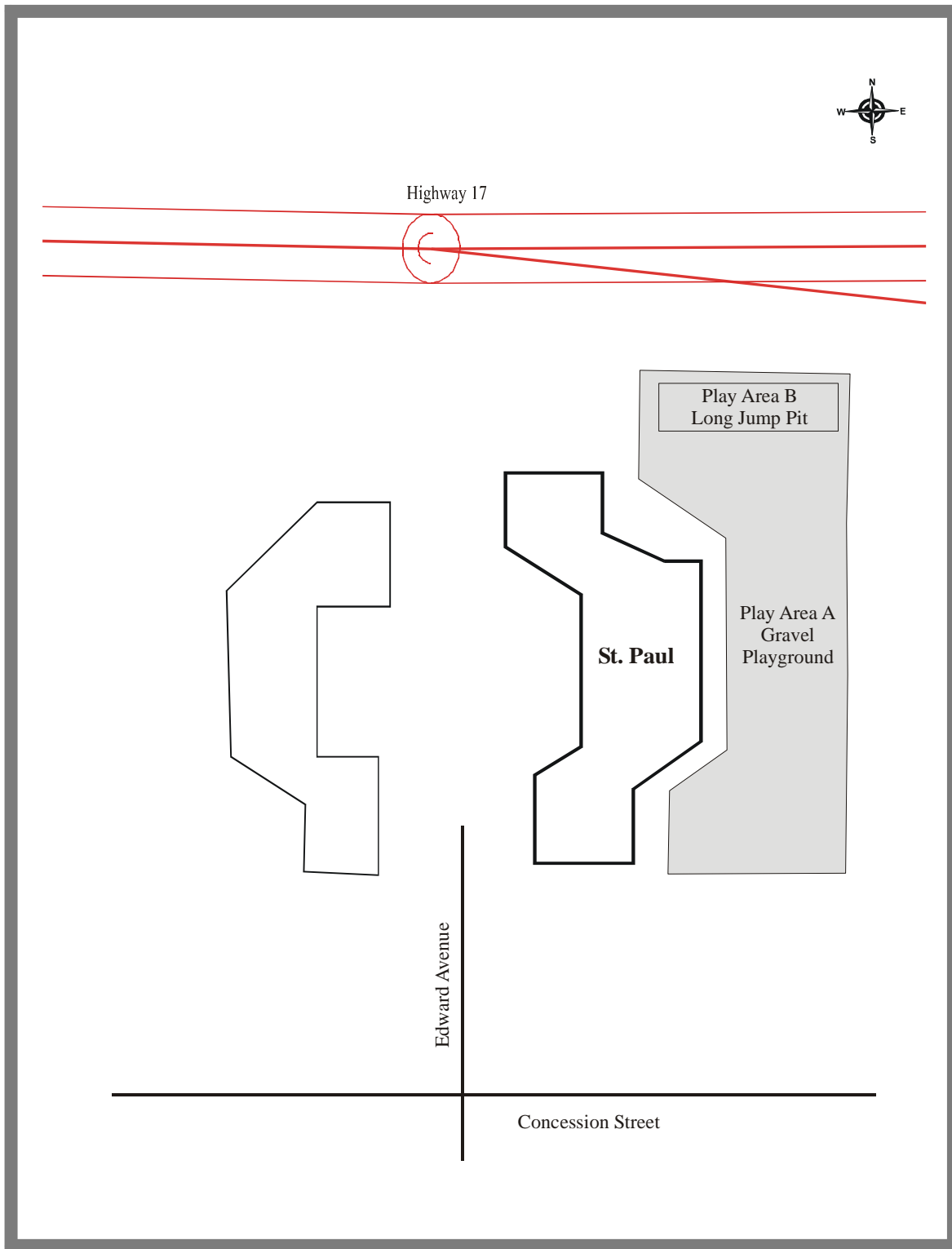


Figure B2.2.22: St. Paul Sampling Locations - 2001.

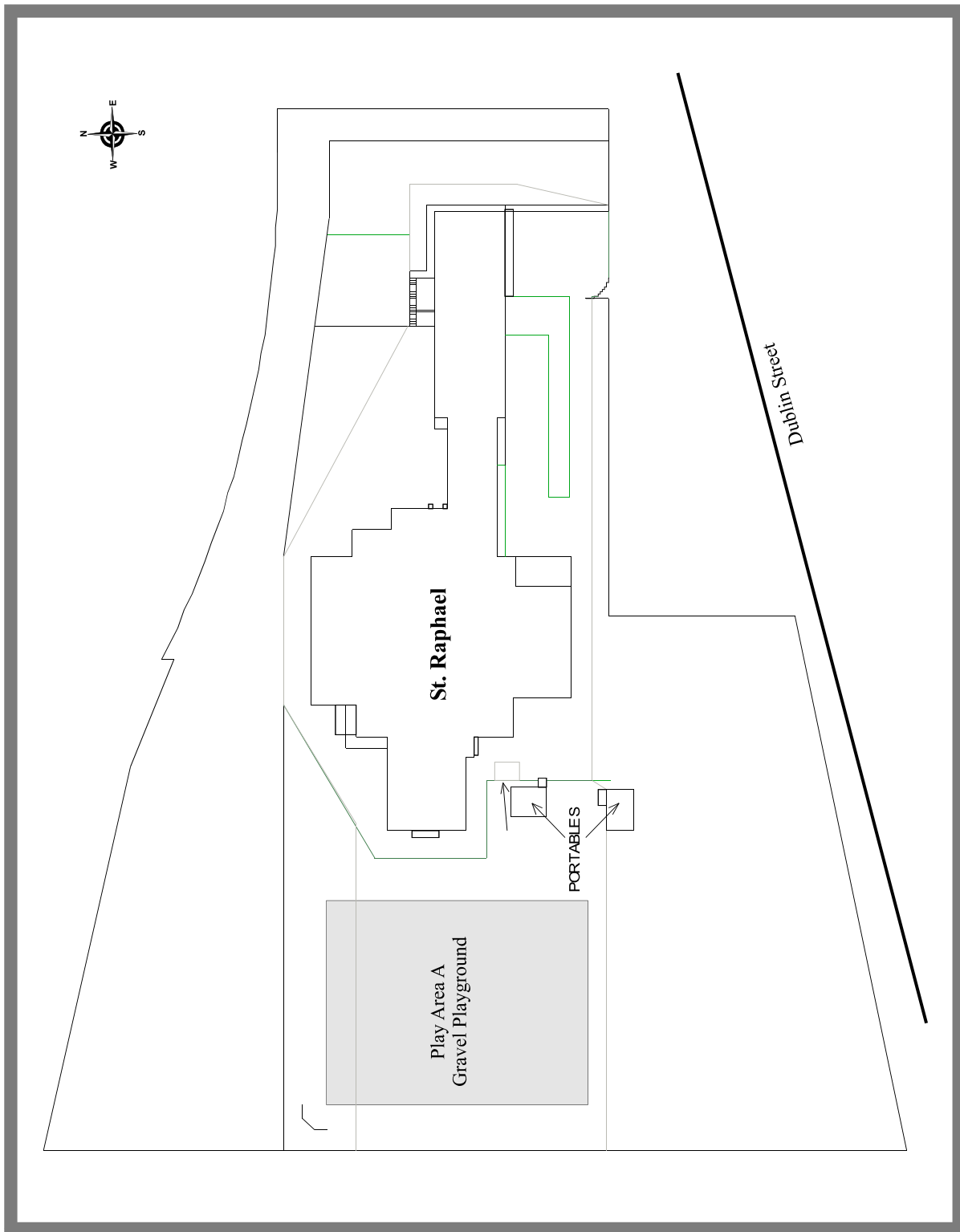
### 2.2.23 St. Raphael - Sudbury Catholic District School Board 1096 Dublin Street, Sudbury

St. Raphael School, including Cedar Park Daycare #2, was sampled on July 18, 2001. Figure B2.2.23 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the west side of the school building. Due to the constant mixing of the gravel and the homogenous nature of the gravel areas, all samples from this property were collected using hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample on this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for the gravel playground samples. The highest nickel and copper concentrations found were 96 and 93 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 0.2 km east and 1 km southwest of St. Raphael School, Stations 86 and 85, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 56 to 540 and 35 to 330 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037193	14460	0 - 5	< 0.8	< 5	34	< 0.8	35	12	<b>93</b>	14	< 1.5	<b>96</b>	< 1	36	77
		14461	0 - 5	< 0.8	< 5	30	< 0.8	26	8	42	8	< 1.5	<b>47</b>	< 1	28	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.2.23:** St. Raphael Sampling Locations - 2001.

### 2.2.24 St. Theresa - Sudbury Catholic District School Board 56 Walford Road, Sudbury

St. Theresa School was sampled on July 5, 2001. Figure B2.2.24 details the sampling locations at this property. Samples were taken from four areas on the school property. Areas A, B and C correspond to sand samples collected from below the play structures. Area D corresponds to the gravel playground to the north and east side of the school building. Due to the constant mixing of the sand and the homogenous nature of the sanded area, sand samples were collected using hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for the gravel playground samples. The highest nickel and copper concentrations found were 110 and 97 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.7 km southwest and 1.5 km northeast of St. Theresa School, Stations 364 and 74, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 790 and 220 to 740 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037050	14106	0 - 15	< 0.8	< 5	21	< 0.8	28	7	18	3	< 1.5	21	< 1	31	16
Area B sand	5037051	14107	0 - 15	< 0.8	< 5	20	< 0.8	28	7	17	3	< 1.5	21	< 1	26	15
Area C sand	5037052	14108	0 - 15	< 0.8	< 5	21	< 0.8	29	7	20	3	< 1.5	24	< 1	29	18
Area D gravel	5037053	14109	0 - 5	< 0.8	< 5	28	< 0.8	34	15	<b>97</b>	9	< 1.5	<b>110</b>	< 1	29	34
		14110	0 - 5	< 0.8	< 5	28	< 0.8	36	17	<b>97</b>	9	< 1.5	<b>110</b>	< 1	30	31
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

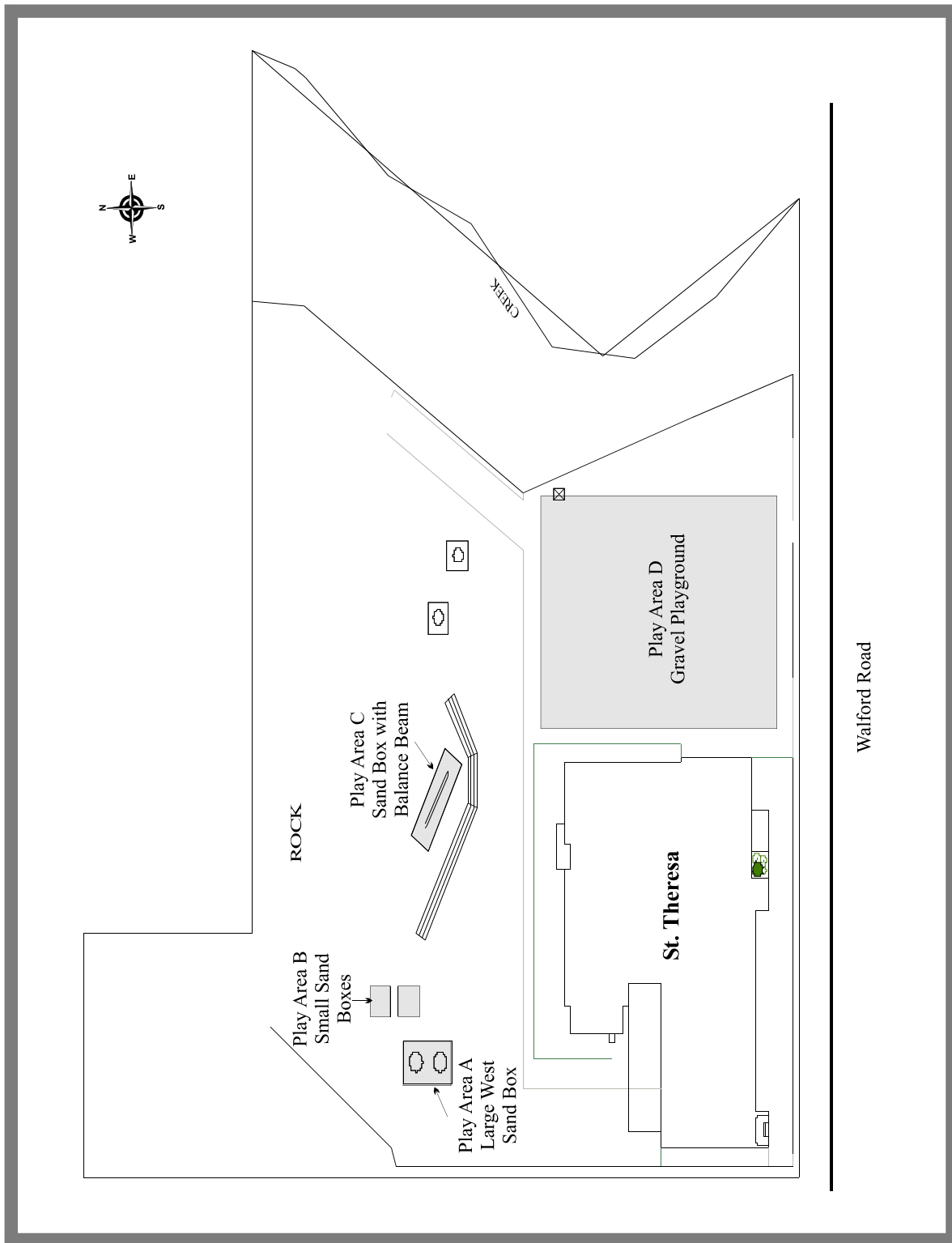


Figure B2.2.24: St. Theresa Sampling Locations - 2001.

### 2.2.25 St. Thomas (formerly) - Sudbury Catholic District School Board 504 St. Raphael Street, Sudbury

St. Thomas School was sampled on July 5, 2001 and has since been sold. Figure B2.2.25 details the sampling locations at this property. Samples were taken from four areas on the school property. Areas A and B correspond to sand samples collected from below the south and north play structures, respectively. Area C corresponds to the gravel baseball diamond infield. Area D corresponds to the gravel playground to the northeast side of the school building. Due to the constant mixing of the sand and the homogenous nature of the sanded areas, sand samples were collected using hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all gravel samples. Cobalt (Co) and zinc (Zn) concentrations were also elevated above the MOE Table F Ontario Soil Background Criteria at selected sites. The highest nickel, copper, and cobalt concentrations, 190, 140, and 23 ppm, respectively, were found in a sample from the gravel playground, while the highest zinc concentration, 200 ppm, was found in a sample from the baseball diamond infield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There was only one exceedence of the MOE Table A Effects Based Soil Criteria for nickel at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037094	14191	0 - 15	< 0.8	< 5	18	< 0.8	30	7	21	3	< 1.5	27	< 1	25	25
Area B sand	5037095	14192	0 - 15	< 0.8	< 5	19	< 0.8	29	7	22	3	< 1.5	23	< 1	32	23
Area C gravel	5037096	14193	0 - 5	< 0.8	< 5	27	< 0.8	24	11	<b>100</b>	11	< 1.5	<b>130</b>	< 1	25	<b>200</b>
		14194	0 - 5	< 0.8	< 5	28	< 0.8	24	11	<b>100</b>	11	< 1.5	<b>130</b>	< 1	24	150
Area D gravel	5037097	14195	0 - 5	< 0.8	< 5	31	< 0.8	32	<b>22</b>	<b>130</b>	11	< 1.5	<b>150</b>	< 1	30	40
		14196	0 - 5	< 0.8	5	42	< 0.8	35	<b>23</b>	<b>140</b>	12	< 1.5	<b>190</b>	< 1	33	39
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

These nickel and copper results are lower than those reported historically. The cobalt concentrations found are similar to those reported previously, while the zinc concentration is much higher than historically found. Previous MOE sampling of undisturbed soils approximately 0.5 km southeast and 2 km northeast of St. Thomas (formerly) School, Stations 75 and 411, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 380 to 980 and 340 to 820 ppm, respectively. At the same historic sites, the cobalt surface soil concentration range was 17 to 38 ppm, while the highest zinc concentration previously reported was 66 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

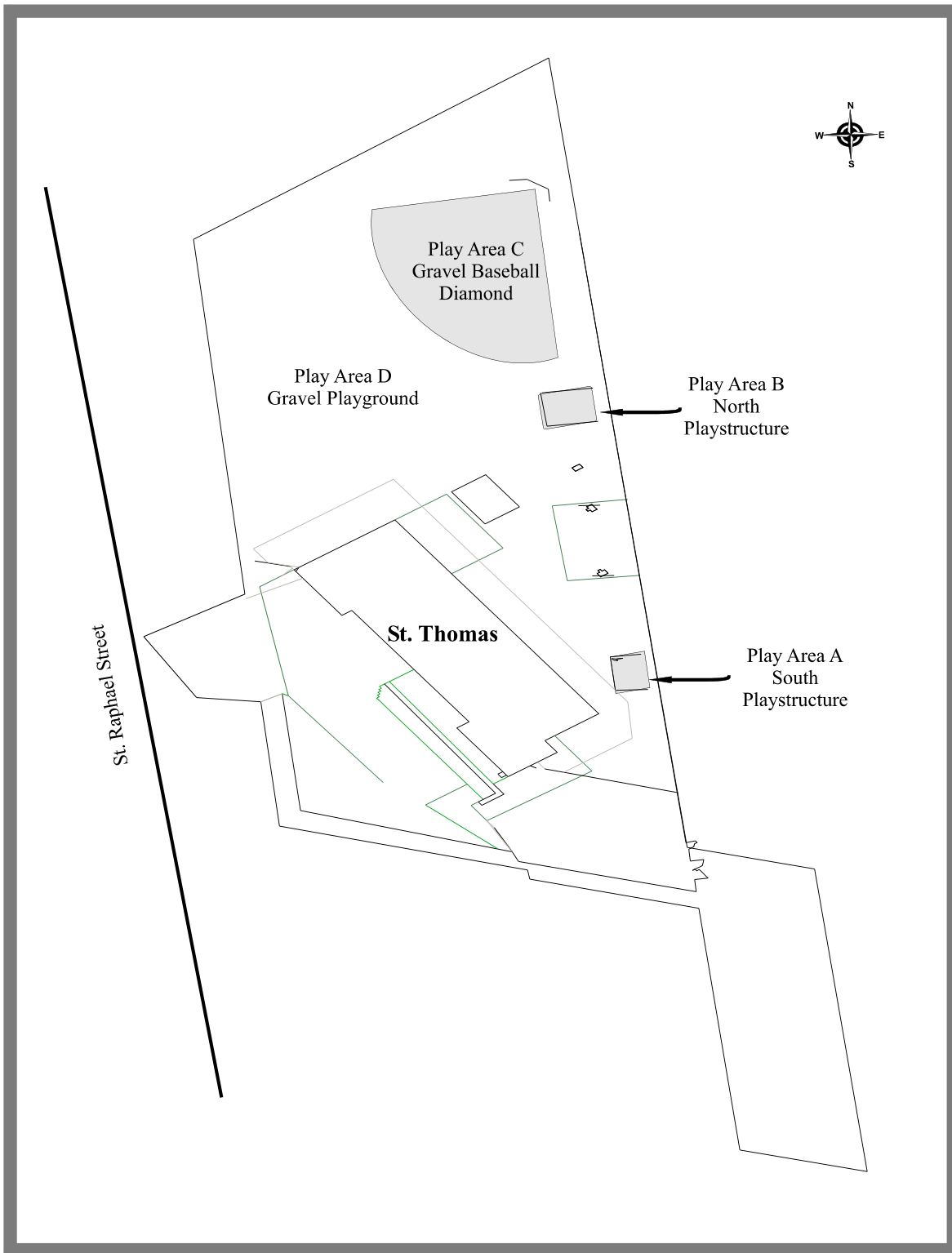


Figure B2.2.25: St. Thomas (formerly) Sampling Locations - 2001.



### 2.3 Le Conseil Scolaire du District de Grand Nord de L'Ontario

As of June 2001, Le Conseil Scolaire du District de Grand Nord de L'Ontario provided the MOE with a list of 8 school properties. MOE representatives were able to collect samples from all properties during the summer of 2001. E. P. Pavillon-de-l'avenir is on the same property as Chelmsford Valley District School in the Rainbow District School Board. For each school there is a section below describing the results, a table with a subset of the results, and a map showing the sampling locations. The maps were produced from field notes. They are not to scale and the locations of the buildings, boundaries and sampling sites shown are only approximate. The schools are listed alphabetically. Complete results for each school are listed in Table 4.1 along with the results from the other school boards.

**Table B2.3:** Number of Le Conseil Scolaire du District de Grand Nord de L'Ontario school in which at least one sample exceed MOE soil criteria.

Number of Schools	Nickel Exceedences		Copper Exceedences		Cobalt Exceedences		Arsenic Exceedences		Lead Exceedences	
	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A
8	5	1	1	0	0	0	0	0	1	0

In order to fit all of the results data onto one table the standard chemical abbreviations had to be used. To interpret the tables properly, the chart below can be used to translate the abbreviations.

Chemical Symbols Used in Results Tables				
<b>Al</b> - aluminum	<b>Sb</b> - antimony	<b>As</b> - arsenic	<b>Ba</b> - barium	<b>Be</b> - beryllium
<b>Cd</b> - cadmium	<b>Ca</b> - calcium	<b>Cr</b> - chromium	<b>Co</b> - cobalt	<b>Cu</b> - copper
<b>Fe</b> - iron	<b>Pb</b> - lead	<b>Mg</b> - magnesium	<b>Mn</b> - manganese	<b>Mo</b> - molybdenum
<b>Ni</b> - nickel	<b>Se</b> - selenium	<b>Sr</b> - strontium	<b>V</b> - vanadium	<b>Zn</b> - zinc

**2.3.1 E.P. Pavillon-de-l'avenir - Conseil Scolaire du District de Grand Nord de L'Ontario  
370 Cote Avenue, Chelmsford**

See Chelmsford Valley District School in Section 2.1.7 for sampling results and map of sampling locations for E.P. Pavillon-de-l'avenir.

### 2.3.2 E.P. Franco Nord - Conseil Scolaire du District de Grand Nord de L'Ontario 178 Avenue Junction, Sudbury

E.P. Franco Nord was sampled on July 19, 2001. Figure B2.3.2 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to the grassed play area on the east side of the property. Areas B and C correspond to the sand samples that were taken below the north and south play structures, respectively. Area D corresponds to the gravel playground. Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

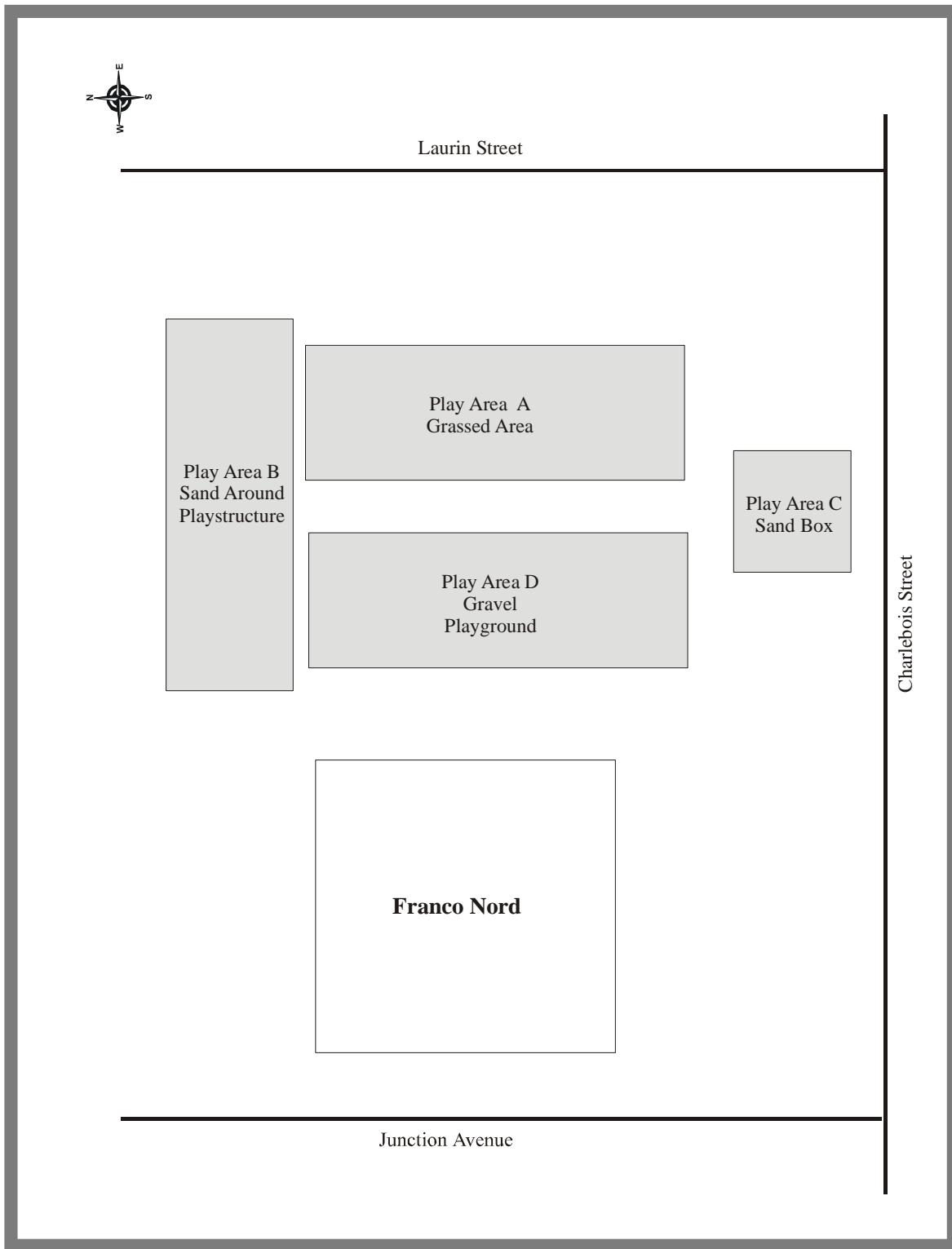
Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in sample taken from the gravel playground. The highest nickel and copper concentrations found in these samples was 85 and 87 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km southeast of E.P. Franco Nord, Station 90 of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 570 and 470 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.3.2:** Concentration of 13 Elements in Soil in µg/g Collected at E.P. Franco Nord, 178 Avenue Junction, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037361	14479	0 - 5	< 0.8	< 5	29	< 0.8	26	5	22	7	< 1.5	38	< 1	27	18
		14480	0 - 5	< 0.8	6	27	< 0.8	24	4	18	6	< 1.5	32	< 1	25	16
Area B sand	5037362	14481	0 - 15	< 0.8	< 5	22	< 0.8	25	7	22	7	< 1.5	19	< 1	39	27
Area C sand	5037363	14482	0 - 15	< 0.8	< 5	16	< 0.8	23	5	16	4	< 1.5	19	< 1	28	21
Area D gravel	5037364	14483	0 - 5	< 0.8	5	32	< 0.8	33	11	<b>87</b>	12	< 1.5	<b>85</b>	< 1	37	39
		14484	0 - 5	< 0.8	6	25	< 0.8	32	10	<b>76</b>	11	< 1.5	<b>73</b>	< 1	35	38
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.3.2:** E.P. Franco Nord Sampling Locations - 2001.

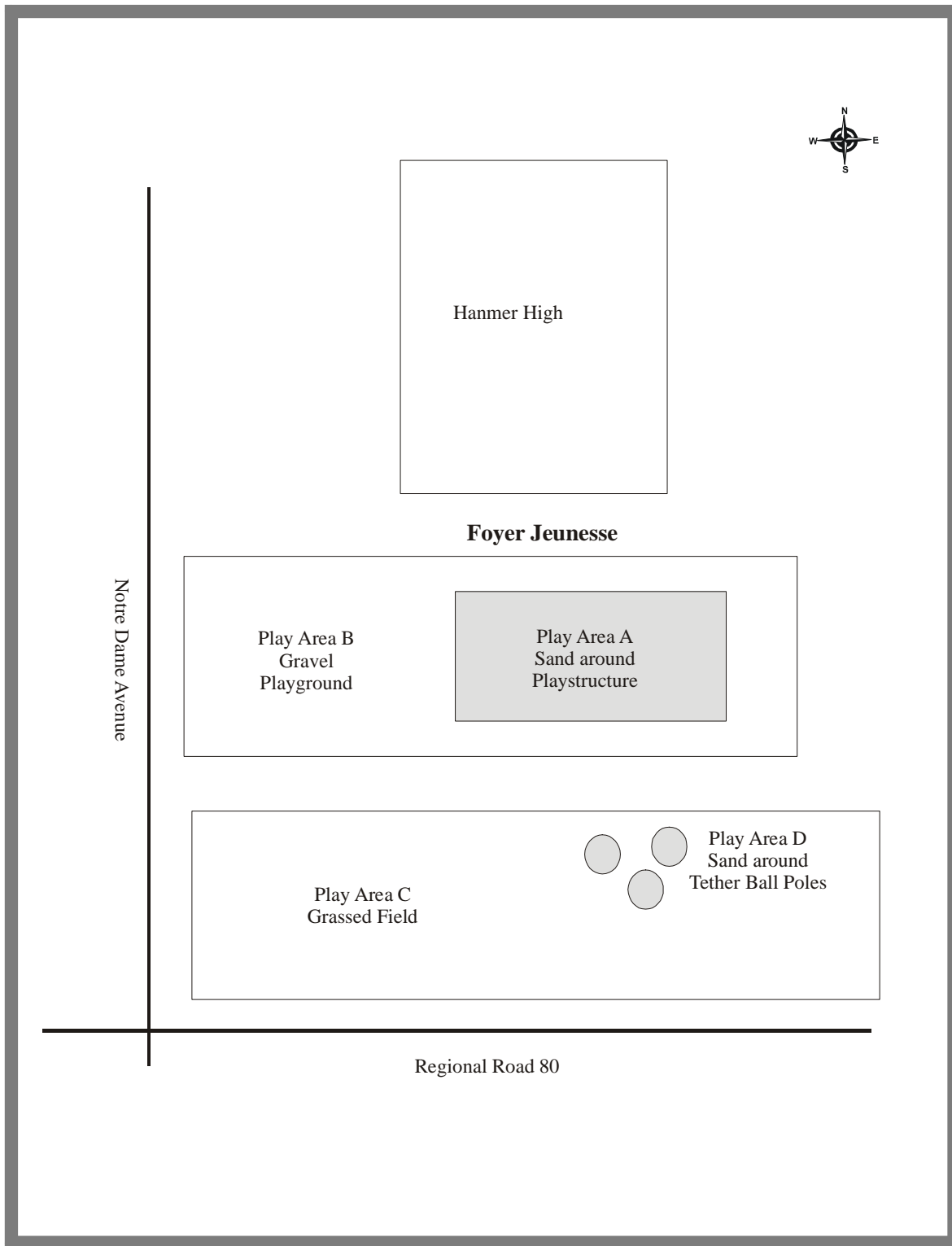
### 2.3.3 E.P. Foyer Jeunesse - Conseil Scolaire du District de Grand Nord de L'Ontario 4752 Rue Notre Dame, Hanmer

E.P. Foyer Jeunesse, including Garderie Jardiniere Francophone, was sampled on July 20, 2001. Figure B2.3.3 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to sand samples that were collected from below the play structure on the south side of the school building. Area D corresponds to the sand samples taken from below the tether ball poles. Area B corresponds to gravel samples taken from the play area on the west side of the play structure (Area A). Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. Area C corresponds to the grassed area on the south side of the property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure or the tether ball poles. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. None of the samples from this property were found to have metal concentrations above the MOE Table F Ontario Soil Background Criteria. In addition, aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are slightly lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km southeast of E.P. Foyer Jeunesse, Station 350 of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 78 and 56 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.3.3:</b> Concentration of 13 Elements in Soil in µg/g Collected at E.P. Foyer Jeunesse at E.S. Hanmer, 4752 Rue Notre Dame, Hanmer - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037343	14602	0 - 15	< 0.8	< 5	16	< 0.8	24	6	13	2	< 1.5	21	< 1	26	17
		14603	0 - 15	< 0.8	< 5	18	< 0.8	28	6	16	3	< 1.5	25	< 1	33	19
Area B gravel	5037344	14604	0 - 5	< 0.8	< 5	40	< 0.8	43	10	55	9	< 1.5	40	< 1	42	40
		14605	0 - 5	< 0.8	< 5	40	< 0.8	43	10	49	10	< 1.5	38	< 1	42	37
Area C grass	5037345	14596	0 - 5	< 0.8	7	32	< 0.8	25	4	27	10	< 1.5	39	< 1	22	24
		14597	0 - 5	< 0.8	6	36	< 0.8	26	5	35	12	< 1.5	42	< 1	25	27
		14598	5 - 10	< 0.8	6	31	< 0.8	25	4	19	9	< 1.5	29	< 1	24	21
		14599	5 - 10	< 0.8	< 5	30	< 0.8	24	4	16	7	< 1.5	28	< 1	22	18
		14600	10 - 20	< 0.8	< 5	28	< 0.8	23	4	13	6	< 1.5	23	< 1	21	17
14601	10 - 20	< 0.8	< 5	27	< 0.8	24	4	12	5	< 1.5	23	< 1	23	19		
Area D sand	5037346	14606	0 - 15	< 0.8	< 5	22	< 0.8	24	6	16	2	< 1.5	39	< 1	30	16
Table F (results in bold)				<b>1.0</b>	<b>14</b>	<b>190</b>	<b>1.0</b>	<b>67</b>	<b>19</b>	<b>56</b>	<b>55</b>	<b>2.5</b>	<b>43</b>	<b>1.4</b>	<b>91</b>	<b>150</b>
Table A (results in bold and underlined)				<b><u>13</u></b>	<b><u>20</u></b>	<b><u>750</u></b>	<b><u>12</u></b>	<b><u>750</u></b>	<b><u>40</u></b>	<b><u>225</u></b>	<b><u>200</u></b>	<b><u>5.0</u></b>	<b><u>150</u></b>	<b><u>10</u></b>	<b><u>200</u></b>	<b><u>600</u></b>
<b>&lt; - less than the Method Detection Limit.</b>				<b>Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.</b>												



**Figure B2.3.3:** E.P. Foyer Jeunesse Sampling Locations - 2001.

### 2.3.4 E.S. Hanmer - Conseil Scolaire du District de Grand Nord de L'Ontario 4800 Rue Notre Dame, Hanmer

E.S. Hanmer was sampled on July 20, 2001. Figure B2.3.4 details the sampling locations at this property. Samples were taken from four areas on the school property. Areas A and B correspond to the grassed area of the east soccer field and the worn areas around the soccer goal posts, respectively. Due to the compacted nature of Areas A and B, it was only possible to sample the surface soil (0-5 cm). Area C corresponds to the grassed area of the west soccer field. Area D corresponds to the sand samples taken from the landing area of the long jump pit. Due to the constant mixing of sand and the homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and lead (Pb) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in samples taken from the surface soil samples from east and west grassed soccer fields. The highest nickel and lead concentrations found in these samples was 62 and 79 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km southeast, 2 km southwest, and 2.5 km northwest of E.S. Hanmer, Stations 350, 346, and 347, respectively, of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 43 to 150 and 35 to 110 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037339	14586	0 - 5	< 0.8	< 5	42	< 0.8	37	6	33	<b>79</b>	< 1.5	<b>50</b>	< 1	27	46
		14587	0 - 5	< 0.8	< 5	52	< 0.8	39	7	46	<b>78</b>	< 1.5	<b>62</b>	< 1	30	44
Area B soil	5037340	14588	0 - 5	< 0.8	< 5	32	< 0.8	29	5	30	25	< 1.5	41	< 1	28	30
Area C grass	5037341	14589	0 - 5	< 0.8	6	36	< 0.8	31	5	39	12	< 1.5	<b>50</b>	< 1	30	27
		14590	0 - 5	< 0.8	< 5	33	< 0.8	28	5	36	11	< 1.5	<b>46</b>	< 1	27	26
		14591	5 - 10	< 0.8	< 5	29	< 0.8	27	4	29	9	< 1.5	37	< 1	28	23
		14592	5 - 10	< 0.8	< 5	23	< 0.8	23	4	31	8	< 1.5	42	< 1	25	17
		14593	10 - 20	< 0.8	< 5	27	< 0.8	26	4	30	7	< 1.5	34	< 1	27	19
14594	10 - 20	< 0.8	< 5	22	< 0.8	20	4	29	8	< 1.5	33	< 1	22	18		
Area D sand	5037342	14595	0 - 15	< 0.8	< 5	21	< 0.8	25	6	18	3	< 1.5	25	< 1	33	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

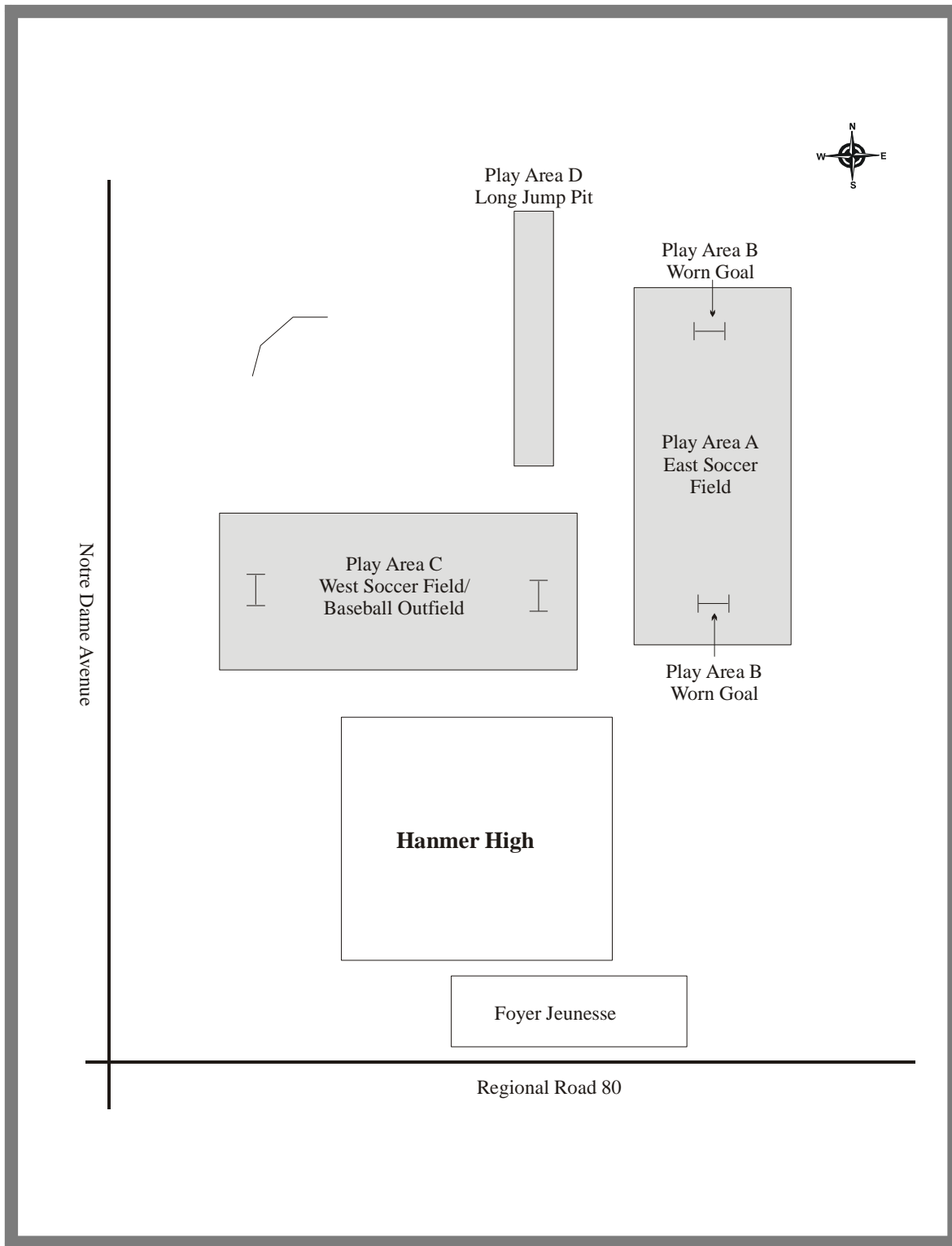


Figure B2.3.4: E.S. Hanmer Sampling Locations - 2001.



### 2.3.5 E.P. Jeanne-Sauve - Conseil Scolaire du District de Grand Nord de L'Ontario 300 Rue Van Horne, Sudbury

E.P. Jeanne-Sauve was sampled on July 5, 2001. Figure B2.3.5 details the sampling locations at this property. Samples were taken from six areas on the school property. Area A corresponds to the grassed areas of the baseball diamond outfields. Area B corresponds to samples taken from the worn area around home plate for both baseball diamond infields. Due to the compacted nature of Areas A and B, it was only possible to sample the surface soil (0-5 cm). Area D corresponds to the grassed area on the northwest corner of the school building. Areas C, E, and F correspond to sand samples collected from the sand boxes located northwest of the school building. Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other samples taken from this property. The highest nickel and copper concentrations, 130 ppm each, were found in the surface soil of the grassed play area northwest of the school building. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

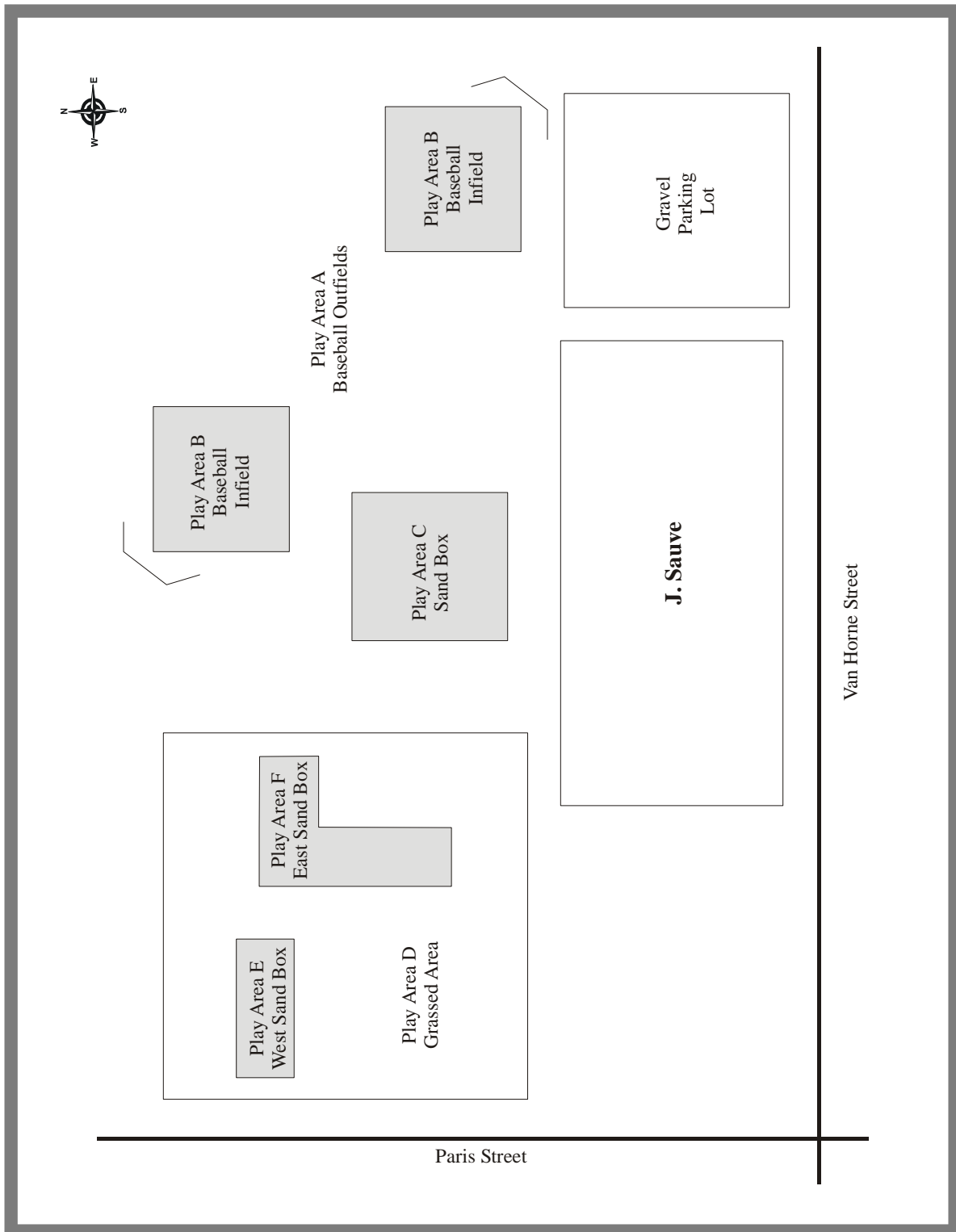
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037089	14179	0 - 5	< 0.8	< 5	43	< 0.8	33	7	<b>92</b>	17	< 1.5	<b>110</b>	< 1	27	33
		14180	0 - 5	< 0.8	< 5	40	< 0.8	29	7	<b>110</b>	19	< 1.5	<b>130</b>	< 1	24	36
Area B soil	5037090	14183	0 - 5	< 0.8	< 5	41	< 0.8	30	7	<b>94</b>	16	< 1.5	<b>110</b>	< 1	27	73
Area C sand	5037091	14184	0 - 15	< 0.8	< 5	21	< 0.8	28	7	19	3	< 1.5	20	< 1	27	17
Area D grass	5037092	14181	0 - 5	< 0.8	< 5	34	< 0.8	26	7	<b>110</b>	22	< 1.5	<b>99</b>	< 1	24	33
		14182	0 - 5	< 0.8	< 5	34	< 0.8	28	8	<b>130</b>	28	< 1.5	<b>130</b>	1.4	25	38
		14187	5 - 10	< 0.8	< 5	31	< 0.8	25	4	47	8	< 1.5	<b>49</b>	< 1	25	23
		14188	5 - 10	< 0.8	< 5	32	< 0.8	27	5	<b>66</b>	14	< 1.5	<b>64</b>	< 1	27	26
		14189	10 - 20	< 0.8	< 5	39	< 0.8	29	4	25	7	< 1.5	37	< 1	32	23
14190	10 - 20	< 0.8	< 5	35	< 0.8	25	4	25	7	< 1.5	35	< 1	26	22		
Area E sand	5030970	14185	0 - 15	< 0.8	< 5	18	< 0.8	25	7	21	3	< 1.5	20	< 1	28	16
Area F sand	5037093	14186	0 - 15	< 0.8	< 5	19	< 0.8	28	7	23	3	< 1.5	25	< 1	28	17
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit.

Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

These soil results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km east of E.P. Jeanne-Sauve, Station 75 of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil

concentrations as high as 830 and 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.3.5:** J. Sauve Soil Sampling Locations - 2001.

### 2.3.6. Jean-Ethier-Blais - Conseil Scolaire du District de Grand Nord de L'Ontario 2190 Boulevard Lasalle, Sudbury

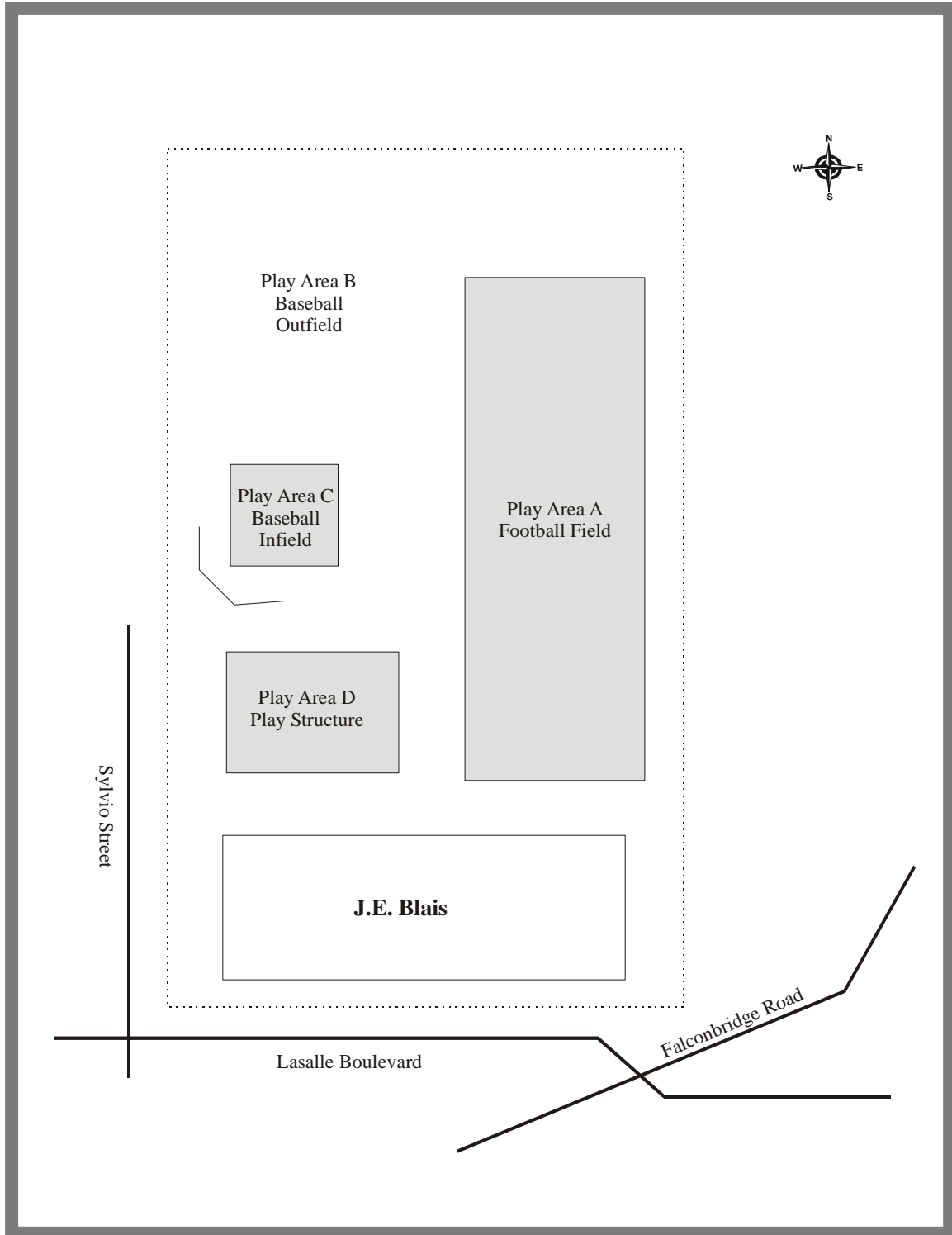
Jean-Ethier-Blais was sampled on July 18, 2001. Figure B2.3.6 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to the grassed areas of the football field. Area B corresponds to the grassed area of the baseball diamond outfield. Area C corresponds to the baseball diamond infield. Due to the compacted nature of Areas A and C, it was only possible to sample the 10 - 20 cm depth for one replicate of the football field and the surface soil layer of the baseball diamond infield. Area D corresponds to sand samples taken from beneath the play structure. Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for selected samples taken from this property. The highest nickel and copper concentrations, 100 and 85 ppm, respectively, were found in the surface soil of the grassed area of the baseball diamond outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037151	14391	0 - 5	< 0.8	< 5	18	< 0.8	23	5	12	2	< 1.5	18	< 1	25	16
		14392	0 - 5	< 0.8	< 5	17	< 0.8	24	5	13	2	< 1.5	18	< 1	27	18
		14393	5 - 10	< 0.8	< 5	44	< 0.8	30	7	52	9	< 1.5	<b>63</b>	< 1	32	40
		14394	5 - 10	< 0.8	< 5	42	< 0.8	32	7	54	8	< 1.5	<b>61</b>	< 1	32	46
		14401	10 - 20	< 0.8	5	32	< 0.8	32	7	38	9	< 1.5	<b>44</b>	< 1	26	45
Area B grass	5037152	14395	0 - 5	< 0.8	< 5	15	< 0.8	20	5	11	2	< 1.5	16	< 1	23	12
		14396	0 - 5	< 0.8	< 5	45	< 0.8	34	8	<b>85</b>	15	< 1.5	<b>100</b>	< 1	31	33
		14397	5 - 10	< 0.8	< 5	42	< 0.8	37	7	<b>77</b>	13	< 1.5	<b>86</b>	< 1	34	31
		14398	5 - 10	< 0.8	5	37	< 0.8	33	7	<b>60</b>	10	< 1.5	<b>73</b>	< 1	32	26
		14402	10 - 20	< 0.8	< 5	32	< 0.8	23	4	31	7	< 1.5	<b>45</b>	< 1	23	20
		14403	10 - 20	< 0.8	< 5	28	< 0.8	25	4	25	6	< 1.5	38	< 1	24	18
Area C soil	5037153	14399	0 - 5	< 0.8	< 5	29	< 0.8	26	5	33	8	< 1.5	42	< 1	25	41
		14400	0 - 5	< 0.8	< 5	40	< 0.8	24	5	33	8	< 1.5	<b>59</b>	< 1	26	26
Area D sand	5037154	14404	0 - 15	< 0.8	< 5	16	< 0.8	22	5	13	2	< 1.5	19	< 1	34	22
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These soil results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northeast of E.P. Jean-Ethier-Blais, Station 42 of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated surface soil nickel and copper

concentration ranges of 46 to 170 ppm and 26 to 150 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.3.6:** J.E. Blais Soil Sampling Locations - 2001.

### 2.3.7 E.S. Macdonald Cartier - Conseil Scolaire du District de Grand Nord de L'Ontario 37 Boulevard Lasalle West, Sudbury

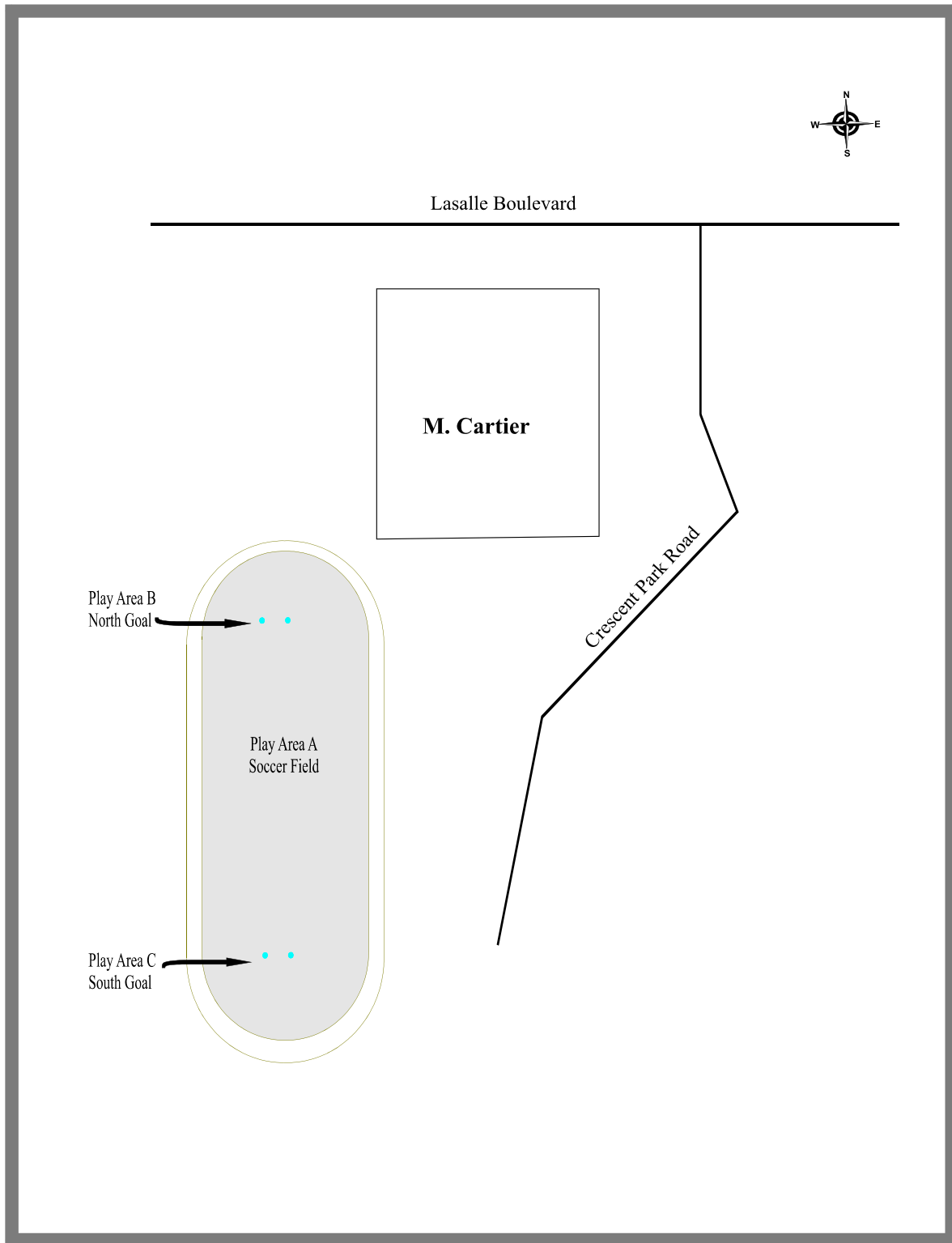
E.S. Macdonald Cartier was sampled on July 19, 2001. Figure B2.3.7 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the north and south soccer goal posts, respectively. Due to the compacted nature of Areas A, B, and C, it was only possible to sample the surface soil layer (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples taken from this property. Copper (Cu), lead (Pb), and selenium (Se) were also elevated above the MOE Table F Ontario Soil Background Criteria for selected samples from this property. The highest nickel, copper, lead and selenium concentrations, 170, 140, 150, and 2 ppm, respectively, were found in the surface soil of the grassed area of the soccer field. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. Only one sample taken from the grassed area of the soccer field was elevated above the MOE Table A Effects Based Soil Criteria (MOE 1997).

The nickel and copper soil results are lower than those reported historically, while the lead soil results are similar to those previously reported. Previous MOE sampling of undisturbed soils approximately 1.5 km southwest, 2 km southeast, and 0.8 km north of E.S. Macdonald Cartier, Stations 362, 85, and 337, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated surface soil nickel and copper concentration ranges of 56 to 375 ppm and 35 to 305 ppm, respectively. The highest lead surface soil concentration reported for Station 337 was 91 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037203	14473	0 - 5	< 0.8	5	38	< 0.8	29	7	<b>99</b>	35	< 1.5	<b>110</b>	< 1	27	25
		14474	0 - 5	< 0.8	6	45	0.9	54	9	<b>140</b>	<b>150</b>	< 1.5	<u>170</u>	<b>2</b>	25	31
Area B soil	5037204	14475	0 - 5	< 0.8	6	36	< 0.8	31	6	51	13	< 1.5	<b>73</b>	< 1	29	24
Area C soil	5037205	14476	0 - 5	< 0.8	< 5	32	< 0.8	25	5	37	9	< 1.5	<b>47</b>	< 1	25	21
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.3.7:** E.S. Macdonald Cartier Sampling Locations - 2001.

### 2.3.8 E.P. Sud Ouest Publique (Helene-Gravel) - Conseil Scolaire du District de Grand Nord de L'Ontario, 1412 Rue Stephen, Sudbury

E.P. Sud Ouest Publique, recently renamed E.P. Helene-Gravel, was sampled on July 4, 2001. Figure B2.3.8 details the sampling locations at this property. Samples were taken from six areas on the school property. Area A corresponds to the baseball diamond infield. Area B corresponds to the grassed area of the baseball diamond outfield. Area C corresponds to the grassed area of the soccer field. Areas D and E correspond to the worn areas around the west and east soccer goal posts, respectively. Due to the compacted nature of Areas A, B, C, D, and E, it was only possible to sample the surface soil layer (0-5 cm). Area E corresponds to the sand samples that were taken from beneath the play structure. Due to the constant mixing of sand and the homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

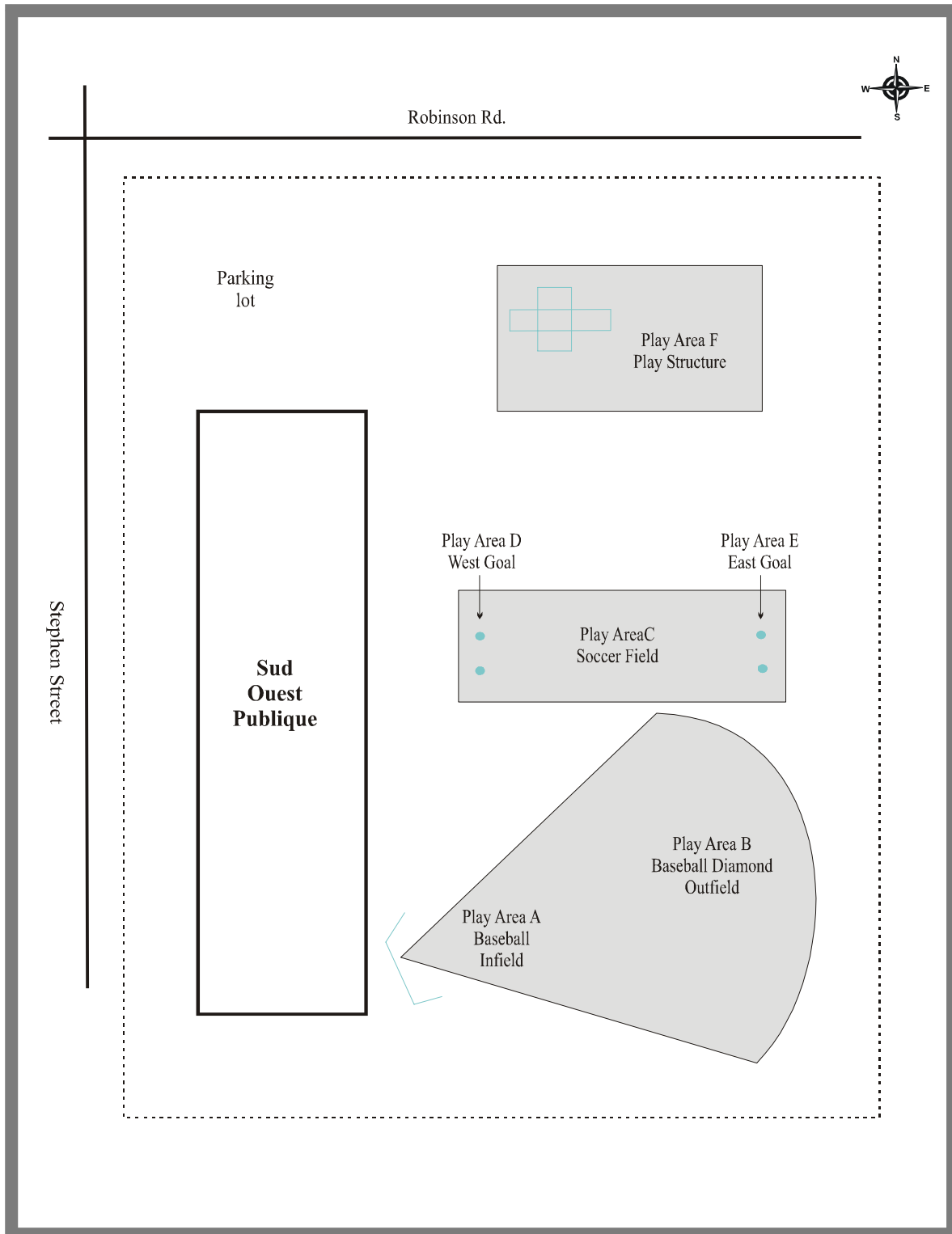
Nickel (Ni), and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for the sand that was taken from beneath the play structures. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for almost all other samples taken from this property. Lead (Pb) and selenium (Se) were also elevated above the MOE Table F Ontario Soil Background Criteria for selected sites. Nickel concentrations were elevated above the MOE Table A Effects Based Soil Criteria in surface soil samples collected from the baseball diamond on this property. The highest nickel and copper concentrations, 190 and 170 ppm, respectively, were found in the surface soil of the grassed area of the baseball diamond outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

**Table B2.3.8:** Concentration of 13 Elements in Soil in µg/g Collected at E.P. Sud Ouest Publique (Helene-Gravel), 1412 Rue Stephen, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A soil	5037041	14096	0 - 5	< 0.8	< 5	49	< 0.8	35	8	<b>140</b>	18	< 1.5	<b>160</b>	< 1	31	35
		14097	0 - 5	< 0.8	< 5	47	< 0.8	35	9	<b>130</b>	28	< 1.5	<b>170</b>	< 1	30	35
Area B grass	5037042	14098	0 - 5	< 0.8	< 5	48	< 0.8	34	8	<b>120</b>	16	< 1.5	<b>140</b>	< 1	30	34
		14099	0 - 5	0.8	< 5	57	< 0.8	36	9	<b>170</b>	19	< 1.5	<b>190</b>	<b>1.7</b>	32	39
Area C grass	5037043	14090	0 - 5	< 0.8	< 5	44	< 0.8	31	8	<b>130</b>	16	< 1.5	<b>150</b>	1.3	27	30
		14091	0 - 5	< 0.8	< 5	44	< 0.8	30	8	<b>130</b>	31	< 1.5	<b>130</b>	1.1	27	31
Area D soil	5037044	14092	0 - 5	<b>2</b>	< 5	37	< 0.8	30	8	<b>110</b>	<b>120</b>	< 1.5	<b>120</b>	< 1	29	29
Area E soil	5037045	14093	0 - 5	< 0.8	< 5	26	< 0.8	30	9	47	4	< 1.5	<b>47</b>	< 1	31	23
Area F sand	5037046	14094	0 - 15	< 0.8	< 5	46	< 0.8	33	8	<b>110</b>	14	< 1.5	<b>130</b>	< 1	29	28
		14095	0 - 15	< 0.8	< 5	34	< 0.8	33	8	54	4	< 1.5	<b>53</b>	< 1	36	32
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

The nickel and copper soil results are lower to those reported historically, while the lead soil results are higher than previously reported. Previous MOE sampling of undisturbed soils approximately 0.8 km southwest of E.P. Sud Ouest Publique (E.P. Helene-Gravel), Station 368 of the MOE Sudbury

2000 Report, for the City of Greater Sudbury (MOE 2001), indicated surface soil nickel and copper concentrations of 400 and 490 ppm, respectively. The highest lead surface soil concentration reported for Station 368 was 30 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.3.8:** Sud Ouest Publique (E.p. Helene-Gravel) Soil Sampling Locations - 2001.



## 2.4 Le Conseil Scolaire Catholique du Nouvel-Ontario

As of June 2001, Le Conseil Scolaire Catholique du Nouvel-Ontario provided the MOE with a list of 31 school properties. MOE representatives were able to collect samples from all but two properties. Both St. Aloysius and St. Louis de Gonzague were paved and did not have any play areas to sample. For each school there is a section below describing the results, a table with a subset of the results, and a map showing the sampling locations. The maps were produced from field notes. They are not to scale and the locations of the buildings, boundaries and sampling sites shown are only approximate. The schools are listed alphabetically. Complete results for each school are listed in Table 4.1 along with the results from the other school boards.

**Table B2.4:** Number of Le Conseil Scolaire Catholique du Nouvel-Ontario school where at least one sample exceed MOE soil criteria.

Number of Schools	Nickel Exceedences		Copper Exceedences		Cobalt Exceedences		Arsenic Exceedences		Lead Exceedences	
	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A
31	28	7	6	0	4	0	0	0	0	0

In order to fit all of the results data onto one table the standard chemical abbreviations had to used. To interpret the tables properly, the chart below can be used to translate the abbreviations.

Chemical Symbols Used in Results Tables				
<b>Al</b> - aluminum	<b>Sb</b> - antimony	<b>As</b> - arsenic	<b>Ba</b> - barium	<b>Be</b> - beryllium
<b>Cd</b> - cadmium	<b>Ca</b> - calcium	<b>Cr</b> - chromium	<b>Co</b> - cobalt	<b>Cu</b> - copper
<b>Fe</b> - iron	<b>Pb</b> - lead	<b>Mg</b> - magnesium	<b>Mn</b> - manganese	<b>Mo</b> - molybdenum
<b>Ni</b> - nickel	<b>Se</b> - selenium	<b>Sr</b> - strontium	<b>V</b> - vanadium	<b>Zn</b> - zinc

Please note as of 2004, Le Conseil Scolaire Catholique du Nouvel-Ontario has sold one school, St. Michel (2.4.25) to the Sudbury Catholic District School Board.

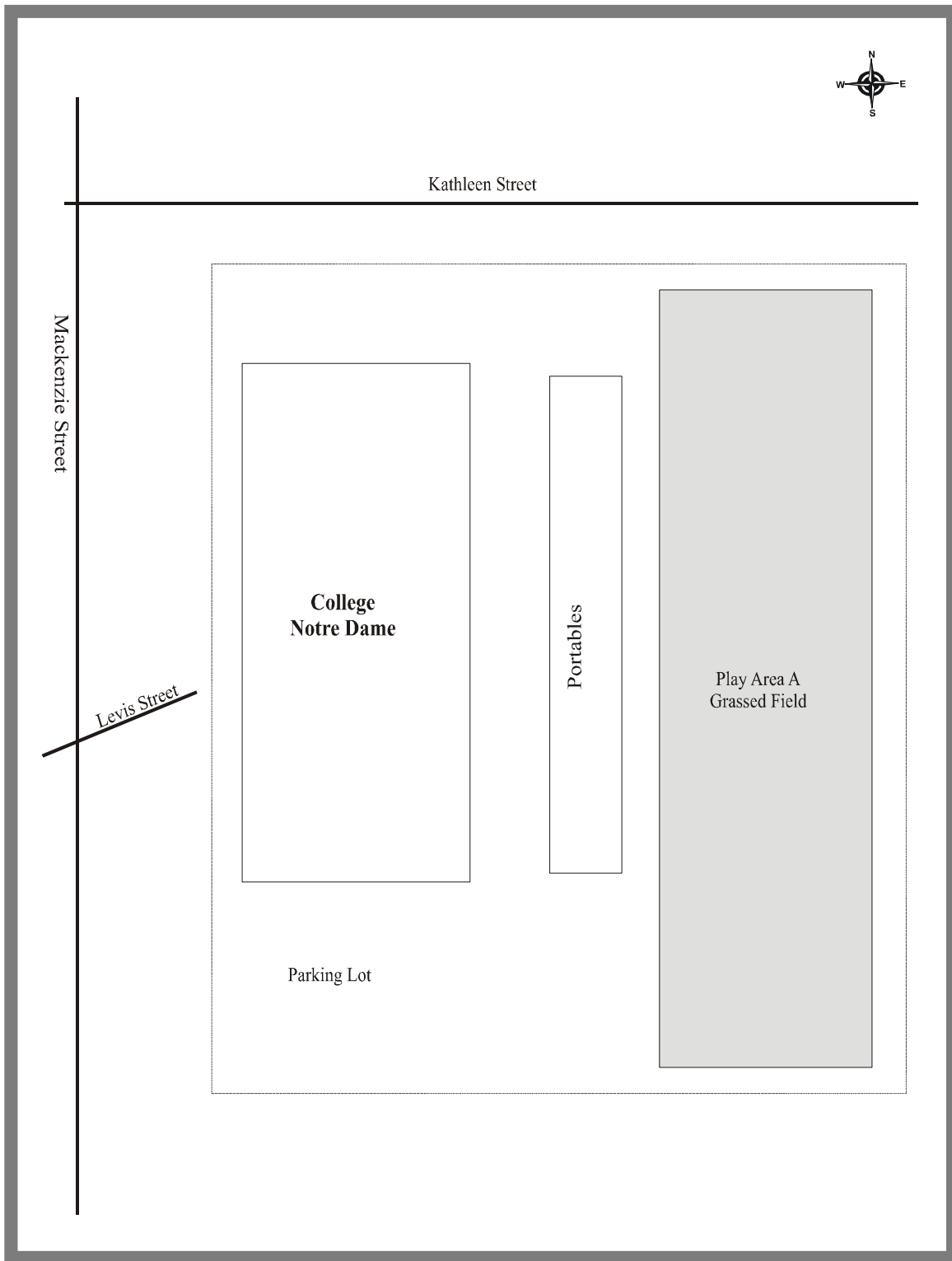
### 2.4.1 College Notre Dame - Le Conseil Scolaire Catholique du Nouvel-Ontario 100 Rue Levis, Sudbury

College Notre Dame was sampled on July 16, 2001. Figure B2.4.1 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the grassed field located behind the portables. Due to the compacted nature of this area and/or the presence of bedrock, it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metals were not elevated above the MOE Table F Ontario Soil Background Criteria at any site from this property. All metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northwest, 1 km west, and 2 km southeast of College Notre Dame, Stations 362, 84, and 75, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 230 to 740 and 230 to 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037135	14244	0 - 5	< 0.8	6	36	< 0.8	25	5	27	8	< 1.5	38	< 1	28	20
		14245	0 - 5	< 0.8	5	33	< 0.8	25	4	26	8	< 1.5	39	< 1	29	21
Table F (results in bold)				1.0	14	190	1.	67	19	56	55		43		91	150
Table A (results in bold and				13	20	750	12.	750	40	225	200		150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.1:** College Notre Dame Sampling Locations - 2001.

## 2.4.2 E.S.C. l'Heritage - Le Conseil Scolaire Catholique du Nouvel-Ontario 323 2<sup>nd</sup> Avenue, Sudbury

E.S.C. l'Heritage was sampled on July 17, 2001. Figure B2.4.2 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Areas B and C correspond to the worn areas around the north and south soccer goal posts, respectively. Due to the compacted nature of the soccer field, it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

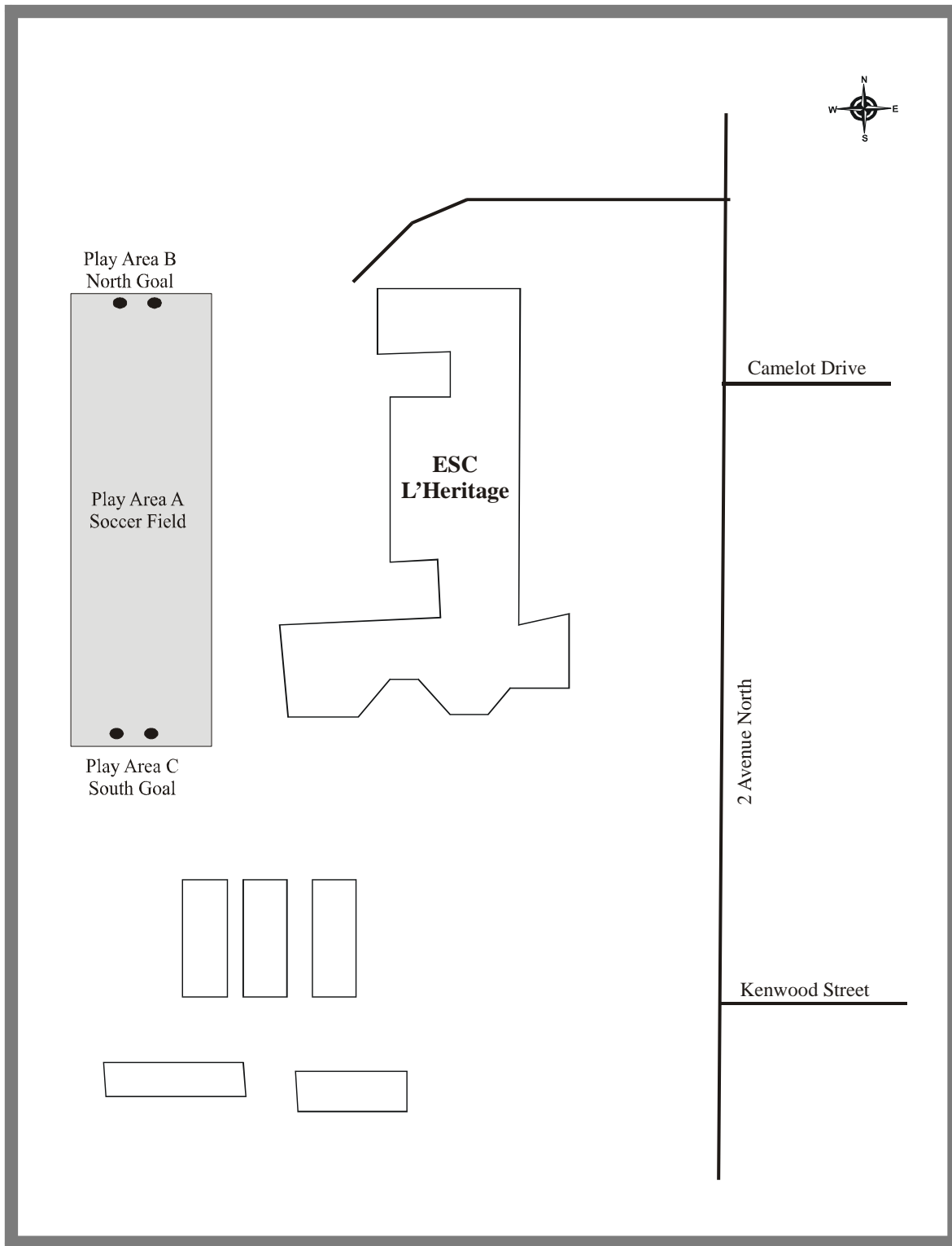
Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil in both samples from the grassed area of the soccer field and only nickel was elevated for the north goal post area. The highest nickel concentration occurred in the surface soil of the grassed soccer field, 120 and 100 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km south and 1 km north of E.S.C. l'Heritage, Stations 77 and 361, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 66 to 210 and 52 to 220 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.2:** Concentration of 13 Elements in Soil in µg/g Collected at E.S.C L'Heritage, 323 2<sup>nd</sup>Avenue, Sudbury -

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037141	14307	0 - 5	< 0.8	5	47	< 0.8	42	9	<b>100</b>	42	< 1.5	<b>120</b>	< 1	31	34
		14308	0 - 5	< 0.8	7	50	< 0.8	43	9	<b>76</b>	24	< 1.5	<b>100</b>	< 1	34	33
Area B soil	5037142	14309	0 - 5	< 0.8	5	45	< 0.8	33	6	39	10	< 1.5	<b>52</b>	< 1	31	25
Area C soil	5037143	14310	0 - 5	< 0.8	6	44	< 0.8	34	6	29	9	< 1.5	43	< 1	30	29
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.2:** E.S.C. l'Heritage Sampling Locations - 2001.

### 2.4.3 E.S.C. Champlain - Le Conseil Scolaire Catholique du Nouvel-Ontario 61 Brookside Drive, Chelmsford

E.S.C. Champlain was sampled on July 19, 2001. Figure B2.4.3 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area of the soccer field. Area B corresponds to the worn areas of the baseball diamond infield. Due to the compacted nature of Areas A and B it was only possible to sample the surface soil (0 - 5 cm). Area C corresponds to sand collected from the landing area of the long jump pit. Due to the constant mixing of sand and the homogeneous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

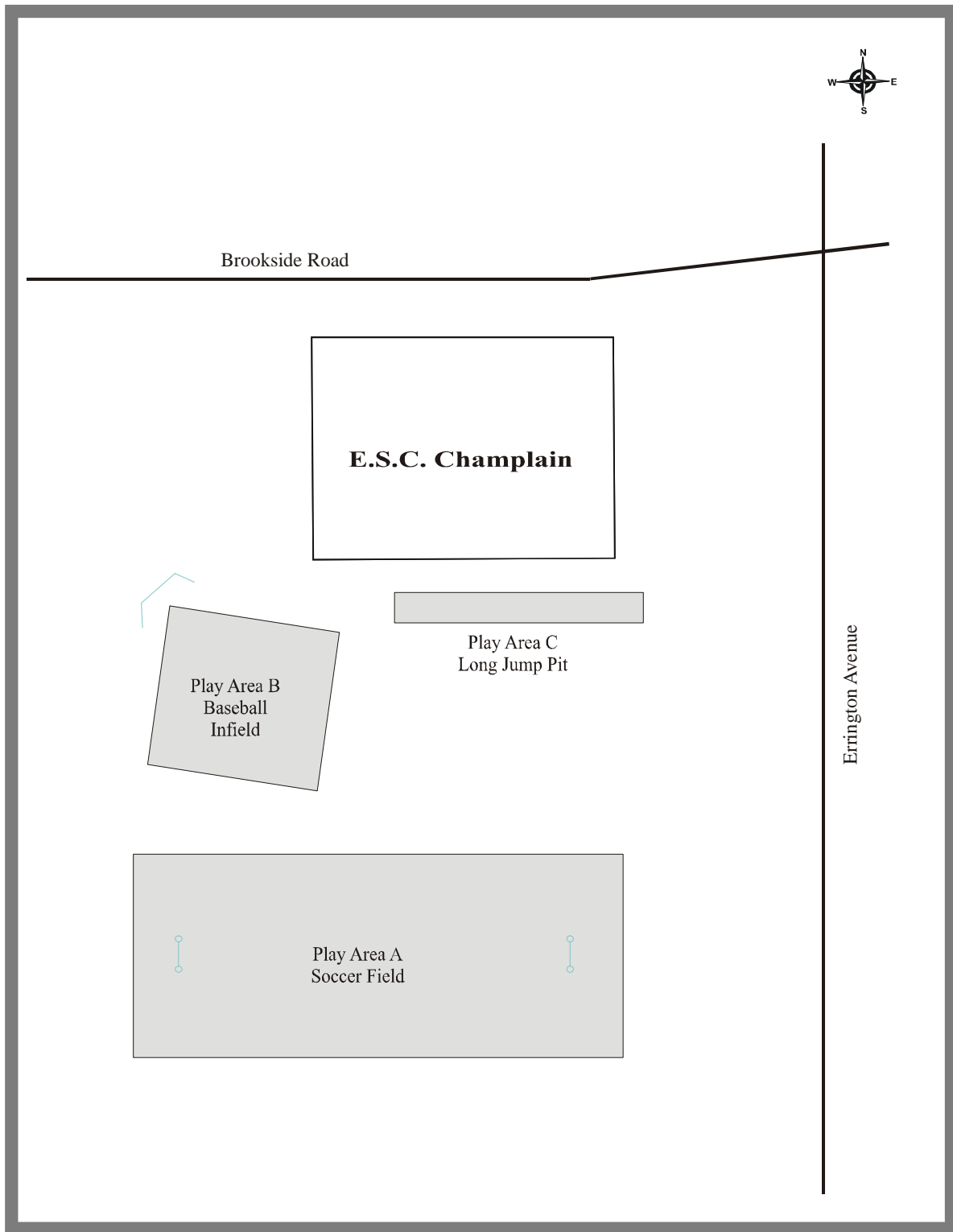
Metal concentrations were not elevated in the sand collected from the landing area of the long jump pit. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. One replicate of the soccer field surface soil had a nickel concentration marginally elevated above the MOE Table F Ontario Soil Background Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 3.5 km northwest, 2.5 km southwest, and 4 km southeast of E.S.C. Champlain, Stations 386, 385, and 384, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 65 to 170 and 49 to 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.3:** Concentration of 13 Elements in Soil in µg/g Collected at E.S.C. Champlain, 61 Brookside Drive, Chelmsford - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037382	14536	0 - 5	< 0.8	< 5	29	< 0.8	25	5	32	9	< 1.5	41	< 1	27	21
		14537	0 - 5	< 0.8	< 5	30	< 0.8	24	5	33	10	< 1.5	<b>44</b>	< 1	26	22
Area B soil	5037383	14538	0 - 5	< 0.8	< 5	46	< 0.8	29	7	24	6	< 1.5	32	< 1	30	25
Area C sand	5037384	14539	0 - 15	< 0.8	< 5	22	< 0.8	30	7	27	8	< 1.5	20	< 1	40	26
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.3:** E.S.C. Champlain Sampling Locations - 2001.

#### 2.4.4 E.S.C. l'Horizon - Le Conseil Scolaire Catholique du Nouvel-Ontario 1650 Valleyview Drive, Val Caron

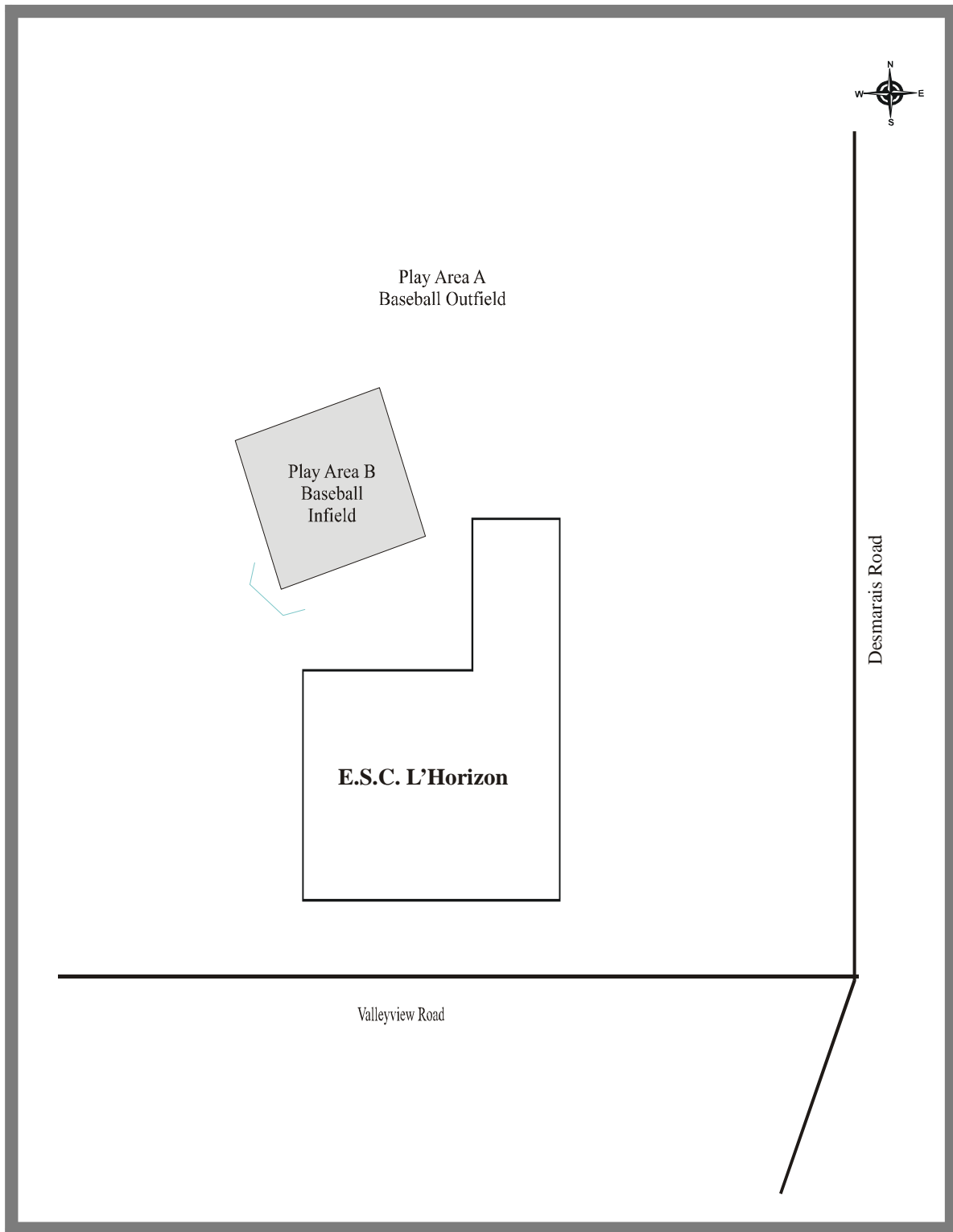
E.S.C. l'Horizon was sampled on July 23, 2001. Figure B2.4.4 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area of the baseball diamond outfield. Area B corresponds to the worn areas of the baseball diamond infield. Due to the compacted nature of the infield, it was only possible to sample the surface soil (0 - 5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the all samples from the baseball diamond outfield. The highest nickel concentration occurred in the surface soil (0-5 cm) of the outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.2 km south, 3.2 km west, and 2.5 km northeast of E.S.C. l'Horizon, Stations 340, 341, and 348, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 96 to 210 and 92 to 180 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037279	14818	0 - 5	< 0.8	< 5	47	< 0.8	33	6	35	9	< 1.5	<b>52</b>	< 1	32	30
		14819	0 - 5	< 0.8	< 5	47	< 0.8	33	6	35	9	< 1.5	<b>53</b>	< 1	32	31
		14820	5 - 10	< 0.8	< 5	48	< 0.8	33	6	33	9	< 1.5	<b>51</b>	< 1	32	30
		14821	5 - 10	< 0.8	< 5	49	< 0.8	33	6	34	9	< 1.5	<b>51</b>	< 1	32	32
		14822	10 - 20	< 0.8	< 5	50	< 0.8	34	6	33	9	< 1.5	<b>52</b>	< 1	32	36
		14823	10 - 20	< 0.8	< 5	47	< 0.8	33	6	31	8	< 1.5	<b>46</b>	< 1	33	32
Area B soil	5037280	14824	0 - 5	< 0.8	< 5	29	< 0.8	19	5	20	3	< 1.5	30	< 1	23	16
		14825	0 - 5	< 0.8	< 5	27	< 0.8	20	5	17	2	< 1.5	19	< 1	22	13
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												





**Figure B2.4.4:** E.S.C. l'Horizon Sampling Locations - 2001.

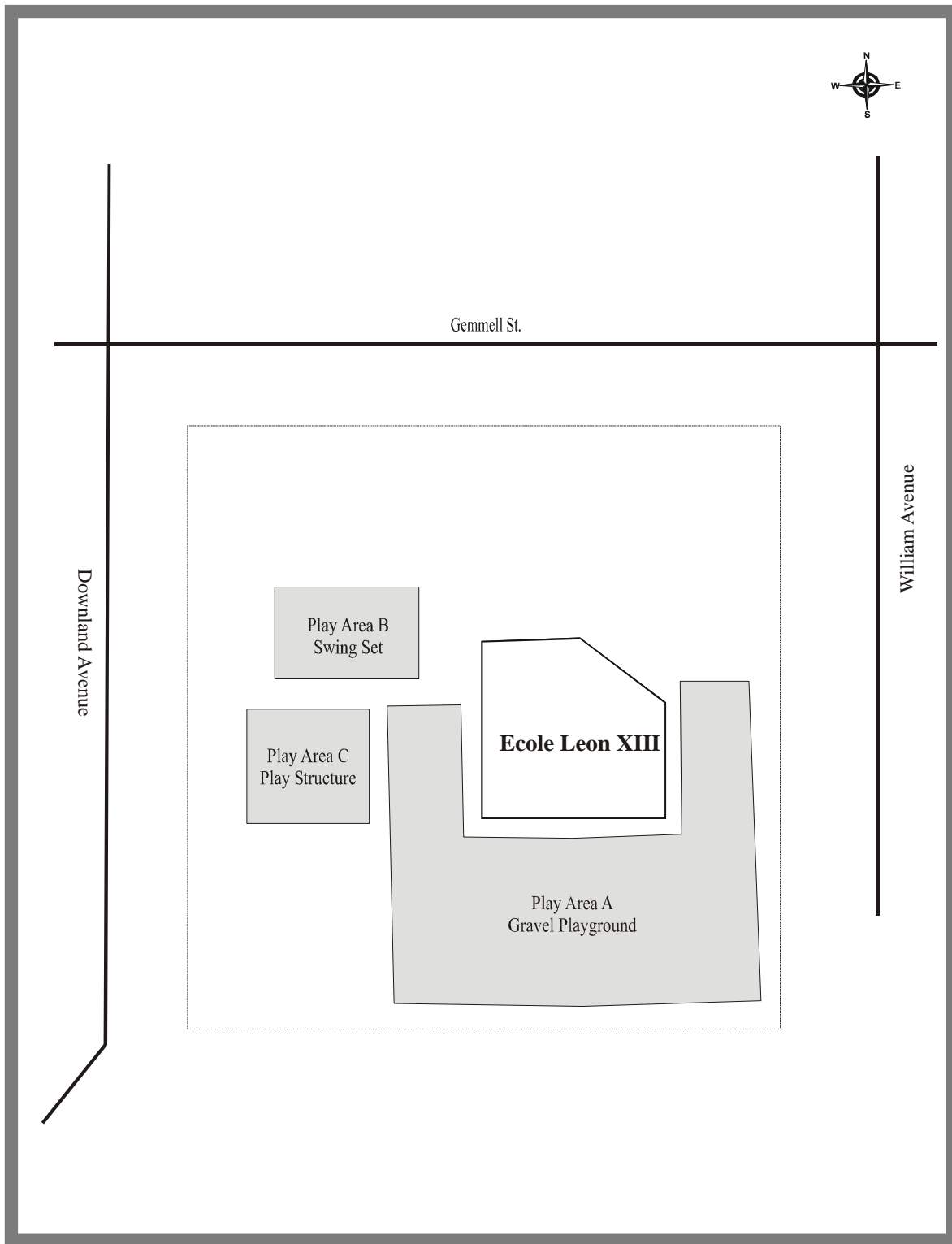
### 2.4.5 Ecole Leon XIII - Le Conseil Scolaire Catholique du Nouvel-Ontario 1311 Rue Gemmell, Sudbury

Ecole Leon XIII was sampled on July 18, 2001. Figure B2.4.5 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel playground. Areas B and C correspond to sand samples collected from below the swing set and play structure, respectively. Due to the constant mixing and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the swing set and play structure. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both gravel samples. The highest nickel and copper concentrations found were 130 and 120 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 1 km northwest, and 1 km southeast of Ecole Leon XIII, Stations 11, 86, and 361, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 45 to 375 and 35 to 305 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037181	14456	0 - 5	< 0.8	< 5	36	< 0.8	34	14	<b>120</b>	18	< 1.5	<b>130</b>	1	31	33
		14457	0 - 5	< 0.8	< 5	30	< 0.8	32	13	<b>110</b>	16	< 1.5	<b>120</b>	< 1	29	30
Area B sand	5037182	14458	0 - 15	< 0.8	< 5	20	< 0.8	22	5	16	3	< 1.5	20	< 1	23	21
Area C sand	5037183	14459	0 - 15	< 0.8	< 5	15	< 0.8	19	4	11	2	< 1.5	13	< 1	18	11
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.5:** Ecole Leon XIII Sampling Locations - 2001.

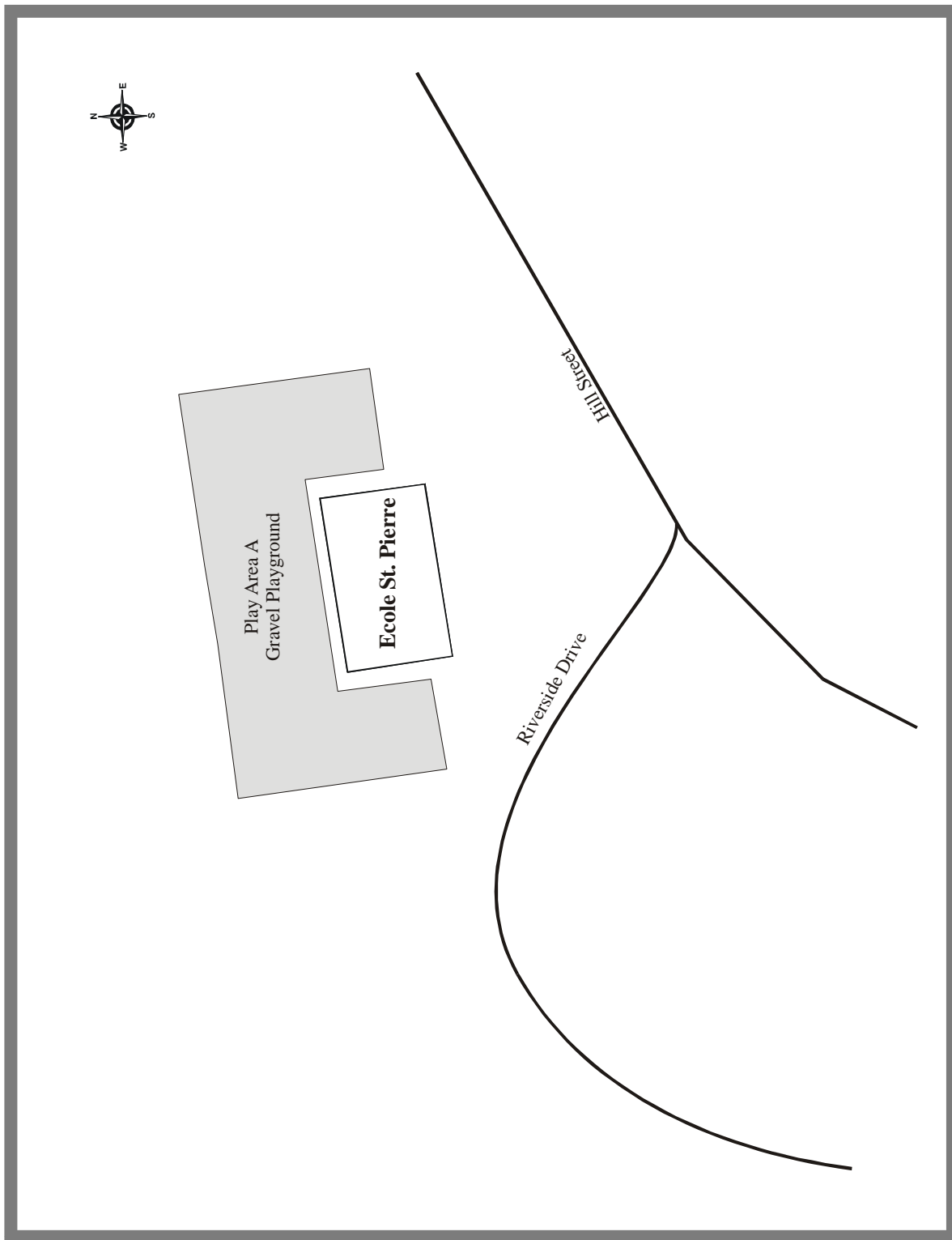
### 2.4.6 Ecole St. Pierre (formerly) - Le Conseil Scolaire Catholique du Nouvel-Ontario 102 Rue Hill, Wahnapiatae

Ecole St. Pierre was sampled on July 22, 2001 and has since been sold. Figure B2.4.6 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the west side of the school building. Due to the constant mixing and homogenous nature of the gravel areas, samples were collected with hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample on this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both gravel samples. The highest nickel and copper concentrations found were 73 and 73 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 1 km north, and 1 km southeast of Ecole St. Pierre (formerly), Stations 64, 418, and 65, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 88 to 2100 and 39 to 760 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.4.6:</b> Concentration of 13 Elements in Soil in $\mu\text{g/g}$ Collected at Ecole St. Pierre (formerly), 102 Rue Hill, Wahnapiatae - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037267	14748	0 - 5	< 0.8	6	48	< 0.8	40	11	<b>73</b>	13	< 1.5	<b>73</b>	< 1	36	33
		14749	0 - 5	< 0.8	5	33	< 0.8	36	10	<b>58</b>	10	< 1.5	<b>60</b>	< 1	34	29
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.6:** Ecole St. Pierre (formerly) Sampling Locations - 2001.

### 2.4.7 Ecole St. Remi (formerly) - Le Conseil Scolaire Catholique du Nouvel-Ontario 95 Rue Estelle, Sudbury

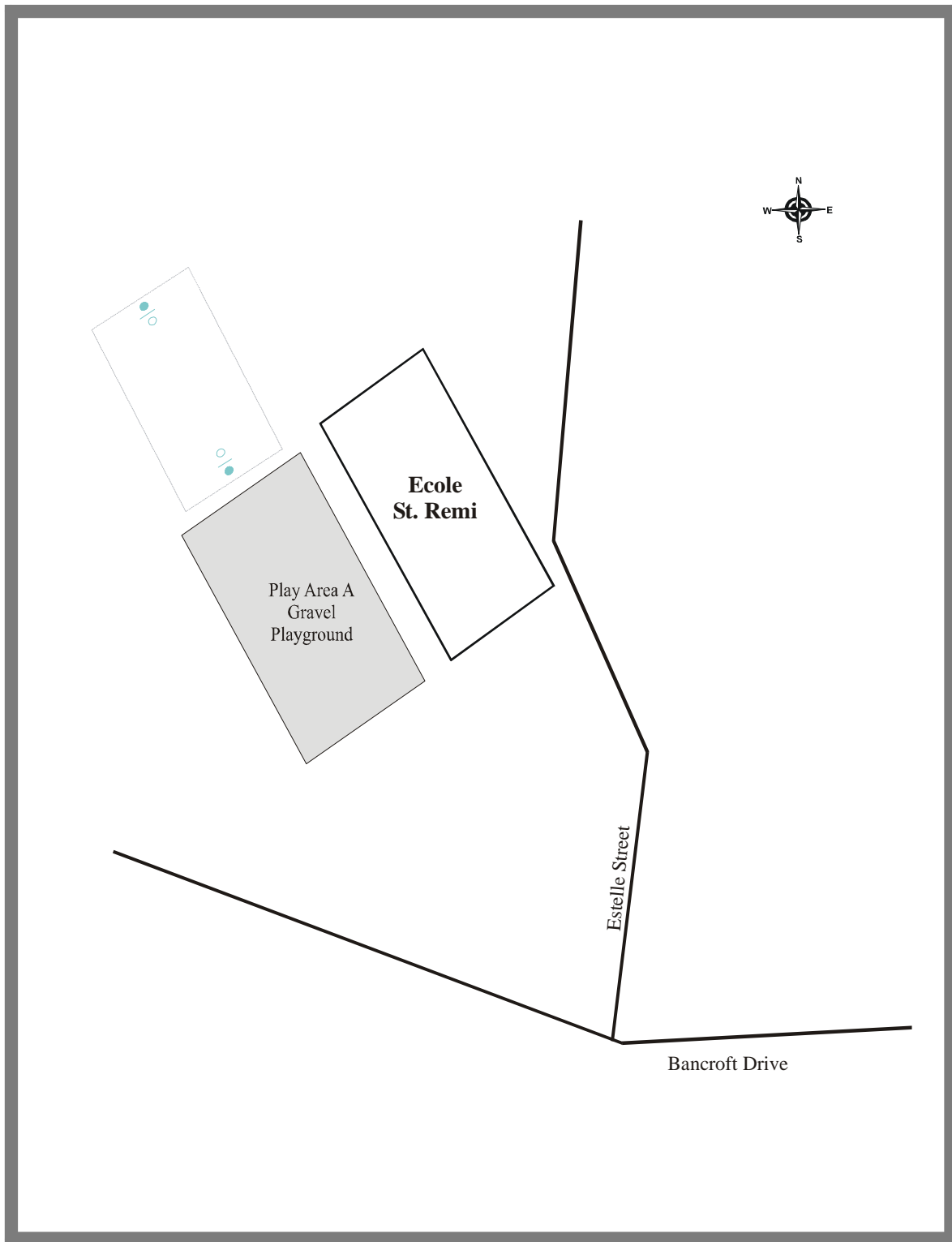
Ecole St. Remi was sampled on July 17, 2001 and has since been sold. Figure B2.4.7 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground on the west side of the school building. Due to the constant mixing and homogenous nature of the gravel areas, samples were collected with hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample on this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both gravel samples. The highest nickel and copper concentrations found were 100 and 98 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northeast, 0.5 km southwest, and 1 km south of Ecole St. Remi (formerly), Stations 410, 78, and 79, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 110 to 360 and 110 to 350 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.7:** Concentration of 13 Elements in Soil in µg/g Collected at Ecole St. Remi (formerly), 95 Rue Estelle,

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037149	14295	0 - 5	< 0.8	7	41	< 0.8	36	13	<b>72</b>	12	< 1.5	<b>79</b>	< 1	35	31
		14296	0 - 5	< 0.8	6	40	< 0.8	41	16	<b>98</b>	14	< 1.5	<b>100</b>	< 1	38	37
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.7:** Ecole St. Remi (formerly) Sampling Locations - 2001.

### 2.4.8 Ecole Ste. Agnes (Association for Community Living) - Le Conseil Scolaire Catholique du Nouvel-Ontario, 80 Rue Landry, Azilda

Ecole Ste. Agnes was sampled on July 19, 2001. At the time of sampling, the Association for Community Living inhabited this building. Figure B2.4.8 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area east of the gravel playground. Due to the compacted nature of the grassed area, it was only possible to sample to the 5-10 cm depth. Area B corresponds to the gravel playground east of the school building. Due to the constant mixing and homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

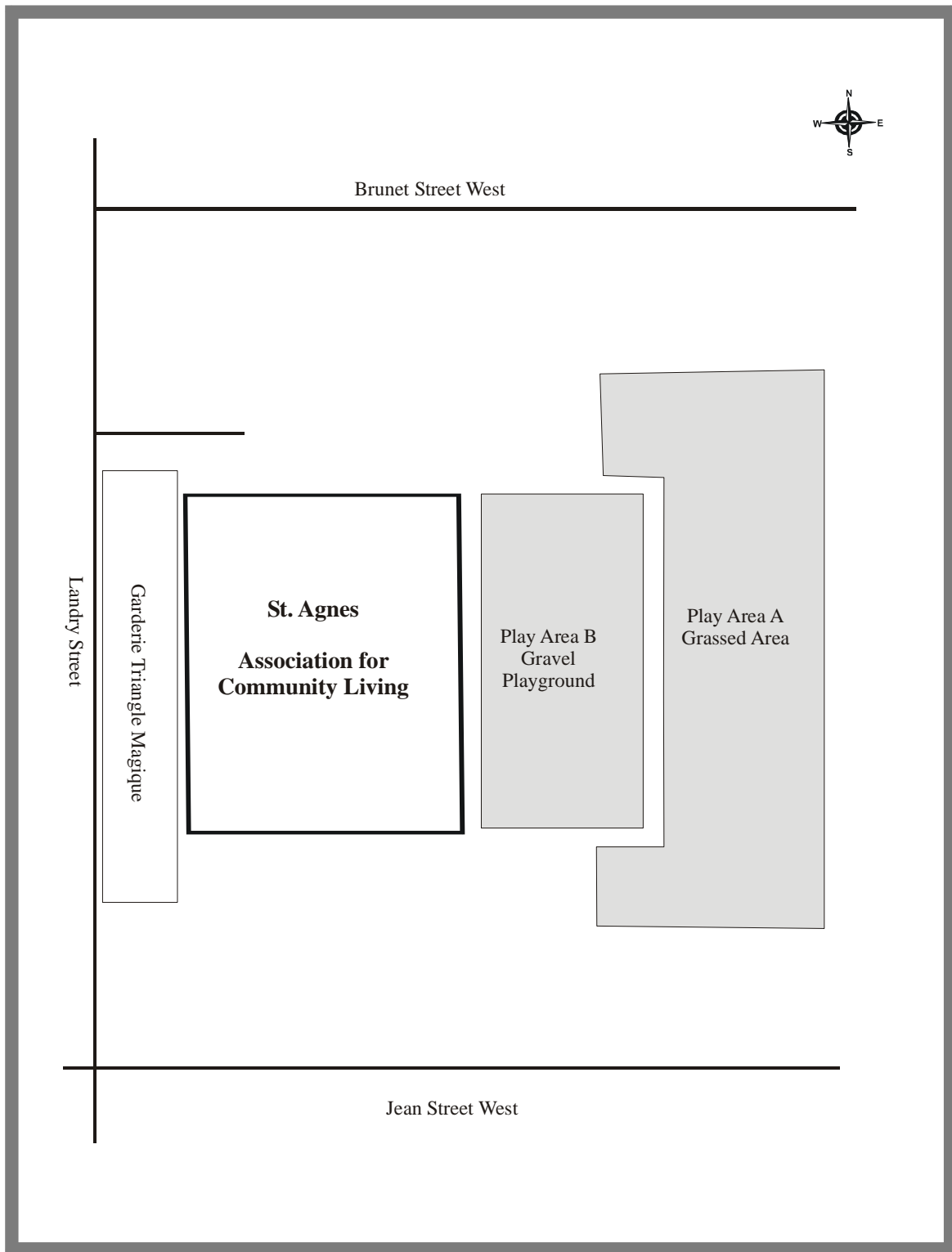
Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in almost all samples collected from this property. The highest nickel and copper concentrations, 150 and 120 ppm, respectively, were found in the surface soil of the grassed area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northeast, 2 km southeast, and 2 km southeast of Ecole Ste. Agnes, Stations 92, 91, and 90, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 36 to 770 and 37 to 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of all materials sampled on this property.

**Table B2.4.8:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Ecole Ste. Agnes (Association for Community Living), 80 Rue Landry, Azilda - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037371	14496	0 - 5	< 0.8	8	40	< 0.8	36	9	<b>110</b>	21	< 1.5	<b>130</b>	< 1	32	42
		14497	0 - 5	< 0.8	8	43	< 0.8	38	11	<b>120</b>	23	< 1.5	<b>150</b>	< 1	33	47
		14498	5 - 10	< 0.8	7	43	< 0.8	38	9	<b>64</b>	14	< 1.5	<b>100</b>	< 1	32	41
		14499	5 - 10	< 0.8	5	32	< 0.8	33	6	39	7	< 1.5	<b>70</b>	< 1	30	31
Area B gravel	5037372	14485	0 - 5	< 0.8	5	27	< 0.8	39	11	<b>81</b>	20	< 1.5	<b>89</b>	1	38	37
		14486	0 - 5	< 0.8	5	24	< 0.8	33	10	<b>77</b>	20	< 1.5	<b>85</b>	1	39	33
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												





**Figure B2.4.8:** Ecole Ste. Agnes (Association for Community Living) Sampling Locations - 2001.

### **2.4.9 Felix Ricard - Le Conseil Scolaire Catholique du Nouvel-Ontario 691 Lasalle Boulevard, Sudbury**

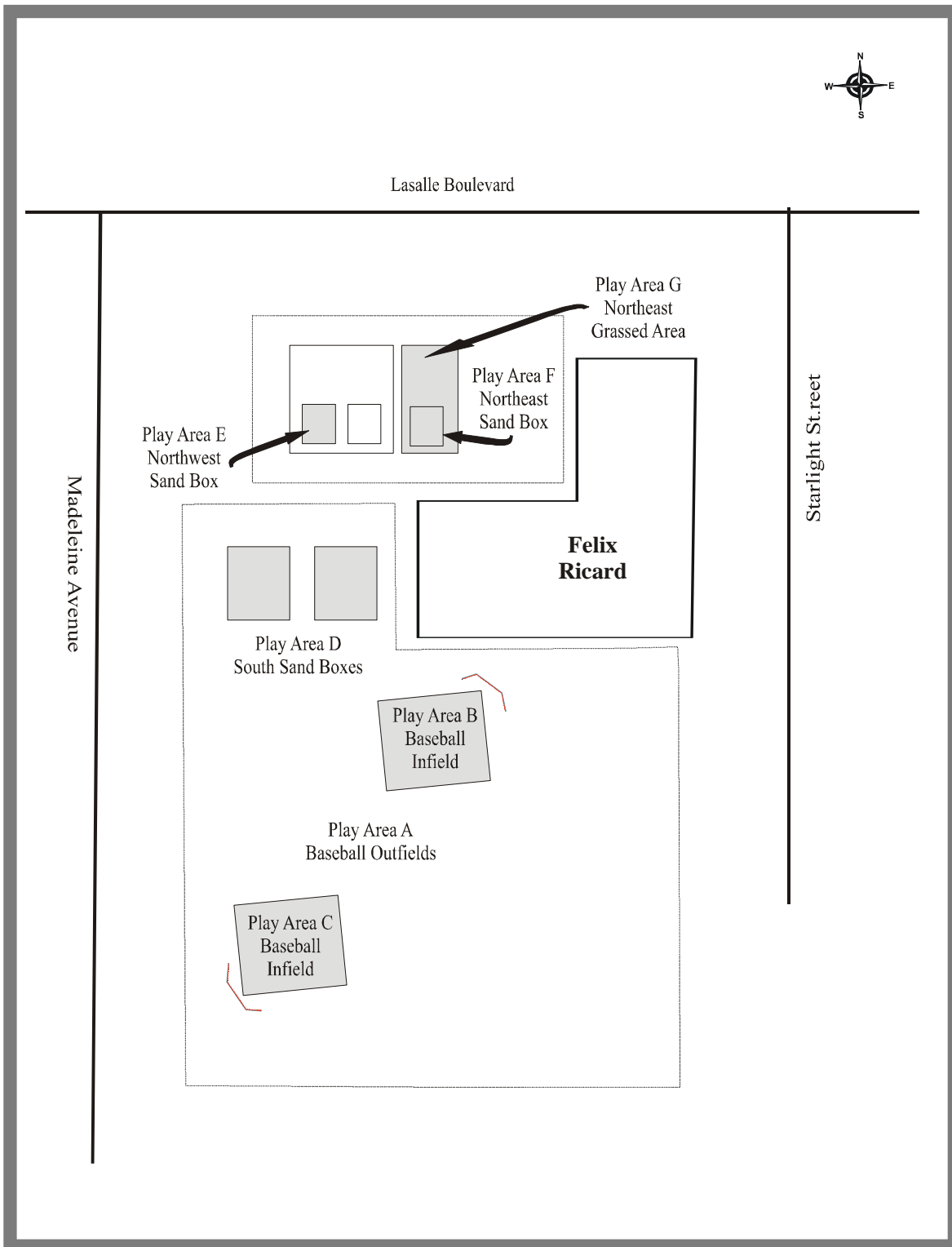
Felix Ricard was sampled on July 18, 2001. Figure B2.4.9 details the sampling locations at this property. Samples were taken from seven areas on the school property. Area A corresponds to the shared grassed baseball diamond outfields. Areas B and C correspond to the north and south baseball diamond infields, respectively. Due to the compacted nature of Areas A, B, C, and G, it was only possible to sample the surface soil layer (0-5 cm). Area D corresponds to sand samples collected from the sand boxes located west of the school building. Area E corresponds to sand samples collected from the sand boxes in the west play area north of the school building. Areas F and G correspond to sand and soil samples, respectively, collected from the east play area north of the school building. Due to the constant mixing and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand sample collected from the sanded play areas. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both grassed play areas sampled. The highest nickel and copper concentrations, 91 and 86 ppm, respectively, were found in the shared grassed baseball diamond outfields. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northwest, 1 km south, and 1 km southeast of Felix Ricard, Stations 337, 85, and 86, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 56 to 540 and 35 to 440 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.9:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Felix Ricard, 691 Lasalle Boulevard, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037194	14462	0 - 5	< 0.8	< 5	34	< 0.8	26	6	<b>86</b>	14	< 1.5	<b>91</b>	< 1	25	27
		14463	0 - 5	< 0.8	< 5	27	< 0.8	25	5	50	9	< 1.5	<b>58</b>	< 1	26	22
Area B soil	5037195	14464	0 - 5	< 0.8	< 5	35	< 0.8	29	8	34	5	< 1.5	39	< 1	29	29
		14465	0 - 5	< 0.8	< 5	35	< 0.8	28	8	31	4	< 1.5	34	< 1	28	23
Area C soil	5037196	14466	0 - 5	< 0.8	7	43	< 0.8	33	9	33	4	< 1.5	34	< 1	33	23
		14467	0 - 5	< 0.8	< 5	42	< 0.8	32	9	32	4	< 1.5	32	< 1	32	24
Area D sand	5037197	14468	0 - 15	< 0.8	< 5	19	< 0.8	25	6	17	2	< 1.5	30	< 1	29	27
Area E sand	5037198	14469	0 - 15	< 0.8	< 5	20	< 0.8	26	7	24	3	< 1.5	31	< 1	27	19
Area F sand	5037199	14470	0 - 15	< 0.8	< 5	19	< 0.8	25	7	24	3	< 1.5	28	< 1	28	17
Area G grass	5037200	14471	0 - 5	< 0.8	< 5	29	< 0.8	27	6	43	9	< 1.5	<b>52</b>	< 1	27	34
		14472	0 - 5	< 0.8	6	27	< 0.8	27	6	51	9	< 1.5	<b>56</b>	< 1	26	37
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.9:** Felix Ricard Sampling Locations - 2001.

### 2.4.10 Jacques Cartier - Le Conseil Scolaire Catholique du Nouvel-Ontario C.P. 1357, 14 Rue Ontario, Chelmsford

Jacques Cartier was sampled on July 19, 2001. Figure B2.4.10 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel playground west of the school building. Areas B and C correspond to sand samples collected from the sand boxes on the west and north side of the school building, respectively. Due to the constant mixing and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand samples from the sanded play areas. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. None of the samples from this property were found to have metal concentrations above the MOE Table F Ontario Soil Background Criteria. In addition, aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 3 km northwest, 2.5 km southwest, and 5 km southeast of Jacques Cartier, Stations 386, 385, and 384, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 65 to 170 and 49 to 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.10:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Jacques Cartier, C.P. 1357, 14 Rue Ontario, Chelmsford - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037385	14540	0 - 5	< 0.8	< 5	27	< 0.8	29	9	38	12	< 1.5	35	< 1	32	30
		14541	0 - 5	< 0.8	< 5	25	< 0.8	31	9	42	14	< 1.5	35	< 1	37	34
Area B sand	5037386	14542	0 - 15	< 0.8	< 5	19	< 0.8	24	6	18	5	< 1.5	16	< 1	34	22
Area C sand	5037387	14543	0 - 15	< 0.8	< 5	26	< 0.8	31	8	29	6	< 1.5	23	< 1	37	33
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

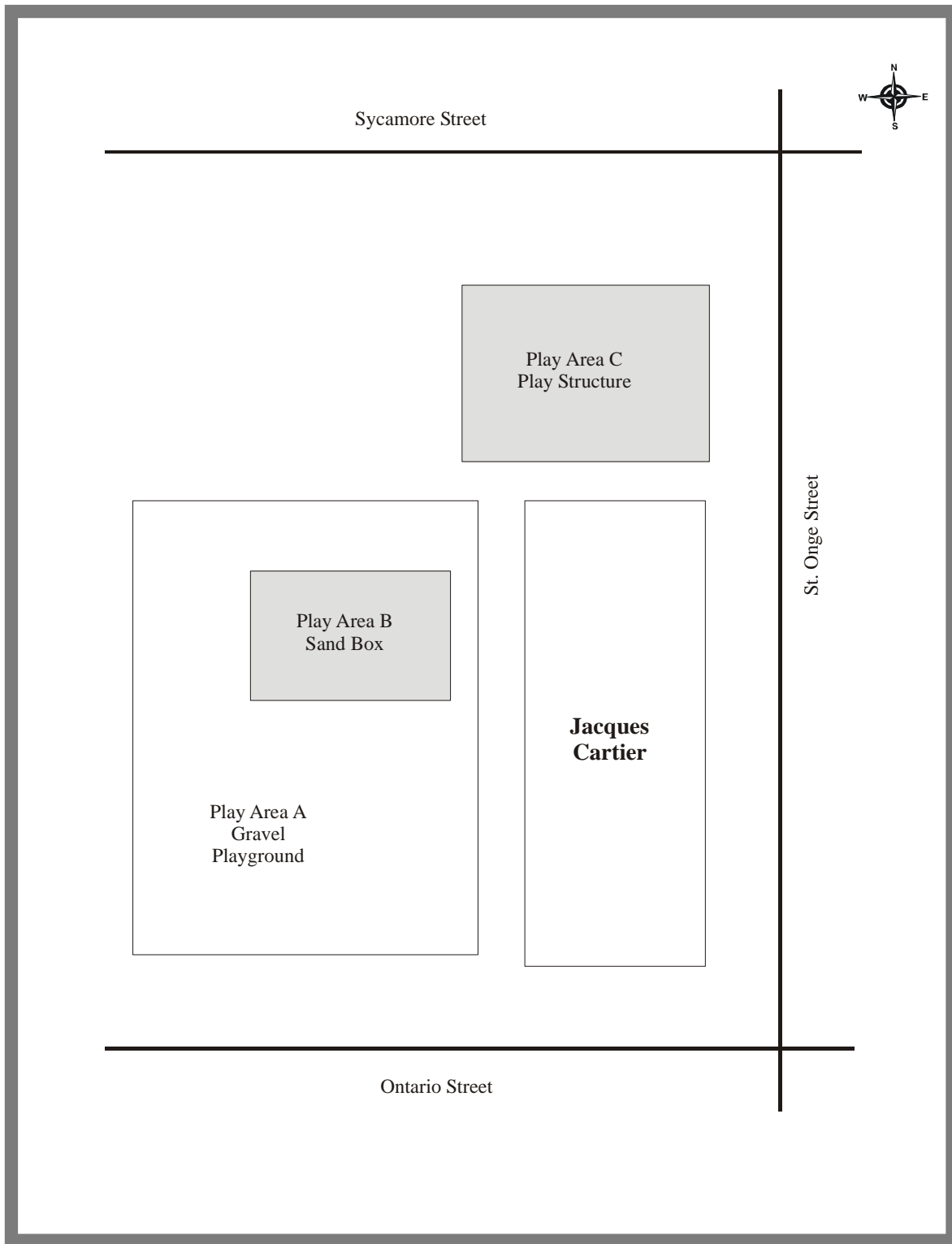


Figure B2.4.10: Jacques Cartier Sampling Locations - 2001.

### 2.4.11 Mgr. Cote - Le Conseil Scolaire Catholique du Nouvel-Ontario C.P. 789, 96 Rue Gaudette, Chelmsford

Mgr. Cote was sampled on July 19, 2001. Figure B2.4.11 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area south of the gravel playground. Due to the compacted nature of the grassed area, it was only possible to sample the surface soil (0-5 cm). Area B corresponds to the gravel playground south of the school building. Due to the constant mixing and homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

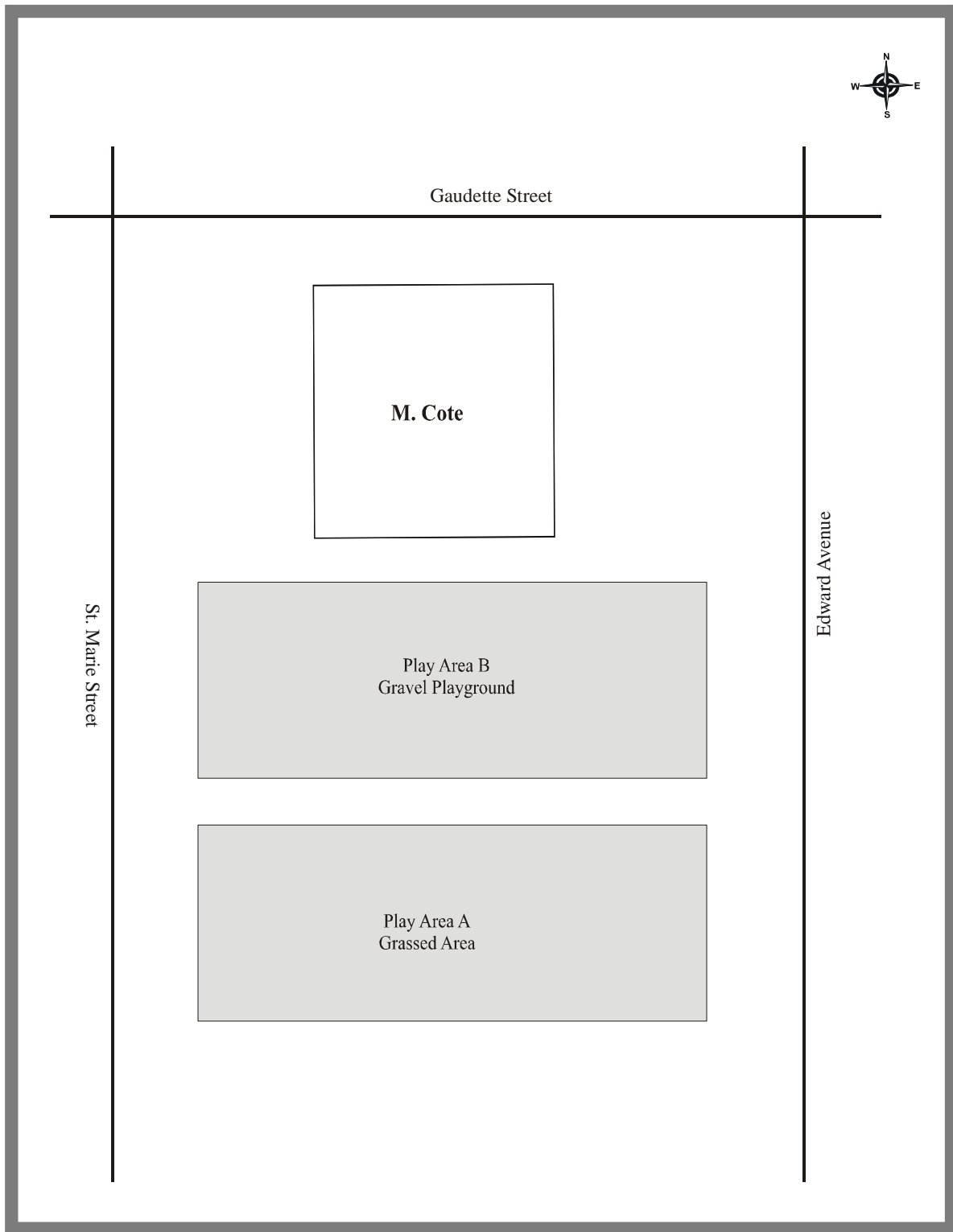
Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in all samples collected from this property, while copper (Cu) was elevated in one replicate sample from the gravel playground. The highest nickel and copper concentrations, 78 ppm each, were found in one replicate sample from the gravel playground. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 3 km northwest, 3.5 km southwest, and 5 km southeast of Mgr. Cote, Stations 386, 385, and 384, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 65 to 170 and 49 to 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.11:** Concentration of 13 Elements in Soil in µg/g Collected at Mgr. Cote, C.P. 789, 96 Rue Gaudette, Chelmsford - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037392	14532	0 - 5	< 0.8	< 5	35	< 0.8	25	8	44	13	< 1.5	<b>64</b>	< 1	30	32
		14533	0 - 5	< 0.8	< 5	47	< 0.8	28	10	55	14	< 1.5	<b>65</b>	< 1	34	40
Area B gravel	5037393	14534	0 - 5	< 0.8	< 5	29	< 0.8	32	10	49	21	< 1.5	<b>51</b>	< 1	32	35
		14535	0 - 5	< 0.8	< 5	33	< 0.8	32	12	<b>78</b>	24	< 1.5	<b>78</b>	< 1	29	40
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.11:** Mgr. Cote Sampling Locations - 2001.



### 2.4.12 Notre Dame - Le Conseil Scolaire Catholique du Nouvel-Ontario 4503 Rue Dennie, Hanmer

Notre Dame was sampled on July 20, 2001. Figure B2.4.12 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel playground southwest of the school building. Due to the constant mixing and homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm depth. Area B corresponds to the grassed baseball diamond outfield. Area C corresponds to the baseball diamond infield. Due to the compacted nature of the baseball diamond infield, it was only possible to sample to the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for selected sites from this property, while cobalt (Co) was elevated in one replicate sample from the gravel playground. The highest nickel concentration, 75 ppm, was found in the surface soil of the baseball diamond outfield, while the highest copper and cobalt concentrations, 80 and 32 ppm, respectively, were found in one replicate sample from the gravel playground. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the concentration ranges of those reported historically, while the elevated cobalt result is higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 2.5 km northwest, and 2 km east of Notre Dame, Stations 347, 346, and 350, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 43 to 150 and 35 to 110 ppm, respectively. The highest cobalt concentration reported at these historic sites was 7.4 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037327	14628	0 - 5	< 0.8	6	36	< 0.8	39	<b>32</b>	<b>80</b>	17	< 1.5	<b>74</b>	< 1	35	51
		14629	0 - 5	< 0.8	< 5	48	< 0.8	41	17	56	10	< 1.5	<b>52</b>	< 1	38	53
Area B grass	5037328	14630	0 - 5	< 0.8	6	42	< 0.8	30	6	<b>67</b>	16	< 1.5	<b>75</b>	1	28	38
		14631	0 - 5	< 0.8	5	43	< 0.8	32	6	51	14	< 1.5	<b>54</b>	< 1	29	32
		14632	5 - 10	< 0.8	< 5	38	< 0.8	29	4	31	8	< 1.5	39	< 1	28	26
		14633	5 - 10	< 0.8	6	36	< 0.8	26	5	54	44	< 1.5	<b>50</b>	< 1	26	24
		14634	10 - 20	< 0.8	< 5	34	< 0.8	26	4	14	6	< 1.5	24	< 1	26	19
		14635	10 - 20	< 0.8	< 5	32	< 0.8	27	4	10	5	< 1.5	23	< 1	27	22
Area C soil	5037329	14636	0 - 5	< 0.8	< 5	32	< 0.8	46	11	<b>68</b>	12	< 1.5	<b>50</b>	< 1	46	48
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

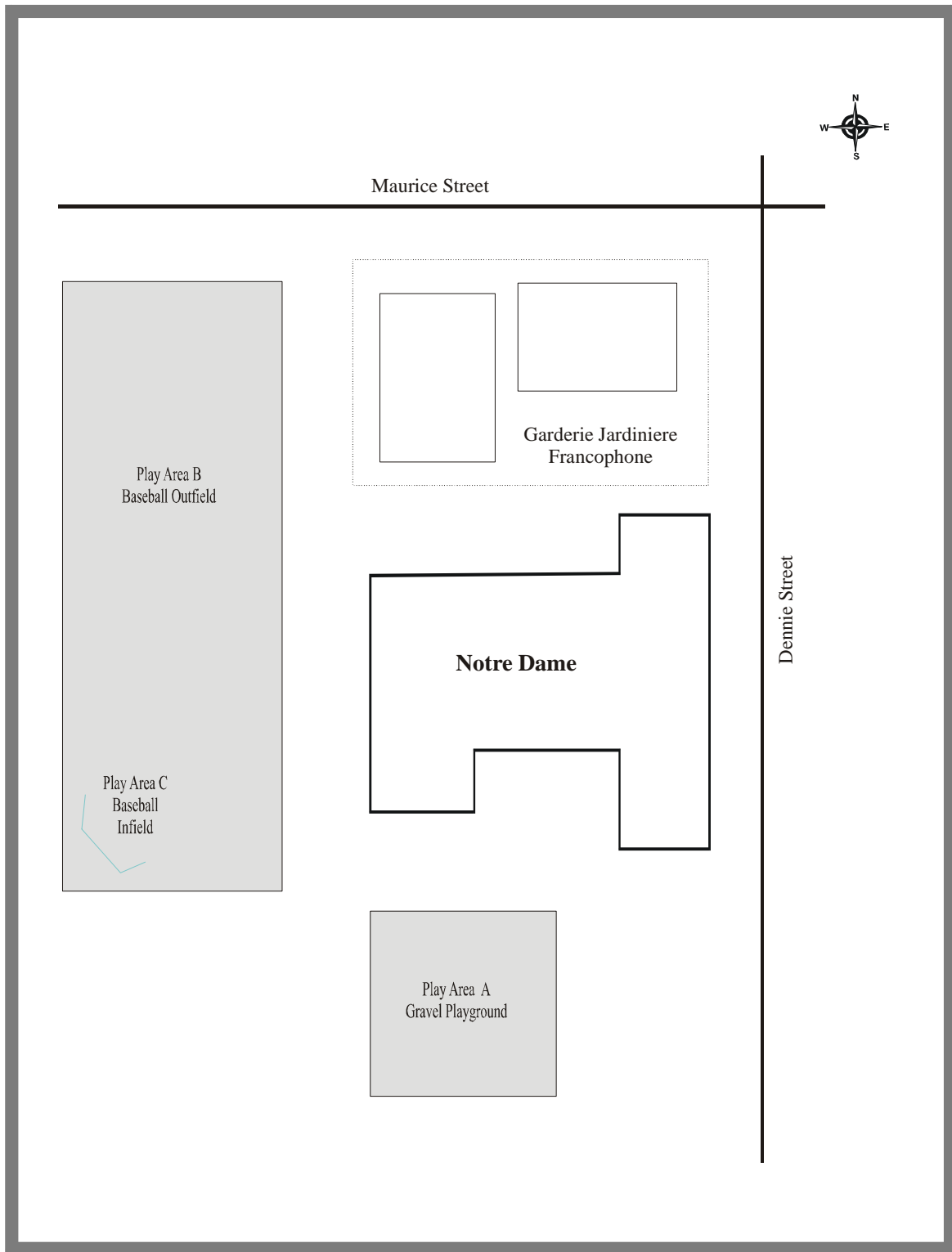


Figure B2.4.12: Notre Dame Sampling Locations - 2001.

### 2.4.13 Notre Dame de l'Esperance - Le Conseil Scolaire Catholique du Nouvel-Ontario 2965 Rue Hope, Val Caron

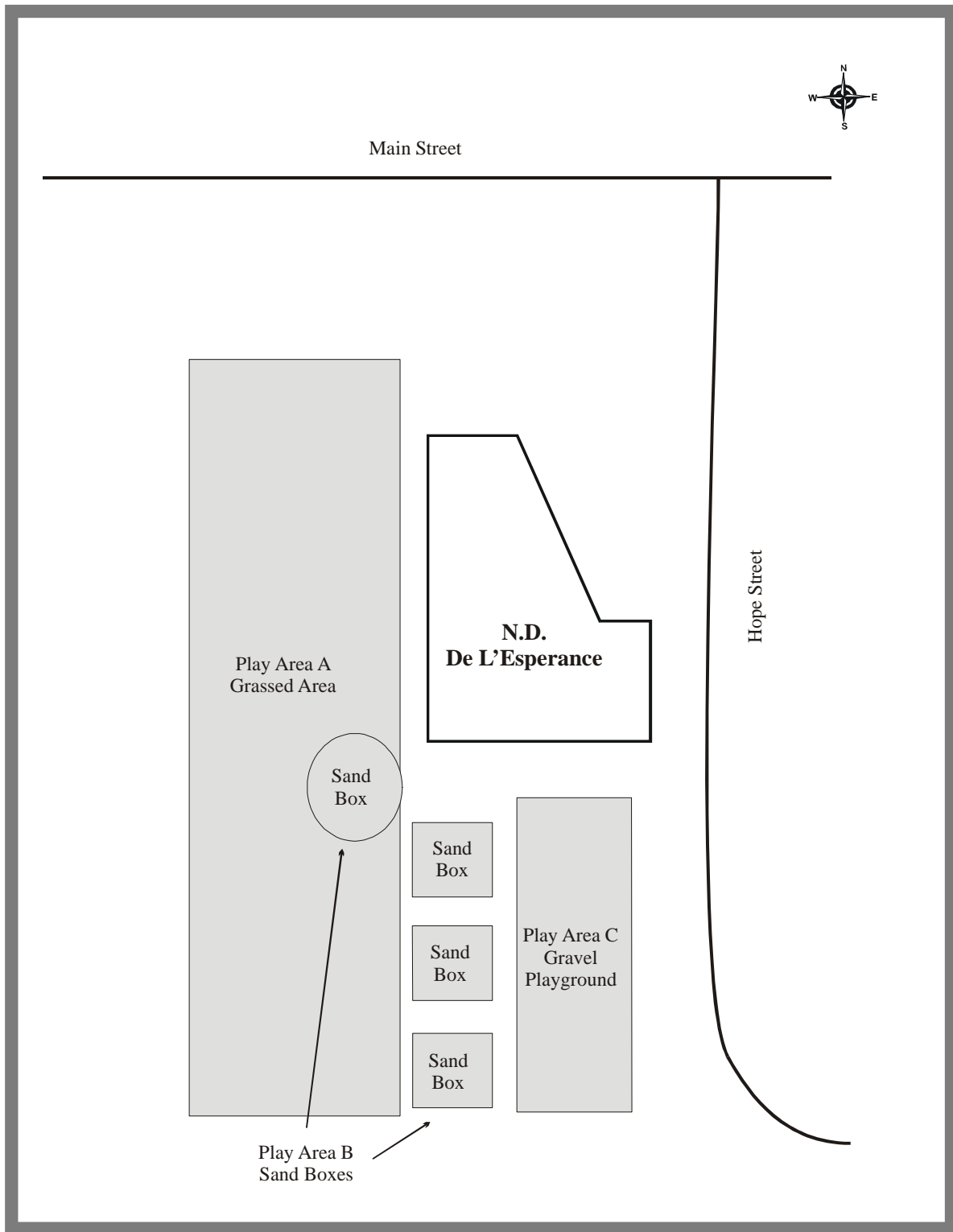
Notre Dame de l'Esperance was sampled on July 23, 2001. Figure B2.4.13 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed area west of the school building. Area B corresponds to sand samples that were collected from the four sanded play areas west and south of the school building. Area C corresponds to the gravel playground south of the school building. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand collected from the four sanded play areas. The sand present was not likely native to the school property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for selected sites from this property. The highest nickel and copper concentrations, 120 and 75 ppm, respectively, were found in one replicate sample from the gravel playground. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results are similar to those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northwest, and 3 km southeast of Notre Dame de l'Esperance, Stations 15 and 348, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 84 and 96 and 92 and 100 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037290	14808	0 - 5	< 0.8	< 5	35	< 0.8	61	4	36	14	< 1.5	<b>66</b>	< 1	78	36
		14809	0 - 5	< 0.8	< 5	42	< 0.8	66	4	40	11	< 1.5	<b>54</b>	< 1	28	25
		14810	5 - 10	< 0.8	< 5	46	< 0.8	40	4	54	8	< 1.5	<b>53</b>	< 1	24	29
		14811	5 - 10	< 0.8	< 5	32	< 0.8	26	4	27	7	< 1.5	40	< 1	29	18
		14812	10 - 20	< 0.8	< 5	26	< 0.8	19	3	14	5	< 1.5	26	< 1	18	12
Area B sand	5037291	14814	0 - 15	< 0.8	< 5	36	< 0.8	28	6	21	3	< 1.5	28	< 1	35	18
		14815	0 - 15	< 0.8	< 5	31	< 0.8	36	6	21	5	< 1.5	24	< 1	40	20
Area C gravel	5037292	14816	0 - 5	< 0.8	< 5	35	< 0.8	34	10	<b>57</b>	7	< 1.5	<b>53</b>	< 1	34	31
		14817	0 - 5	< 0.8	< 5	31	< 0.8	32	11	<b>75</b>	7	< 1.5	<b>120</b>	< 1	34	30
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.13:** Notre Dame de l'Esperance Sampling Locations - 2001.

### 2.4.14 Notre Dame de la Merci - Le Conseil Scolaire Catholique du Nouvel-Ontario 2 Edward Avenue, Coniston

Notre Dame de la Merci was sampled on July 22, 2001. Figure B2.4.14 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground west of the school building. Due to the constant mixing and homogenous nature of the gravel area, samples were collected with hand trowels to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

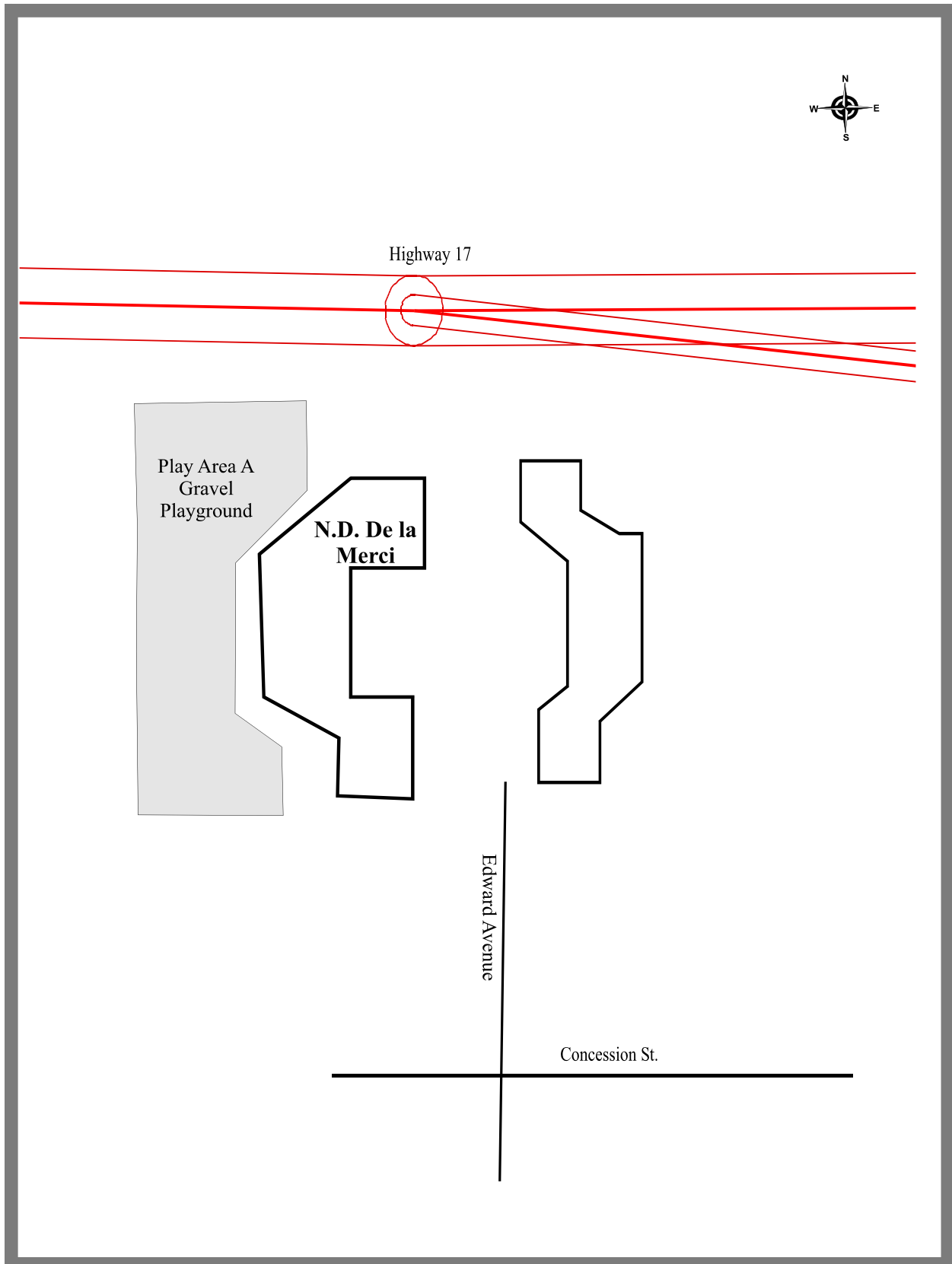
Nickel (Ni) concentrations were elevated above the MOE Table A Effects Based Soil Criteria, while copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples collected from this property. The highest nickel and copper concentrations found were 190 and 200 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 1 km northeast, and 1 km southeast of Notre Dame de la Merci, Stations 81, 49, and 48, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 70 to 970 and 54 to 780 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.14:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Notre Dame de la Merci, 2 Edward Avenue, Coniston - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037265	14750	0 - 5	<b>1.5</b>	13	44	< 0.8	42	14	<b>200</b>	30	< 1.5	<b>190</b>	1	34	42
		14751	0 - 5	< 0.8	8	40	< 0.8	39	15	<b>140</b>	17	< 1.5	<b>170</b>	< 1	35	40
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.14:** Notre Dame de la Merci Sampling Locations - 2001.

### 2.4.15 Notre Dame du Rosaire - Le Conseil Scolaire Catholique du Nouvel-Ontario 2891 Chemin Martin, Blezard Valley

Notre Dame du Rosaire was sampled on July 23, 2001. Figure B2.4.15 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area west of the gravel playground. Area B corresponds to the gravel playground west of the school building. Due to the constant mixing and homogenous nature of the gravel areas, samples were collected with hand trowels to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

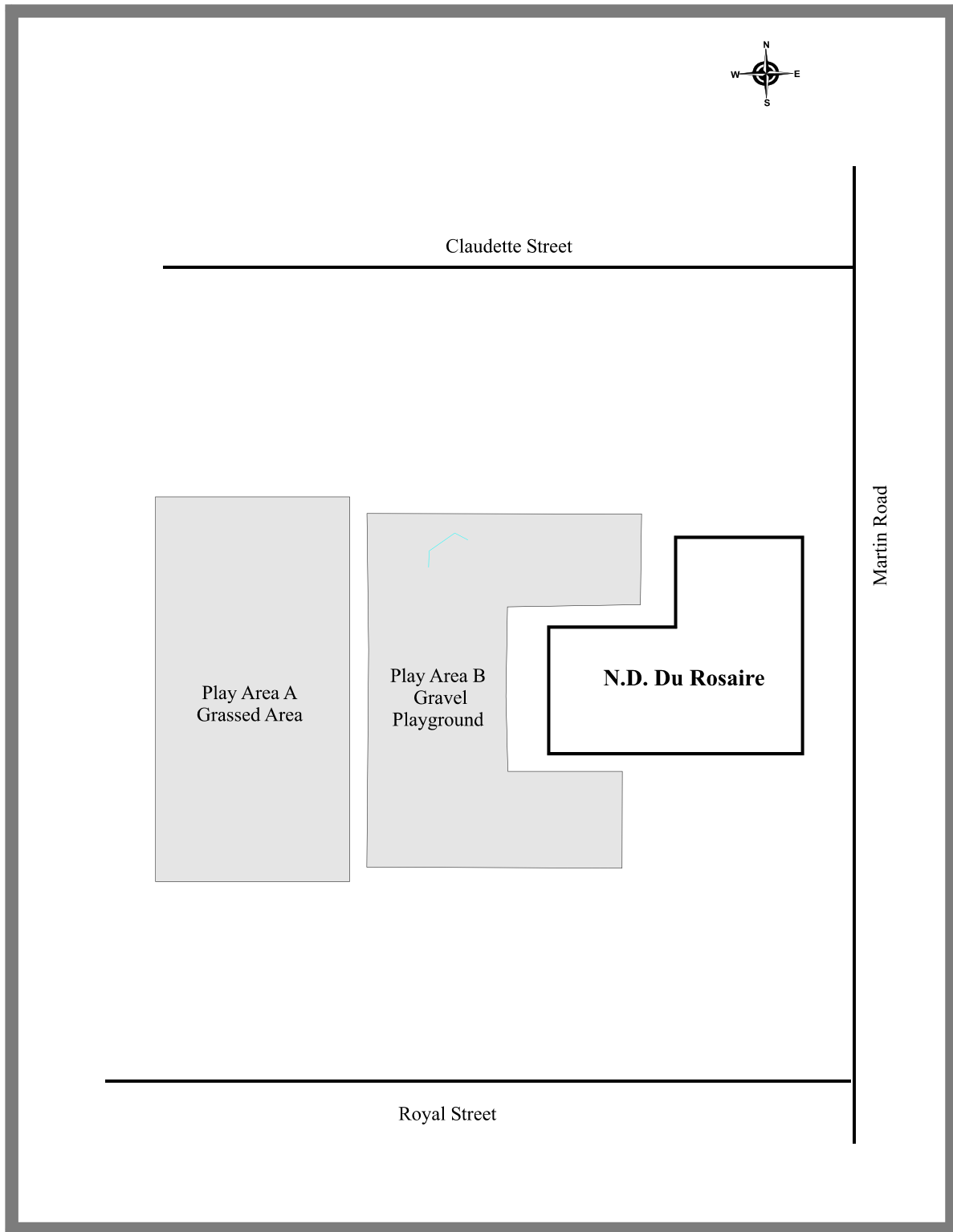
Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for selected sites from this property. The highest nickel and copper concentrations, 92 and 63 ppm, respectively, were found in the surface soil of the grassed play area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northeast, and 1 km south of Notre Dame du Rosaire, Stations 15 and 341, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 28 to 210 and 40 to 180 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.15:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Notre Dame du Rosaire, 2891 Chemin Martin, Blezard Valley - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037304	14800	0 - 5	< 0.8	< 5	30	< 0.8	26	6	<b>63</b>	14	< 1.5	<b>82</b>	< 1	28	26
		14801	0 - 5	< 0.8	< 5	41	< 0.8	24	6	35	17	< 1.5	<b>92</b>	< 1	29	27
		14802	5 - 10	< 0.8	< 5	29	< 0.8	38	4	26	7	< 1.5	37	< 1	45	24
		14803	5 - 10	< 0.8	< 5	28	< 0.8	51	5	28	8	< 1.5	38	< 1	65	41
		14804	10 - 20	< 0.8	< 5	38	< 0.8	56	5	37	5	< 1.5	25	< 1	63	30
		14805	10 - 20	< 0.8	< 5	48	< 0.8	54	5	51	8	< 1.5	<b>44</b>	< 1	61	38
Area B gravel	5037305	14806	0 - 5	< 0.8	< 5	42	< 0.8	52	10	36	9	< 1.5	<b>45</b>	< 1	58	41
		14807	0 - 5	< 0.8	< 5	36	< 0.8	56	10	40	8	< 1.5	<b>47</b>	< 1	69	38
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.15:** Notre Dame du Rosaire Sampling Locations - 2001.



### 2.4.16 St. Augustin - Le Conseil Scolaire Catholique du Nouvel-Ontario 648 Promenade O'Neil West, Garson

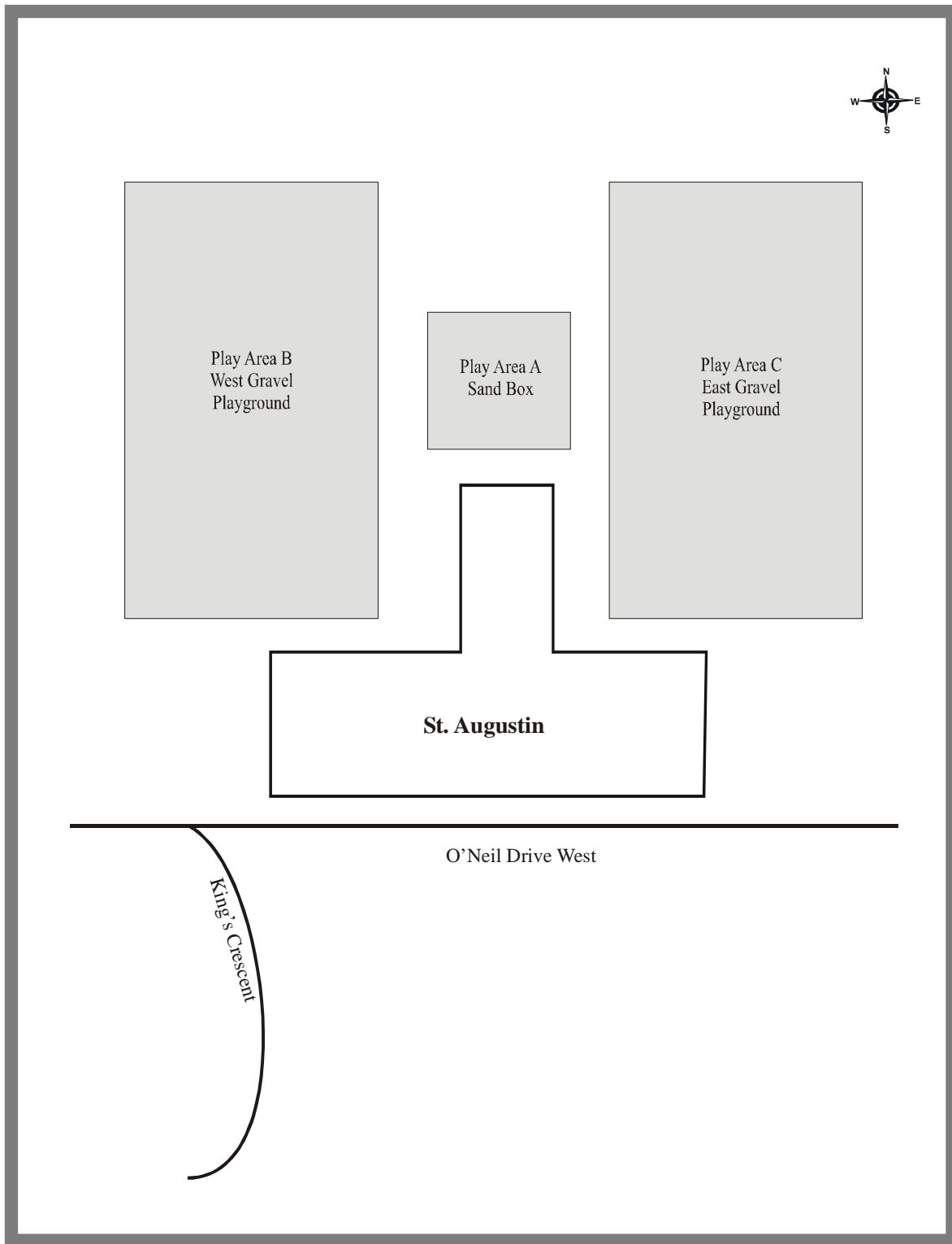
St. Augustin was sampled on July 18, 2001. Figure B2.4.16 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to sand samples that were collected from the sand boxes north of the school building. Areas B and C correspond to the west and east gravel playgrounds, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand collected from the sanded play area. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the gravel playground samples. The highest nickel and copper concentrations, 67 and 71 ppm, respectively, were found in the east gravel playground sample. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northwest, and 2 km northwest of St. Augustin, Stations 40 and 39, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 37 to 120 and 24 to 200 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.16:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at St. Augustin, 648 Promenade O' Neil West, Garson - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037269	14432	0 - 15	< 0.8	6	37	< 0.8	25	7	21	4	< 1.5	21	< 1	27	18
		14433	0 - 15	< 0.8	7	27	< 0.8	22	7	22	4	< 1.5	22	< 1	25	17
Area B gravel	5037270	14434	0 - 5	< 0.8	6	29	< 0.8	27	8	44	8	< 1.5	<b>50</b>	< 1	26	24
		14435	0 - 5	< 0.8	7	28	< 0.8	27	8	44	9	< 1.5	<b>51</b>	< 1	28	23
Area C gravel	5037271	14436	0 - 5	< 0.8	9	38	< 0.8	29	7	<b>57</b>	12	< 1.5	<b>56</b>	< 1	32	20
		14437	0 - 5	< 0.8	9	40	< 0.8	30	7	<b>71</b>	14	< 1.5	<b>67</b>	< 1	30	22
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.																
Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.																



**Figure B2.4.16:** St. Augustin Sampling Locations - 2001.

### 2.4.17 St. Denis - Le Conseil Scolaire Catholique du Nouvel-Ontario 347 Rue Hyland, Sudbury

St. Denis was sampled on July 5, 2001. Figure B2.4.17 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed hill on the south side of the school property. Area B corresponds to the gravel playground south of the school building. Area C corresponds to sand samples taken from beneath the play structure. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other samples from this property and above MOE Table A Effects Based Soil Criteria at selected sites. Copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil samples collected from the grassed hill and from the gravel playground. The highest nickel and copper concentrations, 160 and 200 ppm, respectively, were found in the surface soil of the grassed play area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037074	14149	0 - 5	< 0.8	< 5	36	< 0.8	26	8	<b>200</b>	25	< 1.5	<b>150</b>	< 1	25	65
		14150	0 - 5	< 0.8	< 5	45	< 0.8	26	9	<b>180</b>	23	< 1.5	<u><b>160</b></u>	<b>2</b>	27	130
		14151	5 - 10	< 0.8	< 5	39	< 0.8	24	5	52	9	< 1.5	<b>67</b>	1	26	42
		14152	5 - 10	< 0.8	< 5	39	< 0.8	26	5	41	9	< 1.5	<b>60</b>	< 1	27	31
		14153	10 - 20	< 0.8	< 5	41	< 0.8	24	6	49	10	< 1.5	<b>74</b>	< 1	25	28
		14154	10 - 20	< 0.8	< 5	41	< 0.8	24	5	36	9	< 1.5	<b>60</b>	< 1	27	33
Area B gravel	5037075	14155	0 - 5	< 0.8	< 5	28	< 0.8	31	12	<b>71</b>	7	< 1.5	<b>72</b>	< 1	31	29
		14156	0 - 5	< 0.8	< 5	26	< 0.8	30	14	<b>87</b>	10	< 1.5	<b>91</b>	< 1	28	31
Area C sand	5037076	14157	0 - 15	< 0.8	< 5	18	< 0.8	28	9	34	4	< 1.5	37	< 1	26	23
		14158	0 - 15	< 0.8	< 5	18	< 0.8	29	8	29	3	< 1.5	32	< 1	27	25
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

These results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km east, 1 km northwest, and 1 km southwest of St. Denis, Stations 74, 378, and 73, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 790 and 158 to 740 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

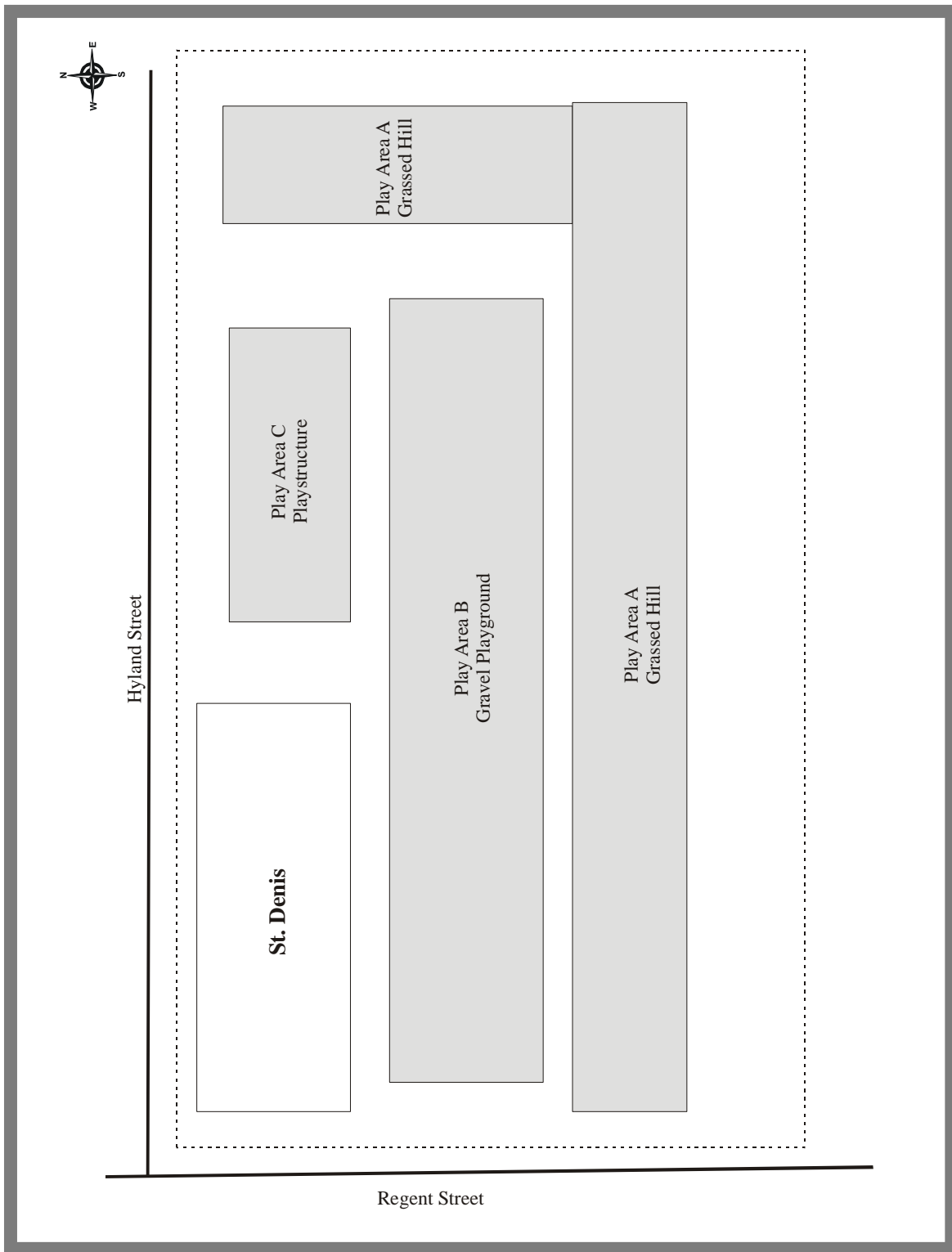


Figure B2.4.17: St. Denis Soil Sampling Locations - 2001.

#### **2.4.18 St. Dominique - Le Conseil Scolaire Catholique du Nouvel-Ontario 2096 Rue Montfort, Sudbury**

St. Dominique was sampled on July 18, 2001. Figure B2.4.18 details the sampling locations at this property. Samples were taken from five areas on the school property. Area A corresponds to the grassed area north of the school building. Area B corresponds to sand samples collected from the south sand box. Area C corresponds to the grass and gravel baseball diamond outfield. Due to the compacted nature of Areas A and C, it was only possible to sample to the 5 - 10 cm depth in the grassed play area and the surface soil layer (0-5 cm) in the outfield. Area D corresponds to the gravel baseball diamond infield. Area E corresponds to the pea gravel collected from the north sand boxes. Due to the constant mixing and homogenous nature of the “sand box” areas, samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Elevated metal concentrations were found in the sand and pea gravel samples collected from the south and north “sand box” play areas, respectively. Although it is possible that the sand is native to the school property; it is believed to have been introduced when the play areas were constructed. The sand and pea gravel samples were not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all surface samples collected from this property and the MOE Table A Effects Based Soil Criteria at selected sites. Copper (Cu) was also elevated above the MOE Table F Ontario Soil Background Criteria at selected surface soil sites. The highest nickel and copper concentrations, 190 and 170 ppm, respectively, were found in the sand samples from the south sand box. It is believed that soil particles may have migrated into these play areas and are responsible for the elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These soil results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northeast and 1 km west of St. Dominique, Stations 42 and 43, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 28 to 190 and 26 to 200 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

<b>Table B2.4.18:</b> Concentration of 13 Elements in Soil in $\mu\text{g/g}$ Collected at St. Dominique, 2096 Rue Montfort, Sudbury - 2001																
Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037155	14381	0 - 5	< 0.8	< 5	46	< 0.8	27	11	<b>74</b>	19	< 1.5	<b>110</b>	< 1	27	28
		14382	0 - 5	< 0.8	< 5	49	< 0.8	28	13	<b>77</b>	21	< 1.5	<b>120</b>	< 1	27	30
		14389	5 - 10	< 0.8	< 5	20	< 0.8	24	6	14	2	< 1.5	23	< 1	28	15
		14390	5 - 10	< 0.8	< 5	23	< 0.8	27	6	16	3	< 1.5	24	< 1	34	16
Area B sand	5037156	14383	0 - 15	< 0.8	8	47	< 0.8	34	16	<b>170</b>	21	< 1.5	<u><b>190</b></u>	< 1	36	40
Area C grass	5037157	14385	0 - 5	< 0.8	< 5	43	< 0.8	32	8	<b>110</b>	18	< 1.5	<b>130</b>	< 1	29	33
		14386	0 - 5	< 0.8	< 5	42	< 0.8	32	7	<b>100</b>	12	< 1.5	<b>77</b>	< 1	31	27
Area D gravel	5037158	14387	0 - 5	< 0.8	< 5	41	< 0.8	34	7	50	11	< 1.5	<b>73</b>	< 1	33	26
		14388	0 - 5	< 0.8	< 5	35	< 0.8	34	7	55	11	< 1.5	<b>78</b>	< 1	32	27
Area E gravel	5037159	14384	0 - 5	< 0.8	8	37	< 0.8	31	16	<b>170</b>	23	< 1.5	<u><b>170</b></u>	< 1	33	36
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

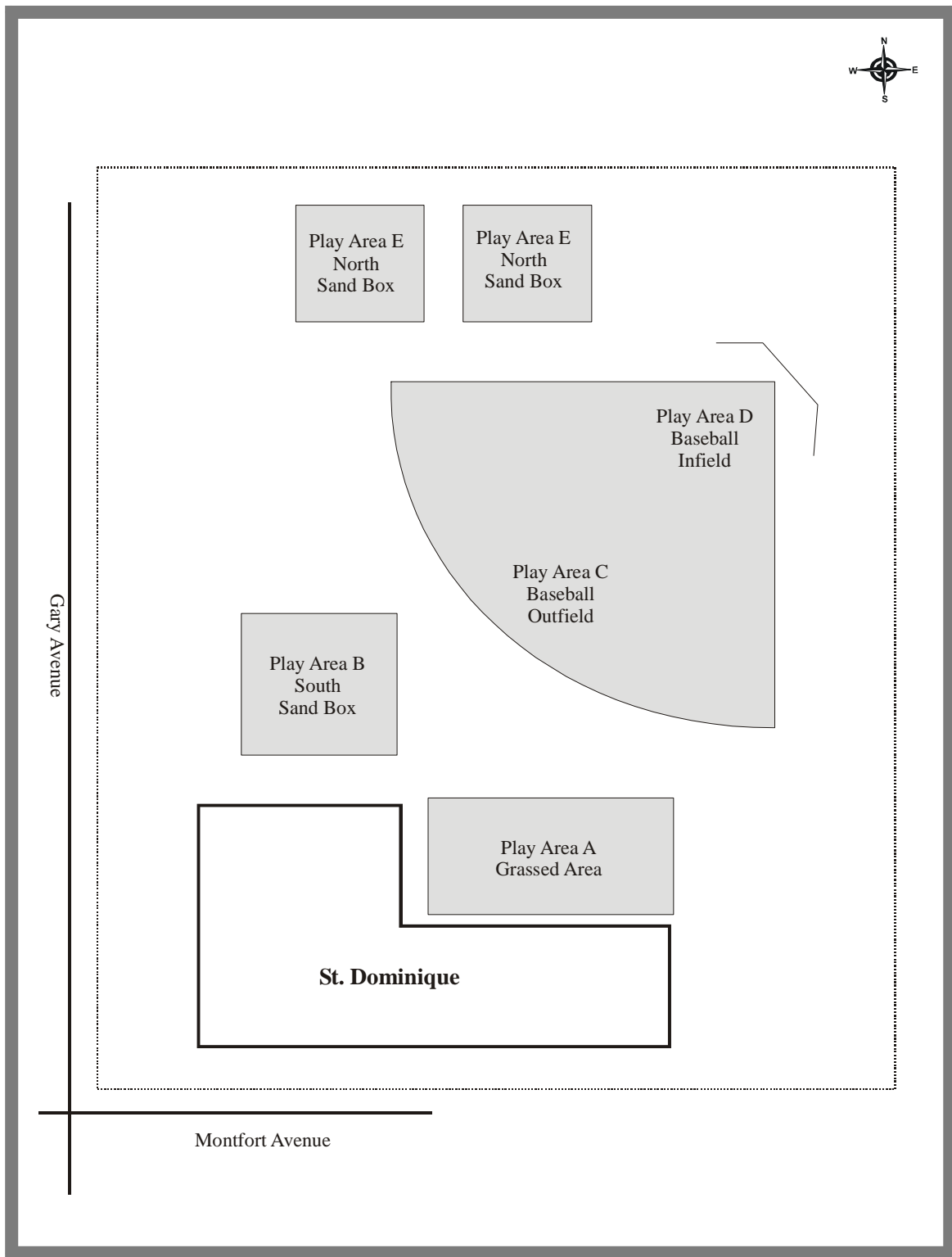


Figure B2.4.18: St. Dominique Sampling Locations - 2001.

### 2.4.19 St. Etienne - Le Conseil Scolaire Catholique du Nouvel-Ontario C.P. 310, 79 Rue Houle, Dowling

St. Etienne was sampled on July 19, 2001. Figure B2.4.19 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground. Area B corresponds to sand samples collected from the sanded play areas. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

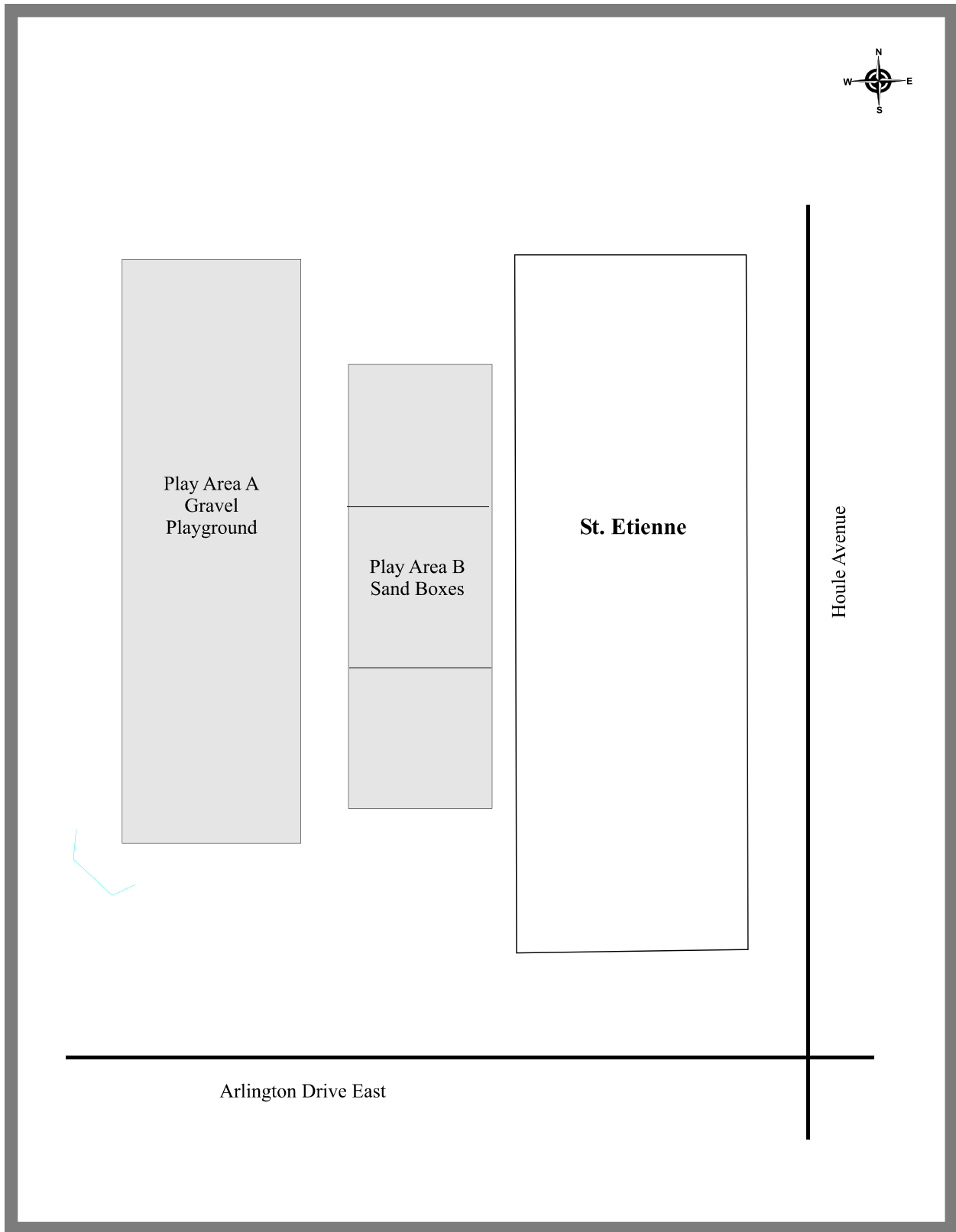
Metal concentrations were not elevated in the sand from the sand boxes. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Neither of the gravel samples were found to have metal concentrations above the MOE Table F Ontario Soil Background Criteria. In addition, aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northeast, 4 km west, and 5 km southwest of St. Etienne, Stations 388, 389, and 391, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 25 to 83 and 14 to 69 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.19:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at St. Etienne, C.P. 310, 79 Rue Houle, Dowling - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037400	14554	0 - 5	< 0.8	< 5	28	< 0.8	33	9	42	20	< 1.5	35	< 1	42	35
		14555	0 - 5	< 0.8	< 5	29	< 0.8	34	9	41	16	< 1.5	34	< 1	42	37
Area B sand	5037401	14556	0 - 15	< 0.8	< 5	21	< 0.8	36	7	23	5	< 1.5	21	< 1	38	28
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												





**Figure B2.4.19:** St. Etienne School Sampling Locations - 2001.

### 2.4.20 St. Gabriel (Better Beginnings) - Le Conseil Scolaire Catholique du Nouvel-Ontario 450 Morin Street, Sudbury

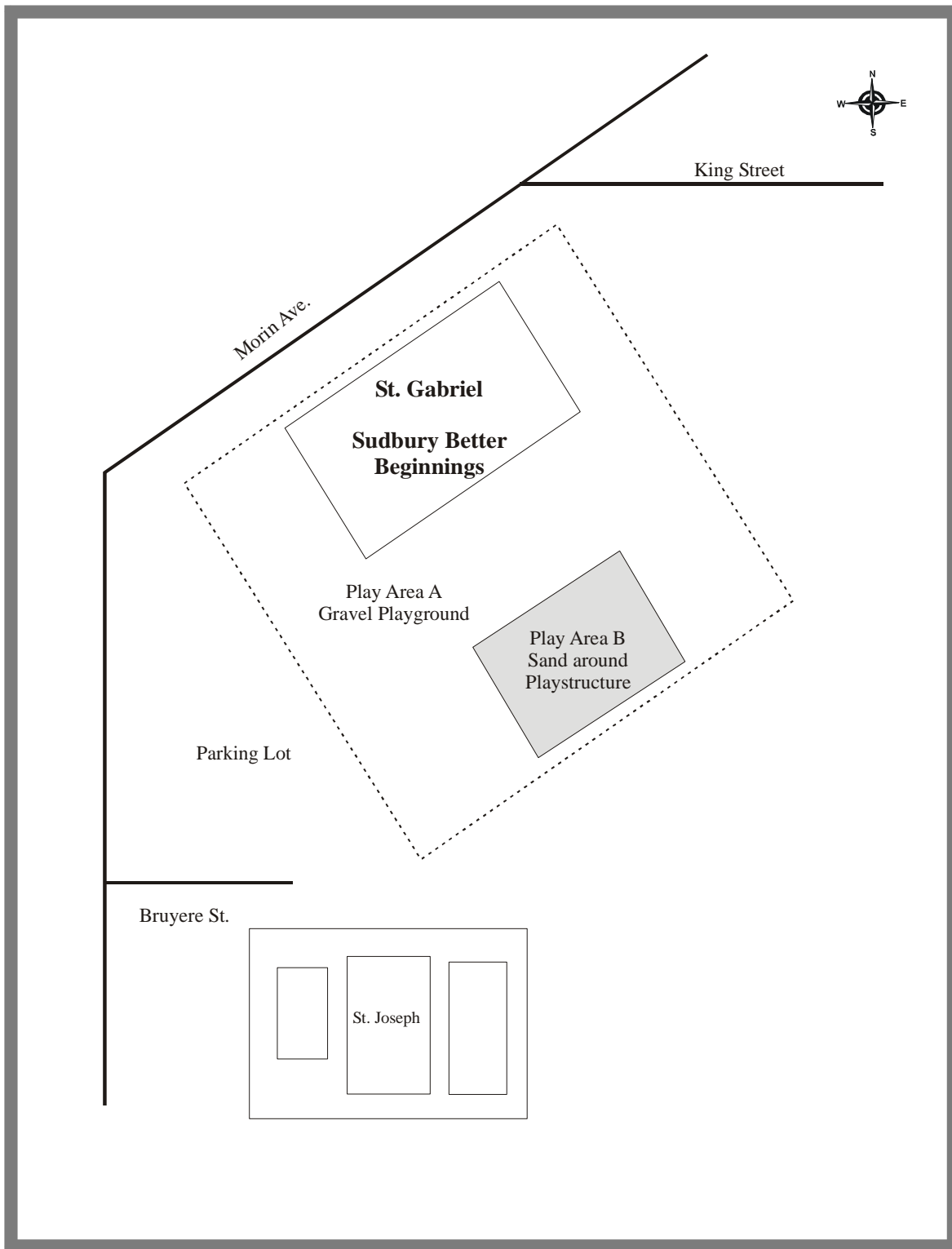
St. Gabriel was sampled on July 17, 2001. At the time of sampling, Sudbury Better Beginnings Program inhabited this building. Figure B2.4.20 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground. Area B corresponds to sand samples collected from beneath the play structure. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. For both gravel playground samples, nickel (Ni) concentrations were elevated above the MOE Table A Effects Based Soil Criteria, and copper (Cu) and cobalt (Co) were elevated above the MOE Table F Ontario Soil Background Criteria. The highest nickel, copper, and cobalt concentrations at the gravel playground were 200, 200, and 21 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

The nickel and copper results are lower than those reported historically, while the cobalt concentrations are within the concentration range previously reported. Previous MOE sampling of undisturbed soils approximately 2 km southeast, 1 km southwest, and 1.5 km northwest of St. Gabriel, Stations 75, 84, and 362, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel, copper and cobalt surface soil concentration ranges of 230 to 830, 230 to 820 ppm, and 15 to 38 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.20:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at St. Gabriel School Better Beginnings, 450 Morin Street, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037127	14284	0 - 5	< 0.8	7	31	< 0.8	34	<b>20</b>	<b>190</b>	19	< 1.5	<b>180</b>	< 1	34	41
		14285	0 - 5	< 0.8	6	31	< 0.8	31	<b>21</b>	<b>200</b>	21	< 1.5	<b>200</b>	< 1	31	47
Area B sand	5037128	14286	0 - 15	< 0.8	5	27	< 0.8	23	8	25	3	< 1.5	23	< 1	33	16
		14287	0 - 15	< 0.8	< 5	23	< 0.8	20	8	22	3	< 1.5	22	< 1	26	15
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.20:** St. Gabriel School (Better Beginnings) Sampling Locations - 2001.

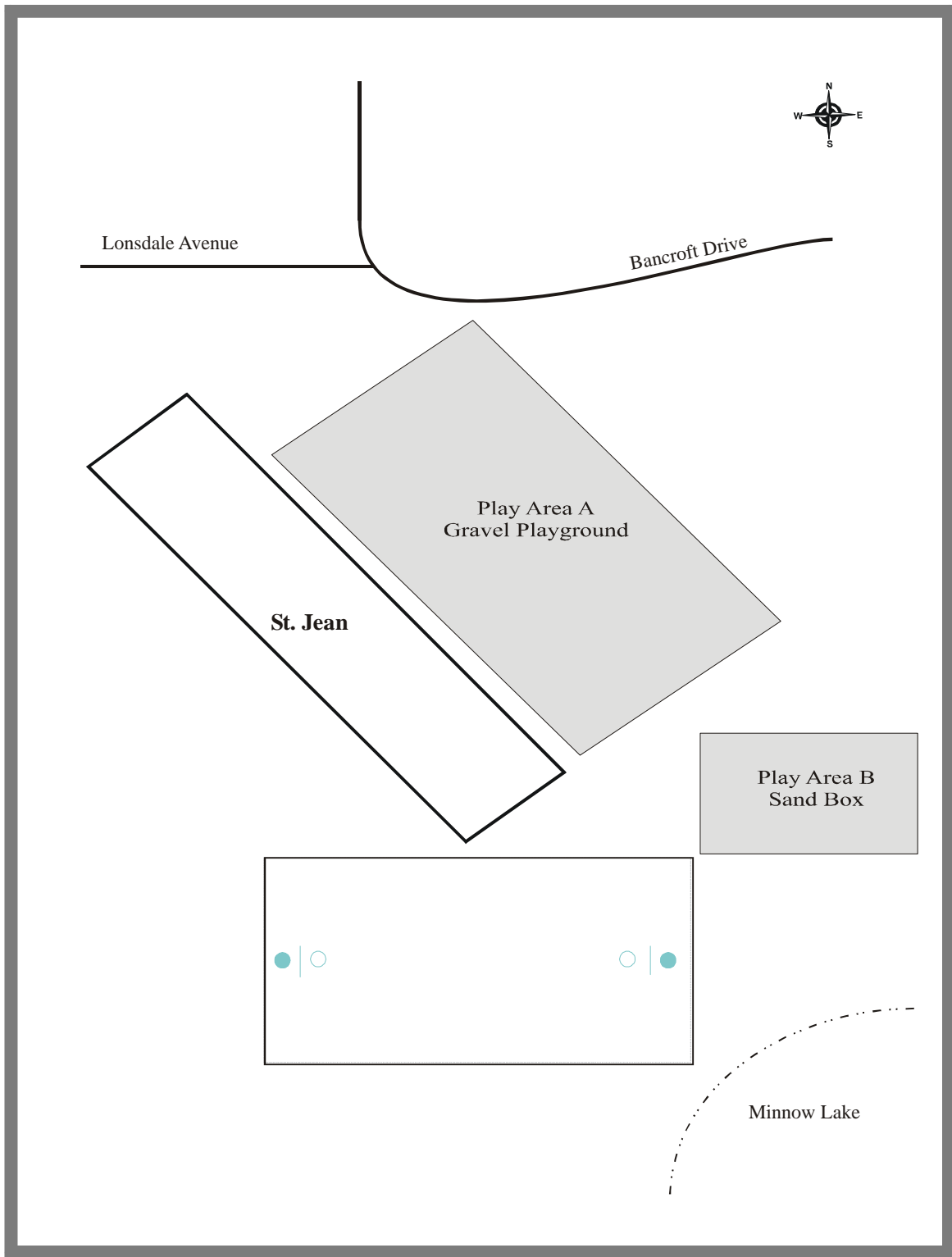
### 2.4.21 St. Jean (formerly) - Le Conseil Scolaire Catholique du Nouvel-Ontario 1127 Promenade Bancroft, Sudbury

St. Jean was sampled on July 17, 2001 and has since been sold. Figure B2.4.21 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground. Area B corresponds to sand samples collected from the sand box. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand box. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for both gravel playground samples from this property and above MOE Table A Effects Based Soil Criteria at selected sites. The highest nickel and copper concentrations found in the gravel samples were 180 and 160 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km south, and 1 km southwest of St. Jean (formerly), Stations 76 and 75, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 78 to 830 and 120 to 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037139	14292	0 - 5	< 0.8	6	35	< 0.8	46	14	<b>140</b>	18	1.9	<b>140</b>	1	41	49
		14293	0 - 5	< 0.8	7	30	< 0.8	35	15	<b>160</b>	17	< 1.5	<u><b>180</b></u>	< 1	31	36
Area B sand	5037140	14294	0 - 15	< 0.8	6	22	< 0.8	27	6	34	4	< 1.5	37	< 1	26	24
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.21: St. Jean (formerly) Sampling Locations - 2001.**

### 2.4.22 St. Joseph - Le Conseil Scolaire Catholique du Nouvel-Ontario 100 Bruyere Street, Sudbury

St. Joseph was sampled on July 17, 2001. Figure B2.4.22 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to sand samples collected from beneath the play structures on the west side of the school building. Area B corresponds to the gravel playground on the east side of the school building. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), copper (Cu) and cobalt (Co) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both gravel samples. Nickel concentrations were also elevated above the MOE Table A Effects Based Soil Criteria for both samples from the gravel playground. The highest nickel, copper, and cobalt concentrations found in the gravel samples were 190, 170, and 22 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria.

These nickel and copper results are lower than those reported historically, while the elevated cobalt concentration falls within the concentration range previously reported. Previous MOE sampling of undisturbed soils approximately 2 km northwest, 1 km southwest, and 2 km southeast of St. Joseph, Stations 362, 84, and 75, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 230 to 830 and 230 to 820 ppm, respectively. The concentration range for cobalt at these historic sites was 15 to 38 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.22:** Concentration of 13 Elements in Soil in µg/g Collected at St. Joseph, 100 Bruyere Street, Sudbury -

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037129	14288	0 - 15	< 0.8	< 5	21	< 0.8	25	7	28	3	< 1.5	22	< 1	27	18
		14289	0 - 15	< 0.8	< 5	19	< 0.8	26	8	23	3	< 1.5	23	< 1	27	16
Area B gravel	5037130	14290	0 - 5	< 0.8	5	32	< 0.8	34	16	<b>170</b>	21	< 1.5	<b>170</b>	< 1	33	38
		14291	0 - 5	< 0.8	6	31	< 0.8	33	<b>22</b>	<b>170</b>	22	< 1.5	<b>190</b>	< 1	32	36
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												

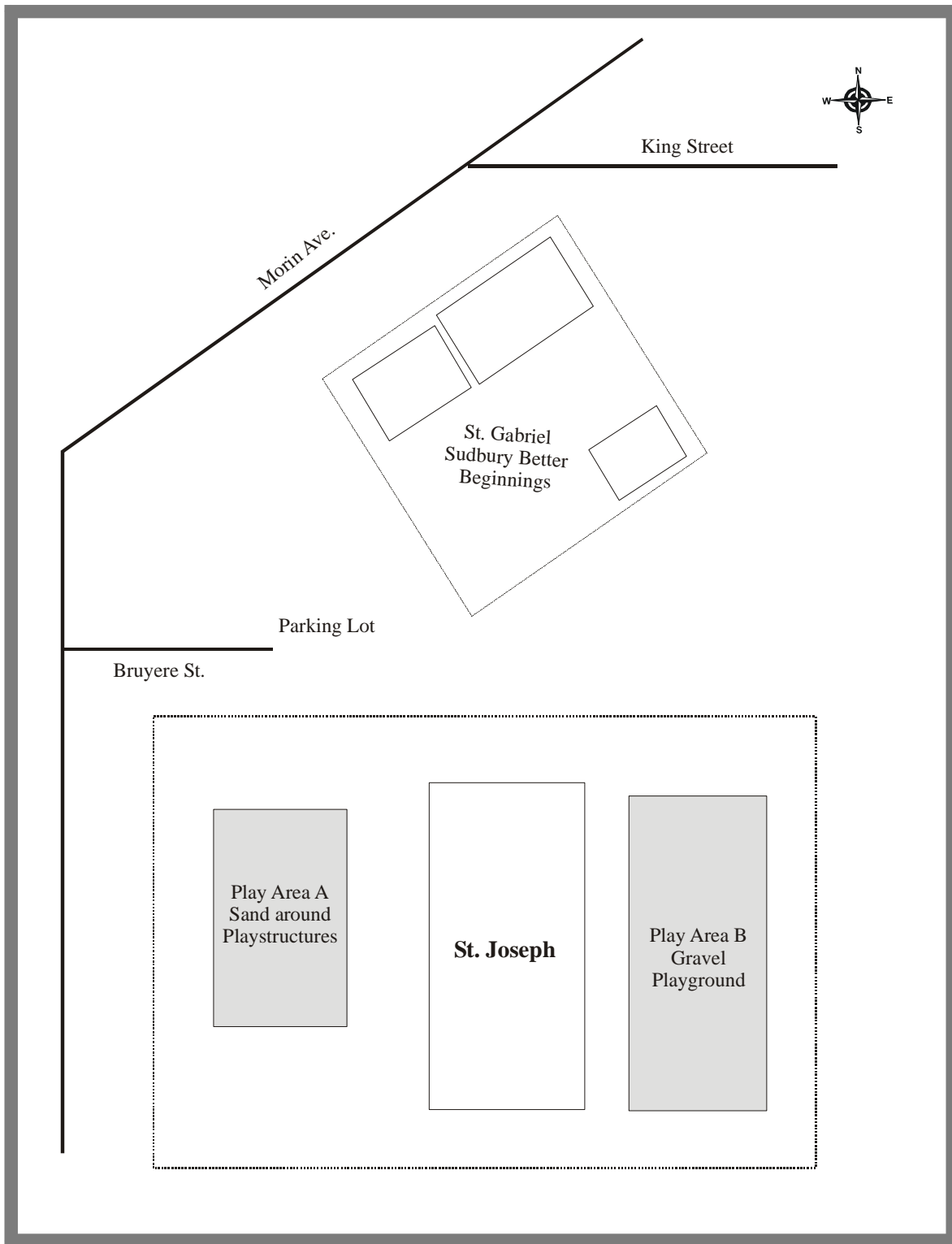


Figure B2.4.22: St. Joseph Sampling Locations - 2001.

### 2.4.23 St. Joseph - Le Conseil Scolaire Catholique du Nouvel-Ontario 1215 Rue St. Anthony, Val Therese

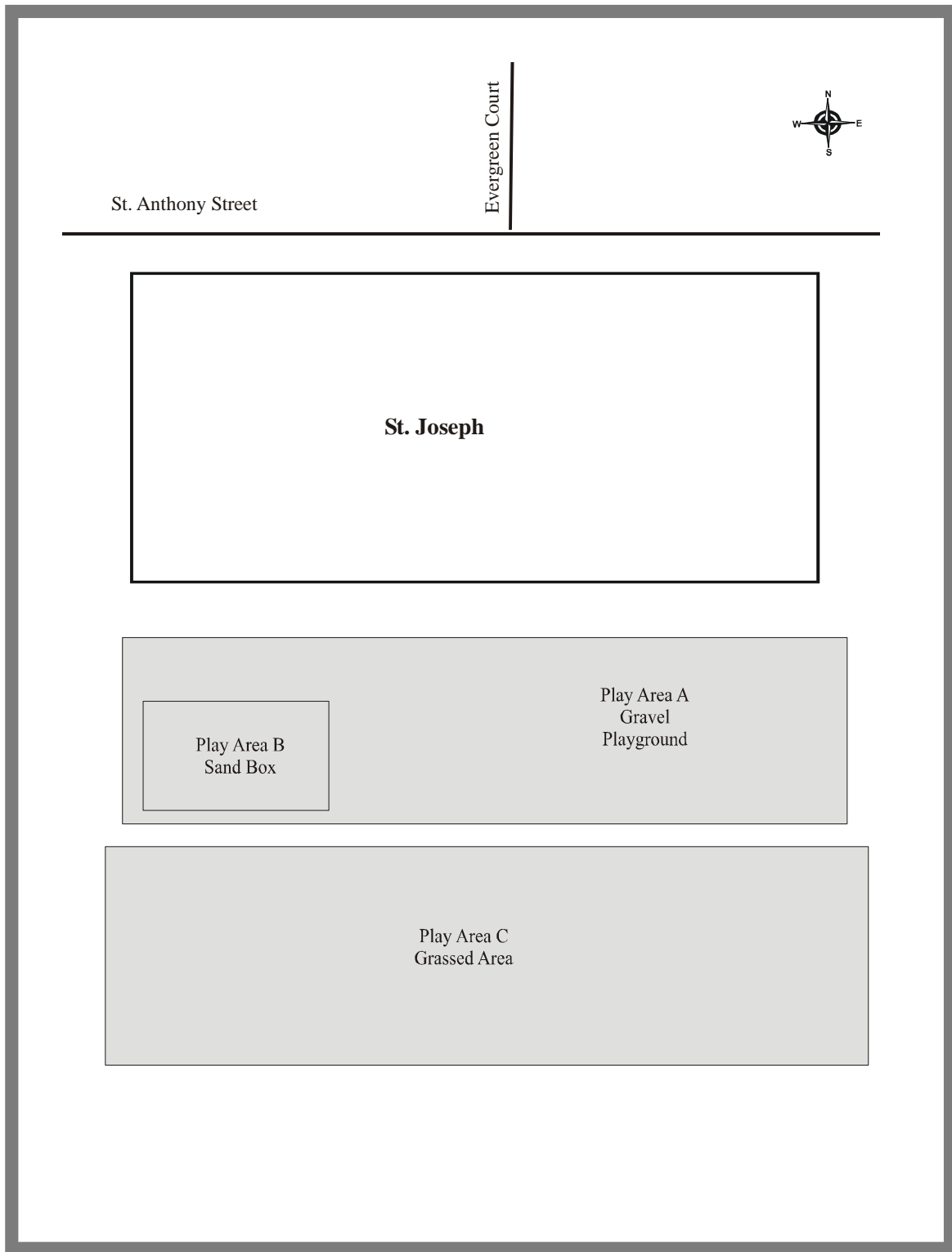
St. Joseph was sampled on July 20, 2001. Figure B2.4.23 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the gravel playground south of the school building. Area B corresponds to sand samples collected from beneath the play structure. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. Area C corresponds to the grassed play area south of the gravel playground. Due to the compacted nature of Area C, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all other samples from this property, with the higher values found in the grassed play area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel results fall within the lower end of the concentration range of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southeast, 2.5 km east, and 3 km northeast of St. Joseph, Stations 344, 347, and 346, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration range of 43 to 150 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037309	14651	0 - 5	< 0.8	6	35	< 0.8	31	15	49	9	< 1.5	<b>49</b>	< 1	34	33
		14652	0 - 5	< 0.8	< 5	26	< 0.8	27	15	38	9	< 1.5	<b>45</b>	< 1	28	29
Area B sand	5037310	14653	0 - 15	< 0.8	< 5	41	< 0.8	46	9	43	6	< 1.5	35	< 1	51	29
Area C grass	5037311	14654	0 - 5	< 0.8	< 5	37	< 0.8	28	8	53	10	< 1.5	<b>59</b>	< 1	30	26
		14655	0 - 5	< 0.8	< 5	46	< 0.8	31	11	52	11	< 1.5	<b>55</b>	< 1	32	31
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												





**Figure B2.4.23:** St. Joseph Sampling Locations - 2001.

### 2.4.24 St. Joseph - Le Conseil Scolaire Catholique du Nouvel-Ontario 3634 Avenue Errington, Chelmsford

St. Joseph was sampled on July 19, 2001. Figure B2.4.24 details the sampling locations at this property. Samples were taken from four areas on the school property. Area A corresponds to the grassed area of the baseball diamond. The entire diamond was grassed, without a separate infield area. Therefore, the entire diamond was sampled as one site. Area B corresponds to grassed play area on the west end of the school property. Due to the compacted nature of the grassed play area, it was only possible to sample the surface soil (0-5 cm). Area C and D correspond to sand samples collected from the north and south sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from either sand box. The sand present is not likely native to the school property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. There was only one sample with an elevated nickel (Ni) concentration that was slightly above the MOE Table F Ontario Soil Background Criteria at 50 ppm. The elevated nickel concentration, 50 ppm, was found in one replicate sample from the west grassed play area, Area B. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northwest, 4 km southwest, and 6 km southeast of St. Joseph, Stations 386, 385, and 384, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration range of 65 to 170 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.24:** Concentration of 13 Elements in Soil in µg/g Collected at St. Joseph, 3634 Avenue Errington, Chelmsford - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037396	14544	0 - 5	< 0.8	< 5	20	< 0.8	22	4	22	10	< 1.5	30	< 1	26	18
		14545	0 - 5	< 0.8	< 5	19	< 0.8	20	3	26	10	< 1.5	33	< 1	23	20
		14546	5 - 10	< 0.8	< 5	20	< 0.8	20	3	11	6	< 1.5	21	< 1	21	15
		14547	5 - 10	< 0.8	< 5	20	< 0.8	20	3	18	9	< 1.5	27	< 1	25	18
		14548	10 - 20	< 0.8	< 5	18	< 0.8	21	3	4	4	< 1.5	13	< 1	23	12
Area B grass	5037397	14550	0 - 5	< 0.8	6	24	< 0.8	18	3	23	8	< 1.5	33	< 1	26	19
		14551	0 - 5	< 0.8	7	28	< 0.8	24	4	38	12	< 1.5	<b>50</b>	< 1	32	21
Area C sand	5037398	14552	0 - 15	< 0.8	< 5	21	< 0.8	22	5	13	3	< 1.5	21	< 1	27	15
Area D sand	5037399	14553	0 - 15	< 0.8	< 5	20	< 0.8	24	5	13	2	< 1.5	19	< 1	28	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				<u>13</u>	<u>20</u>	<u>750</u>	<u>12</u>	<u>750</u>	<u>40</u>	<u>225</u>	<u>200</u>	<u>5.0</u>	<u>150</u>	<u>10</u>	<u>200</u>	<u>600</u>

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.

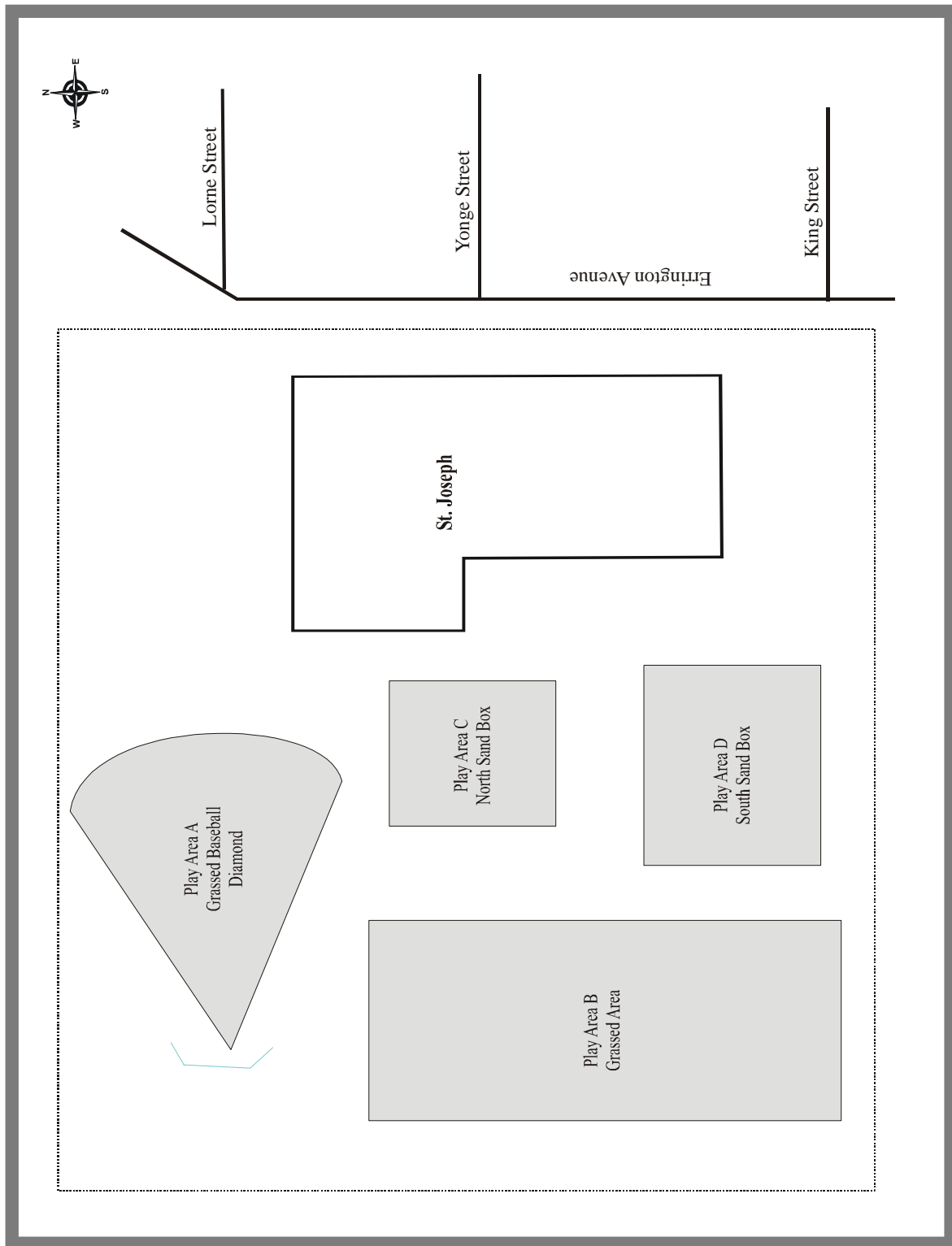


Figure B2.4.24: St. Joseph Soil Sampling Locations - 2001.

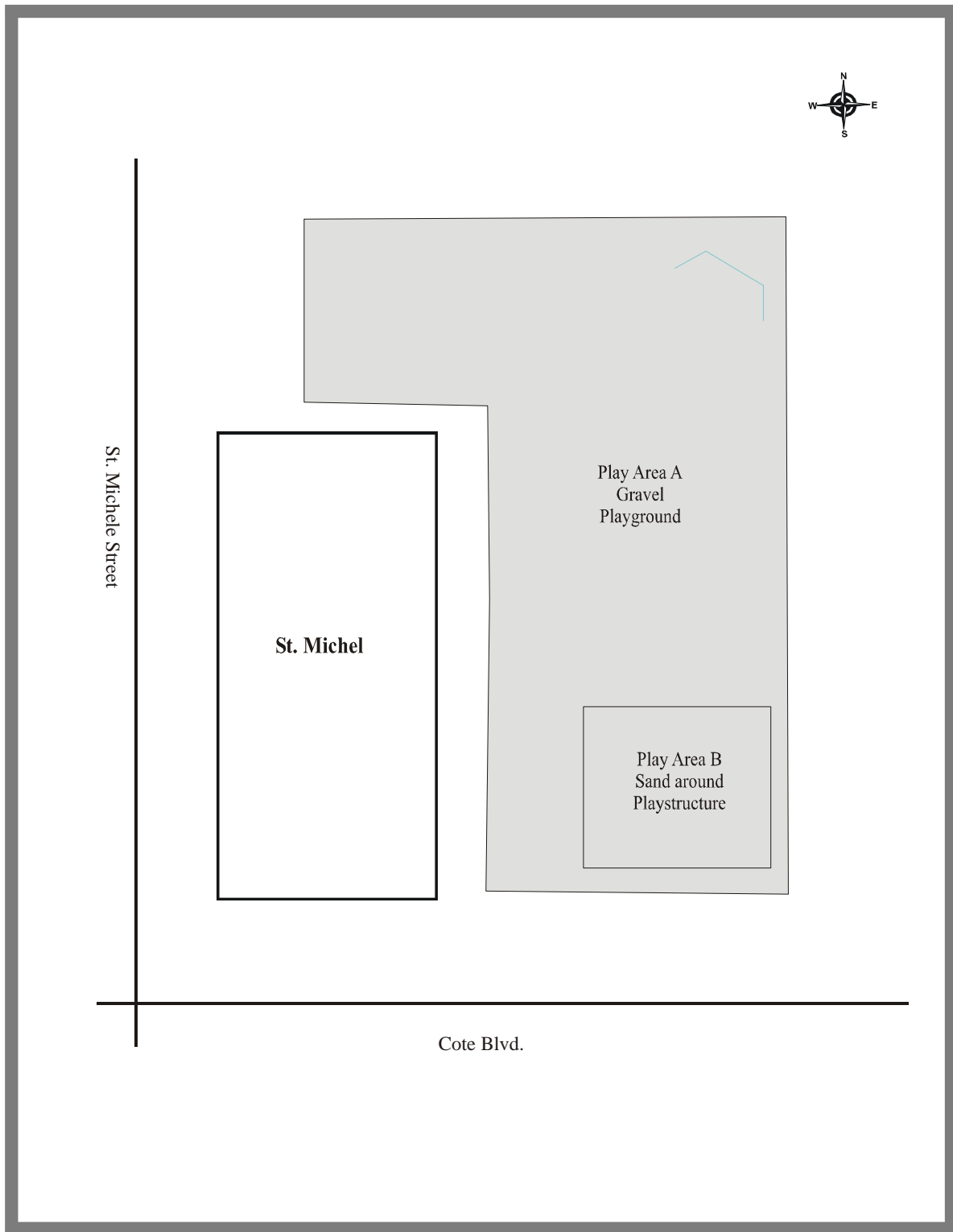
### 2.4.25 St. Michel - Le Conseil Scolaire Catholique du Nouvel-Ontario 4500 Rue St. Michele, Hanmer

St. Michel was sampled on July 20, 2001 and has since been purchased by the Sudbury Catholic District School Board, with the name changed to St. Anne. Figure B2.4.25 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel playground. Area B corresponds to sand samples collected from beneath the play structure. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), copper (Cu), and cobalt (Co) were elevated above the MOE Table F Ontario Soil Background Criteria in at least one replicate sample from the gravel playground. The highest nickel, copper, and cobalt concentrations found were 56, 66, and 24 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel results are lower than those reported historically, while the copper concentrations fall within the concentration ranges previously reported. The elevated cobalt concentration found at this property was higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1 km southeast and 2 km southwest of St. Michel, Stations 350 and 347, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 78 to 150 and 56 to 110 ppm, respectively. The highest cobalt concentration reported historically for these sites was 7.4 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037330	14622	0 - 5	< 0.8	< 5	34	< 0.8	30	<b>24</b>	<b>66</b>	11	< 1.5	<b>53</b>	< 1	32	33
		14623	0 - 5	< 0.8	< 5	30	< 0.8	26	18	53	9	< 1.5	<b>56</b>	< 1	28	27
Area B sand	5037331	14624	0 - 15	< 0.8	< 5	18	< 0.8	23	5	15	2	< 1.5	16	< 1	27	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.25:** St. Michel Sampling Locations - 2001.

### 2.4.26 St. Paul - Le Conseil Scolaire Catholique du Nouvel-Ontario 185 6<sup>th</sup> Avenue, Lively

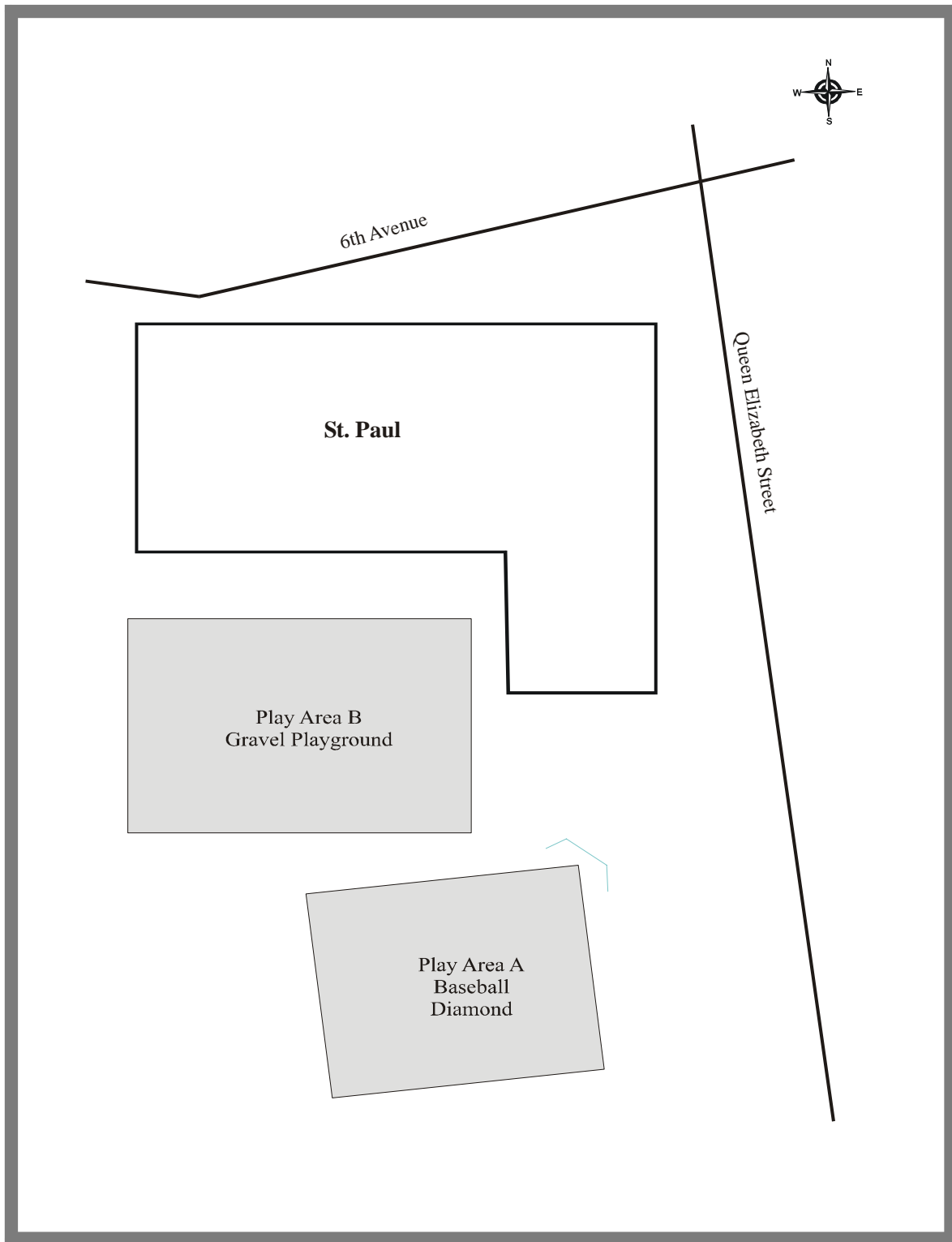
St. Paul was sampled on July 21, 2001. Figure B2.4.26 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the grassed area of the baseball diamond. The entire diamond was grassed, without a separate infield area. Therefore, the entire diamond was sampled as one site. Due to the compacted nature of the baseball diamond, it was only possible to sample to the 5 -10 cm depth for one replicate. Area B corresponds to the gravel playground just south of the school building. Due to the constant mixing and homogenous nature of the gravel areas, samples were collected with hand trowels to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for all samples from this property. The highest nickel and copper concentrations, 150 and 110 ppm, respectively, were found in the surface soil layer of the grassed baseball diamond. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km south and 2.5 km southeast of St. Paul, Stations 376 and 100, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 34 to 700 and 35 to 568 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.26:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at St. Paul, 185 6th Avenue, Lively - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037245	14721	0 - 5	< 0.8	6	67	< 0.8	34	10	<b>110</b>	19	< 1.5	<b>150</b>	< 1	32	53
		14722	0 - 5	< 0.8	< 5	58	< 0.8	31	9	<b>93</b>	15	< 1.5	<b>130</b>	1	30	42
		14723	5 - 10	< 0.8	7	53	< 0.8	32	10	<b>100</b>	14	< 1.5	<b>130</b>	< 1	31	50
Area B gravel	5037246	14724	0 - 5	< 0.8	< 5	30	< 0.8	34	11	<b>83</b>	13	< 1.5	<b>90</b>	< 1	34	36
		14725	0 - 5	< 0.8	< 5	31	< 0.8	35	11	<b>79</b>	12	< 1.5	<b>83</b>	< 1	35	35
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.26:** St. Paul Sampling Locations - 2001.

### 2.4.27 St. Pierre - Le Conseil Scolaire Catholique du Nouvel-Ontario 70 Rue Wilfred, Sudbury

St. Pierre was sampled on July 22, 2001. Figure B2.4.27 details the sampling locations at this property. Samples were taken from one area on the school property. Area A corresponds to the gravel playground surrounding the school building. Due to the constant mixing and homogenous nature of the gravel areas, samples were collected with hand trowels to represent the 0-5 cm depth. There were not any other play areas to sample at this property. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

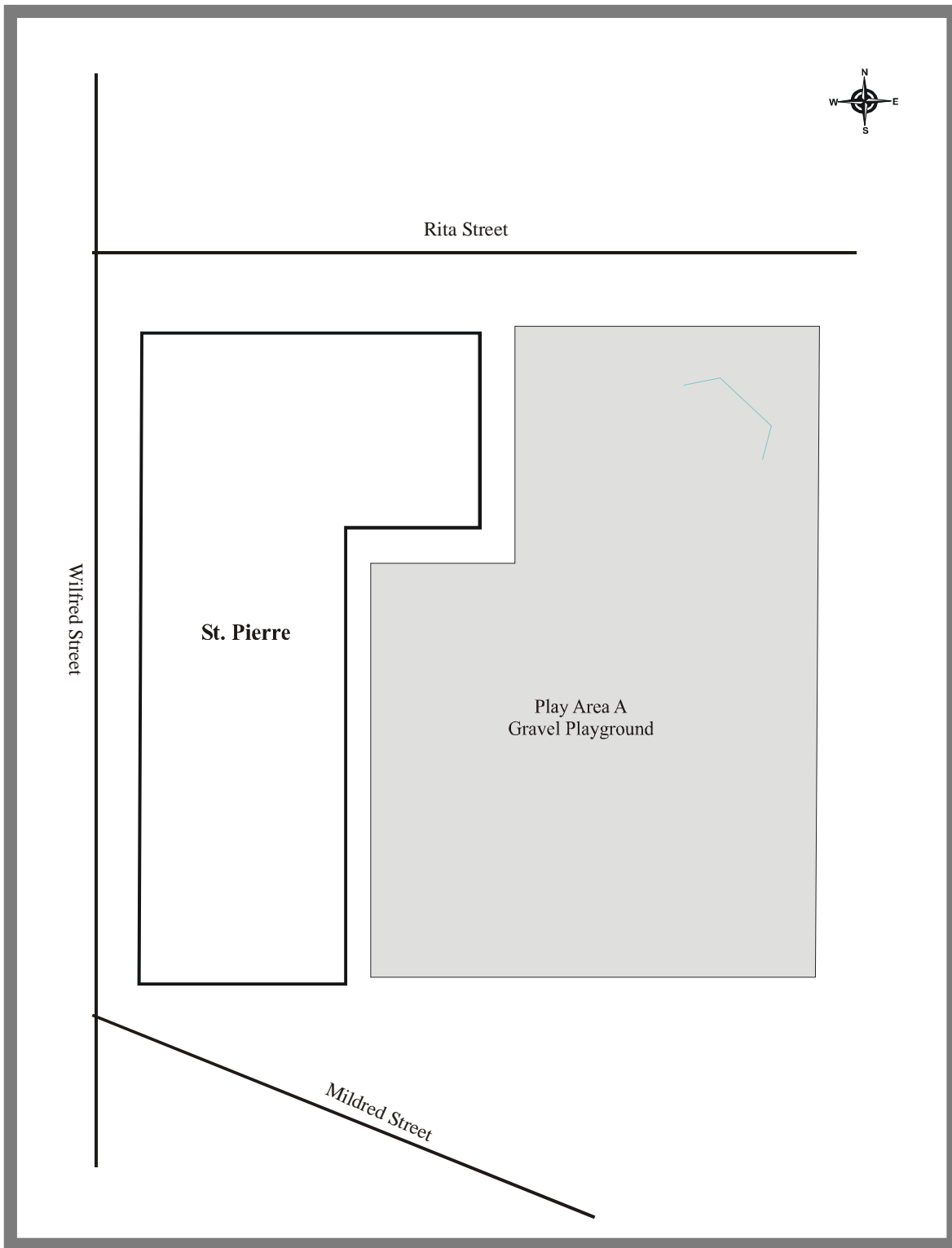
Nickel (Ni), copper (Cu), and cobalt (Co) were elevated above the MOE Table F Ontario Soil Background Criteria in at least one replicate sample from the gravel playground. The highest nickel, copper, and cobalt concentrations found were 120, 93, and 29 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically, while the cobalt concentrations fall within the higher end of the concentration ranges previously reported. Previous MOE sampling of undisturbed soils approximately 1 km northwest and 1.5 km southeast of St. Pierre, Stations 77 and 74, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 91 to 790 and 87 to 740 ppm, respectively. The concentration range for cobalt at these historic sites was 6.5 to 32 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.27:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at St. Pierre, 70 Rue Wilfred, Sudbury - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037266	14772	0 - 5	< 0.8	< 5	39	< 0.8	35	<b>29</b>	<b>93</b>	7	< 1.5	<b>120</b>	< 1	34	39
		14773	0 - 5	< 0.8	< 5	39	< 0.8	33	17	<b>82</b>	7	< 1.5	<b>88</b>	< 1	30	31
Table F(results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A(results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												





**Figure B2.4.27:** St. Pierre Sampling Locations - 2001.

### 2.4.28 Ste. Marie - Le Conseil Scolaire Catholique du Nouvel-Ontario 25 Rue Marier, Azilda

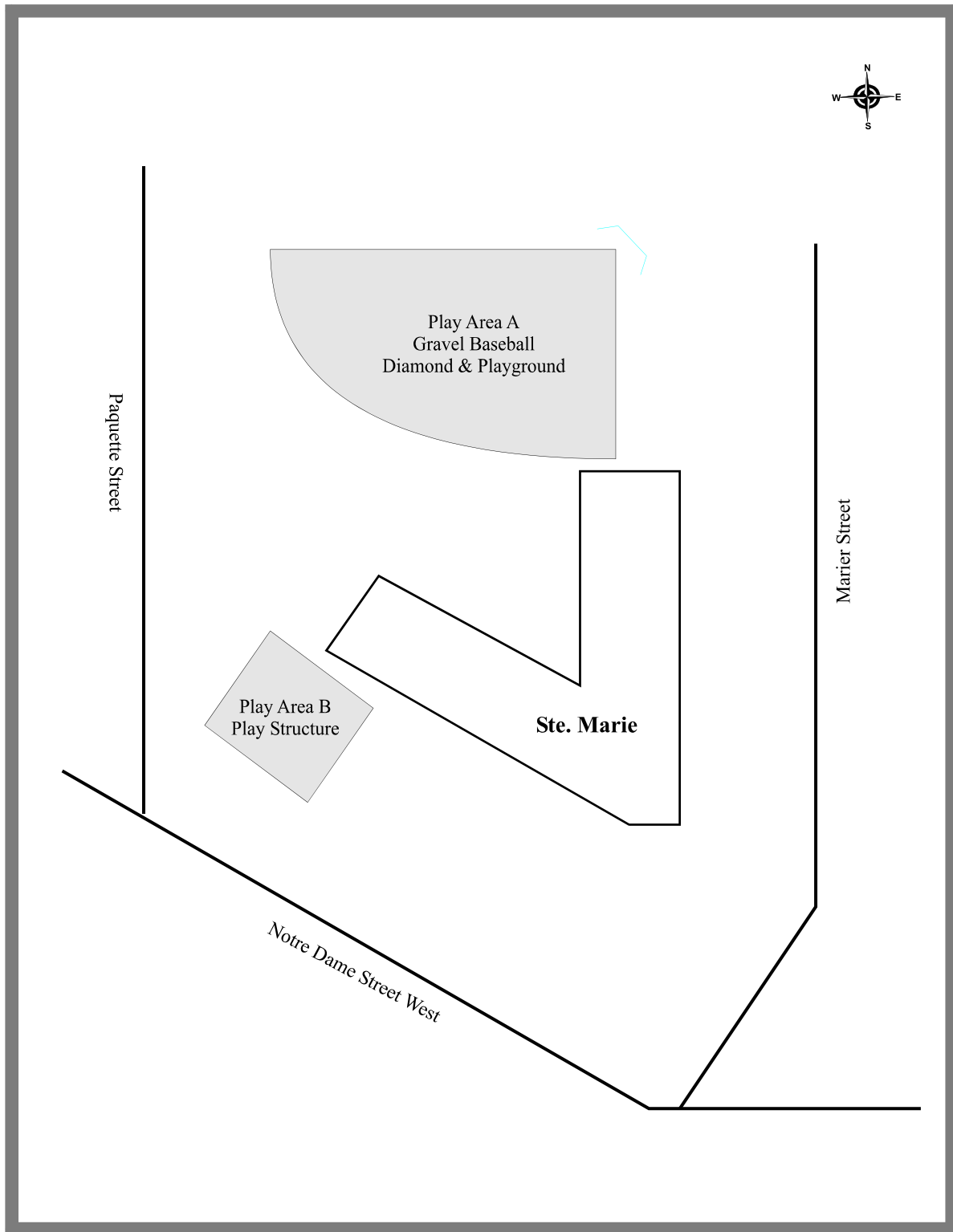
Ste. Marie was sampled on July 19, 2001. Figure B2.4.28 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the gravel baseball diamond and playground north of the school building. Area B corresponds to sand samples collected from beneath the play structure west of the school building. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand is not likely native to the school property and is believed to have been introduced when the play structure was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for both gravel playground samples. The highest nickel and copper concentrations found were 85 and 68 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2.5 km southeast and 4.5 km southwest of Ste. Marie, Stations 90, 91, and 384, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 100 to 770 and 74 to 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.4.28:** Concentration of 13 Elements in Soil in  $\mu\text{g/g}$  Collected at Ste. Marie, 25 Rue Marier, Azilda - 2001

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037373	14500	0 - 5	< 0.8	< 5	34	< 0.8	36	12	<b>68</b>	14	< 1.5	<b>85</b>	< 1	36	46
		14501	0 - 5	< 0.8	< 5	34	< 0.8	32	11	<b>58</b>	12	< 1.5	<b>60</b>	< 1	36	42
Area B sand	5037374	14502	0 - 15	< 0.8	< 5	17	< 0.8	23	5	17	4	< 1.5	19	< 1	28	25
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												



**Figure B2.4.28:** Ste. Marie School Sampling Locations - 2001.

### 2.4.29 Ste. Therese - Le Conseil Scolaire Catholique du Nouvel-Ontario 4617 Rue Ste. Therese, Val Therese

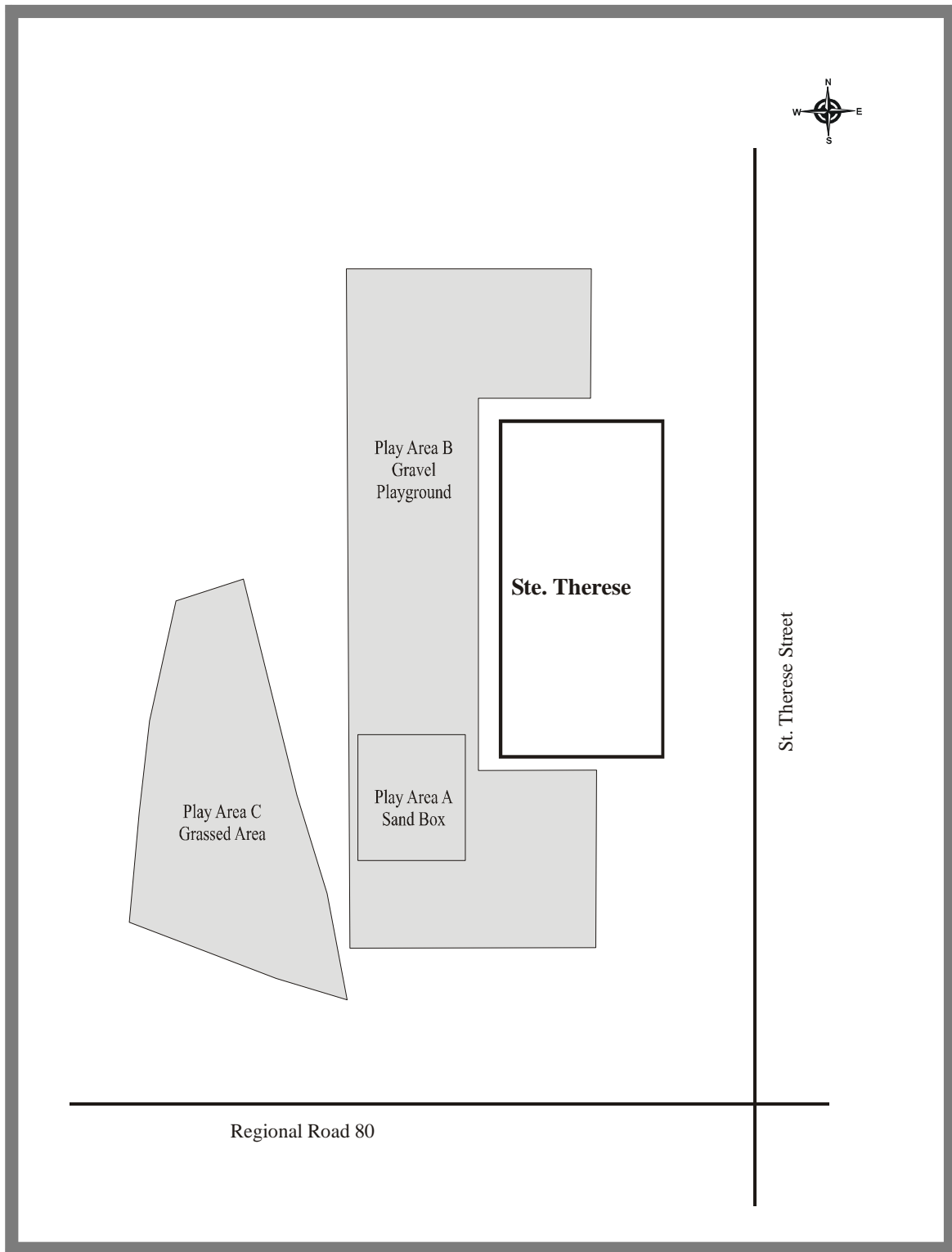
Ste. Therese was sampled on July 20, 2001. Figure B2.4.29 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to sand samples collected from the sand box west of the school building. Area B corresponds to the gravel playground also west of the school building. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. Area C corresponds to the grassed play area west of the gravel playground. Due to the compacted nature of Area C, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand box. The sand present is not likely native to the school property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for both grassed play area samples from this property. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel results fall within the lower end of the concentration range of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km southeast, 3 km northeast, and 3 km southeast of Ste. Therese, Stations 344, 346, and 347, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated a nickel surface soil concentration range of 43 to 150 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037306	14656	0 - 15	< 0.8	< 5	17	< 0.8	24	5	9	2	< 1.5	14	< 1	28	14
Area B gravel	5037307	14657	0 - 5	< 0.8	< 5	26	< 0.8	39	8	37	8	< 1.5	36	< 1	34	27
		14658	0 - 5	< 0.8	< 5	28	< 0.8	37	8	44	10	< 1.5	40	< 1	37	32
Area C grass	5037308	14659	0 - 5	< 0.8	6	36	< 0.8	28	7	48	14	< 1.5	<b>55</b>	< 1	29	34
		14660	0 - 5	< 0.8	< 5	37	< 0.8	34	7	44	12	< 1.5	<b>46</b>	< 1	34	38
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold and underlined)				13	20	750	12	750	40	225	200	5.0	150	10	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.



**Figure B2.4.29:** Ste. Therese Sampling Locations - 2001.

## 2.5 Private Schools

There were only two private schooling facilities provided to the MOE by the City of Greater Sudbury. Both Baron Academy Nursery (formerly) and Montessori School of Sudbury were sampled in July 2001.

### 2.5.1 Baron Academy Nursery (formerly), 1534 Pioneer Road, Sudbury

Baron Academy Nursery was sampled on July 4, 2001 and has since been sold. Figure B2.5.1 details the sampling locations at this property. Samples were taken from two areas on the school property. Area A corresponds to the baseball diamond infield and Area B correspond to the baseball diamond outfield. Due to the compacted nature of Areas A and B, it was only possible to sample the surface soil layer of the infield and to 10 cm in the outfield. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in selected samples taken from the baseball diamond outfield. The highest nickel and copper concentrations found, 71, and 58 ppm, respectively, were found in the surface soil of the grassed baseball diamond outfield. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These soil results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km west of Baron Academy Nursery (formerly), Station 404 of the MOE Sudbury 2000 Report, for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 120 and 110 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037006	14024	0 - 5	< 0.8	5	31	< 0.8	25	4	15	4	< 1.5	23	< 1	25	14
		14025	0 - 5	< 0.8	5	43	< 0.8	31	6	21	6	< 1.5	30	< 1	29	21
Area B grass	5037007	14026	0 - 5	< 0.8	5	27	< 0.8	25	6	<b>58</b>	12	< 1.5	<b>71</b>	< 1	25	21
		14027	0 - 5	< 0.8	5	28	< 0.8	24	6	47	10	< 1.5	<b>61</b>	< 1	24	21
		14028	5 - 10	< 0.8	5	29	< 0.8	27	6	55	8	< 1.5	<b>60</b>	< 1	26	19
		14029	5 - 10	< 0.8	5	30	< 0.8	24	5	48	7	< 1.5	<b>57</b>	< 1	25	19
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold &				13	20	750	3.0	750	40	150	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												
<b>Note: The ball field was also sampled separately as part of McFarlane Lake Playground. (see Appendix C)</b>																

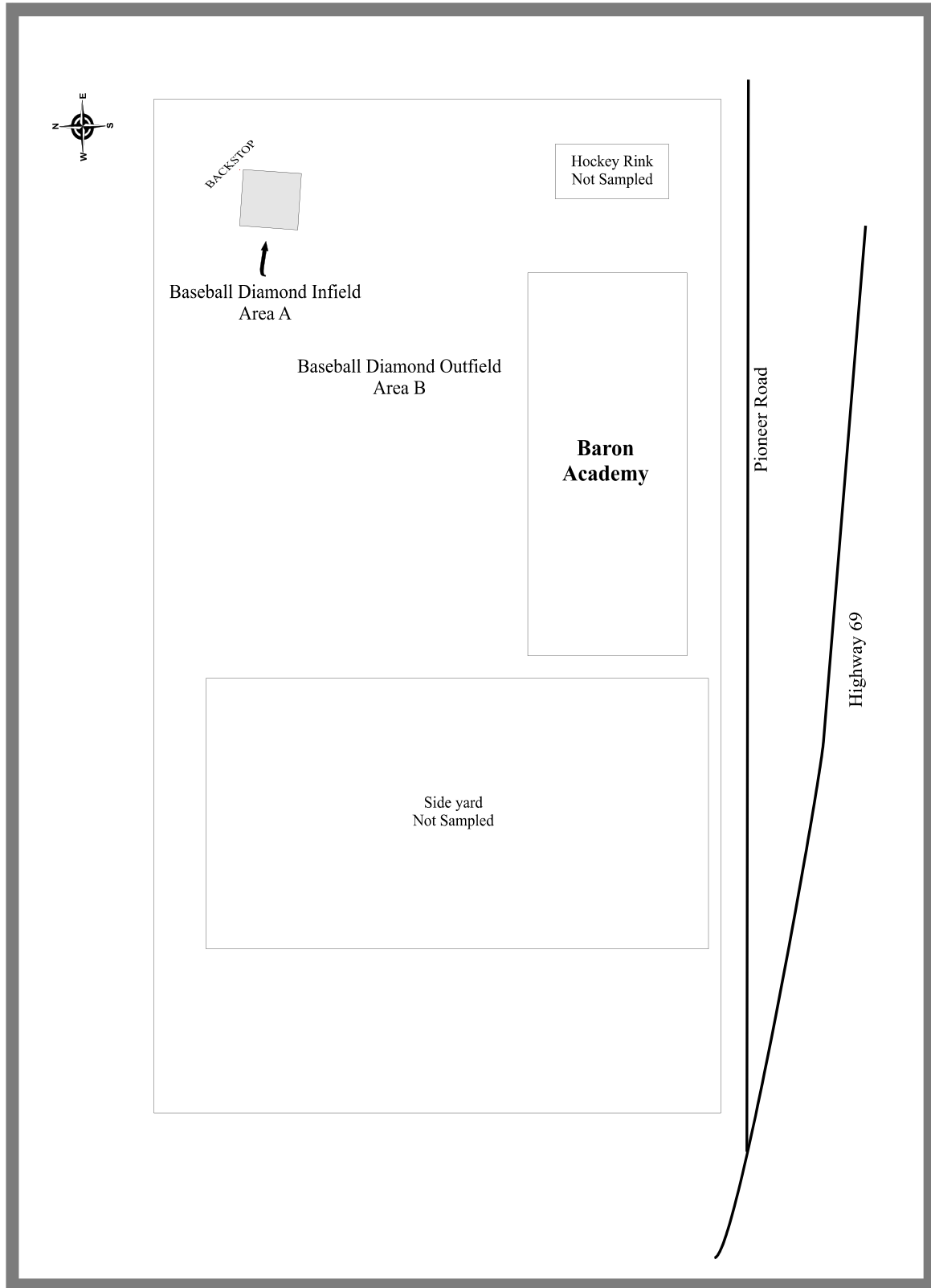


Figure B2.5.1: Baron Academy Nursery (formerly) Sampling Locations - 2001.

## 2.5.2 Montessori School of Sudbury, 295 Victoria Street, Sudbury

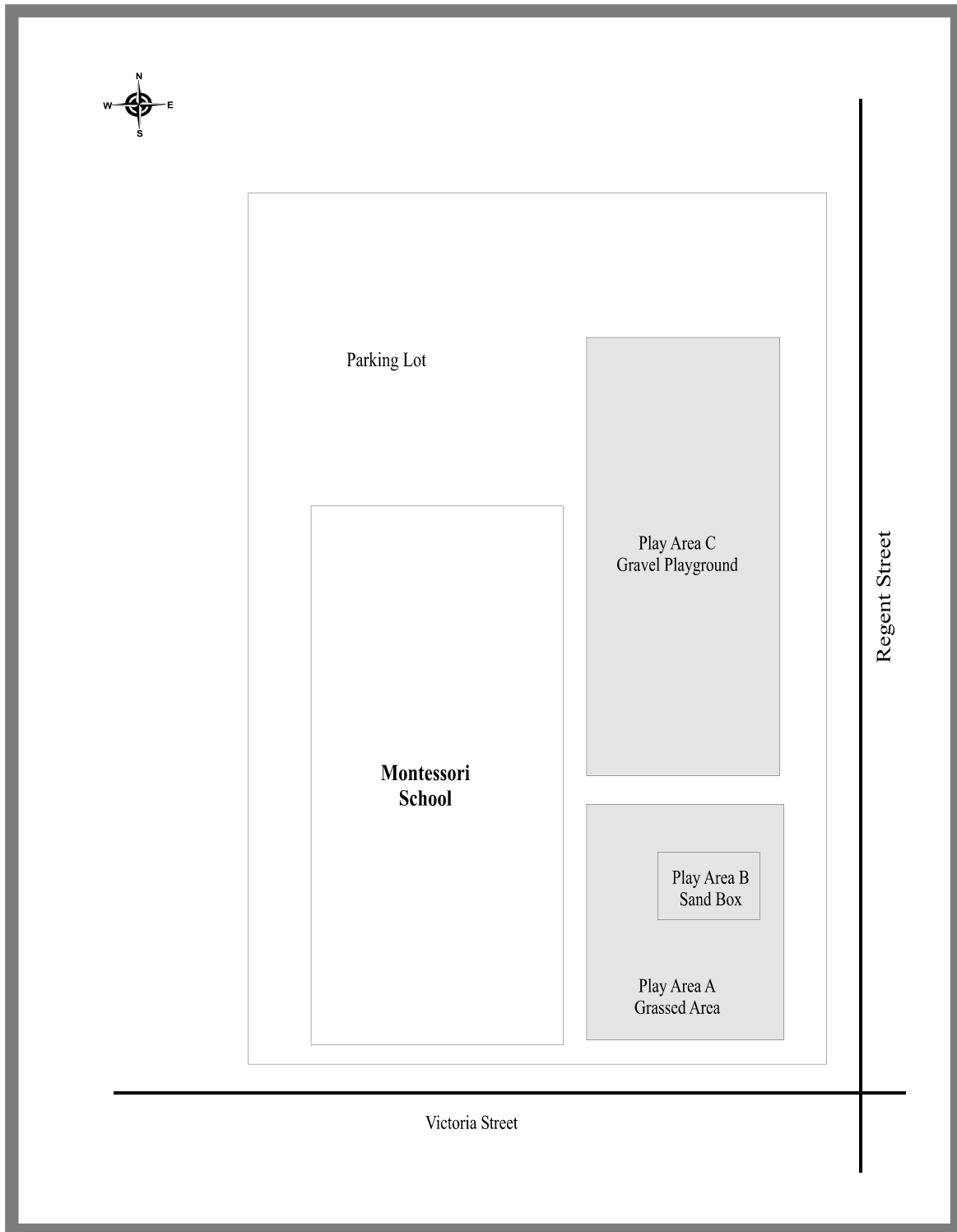
Montessori School of Sudbury was sampled on July 6, 2001. Figure B2.5.2 details the sampling locations at this property. Samples were taken from three areas on the school property. Area A corresponds to the grassed play area on the south side of the fenced property. Due to the compacted nature of Area A, it was only possible to sample the surface soil layer (0-5 cm). Area B corresponds to the sand samples that were taken from the sand boxes. Area D corresponds to the gravel playground in the lower part of the property. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand boxes. The sand present is not likely native to the school property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in all other samples taken from this property. Cobalt (Co) and chromium (Cr) concentrations were also elevated above the MOE Table F Ontario Soil Background Criteria in both the gravel samples. The highest nickel and copper concentrations found in the surface soil samples from the grassed play area were 210 and 150 ppm, respectively. The highest cobalt and chromium concentrations, 30 and 90 ppm, respectively, were found in the samples from the gravel playground. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. Only one sample, 0 -5 cm from the grassed play area, had a nickel concentration that exceeded the MOE Table A Effects Based Soil Criteria.

The nickel and copper soil results are similar to those reported historically, while the cobalt and chromium concentrations are higher than those previously reported. Previous MOE sampling of undisturbed soils approximately 0.5 km southwest of Montessori School of Sudbury, Station 378 of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations of 250 and 180 ppm, respectively. The highest cobalt and chromium concentrations previously reported were 13 and 23 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037109	14216	0 - 5	< 0.8	5	35	< 0.8	28	7	<b>80</b>	13	< 1.5	<b>110</b>	< 1	26	31
		14217	0 - 5	< 0.8	6	44	< 0.8	32	10	<b>150</b>	24	< 1.5	<b>210</b>	1.1	28	39
Area B sand	5037110	14218	0 - 15	< 0.8	5	22	< 0.8	26	7	30	3	< 1.5	32	< 1	33	17
Area C gravel	5037111	14219	0 - 5	< 0.8	5	120	< 0.8	<b>90</b>	<b>28</b>	<b>150</b>	19	< 1.5	<b>120</b>	< 1	73	90
		14220	0 - 5	< 0.8	5	120	< 0.8	<b>86</b>	<b>30</b>	<b>130</b>	15	< 1.5	<b>130</b>	< 1	70	95
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold &				13	20	750	3.0	750	40	150	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results can be found in Table 4.1.												





**Figure B2.5.2:** Montessori School Sampling Locations - 2001.

## 2.6 City of Sudbury Daycares

In June of 2001, the City of Sudbury, Health and Social Services, provided the MOE with an addressed list of all municipal daycare facilities. Sampling was carried out in July of 2001. Several facilities were not sampled for various reasons.

The following properties did not have any play areas to sample:

- All Nations Children, 885 Prete Street, Sudbury
- Dowling Co-op Nursery, 7 Douglas Street, Sudbury
- Happy Tots Cooperative, at Sudbury Secondary School
- Jubilee Heritage Centre, 169 Applegrove Street, Sudbury
- Junior Citizens Daycare, 140 Durham Street, Sudbury
- Larch Street Kids Child Care- Head Office, 199 Larch Street, Sudbury
- YMCA Centre for Life, 140 Durham Street, Sudbury

Minnow Lake Co-op Nursery, 1305 Holland Street, Sudbury is located within a private residence and was not sampled.

The following properties were an intrinsic part of an associated school and therefore, the daycare data can be found with the school at which they are located:

- Alexander Kids at Alexander Public School, 39 St. Brendan Street, Sudbury
- All Nations - St. Christopher, 2843 CKSO Road, Sudbury
- Beattie Kids at R.L. Beattie Public School, 102 Loach's Road, Sudbury
- Cedar Park Daycare #2 at St. Raphael School, 1096 Dublin Street, Sudbury
- C.R. Judd Daycare at C.R. Judd Public School, 8 Lincoln Street, Capreol
- Garderie Jardiniere Francophone at E.P. Foyer Jeunesse, 4752 Rue Notre Dame, Hanmer
- Princess Anne Kids at Princess Anne School, 500 Douglas Street, Sudbury
- Services de Garde de Rayside-Balfour #2 at Chelmsford Public School, 121 Charlotte Street, Chelmsford
- Teddy Bear Daycare at St. John School, 181 William Street, Garson
- Walden Daycare Centre #2 at St. James School, 280 Anderson Drive, Lively

Only the properties that were on the list as of June 4, 2001 were sampled. Detailed sampling descriptions and site maps are provided in the following sections. For those daycares located within schools, sampling descriptions and site maps are provided in the section referenced.

### 2.6.1 Alexander Kids at Alexander Public School, 39 St. Brendan Street, Sudbury

This daycare is operated by Larch Street Kids and is located in the same building as Alexander Public School, Rainbow District School Board. See Alexander Public School for the discussion, results and map (Section 2.1.2).

## 2.6.2 All Nations -South End, 2690 Henri Street, Sudbury

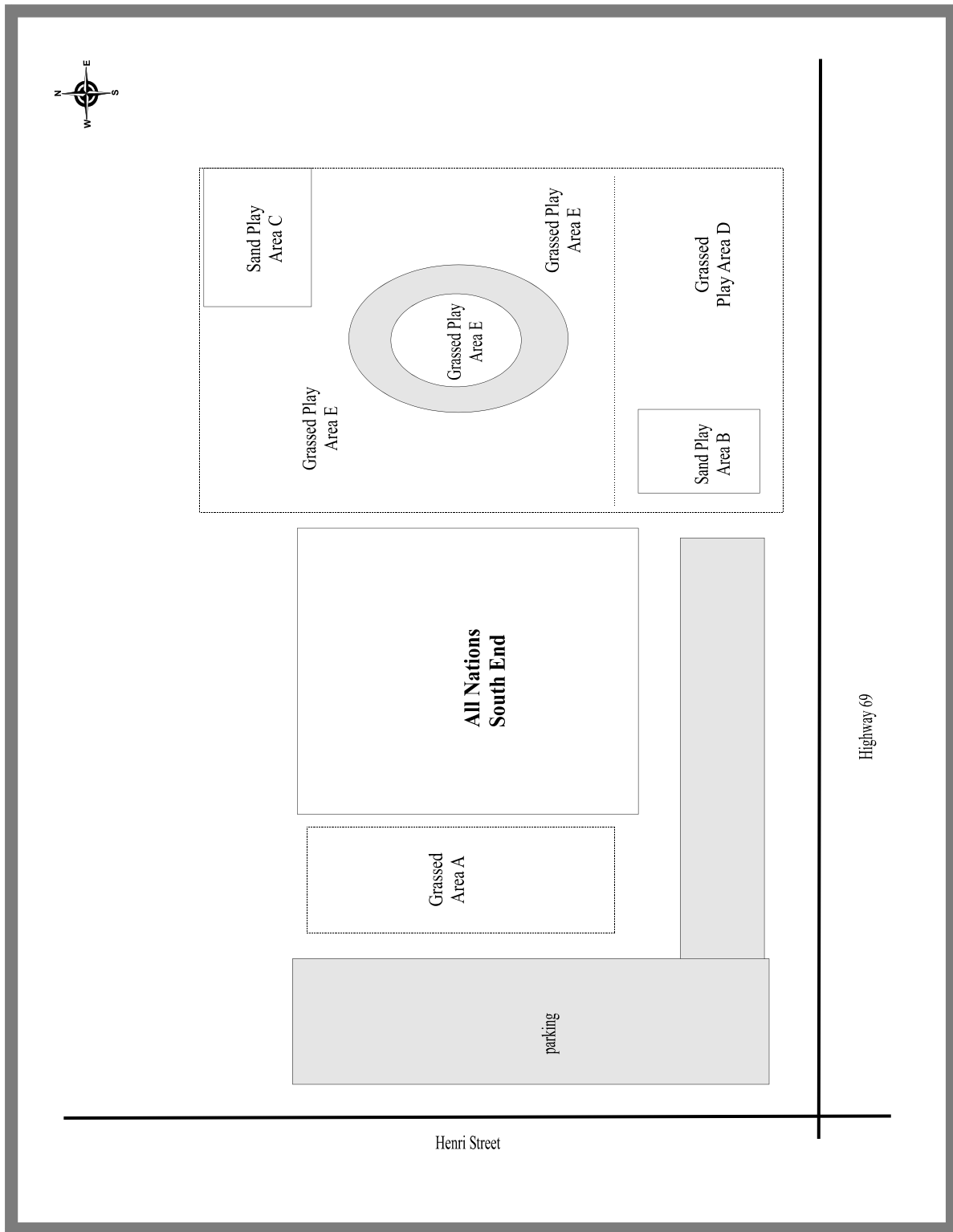
All Nations South End was sampled on July 4, 2001. Samples were taken from five areas on the daycare property. Area A corresponds to the grassed play area on the front lawn of the house. Areas B and C correspond to sand samples collected from the sanded play areas in the southwest and northeast corners of the back yard. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Area D corresponds to the grassed play area on the east side of the house and fence. Area E corresponds to the grassed play area on the west side of the fence and in the north back yard play area. There was no impediment to sampling all three depths for the grassed play areas. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sanded play areas. The sand is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the front yard and for all samples collected from the back and side yard grassed play areas. Copper (Cu) was elevated above the MOE Table F Ontario Soil Background Criteria for selected sites from the back and side yard only.

The highest nickel concentration, 93 ppm, was found in the 10 - 20 cm depth of the side yard, while the highest copper concentration, 65 ppm, was found in the 5 - 10 cm depth of the back yard. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km west and 1 km northeast of All Nations South End, Stations 404 and 406, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 58 to 120 and 57 to 110 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037008	14030	0 - 5	< 0.8	< 5	31	< 0.8	31	7	36	6	< 1.5	<b>48</b>	< 1	29	23
		14031	0 - 5	< 0.8	< 5	31	< 0.8	35	7	32	6	< 1.5	<b>49</b>	< 1	34	24
		14032	5 - 10	< 0.8	< 5	25	< 0.8	29	7	35	5	< 1.5	43	< 1	29	18
		14033	5 - 10	< 0.8	< 5	28	< 0.8	31	7	28	5	< 1.5	37	< 1	33	20
		14034	10 - 20	< 0.8	< 5	26	< 0.8	29	7	28	5	< 1.5	36	< 1	31	18
		14035	10 - 20	< 0.8	< 5	27	< 0.8	28	7	29	5	< 1.5	39	< 1	29	19
Area B sand	5037009	14036	0 - 15	< 0.8	< 5	14	< 0.8	23	4	14	3	< 1.5	16	< 1	27	14
		14037	0 - 15	< 0.8	< 5	14	< 0.8	24	3	15	2	< 1.5	11	< 1	26	14
Area C sand	5037010	14038	0 - 15	< 0.8	< 5	19	< 0.8	29	8	22	3	< 1.5	27	< 1	28	27
		14039	0 - 15	< 0.8	< 5	20	< 0.8	31	9	26	4	< 1.5	29	< 1	32	32
Area D grass	5037011	14040	0 - 5	< 0.8	< 5	25	< 0.8	30	7	33	6	< 1.5	<b>46</b>	< 1	23	20
		14041	0 - 5	< 0.8	< 5	30	< 0.8	35	9	38	7	< 1.5	<b>58</b>	< 1	25	27
		14042	5 - 10	< 0.8	< 5	27	< 0.8	25	6	32	7	< 1.5	<b>51</b>	< 1	25	17
		14043	5 - 10	< 0.8	< 5	27	< 0.8	25	6	30	7	< 1.5	<b>45</b>	< 1	26	19
		14044	10 - 20	< 0.8	6	33	< 0.8	27	7	<b>63</b>	14	< 1.5	<b>93</b>	< 1	28	28
		14045	10 - 20	< 0.8	6	26	< 0.8	22	6	39	9	< 1.5	<b>58</b>	< 1	24	17
Area E grass	5037012	14046	0 - 5	< 0.8	< 5	39	< 0.8	32	7	48	10	< 1.5	<b>66</b>	< 1	27	32
		14047	0 - 5	< 0.8	< 5	40	< 0.8	30	7	56	11	< 1.5	<b>85</b>	< 1	29	28
		14048	5 - 10	< 0.8	< 5	39	< 0.8	28	7	39	9	< 1.5	<b>62</b>	< 1	29	23
		14049	5 - 10	< 0.8	< 5	36	< 0.8	27	7	<b>65</b>	13	< 1.5	<b>92</b>	< 1	27	23
		14050	10 - 20	< 0.8	< 5	31	< 0.8	24	6	49	11	< 1.5	<b>72</b>	< 1	25	22
		14051	10 - 20	< 0.8	< 5	30	< 0.8	24	5	44	9	< 1.5	<b>69</b>	< 1	25	20
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.2:** All Nations - South End Sampling Locations - 2001.

**2.6.3 All Nations - St. Christopher, 2843 CKSO Road, Sudbury**

This daycare is located in the same building as St. Christopher School, Sudbury Catholic District School Board. See St. Christopher School for the discussion, results and location of Area C - play structure (Section 2.2.14).

**2.6.4 Beattie Kids, 102 Loach's Road, Sudbury**

This daycare is operated by Larch Street Kids and is located in the same building as R.L. Beattie Public School, Rainbow District School Board. See R.L. Beattie Public School for the discussion, results and map (Section 2.1.32).

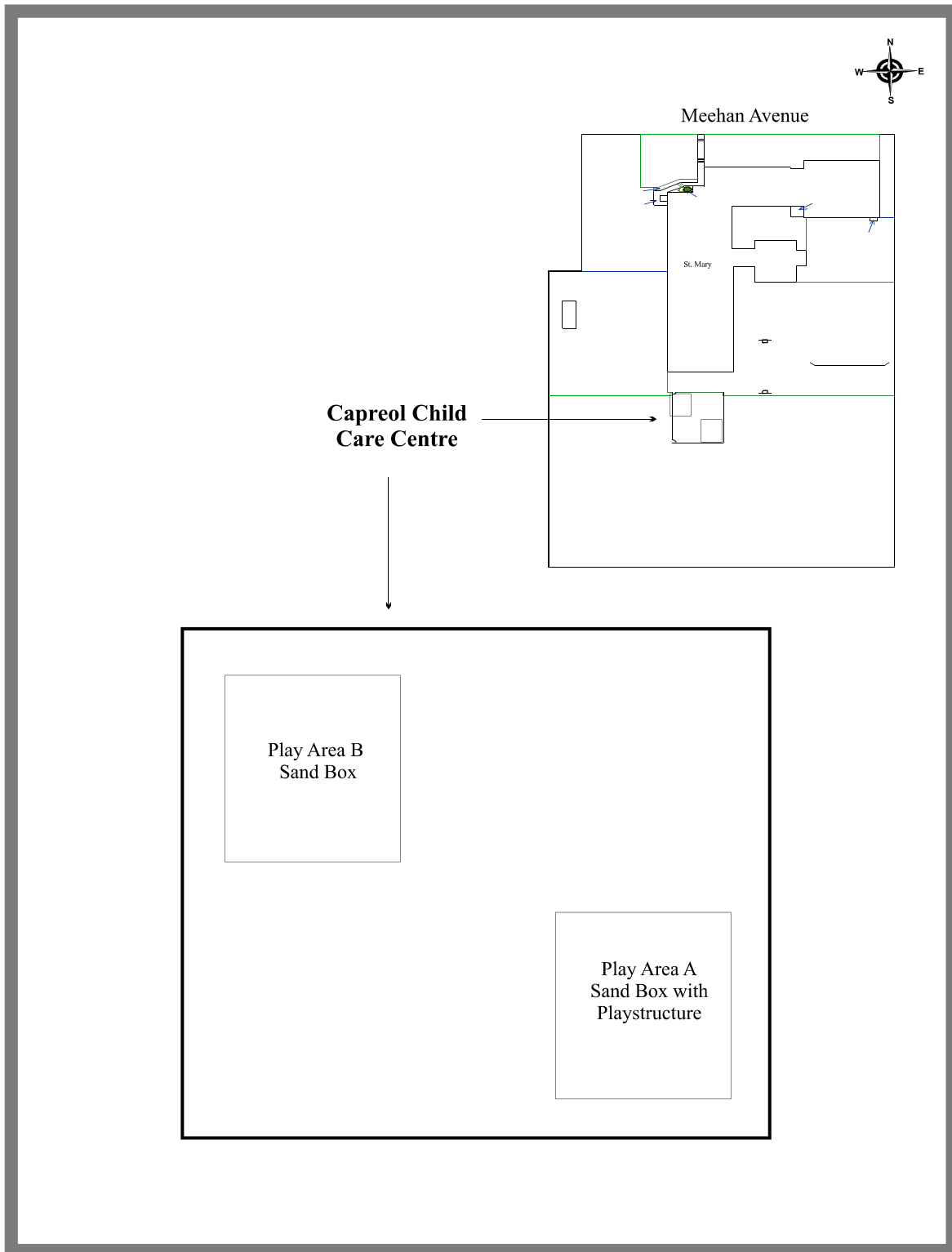
### 2.6.5 Capreol Child Care Centre at St. Mary, 26 Meehan Street, Capreol

Capreol Child Care Centre was sampled on July 20, 2001. Samples were taken from two areas on St. Mary property. Area A corresponds to sand samples collected from beneath the play structure and Area B corresponds to sand samples collected from the sand box. Both areas are located on the south side of St. Mary's School. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in either the sand beneath the play structure or from the sand box. The sand is not likely native to the property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km north and 0.5 km south of Capreol Child Care Centre, Stations 352 and 351, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 130 to 330 and 110 to 300 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037353	14580	0 - 15	< 0.8	< 5	15	< 0.8	21	4	10	3	< 1.5	15	< 1	24	14
Area B sand		14581	0 - 15	< 0.8	< 5	14	< 0.8	18	4	7	3	< 1.5	13	< 1	20	12
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.5:** Capreol Child Care Centre Sampling Locations - 2001.



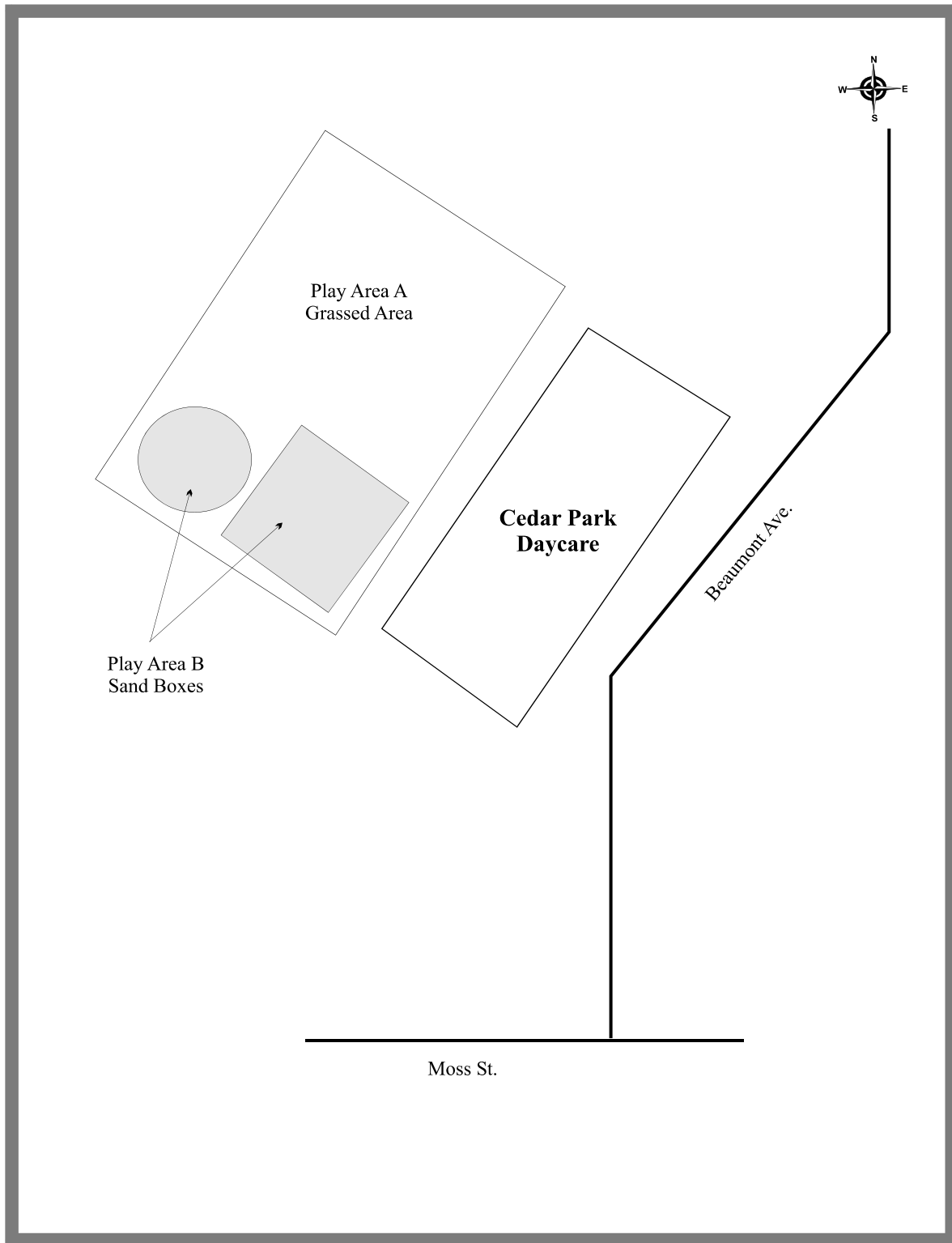
## 2.6.6 Cedar Park Daycare #1, 1073 Beaumont Street, Sudbury

Cedar Park Daycare was sampled on July 23, 2001. Samples were taken from two areas on the daycare property. Area A corresponds to the grassed play area in the back yard. Due to the compacted nature of the grassed area, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil layer (0-5 cm). Area B corresponds to sand samples collected from the sanded play areas on the west side of the backyard. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sanded play areas. The sand is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), copper (Cu), and selenium (Se) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the back yard. The highest nickel, copper, and selenium concentrations found were 130, 130, and 1.6 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel, copper, and selenium results fall within the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km northeast and 1 km south of Cedar Park Daycare, Stations 6 and 86, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel, copper, and selenium surface soil concentration ranges of 56 to 375, 35 to 305, and 0.28 to 1.7 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037206	14839	0 - 5	< 0.8	< 5	53	< 0.8	34	8	<b>99</b>	15	< 1.5	<b>110</b>	<b>1.6</b>	31	48
		14840	0 - 5	< 0.8	< 5	57	0.9	32	9	<b>130</b>	21	< 1.5	<b>130</b>	<b>1.5</b>	32	62
Area B sand	5037207	14841	0 - 15	< 0.8	< 5	21	< 0.8	26	6	15	3	< 1.5	24	< 1	23	19
		14842	0 - 15	< 0.8	< 5	17	< 0.8	23	5	19	3	< 1.5	26	< 1	26	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.6:** Cedar Park Daycare Sampling Locations - 2001.

**2.6.7 Cedar Park Daycare #2 at St. Raphael School, 1096 Dublin Street, Sudbury**

This daycare is located in the same building as St. Raphael School, Sudbury Catholic District School Board. See St. Raphael School for the discussion, results and map (Section 2.2.23).

## 2.6.8 Centre Educatif Etoile du Nord at College Boreal, 21 Lasalle Boulevard, Sudbury

Centre Educatif Etoile du Nord was sampled on July 19, 2001. Samples were taken from two areas on the daycare property. Areas A and B correspond to sand samples collected from below the west and east play structures, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

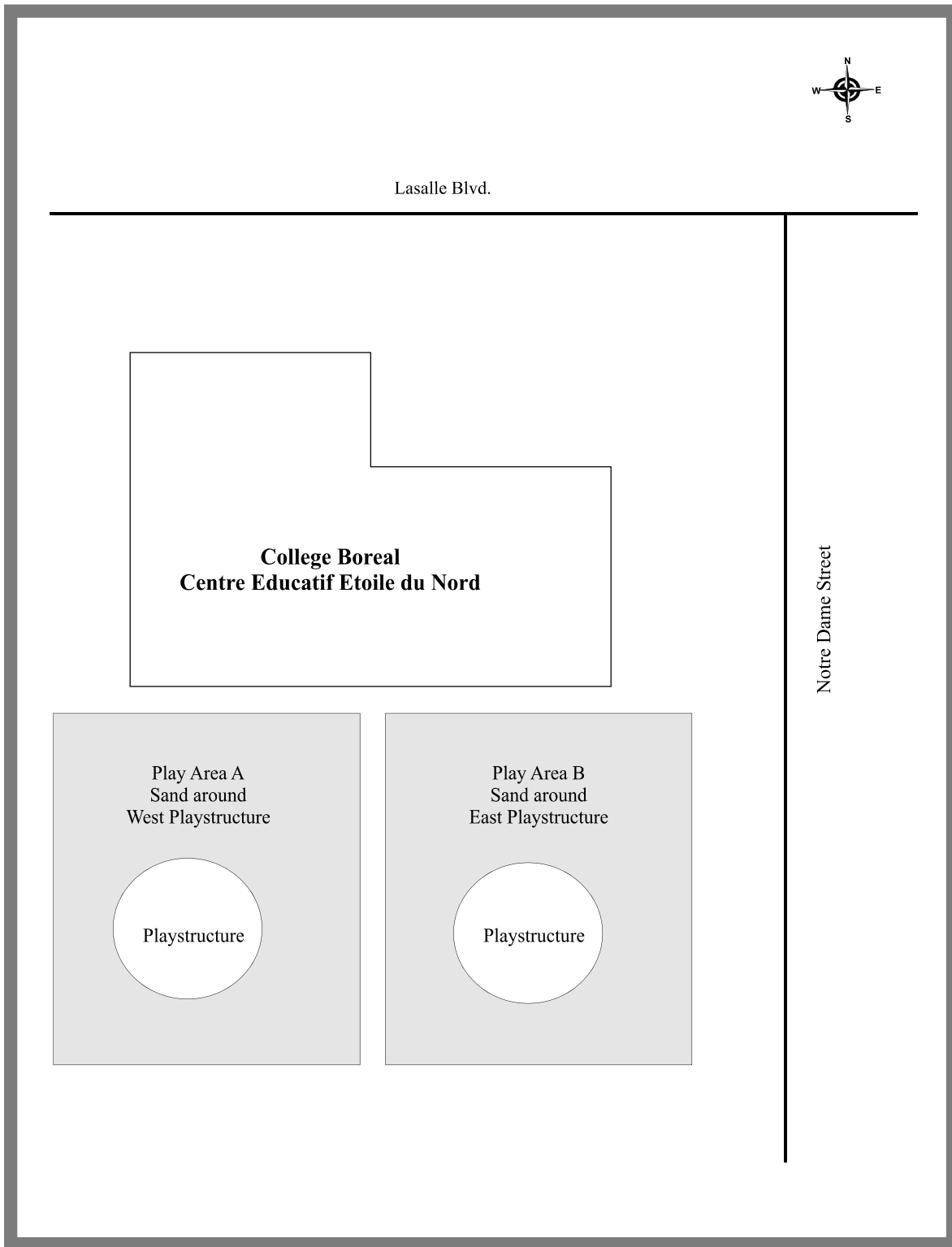
Nickel (Ni) and copper (Cu) concentrations were elevated in the sand beneath the play structures. The sand is not likely native to the daycare property and is believed to have been introduced when the sanded play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. There were not any other play areas surrounding these sanded areas. It is not known if the sand was placed on bare soil when the sanded play areas were constructed. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km west and 1 km northeast of Centre Educatif Etoile Du Nord, Stations 362 and 337, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 530 and 450 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.8:** Concentration of 13 Elements in Soil in µg/g at Centre Educatif Etoile du Nord at College Boreal, 21 Lasalle Boulevard, Sudbury

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037201	14477	0 - 15	< 0.8	7	26	< 0.8	25	13	<b>92</b>	7	< 1.5	<b>90</b>	< 1	29	41
Area B sand	5037202	14478	0 - 15	< 0.8	6	24	< 0.8	23	11	<b>69</b>	6	< 1.5	<b>65</b>	< 1	29	32
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.



**Figure B2.6.8:** Centre Educatif Etoile du Nord Sampling Locations - 2001.

### 2.6.9 Circle of Friends, 106 Arlington Drive, Dowling

Circle of Friends was sampled on July 19, 2001. Samples were taken from one area on the daycare property. Area A corresponds to sand samples collected from the sand box behind the building. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

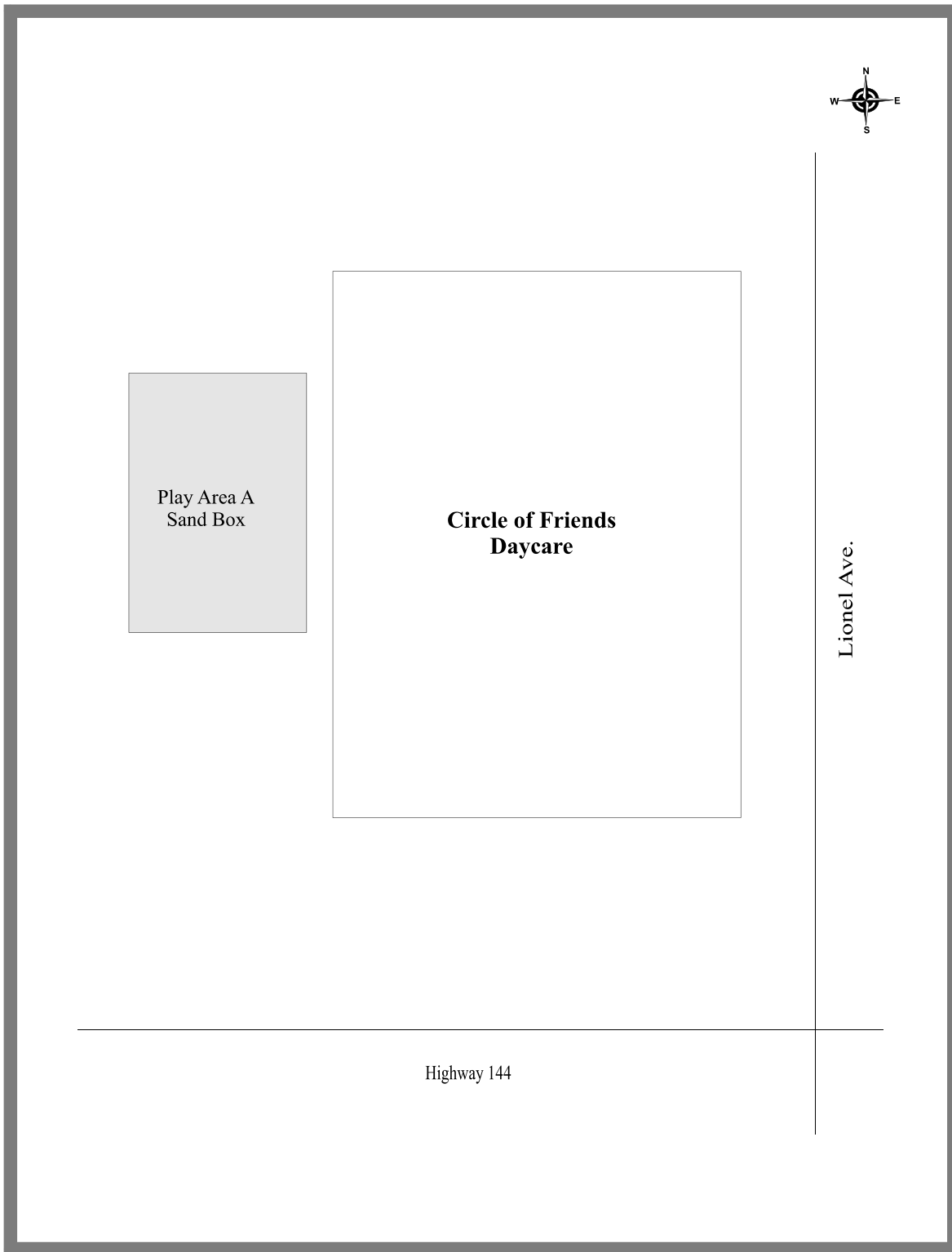
Metal concentrations were not elevated in the sand from the sand box. The sand is not likely native to the daycare property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2.5 km west, 3 km southwest, and 3.5 km northeast of Circle of Friends, Stations 389, 391, and 388, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 25 to 83 and 14 to 69 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.9:** Concentration of 13 Elements in Soil in µg/g at Circle of Friends, 106 Arlington Drive, Dowling

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037405	14561	0 - 15	< 0.8	< 5	16	< 0.8	25	5	10	2	< 1.5	16	< 1	29	14
Table F (results in bold)				<b>1.0</b>	<b>14</b>	<b>190</b>	<b>1.0</b>	<b>67</b>	<b>19</b>	<b>56</b>	<b>55</b>	<b>2.5</b>	<b>43</b>	<b>1.4</b>	<b>91</b>	<b>150</b>
Table A (results in bold & underlined)				<b><u>13</u></b>	<b><u>20</u></b>	<b><u>750</u></b>	<b><u>3.0</u></b>	<b><u>750</u></b>	<b><u>40</u></b>	<b><u>225</u></b>	<b><u>200</u></b>	<b><u>5.0</u></b>	<b><u>150</u></b>	<b><u>2.0</u></b>	<b><u>200</u></b>	<b><u>600</u></b>

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.



**Figure B2.6.9:** Circle of Friends Daycare Sampling Locations - 2001.

### 2.6.10 Cotton Candy Daycare, 298 College Street, Sudbury

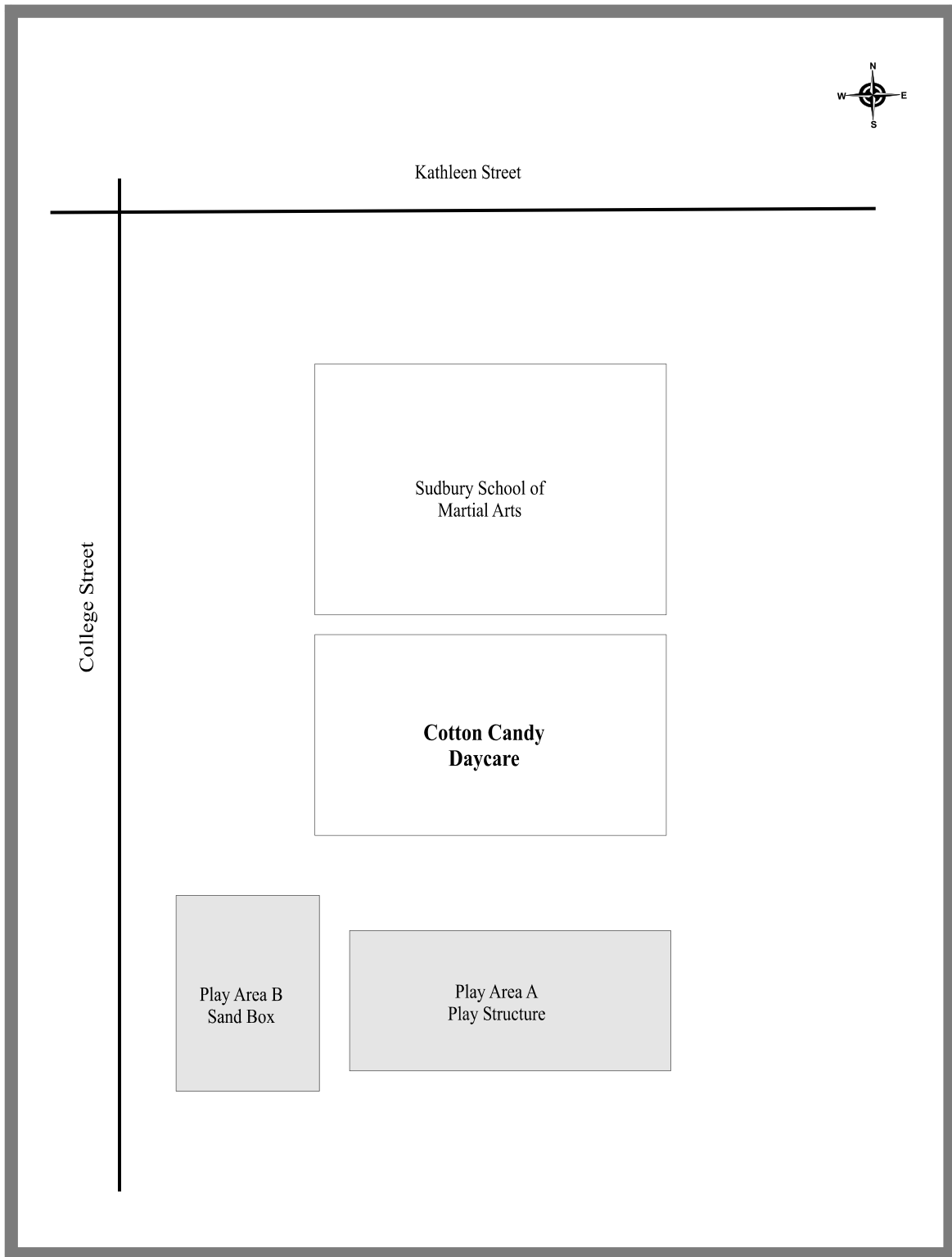
Cotton Candy Daycare was sampled on July 16, 2001. Samples were taken from two areas on the daycare property. Areas A and B correspond to sand samples collected from the sanded play areas in the east and west corners of the daycare property, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from either sanded play area. The sand is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km west of Cotton Candy Daycare, Station 84, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentrations as high as 490 and 520 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037113	14257	0 - 15	< 0.8	< 5	20	< 0.8	27	6	21	3	< 1.5	27	< 1	30	17
		14258	0 - 15	< 0.8	< 5	17	< 0.8	28	5	20	3	< 1.5	25	< 1	31	17
Area B sand	5037114	14259	0 - 15	< 0.8	< 5	27	< 0.8	30	8	36	4	< 1.5	39	< 1	32	24
		14260	0 - 15	< 0.8	< 5	24	< 0.8	29	8	36	4	< 1.5	39	< 1	31	22
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												





**Figure B2.6.10:** Cotton Candy Daycare Sampling Locations - 2001.

**2.6.11 C.R. Judd Daycare at C.R. Judd Public School, 8 Lincoln Street, Capreol**

This daycare is located in the same building as C.R. Judd Public School, Rainbow District School Board. See C.R. Judd Public School for the discussion, results and map (Section 2.1.4).

### 2.6.12 Garderie du Triangle Magique at St. Agnes, 80 Rue Landry, Azilda

Garderie du Triangle Magique was sampled on July 19, 2001. Samples were taken from six areas on the daycare property. Areas A and B correspond to the sand box and grassed play area in the south fenced play area, respectively. Areas C and D correspond to the sand box and grassed area in the centre fenced play area, respectively. Areas E and F correspond to the sand box and grassed area in the north fenced play area, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. In addition, due to the compacted nature of the grassed areas, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in either of the south or centre sand boxes. Arsenic (As) was elevated above the MOE Table A Effects Based Soil Criteria for the sand collected from the north sand box. The origin of the sand is not known, however, it is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metalloid concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of all of the grassed play areas. Copper (Cu) was elevated above the MOE Table F Ontario Soil Background Criteria for one replicate sample from the south grassed area. The highest nickel and copper concentrations, 71 and 64 ppm, respectively, occurred in the surface soil of the south grassed area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel, copper, and arsenic results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northeast and 2 km southeast of Garderie du Triangle Magique, Stations 92, 91, and 90, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel, copper, and arsenic surface soil concentration ranges of 36 to 770, 37 to 820 and 10 to 48 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.12:** Concentration of 13 Elements in Soil in µg/g at Garderie du Triangle Magique at St. Agnes, 80 Rue Landry, Azilda

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037365	14487	0 - 15	< 0.8	< 5	13	< 0.8	21	4	8	2	< 1.5	15	< 1	23	13
Area B grass	5037366	14488	0 - 5	< 0.8	5	31	< 0.8	28	6	54	12	< 1.5	<b>69</b>	< 1	27	32
		14489	0 - 5	< 0.8	< 5	34	< 0.8	30	7	<b>64</b>	14	< 1.5	<b>71</b>	< 1	28	29
Area C sand	5037367	14490	0 - 15	< 0.8	< 5	11	< 0.8	21	3	8	2	< 1.5	14	< 1	21	15
Area D grass	5037368	14491	0 - 5	< 0.8	5	30	< 0.8	25	6	54	14	< 1.5	<b>65</b>	< 1	26	31
		14492	0 - 5	< 0.8	5	27	< 0.8	24	5	35	10	< 1.5	<b>44</b>	< 1	24	28
Area E sand	5037369	14493	0 - 15	< 0.8	<u><b>23</b></u>	12	< 0.8	30	3	27	2	< 1.5	14	< 1	26	15
Area F grass	5037370	14494	0 - 5	< 0.8	6	27	< 0.8	24	5	45	11	< 1.5	<b>53</b>	< 1	24	25
		14495	0 - 5	< 0.8	6	28	< 0.8	25	5	46	11	< 1.5	<b>54</b>	< 1	26	25
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												

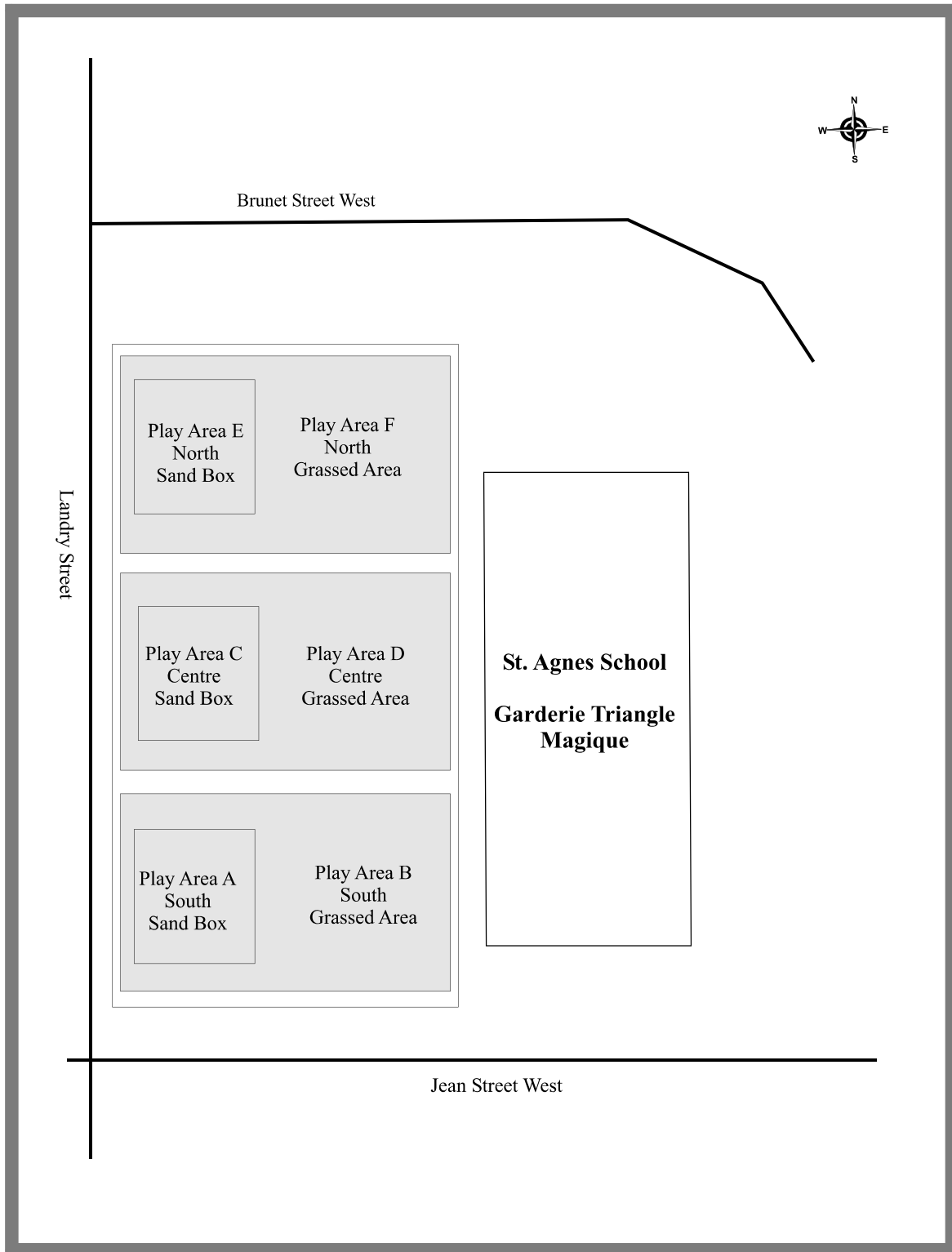


Figure B2.6.12: Garderie Triangle Magique Sampling Locations - 2001.

### 2.6.13 Garderie Jardiniere Francophone formerly at Foyer Jeunesse, 4752 rue Notre Dame, Hanmer

Garderie Jardiniere Francophone was sampled on July 20, 2001 and has since closed. Samples were taken from two areas on the Foyer Jeunesse property. Area A corresponds to sand samples collected from below the play structure. Area B corresponds to the gravel playground. Due to the constant mixing and homogenous nature of the sanded areas, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand beneath the play structure. The sand present is not likely native to the daycare property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni), copper (Cu), and cobalt (Co) concentrations were elevated in both of the gravel playground samples. The highest nickel, copper and cobalt concentrations found were 67, 80, and 33 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically, while the elevated cobalt concentrations are higher than previously reported. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 2.5 km northwest, and 2 km east of Garderie Jardiniere Francophone (formerly), Stations 347, 346, and 350, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 43 to 150 and 35 to 110 ppm, respectively. The highest cobalt concentration previously reported at these historic sites was 7.4 ppm. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.13:** Concentration of 13 Elements in Soil in µg/g at Garderie Jardiniere Francophone formerly at Foyer Jeunesse, 4752 rue Notre Dame, Hanmer

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037325	14625	0 - 15	< 0.8	< 5	22	< 0.8	32	6	27	4	< 1.5	22	< 1	36	35
Area B gravel	5037326	14626	0 - 5	< 0.8	< 5	20	< 0.8	32	<b>33</b>	<b>80</b>	13	< 1.5	<b>67</b>	< 1	33	53
		14627	0 - 5	< 0.8	< 5	22	< 0.8	32	<b>22</b>	<b>60</b>	11	< 1.5	<b>48</b>	< 1	31	41
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												

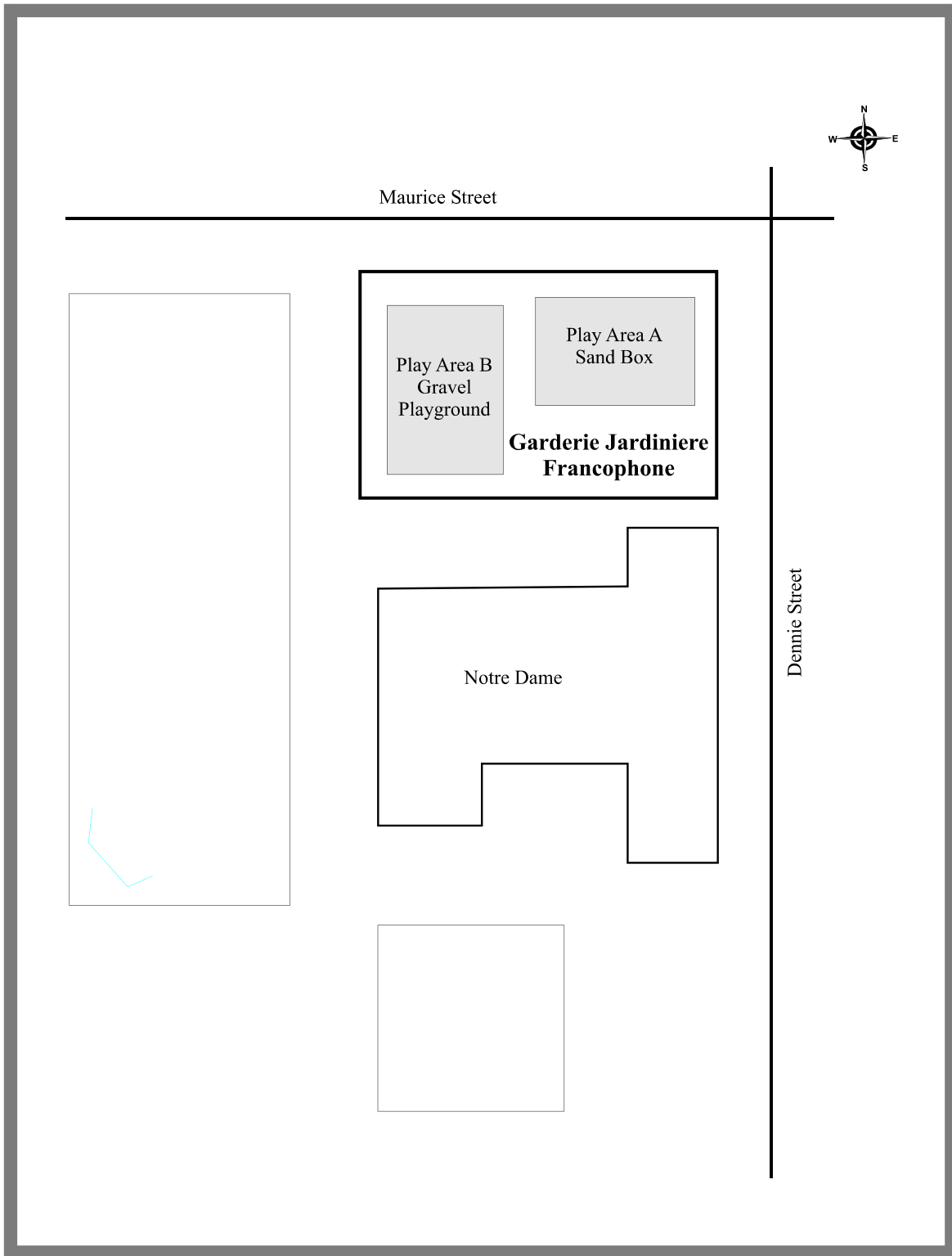


Figure B2.6.13: Garderie Jardiniere Francophone Sampling Locations - 2001.

**2.6.14 Garderie Jardiniere Francophone at E.P. Foyer Jeunesse, 4752 Rue Notre Dame, Hanmer**

This daycare was located in the same building as E.P. Foyer Jeunesse, Conseil Scolaire du District de Grand Nord de L'Ontario. See E.P. Foyer Jeunesse for the discussion, results and location of daycare play areas A and B (Section 2.3.3).

### 2.6.15 Jubilee Heritage Centre formerly at St. Francis, 691 Lilac Street, Sudbury

Jubilee Heritage Centre was sampled on July 5, 2001 but has since closed. Samples were taken from two areas on the daycare property. Area A corresponds to the soil playground beside the sanded play structure on the north side of St. Francis school building. Area B corresponds to sand samples collected from below the play structure. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from beneath the play structure. The sand present is not likely native to the daycare property and is believed to have been introduced when the play structure was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of both samples from the soil from beside the play structure. Copper (Cu) was elevated above the MOE Table F Ontario Soil Background Criteria for one replicate sample from the soil playground. The highest nickel and copper concentrations found were 74 and 62 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north, 1 km southwest, and 1.5 km west of Jubilee Heritage Centre (formerly), Stations 378, 73, and 74, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 790 and 158 to 740 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A soil	5037072	14146	0 - 5	< 0.8	< 5	31	< 0.8	30	8	56	7	< 1.5	<b>69</b>	< 1	28	27
		14147	0 - 5	< 0.8	< 5	27	< 0.8	29	8	<b>62</b>	7	< 1.5	<b>74</b>	< 1	28	26
Area B sand	5037073	14148	0 - 15	< 0.8	< 5	21	< 0.8	27	7	22	3	< 1.5	25	< 1	26	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



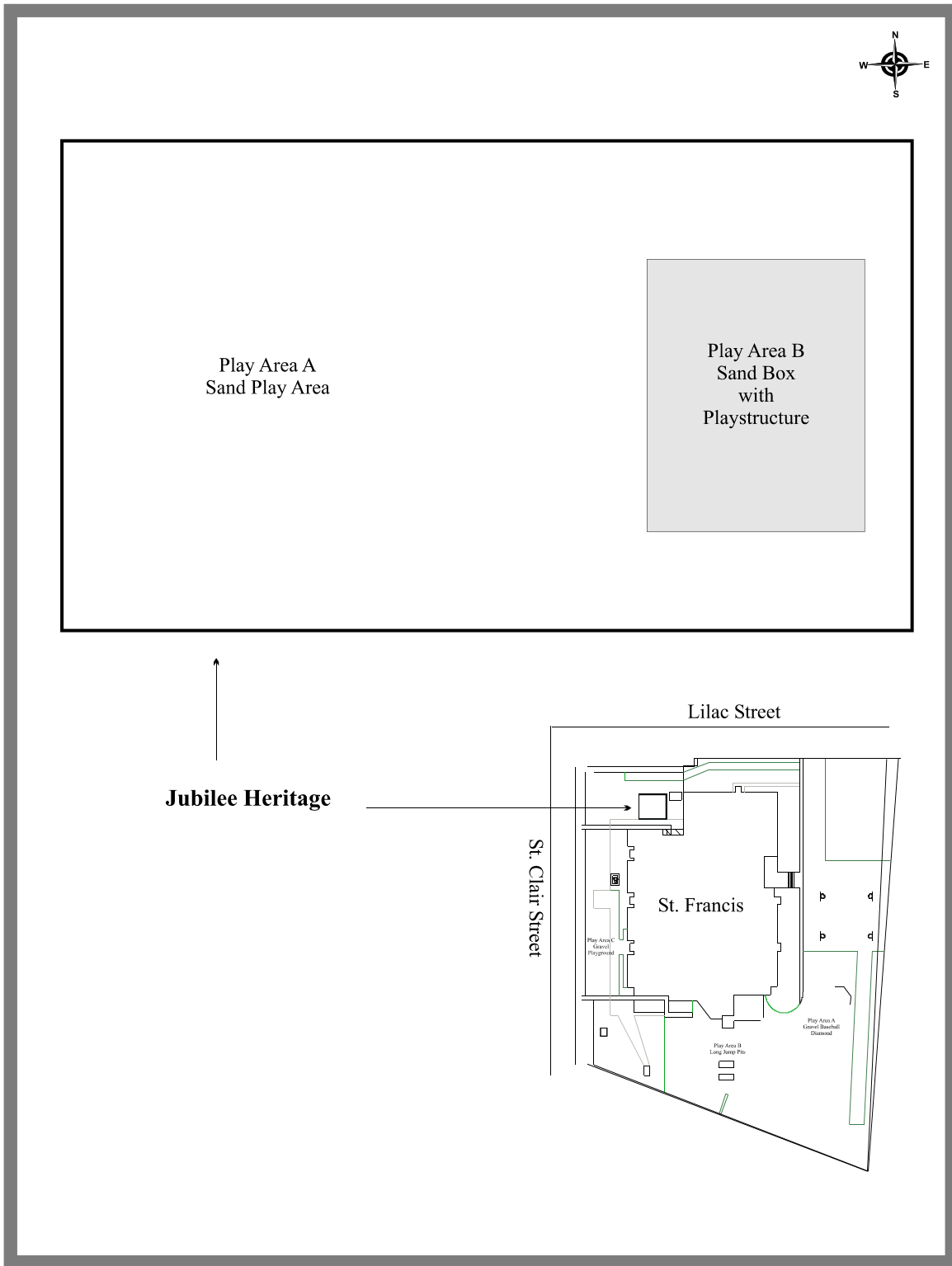


Figure B2.6.15: Jubilee Heritage Sampling Locations - 2001.

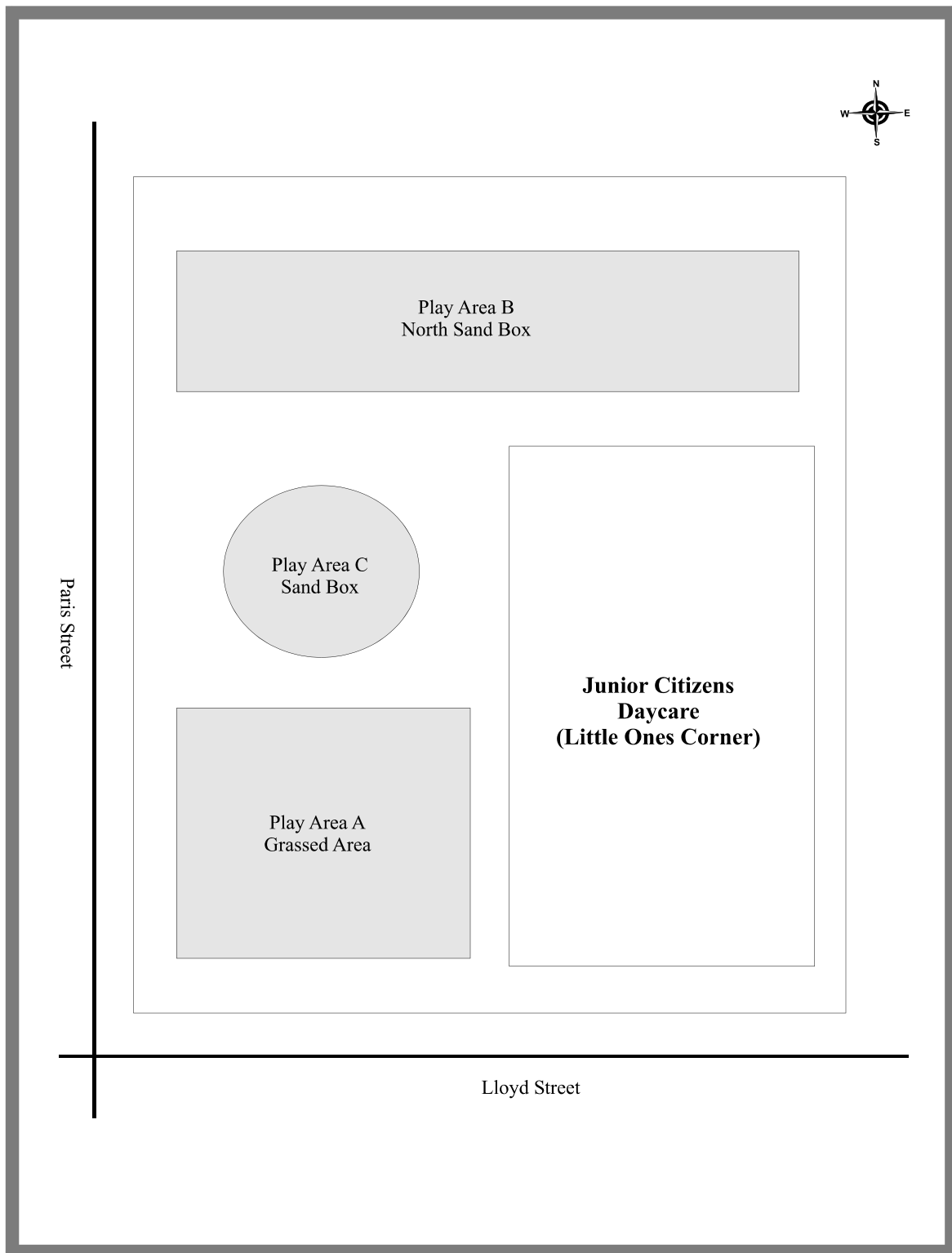
### 2.6.16 Junior Citizens Daycare (formerly Little Ones Corner), 210 Lloyd Street, Sudbury

Junior Citizens Daycare, formerly named Little Ones Corner, was sampled on July 16, 2001. At the time of sampling, its temporary location was at 210 Lloyd Street. The new permanent location, 41 Ramsey Lake Road, has not been sampled. Samples were taken from three areas on the daycare property. Area A corresponds to the grassed play area on the west side of the property. Due to the compacted nature of the grassed play area, it was only possible to sample the surface soil (0-5 cm). Areas B and C correspond to sand samples collected from the north and south sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand samples collected from either sanded play area. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in both of the surface soil samples from the grassed play area. The highest nickel and copper concentrations found were 94 and 86 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km northwest and 1 km southeast of Junior Citizens Daycare, Stations 84 and 75, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 230 to 830 and 230 to 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037136	14238	0 - 5	< 0.8	< 5	41	< 0.8	34	8	<b>86</b>	16	< 1.5	<b>94</b>	< 1	30	46
		14239	0 - 5	< 0.8	< 5	39	< 0.8	35	9	<b>67</b>	11	< 1.5	<b>76</b>	< 1	31	38
Area B sand	5037137	14240	0 - 15	< 0.8	< 5	22	< 0.8	30	7	32	6	< 1.5	33	< 1	27	24
		14241	0 - 15	< 0.8	< 5	29	< 0.8	34	8	32	5	< 1.5	36	< 1	33	30
Area C sand	5037138	14242	0 - 15	< 0.8	< 5	22	< 0.8	26	7	35	7	< 1.5	40	< 1	23	26
		14243	0 - 15	< 0.8	< 5	22	< 0.8	27	7	38	7	< 1.5	43	< 1	25	27
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.16:** Junior Citizens Daycare (formerly Little Ones Corner) Sampling Locations - 2001.

### 2.6.17 La Garderie Touche a Tout, Laurentian University

La Garderie Touche a Tout was sampled on July 5, 2001. Samples were taken from four areas on the daycare property. Areas A and C correspond to sand samples collected from the west and east sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Areas B and D correspond to the west and east grassed play areas, respectively. Due to the compacted nature of these grassed areas, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in sand from either sanded play area. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of both samples from the both grassed play areas. The highest nickel concentration found was 73 ppm. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north, 2.5 km northwest, and 2 km southwest of Garderie Touche a Tout, Stations 19, 74, and 365, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 1000 and 190 to 980 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037058	14126	0 - 15	< 0.8	< 5	20	< 0.8	25	6	22	3	< 1.5	24	< 1	31	18
Area B grass	5037059	14127	0 - 5	< 0.8	< 5	40	< 0.8	37	6	37	9	< 1.5	<b>57</b>	< 1	34	24
		14128	0 - 5	< 0.8	< 5	40	< 0.8	37	6	39	9	< 1.5	<b>58</b>	< 1	33	24
Area C sand	5037060	14129	0 - 15	< 0.8	< 5	19	< 0.8	24	6	15	2	< 1.5	21	< 1	29	14
Area D grass	5037061	14130	0 - 5	< 0.8	< 5	44	< 0.8	36	8	49	10	< 1.5	<b>73</b>	< 1	35	31
		14131	0 - 5	< 0.8	< 5	40	< 0.8	34	7	43	9	< 1.5	<b>64</b>	< 1	32	25
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.

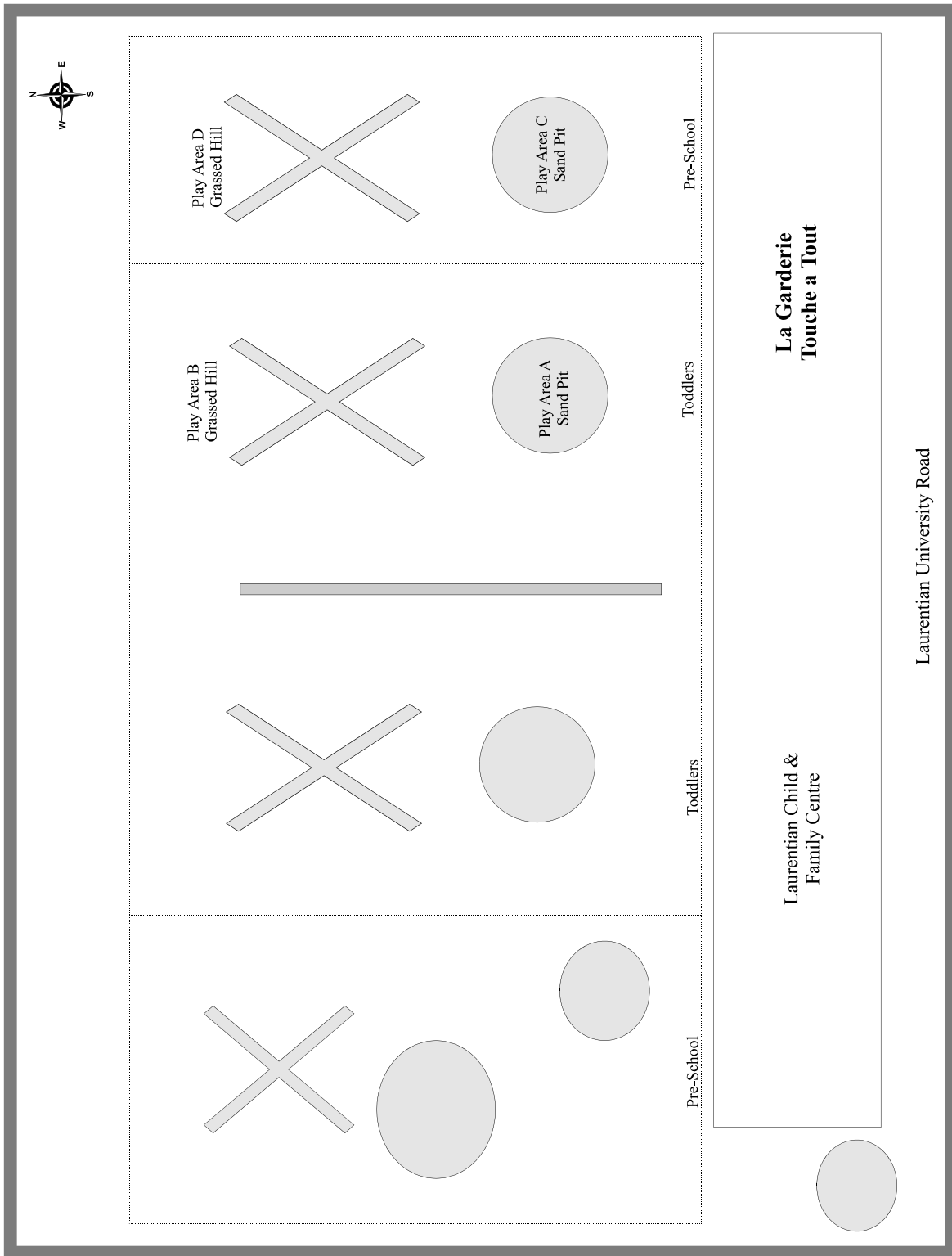


Figure B2.6.17: La Garderie Touche a Tout Sampling Locations - 2001.

### 2.6.18 Laurentian Child & Family Centre, Laurentian University

Laurentian Child and Family Centre was sampled on July 5, 2001. Samples were taken from seven areas on the daycare property. Area A corresponds to sand samples collected from the pile of sand from the parking lot that was purchased to use in the sanded play areas. Area B corresponds to sand samples collected from beneath the play structure located in the west play area. Areas C and D correspond to sand samples collected from the west and east sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Areas E and F correspond to the west and east grassed play areas, respectively. Area G corresponds to the long narrow grassed play area on the east edge of the Laurentian Child and Family Centre play area. Due to the compacted nature of these grassed areas, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

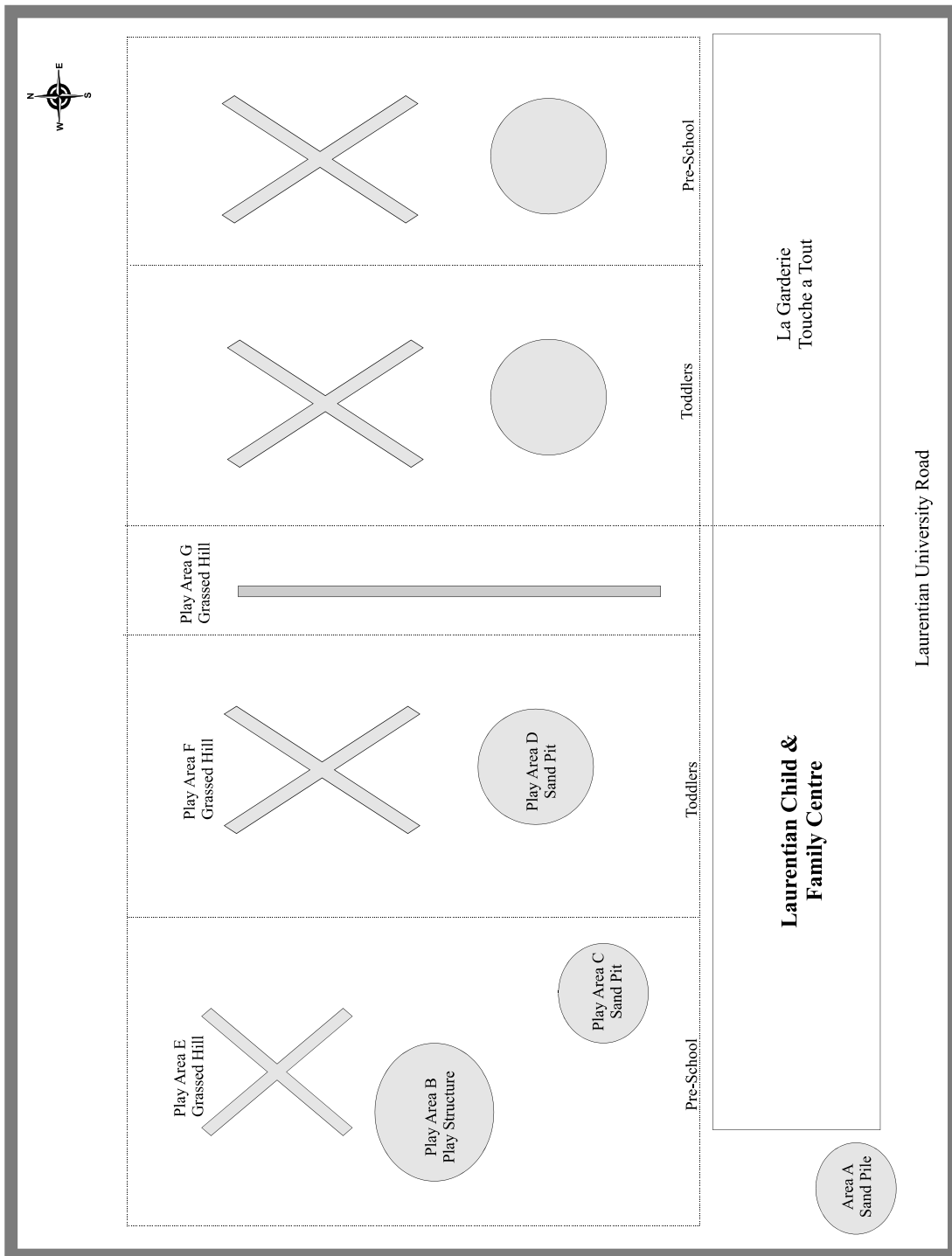
Metal concentrations were not elevated in sand from either sanded play area. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of all samples from the grassed play areas. The highest nickel concentration found was 60 ppm. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037062	14115	0 - 15	< 0.8	< 5	12	< 0.8	15	3	6	2	< 1.5	11	< 1	16	9
Area B sand	5037063	14116	0 - 15	< 0.8	< 5	17	< 0.8	24	6	16	3	< 1.5	22	< 1	29	16
		14117	0 - 15	< 0.8	< 5	17	< 0.8	24	6	17	3	< 1.5	22	< 1	31	16
Area C sand	5037064	14122	0 - 15	< 0.8	< 5	16	< 0.8	20	4	8	2	< 1.5	12	< 1	22	10
Area D sand	5037065	14123	0 - 15	< 0.8	< 5	23	< 0.8	30	8	25	3	< 1.5	29	< 1	33	18
Area E grass	5037066	14118	0 - 5	< 0.8	< 5	42	< 0.8	37	6	37	10	< 1.5	<b>59</b>	< 1	34	28
		14119	0 - 5	< 0.8	< 5	44	< 0.8	37	6	37	10	< 1.5	<b>60</b>	< 1	35	28
Area F grass	5037067	14120	0 - 5	< 0.8	< 5	44	< 0.8	38	6	39	10	< 1.5	<b>60</b>	< 1	35	30
		14121	0 - 5	< 0.8	5	45	< 0.8	41	6	37	11	< 1.5	<b>58</b>	< 1	35	31
Area G grass	5037068	14124	0 - 5	< 0.8	< 5	46	< 0.8	38	6	41	10	< 1.5	<b>60</b>	< 1	35	30
		14125	0 - 5	< 0.8	6	45	< 0.8	37	6	41	10	< 1.5	<b>60</b>	< 1	34	31
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km north, 2.5 km northwest, and 2 km southwest of Laurentian Child and Family Centre, Stations 19, 74, and 365, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 1000 and 190 to 980 ppm, respectively. Historic MOE sampling in

the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.6.18:** Laurentian Child & Family Centre Daycare Sampling Locations - 2001.

### 2.6.19 Maple Tree Preschool Inc. #1, 158 John Street, Sudbury

Maple Tree Preschool Inc. #1 was sampled on July 5, 2001. Samples were taken from two areas on the daycare property. Area A corresponds to the grassed play area surrounding the sand box. Area B corresponds to sand samples collected from the sand box. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

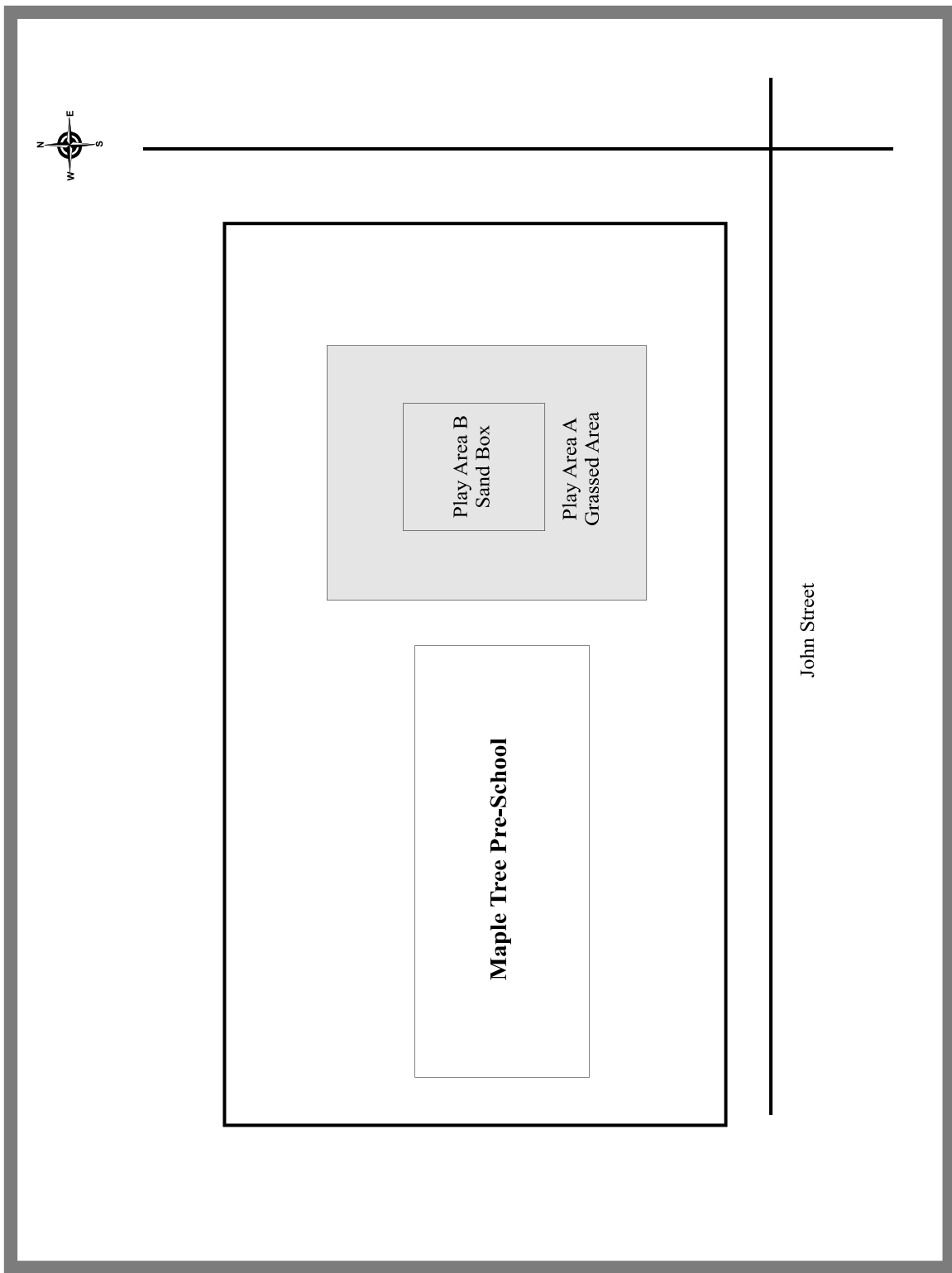
Metal concentrations were not elevated in the sand collected from the sand box. The sand present is not likely native to the daycare property and is believed to have been introduced when the sand box was constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated in selected samples from the grassed play area. The highest nickel and copper concentrations, 160 ppm each, were found in the 10 - 20 cm depth layer of the grassed play area. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There was one nickel value that exceeded the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km northwest, 0.7 km southwest, and 1 km northeast of Maple Tree Preschool Inc. #1, Stations 378, 74, and 75, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 145 to 830 and 180 to 820 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.19:** Concentration of 13 Elements in Soil in µg/g at Maple Tree Preschool Inc. #1, 158 John Street, Sudbury

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037087	14173	0 - 5	< 0.8	< 5	27	< 0.8	21	6	55	8	< 1.5	<b>75</b>	< 1	21	28
		14174	0 - 5	< 0.8	< 5	30	< 0.8	24	6	<b>67</b>	9	< 1.5	<b>86</b>	< 1	25	27
		14175	5 - 10	< 0.8	< 5	30	< 0.8	26	6	<b>59</b>	11	< 1.5	<b>65</b>	< 1	26	29
		14176	5 - 10	< 0.8	< 5	29	< 0.8	25	7	43	8	< 1.5	<b>54</b>	< 1	25	26
		14177	10 - 20	< 0.8	7	29	< 0.8	28	11	<b>160</b>	27	< 1.5	<b>160</b>	< 1	30	37
		14178	10 - 20	< 0.8	5	24	< 0.8	22	7	<b>91</b>	17	< 1.5	<b>99</b>	< 1	22	26
Area B sand	5037088	14172	0 - 15	< 0.8	< 5	14	< 0.8	17	4	10	3	< 1.5	17	< 1	16	10
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.																





**Figure B2.6.19:** Maple Tree Preschool #1 Sampling Locations - 2001.

### 2.6.20 Maple Tree Preschool Inc. #2 at St. Benedict Secondary, 2993 Algonquin Road, Sudbury

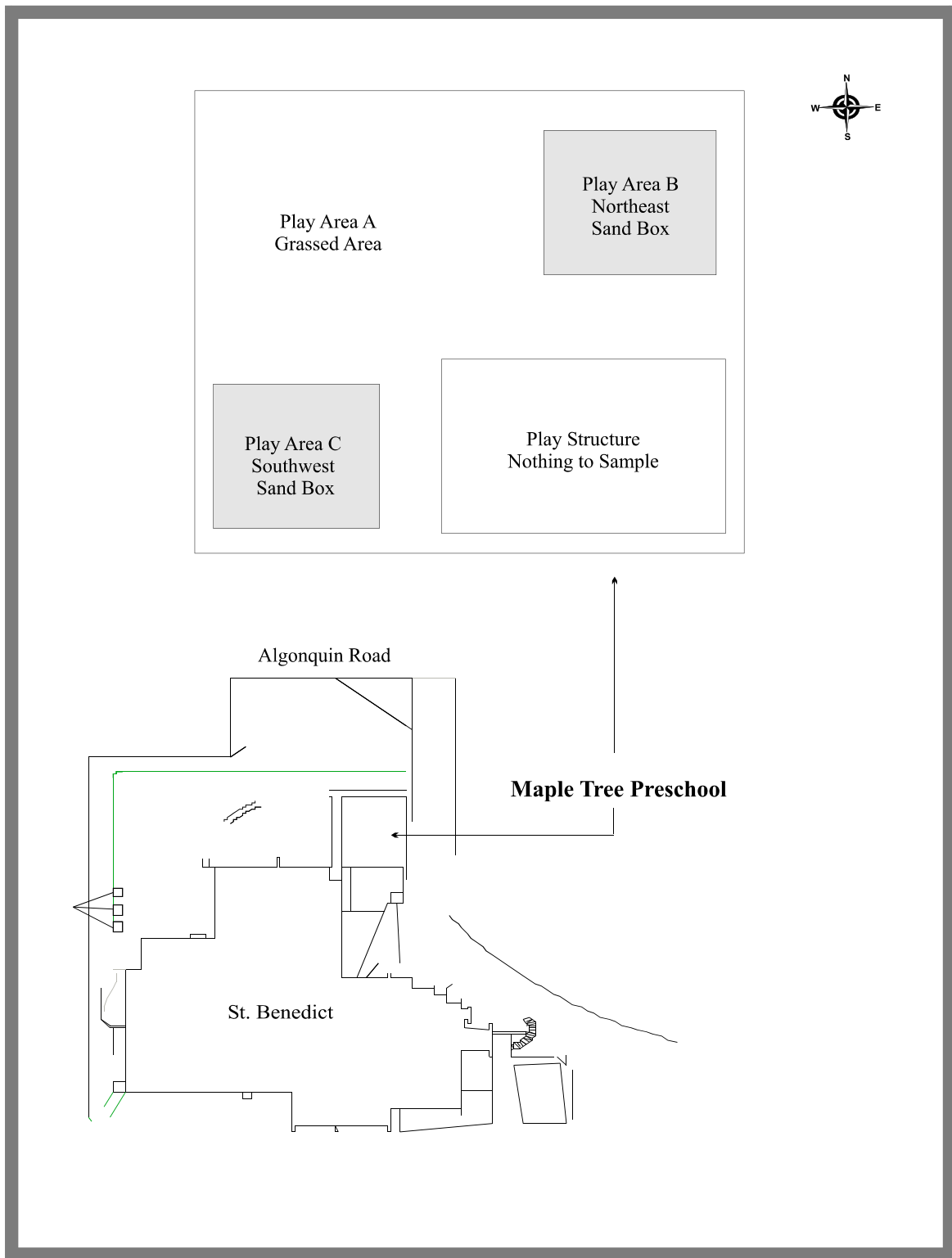
Maple Tree Preschool Inc. #2 was sampled on July 4, 2001. Samples were taken from three areas on the daycare property. Area A corresponds to the grassed play area. Due to the compacted nature of the grassed area, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil layer (0-5 cm). Areas B and C correspond to sand samples collected from the southwest and northeast sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from either sanded play area. The sand is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. None of the samples from this property were found to have metal concentrations above the MOE Table F Ontario Soil Background Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km southwest, 1.5 km north, and 1.5 km east of Maple Tree Preschool Inc. #2, Stations 366, 365, and 404, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 120 to 190 and 110 to 190 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.20:** Concentration of 13 Elements in Soil in µg/g at Maple Tree Preschool Inc. #2 at St. Benedict Secondary, 2993 Algonquin Road, Sudbury

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037026	14064	0 - 5	< 0.8	< 5	29	< 0.8	29	6	22	6	< 1.5	35	< 1	27	22
		14065	0 - 5	< 0.8	6	34	< 0.8	30	6	27	6	< 1.5	41	< 1	30	24
Area B sand	5037027	14067	0 - 15	< 0.8	< 5	24	< 0.8	32	6	18	3	< 1.5	20	< 1	31	17
Area C sand	5037028	14066	0 - 15	< 0.8	< 5	21	< 0.8	28	6	19	3	< 1.5	22	< 1	28	17
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.20:** Maple Tree Preschool #2 Sampling Locations - 2001.

### 2.6.21 Play and Learn Daycare at Cambrian College, 1400 Barrydowne Road, Sudbury

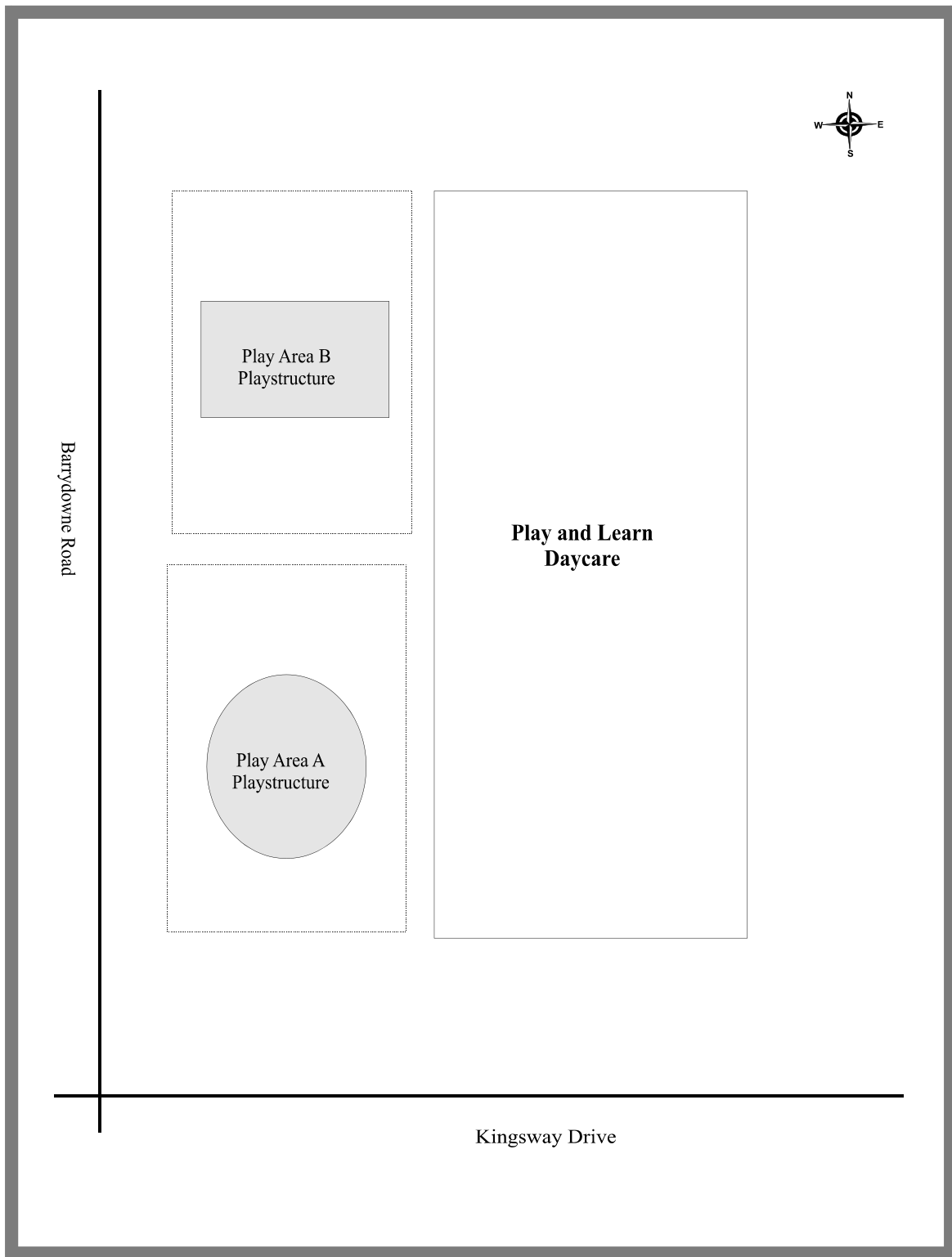
Play and Learn Daycare was sampled on July 17, 2001. Samples were taken from two areas on the daycare property. Areas A and B correspond to the south and north sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from either sanded play area. The sand is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northwest and 0.5 km southeast of Play and Learn Daycare, Stations 6 and 43, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 28 to 230 and 33 to 210 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.21:** Concentration of 13 Elements in Soil in µg/g at Play and Learn Daycare, 1400 Barrydowne Road, Sudbury

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037172	14330	0 - 15	< 0.8	5	18	< 0.8	25	6	14	2	< 1.5	21	< 1	29	17
Area B sand	5037173	14332	0 - 15	< 0.8	< 5	22	< 0.8	31	9	29	4	< 1.5	34	< 1	31	23
Table F (results in bold)				<b>1.0</b>	<b>14</b>	<b>190</b>	<b>1.0</b>	<b>67</b>	<b>19</b>	<b>56</b>	<b>55</b>	<b>2.5</b>	<b>43</b>	<b>1.4</b>	<b>91</b>	<b>150</b>
Table A (results in bold & underlined)				<b><u>13</u></b>	<b><u>20</u></b>	<b><u>750</u></b>	<b><u>3.0</u></b>	<b><u>750</u></b>	<b><u>40</u></b>	<b><u>225</u></b>	<b><u>200</u></b>	<b><u>5.0</u></b>	<b><u>150</u></b>	<b><u>2.0</u></b>	<b><u>200</u></b>	<b><u>600</u></b>
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.21: Play & Learn Daycare Sampling Locations - 2001.**

**2.6.22 Princess Anne Kids at Princess Anne Public School, 500 Douglas Street, Sudbury**

This daycare is operated by Larch Street Kids and is located in the same building as Princess Anne Public School, Rainbow District School Board. See Princess Anne Public School for the discussion, results and map (Section 2.1.29).

### 2.6.23 R.J. Kids at Robert Jack Public School, 7 Margaret Street, Garson

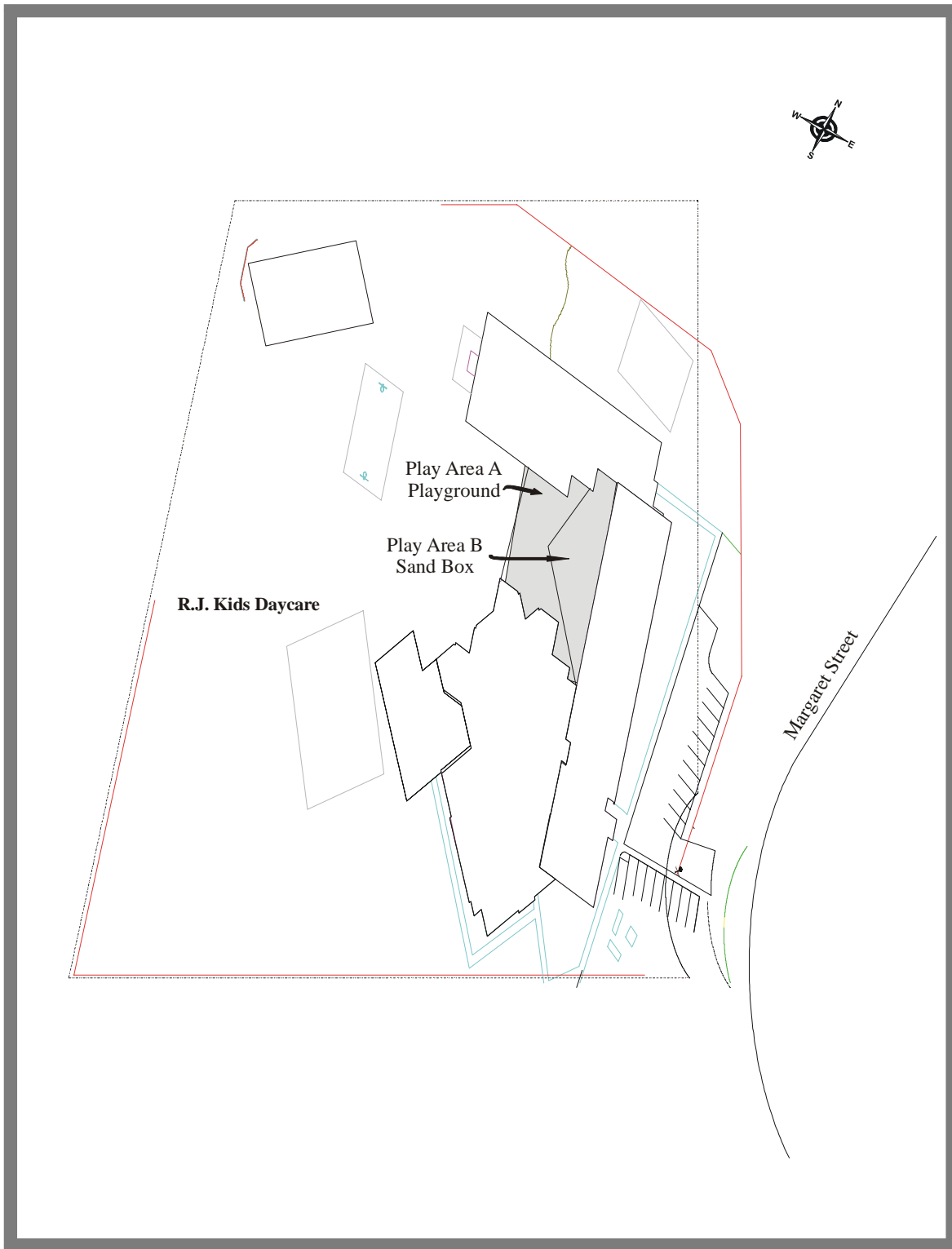
R.J. Kids, operated by Larch Street Kids and located in Robert Jack Public School, was sampled on July 18, 2001. Samples were taken from two areas on the daycare property. Area A corresponds to the gravel playground. Area B corresponds to sand samples collected from the sand box. Due to the constant mixing and homogenous nature of the sanded area, sand samples were collected with hand trowels to represent the 0-15 cm depth. Hand trowels were also used to collect the gravel samples to represent the 0-5 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from the sand box. The sand is not likely native to the daycare property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. None of the samples from this property had concentrations above the MOE Table F Ontario Soil Background Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 2 km northwest, 0.5 km southwest, and 1 km west of R. J. Kids Daycare, Stations 412, 40, and 39, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 37 to 140 and 24 to 200 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.23:** Concentration of 13 Elements in Soil in µg/g at RJ Kids at Robert Jack Public School, 7 Margaret Street, Garson

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A gravel	5037275	14428	0 - 5	< 0.8	6	25	< 0.8	23	7	23	4	< 1.5	31	< 1	25	18
Area B sand	5037275	14429	0 - 15	< 0.8	5	18	< 0.8	25	6	15	3	< 1.5	22	< 1	29	17
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.23: R. J. Kids Daycare Sampling Locations - 2001.**



### 2.6.24 Services De Garde De Rayside - Balfour #1, 30 Hill Street, Chelmsford

Services de Garde de Rayside-Balfour #1 was sampled on July 19, 2001. Samples were taken from four areas on the daycare property. Areas A, B and C correspond to sand samples collected from the north, west, and south sanded play areas, respectively. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. Area D corresponds to the grassed play area along the east fence line. Due to the compacted nature of these grassed areas, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

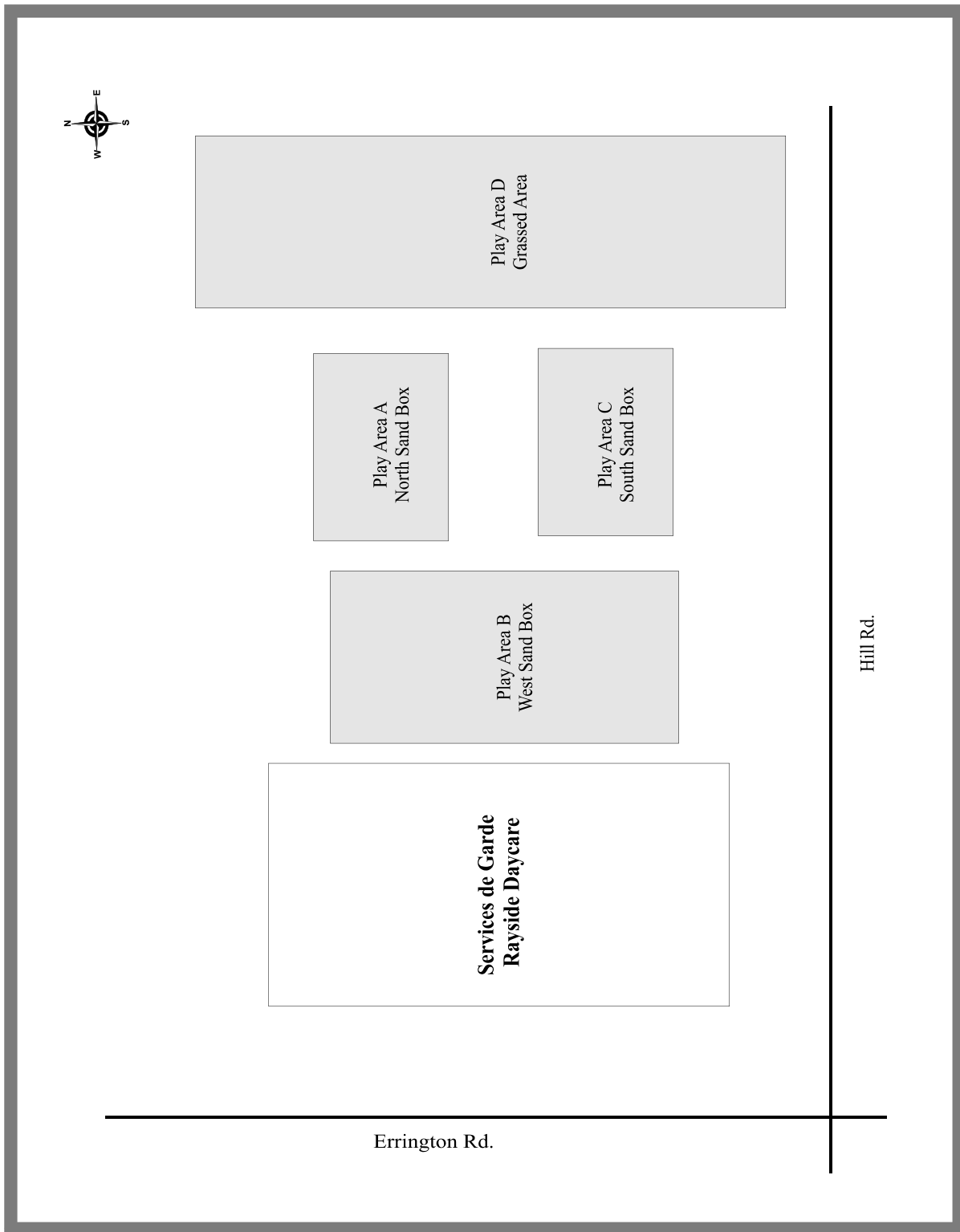
Metal concentrations were not elevated in sand any of the sanded play areas. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil from the grassed play area. The highest nickel concentration found was 66 ppm. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 3.5 km northwest, 3 km southwest, and 4 km southeast of Services de Garde de Rayside-Balfour #1, Stations 386, 385, and 384, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 65 to 170 and 49 to 130 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.24:** Concentration of 13 Elements in Soil in µg/g at Services De Garde De Rayside - Balfour #1, 30 Hill Street, Chelmsford

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037379	14514	0 - 15	< 0.8	5	14	< 0.8	22	6	15	4	< 1.5	18	< 1	25	18
Area B sand	5037378	14515	0 - 15	< 0.8	< 5	11	< 0.8	22	5	11	3	< 1.5	17	< 1	22	15
		14516	0 - 15	< 0.8	< 5	16	< 0.8	24	7	18	4	< 1.5	20	< 1	29	21
Area C sand	5037380	14517	0 - 15	< 0.8	< 5	12	< 0.8	25	5	13	3	< 1.5	18	< 1	25	17
Area D grass	5037381	14518	0 - 5	< 0.8	7	32	< 0.8	27	8	48	17	< 1.5	<b>66</b>	< 1	26	30
		14519	0 - 5	< 0.8	5	36	< 0.8	30	7	38	15	< 1.5	<b>58</b>	< 1	29	28
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.



**Figure B2.6.24:** Services de Garde Rayside - Balfour #1 Sampling Locations - 2001.

**2.6.25 Services De Garde De Rayside - Balfour #2, 121 Charlotte Street, Chelmsford**

This daycare is located in the same building as Chelmsford Public School, Rainbow District School Board. See Chelmsford Public School for the discussion, results and map (Section 2.1.6).

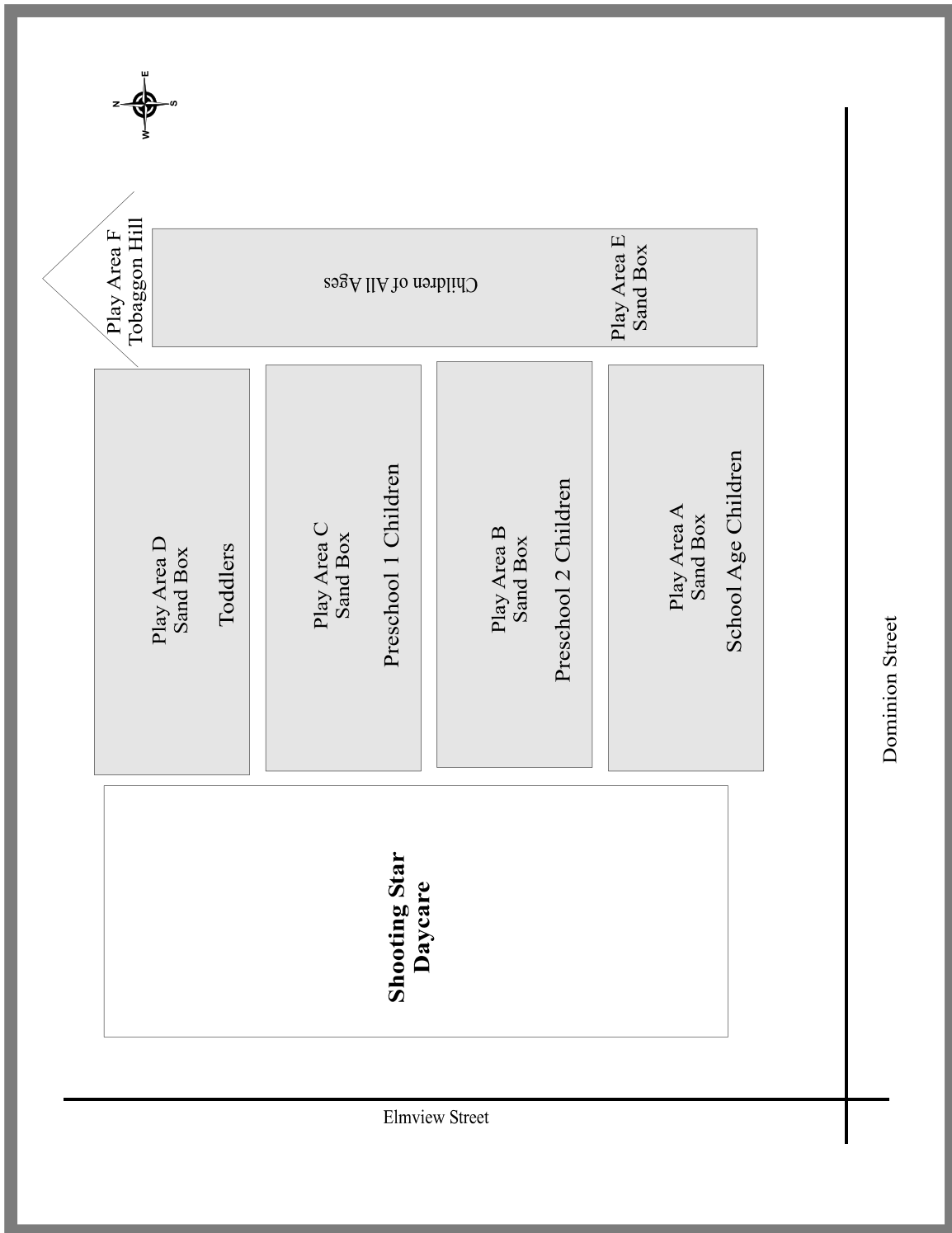
### 2.6.26 Shooting Star Daycare, 4120 Elmview Drive, Hanmer

Shooting Star Daycare was sampled on July 20, 2001. Samples were taken from six areas on the daycare property. Areas A to D are sanded play areas that are located immediately east of the daycare building. Area A corresponds to sand samples collected from the southern most sanded areas designated for school aged children. Area B corresponds to sand samples collected from the play area just north of Area A that has been designated for preschool children. Area C corresponds to sand samples collected from the sanded play area just north of Area B that has also been designated for preschool children. Area D corresponds to the northern most sanded area that has been designated for toddler aged children. Area E corresponds to the sanded play area in the southeast corner of the property, just east of Areas A and B. Area F corresponds to soil samples taken from a hill located in the northeast corner of the property. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

One sand sample, from Area A, was found to be elevated above the MOE Table F Ontario Soil Background Criteria for nickel. Metal concentrations were not elevated in any other sand or soil sample from this property. The sand present is not likely native to the daycare property and according to a discussion had on site the day of sampling, the sand had been introduced in November 2000 and more sand was added in June or July of 2001. Thus the sand was not expected to have elevated metal concentrations. The highest nickel concentration found was 60 ppm. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 50 m south, 2 km northeast, and 3.5 km southeast of Shooting Star Daycare, Stations 344, 347, and 349, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 66 to 150 and 57 to 110 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037312	14644	0 - 15	< 0.8	< 5	32	< 0.8	35	11	26	5	< 1.5	<b>60</b>	< 1	33	27
Area B sand	5037313	14645	0 - 15	< 0.8	< 5	22	< 0.8	30	6	16	3	< 1.5	23	< 1	30	18
Area C sand	5037314	14646	0 - 15	< 0.8	< 5	25	< 0.8	32	10	20	4	< 1.5	27	< 1	33	22
Area D sand	5037315	14647	0 - 15	< 0.8	< 5	23	< 0.8	30	7	18	4	< 1.5	26	< 1	31	22
Area E sand	5037316	14648	0 - 15	< 0.8	< 5	20	< 0.8	28	6	14	3	< 1.5	22	< 1	29	16
Area F soil	5037317	14649	0 - 5	< 0.8	< 5	28	< 0.8	28	5	16	6	< 1.5	34	< 1	28	17
		14650	0 - 5	< 0.8	< 5	27	< 0.8	27	4	12	5	< 1.5	28	< 1	27	15
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												



**Figure B2.6.26:** Shooting Star Daycare Sampling Locations - 2001.

### 2.6.27 Smiles 'n' Freckles Inc. Daycare, 63 Ridgemont Avenue, Sudbury

Smiles 'n' Freckles Inc. Daycare was sampled on July 17, 2001. Samples were taken from one area on the daycare property. Area A corresponds to sand samples collected from beneath the play structure. Due to the constant mixing and homogenous nature of the sanded areas, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from beneath the play structure. The sand is not likely native to the daycare property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest and 1 km north of Smiles 'n' Freckles Inc. Daycare, Stations 78, 79, and 410, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 110 to 360 and 110 to 350 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.27:** Concentration of 13 Elements in Soil in µg/g at Smiles 'n' Freckles Inc. Daycare, 63 Ridgemont Avenue, Sudbury

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037150	14363	0 - 15	< 0.8	< 5	21	< 0.8	23	7	18	33	< 1.5	20	< 1	28	17
		14364	0 - 15	< 0.8	< 5	21	< 0.8	25	8	19	3	< 1.5	21	< 1	33	19
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												

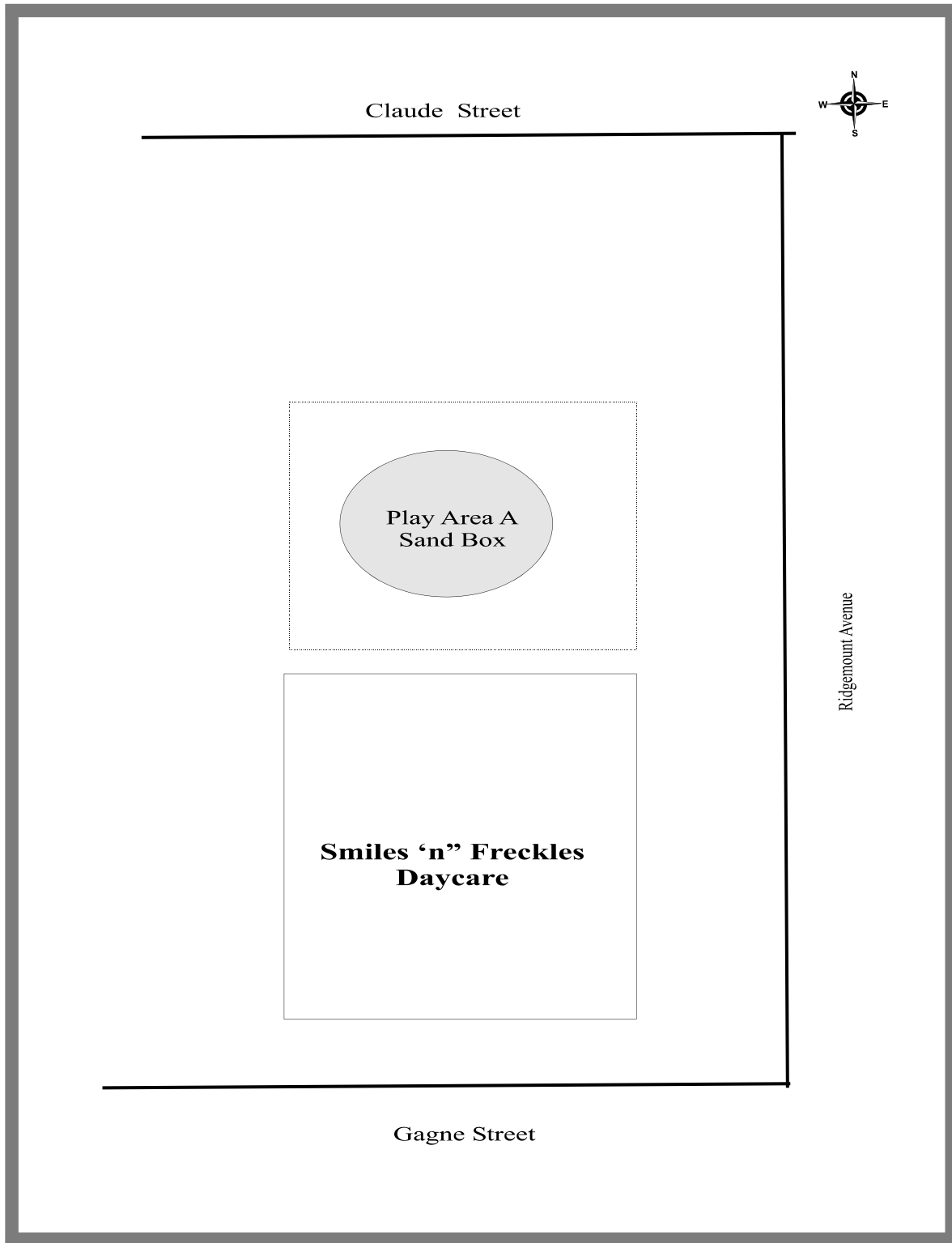


Figure B2.6.27: Smiles 'n' Freckles Daycare Sampling Locations -2001.

### 2.6.28 St. Albert Child Care Centre, 135 Eyre Street, Sudbury

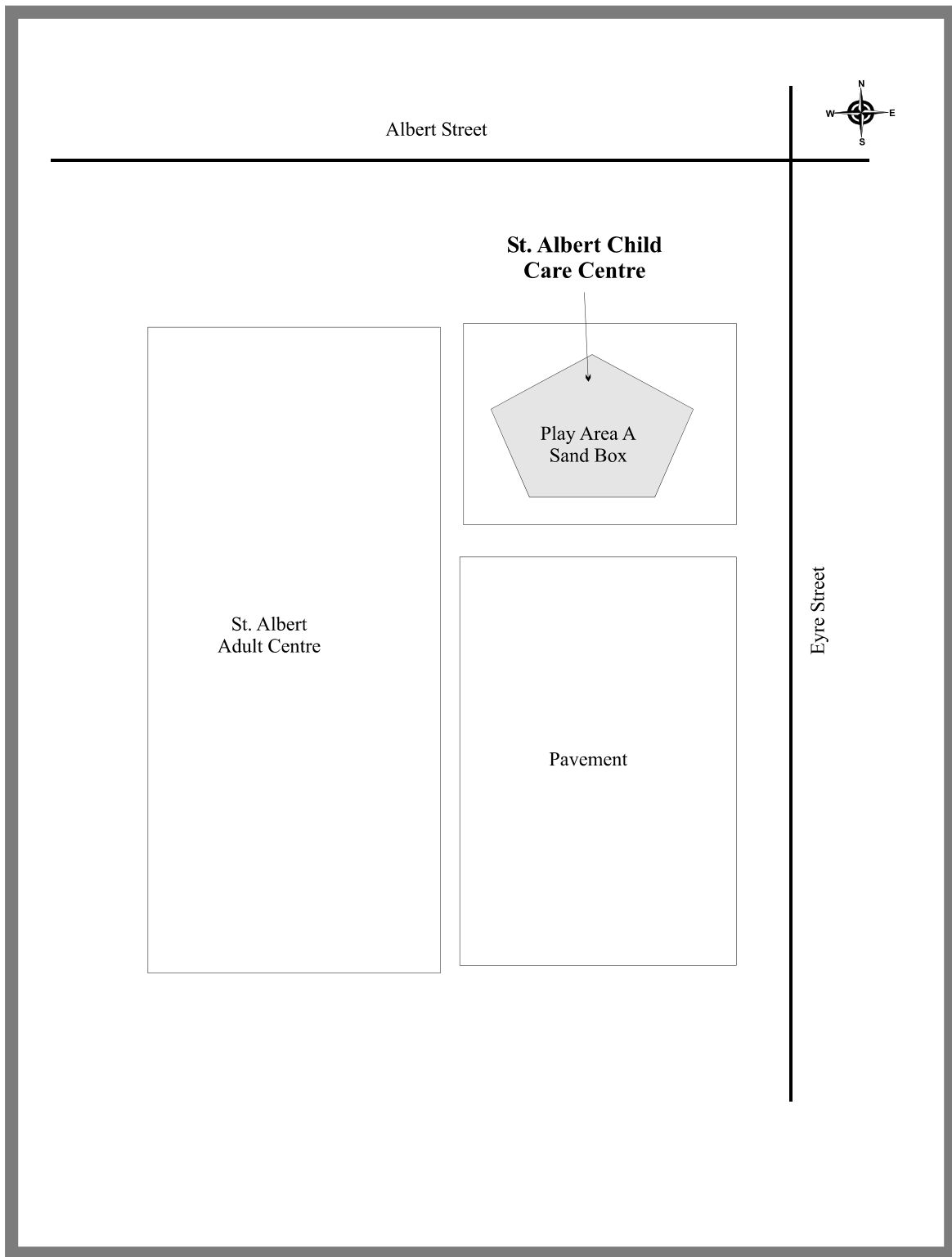
St. Albert Child Care Centre was sampled on July 6, 2001. Samples were taken from one area on the daycare property. Area A corresponds to the grassed play area on the front lawn of St. Albert Adults Centre. Due to the compacted nature of the grassed area, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

None of the samples from this property had metal concentrations above the MOE Table F Ontario Soil Background Criteria. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km northwest and 0.5 km southwest of St. Albert Child Care Centre, Stations 83 and 378, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 90 to 250 and 74 to 210 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037105	14221	0 - 5	< 0.8	< 5	40	< 0.8	28	5	20	5	< 1.5	29	< 1	28	17
		14222	0 - 5	< 0.8	< 5	45	< 0.8	29	6	20	5	< 1.5	31	< 1	28	18
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												





**Figure B2.6.28:** St. Albert Child Care Centre Sampling Locations - 2001.

### 2.6.29 Teddy Bear Daycare #1 at First Baptist Church, 2603 Falconbridge Highway

Teddy Bear Daycare #1 at First Baptist Church was sampled on July 18, 2001. Samples were taken from one area on the daycare property. Area A corresponds to sand samples collected from the sanded play area behind the church. Due to the constant mixing and homogeneous nature of the sanded area, samples were collected with hand trowels to represent the 0 - 15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

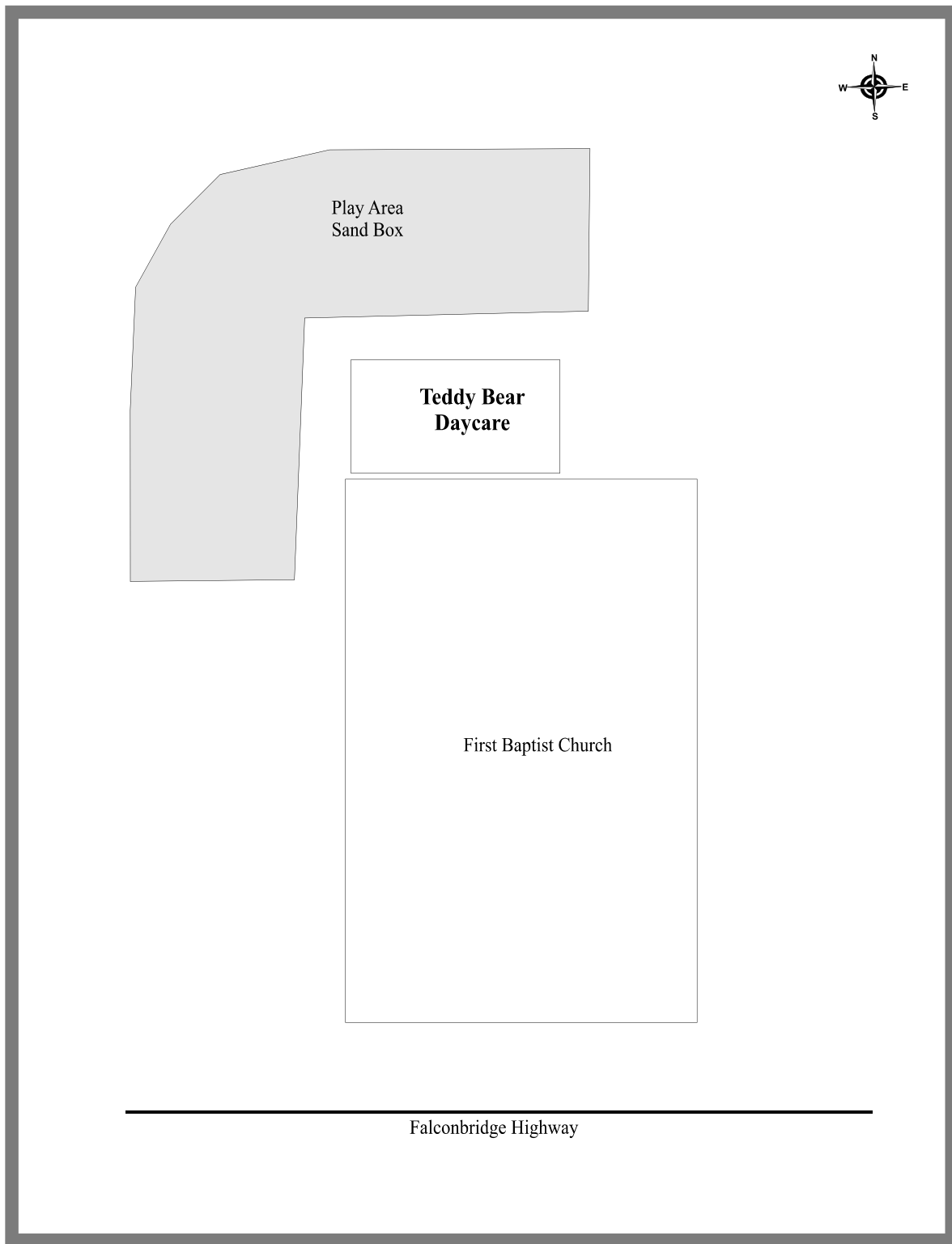
Metal concentrations were not elevated in the sand from the sanded play area. The sand present is not likely native to the daycare property and is believed to have been introduced when the play area was constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km southwest, 1.5 km south, and 1.5 km east of Teddy Bear Daycare, Stations 41, 412, and 40, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 37 to 140 and 24 to 193 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.29:** Concentration of 13 Elements in Soil in µg/g at Teddy Bear Daycare #1 at First Baptist Church, 2603 Falconbridge Highway

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037268	14430	0 - 15	< 0.8	6	20	< 0.8	23	6	17	3	< 1.5	22	< 1	30	16
		14431	0 - 15	< 0.8	5	25	< 0.8	26	6	16	3	< 1.5	23	< 1	31	17
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.



**Figure B2.6.29:** Teddy Bear Daycare #1 Sampling Locations - 2001.

### 2.6.30 Teddy Bear Daycare #2 at Falconbridge Recreation Centre, Edison Road, Falconbridge

Teddy Bear Daycare #2, seasonal daycare at Falconbridge Recreation Centre, was sampled on July 22, 2001. Samples were taken from one area on the daycare property. Area A corresponds to sand samples collected from beneath the slide and swings in Centennial Park, beside the tennis courts. Due to the constant mixing and homogeneous nature of the sanded area, samples were collected with hand trowels to represent the 0-15 cm depth. Area A was sampled again on September 18<sup>th</sup>, 2001 as part of Centennial Park. See Appendix C for re-sampling results. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand from beneath the slide and swings. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results are much lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 0.5 km north, 0.5 km northeast, and 0.5 km southwest of Teddy Bear Daycare, Stations 23, 22, and 36, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 68 to 1100 and 148 to 1300 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

**Table B2.6.30:** Concentration of 13 Elements in Soil in µg/g at Teddy Bear Daycare #2 at Falconbridge Recreation Centre, Edison Road, Falconbridge

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037360	14760	0 - 15	< 0.8	< 5	17	< 0.8	20	5	14	2	< 1.5	21	< 1	22	13
		14761	0 - 15	< 0.8	< 5	21	< 0.8	21	5	13	2	< 1.5	19	< 1	25	14
Table F (results in bold)				<b>1.0</b>	<b>14</b>	<b>190</b>	<b>1.0</b>	<b>67</b>	<b>19</b>	<b>56</b>	<b>55</b>	<b>2.5</b>	<b>43</b>	<b>1.4</b>	<b>91</b>	<b>150</b>
Table A (results in bold & underlined)				<b><u>13</u></b>	<b><u>20</u></b>	<b><u>750</u></b>	<b><u>3.0</u></b>	<b><u>750</u></b>	<b><u>40</u></b>	<b><u>225</u></b>	<b><u>200</u></b>	<b><u>5.0</u></b>	<b><u>150</u></b>	<b><u>2.0</u></b>	<b><u>200</u></b>	<b><u>600</u></b>
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												

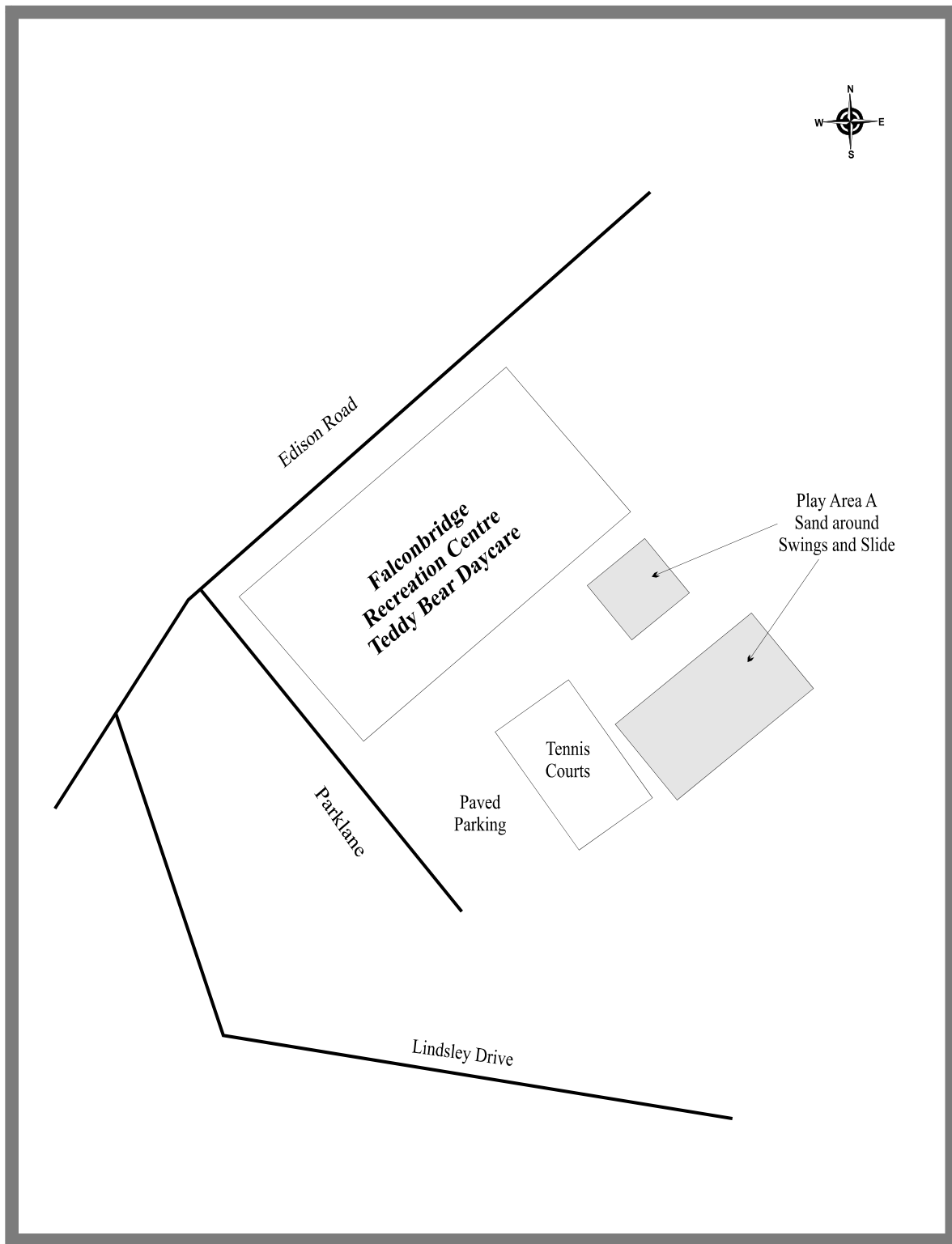


Figure B2.6.30: Teddy Bear Daycare #2 Sampling Locations - 2001.

**2.6.31 Teddy Bear Daycare #3 at St. John School, 181 William Street, Garson**

This daycare is located in the same building as St. John School, Sudbury Catholic District School Board. See St. John School for the discussion, results and map (Section 2.2.18).

### 2.6.32 Valley East Co-op-at Raymond Plourde Arena, 1919 Helene Street, Val Caron

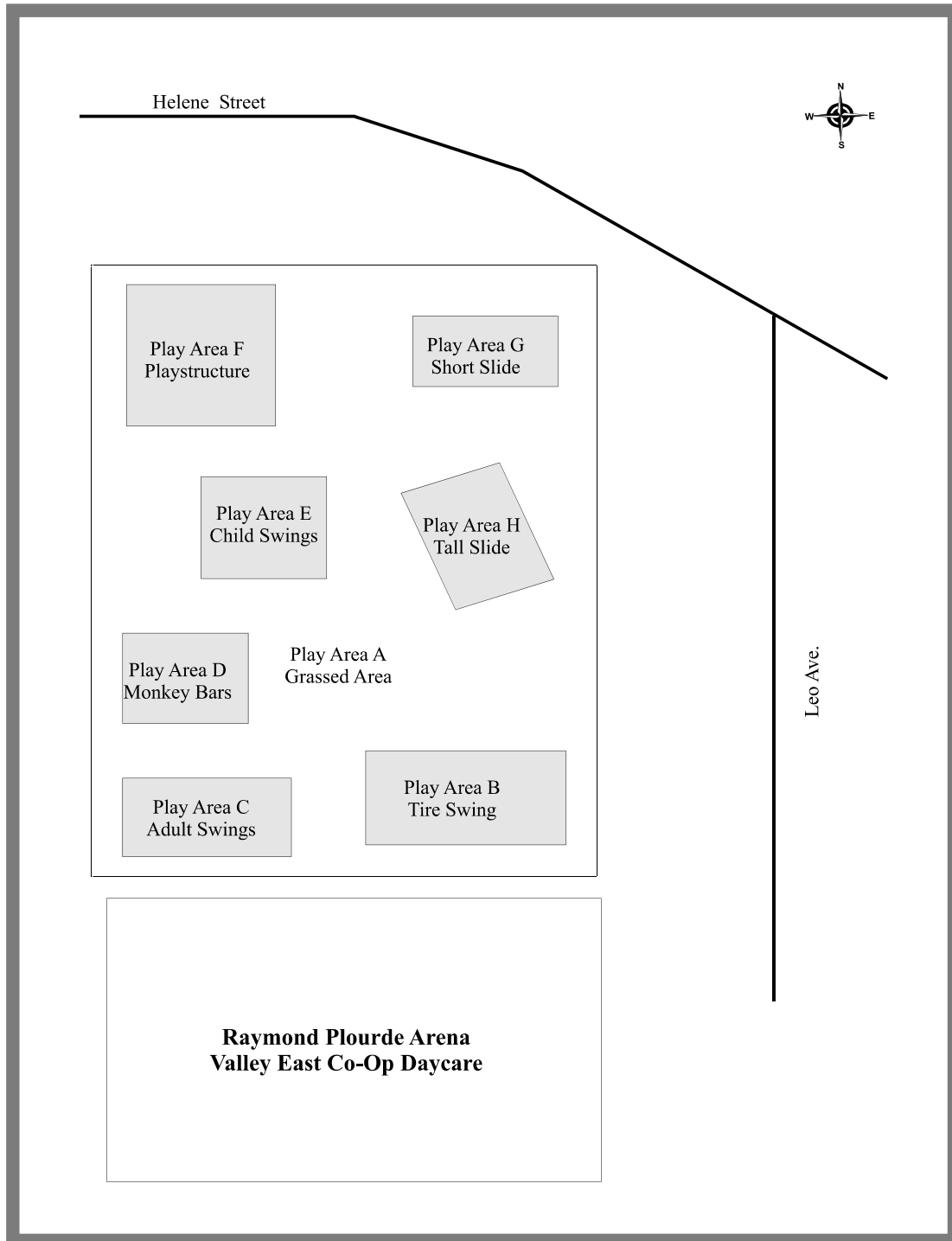
Valley East Co-op, at Raymond Plourde Arena, was sampled on July 23, 2001. Samples were taken from eight areas on the daycare property. Area A corresponds the grassed play area between and around the play structures. Due to the compacted nature of the grassed area, it was only possible to sample the surface soil (0-5 cm). Area B corresponds to sand samples collected from beneath the tire hang. Area C corresponds to sand samples collected from beneath the adult swings. Area D corresponds to sand samples collected from beneath the monkey bars. Area E corresponds to sand samples collected from beneath the child swings. Area F corresponds to sand samples collected from beneath the play structure. Area G corresponds to sand samples collected from the landing area of the smaller slide. Area H corresponds to sand samples collected from the landing area of the larger slide. Due to the constant mixing and homogeneous nature of the sanded area, samples were collected with hand trowels to represent the 0-15 cm depth. All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in any of the sand samples from this property. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for both samples from the grassed play area. The highest nickel concentration found was 54 ppm. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037296	14788	0 - 5	< 0.8	7	29	< 0.8	24	4	43	10	< 1.5	<b>50</b>	< 1	25	27
		14789	0 - 5	< 0.8	< 5	29	< 0.8	24	4	42	11	< 1.5	<b>54</b>	< 1	26	26
Area B sand	5037297	14790	0 - 15	< 0.8	< 5	22	< 0.8	42	7	28	4	< 1.5	28	< 1	50	25
Area C sand	5037298	14791	0 - 15	< 0.8	< 5	32	< 0.8	46	8	35	5	< 1.5	28	< 1	47	38
Area D sand	5037299	14792	0 - 15	< 0.8	< 5	29	< 0.8	50	11	36	5	< 1.5	29	< 1	59	30
Area E sand	5037300	14793	0 - 15	< 0.8	< 5	43	< 0.8	52	8	48	6	< 1.5	30	< 1	56	36
Area F sand	5037301	14794	0 - 15	< 0.8	< 5	22	< 0.8	45	7	26	4	< 1.5	27	< 1	54	39
Area G sand	5037302	14795	0 - 15	< 0.8	< 5	28	< 0.8	50	8	39	6	< 1.5	35	< 1	56	35
Area H sand	5037303	14796	0 - 15	< 0.8	< 5	29	< 0.8	55	8	33	5	< 1.5	30	< 1	56	32
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												
Note: The play structures and grass area were also sampled separately as part of the Confederation Playground.(see Appendix C)																

These nickel and copper results are lower than those reported historically. Previous MOE sampling of undisturbed soils approximately 1 km west, 2.5 km southeast, and 3.5 km southwest of Valley East Co-op, Stations 15, 340, and 341, respectively, of the MOE Sudbury 2000 Report for the City

of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 84 to 210 and 100 to 180 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.



**Figure B2.6.32:** Valley East Co-Op Daycare Sampling Locations - 2001.



### 2.6.33 Walden Daycare Centre #1, 500 Niemi Drive, Lively

Walden Daycare Centre #1 was sampled on July 21, 2001. Samples were taken from five areas on the daycare property. Area A corresponds to the grassed play area stretching from the parking lot to the northwest fence facing Niemi Road. Area B corresponds to sand samples collected from the two sand boxes just south of the Area A. Area C corresponds to wood chips collected from around the sand boxes. Area D corresponds to sand samples collected from the sanded play area north of the building. Area E corresponds to the grassed play area surrounding Area D, on the northern edge of the property. Due to the constant mixing and homogeneous nature of the sanded area, samples were collected with hand trowels to represent the 0-15 cm depth. The wood chips were also collected with hand trowels to represent the 0-15 cm layer. Due to the compacted nature of the grassed area, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in the sand or wood chip samples from this property. Neither the sand nor wood chips present are native to the daycare property and both are believed to have been introduced when the play areas were constructed. Thus, neither the sand nor wood chips were expected to have elevated metal concentrations. Nickel (Ni) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria in the surface soils of both grassed play areas. Copper (Cu) was elevated above the MOE Table F Ontario Soil Background Criteria in the surface soil of the north grassed play area only. The highest nickel and copper concentrations found on this property were 110 and 93 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

**Table B2.6.33:** Concentration of 13 Elements in Soil in µg/g at Walden Daycare Centre #1, 500 Niemi Drive, Lively

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A grass	5037238	14711	0 - 5	< 0.8	< 5	37	< 0.8	30	6	38	8	< 1.5	<b>49</b>	< 1	29	27
		14712	0 - 5	< 0.8	< 5	39	< 0.8	31	7	42	9	< 1.5	<b>52</b>	< 1	31	30
Area B sand	5037239	14718	0 - 15	< 0.8	< 5	19	< 0.8	29	8	20	3	< 1.5	21	< 1	30	19
	5037240	14713	0 - 15	< 0.8	< 5	22	< 0.8	28	7	18	3	< 1.5	18	< 1	29	17
Area C mulch	5037241	14714	0 - 15	< 0.8	< 5	20	< 0.8	27	8	34	4	< 1.5	35	< 1	27	22
Area D sand	5037242	14715	0 - 15	< 0.8	< 5	18	< 0.8	28	10	31	5	< 1.5	30	< 1	25	29
Area E grass	5037243	14716	0 - 5	< 0.8	< 5	59	< 0.8	38	17	<b>92</b>	17	< 1.5	<b>110</b>	< 1	34	51
		14717	0 - 5	< 0.8	< 5	67	< 0.8	36	13	<b>93</b>	37	< 1.5	<b>95</b>	< 1	37	58
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold & underlined)				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600
< - less than the Method Detection Limit.				Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.												

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 1.5 km north, 1.5 km southwest, and 2.5 km east of Walden Daycare Centre, Stations 376, 375, and 100, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 34 to 700 and 35 to 568 ppm, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

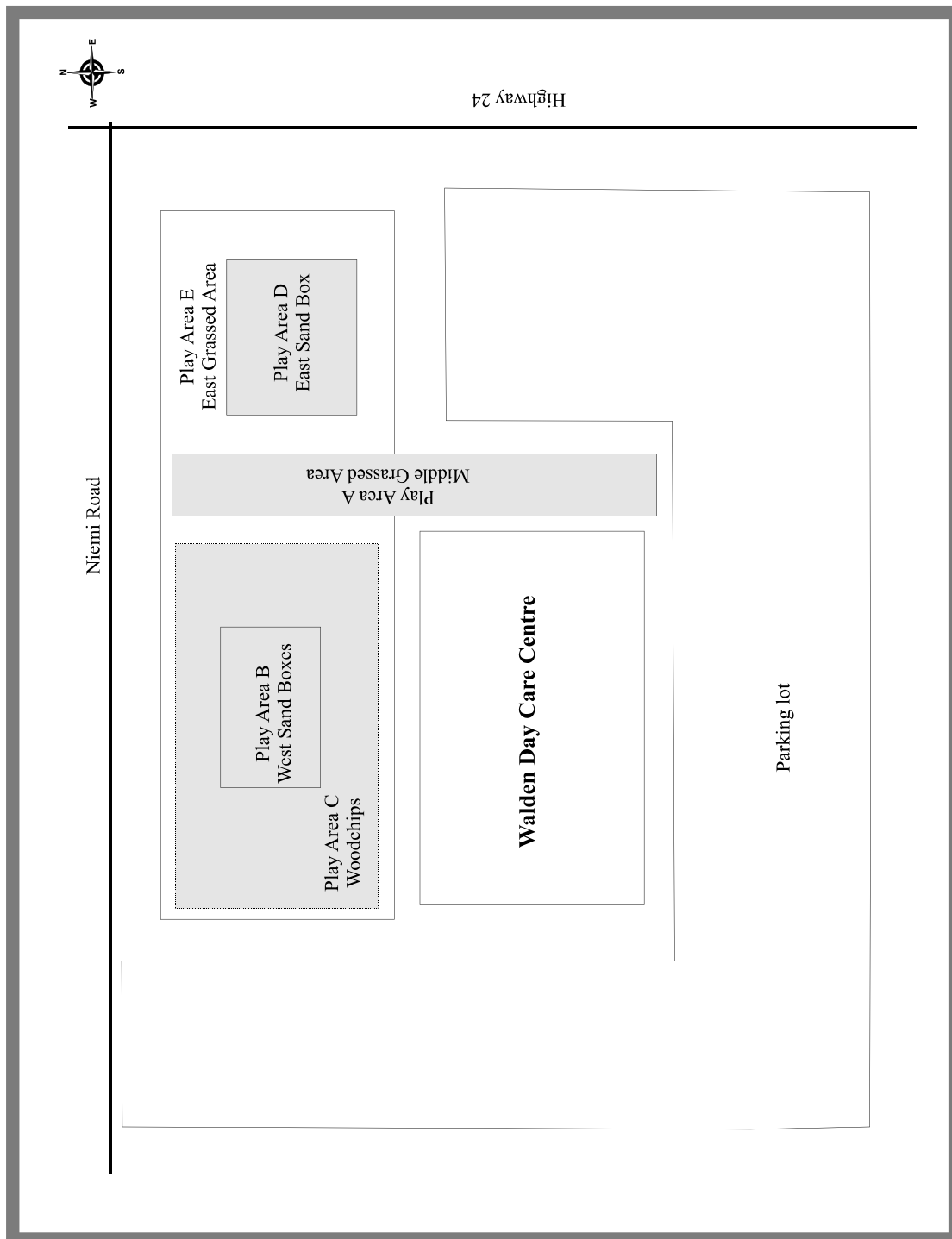


Figure B2.6.33: Walden Daycare Centre #1 Sampling Locations - 2001.

**2.6.34 Walden Daycare Centre #2 at St. James School, 280 Anderson Drive, Lively**

This daycare is located in the same building as St. James School, Sudbury Catholic District School Board. See St. James School for the discussion, results and map (Section 2.2.17).

### 2.6.35 Walden Play and Learn, 3 Westview Crescent, Lively

Walden Play and Learn was sampled on July 21, 2001. Samples were taken from three areas on the daycare property. Areas A and B correspond to sand samples collected from beneath the north and south play structures, respectively. Due to the constant mixing and homogeneous nature of the sanded area, samples were collected with hand trowels to represent the 0-15 cm depth. Area C corresponds to the grassed play area west of Area B. Due to the compacted nature of this grassed area, or the presence of bedrock at shallow depths, it was only possible to sample the surface soil (0-5 cm). All data were compared with the MOE Table F Ontario Soil Background Criteria and Table A Effects Based Soil Criteria (MOE 1997).

Metal concentrations were not elevated in either of the sanded play areas. The sand present is not likely native to the daycare property and is believed to have been introduced when the play areas were constructed. Thus the sand was not expected to have elevated metal concentrations. Nickel (Ni) and copper (Cu) concentrations were elevated above the MOE Table F Ontario Soil Background Criteria for samples collected from the grassed play area only. The highest nickel and copper concentrations found were 73 and 61 ppm, respectively. All other metals listed, as well as aluminum (Al), calcium (Ca), iron (Fe), magnesium (Mg), manganese (Mn), and strontium (Sr) which are not listed, were below the MOE Table F Ontario Soil Background Criteria. There were no exceedences of the MOE Table A Effects Based Soil Criteria at this property.

These nickel and copper results fall within the lower end of the concentration ranges of those reported historically. Previous MOE sampling of undisturbed soils approximately 0.2 km southwest and 2 km northeast of Walden Play and Learn, Stations 101 and 100, respectively, of the MOE Sudbury 2000 Report for the City of Greater Sudbury (MOE 2001), indicated nickel and copper surface soil concentration ranges of 34 to 700 ppm and 35 to 568, respectively. Historic MOE sampling in the Sudbury area was of undeveloped surface soils which may not be representative of the materials sampled on this property.

Map ID	Station	Sample Number	Soil Depth	Sb	As	Ba	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	V	Zn
Area A sand	5037236	14709	0 - 15	< 0.8	< 5	32	< 0.8	28	6	53	4	< 1.5	25	< 1	29	27
Area B sand	5037237	14710	0 - 15	< 0.8	< 5	26	< 0.8	30	7	28	6	< 1.5	28	< 1	38	24
Area C grass	5037235	14707	0 - 5	< 0.8	< 5	30	< 0.8	21	6	41	10	< 1.5	<b>73</b>	< 1	22	21
		14708	0 - 5	< 0.8	< 5	45	< 0.8	30	6	<b>61</b>	8	< 1.5	<b>73</b>	< 1	31	31
Table F (results in bold)				1.0	14	190	1.0	67	19	56	55	2.5	43	1.4	91	150
Table A (results in bold &				13	20	750	3.0	750	40	225	200	5.0	150	2.0	200	600

< - less than the Method Detection Limit. Al, Ca, Fe, Mg, Mn, and Sr results for this school can be found in Table 4.2.

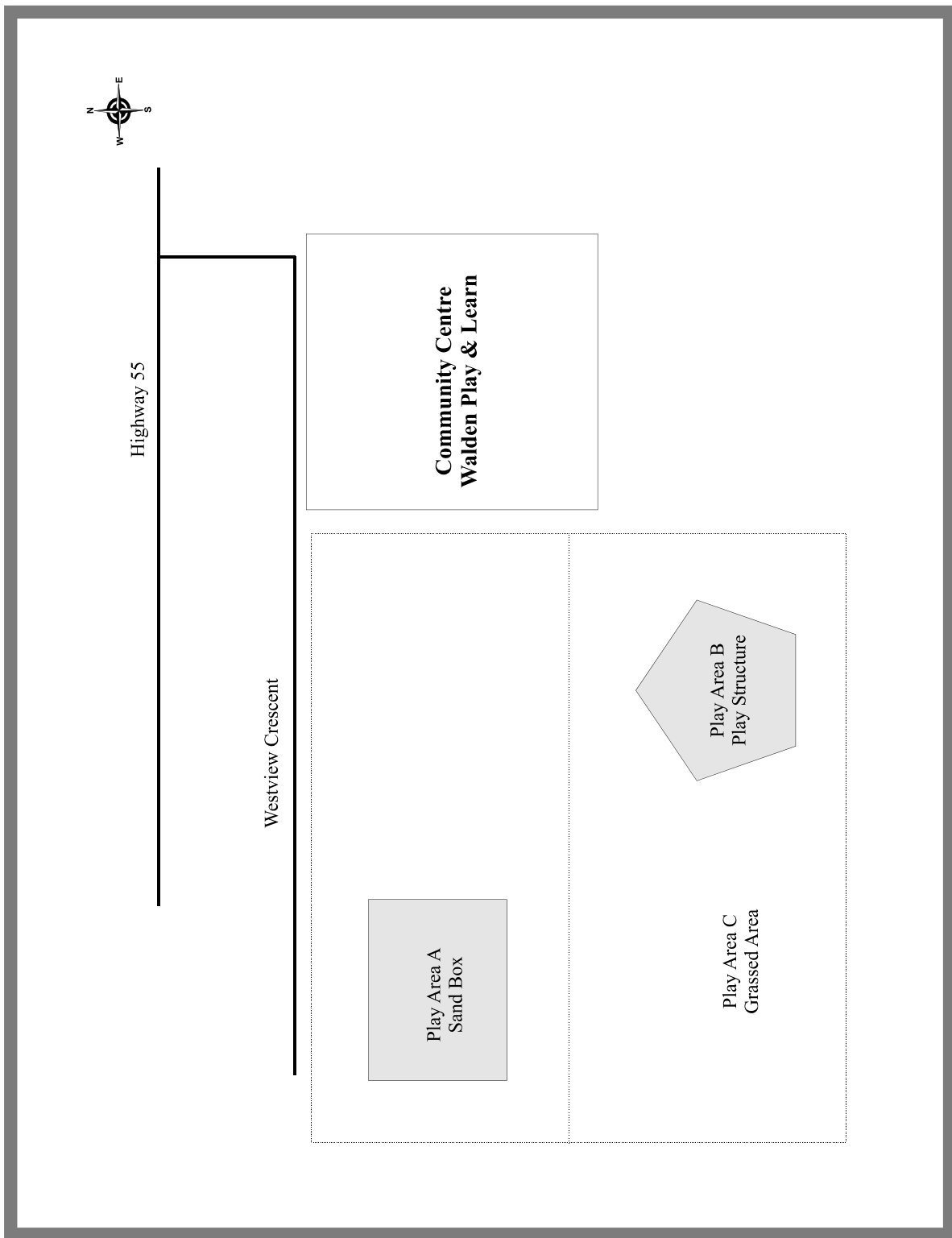


Figure B2.6.35: Walden Play & Learn Sampling Locations - 2001.

### 3.0 SUMMARY STATISTICS FOR ALL SCHOOLS AND DAYCARES

**Table B3.1:** Number of schools or daycares in which at least one sample exceed MOE soil criteria.

School Board	Number of Schools	Nickel Exceedences		Copper Exceedences		Cobalt Exceedences		Arsenic Exceedences		Lead Exceedences	
		Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A	Table F	Table A
Daycares	25	16	2	7	0	1	0	0	1	0	0
Rainbow	40	39	18	11	7	4	2	1	1	3	0
Sudbury Catholic	26	23	5	4	2	4	0	0	0	1	0
Grand Nord	8	5	1	1	0	0	0	0	0	1	0
Scolaire Catholique	31	28	7	6	0	4	0	0	0	0	0
<b>TOTAL:</b>	<b>130</b>	<b>111</b>	<b>33</b>	<b>29</b>	<b>9</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>0</b>

**Table B3.2:** Summary Statistics for All\* Sand Samples from All Schools and Daycares in the Sudbury Region

	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Minimum	3200	0.4	2.5	11	0.3	0.4	1500	11	3	6	7400	2	1900	70	0.8	11	0.5	10	11	9
10th	4460	0.4	2.5	16	0.3	0.4	2160	22	5	12	11000	2	2600	140	0.8	16	0.5	15	24	14
1st quartile	5000	0.4	2.5	19	0.3	0.4	2500	24	6	16	12000	3	3000	150	0.8	20	0.5	18	27	16
Median	5800	0.4	2.5	21	0.3	0.4	2900	27	7	21	14000	3	3700	170	0.8	24	0.5	21	29	19
3rd quartile	6900	0.4	2.5	24	0.3	0.4	3400	30	8	29	16000	4	4200	190	0.8	31	0.5	25	33	24
95th	8540	0.4	6	32	0.3	0.4	4300	39	9	52	19400	7	5040	240	0.8	62	0.5	30	41	34
Maximum	10000	0.8	23	47	0.5	0.8	12000	55	16	170	26000	82	6000	300	4	190	1	46	59	110
Mean	6059	0.4	3	22	0.3	0.4	3073	28	7	25	14255	4	3659	175	0.8	29	0.5	21	31	21
Geometric mean	5906	0.4	3	21	0.3	0.4	2945	27	7	22	13961	3	3566	172	0.8	26	0.5	21	30	20
Sample std. dev.	1392	0.0	2	6	0.0	0.0	1113	6	2	18	2955	7	814	33	0.2	20	0.1	6	7	9
CV (std. dev./mean)	23%	7%	61%	26%	7%	7%	36%	23%	26%	72%	21%	152%	22%	19%	32%	70%	10%	26%	23%	43%
Lower CI for the mean	5861	0.4	2.7	21	0.2	0.4	2915	27	7	23	13835	3	3543	170	0.7	26	0.5	20	30	20
Upper CI for the mean	6257	0.4	3.2	23	0.3	0.4	3232	29	7	28	14676	5	3774	179	0.8	32	0.5	22	32	22
Kurtosis	-0.1	193	87.7	3.7	193	193	33.2	4.3	4.2	23.5	1.7	104	0.0	1.3	175	27.9	94.0	1.2	4.5	50.1
Skewness	0.6	13.9	8.3	1.4	13.9	13.9	4.7	1.6	1.1	4.0	0.8	9.5	0.3	0.6	13.0	4.6	9.7	0.6	1.4	5.5

n = 193

*Note: the standard-deviation and the confidence interval of the mean are valid only in the case of a simple random sampling*

**Table B3.3:** Summary Statistics for Playground Gravel Samples from All Schools and Daycares in the Sudbury Region

	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Minimum	4600	0.4	2.5	18	0.3	0.4	2000	20	6	18	11000	3	2800	140	0.8	27	0.5	10	24	17
10th	5900	0.4	2.5	25	0.3	0.4	2600	27	8	42	14000	7	3700	170	0.8	40	0.5	18	28	27
1st quartile	6500	0.4	2.5	28	0.3	0.4	3000	30	9	51	16000	9	4150	180	0.8	56	0.5	23	30	30
Median	7600	0.4	2.5	33	0.3	0.4	3500	33	12	78	18000	11	4500	210	0.8	80	0.5	27	32	36
3rd quartile	8600	0.4	6	39	0.3	0.4	4100	37	16	115	20000	15	5300	230	0.8	120	0.5	29	36	41
95th	11000	0.4	8	48	0.3	0.4	5100	47	28	200	24000	21	6400	300	0.8	190	1	35	45	65
Maximum	20000	1.5	13	120	0.3	0.8	14000	90	33	310	43000	30	14000	390	4	290	2	47	73	110
Mean	7978	0.4	4	35	0.3	0.4	3710	35	14	91	18436	12	4829	214	0.8	97	0.6	26	34	39
Geometric mean	7727	0.4	4	33	0.3	0.4	3526	34	13	78	17957	11	4666	210	0.8	84	0.5	25	34	37
Sample std. dev.	2320	0.1	2	14	0.0	0.0	1575	10	6	55	4742	5	1557	45	0.4	56	0.2	6	8	15
CV (std. dev./mean)	29%	29%	55%	40%	0%	10%	43%	28%	45%	61%	26%	40%	32%	21%	47%	58%	40%	25%	24%	38%
Lower CI for the mean	7518	0.4	4	32	0.3	0.4	3398	33	13	80	17495	11	4520	205	0.7	86	0.5	25	33	36
Upper CI for the mean	8438	0.4	5	37	0.3	0.4	4022	37	15	102	19376	13	5138	223	0.9	108	0.6	27	36	41
Kurtosis	12.5	68.7	1.2	27.4		101.0	28.7	16.0	1.3	2.8	11.7	1.0	22.2	2.5	74.9	1.6	20.7	1.4	10.4	8.1
Skewness	2.8	8.1	1.2	4.7		10.0	4.8	3.3	1.3	1.6	2.7	1.0	4.0	1.4	8.4	1.3	4.2	0.1	2.9	2.5

n = 101

*Note: the standard-deviation and the confidence interval of the mean are valid only in the case of a simple random sampling*

**Table B3.4:** Summary Statistics for Baseball Infield Crushed Stone Samples from All Schools and Daycares in the Sudbury Region

	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Minimum	4100	0.4	2.5	17	0.3	0.4	2000	19	4	13	9500	3	2100	120	0.8	17	0.5	15	22	14
10th	5220	0.4	2.5	25	0.3	0.4	2600	24	6	28	12000	7	3000	150	0.8	38	0.5	18	25	23
1st quartile	6400	0.4	2.5	28	0.3	0.4	2900	27	7	50	14000	8	3400	170	0.8	62	0.5	22	28	27
Median	7900	0.4	2.5	34	0.3	0.4	3950	29	10	68	15000	11	4100	190	0.8	84	0.5	29	29	30
3rd quartile	9700	0.4	6	40	0.3	0.4	7600	34	12	100	17000	16	5400	230	0.8	130	0.5	45	32	40
95th	12000	1.0	8	58	0.3	0.4	12850	40	17	220	21000	23	6100	260	0.8	238	1	84	41	108
Maximum	15000	1.5	9	68	0.3	1.0	15000	42	20	670	24000	32	7600	270	3	370	2	90	68	200
Mean	8269	0.5	4	35	0.3	0.4	5345	30	10	99	15512	13	4400	196	0.8	106	0.6	36	32	41
Geometric mean	7916	0.4	4	34	0.3	0.4	4554	30	9	72	15200	11	4223	193	0.8	87	0.5	32	31	35
Sample std. dev.	2469	0.2	2	11	0.0	0.1	3264	5	4	107	3208	6	1240	36	0.3	74	0.2	19	9	34
CV (std. dev./mean)	30%	48%	52%	31%	0%	22%	62%	17%	36%	109%	21%	51%	29%	19%	38%	71%	45%	54%	28%	84%
Lower CI for the mean	7490	0.4	3	32	0.3	0.4	4316	29	9	65	14500	11	4009	184	0.7	82	0.5	30	29	30
Upper CI for the mean	9048	0.5	5	38	0.3	0.4	6375	32	11	133	16524	15	4791	207	0.9	129	0.6	42	34	52
Kurtosis	0.3	12.8	-0.8	2.2		42.0	1.0	0.0	0.2	18.9	0.9	1.8	-0.5	-0.7	42.0	5.0	27.5	1.6	10.8	12.7
Skewness	0.7	3.6	0.9	1.3		6.5	1.3	0.4	0.6	3.9	0.9	1.3	0.3	0.2	6.5	2.1	5.1	1.4	3.1	3.4

n = 42

Note: the standard-deviation and the confidence interval of the mean are valid only in the case of a simple random sampling

**Table B3.5:** Summary Statistics for All\* 0-5 Cm Soil Samples from All Schools and Daycares in the Sudbury Region

	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Minimum	4100	0.4	2.5	15	0.3	0.4	1700	18	3	11	8500	2	1200	98	0.8	16	0.5	14	16	12
10th	7230	0.4	2.5	28	0.3	0.4	2830	24	5	24	11000	6	2100	140	0.8	34	0.5	22	24	20
1st quartile	8200	0.4	2.5	31	0.3	0.4	3500	26	6	36	12000	9	2400	165	0.8	47	0.5	28	26	24
Median	9200	0.4	2.5	37	0.3	0.4	4700	30	7	51	13000	13	3100	200	0.8	67	0.5	33	29	29
3rd quartile	10750	0.4	6	45	0.3	0.4	6800	35	8	92	15000	21	3900	230	0.8	110	0.5	40	31	37
95th	12000	0.4	8	54	0.3	0.8	11000	45	15	199	18850	84	5485	289	0.8	259	2	49	35	56
Maximum	17000	4.4	37	110	0.5	3.1	33000	67	80	2900	34000	200	9200	440	2	2500	12	170	78	130
Mean	9319	0.4	4	39	0.3	0.5	5690	31	8	99	13856	22	3282	201	0.8	114	0.7	34	29	32
Geometric mean	9158	0.4	4	38	0.3	0.4	4970	31	7	58	13582	15	3095	195	0.8	75	0.6	33	29	30
Sample std. dev.	1698	0.3	4	11	0	0	3660	7	8	256	3077	28	1195	50	0.1	236	1.0	12	5	14
CV (std. dev./mean)	18%	71%	86%	28%	10%	66%	64%	24%	93%	259%	22%	128%	36%	25%	16%	208%	134%	36%	17%	45%
Lower CI for the mean	9133	0.4	4	38	0.2	0.4	5289	31	7	71	13519	19	3151	195	0.8	88	0.6	33	28	31
Upper CI for the mean	9505	0.5	5	40	0.3	0.5	6090	32	9	127	14192	25	3413	206	0.8	139	0.8	36	29	34
Kurtosis	1.1	99.4	38.7	7.3	104.6	48.6	17.4	4.4	53.1	79.5	12.4	11.4	3.3	1.8	45.4	73.4	72.5	45.1	33.9	13.0
Skewness	0.1	9.4	5.3	1.8	10.3	6.6	3.4	1.6	6.6	8.6	2.6	3.2	1.4	0.9	6.8	8.1	7.7	4.6	3.5	2.9

n = 324

Note: the standard-deviation and the confidence interval of the mean are valid only in the case of a simple random sampling



**Table B3.6:** Summary Statistics for All\* 5-10 Cm Soil Samples from All Schools and Daycares in the Sudbury Region

	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Minimum	5400	0.4	2.5	20	0.3	0.4	1600	18	3	11	7700	2	1100	100	0.8	21	0.5	13	20	15
10th	7300	0.4	2.5	26	0.3	0.4	2100	23	4	19	11000	7	1750	135	0.8	32	0.5	18	24	18
1st quartile	8650	0.4	2.5	29	0.3	0.4	2500	24	5	28	12000	7	1900	145	0.8	41	0.5	24	26	21
Median	9900	0.4	2.5	34	0.3	0.4	3650	27	6	39	13000	9	2450	180	0.8	53	0.5	31	29	25
3rd quartile	11000	0.4	6	40	0.3	0.4	5600	33	7	60	14500	11	3300	215	0.8	71	0.5	38	32	31
95th	13000	0.4	11	54	0.3	0.4	14750	39	11	173	18250	31	5125	280	0.8	213	1	45	35	47
Maximum	15000	1.8	94	97	0.3	2.4	38000	51	46	1300	24000	55	8500	310	0.8	1900	9	52	65	68
Mean	9775	0.4	7	37	0.3	0.5	5063	29	7	89	13315	11	2798	184	0.8	117	0.8	31	29	28
Geometric mean	9597	0.4	4	35	0.3	0.4	4038	28	6	45	13074	10	2599	178	0.8	61	0.6	29	29	26
Sample std. dev.	1836	0.2	15	12	0.0	0.3	4796	6	7	211	2692	8	1199	49	0.0	284	1.3	9	6	10
CV (std. dev./mean)	19%	53%	214%	34%	0%	59%	95%	22%	101%	239%	20%	74%	43%	27%	0%	244%	165%	30%	20%	38%
Lower CI for the mean	9401	0.4	4	34	0.3	0.4	4086	28	6	46	12766	9	2554	174	0.8	59	0.5	29	28	25
Upper CI for the mean	10149	0.5	10	39	0.3	0.5	6039	30	9	132	13863	13	3042	194	0.8	175	1.0	33	30	30
Kurtosis	0.3	21.8	21.9	8.4		35.8	23.4	1.2	18.8	21.1	4.0	12.7	5.5	-0.3		25.2	27.8	-0.7	16.0	3.7
Skewness	0.1	4.8	4.7	2.5		5.8	4.2	1.1	4.4	4.7	1.5	3.4	1.9	0.6		5.0	5.2	0.0	2.8	1.7

n = 96

*Note: the standard-deviation and the confidence interval of the mean are valid only in the case of a simple random sampling***Table B3.7:** Summary Statistics for All 10-20 Cm Soil Samples from All Schools and Daycares in the Sudbury

	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Minimum	5200	0.4	2.5	18	0.3	0.4	1400	15	3	4	7000	4	1500	85	0.8	13	0.5	12	18	12
10th	7180	0.4	2.5	24	0.3	0.4	2000	21	4	14	10000	5	1700	120	0.8	23	0.5	16	22	15
1st quartile	8100	0.4	2.5	28	0.3	0.4	2500	23	4	23	11000	6	1900	145	0.8	36	0.5	22	24	19
Median	9200	0.4	2.5	34	0.3	0.4	3100	26	5	31	12000	7	2200	170	0.8	46	0.5	28	27	22
3rd quartile	11000	0.4	5	39	0.3	0.4	4300	28	6	49	14000	9	2900	200	0.8	66	0.5	34	30	26
95th	12000	0.4	17	47	0.3	0.4	8020	34	11	169	15300	18	4670	242	0.8	194	0.6	44	33	36
Maximum	12000	1.1	52	63	0.3	1.1	13000	56	23	540	27000	27	6500	340	0.8	710	4	49	63	45
Mean	9208	0.4	5	34	0.3	0.4	3773	27	6	51	12533	8	2536	172	0.8	70	0.6	28	28	23
Geometric mean	9049	0.4	4	33	0.3	0.4	3350	26	5	34	12264	8	2397	166	0.8	51	0.5	27	27	22
Sample std. dev.	1665	0.1	9	8	0.0	0.1	2186	6	3	72	2931	4	987	47	0.0	93	0.5	9	7	6
CV (std. dev./mean)	18%	28%	164%	24%	0%	20%	58%	24%	52%	142%	24%	52%	39%	28%	0%	133%	84%	33%	25%	28%
Lower CI for the mean	8822	0.4	3	32	0.3	0.4	3267	25	5	34	11854	7	2307	161	0.8	49	0.5	26	26	22
Upper CI for the mean	9594	0.5	8	36	0.3	0.4	4280	28	7	67	13212	9	2765	183	0.8	92	0.7	31	29	24
Kurtosis	-0.5	23.5	16.2	1.8		75.0	6.0	9.0	14.2	29.6	12.2	5.5	5.2	2.4		30.7	37.0	-0.7	16.3	1.2
Skewness	-0.2	4.9	4.1	0.8		8.7	2.3	2.4	3.2	4.9	2.8	2.2	2.2	1.1		5.1	6.0	0.3	3.5	0.9

n = 75

*Note: the standard-deviation and the confidence interval of the mean are valid only in the case of a simple random sampling*

**4.0 COMBINED SCHOOL AND DAYCARE RESULTS** - Schools in alphabetical order.

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Adamsdale Public School - Rainbow District School Board, 181 1st Avenue, Sudbury</b>																						
Area A grass	5037144	14299	0 - 5	11000	<0.8	< 5	41	<0.8	5300	41	6	<b>62</b>	13000	49	2600	210	< 1.5	<b>73</b>	< 1	40	29	30
		14300	0 - 5	12000	<0.8	6	44	<0.8	6100	43	7	<b>60</b>	15000	34	3500	260	< 1.5	<b>73</b>	< 1	41	33	36
Area B grass	5037145	14301	0 - 5	12000	<0.8	< 5	48	<0.8	6900	39	7	44	15000	11	3700	280	1.6	<b>65</b>	< 1	46	34	47
		14302	0 - 5	12000	<0.8	< 5	47	<0.8	6600	37	7	42	15000	10	3600	270	< 1.5	<b>60</b>	< 1	43	33	34
Area C gravel	5037146	14303	0 - 5	8100	<0.8	8	25	<0.8	2600	29	10	<b>100</b>	15000	19	3000	150	< 1.5	<b>120</b>	< 1	23	29	48
		14304	0 - 5	7800	<0.8	8	22	<0.8	2000	28	10	<b>92</b>	15000	19	2300	150	< 1.5	<b>130</b>	< 1	22	28	38
Area D sand	5037147	14305	0 - 15	6500	<0.8	< 5	23	<0.8	3100	29	7	17	14000	2	3700	180	< 1.5	19	< 1	26	28	17
		14306	0 - 15	6300	<0.8	5	22	<0.8	3100	29	8	18	15000	3	3700	180	< 1.5	20	< 1	24	29	17
<b>Alexander Public School - Rainbow District School Board, 39 St. Brendan Street, Sudbury</b>																						
Area A gravel	5037084	14166	0 - 5	7800	<0.8	< 5	34	<0.8	4400	47	<b>31</b>	<b>180</b>	22000	14	5300	240	< 1.5	<b>180</b>	< 1	27	35	73
		14167	0 - 5	8300	<0.8	< 5	40	<0.8	4400	47	<b>27</b>	<b>160</b>	23000	14	5700	240	< 1.5	<b>170</b>	< 1	25	36	61
Area B gravel	5037085	14168	0 - 5	5700	<0.8	< 5	29	<0.8	3200	26	8	<b>77</b>	13000	6	3800	170	< 1.5	<b>80</b>	< 1	28	25	26
		14169	0 - 5	6800	<0.8	< 5	35	<0.8	3800	29	11	<b>120</b>	14000	9	4200	200	< 1.5	<b>120</b>	< 1	28	27	40
Area C sand	5037086	14170	0 - 15	6300	<0.8	< 5	22	<0.8	2900	30	7	31	15000	3	3800	170	< 1.5	39	< 1	25	30	23
		14171	0 - 15	5800	<0.8	< 5	18	<0.8	2300	26	6	24	13000	3	3800	160	< 1.5	29	< 1	20	24	21
<b>Algonquin Road Public School - Rainbow District School Board, 2650 Algonquin Road, Sudbury</b>																						
Area A grass	5037016	14002	0 - 5	8200	<0.8	< 5	31	<0.8	3200	30	8	51	15000	9	3500	170	< 1.5	<b>63</b>	< 1	30	30	31
		14003	0 - 5	8800	<0.8	< 5	34	<0.8	3400	31	9	<b>58</b>	15000	10	3500	180	< 1.5	<b>71</b>	< 1	33	30	32
		14004	5 - 10	9500	<0.8	< 5	37	<0.8	3400	30	8	<b>71</b>	14000	15	2700	160	< 1.5	<b>85</b>	< 1	33	30	39
		14005	5 - 10	9900	<0.8	< 5	40	<0.8	3500	31	8	<b>74</b>	15000	13	2900	160	< 1.5	<b>80</b>	< 1	36	31	40
		14006	10 - 15	11000	<0.8	< 5	40	<0.8	3300	28	6	39	14000	8	2400	150	< 1.5	<b>49</b>	< 1	38	31	24
Area B sand	5037017	14008	0 - 15	6800	<0.8	< 5	22	<0.8	3200	29	7	23	15000	4	3800	170	< 1.5	24	< 1	28	30	16
		14009	0 - 15	6700	<0.8	< 5	21	<0.8	3000	30	7	23	15000	3	4000	180	< 1.5	24	< 1	24	32	16
Area C sand	5037018	14010	0 - 15	6000	<0.8	< 5	20	<0.8	2700	28	7	18	14000	3	3400	160	< 1.5	24	< 1	24	33	14
		14011	0 - 15	7000	<0.8	< 5	24	<0.8	3000	35	7	22	16000	3	3800	180	< 1.5	27	< 1	28	35	17
Area D gravel	5037019	14012	0 - 5	9700	<b>1.1</b>	< 5	48	<0.8	3400	35	9	52	14000	8	4800	160	< 1.5	<b>62</b>	< 1	31	30	23
		14013	0 - 5	10000	<b>1.5</b>	< 5	58	<0.8	4100	41	10	54	15000	7	4800	180	< 1.5	<b>68</b>	< 1	34	33	29

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area E grass	5037020	14018	0 - 5	9500	<0.8	< 5	41	<0.8	6600	33	7	45	14000	9	3800	260	< 1.5	<b>72</b>	< 1	40	30	31
		14019	0 - 5	10000	<0.8	< 5	41	<0.8	6300	35	7	47	14000	9	3800	250	< 1.5	<b>72</b>	< 1	40	31	33
		14020	5 - 10	12000	<0.8	6	50	<0.8	6100	46	8	47	17000	10	4500	310	< 1.5	<b>72</b>	< 1	37	37	37
		14021	5 - 10	12000	<0.8	< 5	45	<0.8	6300	47	8	41	17000	10	4400	290	< 1.5	<b>66</b>	< 1	41	37	32
<b>Baron Academy Nursery (formerly)- Private School, 1534 Pioneer Road, Sudbury</b>																						
Area A gravel	5037006	14024	0 - 5	6300	<0.8	< 5	31	<0.8	8000	25	4	15	11000	4	4300	190	< 1.5	23	< 1	70	25	14
		14025	0 - 5	8000	<0.8	< 5	43	<0.8	10000	31	6	21	14000	6	6100	220	< 1.5	30	< 1	87	29	21
Area B grass	5037007	14026	0 - 5	7400	<0.8	< 5	27	<0.8	4400	25	6	<b>58</b>	11000	12	2700	180	< 1.5	<b>71</b>	< 1	29	25	21
		14027	0 - 5	7600	<0.8	< 5	28	<0.8	4600	24	6	47	11000	10	2800	180	< 1.5	<b>61</b>	< 1	28	24	21
		14028	5 - 10	8600	<0.8	< 5	29	<0.8	3200	27	6	55	12000	8	2300	140	< 1.5	<b>60</b>	< 1	26	26	19
		14029	5 - 10	8900	<0.8	< 5	30	<0.8	2800	24	5	48	11000	7	2000	130	< 1.5	<b>57</b>	< 1	24	25	19
<b>C.R. Judd Public School - Rainbow District School Board, 8 Lincoln Street, Capreol</b>																						
Area A grass	5037354	14571	0 - 5	11000	<0.8	6	33	<0.8	2800	25	4	34	13000	10	1900	150	< 1.5	<b>46</b>	< 1	26	26	28
		14572	0 - 5	11000	<0.8	6	34	<0.8	2900	26	5	30	13000	10	2000	160	< 1.5	41	< 1	28	26	28
Area B grass	5037355	14573	0 - 5	8800	<0.8	6	27	<0.8	2500	31	4	30	11000	32	1900	140	< 1.5	36	< 1	22	24	26
		14574	0 - 5	8600	<0.8	6	27	<0.8	2400	36	4	31	11000	49	2000	130	< 1.5	37	< 1	20	23	27
		14575	5 - 10	7600	<0.8	6	27	<0.8	2200	24	4	19	11000	9	2000	150	< 1.5	30	< 1	16	22	22
		14576	5 - 10	7000	<0.8	5	25	<0.8	2000	24	4	16	10000	5	1900	140	< 1.5	26	< 1	14	21	19
		14577	10 - 20	7300	<0.8	< 5	25	<0.8	2700	24	4	13	11000	4	2200	180	< 1.5	21	< 1	22	24	17
14578	10 - 20	8400	<0.8	< 5	30	<0.8	3300	26	4	17	12000	5	2100	200	< 1.5	29	< 1	31	26	22		
Area C sand	5037356	14579	0 - 15	5600	<0.8	< 5	23	<0.8	2800	25	6	12	12000	2	3100	150	< 1.5	18	< 1	22	25	16
<b>Carl A. Nesbitt Public School - Rainbow District School Board, 1241 Roy Street, Sudbury</b>																						
Area A grass	5037184	14346	0 - 5	11000	<0.8	6	48	<0.8	10000	32	9	<b>110</b>	14000	18	3500	280	< 1.5	<b>120</b>	< 1	46	30	35
		14347	0 - 5	12000	<0.8	5	44	<0.8	7400	32	7	<b>100</b>	14000	12	3100	230	< 1.5	<b>77</b>	< 1	44	31	28
Area B soil	5037185	14348	0 - 5	14000	<0.8	6	44	<0.8	6800	35	7	50	17000	11	4800	210	< 1.5	<b>75</b>	< 1	47	34	27
Area C soil	5037186	14349	0 - 5	11000	<0.8	5	37	<0.8	7300	34	7	56	14000	11	4000	230	< 1.5	<b>74</b>	< 1	45	32	27
Area D sand	5037187	14350	0 - 15	5600	<0.8	< 5	23	<0.8	2100	26	6	14	14000	2	3200	160	< 1.5	22	< 1	20	33	16
		14351	0 - 15	5700	<0.8	< 5	24	<0.8	2300	27	6	15	14000	2	3000	160	< 1.5	22	< 1	19	33	17

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area E sand	5037188	14352	0 - 15	4900	<0.8	< 5	19	<0.8	2900	22	5	12	12000	2	2900	140	< 1.5	17	< 1	17	27	16
		14353	0 - 15	5000	<0.8	< 5	20	<0.8	3100	25	6	15	14000	3	3100	160	< 1.5	19	< 1	17	31	20
Area F grass	5037189	14357	0 - 5	9200	<0.8	< 5	41	<0.8	4300	36	8	<b>87</b>	13000	16	2400	180	< 1.5	<b>99</b>	< 1	33	30	34
		14358	0 - 5	11000	<0.8	< 5	44	<0.8	4900	35	8	<b>73</b>	14000	13	2600	180	< 1.5	<b>77</b>	< 1	40	33	31
		14359	5 - 10	12000	<0.8	6	38	<0.8	3700	34	7	<b>60</b>	17000	10	2500	180	< 1.5	<b>70</b>	< 1	33	31	27
		14360	5 - 10	9300	<0.8	< 5	34	<0.8	2600	30	7	47	13000	7	2400	140	< 1.5	<b>55</b>	< 1	23	31	24
		14361	10 - 20	9300	<0.8	8	40	<0.8	2600	33	8	<b>73</b>	13000	11	2200	180	< 1.5	<b>100</b>	< 1	25	29	27
14362	10 - 20	9200	<0.8	7	42	<0.8	3700	34	8	<b>57</b>	12000	9	2500	180	< 1.5	<b>94</b>	< 1	28	30	24		
Area G soil	5037190	14355	0 - 5	9200	<0.8	6	41	<0.8	4400	32	6	53	13000	8	2800	150	< 1.5	<b>60</b>	< 1	32	32	47
Area H soil	5037191	14354	0 - 5	10000	<0.8	< 5	46	<0.8	5500	32	7	51	15000	10	3000	190	< 1.5	<b>73</b>	< 1	38	31	41
Area I sand	5037192	14356	0 - 15	4200	<0.8	< 5	18	<0.8	2300	21	5	11	11000	2	2700	140	< 1.5	14	< 1	16	26	13
Chelmsford Public School - Rainbow District School Board, 121 Charlotte Street, Chelmsford																						
Area A grass	5037388	14526	0 - 5	12000	<0.8	6	43	<0.8	7100	35	6	32	15000	11	3600	300	< 1.5	<b>47</b>	< 1	45	33	30
		14527	0 - 5	11000	<0.8	< 5	43	<0.8	6600	33	6	28	14000	10	3600	260	< 1.5	<b>49</b>	< 1	43	32	29
		14528	5 - 10	12000	<0.8	< 5	44	<0.8	6300	36	6	22	16000	10	3600	240	< 1.5	42	< 1	47	35	25
		14529	5 - 10	12000	<0.8	< 5	43	<0.8	6400	35	6	28	15000	11	3600	250	< 1.5	<b>47</b>	< 1	44	33	26
		14530	10 - 20	11000	<0.8	< 5	37	<0.8	4500	28	5	20	13000	9	2500	180	< 1.5	38	< 1	44	31	21
14531	10 - 20	11000	<0.8	< 5	40	<0.8	5100	30	6	22	14000	9	3100	200	< 1.5	42	< 1	43	32	23		
Area B sand	5037389	14523	0 - 15	5100	<0.8	< 5	18	<0.8	2900	26	6	15	15000	4	3900	180	< 1.5	16	< 1	18	31	21
Area C sand	5037390	14524	0 - 15	4700	<0.8	< 5	18	<0.8	3100	27	7	15	15000	4	3400	170	< 1.5	20	< 1	18	32	23
Area D sand	5037391	14525	0 - 15	5500	<0.8	< 5	16	<0.8	3200	25	6	17	16000	4	3900	180	< 1.5	16	< 1	20	33	20

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Chelmsford Valley District School - Rainbow District School Board, 3594 Highway 144, Chelmsford</b>																						
Area A grass	5037375	14503	0 - 5	9700	<0.8	< 5	36	<0.8	4700	34	5	23	12000	46	2300	210	< 1.5	36	< 1	40	28	21
		14504	0 - 5	10000	<0.8	6	35	<0.8	4000	36	5	19	13000	55	2300	170	< 1.5	32	< 1	36	28	21
		14505	5 - 10	11000	<0.8	< 5	37	<0.8	5300	30	5	16	13000	8	2400	190	< 1.5	30	< 1	39	30	20
		14506	5 - 10	11000	<0.8	5	39	<0.8	4400	33	7	23	15000	15	2800	190	< 1.5	38	< 1	39	31	25
		14507	10 - 20	9900	<0.8	< 5	36	<0.8	4300	30	6	27	14000	17	2500	190	< 1.5	43	< 1	34	29	23
Area B grass	5037376	14508	0 - 5	8300	<0.8	6	32	<0.8	5500	24	5	38	10000	14	2400	160	< 1.5	<b>54</b>	< 1	39	26	22
		14509	0 - 5	7800	<0.8	< 5	30	<0.8	5300	22	5	37	10000	14	2600	160	< 1.5	<b>55</b>	< 1	30	24	21
		14510	5 - 10	8800	<0.8	< 5	33	<0.8	4500	25	5	18	11000	7	2400	170	< 1.5	33	< 1	38	27	18
		14511	5 - 10	9000	<0.8	5	34	<0.8	5800	26	5	22	12000	9	2500	180	< 1.5	39	< 1	40	27	19
		14512	10 - 20	9000	<0.8	< 5	35	<0.8	5400	27	4	17	11000	7	2400	170	< 1.5	35	< 1	47	26	18
Area C soil	5037377	14513	0 - 5	9200	<0.8	< 5	37	<0.8	11000	29	6	17	14000	6	5600	230	< 1.5	27	< 1	56	28	22
<b>Churchill Public School - Rainbow District School Board, 1722 Fielding Street, Sudbury</b>																						
Area A grass	5037166	14448	0 - 5	8900	<0.8	6	39	<0.8	7200	30	8	<b>100</b>	13000	18	3200	220	< 1.5	<b>120</b>	1	34	27	28
		14449	0 - 5	9600	<0.8	< 5	44	0.8	7300	36	9	<b>130</b>	14000	28	3400	290	< 1.5	<b>140</b>	1	42	29	32
Area B soil	5037167	14450	0 - 5	7900	<0.8	< 5	40	<0.8	3000	41	13	<b>100</b>	18000	14	4700	260	< 1.5	<b>120</b>	< 1	26	31	42
Area C soil	5037168	14451	0 - 5	5900	<0.8	< 5	26	<0.8	13000	25	8	52	13000	7	8300	180	< 1.5	<b>59</b>	< 1	32	26	23
Area D sand	5037169	14452	0 - 15	4500	<0.8	< 5	18	<0.8	2000	22	5	12	11000	2	2600	140	< 1.5	18	< 1	18	23	14
Area E grass	5037170	14453	0 - 5	8200	<0.8	8	40	<0.8	3300	38	<b>42</b>	<b>300</b>	24000	34	4300	270	< 1.5	<b>420</b>	1	28	32	69
		14454	0 - 5	8200	<0.8	6	44	<0.8	3400	34	<b>34</b>	<b>220</b>	22000	21	4200	220	< 1.5	<b>320</b>	1	28	33	54
Area F soil	5037171	14455	0 - 5	8500	<0.8	7	40	<0.8	2900	34	14	<b>110</b>	18000	17	4400	220	< 1.5	<b>120</b>	1	28	32	75
<b>College Notre Dame - Le Conseil Scolaire Catholique du Nouvel - Ontario, 100 Rue Levis, Sudbury</b>																						
Area A grass	5037135	14244	0 - 5	9600	<0.8	6	36	<0.8	3300	25	5	27	11000	8	2100	150	< 1.5	38	< 1	32	28	20
		14245	0 - 5	10000	<0.8	5	33	<0.8	3800	25	4	26	12000	8	2100	150	< 1.5	39	< 1	37	29	21

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Confederation Secondary School - Rainbow District School Board, 1918 Main Street West, Val Caron</b>																						
Area A grass	5037294	14797	0 - 5	8100	<0.8	< 5	35	<0.8	15000	57	5	40	9400	<b>170</b>	2900	130	< 1.5	<b>54</b>	< 1	37	22	23
		14798	0 - 5	7400	<0.8	< 5	38	<0.8	33000	36	5	52	8600	<b>77</b>	4500	150	< 1.5	<b>74</b>	< 1	46	20	26
Area B soil	5037295	14799	0 - 5	9400	<0.8	< 5	27	<0.8	4200	26	3	26	9900	21	1600	130	< 1.5	38	< 1	34	26	17
<b>Copper Cliff Public School - Rainbow District School Board, 50 School Street, Copper Cliff</b>																						
Area A grass	5037254	14670	0 - 5	9100	<0.8	<u><b>32</b></u>	82	<b>3.1</b>	27000	48	<u><b>80</b></u>	<u><b>2900</b></u>	30000	<b>100</b>	4400	250	1.6	<u><b>2500</b></u>	<u><b>12</b></u>	40	28	110
		14671	0 - 5	11000	<0.8	<u><b>37</b></u>	76	<b>2.6</b>	21000	54	<u><b>80</b></u>	<u><b>2500</b></u>	34000	<b>90</b>	4700	230	< 1.5	<u><b>2500</b></u>	<b>8</b>	39	33	110
		14672	5 - 10	14000	<b>1.5</b>	<u><b>65</b></u>	83	<b>1.1</b>	17000	39	<u><b>38</b></u>	<u><b>1100</b></u>	20000	34	3400	210	< 1.5	<u><b>1600</b></u>	<b>4</b>	41	31	51
		14673	5 - 10	15000	<b>1.6</b>	<u><b>77</b></u>	97	<b>1.4</b>	17000	45	<u><b>46</b></u>	<u><b>1300</b></u>	24000	41	3700	270	< 1.5	<u><b>1900</b></u>	<b>6</b>	44	34	68
		14674	10 - 20	11000	1	<u><b>35</b></u>	63	<0.8	4300	28	11	<b>190</b>	14000	7	2400	150	< 1.5	<u><b>260</b></u>	1	29	28	30
		14675	10 - 20	9800	<b>1.1</b>	<u><b>44</b></u>	58	<0.8	4800	27	14	<u><b>260</b></u>	13000	11	2500	170	< 1.5	<u><b>370</b></u>	1	29	27	27
Area B sand	5037255	14676	0 - 15	8200	<0.8	< 5	28	<0.8	3900	35	9	47	18000	4	4600	220	< 1.5	43	< 1	29	37	24
		14677	0 - 15	7700	<0.8	< 5	26	<0.8	3400	35	9	36	18000	4	4700	220	< 1.5	34	< 1	24	36	23
	5037256	14678	0 - 15	7500	<0.8	< 5	26	<0.8	3200	33	8	43	17000	4	4500	210	< 1.5	38	< 1	23	33	22
		14679	0 - 15	7300	<0.8	< 5	22	<0.8	3100	32	8	27	17000	3	4700	210	< 1.5	28	< 1	21	32	21
	5037257	14680	0 - 15	7100	<0.8	< 5	25	<0.8	3200	34	8	39	17000	4	4500	210	< 1.5	34	< 1	21	36	23
Area C sand	5037258	14682	0 - 15	7800	<0.8	< 5	27	<0.8	3700	35	8	34	18000	4	4600	220	< 1.5	27	< 1	26	36	21
		14683	0 - 15	8200	<0.8	< 5	27	<0.8	3800	32	9	29	17000	4	4600	220	< 1.5	30	< 1	29	33	21
	5037259	14684	0 - 15	8000	<0.8	< 5	26	<0.8	3600	34	9	32	17000	3	4700	220	< 1.5	29	< 1	27	34	21
		14685	0 - 15	8100	<0.8	< 5	27	<0.8	3700	34	9	34	18000	3	4600	210	< 1.5	33	< 1	28	34	21
Area D grass	5037260	14686	0 - 5	10000	<0.8	<u><b>24</b></u>	37	<b>3.1</b>	11000	24	<u><b>54</b></u>	<u><b>2000</b></u>	26000	<b>96</b>	5500	130	< 1.5	<u><b>1700</b></u>	<b>7</b>	27	16	49
		14687	0 - 5	11000	<0.8	<u><b>28</b></u>	32	<b>2.6</b>	12000	20	<u><b>45</b></u>	<u><b>1600</b></u>	23000	51	4100	98	< 1.5	<u><b>1500</b></u>	<b>5</b>	20	16	39
		14688	5 - 10	14000	<b>1.4</b>	<u><b>66</b></u>	81	<b>1.6</b>	8800	33	<u><b>39</b></u>	<u><b>980</b></u>	19000	33	3300	200	< 1.5	<u><b>1100</b></u>	<b>7</b>	43	34	57
		14689	5 - 10	13000	<b>1.8</b>	<u><b>94</b></u>	76	<b>2.4</b>	9100	38	<u><b>42</b></u>	<u><b>940</b></u>	19000	55	3300	190	< 1.5	<u><b>1100</b></u>	<b>9</b>	42	33	67
		14690	10 - 20	9100	<0.8	<u><b>36</b></u>	36	<0.8	3300	23	15	<b>190</b>	12000	11	2100	130	< 1.5	<u><b>250</b></u>	<b>3</b>	27	26	26
		14691	10 - 20	10000	0.9	<u><b>52</b></u>	42	<b>1.1</b>	6800	15	23	<u><b>540</b></u>	16000	19	2700	170	< 1.5	<u><b>710</b></u>	<b>4</b>	33	22	19
Area E grass	5037261	14692	0 - 5	7400	<0.8	6	85	<0.8	7000	30	11	<u><b>250</b></u>	13000	11	5000	170	< 1.5	<u><b>250</b></u>	1	57	27	26
		14693	0 - 5	8500	<0.8	6	110	<0.8	7000	32	11	<u><b>270</b></u>	13000	12	4800	190	< 1.5	<u><b>260</b></u>	1	60	29	27

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Corpus Christi - Sudbury Catholic District School Board, 811 Robinson Drive, Sudbury</b>																						
Area A gravel	5037039	14086	0 - 5	11000	<0.8	< 5	40	<0.8	13000	34	7	50	15000	10	6100	250	< 1.5	<b>74</b>	< 1	45	31	34
		14087	0 - 5	12000	<0.8	< 5	42	<0.8	13000	35	7	48	15000	11	6100	260	< 1.5	<b>71</b>	< 1	48	32	37
Area B gravel	5037040	14088	0 - 5	12000	<0.8	< 5	43	<0.8	14000	36	7	49	16000	11	6500	270	< 1.5	<b>71</b>	< 1	47	34	40
		14089	0 - 5	11000	<0.8	< 5	41	<0.8	13000	35	7	46	15000	10	6200	260	< 1.5	<b>67</b>	< 1	44	31	32
<b>Cyril Varney Public School - Rainbow District School Board, 1545 Gary Street, Sudbury</b>																						
Area A grass	5037220	14367	0 - 5	7700	<0.8	7	41	<0.8	4400	28	6	46	11000	11	2700	220	< 1.5	<b>66</b>	< 1	30	26	27
		14368	0 - 5	8800	<0.8	7	37	<0.8	4100	29	6	38	13000	10	2800	220	< 1.5	<b>60</b>	< 1	23	26	24
		14369	5 - 10	5800	<0.8	< 5	23	<0.8	2400	22	5	22	9800	5	2300	140	< 1.5	35	< 1	18	21	15
		14370	5 - 10	11000	<0.8	7	39	<0.8	5800	34	7	25	15000	9	3400	230	< 1.5	<b>45</b>	< 1	38	32	22
		14380	10 - 20	5600	<0.8	< 5	21	<0.8	2400	28	11	<b>92</b>	14000	12	3800	170	< 1.5	<b>87</b>	< 1	17	27	28
Area B soil	5037221	14371	0 - 5	5700	<0.8	< 5	23	<0.8	3200	28	8	26	14000	4	3500	170	< 1.5	28	< 1	22	31	20
Area C soil	5037222	14372	0 - 5	7900	<0.8	6	39	<0.8	4100	29	7	<b>77</b>	12000	25	2600	160	< 1.5	<b>78</b>	< 1	22	25	24
Area D soil	5037223	14373	0 - 5	8000	<0.8	5	43	1	6600	35	11	<b>160</b>	13000	54	3000	210	< 1.5	<b>160</b>	<b>2</b>	28	24	36
		14374	0 - 5	8800	<0.8	< 5	32	<0.8	4700	33	6	51	13000	29	2700	190	< 1.5	<b>67</b>	< 1	26	27	23
Area E sand	5037224	14375	0 - 15	8600	<0.8	< 5	17	<0.8	5600	22	7	35	13000	<b>82</b>	2700	190	< 1.5	<b>80</b>	< 1	26	13	13
		14376	0 - 15	8300	<0.8	< 5	15	<0.8	4400	11	4	9	9100	9	2600	70	< 1.5	27	< 1	21	11	9
Area F grass	5037225	14377	0 - 5	8400	<0.8	< 5	32	<0.8	4200	24	4	26	10000	12	2400	150	< 1.5	35	< 1	33	24	18
		14378	0 - 5	8500	<0.8	5	31	<0.8	3700	27	6	39	13000	12	2400	180	< 1.5	<b>53</b>	< 1	23	26	21
Area G sand	5037226	14379	0 - 15	7000	<0.8	5	30	<0.8	2600	21	6	39	11000	6	1900	140	< 1.5	<b>51</b>	< 1	18	23	18
<b>E.P. Pavillon-de-l'avenir, Consiel Scolarie du District de Grand Nord de L'Ontairo, 370 Cote Avenue, Chelmsford</b>																						
This school is located in the same building as Chelmsford V.D.C.S, Rainbow District School Board. See that Chelmsford Valley District School above for the results.																						
<b>E.S.C. l'Heritage, 323 2<sup>nd</sup> Avenue - Le Conseil Scolaire Catholique du Novel - Ontario, Sudbury</b>																						
Area A grass	5037141	14307	0 - 5	11000	<0.8	5	47	<0.8	5900	42	9	<b>100</b>	15000	42	3200	220	< 1.5	<b>120</b>	< 1	40	31	34
		14308	0 - 5	12000	<0.8	7	50	<0.8	6300	43	9	<b>76</b>	16000	24	3600	250	< 1.5	<b>100</b>	< 1	43	34	33
Area B soil	5037142	14309	0 - 5	11000	<0.8	5	45	<0.8	7300	33	6	39	14000	10	3700	230	< 1.5	<b>52</b>	< 1	46	31	25
Area C soil	5037143	14310	0 - 5	12000	<0.8	6	44	<0.8	5800	34	6	29	14000	9	3000	210	< 1.5	43	< 1	38	30	29

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>E.S.C. Champlain - Le Conseil Scolaire Catholique du Nouvel - Ontario, 61 Brookside Drive, Chelmsford</b>																						
Area A grass	5037382	14536	0 - 5	9600	<0.8	< 5	29	<0.8	4000	25	5	32	12000	9	2200	160	< 1.5	41	< 1	37	27	21
		14537	0 - 5	9200	<0.8	< 5	30	<0.8	3700	24	5	33	11000	10	2200	160	< 1.5	<b>44</b>	< 1	33	26	22
Area B soil	5037383	14538	0 - 5	8700	<0.8	< 5	46	<0.8	14000	29	7	24	15000	6	8200	230	< 1.5	32	< 1	76	30	25
Area C sand	5037384	14539	0 - 15	7100	<0.8	< 5	22	<0.8	4100	30	7	27	18000	8	4500	220	< 1.5	20	< 1	28	40	26
<b>E.S.C. l'Horizon- Le Conseil Scolaire Catholique du Nouvel - Ontario, 1650 Valleyview Drive, Val Caron</b>																						
Area A grass	5037279	14818	0 - 5	12000	<0.8	< 5	47	<0.8	7600	33	6	35	14000	9	3200	250	< 1.5	<b>52</b>	< 1	46	32	30
		14819	0 - 5	12000	<0.8	< 5	47	<0.8	7500	33	6	35	15000	9	3200	270	< 1.5	<b>53</b>	< 1	46	32	31
		14820	5 - 10	12000	<0.8	< 5	48	<0.8	8500	33	6	33	14000	9	3300	260	< 1.5	<b>51</b>	< 1	48	32	30
		14821	5 - 10	12000	<0.8	< 5	49	<0.8	8400	33	6	34	14000	9	3300	280	< 1.5	<b>51</b>	< 1	45	32	32
		14822	10 - 20	12000	<0.8	< 5	50	<0.8	8300	34	6	33	14000	9	3200	280	< 1.5	<b>52</b>	< 1	49	32	36
		14823	10 - 20	12000	<0.8	< 5	47	<0.8	7900	33	6	31	15000	8	3400	270	< 1.5	<b>46</b>	< 1	47	33	32
Area B soil	5037280	14824	0 - 5	5400	<0.8	< 5	29	<0.8	11000	19	5	20	11000	3	4500	220	< 1.5	30	< 1	33	23	16
		14825	0 - 5	5100	<0.8	< 5	27	<0.8	11000	20	5	17	11000	2	4500	170	< 1.5	19	< 1	31	22	13
<b>Ecole Leon XIII - Le Conseil Scolaire Catholique du Nouvel - Ontario, 1311 Rue Gemmell, Sudbury</b>																						
Area A gravel	5037181	14456	0 - 5	8000	<0.8	< 5	36	<0.8	2600	34	14	<b>120</b>	19000	18	4300	190	< 1.5	<b>130</b>	1	26	31	33
		14457	0 - 5	7100	<0.8	< 5	30	<0.8	2400	32	13	<b>110</b>	17000	16	3900	180	< 1.5	<b>120</b>	< 1	22	29	30
Area B sand	5037182	14458	0 - 15	3900	<0.8	< 5	20	<0.8	3200	22	5	16	11000	3	2600	130	< 1.5	20	< 1	17	23	21
Area C sand	5037183	14459	0 - 15	3700	<0.8	< 5	15	<0.8	1500	19	4	11	9200	2	2100	110	< 1.5	13	< 1	15	18	11
<b>Ecole St. Pierre (formerly) - Le Conseil Scolaire Catholique du Nouvel - Ontario, 102 Rue Hill, Wahnapiatae</b>																						
Area A gravel	5037267	14748	0 - 5	11000	<0.8	6	48	<0.8	4100	40	11	<b>73</b>	19000	13	4800	230	< 1.5	<b>73</b>	< 1	35	36	33
		14749	0 - 5	8200	<0.8	5	33	<0.8	3600	36	10	<b>58</b>	18000	10	4500	210	< 1.5	<b>60</b>	< 1	27	34	29
<b>Ecole St. Remi (formerly) - Le Conseil Scolaire Catholique du Nouvel - Ontario, 95 Rue Estelle, Sudbury</b>																						
Area A gravel	5037149	14295	0 - 5	10000	<0.8	7	41	<0.8	3800	36	13	<b>72</b>	19000	12	5100	280	< 1.5	<b>79</b>	< 1	31	35	31
		14296	0 - 5	9900	<0.8	6	40	<0.8	3700	41	16	<b>98</b>	21000	14	5900	290	< 1.5	<b>100</b>	< 1	29	38	37

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			



**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Ecole Ste. Agnes (Association for Community Living) - Le Conseil Scolaire Catholique du Nouvel - Ontario, 80 Rue Landry, Azilda</b>																						
Area A grass	5037371	14496	0 - 5	9700	<0.8	8	40	<0.8	4000	36	9	<b>110</b>	16000	21	3500	260	< 1.5	<b>130</b>	< 1	34	32	42
		14497	0 - 5	10000	<0.8	8	43	<0.8	4500	38	11	<b>120</b>	16000	23	3700	290	< 1.5	<b>150</b>	< 1	38	33	47
		14498	5 - 10	11000	<0.8	7	43	<0.8	4300	38	9	<b>64</b>	16000	14	3800	280	< 1.5	<b>100</b>	< 1	36	32	41
		14499	5 - 10	8900	<0.8	5	32	<0.8	3700	33	6	39	14000	7	3200	230	< 1.5	<b>70</b>	< 1	32	30	31
Area B gravel	5037372	14485	0 - 5	8200	<0.8	5	27	<0.8	2700	39	11	<b>81</b>	20000	20	5700	230	< 1.5	<b>89</b>	1	18	38	37
		14486	0 - 5	8000	<0.8	5	24	<0.8	3500	33	10	<b>77</b>	20000	20	5300	230	< 1.5	<b>85</b>	1	26	39	33
<b>Ernie Checkeris Public School - Rainbow District School Board, 1570 Agincourt Avenue, Sudbury</b>																						
Area A grass	5037208	14762	0 - 5	9500	<0.8	5	43	<0.8	4800	29	8	<b>120</b>	12000	31	2600	160	< 1.5	<b>160</b>	< 1	35	28	33
		14763	0 - 5	9900	<0.8	6	43	<0.8	6500	29	7	<b>130</b>	12000	27	3700	160	< 1.5	<b>150</b>	< 1	42	29	37
		14764	5 - 10	11000	<0.8	< 5	36	<0.8	2900	26	5	56	13000	7	2300	140	< 1.5	<b>70</b>	< 1	29	30	34
		14765	5 - 10	8600	<0.8	< 5	33	<0.8	2800	20	5	<b>67</b>	10000	7	1800	110	< 1.5	<b>96</b>	< 1	28	25	23
		14766	10 - 20	8600	<0.8	< 5	33	<0.8	2900	21	4	34	10000	5	2000	120	< 1.5	<b>66</b>	< 1	29	26	19
		14767	10 - 20	9500	<0.8	5	37	<0.8	2800	23	5	50	11000	7	2000	120	< 1.5	<b>67</b>	< 1	29	28	21
Area B gravel	5037209	14768	0 - 5	9200	<0.8	5	38	<0.8	2900	22	5	<b>61</b>	12000	8	2100	120	< 1.5	<b>93</b>	< 1	26	29	35
Area C sand	5037210	14769	0 - 15	5200	<0.8	< 5	22	<0.8	2900	25	6	21	11000	3	3200	170	< 1.5	27	< 1	18	34	21
		14770	0 - 15	4800	<0.8	< 5	21	<0.8	2200	24	6	19	12000	3	3200	160	< 1.5	24	< 1	15	28	21
Area D sand	5037211	14771	0 - 15	5600	<0.8	< 5	25	<0.8	2700	26	6	24	14000	3	3400	180	< 1.5	30	< 1	19	34	20
<b>Falconbridge Public School - Rainbow District School Board, 72 Edison Street, Falconbridge</b>																						
Area A grass	5037357	14755	0 - 5	9800	<0.8	< 5	46	<0.8	6300	35	11	<b>58</b>	13000	21	3400	220	1.5	<b>110</b>	< 1	42	30	36
		14756	0 - 5	8700	<0.8	< 5	43	1	7000	31	12	<b>66</b>	12000	20	3400	210	1.8	<b>120</b>	< 1	38	26	35
Area B soil	5037358	14757	0 - 5	6100	<0.8	< 5	26	<0.8	2500	31	13	46	16000	11	4200	190	< 1.5	<b>61</b>	< 1	19	32	27
Area C sand	5037359	14758	0 - 15	4100	<0.8	< 5	18	<0.8	2400	22	6	17	12000	2	2900	140	< 1.5	37	< 1	13	28	14
		14759	0 - 15	4800	<0.8	< 5	21	<0.8	2700	25	6	21	13000	3	2900	150	< 1.5	34	< 1	19	30	15
<b>Felix Richard - Le Conseil Scolaire Catholique du Nouvel - Ontario, 691 Lasalle Boulevard, Sudbury</b>																						
Area A grass	5037194	14462	0 - 5	8700	<0.8	< 5	34	<0.8	4400	26	6	<b>86</b>	12000	14	2600	150	< 1.5	<b>91</b>	< 1	32	25	27
		14463	0 - 5	8900	<0.8	< 5	27	<0.8	3200	25	5	50	11000	9	1900	130	< 1.5	<b>58</b>	< 1	32	26	22
Area B soil	5037195	14464	0 - 5	7100	<0.8	< 5	35	<0.8	9600	29	8	34	14000	5	4700	180	< 1.5	39	< 1	41	29	29
		14465	0 - 5	7200	<0.8	< 5	35	<0.8	7600	28	8	31	14000	4	4300	180	< 1.5	34	< 1	39	28	23

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area C soil	5037196	14466	0 - 5	8400	<0.8	7	43	<0.8	7100	33	9	33	16000	4	4100	210	< 1.5	34	< 1	41	33	23
		14467	0 - 5	7800	<0.8	< 5	42	<0.8	6200	32	9	32	16000	4	4300	210	< 1.5	32	< 1	36	32	24
Area D sand	5037197	14468	0 - 15	4500	<0.8	< 5	19	<0.8	2900	25	6	17	12000	2	2900	140	< 1.5	30	< 1	18	29	27
Area E sand	5037198	14469	0 - 15	5000	<0.8	< 5	20	<0.8	2700	26	7	24	13000	3	2900	160	< 1.5	31	< 1	19	27	19
Area F sand	5037199	14470	0 - 15	6500	<0.8	< 5	19	<0.8	2600	25	7	24	13000	3	2900	150	< 1.5	28	< 1	17	28	17
Area G grass	5037200	14471	0 - 5	9200	<0.8	< 5	29	<0.8	3300	27	6	43	13000	9	2000	160	< 1.5	<b>52</b>	< 1	32	27	34
		14472	0 - 5	8900	<0.8	6	27	<0.8	3000	27	6	51	13000	9	2100	150	< 1.5	<b>56</b>	< 1	29	26	37
<b>E.P. Foyer Jeunesse at E.S. Hanmer - Conseil Scolaire du District de Grand Nord de L'Ontario, 4752 Rue Notre Dame, Hanmer</b>																						
Area A sand	5037343	14602	0 - 15	4500	<0.8	< 5	16	<0.8	1800	24	6	13	12000	2	3100	160	< 1.5	21	< 1	<10	26	17
		14603	0 - 15	5100	<0.8	< 5	18	<0.8	2200	28	6	16	13000	3	3200	160	< 1.5	25	< 1	14	33	19
Area B gravel	5037344	14604	0 - 5	11000	<0.8	< 5	40	<0.8	3600	43	10	55	21000	9	5900	280	< 1.5	40	< 1	27	42	40
		14605	0 - 5	11000	<0.8	< 5	40	<0.8	3800	43	10	49	21000	10	5700	270	< 1.5	38	< 1	30	42	37
Area C grass	5037345	14596	0 - 5	9600	<0.8	7	32	<0.8	3000	25	4	27	11000	10	2400	130	< 1.5	39	< 1	16	22	24
		14597	0 - 5	11000	<0.8	6	36	<0.8	3000	26	5	35	12000	12	2300	150	< 1.5	42	< 1	22	25	27
		14598	5 - 10	10000	<0.8	6	31	<0.8	1800	25	4	19	11000	9	1800	130	< 1.5	29	< 1	17	24	21
		14599	5 - 10	9900	<0.8	< 5	30	<0.8	1600	24	4	16	11000	7	1700	110	< 1.5	28	< 1	14	22	18
		14600	10 - 20	9200	<0.8	< 5	28	<0.8	1400	23	4	13	10000	6	1800	100	< 1.5	23	< 1	12	21	17
14601	10 - 20	9500	<0.8	< 5	27	<0.8	1600	24	4	12	11000	5	1800	110	< 1.5	23	< 1	15	23	19		
Area D sand	5037346	14606	0 - 15	5400	<0.8	< 5	22	<0.8	2100	24	6	16	13000	2	3100	170	< 1.5	39	< 1	16	30	16
<b>E.P. Franco Nord - Conseil Scolaire du District de Grand de L'ONTARIO, 178 Avenue Junction, Sudbury</b>																						
Area A grass	5037361	14479	0 - 5	8800	<0.8	< 5	29	<0.8	3400	26	5	22	11000	7	2200	160	< 1.5	38	< 1	32	27	18
		14480	0 - 5	8500	<0.8	6	27	<0.8	3500	24	4	18	10000	6	2100	150	< 1.5	32	< 1	32	25	16
Area B sand	5037362	14481	0 - 15	6500	<0.8	< 5	22	<0.8	4300	25	7	22	18000	7	4300	210	< 1.5	19	< 1	30	39	27
Area C sand	5037363	14482	0 - 15	4500	<0.8	< 5	16	<0.8	5300	23	5	16	12000	4	3500	160	< 1.5	19	< 1	21	28	21
Area D gravel	5037364	14483	0 - 5	8100	<0.8	5	32	<0.8	3500	33	11	<b>87</b>	19000	12	5700	260	< 1.5	<b>85</b>	< 1	23	37	39
		14484	0 - 5	6700	<0.8	6	25	<0.8	3000	32	10	<b>76</b>	17000	11	4900	230	< 1.5	<b>73</b>	< 1	18	35	38

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600

< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Gatchell School - Rainbow District School Board, 31 Tuddenham Avenue, Sudbury</b>																						
Area A sand	5037098	14208	0 - 15	7300	<0.8	< 5	33	<0.8	4300	32	9	<b>85</b>	19000	7	5300	240	< 1.5	<b>59</b>	< 1	29	39	32
Area B sand	5037099	14209	0 - 15	5200	<0.8	< 5	24	<0.8	3400	22	6	26	12000	3	2800	150	< 1.5	31	< 1	23	28	14
Area C grass	5037100	14210	0 - 5	7200	<0.8	< 5	32	<0.8	4200	26	5	43	9800	7	2300	150	< 1.5	<b>51</b>	< 1	34	26	19
		14211	0 - 5	6200	<0.8	< 5	24	<0.8	3000	32	7	27	15000	3	4000	180	< 1.5	29	< 1	23	31	21
Area D grass	5037101	14212	0 - 5	8000	<0.8	< 5	31	<0.8	3900	26	5	38	11000	7	2200	150	< 1.5	<b>47</b>	< 1	34	25	18
		14213	0 - 5	7700	<0.8	< 5	31	<0.8	3200	25	5	43	10000	6	2000	140	< 1.5	<b>54</b>	< 1	26	24	18
Area E grass	5037102	14214	0 - 5	8100	<0.8	8	45	<0.8	3700	51	<b>20</b>	<b>530</b>	20000	<b>71</b>	3600	180	< 1.5	<b>360</b>	<b>3.1</b>	32	32	96
		14215	0 - 5	8000	<0.8	7	41	<0.8	3000	49	<b>21</b>	<b>480</b>	21000	<b>75</b>	3000	190	< 1.5	<b>380</b>	<b>2.8</b>	33	33	99
<b>George Vanier Public School - Rainbow District School Board, 249 6<sup>th</sup> Avenue, Lively</b>																						
Area A grass	5037248	14726	0 - 5	6600	<0.8	< 5	45	0.9	2800	29	17	<b>190</b>	15000	<b>65</b>	3000	140	< 1.5	<b>320</b>	<b>2</b>	16	24	39
		14727	0 - 5	8600	<0.8	7	70	<b>1.6</b>	4900	39	<b>27</b>	<b>370</b>	20000	<b>110</b>	3600	190	< 1.5	<b>630</b>	<b>4</b>	28	31	56
Area B gravel	5037249	14728	0 - 5	5400	<0.8	< 5	17	<0.8	3500	26	8	<b>60</b>	11000	6	3000	160	< 1.5	<b>120</b>	< 1	28	28	30
Area C sand	5037250	14729	0 - 15	6100	<0.8	< 5	23	<0.8	2800	29	7	19	14000	3	3700	170	< 1.5	26	< 1	23	28	19
Area D sand	5037251	14730	0 - 15	5000	<0.8	< 5	20	<0.8	1800	25	7	17	13000	2	3400	170	< 1.5	27	< 1	14	28	17
Area E gravel	5037252	14731	0 - 5	6400	<0.8	< 5	34	<0.8	7700	25	6	35	11000	7	4200	180	< 1.5	<b>57</b>	< 1	67	25	21
Area F grass	5037253	14732	0 - 5	5400	<0.8	< 5	24	<0.8	3200	21	6	43	8500	8	2500	140	< 1.5	<b>68</b>	< 1	26	20	21
		14733	0 - 5	6700	<0.8	< 5	32	<0.8	3500	24	7	<b>67</b>	11000	13	2600	150	< 1.5	<b>110</b>	< 1	32	23	26
<b>E.S. Hanmer - Conseil Scolaire du District de Grand Nord de L'Ontario, 4800 Rue Notre Dame, Hanmer</b>																						
Area A grass	5037339	14586	0 - 5	10000	<0.8	< 5	42	<0.8	17000	37	6	33	13000	<b>79</b>	3800	200	< 1.5	<b>50</b>	< 1	28	27	46
		14587	0 - 5	11000	<0.8	< 5	52	<0.8	6400	39	7	46	15000	<b>78</b>	3200	240	< 1.5	<b>62</b>	< 1	24	30	44
Area B soil	5037340	14588	0 - 5	9800	<0.8	< 5	32	<0.8	5600	29	5	30	13000	25	2600	190	< 1.5	41	< 1	33	28	30

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area C grass	5037341	14589	0 - 5	11000	<0.8	6	36	<0.8	4700	31	5	39	13000	12	2200	170	< 1.5	<b>50</b>	< 1	40	30	27
		14590	0 - 5	9800	<0.8	< 5	33	<0.8	4200	28	5	36	12000	11	2200	150	< 1.5	<b>46</b>	< 1	33	27	26
		14591	5 - 10	10000	<0.8	< 5	29	<0.8	4000	27	4	29	12000	9	1900	150	< 1.5	37	< 1	40	28	23
		14592	5 - 10	7000	<0.8	< 5	23	<0.8	2100	23	4	31	7700	8	1100	110	< 1.5	42	< 1	26	25	17
		14593	10 - 20	11000	<0.8	< 5	27	<0.8	3600	26	4	30	12000	7	1800	140	< 1.5	34	< 1	39	27	19
		14594	10 - 20	7300	<0.8	< 5	22	<0.8	1700	20	4	29	9500	8	1700	85	< 1.5	33	< 1	12	22	18
Area D sand	5037342	14595	0 - 15	4900	<0.8	< 5	21	<0.8	1800	25	6	18	14000	3	3000	170	< 1.5	25	< 1	13	33	18
<b>Immaculate Conception - Sudbury Catholic District School Board, 1748 Pierre Street, Val Caron</b>																						
Area A gravel	5037293	14786	0 - 5	9400	<0.8	6	38	<0.8	4100	39	9	<b>84</b>	20000	16	5700	250	1.6	<b>79</b>	1	29	38	53
		14787	0 - 5	8600	<0.8	< 5	34	<0.8	3400	40	9	<b>70</b>	20000	12	5800	230	< 1.5	<b>67</b>	< 1	23	39	43
<b>E.P. Jeanne-Sauve, 300 Rue Van Horne - Conseil Scolaire du District de Grand Nord de L'Ontario, Sudbury</b>																						
Area A grass	5037089	14179	0 - 5	8900	<0.8	< 5	43	<0.8	11000	33	7	<b>92</b>	13000	17	5800	210	< 1.5	<b>110</b>	< 1	34	27	33
		14180	0 - 5	7500	<0.8	< 5	40	<0.8	10000	29	7	<b>110</b>	12000	19	5500	190	< 1.5	<b>130</b>	< 1	30	24	36
Area B soil	5037090	14183	0 - 5	7500	<0.8	< 5	41	<0.8	8800	30	7	<b>94</b>	12000	16	4600	190	< 1.5	<b>110</b>	< 1	29	27	73
Area C soil	5037091	14184	0 - 5	5800	<0.8	< 5	21	<0.8	3200	28	7	19	13000	3	4000	170	< 1.5	20	< 1	20	27	17
Area D grass	5037092	14181	0 - 5	8100	<0.8	< 5	34	<0.8	4000	26	7	<b>110</b>	12000	22	3000	160	< 1.5	<b>99</b>	< 1	25	24	33
		14182	0 - 5	7200	<0.8	< 5	34	<0.8	4000	28	8	<b>130</b>	12000	28	3300	170	< 1.5	<b>130</b>	1.4	22	25	38
		14187	5 - 10	9900	<0.8	< 5	31	<0.8	2300	25	4	47	11000	8	1800	110	< 1.5	<b>49</b>	< 1	22	25	23
		14188	5 - 10	9900	<0.8	< 5	32	<0.8	3400	27	5	<b>66</b>	12000	14	2300	150	< 1.5	<b>64</b>	< 1	30	27	26
		14189	10 - 20	11000	<0.8	< 5	39	<0.8	3100	29	4	25	13000	7	2200	160	< 1.5	37	< 1	33	32	23
		14190	10 - 20	11200	<0.8	< 5	35	<0.8	2200	25	4	25	14000	7	2000	150	< 1.5	35	< 1	20	26	22
Area E sand	5030970	14185	0 - 15	5800	<0.8	< 5	18	<0.8	2500	25	7	21	15000	3	4200	160	< 1.5	20	< 1	14	28	16
Area F sand	5037093	14186	0 - 15	6000	<0.8	< 5	19	<0.8	2200	28	7	23	15000	3	4200	190	< 1.5	25	< 1	14	28	17

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>E.P. Jean-Ethier-Blais - Conseil Scolaire du District de Grand Nord de L'Ontario, 2190 Boulevard Lasalle, Sudbury</b>																						
Area A grass	5037151	14391	0 - 5	4600	<0.8	< 5	18	<0.8	2600	23	5	12	12000	2	3000	140	< 1.5	18	< 1	17	25	16
		14392	0 - 5	4300	<0.8	< 5	17	<0.8	2600	24	5	13	12000	2	2900	140	< 1.5	18	< 1	16	27	18
		14393	5 - 10	10000	<0.8	< 5	44	<0.8	5700	30	7	52	15000	9	3100	190	< 1.5	<b>63</b>	< 1	41	32	40
		14394	5 - 10	10000	<0.8	< 5	42	<0.8	4400	32	7	54	14000	8	3000	150	< 1.5	<b>61</b>	< 1	35	32	46
		14401	10 - 20	8100	<0.8	5	32	<0.8	2700	32	7	38	12000	9	2900	180	< 1.5	<b>44</b>	< 1	19	26	45
Area B grass	5037152	14395	0 - 5	4100	<0.8	< 5	15	<0.8	2100	20	5	11	11000	2	2800	130	< 1.5	16	< 1	14	23	12
		14396	0 - 5	10000	<0.8	< 5	45	<0.8	4500	34	8	<b>85</b>	13000	15	2600	190	< 1.5	<b>100</b>	< 1	38	31	33
		14397	5 - 10	11000	<0.8	< 5	42	<0.8	4400	37	7	<b>77</b>	14000	13	2600	180	< 1.5	<b>86</b>	< 1	40	34	31
		14398	5 - 10	10000	<0.8	5	37	<0.8	3400	33	7	<b>60</b>	14000	10	2600	180	< 1.5	<b>73</b>	< 1	31	32	26
		14402	10 - 20	7100	<0.8	< 5	32	<0.8	2400	23	4	31	9500	7	1900	130	< 1.5	<b>45</b>	< 1	17	23	20
Area C soil	5037153	14399	0 - 5	8000	<0.8	< 5	29	<0.8	2200	26	5	33	12000	8	2300	150	< 1.5	42	< 1	16	25	41
		14400	0 - 5	8200	<0.8	< 5	40	<0.8	2800	24	5	33	12000	8	1900	160	< 1.5	<b>59</b>	< 1	22	26	26
Area D sand	5037154	14404	0 - 15	4100	<0.8	< 5	16	<0.8	2800	22	5	13	12000	2	2900	140	< 1.5	19	< 1	12	34	22
<b>Jacques Cartier - Le Conseil Scolaire Catholique du Nouvel - Ontario, C.P. 1357, 14 Rue Ontario, Chelmsford</b>																						
Area A gravel	5037385	14540	0 - 5	8000	<0.8	< 5	27	<0.8	3500	29	9	38	17000	12	4300	210	< 1.5	35	< 1	27	32	30
		14541	0 - 5	7900	<0.8	< 5	25	<0.8	3600	31	9	42	19000	14	4800	220	< 1.5	35	< 1	28	37	34
Area B sand	5037386	14542	0 - 15	6200	<0.8	< 5	19	<0.8	3700	24	6	18	16000	5	4200	200	< 1.5	16	< 1	26	34	22
Area C sand	5037387	14543	0 - 15	8000	<0.8	< 5	26	<0.8	4000	31	8	29	18000	6	4400	240	< 1.5	23	< 1	33	37	33
<b>Jessie Hamilton Public School - Rainbow District School Board, 16 Jessie Street, Lively</b>																						
Area A sand	5037227	14694	0 - 15	6300	<0.8	< 5	22	<0.8	3200	27	7	17	13000	3	3700	170	< 1.5	22	< 1	24	27	18
		14695	0 - 15	6500	<0.8	< 5	24	<0.8	3900	30	6	16	15000	3	3800	190	< 1.5	22	< 1	25	34	21
Area B sand	5037228	14696	0 - 15	6700	<0.8	< 5	23	<0.8	3000	31	10	<b>60</b>	15000	5	4100	190	< 1.5	<b>150</b>	< 1	22	33	40
		14697	0 - 15	7900	<0.8	< 5	25	<0.8	3200	31	7	47	16000	6	4200	190	< 1.5	<b>67</b>	< 1	25	30	25
Area C soil	5037229	14698	0 - 5	9900	<0.8	< 5	46	<0.8	8400	24	5	36	12000	7	4300	180	< 1.5	<b>60</b>	< 1	89	26	27
		14699	0 - 5	10000	<0.8	< 5	46	<0.8	8400	25	5	37	13000	7	4400	180	< 1.5	<b>63</b>	< 1	84	27	37
Area D grass	5037230	14700	0 - 5	9800	<0.8	< 5	65	<0.8	18000	30	10	<b>130</b>	15000	18	9200	210	< 1.5	<u><b>260</b></u>	< 1	170	28	43
		14701	0 - 5	11000	<0.8	< 5	49	<b>1.5</b>	7000	38	10	<b>110</b>	17000	17	4600	250	< 1.5	<u><b>240</b></u>	< 1	46	33	42

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area E soil	5037231	14702	0 - 5	12000	<0.8	< 5	46	<0.8	7000	42	8	<b>60</b>	18000	10	5300	290	< 1.5	<b>96</b>	< 1	41	36	49
Area F soil	5037232	14703	0 - 5	7900	<0.8	< 5	46	<0.8	7400	26	6	52	13000	9	3100	270	< 1.5	<b>84</b>	< 1	30	27	39
Area G gravel	5037233	14704	0 - 5	7400	<0.8	< 5	34	<0.8	3500	34	12	<b>61</b>	17000	7	5400	210	< 1.5	<b>100</b>	< 1	21	32	31
Area H grass	5037234	14705	0 - 5	8900	<0.8	< 5	40	<0.8	4100	30	9	<b>110</b>	15000	16	3200	190	< 1.5	<u><b>260</b></u>	< 1	30	29	30
		14706	0 - 5	9200	<0.8	5	40	<0.8	4200	30	8	<b>110</b>	15000	17	3000	170	< 1.5	<u><b>250</b></u>	< 1	31	30	29
<b>Lansdowne Public School - Rainbow District School Board, 185 Lansdowne Street North, Sudbury</b>																						
Area A grass	5037115	14261	0 - 5	11000	<0.8	6	52	<0.8	8400	34	9	<b>150</b>	15000	23	4000	230	< 1.5	<u><b>170</b></u>	1	41	30	39
		14262	0 - 5	11000	<0.8	6	53	<0.8	7400	35	9	<b>130</b>	15000	18	3700	210	< 1.5	<u><b>160</b></u>	< 1	37	29	38
Area B gravel	5037116	14263	0 - 5	9300	<0.8	5	47	<0.8	7300	31	10	<b>150</b>	14000	18	4000	210	< 1.5	<u><b>170</b></u>	< 1	36	29	53
		14264	0 - 5	9800	<0.8	5	47	<0.8	9800	33	10	<b>120</b>	15000	18	5300	240	< 1.5	<b>140</b>	< 1	47	30	33
Area C sand	5037117	14265	0 - 15	5300	<0.8	< 5	24	<0.8	2700	33	7	52	15000	4	3000	160	< 1.5	<b>67</b>	< 1	23	35	28
		14266	0 - 15	4900	<0.8	< 5	19	<0.8	2300	30	7	45	14000	4	3000	150	< 1.5	<b>57</b>	< 1	18	34	25
<b>Larchwood Public School - Rainbow District School Board, Box 220 Main Street, Dowling</b>																						
Area A grass	5037402	14557	0 - 5	13000	<0.8	< 5	50	<0.8	6300	46	6	23	15000	30	3900	230	< 1.5	<b>44</b>	< 1	45	33	34
		14558	0 - 5	13000	<0.8	< 5	54	<0.8	7900	53	7	25	16000	51	4300	250	< 1.5	<b>49</b>	< 1	51	35	38
Area B sand	5037403	14559	0 - 15	5900	<0.8	< 5	20	<0.8	3400	26	6	19	16000	4	4300	200	< 1.5	19	< 1	22	34	23
Area C soil	5037404	14560	0 - 5	11000	<0.8	< 5	44	<0.8	9100	37	5	24	13000	14	4100	200	< 1.5	38	< 1	46	30	37
<b>Lasalle Secondary - Rainbow District School Board, 1545 Kennedy Street, Sudbury</b>																						
Area A grass	5037215	14333	0 - 5	9300	<0.8	6	42	<0.8	4500	30	7	<b>83</b>	13000	26	2700	170	< 1.5	<b>90</b>	< 1	32	29	26
		14334	0 - 5	9000	<0.8	< 5	46	1	6900	37	10	<b>160</b>	13000	53	3100	220	< 1.5	<u><b>160</b></u>	<b>2</b>	35	27	38
Area B grass	5037216	14335	0 - 5	11000	<0.8	< 5	36	<0.8	5600	35	6	55	14000	28	2800	210	< 1.5	<b>73</b>	< 1	39	31	25
		14336	0 - 5	10000	<0.8	< 5	36	<0.8	6500	45	7	<b>66</b>	14000	<b>77</b>	2400	210	< 1.5	<b>84</b>	< 1	38	30	26
		14339	5 - 10	9900	<0.8	5	32	<0.8	4200	29	6	40	13000	9	2500	200	< 1.5	<b>55</b>	< 1	30	29	22
		14340	10 - 20	7800	<0.8	5	30	<0.8	2700	21	5	41	12000	6	1900	150	< 1.5	<b>56</b>	< 1	22	24	18
Area C soil	5037217	14337	0 - 5	8500	<0.8	< 5	31	<0.8	4100	22	3	20	9200	9	2500	140	< 1.5	29	< 1	36	23	17

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600

< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area D soil	5037218	14338	0 - 5	9100	<0.8	< 5	32	<0.8	4300	25	4	26	11000	12	2400	150	< 1.5	35	< 1	37	25	19
<b>Levack Public School (formerly) - Rainbow District School Board, 38 School Street, Levack</b>																						
Area A gravel	5037406	14568	0 - 5	7600	<0.8	< 5	28	<0.8	4600	27	7	43	14000	23	4000	190	< 1.5	<b>50</b>	< 1	24	27	30
		14569	0 - 5	6800	1	5	35	<0.8	4100	23	17	<u>670</u>	19000	32	3600	170	< 1.5	<u>350</u>	1	21	26	46
Area B sand	5037407	14570	0 - 15	4600	<0.8	< 5	18	<0.8	2800	23	6	15	13000	2	3400	150	< 1.5	16	< 1	13	29	18
<b>Levack District High School (now Levack Public School) - Rainbow District School Board, 100 High Street, Levack</b>																						
Area A grass	5037408	14563	0 - 5	8800	<0.8	< 5	54	<0.8	11000	33	8	48	12000	21	3200	330	< 1.5	<b>72</b>	1	46	28	62
		14564	0 - 5	9200	<0.8	< 5	53	<0.8	10000	33	9	44	12000	16	3100	440	< 1.5	<b>73</b>	< 1	47	29	40
		14565	5 - 10	9700	<0.8	< 5	46	<0.8	9700	34	7	29	14000	7	3600	270	< 1.5	40	1	49	34	24
		14566	5 - 10	9600	<0.8	< 5	46	<0.8	10000	34	7	36	13000	8	3600	230	< 1.5	<b>53</b>	< 1	45	33	27
		14567	10 - 20	8600	<0.8	< 5	38	<0.8	12000	33	6	28	13000	7	3800	210	< 1.5	<b>45</b>	< 1	36	31	26
<b>Lively District High School - Rainbow District School Board, 5<sup>th</sup> Avenue, Lively</b>																						
Area A grass	5037247	14734	0 - 5	11000	<0.8	6	42	<0.8	5500	60	6	<b>60</b>	15000	<b>120</b>	2900	200	< 1.5	<b>85</b>	< 1	43	31	31
		14735	0 - 5	11000	<0.8	< 5	47	<0.8	6200	47	8	<b>93</b>	14000	<b>85</b>	3000	210	< 1.5	<b>140</b>	1	40	29	34
		14736	5 - 10	9000	<0.8	7	28	<0.8	2800	24	5	37	12000	11	1800	160	< 1.5	<b>54</b>	< 1	24	26	23
		14737	10 - 20	8900	<0.8	5	31	<0.8	2200	22	4	30	12000	6	1700	150	< 1.5	42	< 1	20	25	23
<b>Lockerby Composite School - Rainbow District School Board, 1391 Ramsey View Court, Sudbury</b>																						
Area A grass	5037055	14111	0 - 5	9600	<b>1.3</b>	< 5	48	<0.8	6000	36	7	<b>75</b>	13000	<b>75</b>	3100	200	< 1.5	<b>87</b>	< 1	41	28	25
		14112	0 - 5	10000	0.9	< 5	39	<0.8	6800	67	8	<b>110</b>	13000	<b>200</b>	3200	220	< 1.5	<b>120</b>	< 1	42	28	30
Area B soil	5037056	14113	0 - 5	10000	<b>3.2</b>	< 5	35	<0.8	6400	39	7	<b>62</b>	14000	<b>110</b>	3600	230	< 1.5	<b>85</b>	< 1	45	31	26
Area C soil	5037057	14114	0 - 5	9900	<b>4.4</b>	< 5	32	<0.8	5600	33	6	50	13000	<b>150</b>	3400	200	< 1.5	<b>70</b>	< 1	43	30	25
<b>Lo-Ellen Park Secondary - Rainbow District School Board, 275 Loach's Road, Sudbury</b>																						
Area A grass	5037029	14078	0 - 5	9500	<0.8	< 5	41	<0.8	6500	54	10	<b>120</b>	12000	<b>140</b>	2600	170	< 1.5	<u>160</u>	< 1	34	27	25
		14079	0 - 5	9200	<0.8	< 5	37	<0.8	5600	51	10	<b>120</b>	13000	<b>120</b>	2500	160	< 1.5	<b>140</b>	< 1	32	26	24
		14080	5 - 10	9700	<0.8	8	36	<0.8	4800	27	8	<b>91</b>	13000	11	2600	140	< 1.5	<b>130</b>	< 1	30	29	21
		14081	5 - 10	10000	<0.8	< 5	34	<0.8	4600	27	8	<b>89</b>	13000	12	2600	150	< 1.5	<b>110</b>	< 1	30	28	20
		14082	10 - 20	7900	<0.8	< 5	30	<0.8	3700	23	6	53	11000	7	2300	130	< 1.5	<b>78</b>	< 1	28	26	15
		14083	10 - 20	5800	<0.8	< 5	21	<0.8	2800	19	5	29	9500	4	2100	110	< 1.5	40	< 1	23	22	12

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area B soil	5037030	14084	0 - 5	9700	<0.8	< 5	37	<0.8	2800	27	6	45	13000	14	2100	210	< 1.5	<b>53</b>	< 1	28	28	21
Area C soil	5037031	14085	0 - 5	11000	<0.8	< 5	48	<0.8	5400	34	9	<b>110</b>	14000	29	2800	170	< 1.5	<b>130</b>	< 1	34	31	27
<b>Long Lake Public School - Rainbow District School Board, 4420 Long Lake Road, Sudbury</b>																						
Area A grass	5037021	14197	0 - 5	7000	<0.8	6	33	<0.8	2500	23	7	<b>92</b>	12000	15	2100	160	< 1.5	<b>110</b>	< 1	18	23	26
		14198	0 - 5	6800	<0.8	6	28	<0.8	2000	21	6	<b>82</b>	11000	10	1800	140	< 1.5	<b>84</b>	< 1	15	22	22
		14201	5 - 10	9100	<0.8	7	37	<0.8	2500	24	5	<b>60</b>	12000	8	1600	210	< 1.5	<b>74</b>	< 1	28	26	24
		14202	5 - 10	7400	<0.8	9	34	<0.8	1600	22	5	<b>82</b>	11000	10	1700	140	< 1.5	<b>78</b>	< 1	13	20	23
		14203	10 - 20	10000	<0.8	< 5	38	<0.8	2700	27	5	18	12000	5	2400	170	< 1.5	<b>44</b>	< 1	26	25	22
Area B sand	5037022	14199	0 - 15	5500	<0.8	< 5	29	<0.8	1800	27	7	21	14000	3	4100	170	< 1.5	21	< 1	10	25	23
		14200	0 - 15	6200	<0.8	< 5	33	<0.8	2500	28	8	41	15000	3	4200	180	< 1.5	24	< 1	15	28	24
<b>E.S. Macdonald Cartier - Conseil Scolaire du District de Grand Nord de L'Ontario, 37 Boulevard Lasalle West, Sudbury</b>																						
Area A grass	5037203	14473	0 - 5	9200	<0.8	5	38	<0.8	5900	29	7	<b>99</b>	12000	35	2100	160	< 1.5	<b>110</b>	< 1	33	27	25
		14474	0 - 5	8600	<0.8	6	45	0.9	5200	54	9	<b>140</b>	11000	<b>150</b>	2300	170	< 1.5	<b>170</b>	<b>2</b>	32	25	31
Area B soil	5037204	14475	0 - 5	10000	<0.8	6	36	<0.8	4800	31	6	51	13000	13	2300	180	< 1.5	<b>73</b>	< 1	42	29	24
Area C soil	5037205	14476	0 - 5	9000	<0.8	< 5	32	<0.8	3900	25	5	37	12000	9	2200	180	< 1.5	<b>47</b>	< 1	31	25	21
<b>MacLeod Public School - Rainbow District School Board, 310 Anthony Street, Sudbury</b>																						
Area A sand	5037047	14104	0 - 15	8800	<0.8	< 5	31	<0.8	4000	25	5	33	11000	7	2200	150	< 1.5	43	< 1	36	26	17
		14105	0 - 15	8300	<0.8	< 5	26	<0.8	3800	35	7	22	17000	3	4600	200	< 1.5	28	< 1	30	33	21
Area B gravel	5037048	14100	0 - 5	15000	<0.8	< 5	68	<0.8	8200	29	12	<b>100</b>	24000	9	6100	200	< 1.5	<b>81</b>	< 1	90	68	34
		14101	0 - 5	14000	<0.8	< 5	65	<0.8	7600	29	15	<b>96</b>	24000	8	5900	200	< 1.5	<b>64</b>	< 1	85	66	29
Area C grass	5037049	14102	0 - 5	12000	<0.8	< 5	52	<0.8	9000	41	10	<b>130</b>	17000	16	5000	380	< 1.5	<b>160</b>	1.1	46	35	40
		14103	0 - 5	12000	<0.8	< 5	47	<0.8	6600	39	9	<b>150</b>	16000	19	4200	300	< 1.5	<b>140</b>	1.1	39	33	38
<b>Marymount Academy - Sudbury Catholic District School Board, 165 D'Youville Street, Sudbury</b>																						
Area A grass	5037134	14246	0 - 5	8700	<0.8	14	53	<b>1.3</b>	3800	26	<b>22</b>	<b>500</b>	16000	<b>70</b>	2200	180	< 1.5	<b>510</b>	<b>3</b>	28	28	50
		14247	0 - 5	8400	<0.8	14	51	<b>1.3</b>	3800	26	<b>28</b>	<b>510</b>	18000	<b>65</b>	2100	180	< 1.5	<b>660</b>	<b>4</b>	27	28	52
		14248	5 - 10	6900	<0.8	10	31	<0.8	2300	18	8	<b>150</b>	11000	30	1700	120	< 1.5	<b>160</b>	< 1	17	23	37

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			



**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Mgr. Cote, C.P. 789 - Le Conseil Scolaire Catholique du Nouvel - Ontario, 96 Rue Gaudette, Chelmsford</b>																						
Area A grass	5037392	14532	0 - 5	8800	<0.8	< 5	35	<0.8	7300	25	8	44	15000	13	4300	280	< 1.5	<b>64</b>	< 1	37	30	32
		14533	0 - 5	9700	<0.8	< 5	47	<0.8	10000	28	10	55	17000	14	5400	370	< 1.5	<b>65</b>	< 1	39	34	40
Area B gravel	5037393	14534	0 - 5	7200	<0.8	< 5	29	<0.8	3700	32	10	49	16000	21	4000	200	< 1.5	<b>51</b>	< 1	28	32	35
		14535	0 - 5	7600	<0.8	< 5	33	<0.8	3800	32	12	<b>78</b>	15000	24	4100	210	< 1.5	<b>78</b>	< 1	27	29	40
<b>Montessori School of Sudbury - Private School, 295 Victoria Street, Sudbury</b>																						
Area A grass	5037109	14216	0 - 5	8300	<0.8	< 5	35	<0.8	5700	28	7	<b>80</b>	13000	13	2900	170	< 1.5	<b>110</b>	< 1	30	26	31
		14217	0 - 5	8300	<0.8	< 6	44	<0.8	5600	32	10	<b>150</b>	13000	24	3100	180	< 1.5	<b>210</b>	1.1	32	28	39
Area B sand	5037110	14218	0 - 15	5900	<0.8	< 5	22	<0.8	3100	26	7	30	17000	3	4100	160	< 1.5	32	< 1	16	33	17
Area C gravel	5037111	14219	0 - 5	20000	<0.8	< 5	120	<0.8	2200	<b>90</b>	<b>28</b>	<b>150</b>	43000	19	14000	390	< 1.5	<b>120</b>	< 1	10	73	90
		14220	0 - 5	20000	<0.8	< 5	120	<0.8	2000	<b>86</b>	<b>30</b>	<b>130</b>	42000	15	14000	370	< 1.5	<b>130</b>	< 1	10	70	95
<b>Northeastern Secondary - Rainbow District School Board, 45 Spruce Street, Garson</b>																						
Area A grass	5037322	14407	0 - 5	7300	<0.8	8	32	<0.8	3900	26	8	<b>88</b>	13000	27	2900	240	< 1.5	<b>120</b>	< 1	17	26	37
		14408	0 - 5	8000	<0.8	9	39	<0.8	5600	30	10	<b>140</b>	14000	51	2800	250	< 1.5	<b>180</b>	< 1	31	27	45
		14409	5 - 10	7500	<0.8	6	28	<0.8	3600	28	5	30	12000	11	3100	240	< 1.5	<b>52</b>	< 1	24	30	27
		14410	5 - 10	10000	<0.8	8	36	<0.8	4600	31	5	31	15000	10	3000	300	< 1.5	<b>51</b>	< 1	38	36	33
		14413	10 - 20	8400	<0.8	6	35	<0.8	3600	28	5	25	13000	9	2800	220	< 1.5	38	< 1	27	31	25
Area B grass	5037323	14414	10 - 20	5200	<0.8	6	24	<0.8	2500	21	4	16	9100	4	2200	150	< 1.5	26	< 1	20	23	15
		14405	0 - 5	7200	<0.8	9	48	0.9	5800	26	15	<b>210</b>	14000	45	3600	200	< 1.5	<b>250</b>	1	36	25	72
Area C gravel	5037324	14406	0 - 5	7400	<0.8	7	37	<0.8	4100	25	8	<b>81</b>	13000	15	2900	220	< 1.5	<b>110</b>	< 1	23	27	35
		14411	0 - 5	7600	<0.8	7	30	<0.8	4700	27	6	37	12000	8	2900	250	< 1.5	<b>58</b>	< 1	40	29	30
		14412	0 - 5	8600	<0.8	6	29	<0.8	4700	28	6	33	13000	9	2800	230	< 1.5	<b>58</b>	< 1	44	30	27
<b>Notre Dame - Le Conseil Scolaire Catholique du Nouvel - Ontario, 4503 Rue Dennie, Hanmer</b>																						
Area A gravel	5037327	14628	0 - 5	7600	<0.8	6	36	<0.8	3100	39	<b>32</b>	<b>80</b>	24000	17	5200	220	< 1.5	<b>74</b>	< 1	19	35	51
		14629	0 - 5	11000	<0.8	< 5	48	<0.8	5100	41	17	56	23000	10	5800	260	< 1.5	<b>52</b>	< 1	38	38	53
Area B grass	5037328	14630	0 - 5	9700	<0.8	6	42	<0.8	3500	30	6	<b>67</b>	13000	16	2400	230	< 1.5	<b>75</b>	1	34	28	38
		14631	0 - 5	13000	<0.8	5	43	<0.8	4000	32	6	51	15000	14	2400	250	< 1.5	<b>54</b>	< 1	42	29	32
		14632	5 - 10	13000	<0.8	< 5	38	<0.8	3900	29	4	31	13000	8	1900	190	< 1.5	39	< 1	40	28	26
		14633	5 - 10	10000	<0.8	6	36	<0.8	2500	26	5	54	12000	44	1900	170	< 1.5	<b>50</b>	< 1	26	26	24
		14634	10 - 20	10000	<0.8	< 5	34	<0.8	2900	26	4	14	11000	6	1800	160	< 1.5	24	< 1	32	26	19
		14635	10 - 20	12000	<0.8	< 5	32	<0.8	2500	27	4	10	12000	5	1900	150	< 1.5	23	< 1	27	27	22

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area C soil	5037329	14636	0 - 5	9400	<0.8	< 5	32	<0.8	4000	46	11	<b>68</b>	21000	12	5800	300	< 1.5	<b>50</b>	< 1	28	46	48
<b>Notre Dame de l'Esperance - Le Conseil Scolaire Catholique du Nouvel - Ontario, 2965 Rue Hope, Val Caron</b>																						
Area A grass	5037290	14808	0 - 5	11000	<0.8	< 5	35	<0.8	5000	61	4	36	33000	14	5200	330	< 1.5	<b>66</b>	< 1	43	78	36
		14809	0 - 5	11000	<0.8	< 5	42	<0.8	18000	66	4	40	12000	11	3400	170	< 1.5	<b>54</b>	< 1	51	28	25
		14810	5 - 10	9500	<0.8	< 5	46	<0.8	38000	40	4	54	11000	8	5600	180	< 1.5	<b>53</b>	< 1	52	24	29
		14811	5 - 10	11000	<0.8	< 5	32	<0.8	5000	26	4	27	11000	7	1900	160	< 1.5	40	< 1	38	29	18
		14812	10 - 20	7400	<0.8	< 5	26	<0.8	2500	19	3	14	7000	5	1600	88	< 1.5	26	< 1	23	18	12
Area B sand	5037291	14814	0 - 15	6100	<0.8	< 5	36	<0.8	3800	28	6	21	15000	3	3500	180	< 1.5	28	< 1	23	35	18
		14815	0 - 15	7900	<0.8	< 5	31	<0.8	4300	36	6	21	17000	5	4100	210	< 1.5	24	< 1	29	40	20
Area C gravel	5037292	14816	0 - 5	8300	<0.8	< 5	35	<0.8	4400	34	10	<b>57</b>	17000	7	5000	210	< 1.5	<b>53</b>	< 1	31	34	31
		14817	0 - 5	8000	<0.8	< 5	31	<0.8	4100	32	11	<b>75</b>	18000	7	5000	210	< 1.5	<b>120</b>	< 1	28	34	30
<b>Notre Dame de la Merci - Le Conseil Scolaire Catholique du Nouvel - Ontario, 2 Edward Avenue, Coniston</b>																						
Area A gravel	5037265	14750	0 - 5	9300	<b>1.5</b>	13	44	<0.8	2900	42	14	<b>200</b>	25000	30	4300	180	< 1.5	<b>190</b>	1	27	34	42
		14751	0 - 5	9200	<0.8	8	40	<0.8	3700	39	15	<b>140</b>	22000	17	5700	220	< 1.5	<b>170</b>	< 1	27	35	40
<b>Notre Dame du Rosaire - Le Conseil Scolaire Catholique du Nouvel - Ontario, 2891 Chemin Martin, Blezard Valley</b>																						
Area A grass	5037304	14800	0 - 5	9000	<0.8	< 5	30	<0.8	4100	26	6	<b>63</b>	12000	14	2300	170	< 1.5	<b>82</b>	< 1	37	28	26
		14801	0 - 5	11000	<0.8	< 5	41	<0.8	3900	24	6	35	13000	17	2100	240	< 1.5	<b>92</b>	< 1	39	29	27
		14802	5 - 10	8800	<0.8	< 5	29	<0.8	4100	38	4	26	18000	7	4500	250	< 1.5	37	< 1	35	45	24
		14803	5 - 10	11000	<0.8	< 5	28	<0.8	4700	51	5	28	24000	8	5700	290	< 1.5	38	< 1	35	65	41
		14804	10 - 20	12000	<0.8	< 5	38	<0.8	5100	56	5	37	27000	5	5600	330	< 1.5	25	< 1	44	63	30
Area B gravel	5037305	14805	10 - 20	12000	<0.8	< 5	48	<0.8	5200	54	5	51	26000	8	5900	340	< 1.5	<b>44</b>	< 1	43	61	38
		14806	0 - 5	9000	<0.8	< 5	42	<0.8	4400	52	10	36	26000	9	4900	340	< 1.5	<b>45</b>	< 1	40	58	41
		14807	0 - 5	11000	<0.8	< 5	36	<0.8	4600	56	10	40	30000	8	5400	320	< 1.5	<b>47</b>	< 1	39	69	38
<b>Our Lady of Fatima - Sudbury Catholic District School Board, 1755 R.R. 55, Naughton</b>																						
Area A grass	5037262	14738	0 - 5	8200	<0.8	< 5	29	<0.8	3200	23	5	45	11000	14	2100	160	< 1.5	<b>71</b>	< 1	26	23	25
		14739	0 - 5	8000	<0.8	< 5	29	<0.8	3200	23	5	44	11000	12	2000	160	< 1.5	<b>68</b>	< 1	25	23	25
		14740	5 - 10	8600	<0.8	6	29	<0.8	2500	22	5	35	11000	8	1800	170	< 1.5	<b>55</b>	< 1	21	23	27
		14741	5 - 10	7700	<0.8	< 5	27	<0.8	2200	22	4	37	10000	8	1900	140	< 1.5	<b>50</b>	< 1	16	21	25
		14742	10 - 20	8700	<0.8	< 5	28	<0.8	2100	21	4	21	11000	5	1800	160	< 1.5	36	< 1	16	21	22
		14743	10 - 20	8400	<0.8	< 5	29	<0.8	2000	20	4	18	11000	5	1600	170	< 1.5	33	< 1	15	21	23

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Pinecrest Public School - Rainbow District School Board, 1650 Dominion Drive, Hanmer</b>																						
Area A grass	5037318	14661	0 - 5	12000	<0.8	6	34	<0.8	9000	27	5	40	13000	12	2200	150	< 1.5	<b>54</b>	< 1	36	28	26
		14662	0 - 5	12000	<0.8	< 5	36	<0.8	3800	27	4	37	13000	9	2000	140	< 1.5	<b>44</b>	< 1	34	28	24
		14663	5 - 10	11000	<0.8	6	31	<0.8	4700	26	5	39	12000	11	2000	140	< 1.5	<b>52</b>	< 1	27	26	29
		14664	5 - 10	12000	<0.8	5	35	<0.8	4100	27	5	31	13000	9	2000	140	< 1.5	<b>45</b>	< 1	31	27	24
Area B soil	5037319	14669	0 - 5	11000	<0.8	5	29	<0.8	2400	27	4	38	13000	14	2100	130	< 1.5	41	< 1	22	26	34
Area C sand	5037320	14666	0 - 15	5000	<0.8	< 5	20	<0.8	3400	25	7	12	12000	3	3200	160	< 1.5	17	< 1	20	28	15
Area D gravel	5037321	14667	0 - 5	11000	<0.8	5	49	<0.8	4600	46	16	<b>81</b>	22000	11	6600	300	< 1.5	<b>130</b>	< 1	35	44	42
		14668	0 - 5	11000	<0.8	< 5	49	<0.8	4300	46	15	<b>83</b>	23000	10	6600	300	< 1.5	<b>120</b>	< 1	34	45	41
Area E soil	5030971	14665	0 - 5	11000	<0.8	5	31	<0.8	3700	28	5	35	13000	10	2100	150	< 1.5	<b>49</b>	< 1	29	27	33
<b>Pius XII - Sudbury Catholic District School Board, 44 3<sup>rd</sup> Ave, Sudbury</b>																						
Area A gravel	5037148	14297	0 - 5	6500	<0.8	< 5	35	<0.8	3800	32	11	52	13000	8	4200	200	< 1.5	<b>59</b>	< 1	29	30	28
		14298	0 - 5	7600	<0.8	< 5	33	<0.8	3800	33	9	51	15000	7	4100	200	< 1.5	<b>53</b>	< 1	30	31	27
<b>Princess Anne Public School - Rainbow District School Board, 500 Douglas Street, Sudbury</b>																						
Area A gravel	5037106	14134	0 - 5	7800	<0.8	6	34	<0.8	2800	35	17	<b>220</b>	18000	18	4800	190	< 1.5	<b>200</b>	<b>2</b>	26	30	28
		14135	0 - 5	7800	<0.8	6	31	<0.8	2800	32	13	<b>200</b>	18000	13	4800	190	< 1.5	<b>170</b>	< 1	24	29	25
Area B grass	5037107	14136	0 - 5	10000	<0.8	7	46	<0.8	5700	39	11	<b>200</b>	15000	43	3100	200	< 1.5	<b>280</b>	< 1	40	31	33
		14137	0 - 5	11000	<0.8	7	45	<0.8	6200	35	13	<b>240</b>	19000	21	3100	190	< 1.5	<b>300</b>	<b>2</b>	32	31	37
		14139	5 - 10	10000	<0.8	8	56	<0.8	5800	38	13	<b>240</b>	16000	17	3200	240	< 1.5	<b>370</b>	1	35	33	38
		14140	10 - 20	8100	<0.8	5	41	<0.8	4000	29	8	<b>120</b>	13000	10	2900	180	< 1.5	<b>170</b>	< 1	27	27	27
Area C sand	5037108	14138	0 - 15	7100	<0.8	< 5	23	<0.8	3500	31	8	36	15000	4	4300	190	< 1.5	34	< 1	28	31	22
<b>Queen Elizabeth II Public School - Rainbow District School Board, 32 Dell Street, Sudbury</b>																						
Area A grass	5037119	14269	0 - 5	9600	<0.8	7	35	<0.8	3800	29	8	<b>120</b>	13000	15	2000	200	< 1.5	<b>120</b>	< 1	34	29	28
		14270	0 - 5	9800	<0.8	9	37	<0.8	4500	25	8	<b>130</b>	13000	17	2300	200	< 1.5	<b>130</b>	< 1	34	28	29
		14271	5 - 10	10000	<0.8	7	34	<0.8	4000	25	7	<b>92</b>	13000	12	2200	220	< 1.5	<b>99</b>	< 1	31	28	26
		14272	5 - 10	9700	<0.8	6	33	<0.8	3600	25	6	<b>73</b>	12000	9	2200	180	< 1.5	<b>83</b>	< 1	28	28	25
		14280	10 - 20	11000	<0.8	6	35	<0.8	3100	27	6	43	13000	7	2400	200	< 1.5	<b>54</b>	< 1	33	31	24
		14281	10 - 20	10000	<0.8	< 5	32	<0.8	2800	28	6	49	13000	7	2100	190	< 1.5	<b>61</b>	< 1	24	27	23

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area B soil	5037120	14273	0 - 5	8900	<0.8	8	30	<0.8	3500	24	5	45	12000	9	2300	160	< 1.5	<b>63</b>	< 1	30	27	22
Area C soil	5037121	14274	0 - 5	9000	<0.8	6	37	<0.8	5400	27	7	<b>100</b>	12000	14	2400	190	< 1.5	<b>120</b>	< 1	31	28	26
Area D sand	5037122	14275	0 - 15	6800	<0.8	< 5	20	<0.8	3400	31	7	32	16000	3	4000	190	< 1.5	37	< 1	27	33	42
		14276	0 - 15	6900	<0.8	6	20	<0.8	3200	27	7	23	14000	3	4200	190	< 1.5	26	< 1	26	29	22
Area E sand	5037123	14277	0 - 15	5500	<0.8	< 5	20	<0.8	2800	25	7	26	13000	3	3600	160	< 1.5	34	< 1	21	29	17
Area F gravel	5037124	14282	0 - 5	6700	<0.8	7	36	0.8	5400	32	16	<b>210</b>	15000	19	4500	210	< 1.5	<b>240</b>	1	27	30	38
		14283	0 - 5	7300	<0.8	8	39	<0.8	4400	31	17	<b>260</b>	17000	26	4600	190	< 1.5	<b>270</b>	< 1	27	29	58
Area G gravel	5037125	14278	0 - 5	7000	<0.8	7	34	<0.8	4000	29	16	<b>210</b>	16000	23	4500	190	< 1.5	<b>240</b>	< 1	30	31	110
Area H gravel	5037126	14279	0 - 5	8100	<0.8	9	40	1	9600	29	<b>20</b>	<b>300</b>	16000	30	7600	210	< 1.5	<b>370</b>	1	33	29	65
<b>R.H. Murray Public School - Rainbow District School Board, 3 Henry Street, Whitefish</b>																						
Area A grass	5037409	14744	0 - 5	11000	<0.8	< 5	62	<0.8	5000	23	5	24	14000	11	3400	270	< 1.5	32	< 1	24	29	45
		14745	0 - 5	13000	<0.8	< 5	74	<0.8	5900	27	6	29	16000	13	3800	300	< 1.5	37	< 1	27	31	53
Area B soil	5037410	14746	0 - 5	17000	<0.8	< 5	81	<0.8	5200	37	6	22	19000	9	4500	300	< 1.5	27	< 1	33	38	47
Area C soil	5037411	14747	0 - 5	8800	<0.8	< 5	31	<0.8	4400	31	6	16	16000	3	4200	190	< 1.5	17	< 1	35	31	19
<b>R.L. Beattie Public School - Rainbow District School Board, 102 Loach's Road, Sudbury</b>																						
Area A sand	5037032	14072	0 - 15	7200	<0.8	< 5	23	<0.8	3400	31	7	23	16000	3	4200	190	< 1.5	25	< 1	27	32	17
		14073	0 - 15	6000	<0.8	< 5	21	<0.8	2600	28	7	24	15000	3	4000	180	< 1.5	27	< 1	20	28	16
Area B sand	5037033	14074	0 - 15	6200	<0.8	< 5	20	<0.8	2800	30	7	25	14000	3	3900	170	< 1.5	28	< 1	22	29	17
		14075	0 - 15	6300	<0.8	< 5	20	<0.8	2800	30	6	21	15000	3	4000	170	< 1.5	23	< 1	23	28	17
Area C grass	5037034	14068	0 - 5	11000	<0.8	< 5	42	<0.8	7100	33	7	<b>77</b>	15000	13	3100	230	< 1.5	<b>97</b>	< 1	45	32	31
		14069	0 - 5	11000	<0.8	< 5	42	<0.8	7500	32	7	<b>83</b>	15000	13	3300	240	< 1.5	<b>100</b>	< 1	45	32	31
Area D soil	5037035	14071	0 - 5	11000	0.9	< 5	52	<0.8	6700	36	8	<b>87</b>	15000	15	3700	230	< 1.5	<b>110</b>	< 1	43	32	36
Area E soil	5037036	14070	0 - 5	11000	<0.8	< 5	54	<0.8	6100	33	7	<b>61</b>	15000	11	3300	230	< 1.5	<b>84</b>	< 1	44	33	51
Area F gravel	5037037	14076	0 - 5	6800	<0.8	< 5	27	<0.8	2900	32	9	<b>82</b>	15000	11	3800	170	< 1.5	<b>82</b>	< 1	26	28	27

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area G sand	5037038	14077	0 - 15	7100	<0.8	< 5	22	<0.8	3300	29	7	19	14000	3	4000	180	< 1.5	21	< 1	28	28	16
<b>Redwood Acres Public School - Rainbow District School Board, 4625 Carl Street, Hanmer</b>																						
Area A grass	5037332	14612	0 - 5	9900	<0.8	< 5	32	<0.8	3000	26	4	21	12000	15	2000	150	< 1.5	34	1	27	26	21
		14613	0 - 5	9700	<0.8	< 5	31	<0.8	3200	26	5	25	12000	43	2200	150	< 1.5	40	< 1	24	25	22
		14614	5 - 10	9400	<0.8	< 5	29	<0.8	2200	25	4	24	12000	8	1800	140	< 1.5	32	< 1	19	25	19
		14615	5 - 10	9100	<0.8	< 5	28	<0.8	2000	24	4	22	11000	7	1700	140	< 1.5	31	< 1	16	24	19
Area B soil	5037333	14607	0 - 5	9100	<0.8	< 5	28	<0.8	2100	25	5	20	11000	9	2100	120	< 1.5	32	< 1	16	24	21
Area C soil	5037334	14608	0 - 5	9200	<0.8	< 5	27	<0.8	3000	26	4	21	11000	7	1900	130	< 1.5	36	< 1	27	25	27
Area D soil	5037335	14609	0 - 5	8100	<0.8	< 5	35	<0.8	3200	34	10	44	17000	7	5100	220	< 1.5	40	< 1	24	35	31
Area E soil	5037336	14610	0 - 5	8400	<0.8	6	35	<0.8	3300	32	10	43	17000	6	4700	220	< 1.5	41	< 1	25	33	27
Area F sand	5037337	14611	0 - 15	5100	<0.8	< 5	20	<0.8	4000	23	6	15	13000	3	3300	170	< 1.5	16	< 1	19	29	20
Area G grass	5037338	14616	0 - 5	8700	<0.8	7	31	<0.8	28000	24	5	54	11000	18	3300	140	< 1.5	<b>72</b>	< 1	38	23	24
		14617	0 - 5	9200	<0.8	6	30	<0.8	3800	27	4	43	11000	11	1900	160	< 1.5	<b>52</b>	< 1	28	26	24
		14618	5 - 10	8600	<0.8	< 5	30	<0.8	3300	25	4	27	11000	7	2000	160	< 1.5	<b>44</b>	< 1	21	24	21
		14619	5 - 10	7200	<0.8	< 5	25	<0.8	2300	23	4	18	9500	5	1900	130	< 1.5	32	< 1	14	21	18
		14620	10 - 20	8500	<0.8	< 5	24	<0.8	3100	23	4	13	11000	4	1800	150	< 1.5	23	< 1	15	22	17
		14621	10 - 20	7100	<0.8	< 5	22	<0.8	1900	22	4	15	10000	4	1900	130	< 1.5	22	< 1	12	23	14
<b>Robert Jack Public School - Rainbow District School Board, 7 Margaret Street, Garson</b>																						
Area A grass	5037272	14420	0 - 5	7400	<0.8	9	33	<0.8	3000	24	5	51	11000	10	2200	160	< 1.5	<b>54</b>	< 1	18	24	29
		14421	0 - 5	9300	<0.8	9	38	<0.8	4600	30	6	51	13000	14	2800	190	< 1.5	<b>69</b>	< 1	32	29	33
		14426	5 - 10	8500	<0.8	<b>15</b>	32	<0.8	2000	21	4	<b>71</b>	11000	9	1500	140	< 1.5	<b>47</b>	< 1	24	26	22
		14427	10 - 20	8200	<0.8	8	31	<0.8	1900	21	5	18	10000	7	1700	160	< 1.5	41	< 1	22	24	23
Area B soil	5037273	14422	0 - 5	8800	<0.8	< 5	35	<0.8	2400	29	6	26	13000	6	2800	170	< 1.5	41	< 1	24	28	70
		14423	0 - 5	8400	<0.8	< 5	32	<0.8	2400	28	6	23	13000	5	2600	160	< 1.5	35	< 1	27	29	29
Area C gravel	5037274	14424	0 - 5	7200	<0.8	7	34	<0.8	3500	32	15	45	17000	6	4200	200	< 1.5	<b>56</b>	< 1	27	33	29
		14425	0 - 5	7100	<0.8	6	34	<0.8	3400	32	15	<b>61</b>	17000	6	4000	180	< 1.5	<b>61</b>	< 1	27	31	30

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600

< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Sacred Heart (formerly)- Sudbury Catholic District School Board, 1169 Dollard Avenue, Sudbury</b>																						
Area A gravel	5037219	14365	0 - 5	5000	<0.8	< 5	23	<0.8	2300	27	12	<b>62</b>	15000	9	3400	160	< 1.5	<b>76</b>	< 1	17	29	44
		14366	0 - 5	5200	<0.8	< 5	29	<0.8	3200	26	11	<b>72</b>	15000	16	4000	170	< 1.5	<b>90</b>	< 1	18	28	52
<b>St. Andrew - Sudbury Catholic District School Board, 1305 Holland Road, Sudbury</b>																						
Area A gravel	5037212	14341	0 - 5	6500	<0.8	< 5	27	<0.8	2700	28	10	<b>91</b>	15000	12	3700	170	< 1.5	<b>93</b>	< 1	23	30	30
		14342	0 - 5	6700	<0.8	< 5	24	<0.8	2600	30	11	<b>100</b>	16000	15	3900	180	< 1.5	<b>100</b>	< 1	20	30	36
Area B sand	5037213	14343	0 - 15	4900	<0.8	< 5	19	<0.8	2600	23	6	20	13000	3	3000	150	< 1.5	29	< 1	17	28	16
Area C soil	5037214	14344	0 - 5	9900	<0.8	8	44	<0.8	3400	33	15	<b>160</b>	22000	20	4700	240	< 1.5	<b>170</b>	< 1	29	39	40
		14345	0 - 5	9300	<0.8	8	42	<0.8	3400	32	16	<b>160</b>	21000	20	4400	220	< 1.5	<b>160</b>	< 1	28	32	38
<b>St. Anne - Sudbury Catholic District School Board, 539 Francis Street, Hanmer</b>																						
Area A sand	5037347	14637	0 - 15	5400	<0.8	< 5	21	<0.8	2900	32	6	17	15000	4	3800	190	< 1.5	22	< 1	22	38	25
Area B gravel	5037348	14638	0 - 5	5500	<0.8	< 5	23	<0.8	3300	30	7	29	13000	7	4200	190	< 1.5	34	< 1	25	32	32
		14639	0 - 5	5900	<0.8	< 5	23	<0.8	3200	31	7	29	15000	8	4500	180	< 1.5	35	< 1	22	31	35
Area C gravel	5037349	14640	0 - 5	4100	<0.8	< 5	27	<0.8	15000	19	5	13	9500	3	5500	140	< 1.5	17	< 1	54	22	15
Area D grass	5037350	14641	0 - 5	8200	<0.8	< 5	32	<0.8	4800	25	4	22	11000	7	2500	180	< 1.5	33	< 1	34	25	30
		14642	0 - 5	9800	<0.8	< 5	34	<0.8	4800	27	5	26	12000	8	2200	200	< 1.5	37	< 1	34	29	34
		14643	5 - 10	10000	<0.8	< 5	32	<0.8	4100	26	5	20	12000	7	2200	190	< 1.5	32	< 1	32	27	23
<b>St. Anthony - Sudbury Catholic District School Board, 11 Mary Street, Sudbury</b>																						
Area A gravel	5037103	14205	0 - 5	8400	<0.8	6	39	<0.8	4100	36	<b>20</b>	<b>310</b>	19000	15	4900	210	< 1.5	<b>290</b>	<b>2</b>	30	33	40
		14206	0 - 5	7500	0.9	5	35	<0.8	3500	34	17	<b>270</b>	17000	13	4500	200	<b>4.3</b>	<b>260</b>	<b>1.6</b>	28	32	32
Area B sand	5037104	14207	0 - 15	8600	<0.8	6	29	<0.8	3800	40	11	<b>86</b>	21000	6	6000	240	< 1.5	<b>77</b>	< 1	28	42	27
<b>St. Augustin - Le Conseil Scolaire Catholique du Nouvel - Ontario, 648 Promenade O' Neil West, Garson</b>																						
Area A sand	5037269	14432	0 - 15	7100	<0.8	6	37	<0.8	3600	25	7	21	13000	4	3400	180	< 1.5	21	< 1	25	27	18
		14433	0 - 15	5600	<0.8	7	27	<0.8	3400	22	7	22	12000	4	3300	170	< 1.5	22	< 1	20	25	17
Area B gravel	5037270	14434	0 - 5	6300	<0.8	6	29	<0.8	3400	27	8	44	13000	8	3400	170	< 1.5	<b>50</b>	< 1	25	26	24
		14435	0 - 5	6200	<0.8	7	28	<0.8	3100	27	8	44	13000	9	3500	170	< 1.5	<b>51</b>	< 1	25	28	23
Area C gravel	5037271	14436	0 - 5	8600	<0.8	9	38	<0.8	3000	29	7	<b>57</b>	14000	12	3300	180	< 1.5	<b>56</b>	< 1	30	32	20
		14437	0 - 5	8800	<0.8	9	40	<0.8	3000	30	7	<b>71</b>	14000	14	3300	180	< 1.5	<b>67</b>	< 1	30	30	22

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn	
<b>St. Benedict Secondary - Sudbury Catholic District School Board, 2993 Algonquin Road, Sudbury</b>																							
Area A grass	5037023	14058	0 - 5	9300	<0.8	< 5	32	<0.8	3800	29	6	29	13000	7	2900	180	< 1.5	<b>46</b>	< 1	29	29	19	
		14059	0 - 5	7600	<0.8	< 5	29	<0.8	2900	25	5	26	11000	6	2400	140	< 1.5	40	< 1	19	23	17	
Area B soil	5037024	14060	0 - 5	7600	<0.8	< 5	29	<0.8	5500	22	4	25	9700	7	2400	150	< 1.5	30	< 1	34	24	17	
		14061	0 - 5	7000	<0.8	< 5	28	<0.8	5200	22	4	19	9500	7	2400	150	< 1.5	31	< 1	31	24	15	
Area C soil	5037025	14062	0 - 5	10000	<0.8	< 5	32	<0.8	2200	28	6	25	14000	4	2400	130	< 1.5	40	< 1	26	30	16	
		14063	0 - 5	11000	<0.8	< 5	36	<0.8	2900	30	6	24	15000	4	2400	140	< 1.5	39	< 1	34	33	16	
<b>St. Bernadette - Sudbury Catholic District School Board, 870 Auger Avenue, Sudbury</b>																							
Area A gravel	5037164	14444	0 - 5	6800	<0.8	8	30	<0.8	2300	28	11	<b>86</b>	17000	16	3800	190	< 1.5	<b>93</b>	< 1	19	32	24	
		14445	0 - 5	6000	<0.8	8	26	<0.8	2000	26	11	<b>81</b>	16000	15	3800	180	< 1.5	<b>85</b>	< 1	15	29	24	
Area B gravel	5037165	14446	0 - 5	5500	<0.8	7	28	<0.8	2100	28	<b>21</b>	<b>100</b>	18000	11	3800	190	< 1.5	<b>100</b>	< 1	13	26	32	
		14447	0 - 5	5300	<0.8	< 5	23	<0.8	2400	29	<b>26</b>	<b>79</b>	21000	10	3700	160	< 1.5	<b>91</b>	< 1	16	28	33	
<b>St. Charles - Sudbury Catholic District School Board, 26 Charlotte Street, Chelmsford</b>																							
Area A gravel	5037394	14520	0 - 5	5900	<0.8	< 5	25	<0.8	3300	27	7	35	14000	6	3800	210	< 1.5	<b>59</b>	< 1	24	30	25	
		14521	0 - 5	6300	<0.8	< 5	25	<0.8	3700	26	7	44	15000	6	4100	190	< 1.5	<b>63</b>	< 1	27	31	27	
Area B sand	5037395	14522	0 - 15	4000	<0.8	< 5	13	<0.8	2100	24	4	11	10000	3	2500	130	< 1.5	13	< 1	15	24	21	
<b>St. Charles College - Sudbury Catholic District School Board, 1940 Hawthorne Drive, Sudbury</b>																							
Area A grass	5037160	14438	0 - 5	8700	<b>2.1</b>	6	38	<0.8	4800	30	7	<b>67</b>	12000	<b>130</b>	2800	170	< 1.5	<b>86</b>	< 1	29	25	29	
		14439	0 - 5	9000	<b>1.6</b>	6	46	<0.8	6100	30	6	<b>67</b>	12000	<b>92</b>	2700	180	< 1.5	<b>85</b>	< 1	31	25	29	
Area B soil	5037162	14442	0 - 5	9000	0.8	5	34	<0.8	6100	31	6	41	13000	24	3500	210	< 1.5	<b>59</b>	< 1	32	27	26	
Area C grass	5037161	14440	0 - 5	7900	<0.8	8	31	<0.8	3100	30	6	<b>89</b>	10000	49	1600	120	< 1.5	<b>100</b>	< 1	22	22	24	
		14441	0 - 5	6900	<0.8	7	34	<0.8	3700	45	7	<b>93</b>	9700	<b>120</b>	1700	130	< 1.5	<b>120</b>	< 1	23	21	28	
Area D soil	5037163	14443	0 - 5	10000	<0.8	5	45	<0.8	3100	38	8	43	17000	13	3900	230	< 1.5	<b>69</b>	< 1	25	32	28	
<b>St. Christopher - Sudbury Catholic District School Board, 2843 CKSO Road, Sudbury</b>																							
Area A sand	5037013	14052	0 - 15	10000	<0.8	< 5	25	<0.8	3300	53	8	23	16000	30	5100	200	< 1.5	<b>4.1</b>	25	< 1	26	48	110
		14053	0 - 15	10000	<0.8	< 5	24	<0.8	3400	32	9	23	17000	3	4500	190	< 1.5	22	< 1	28	33	19	
Area B gravel	5037014	14054	0 - 5	12000	<0.8	< 5	39	<0.8	5700	36	8	27	20000	8	5400	260	< 1.5	35	< 1	39	41	30	
		14055	0 - 5	11000	<0.8	< 5	38	<0.8	5700	38	7	26	20000	7	5400	270	< 1.5	37	< 1	37	41	29	

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area C grass	5037015	14056	0 - 5	9500	<0.8	< 5	40	<0.8	3600	33	7	23	16000	4	3900	210	< 1.5	30	< 1	31	32	19
		14057	0 - 5	9400	<0.8	< 5	40	<0.8	3700	31	7	25	16000	5	3900	210	< 1.5	34	< 1	31	32	20
<b>St. David - Sudbury Catholic District School Board, 350 Jean Street, Sudbury</b>																						
Area A gravel	5037118	14267	0 - 5	4600	<0.8	< 5	18	<0.8	2900	20	6	18	11000	3	3200	140	< 1.5	27	< 1	18	24	17
		14268	0 - 5	6000	<0.8	< 5	29	<0.8	3200	28	13	<b>88</b>	15000	8	4000	170	< 1.5	<b>92</b>	< 1	24	30	42
<b>St. Denis - Le Conseil Scolaire Catholique du Nouvel - Ontario, 347 Rue Hyland, Sudbury</b>																						
Area A grass	5037074	14149	0 - 5	9500	<0.8	< 5	36	<0.8	2600	26	8	<b>200</b>	13000	25	1900	180	< 1.5	<b>150</b>	< 1	24	25	65
		14150	0 - 5	10000	<0.8	< 5	45	<0.8	3500	26	9	<b>180</b>	13000	23	2100	200	< 1.5	<u><b>160</b></u>	<b>2</b>	34	27	130
		14151	5 - 10	11000	<0.8	< 5	39	<0.8	2900	24	5	<b>52</b>	12000	9	1700	210	< 1.5	<b>67</b>	1	30	26	42
		14152	5 - 10	12000	<0.8	< 5	39	<0.8	3000	26	5	41	13000	9	1800	220	< 1.5	<b>60</b>	< 1	35	27	31
		14153	10 - 20	9100	<0.8	< 5	41	<0.8	3300	24	6	49	12000	10	2200	210	< 1.5	<b>74</b>	< 1	28	25	28
Area B gravel	5037075	14155	0 - 5	6600	<0.8	< 5	28	<0.8	3300	31	12	<b>71</b>	17000	7	4200	180	< 1.5	<b>72</b>	< 1	26	31	29
		14156	0 - 5	6200	<0.8	< 5	26	<0.8	3000	30	14	<b>87</b>	16000	10	4400	180	< 1.5	<b>91</b>	< 1	23	28	31
Area C sand	5037076	14157	0 - 15	5500	<0.8	< 5	18	<0.8	2200	28	9	34	14000	4	4200	160	< 1.5	37	< 1	16	26	23
		14158	0 - 15	5800	<0.8	< 5	18	<0.8	2400	29	8	29	15000	3	4200	170	< 1.5	32	< 1	18	27	25
<b>St. Dominique - Le Conseil Scolaire Catholique du Nouvel - Ontario, 2096 Rue Montfort, Sudbury</b>																						
Area A grass	5037155	14381	0 - 5	8000	<0.8	< 5	46	<0.8	3000	27	11	<b>74</b>	13000	19	3400	200	< 1.5	<b>110</b>	< 1	23	27	28
		14382	0 - 5	8400	<0.8	< 5	49	<0.8	2900	28	13	<b>77</b>	14000	21	3600	200	< 1.5	<b>120</b>	< 1	22	27	30
		14389	5 - 10	5400	<0.8	< 5	20	<0.8	1900	24	6	14	13000	2	3100	160	< 1.5	23	< 1	18	28	15
		14390	5 - 10	5500	<0.8	< 5	23	<0.8	1700	27	6	16	14000	3	2700	160	< 1.5	24	< 1	19	34	16
Area B sand	5037156	14383	0 - 15	9500	<0.8	8	47	<0.8	3300	34	16	<b>170</b>	20000	21	5200	240	< 1.5	<u><b>190</b></u>	1	33	36	40
Area C grass	5037157	14385	0 - 5	10000	<0.8	5	43	<0.8	9900	32	8	<b>110</b>	14000	18	3400	270	< 1.5	<b>130</b>	1	45	29	33
		14386	0 - 5	11000	<0.8	< 5	42	<0.8	7300	32	7	<b>100</b>	14000	12	3100	220	< 1.5	<b>77</b>	< 1	43	31	27
Area D gravel	5037158	14387	0 - 5	12000	<0.8	5	41	<0.8	7600	34	7	50	15000	11	5400	210	< 1.5	<b>73</b>	< 1	49	33	26
		14388	0 - 5	11000	<0.8	< 5	35	<0.8	8300	34	7	55	15000	11	3300	230	< 1.5	<b>78</b>	< 1	48	32	27
Area E gravel	5037159	14384	0 - 5	7700	<0.8	8	37	<0.8	3100	31	16	<b>170</b>	18000	23	4400	220	< 1.5	<u><b>170</b></u>	1	26	33	36
<b>St. Etienne - Le Conseil Scolaire Catholique du Nouvel - Ontario, C.P. 310, 79 Rue Houle, Dowling</b>																						
Area A gravel	5037400	14554	0 - 5	9000	<0.8	< 5	28	<0.8	3900	33	9	42	21000	20	5600	240	< 1.5	35	< 1	31	42	35
		14555	0 - 5	9000	<0.8	< 5	29	<0.8	3700	34	9	41	21000	16	5700	250	< 1.5	34	< 1	28	42	37

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			



**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area B sand	5037401	14556	0 - 15	6700	<0.8	< 5	21	<0.8	4000	36	7	23	18000	5	4400	210	< 1.5	21	< 1	28	38	28
<b>St. Francis - Sudbury Catholic District School Board, 691 Lilac Street, Sudbury</b>																						
Area A gravel	5037069	14141	0 - 5	5400	<0.8	< 5	24	<0.8	2600	31	12	<b>140</b>	15000	15	3800	150	< 1.5	<b>150</b>	< 1	19	27	40
		14142	0 - 5	5800	<0.8	< 5	25	<0.8	2700	30	13	<b>160</b>	15000	15	3900	150	< 1.5	<b>150</b>	< 1	20	26	40
Area B sand	5037070	14143	0 - 15	6900	<0.8	< 5	21	<0.8	3200	32	8	30	17000	4	4500	190	< 1.5	32	< 1	22	34	21
Area C gravel	5037071	14144	0 - 5	7400	<0.8	< 5	39	<0.8	4000	35	13	<b>140</b>	16000	10	4800	190	< 1.5	<b>130</b>	< 1	24	29	56
		14145	0 - 5	7600	<0.8	< 5	39	<0.8	4100	38	15	<b>180</b>	17000	15	4700	200	< 1.5	<b>170</b>	< 1	26	32	110
<b>St. Gabriel (Better Beginnings) - Le Conseil Scolaire Catholique du Nouvel - Ontario, 450 Morin Street, Sudbury</b>																						
Area A gravel	5037127	14284	0 - 5	7400	<0.8	7	31	<0.8	3500	34	<b>20</b>	<b>190</b>	20000	19	4400	200	< 1.5	<b>180</b>	< 1	25	34	41
		14285	0 - 5	7100	<0.8	6	31	<0.8	3400	31	<b>21</b>	<b>200</b>	19000	21	4200	190	< 1.5	<b>200</b>	< 1	26	31	47
Area B sand	5037128	14286	0 - 15	5400	<0.8	5	27	<0.8	2500	23	8	25	14000	3	3400	190	< 1.5	23	< 1	18	33	16
		14287	0 - 15	4900	<0.8	< 5	23	<0.8	2100	20	8	22	13000	3	3200	170	< 1.5	22	< 1	15	26	15
<b>St. James - Sudbury Catholic District School Board, 280 Anderson Drive, Lively</b>																						
Area A gravel	5037244	14719	0 - 5	8100	<0.8	5	30	<0.8	3600	32	11	<b>64</b>	15000	9	4500	250	< 1.5	<b>70</b>	< 1	23	31	34
		14720	0 - 5	6300	<0.8	< 5	30	<0.8	2500	29	10	48	14000	7	4100	250	< 1.5	<b>47</b>	< 1	17	32	30
<b>St. Jean (formerly) - Le Conseil Scolaire Catholique du Nouvel - Ontario, 1127 Promenade Bancroft, Sudbury</b>																						
Area A gravel	5037139	14292	0 - 5	9400	<0.8	6	35	<0.8	4200	46	14	<b>140</b>	20000	18	5600	250	1.9	<b>140</b>	1	32	41	49
		14293	0 - 5	7200	<0.8	7	30	<0.8	3400	35	15	<b>160</b>	17000	17	4300	180	< 1.5	<b>180</b>	< 1	26	31	36
Area B sand	5037140	14294	0 - 15	5100	<0.8	6	22	<0.8	2900	27	6	34	12000	4	2900	150	< 1.5	37	< 1	21	26	24
<b>St. John - Sudbury Catholic District School Board, 181 William Street, Garson</b>																						
Area A gravel	5037276	14415	0 - 5	6700	<0.8	8	27	<0.8	2700	27	8	<b>57</b>	14000	10	3000	170	< 1.5	<b>68</b>	< 1	22	29	28
		14416	0 - 5	6300	<0.8	9	25	<0.8	2700	26	9	<b>59</b>	14000	10	3200	170	< 1.5	<b>73</b>	< 1	22	30	28
Area B gravel	5037277	14417	0 - 5	6000	<0.8	7	29	<0.8	2500	24	7	43	11000	7	2800	150	< 1.5	<b>62</b>	< 1	18	26	25
		14418	0 - 5	5800	<0.8	6	29	<0.8	2600	24	8	51	12000	7	2900	160	< 1.5	<b>71</b>	< 1	19	24	24

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600

< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area C sand	5037278	14419	0 - 15	4100	<0.8	< 5	19	<0.8	3400	20	5	12	9900	2	2600	130	< 1.5	18	< 1	15	23	16
<b>St. Joseph - Le Conseil Scolaire Catholique du Nouvel - Ontario, 100 Bruyere Street, Sudbury</b>																						
Area A sand	5037129	14288	0 - 15	5800	<0.8	< 5	21	<0.8	2700	25	7	28	14000	3	3600	170	< 1.5	22	< 1	20	27	18
		14289	0 - 15	5800	<0.8	< 5	19	<0.8	2300	26	8	23	14000	3	3300	170	< 1.5	23	< 1	18	27	16
Area B gravel	5037130	14290	0 - 5	6700	<0.8	5	32	<0.8	3500	34	16	<b>170</b>	18000	21	4300	200	< 1.5	<b>170</b>	< 1	23	33	38
		14291	0 - 5	6600	<0.8	6	31	<0.8	3200	33	<b>22</b>	<b>170</b>	18000	22	4200	190	< 1.5	<b>190</b>	< 1	31	32	36
<b>St. Joseph - Le Conseil Scolaire Catholique du Nouvel - Ontario, 1215 Rue St. Anthony, Hanmer</b>																						
Area A gravel	5037309	14651	0 - 5	7100	<0.8	6	35	<0.8	3100	31	15	49	19000	9	4300	200	< 1.5	<b>49</b>	< 1	24	34	33
		14652	0 - 5	5600	<0.8	< 5	26	<0.8	2200	27	15	38	16000	9	3800	160	< 1.5	<b>45</b>	< 1	16	28	29
Area B sand	5037310	14653	0 - 15	8700	<0.8	< 5	41	<0.8	2900	46	9	43	22000	6	5200	250	< 1.5	35	< 1	18	51	29
Area C grass	5037311	14654	0 - 5	7100	<0.8	< 5	37	<0.8	2900	28	8	53	14000	10	3700	200	< 1.5	<b>59</b>	< 1	21	30	26
		14655	0 - 5	8700	<0.8	< 5	46	<0.8	3600	31	11	52	17000	11	4200	210	< 1.5	<b>55</b>	< 1	29	32	31
<b>St. Joseph - Le Conseil Scolaire Catholique du Nouvel - Ontario, 3634 Avenue Errington, Chelmsford</b>																						
Area A grass	5037396	14544	0 - 5	7700	<0.8	< 5	20	<0.8	2400	22	4	22	11000	10	1600	120	< 1.5	30	< 1	25	26	18
		14545	0 - 5	6800	<0.8	< 5	19	<0.8	2100	20	3	26	10000	10	1500	110	< 1.5	33	< 1	21	23	20
		14546	5 - 10	6900	<0.8	< 5	20	<0.8	1800	20	3	11	9200	6	1400	100	< 1.5	21	< 1	18	21	15
		14547	5 - 10	7500	<0.8	< 5	20	<0.8	2100	20	3	18	11000	9	1500	110	< 1.5	27	< 1	22	25	18
		14548	10 - 20	7800	<0.8	< 5	18	<0.8	2000	21	3	4	10000	4	1700	98	< 1.5	13	< 1	19	23	12
Area B grass	5037397	14550	0 - 5	7000	<0.8	6	24	<0.8	1700	18	3	23	11000	8	1200	100	< 1.5	33	< 1	20	26	19
		14551	0 - 5	8600	<0.8	7	28	<0.8	2600	24	4	38	13000	12	1400	140	< 1.5	<b>50</b>	< 1	29	32	21
Area C sand	5037398	14552	0 - 15	5400	<0.8	< 5	21	<0.8	1900	22	5	13	12000	3	3000	150	< 1.5	21	< 1	18	27	15
Area D sand	5037399	14553	0 - 15	5000	<0.8	< 5	20	<0.8	2200	24	5	13	12000	2	3000	150	< 1.5	19	< 1	17	28	18
<b>St. Kevin (Bishop Alexander C.C.S.S.) - Sudbury Catholic District School Board, 3075 River Road, Val Caron</b>																						
Area A gravel	5037288	14774	0 - 5	9100	<0.8	< 5	31	<0.8	3900	42	12	<b>59</b>	21000	12	5900	240	< 1.5	<b>57</b>	< 1	28	38	38
		14775	0 - 5	8800	<0.8	< 5	29	<0.8	3700	40	15	<b>64</b>	21000	10	6000	240	< 1.5	<b>63</b>	< 1	25	38	39
Area B gravel	5037289	14776	0 - 5	10000	<0.8	< 5	37	<0.8	4200	42	10	<b>71</b>	21000	14	6100	250	< 1.5	<b>68</b>	< 1	29	39	37
		14777	0 - 5	10000	<0.8	< 5	36	<0.8	4400	44	11	<b>82</b>	23000	12	6400	280	< 1.5	<b>92</b>	< 1	31	46	38

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>St. Mary - Sudbury Catholic District School Board, 26 Meehan Avenue, Capreol</b>																						
Area A gravel	5037352	14582	0 - 5	12000	<0.8	6	32	<0.8	1700	27	8	<b>69</b>	17000	22	2600	280	< 1.5	<b>69</b>	< 1	16	34	46
		14583	0 - 5	13000	<0.8	8	31	<0.8	1800	26	7	<b>97</b>	15000	25	2200	250	< 1.5	<b>72</b>	< 1	18	33	48
<b>St. Michael - Sudbury Catholic District School Board, 41 Samson Street, Sudbury</b>																						
Area A gravel	5037083	14132	0 - 5	7200	<0.8	< 5	26	<0.8	3900	29	11	<b>120</b>	19000	11	5100	170	< 1.5	<b>130</b>	< 1	19	30	32
		14133	0 - 5	6500	<0.8	< 5	29	<0.8	5100	29	11	<b>120</b>	15000	11	4200	180	< 1.5	<b>140</b>	< 1	24	27	65
<b>St. Michel Le Conseil Scolaire Catholique du Nouvel - Ontario, 4500 Rue St. Michele, Hanmer</b>																						
Area A gravel	5037330	14622	0 - 5	6500	<0.8	< 5	34	<0.8	2300	30	<b>24</b>	<b>66</b>	21000	11	4300	170	< 1.5	<b>53</b>	< 1	15	32	33
		14623	0 - 5	5700	<0.8	< 5	30	<0.8	2200	26	18	53	17000	9	3700	150	< 1.5	<b>56</b>	< 1	14	28	27
Area B sand	5037331	14624	0 - 15	4500	<0.8	< 5	18	<0.8	2300	23	5	15	11000	2	3000	150	< 1.5	16	< 1	11	27	18
<b>St. Paul - Le Conseil Scolaire Catholique du Nouvel - Ontario, 185 6<sup>th</sup> Avenue, Lively</b>																						
Area A grass	5037245	14721	0 - 5	11000	<0.8	6	67	<0.8	6800	34	10	<b>110</b>	15000	19	3300	260	< 1.5	<b>150</b>	< 1	40	32	53
		14722	0 - 5	10000	<0.8	< 5	58	<0.8	6300	31	9	<b>93</b>	12000	15	2900	240	< 1.5	<b>130</b>	1	39	30	42
		14723	5 - 10	10000	<0.8	7	53	<0.8	3300	32	10	<b>100</b>	16000	14	3300	190	< 1.5	<b>130</b>	< 1	31	31	50
Area B gravel	5037246	14724	0 - 5	6400	<0.8	< 5	30	<0.8	2900	34	11	<b>83</b>	17000	13	4400	210	< 1.5	<b>90</b>	< 1	21	34	36
		14725	0 - 5	6900	<0.8	< 5	31	<0.8	3400	35	11	<b>79</b>	17000	12	4400	210	< 1.5	<b>83</b>	< 1	26	35	35
<b>St. Paul - Sudbury Catholic District School Board, 1 Edward Avenue North, Coniston</b>																						
Area A gravel	5037263	14752	0 - 5	8900	<0.8	6	43	<0.8	4300	35	14	<b>99</b>	18000	12	5500	250	< 1.5	<b>120</b>	< 1	28	34	42
		14753	0 - 5	9500	<0.8	6	45	<0.8	4300	43	14	<b>100</b>	19000	14	5800	260	< 1.5	<b>120</b>	< 1	28	32	46
Area B sand	5037264	14754	0 - 15	4600	<0.8	< 5	26	<0.8	2400	18	6	15	10000	2	2700	130	< 1.5	17	< 1	18	23	13
<b>St. Pierre - Le Conseil Scolaire Catholique du Nouvel - Ontario, 70 Rue Wilfred, Sudbury</b>																						
Area A gravel	5037266	14772	0 - 5	8000	<0.8	< 5	39	<0.8	4800	35	<b>29</b>	<b>93</b>	22000	7	4900	230	< 1.5	<b>120</b>	< 1	28	34	39
		14773	0 - 5	8300	<0.8	< 5	39	<0.8	5200	33	17	<b>82</b>	18000	7	4700	210	< 1.5	<b>88</b>	< 1	30	30	31
<b>St. Raphael - Sudbury Catholic District School Board, 1096 Dublin Street, Sudbury</b>																						
Area A gravel	5037193	14460	0 - 5	8300	<0.8	< 5	34	<0.8	3400	35	12	<b>93</b>	18000	14	4500	220	< 1.5	<b>96</b>	< 1	31	36	77
		14461	0 - 5	6400	<0.8	< 5	30	<0.8	3000	26	8	42	14000	8	3300	170	< 1.5	<b>47</b>	< 1	24	28	27
<b>St. Theresa - Sudbury Catholic District School Board, 56 Walford Road, Sudbury</b>																						
Area A sand	5037050	14106	0 - 15	6700	<0.8	< 5	21	<0.8	3200	28	7	18	15000	3	3900	180	< 1.5	21	< 1	28	31	16

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area B sand	5037051	14107	0 - 15	6600	<0.8	< 5	20	<0.8	3100	28	7	17	14000	3	4100	170	< 1.5	21	< 1	26	26	15
Area C sand	5037052	14108	0 - 15	6500	<0.8	< 5	21	<0.8	2700	29	7	20	14000	3	4200	180	< 1.5	24	< 1	24	29	18
Area D gravel	5037053	14109	0 - 5	7400	<0.8	< 5	28	<0.8	3400	34	15	<b>97</b>	18000	9	4900	190	< 1.5	<b>110</b>	< 1	26	29	34
		14110	0 - 5	7700	<0.8	< 5	28	<0.8	3500	36	17	<b>97</b>	19000	9	5000	190	< 1.5	<b>110</b>	< 1	28	30	31
<b>St. Thomas (formerly) - Sudbury Catholic District School Board - Ontario, 504 St. Raphael Street, Sudbury</b>																						
Area A sand	5037094	14191	0 - 15	6500	<0.8	< 5	18	<0.8	2200	30	7	21	15000	3	5200	200	< 1.5	27	< 1	14	25	25
Area B sand	5037095	14192	0 - 15	6000	<0.8	< 5	19	<0.8	2500	29	7	22	16000	3	4100	180	< 1.5	23	< 1	16	32	23
Area C gravel	5037096	14193	0 - 5	5100	<0.8	< 5	27	<0.8	3000	24	11	<b>100</b>	13000	11	3300	170	< 1.5	<b>130</b>	< 1	16	25	<b>200</b>
		14194	0 - 5	5200	<0.8	< 5	28	<0.8	2600	24	11	<b>100</b>	13000	11	3400	170	< 1.5	<b>130</b>	< 1	16	24	150
Area D gravel	5037097	14195	0 - 5	6400	<0.8	< 5	31	<0.8	2800	32	<b>22</b>	<b>130</b>	18000	11	4600	190	< 1.5	<b>150</b>	< 1	20	30	40
		14196	0 - 5	8100	<0.8	5	42	<0.8	3800	35	<b>23</b>	<b>140</b>	19000	12	4900	210	< 1.5	<b>190</b>	< 1	29	33	39
<b>Ste. Marie - Le Conseil Scolaire Catholique du Nouvel - Ontario, 25 Rue Marier, Azilda</b>																						
Area A gravel	5037373	14500	0 - 5	8100	<0.8	< 5	34	<0.8	4400	36	12	<b>68</b>	18000	14	5000	230	< 1.5	<b>85</b>	< 1	35	36	46
		14501	0 - 5	8000	<0.8	< 5	34	<0.8	4500	32	11	<b>58</b>	18000	12	5100	230	< 1.5	<b>60</b>	< 1	33	36	42
Area B sand	5037374	14502	0 - 15	5200	<0.8	< 5	17	<0.8	3500	23	5	17	13000	4	3200	170	< 1.5	19	< 1	25	28	25
<b>Ste. Therese - Le Conseil Scolaire Catholique du Nouvel - Ontario, 4617 Rue Ste. Therese, Val Therese</b>																						
Area A sand	5037306	14656	0 - 15	4900	<0.8	< 5	17	<0.8	3000	24	5	9	12000	2	3100	150	< 1.5	14	< 1	19	28	14
Area B gravel	5037307	14657	0 - 5	7500	<0.8	< 5	26	<0.8	3800	39	8	37	16000	8	4400	230	< 1.5	36	< 1	29	34	27
		14658	0 - 5	8100	<0.8	< 5	28	<0.8	3800	37	8	44	17000	10	5000	230	< 1.5	40	< 1	30	37	32
Area C grass	5037308	14659	0 - 5	8800	<0.8	6	36	<0.8	4000	28	7	48	13000	14	2800	230	< 1.5	<b>55</b>	< 1	35	29	34
		14660	0 - 5	9300	<0.8	< 5	37	<0.8	3900	34	7	44	15000	12	3300	230	< 1.5	<b>46</b>	< 1	34	34	38
<b>E.P. Sud Ouest Publique (Helene-Gravel) - Conseil Scolaire du District de Grand Nord de L'Ontario, 1412 Rue Stephen, Sudbury</b>																						
Area A soil	5037041	14096	0 - 5	10000	<0.8	< 5	49	<0.8	8600	35	8	<b>140</b>	14000	18	4300	240	< 1.5	<b>160</b>	< 1	41	31	35
		14097	0 - 5	11000	<0.8	< 5	47	<0.8	8900	35	9	<b>130</b>	14000	28	4200	240	< 1.5	<b>170</b>	< 1	43	30	35
Area B grass	5037042	14098	0 - 5	10000	<0.8	< 5	48	<0.8	7700	34	8	<b>120</b>	14000	16	4100	250	< 1.5	<b>140</b>	< 1	38	30	34
		14099	0 - 5	11000	<0.8	5	57	<0.8	9100	36	9	<b>170</b>	15000	19	4200	280	< 1.5	<b>190</b>	<b>1.7</b>	47	32	39

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area C grass	5037043	14090	0 - 5	9400	<0.8	< 5	44	<0.8	7800	31	8	<b>130</b>	14000	16	4000	220	< 1.5	<b>150</b>	1.3	36	27	30
		14091	0 - 5	9600	<0.8	< 5	44	<0.8	7300	30	8	<b>130</b>	13000	31	3900	210	< 1.5	<b>130</b>	1.1	36	27	31
Area D soil	5037044	14092	0 - 5	10000	<b>2</b>	< 5	37	<0.8	5700	30	8	<b>110</b>	13000	<b>120</b>	3200	220	< 1.5	<b>120</b>	< 1	43	29	29
Area E soil	5037045	14093	0 - 5	7600	<0.8	< 5	26	<0.8	3200	30	9	47	17000	4	4500	200	< 1.5	<b>47</b>	< 1	26	31	23
Area F sand	5037046	14094	0 - 15	10000	<0.8	< 5	46	<0.8	12000	33	8	<b>110</b>	14000	14	5500	250	< 1.5	<b>130</b>	< 1	46	29	28
		14095	0 - 15	8100	<0.8	< 5	34	<0.8	3400	33	8	54	18000	4	4700	210	< 1.5	<b>53</b>	< 1	24	36	32
<b>Sudbury Secondary School - Rainbow District School Board, 85 Mackenzie Street, Sudbury</b>																						
Area A grass	5037131	14249	0 - 5	10000	<0.8	6	43	0.8	6200	34	9	<b>150</b>	13000	29	3100	220	< 1.5	<b>170</b>	1	41	30	40
		14250	0 - 5	9200	<0.8	7	37	<0.8	5100	30	8	<b>110</b>	12000	21	2800	210	< 1.5	<b>130</b>	< 1	34	28	32
		14251	5 - 10	11000	<0.8	6	36	<0.8	5600	32	7	<b>62</b>	14000	13	3000	240	< 1.5	<b>76</b>	< 1	45	33	27
		14252	5 - 10	11000	<0.8	7	37	<0.8	5500	32	7	<b>73</b>	14000	19	2900	210	< 1.5	<b>92</b>	< 1	42	31	29
		14253	10 - 20	11000	<0.8	5	42	<0.8	5500	33	8	<b>97</b>	15000	20	2900	220	< 1.5	<b>110</b>	< 1	45	33	30
		14254	10 - 20	11000	<0.8	< 5	37	<0.8	5300	33	8	<b>76</b>	14000	22	3000	230	< 1.5	<b>98</b>	< 1	42	31	31
Area B soil	5037132	14255	0 - 5	10000	<0.8	6	39	<0.8	6000	32	8	<b>85</b>	13000	16	3300	240	< 1.5	<b>100</b>	< 1	47	33	31
Area C soil	5037133	14256	0 - 5	12000	<0.8	7	42	<0.8	6700	37	7	<b>65</b>	15000	19	3300	270	< 1.5	<b>86</b>	< 1	52	37	31
<b>Val Caron Public School - Rainbow District School Board, 1555 Main Street East, Val Caron</b>																						
Area A grass	5037286	14778	0 - 5	12000	<0.8	< 5	46	<0.8	6000	36	7	47	15000	16	3500	240	< 1.5	<b>62</b>	< 1	43	34	43
		14779	0 - 5	12000	<0.8	< 5	48	<0.8	6100	37	7	42	16000	14	3600	250	< 1.5	<b>55</b>	< 1	42	35	37
		14780	5 - 10	12000	<0.8	< 5	44	<0.8	5600	35	6	42	15000	14	3300	230	< 1.5	<b>58</b>	< 1	37	32	41
		14781	5 - 10	13000	<0.8	< 5	46	<0.8	6200	38	7	41	16000	15	3700	250	< 1.5	<b>56</b>	< 1	40	35	43
		14782	10 - 20	9500	<0.8	< 5	36	<0.8	4000	28	5	42	12000	12	2400	160	< 1.5	<b>57</b>	< 1	28	27	26
		14783	10 - 20	12000	<0.8	< 5	40	<0.8	5500	35	6	45	15000	12	3300	210	< 1.5	<b>52</b>	< 1	38	33	39
Area B sand	5037287	14784	0 - 15	5500	<0.8	< 5	21	<0.8	4100	23	5	11	12000	2	3500	150	< 1.5	17	< 1	21	25	18
		14785	0 - 15	5000	<0.8	< 5	18	<0.8	11000	23	5	12	13000	2	5900	150	< 1.5	17	< 1	22	29	18

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

Table B4.1: Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Valleyview Public School - Rainbow District School Board, 1840 Valley View Road, Val Caron</b>																						
Area A grass	5037281	14826	0 - 5	12000	<0.8	< 5	45	<0.8	5500	37	7	48	16000	14	3600	250	< 1.5	<b>65</b>	< 1	41	36	31
		14827	0 - 5	11000	<0.8	< 5	43	<0.8	5300	37	7	46	16000	14	3500	240	< 1.5	<b>64</b>	< 1	37	34	31
		14828	5 - 10	11000	<0.8	< 5	42	<0.8	5000	37	7	38	15000	12	3500	250	< 1.5	<b>59</b>	< 1	34	33	29
		14829	10 - 20	12000	<0.8	< 5	39	<0.8	5400	35	7	31	16000	10	3300	230	< 1.5	<b>57</b>	< 1	42	35	28
Area B soil	5037282	14832	0 - 5	10000	<0.8	< 5	51	<0.8	4300	40	12	<b>76</b>	20000	9	5800	270	< 1.5	<b>110</b>	< 1	34	43	38
		14833	0 - 5	10000	<0.8	< 5	50	<0.8	4200	41	11	<b>59</b>	20000	10	5900	280	< 1.5	<b>55</b>	< 1	33	41	38
Area C grass	5037283	14834	0 - 5	12000	<0.8	< 5	53	<0.8	7400	40	10	<b>90</b>	17000	21	3400	310	< 1.5	<b>120</b>	1.2	39	32	51
		14835	0 - 5	11000	<0.8	< 5	54	<0.8	6700	41	9	<b>91</b>	15000	22	3000	330	< 1.5	<b>120</b>	1.2	42	33	56
Area D soil	5037284	14836	0 - 5	11000	<0.8	< 5	45	<0.8	6400	36	6	47	14000	11	3000	280	< 1.5	<b>71</b>	< 1	39	30	43
Area E sand	5037285	14837	0 - 15	5800	<0.8	< 5	23	<0.8	3000	25	6	13	14000	2	3800	180	< 1.5	23	< 1	18	31	17
		14838	0 - 15	5400	<0.8	< 5	20	<0.8	2600	23	5	12	11000	2	3300	150	< 1.5	20	< 1	18	22	16
<b>Wanup Public School - Rainbow District School Board, 4543 Highway 537, Sudbury</b>																						
Area A grass	5037002	14223	0 - 5	7100	<0.8	< 5	30	<0.8	2100	21	5	56	9900	13	1600	180	< 1.5	<b>65</b>	< 1	22	23	22
		14224	0 - 5	8400	<0.8	< 5	29	<0.8	2400	22	5	<b>58</b>	11000	12	1900	180	< 1.5	<b>59</b>	< 1	25	25	25
		14225	5 - 10	8200	<0.8	< 5	32	<0.8	2100	20	4	45	11000	9	1600	180	< 1.5	<b>58</b>	< 1	21	24	24
		14226	5 - 10	12000	<0.8	< 5	32	<0.8	2200	22	5	45	15000	9	1800	230	< 1.5	<b>64</b>	< 1	22	25	25
		14227	10 - 20	8300	<0.8	< 5	32	<0.8	2300	21	4	34	11000	7	1700	200	< 1.5	<b>56</b>	< 1	23	24	24
		14228	10 - 20	7700	<0.8	< 5	29	<0.8	1800	20	4	24	9900	6	1700	200	< 1.5	<b>48</b>	< 1	17	22	21
Area B grass	5037003	14229	0 - 5	8800	<0.8	< 5	35	<0.8	3100	25	5	51	12000	13	2000	180	< 1.5	<b>66</b>	< 1	32	28	23
		14230	0 - 5	9300	<0.8	< 5	36	<0.8	3400	24	5	53	12000	12	1900	180	< 1.5	<b>66</b>	< 1	36	28	24
		14231	5 - 10	10000	<0.8	< 5	36	<0.8	2900	24	4	41	13000	9	1800	180	< 1.5	<b>53</b>	< 1	32	29	25
		14232	5 - 10	9600	<0.8	< 5	33	<0.8	2800	23	4	38	12000	8	1800	150	< 1.5	<b>50</b>	< 1	29	28	25
		14233	10 - 20	9900	<0.8	< 5	38	<0.8	3300	24	4	32	12000	7	1900	190	< 1.5	<b>48</b>	< 1	34	28	25
		14234	10 - 20	10000	<0.8	< 5	34	<0.8	3000	25	4	25	13000	6	1900	180	< 1.5	<b>44</b>	< 1	32	28	24
Area C soil	5037004	14235	0 - 5	7200	<0.8	< 5	36	<0.8	9800	30	9	27	15000	4	5000	200	< 1.5	27	< 1	61	31	27
		14236	0 - 5	9400	<0.8	< 5	34	<0.8	5100	36	9	38	19000	4	5300	220	< 1.5	<b>55</b>	< 1	35	34	24
Area D sand	5037005	14237	0 - 15	7700	<0.8	< 5	23	<0.8	3400	33	7	19	17000	3	4400	190	< 1.5	21	< 1	29	33	24

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1:** Concentration of 19 Elements in Soil in µg/g Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Wembley Public School - Rainbow District School Board, 408 Wembley Drive, Sudbury</b>																						
Area A grass	5037077	14159	0 - 5	8600	<0.8	< 5	37	<0.8	3700	31	16	<b>160</b>	15000	16	2600	190	< 1.5	<b>180</b>	< 1	29	26	37
		14160	0 - 5	9200	<0.8	< 5	33	<0.8	3700	29	7	<b>81</b>	12000	11	2500	180	< 1.5	<b>88</b>	< 1	31	27	30
Area B soil	5037078	14161	0 - 5	9400	<0.8	< 5	30	<0.8	4200	30	5	41	13000	8	2500	200	< 1.5	<b>60</b>	< 1	37	29	22
Area C soil	5037079	14162	0 - 5	8700	<0.8	< 5	34	<0.8	3700	29	8	<b>120</b>	12000	16	2500	170	< 1.5	<b>130</b>	< 1	36	27	40
Area D soil	5037080	14163	0 - 5	6500	<0.8	< 5	27	<0.8	3400	25	9	<b>66</b>	13000	7	3200	180	< 1.5	<b>63</b>	< 1	29	27	20
Area E sand	5037081	14164	0 - 15	5900	<0.8	< 5	19	<0.8	2700	28	7	24	14000	3	3800	170	< 1.5	29	< 1	19	29	18
Area F sand	5037082	14165	0 - 15	6200	<0.8	< 5	21	<0.8	3300	30	7	35	16000	4	3700	180	< 1.5	43	< 1	23	33	23
<b>Westmount Avenue Public School - Rainbow District School Board, 511 Westmount Avenue, Sudbury</b>																						
Area A grass	5037174	14311	0 - 5	8700	<0.8	6	32	<0.8	3200	29	7	<b>70</b>	13000	15	2400	150	< 1.5	<b>81</b>	< 1	30	29	25
		14312	0 - 5	8300	<0.8	7	30	<0.8	2800	27	6	<b>63</b>	12000	13	2300	150	< 1.5	<b>66</b>	< 1	26	28	25
		14313	5 - 10	8200	<0.8	6	25	<0.8	2500	27	6	36	13000	7	2300	150	< 1.5	42	< 1	23	30	21
		14314	5 - 10	9500	<0.8	6	30	<0.8	2500	27	7	41	13000	8	2400	170	< 1.5	<b>54</b>	< 1	25	29	22
		14315	10 - 20	6800	<0.8	6	30	<0.8	2600	25	5	25	13000	5	2300	160	< 1.5	38	< 1	25	30	16
		14316	10 - 20	10000	<0.8	9	43	<0.8	3800	30	7	40	15000	8	2400	230	< 1.5	<b>58</b>	< 1	38	34	22
Area B sand	5037175	14317	0 - 15	4600	<0.8	< 5	19	<0.8	2700	28	7	15	15000	3	2900	160	< 1.5	21	< 1	18	34	14
Area C gravel	5037176	14318	0 - 5	9200	<0.8	6	38	<0.8	3800	29	9	<b>77</b>	14000	13	3100	230	< 1.5	<b>95</b>	< 1	32	28	27
		14319	0 - 5	8100	0.8	7	33	<0.8	3300	28	10	<b>84</b>	14000	13	3100	200	< 1.5	<b>100</b>	< 1	28	28	29
Area D grass	5037177	14320	0 - 5	9700	<0.8	< 5	34	<0.8	4200	26	6	53	12000	12	2700	170	< 1.5	<b>66</b>	< 1	25	25	28
		14321	0 - 5	10800	<0.8	5	48	<0.8	5500	36	9	<b>110</b>	14000	23	2800	240	< 1.5	<b>130</b>	1	39	30	38
Area E sand	5037178	14322	0 - 15	7300	<0.8	5	28	<0.8	2800	30	9	35	17000	4	3500	200	< 1.5	34	< 1	27	36	23
		14324	0 - 15	6400	<0.8	6	28	<0.8	2600	31	9	34	16000	4	3800	210	< 1.5	31	< 1	22	35	25

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.1:** Concentration of 19 Elements in Soil in  $\mu\text{g/g}$  Collected on 105 School Properties in the Sudbury Area in the Summer of 2001

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area F grass	5037179	14325	0 - 5	10700	< 0.8	5	39	< 0.8	4100	33	7	<b>71</b>	14000	16	2600	200	< 1.5	<b>86</b>	< 1	36	29	30
		14326	0 - 5	10300	< 0.8	< 5	33	< 0.8	4300	26	6	54	12000	11	2700	170	< 1.5	<b>68</b>	< 1	29	26	25
		14327	5 - 10	11200	< 0.8	< 5	36	< 0.8	3500	26	5	30	13000	7	2200	160	< 1.5	42	< 1	31	27	21
		14328	5 - 10	10500	< 0.8	< 5	33	< 0.8	3000	24	5	39	12000	8	2000	150	< 1.5	<b>50</b>	< 1	27	25	21
		14329	10 - 20	10200	< 0.8	< 5	36	< 0.8	2700	26	5	33	12000	9	2000	140	< 1.5	<b>49</b>	< 1	23	25	20
Area G sand	5037180	14331	0 - 15	7200	< 0.8	6	29	< 0.8	3100	28	9	42	16000	5	3900	190	< 1.5	37	< 1	26	32	22

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 $\mu\text{g/g}$ . NG - no guideline.																			



**Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Alexander Kids at Alexander Public School, 39 St. Brendan Street, Sudbury</b> This daycare is operated by Larch Street Kids and is located in the same building as Alexander Public School, Rainbow District School Board. See Alexander Public																						
<b>All Nations -South End, 2690 Henri Street, Sudbury</b>																						
Area A grass	5037008	14030	0 - 5	8300	< 0.8	< 5	31	< 0.8	3600	31	7	36	14000	6	3600	190	< 1.5	<b>48</b>	< 1	24	29	23
		14031	0 - 5	9900	< 0.8	< 5	31	< 0.8	4000	35	7	32	16000	6	4100	180	< 1.5	<b>49</b>	< 1	28	34	24
		14032	5 - 10	8700	< 0.8	< 5	25	< 0.8	2300	29	7	35	14000	5	3700	170	< 1.5	43	< 1	17	29	18
		14033	5 - 10	9500	< 0.8	< 5	28	< 0.8	3000	31	7	28	16000	5	3900	180	< 1.5	37	< 1	25	33	20
		14034	10 - 20	9400	< 0.8	< 5	26	< 0.8	2500	29	7	28	15000	5	3700	170	< 1.5	36	< 1	22	31	18
Area B sand	5037009	14036	0 - 15	4300	< 0.8	< 5	14	< 0.8	2400	23	4	14	11000	3	2500	150	< 1.5	16	< 1	17	27	14
		14037	0 - 15	4300	< 0.8	< 5	14	< 0.8	2300	24	3	15	11000	2	2600	150	< 1.5	11	< 1	16	26	14
Area C sand	5037010	14038	0 - 15	6200	< 0.8	< 5	19	< 0.8	2100	29	8	22	15000	3	4100	180	< 1.5	27	< 1	15	28	27
		14039	0 - 15	6200	< 0.8	< 5	20	< 0.8	2300	31	9	26	16000	4	4000	180	< 1.5	29	< 1	17	32	32
Area D grass	5037011	14040	0 - 5	6800	< 0.8	< 5	25	< 0.8	12000	30	7	33	13000	6	7300	190	< 1.5	<b>46</b>	< 1	23	23	20
		14041	0 - 5	7900	< 0.8	< 5	30	< 0.8	11000	35	9	38	13000	7	6500	210	< 1.5	<b>58</b>	< 1	27	25	27
		14042	5 - 10	7200	< 0.8	< 5	27	< 0.8	17000	25	6	32	12000	7	8500	200	< 1.5	<b>51</b>	< 1	33	25	17
		14043	5 - 10	7200	< 0.8	< 5	27	< 0.8	14000	25	6	30	12000	7	6900	190	< 1.5	<b>45</b>	< 1	38	26	19
		14044	10 - 20	8600	< 0.8	6	33	< 0.8	13000	27	7	<b>63</b>	13000	14	6500	220	< 1.5	<b>93</b>	< 1	39	28	28
Area E grass	5037012	14045	10 - 20	6300	< 0.8	6	26	< 0.8	10000	22	6	39	11000	9	5300	160	< 1.5	<b>58</b>	< 1	31	24	17
		14046	0 - 5	8600	< 0.8	< 5	39	< 0.8	6900	32	7	48	14000	10	4500	200	< 1.5	<b>66</b>	< 1	30	27	32
		14047	0 - 5	9500	< 0.8	< 5	40	< 0.8	7400	30	7	56	13000	11	4600	220	< 1.5	<b>85</b>	< 1	39	29	28
		14048	5 - 10	8700	< 0.8	< 5	39	< 0.8	9200	28	7	39	13000	9	5200	190	< 1.5	<b>62</b>	< 1	33	29	23
		14049	5 - 10	8600	< 0.8	< 5	36	< 0.8	7600	27	7	<b>65</b>	13000	13	4600	190	< 1.5	<b>92</b>	< 1	34	27	23
		14050	10 - 20	7400	< 0.8	< 5	31	< 0.8	7700	24	6	49	11000	11	4400	160	< 1.5	<b>72</b>	< 1	27	25	22
Area E grass	5037012	14051	10 - 20	7300	< 0.8	< 5	30	< 0.8	5700	24	5	44	11000	9	3200	170	< 1.5	<b>69</b>	< 1	29	25	20
		<b>All Nations St. Christopher, 2841 CKSO Rd., Sudbury</b> This daycare is located in the same building as St. Christopher School, Catholic District School Board. See St. Christopher School above for the results.																				
<b>Beattie Kids, 102 Loach's Rd., Sudbury</b> This daycare is operated by Larch Street Kids and is located in the same building as R.L. Beattie Public School, Rainbow District School Board. See R.L. Beattie Public School above for the results.																						

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150	
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600	
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																				

**Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
<b>Capreol Child Care Centre at St. Mary, 26 Meehan Street, Capreol</b>																						
Area A sand	5037353	14580	0 - 15	5200	< 0.8	< 5	15	< 0.8	1700	21	4	10	9900	3	2500	140	< 1.5	15	< 1	11	24	14
		14581	0 - 15	4500	< 0.8	< 5	14	< 0.8	1800	18	4	7	8700	3	2300	120	< 1.5	13	< 1	11	20	12
<b>Cedar Park Daycare #1, 1073 Beaumont Street, Sudbury</b>																						
Area A grass	5037206	14839	0 - 5	8000	< 0.8	< 5	53	< 0.8	8100	34	8	<b>99</b>	13000	15	3500	220	< 1.5	<b>110</b>	<b>1.6</b>	35	31	48
		14840	0 - 5	8600	< 0.8	< 5	57	0.9	9000	32	9	<b>130</b>	13000	21	3600	240	< 1.5	<b>130</b>	<b>1.5</b>	38	32	62
Area B sand	5037207	14841	0 - 15	6400	< 0.8	< 5	21	< 0.8	2600	26	6	15	13000	3	4200	160	< 1.5	24	< 1	19	23	19
		14842	0 - 15	4700	< 0.8	< 5	17	< 0.8	2400	23	5	19	12000	3	3100	140	< 1.5	26	< 1	16	26	18
<b>Cedar Park Daycare #2, 1096 Dublin St., Sudbury</b>																						
This daycare is located in the same building as St. Raphael School, Sudbury Catholic District School Board. See St. Raphael School above for the results.																						
<b>Centre Educatif Etoile du Nord at College Boreal, 21 Lasalle Boulevard, Sudbury</b>																						
Area A sand	5037201	14477	0 - 15	5400	< 0.8	7	26	< 0.8	2500	25	13	<b>92</b>	15000	7	3900	190	< 1.5	<b>90</b>	< 1	17	29	41
Area B sand	5037202	14478	0 - 15	5500	< 0.8	6	24	< 0.8	2500	23	11	<b>69</b>	14000	6	3500	180	< 1.5	<b>65</b>	< 1	18	29	32
<b>Circle of Friends, 106 Arlington Drive, Dowling</b>																						
Area A sand	5037405	14561	0 - 15	4300	< 0.8	< 5	16	< 0.8	2900	25	5	10	12000	2	3000	140	< 1.5	16	< 1	14	29	14
<b>Cotton Candy Daycare, 298 College Street, Sudbury</b>																						
Area A sand	5037113	14257	0 - 15	5900	< 0.8	< 5	20	< 0.8	2900	27	6	21	14000	3	3300	180	< 1.5	27	< 1	25	30	17
		14258	0 - 15	5500	< 0.8	< 5	17	< 0.8	3000	28	5	20	13000	3	3000	180	< 1.5	25	< 1	25	31	17
Area B sand	5037114	14259	0 - 15	8200	< 0.8	< 5	27	< 0.8	3000	30	8	36	16000	4	3400	200	< 1.5	39	< 1	32	32	24
		14260	0 - 15	6900	< 0.8	< 5	24	< 0.8	3200	29	8	36	15000	4	4200	190	< 1.5	39	< 1	24	31	22
<b>C.R. Judd Daycare at C.R. Judd Public School, 8 Lincoln Street, Capreol</b>																						
This daycare is located in the same building as C.R. Judd Public School, Rainbow District School Board. See C.R. Judd Public School above for the results.																						
<b>Garderie du Triangle Magique at St. Agnes, 80 Rue Landry, Azilda</b>																						
Area A sand	5037365	14487	0 - 15	4200	< 0.8	< 5	13	< 0.8	2500	21	4	8	9100	2	2000	130	< 1.5	15	< 1	18	23	13
Area B grass	5037366	14488	0 - 5	8500	< 0.8	5	31	< 0.8	5300	28	6	54	13000	12	2500	200	< 1.5	<b>69</b>	< 1	33	27	32
		14489	0 - 5	8500	< 0.8	< 5	34	< 0.8	5100	30	7	<b>64</b>	14000	14	3100	210	< 1.5	<b>71</b>	< 1	34	28	29
Area C sand	5037367	14490	0 - 15	3700	< 0.8	< 5	11	< 0.8	2100	21	3	8	8700	2	1900	120	< 1.5	14	< 1	15	21	15

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

<b>Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001</b>																						
Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area D grass	5037368	14491	0 - 5	8100	< 0.8	5	30	< 0.8	5000	25	6	54	12000	14	2300	200	< 1.5	<b>65</b>	< 1	33	26	31
		14492	0 - 5	7800	< 0.8	5	27	< 0.8	3600	24	5	35	11000	10	2100	190	< 1.5	<b>44</b>	< 1	28	24	28
Area E sand	5037369	14493	0 - 15	4300	< 0.8	<b>23</b>	12	< 0.8	2700	30	3	27	11000	2	1900	150	< 1.5	14	< 1	23	26	15
Area F grass	5037370	14494	0 - 5	7600	< 0.8	6	27	< 0.8	3900	24	5	45	11000	11	2100	180	< 1.5	<b>53</b>	< 1	30	24	25
		14495	0 - 5	8000	< 0.8	6	28	< 0.8	4200	25	5	46	12000	11	2200	190	< 1.5	<b>54</b>	< 1	31	26	25
<b>Garderie Jardiniere Francophone, 4752 rue Notre Dame, Hanmer</b>																						
This daycare is located in the same building as E.P. Foyer Jeunesse, Conseil Scolaire du District de Grand Nord de L'Ontario. See E.P. Foyer Jeunesse above for the results.																						
<b>Garderie Jardiniere Francophone formerly at Ecole Notre Dame, 4503 Rue Dennie, Hanmer</b>																						
Area A sand	5037325	14625	0 - 15	5500	< 0.8	< 5	22	< 0.8	2000	32	6	27	14000	4	3800	190	< 1.5	22	< 1	10	36	35
Area B gravel	5037326	14626	0 - 5	5200	< 0.8	< 5	20	< 0.8	2200	32	<b>33</b>	<b>80</b>	23000	13	4300	170	< 1.5	<b>67</b>	< 1	11	33	53
		14627	0 - 5	6000	< 0.8	< 5	22	< 0.8	2600	32	<b>22</b>	<b>60</b>	20000	11	4400	170	< 1.5	<b>48</b>	< 1	15	31	41
<b>Jubilee Heritage Centre formerly at St. Francis, 691 Lilac Street, Sudbury</b>																						
Area A soil	5037072	14146	0 - 5	8200	< 0.8	< 5	31	< 0.8	3300	30	8	56	14000	7	3600	180	< 1.5	<b>69</b>	< 1	26	28	27
		14147	0 - 5	6900	< 0.8	< 5	27	< 0.8	2800	29	8	<b>62</b>	13000	7	3700	170	< 1.5	<b>74</b>	< 1	21	28	26
Area B sand	5037073	14148	0 - 15	6000	< 0.8	< 5	21	< 0.8	2800	27	7	22	14000	3	4100	170	< 1.5	25	< 1	21	26	18
<b>Junior Citizens Daycare (formerly Little Ones Corner), 210 Lloyd Street, Sudbury</b>																						
Area A grass	5037136	14238	0 - 5	9400	< 0.8	< 5	41	< 0.8	5000	34	8	<b>86</b>	14000	16	3000	220	< 1.5	<b>94</b>	< 1	39	30	46
		14239	0 - 5	9000	< 0.8	< 5	39	< 0.8	4500	35	9	<b>67</b>	14000	11	3300	210	< 1.5	<b>76</b>	< 1	37	31	38
Area B sand	5037137	14240	0 - 15	6000	< 0.8	< 5	22	< 0.8	2700	30	7	32	14000	6	3700	170	< 1.5	33	< 1	19	27	24
		14241	0 - 15	7800	< 0.8	< 5	29	< 0.8	3400	34	8	32	17000	5	4700	200	< 1.5	36	< 1	27	33	30
Area C sand	5037138	14242	0 - 15	6400	< 0.8	< 5	22	< 0.8	2500	26	7	35	12000	7	3700	170	< 1.5	40	< 1	21	23	26
		14243	0 - 15	6700	< 0.8	< 5	22	< 0.8	2900	27	7	38	13000	7	3700	170	< 1.5	43	< 1	23	25	27
<b>La Garderie Touche a Tout, Laurentian University</b>																						
Area A sand	5037058	14126	0 - 15	5400	< 0.8	< 5	20	< 0.8	3400	25	6	22	14000	3	3300	160	< 1.5	24	< 1	23	31	18
Area B grass	5037059	14127	0 - 5	11000	< 0.8	< 5	40	< 0.8	12000	37	6	37	15000	9	7300	220	< 1.5	<b>57</b>	< 1	47	34	24
		14128	0 - 5	11000	< 0.8	< 5	40	< 0.8	12000	37	6	39	16000	9	7100	210	< 1.5	<b>58</b>	< 1	45	33	24
Area C sand	5037060	14129	0 - 15	5800	< 0.8	< 5	19	< 0.8	3200	24	6	15	15000	2	3200	150	< 1.5	21	< 1	18	29	14
Table F (results in bold)				NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)				NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																						

**Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area D grass	5037061	14130	0 - 5	11800	< 0.8	< 5	44	< 0.8	7100	36	8	49	16000	10	4400	210	< 1.5	<b>73</b>	< 1	43	35	31
		14131	0 - 5	10000	< 0.8	< 5	40	< 0.8	8100	34	7	43	14000	9	5000	210	< 1.5	<b>64</b>	< 1	43	32	25
<b>Laurentian Child &amp; Family Centre, Laurentian University</b>																						
Area A sand	5037062	14115	0 - 15	3200	< 0.8	< 5	12	< 0.8	1500	15	3	6	7400	2	2100	100	< 1.5	11	< 1	15	16	9
Area B sand	5037063	14116	0 - 15	4500	< 0.8	< 5	17	< 0.8	3100	24	6	16	13000	3	3400	150	< 1.5	22	< 1	18	29	16
		14117	0 - 15	4500	< 0.8	< 5	17	< 0.8	3000	24	6	17	13000	3	3200	150	< 1.5	22	< 1	18	31	16
Area C sand	5037064	14122	0 - 15	4100	< 0.8	< 5	16	< 0.8	2200	20	4	8	9200	2	2200	120	< 1.5	12	< 1	18	22	10
Area D sand	5037065	14123	0 - 15	7700	< 0.8	< 5	23	< 0.8	4100	30	8	25	16000	3	4400	190	< 1.5	29	< 1	31	33	18
Area E grass	5037066	14118	0 - 5	11000	< 0.8	< 5	42	< 0.8	9500	37	6	37	15000	10	4900	230	< 1.5	<b>59</b>	< 1	50	34	28
		14119	0 - 5	11000	< 0.8	< 5	44	< 0.8	10000	37	6	37	15000	10	5400	230	< 1.5	<b>60</b>	< 1	51	35	28
Area F grass	5037067	14120	0 - 5	12000	< 0.8	< 5	44	< 0.8	12000	38	6	39	16000	10	6100	240	< 1.5	<b>60</b>	< 1	50	35	30
		14121	0 - 5	12000	< 0.8	< 5	45	< 0.8	11000	41	6	37	16000	11	5700	240	< 1.5	<b>58</b>	< 1	50	35	31
Area G grass	5037068	14124	0 - 5	11000	< 0.8	< 5	46	< 0.8	11000	38	6	41	15000	10	5600	240	< 1.5	<b>60</b>	< 1	49	35	30
		14125	0 - 5	11000	< 0.8	6	45	< 0.8	11000	37	6	41	15000	10	5300	230	< 1.5	<b>60</b>	< 1	50	34	31
<b>Maple Tree Preschool Inc. #2 at St. Benedict Secondary, 2993 Algonquin Road, Sudbury</b>																						
Area A grass	5037026	14064	0 - 5	8200	< 0.8	< 5	29	< 0.8	6400	29	6	22	14000	6	4400	180	< 1.5	35	< 1	31	27	22
		14065	0 - 5	8500	< 0.8	6	34	< 0.8	7000	30	6	27	14000	6	4100	200	< 1.5	41	< 1	35	30	24
Area B sand	5037027	14067	0 - 15	6700	< 0.8	< 5	24	< 0.8	3400	32	6	18	15000	3	3600	180	< 1.5	20	< 1	29	31	17
Area C sand	5037028	14066	0 - 15	6400	< 0.8	< 5	21	< 0.8	3100	28	6	19	14000	3	3700	170	< 1.5	22	< 1	26	28	17
<b>Maple Tree Preschool Inc. #1 , 158 John Street, Sudbury</b>																						
Area A grass	5037087	14173	0 - 5	6300	< 0.8	< 5	27	< 0.8	2400	21	6	55	9000	8	2100	110	< 1.5	<b>75</b>	< 1	20	21	28
		14174	0 - 5	7900	< 0.8	< 5	30	< 0.8	3700	24	6	<b>67</b>	11000	9	2300	140	< 1.5	<b>86</b>	< 1	29	25	27
		14175	5 - 10	8400	< 0.8	< 5	30	< 0.8	3300	26	6	<b>59</b>	12000	11	2600	160	< 1.5	<b>65</b>	< 1	29	26	29
		14176	5 - 10	7500	< 0.8	< 5	29	< 0.8	3000	25	7	43	11000	8	2400	140	< 1.5	<b>54</b>	< 1	26	25	26
		14177	10 - 20	8100	< 0.8	7	29	< 0.8	2800	28	11	<b>160</b>	15000	27	2900	170	< 1.5	<b>160</b>	< 1	21	30	37
		14178	10 - 20	6600	< 0.8	5	24	< 0.8	2200	22	7	<b>91</b>	12000	17	2200	140	< 1.5	<b>99</b>	< 1	15	22	26

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
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Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
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< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area B sand	5037088	14172	0 - 15	4100	< 0.8	< 5	14	< 0.8	1500	17	4	10	8100	3	2400	110	< 1.5	17	< 1	14	16	10
<b>Play and Learn Daycare, 1400 Barrydowne Road, Sudbury</b>																						
Area A sand	5037172	14330	0 - 15	5000	< 0.8	< 5	18	< 0.8	3300	25	6	14	13000	2	3200	150	< 1.5	21	< 1	21	29	17
Area B sand	5037173	14332	0 - 15	6100	< 0.8	< 5	22	< 0.8	3100	31	9	29	15000	4	3300	170	< 1.5	34	< 1	23	31	23
<b>Princess Anne Kids at Princess Anne Public School, 500 Douglas St., Sudbury</b>																						
This daycare is operated by Larch Street Kids and is located in the same building as Princess Anne Public School, Rainbow District School Board. See Princess Anne Public School above for the results.																						
<b>RJ Kids at Robert Jack Public School, 7 Margaret Street, Garson</b>																						
Area A gravel	5037275	14428	0 - 5	5400	< 0.8	6	25	< 0.8	2900	23	7	23	11000	4	2700	140	< 1.5	31	< 1	19	25	18
Area B sand	5037275	14429	0 - 15	4600	< 0.8	5	18	< 0.8	2800	25	6	15	12000	3	2800	150	< 1.5	22	< 1	17	29	17
<b>Services De Garde De Rayside - Balfour #1, 30 Hill Street, Chelmsford</b>																						
Area A sand	5037379	14514	0 - 15	4800	< 0.8	< 5	14	< 0.8	2700	22	6	15	12000	4	2900	150	< 1.5	18	< 1	21	25	18
Area B sand	5037378	14515	0 - 15	4600	< 0.8	< 5	11	< 0.8	2500	22	5	11	10000	3	2700	120	< 1.5	17	< 1	18	22	15
		14516	0 - 15	4800	< 0.8	< 5	16	< 0.8	2500	24	7	18	13000	4	3400	160	< 1.5	20	< 1	18	29	21
Area C sand	5037380	14517	0 - 15	4700	< 0.8	< 5	12	< 0.8	2500	25	5	13	10000	3	2900	130	< 1.5	18	< 1	18	25	17
Area D grass	5037381	14518	0 - 5	8400	< 0.8	7	32	< 0.8	4200	27	8	48	12000	17	2600	200	< 1.5	<b>66</b>	< 1	32	26	30
		14519	0 - 5	10000	< 0.8	5	36	< 0.8	5200	30	7	38	13000	15	2800	210	< 1.5	<b>58</b>	< 1	40	29	28
<b>Services De Garde De Rayside - Balfour #2 at Chelmsford Public School, 121 Charlotte Street, Chelmsford</b>																						
This daycare is located in the same building as Chelmsford Public School, Rainbow District School Board. See Chelmsford Public School above for the results.																						
<b>Shooting Star Daycare, 4120 Elmview Drive, Hanmer</b>																						
Area A sand	5037312	14644	0 - 15	7700	< 0.8	< 5	32	< 0.8	3900	35	11	26	15000	5	3700	230	< 1.5	<b>60</b>	< 1	30	33	27
Area B sand	5037313	14645	0 - 15	5100	< 0.8	< 5	22	< 0.8	2800	30	6	16	14000	3	3700	170	< 1.5	23	< 1	16	30	18
Area C sand	5037314	14646	0 - 15	5700	< 0.8	< 5	25	< 0.8	2800	32	10	20	15000	4	4200	200	< 1.5	27	< 1	18	33	22

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600

< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.

**Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area D sand	5037315	14647	0 - 15	6000	< 0.8	< 5	23	< 0.8	3000	30	7	18	15000	4	4100	190	< 1.5	26	< 1	21	31	22
Area E sand	5037316	14648	0 - 15	5000	< 0.8	< 5	20	< 0.8	2900	28	6	14	13000	3	3300	170	< 1.5	22	< 1	18	29	16
Area F soil	5037317	14649	0 - 5	8200	< 0.8	< 5	28	< 0.8	4100	28	5	16	12000	6	2300	190	< 1.5	34	< 1	33	28	17
		14650	0 - 5	7800	< 0.8	< 5	27	< 0.8	4100	27	4	12	12000	5	2300	200	< 1.5	28	< 1	34	27	15
<b>Smiles 'N' Freckles Inc. Daycare, 63 Ridgemont Avenue, Sudbury</b>																						
Area A sand	5037150	14363	0 - 15	4800	< 0.8	< 5	21	< 0.8	4500	23	7	18	13000	33	3500	150	< 1.5	20	< 1	17	28	17
		14364	0 - 15	5200	< 0.8	< 5	21	< 0.8	5200	25	8	19	14000	3	3900	160	< 1.5	21	< 1	18	33	19
<b>St. Albert Child Care Centre, 135 Eyre Street, Sudbury</b>																						
Area A grass	5037105	14221	0 - 5	8100	< 0.8	< 5	40	< 0.8	4200	28	5	20	12000	5	3400	170	< 1.5	29	< 1	25	28	17
		14222	0 - 5	8400	< 0.8	< 5	45	< 0.8	4200	29	6	20	13000	5	3400	170	< 1.5	31	< 1	27	28	18
<b>Teddy Bear Daycare #1 at First Baptist Church, 2503 Falconbridge Highway</b>																						
Area A sand	5037268	14430	0 - 15	4800	< 0.8	6	20	< 0.8	2500	23	6	17	12000	3	3000	150	< 1.5	22	< 1	16	30	16
		14431	0 - 15	5400	< 0.8	5	25	< 0.8	3500	26	6	16	13000	3	3300	170	< 1.5	23	< 1	25	31	17
<b>Teddy Bear Daycare #2 at Falconbridge Recreation Centre, Edison Road, Falconbridge</b>																						
Area A sand	5037360	14760	0 - 15	4400	< 0.8	< 5	17	< 0.8	2200	20	5	14	10000	2	2600	130	< 1.5	21	< 1	17	22	13
		14761	0 - 15	5000	< 0.8	< 5	21	< 0.8	2600	21	5	13	11000	2	2600	140	< 1.5	19	< 1	20	25	14
<b>Teddy Bear Daycare #3, 181 William St., Garson</b>																						
This daycare is located in the same building as St. John School, Sudbury Catholic District School Board. See St. John School above for the results.																						
<b>Valley East Co-op-at Raymond Plourde Arena, 1919 Helene Street, Val Caron</b>																						
Area A grass	5037296	14788	0 - 5	9900	< 0.8	7	29	< 0.8	2700	24	4	43	12000	10	1800	140	< 1.5	<b>50</b>	1	27	25	27
		14789	0 - 5	9300	< 0.8	< 5	29	< 0.8	2900	24	4	42	11000	11	1800	140	< 1.5	<b>54</b>	< 1	31	26	26
Area B sand	5037297	14790	0 - 15	7300	< 0.8	< 5	22	< 0.8	3000	42	7	28	20000	4	4500	230	< 1.5	28	< 1	23	50	25
Area C sand	5037298	14791	0 - 15	8400	< 0.8	< 5	32	< 0.8	3400	46	8	35	21000	5	4900	260	< 1.5	28	< 1	27	47	38
Area D sand	5037299	14792	0 - 15	8500	< 0.8	< 5	29	< 0.8	3400	50	11	36	24000	5	4800	280	< 1.5	29	< 1	26	59	30
Area E sand	5037300	14793	0 - 15	9600	< 0.8	< 5	43	< 0.8	3700	52	8	48	23000	6	5500	300	< 1.5	30	< 1	33	56	36

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	750	12.0	NG	750	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

**Table B4.2: Concentration of 19 Elements in Soil in µg/g Collected on 25 Daycare Properties in the Sudbury Area in the Summer of 2001**

Map ID	Station	Sample Number	Soil Depth	Al	Sb	As	Ba	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	Se	Sr	V	Zn
Area F sand	5037301	14794	0 - 15	6800	< 0.8	< 5	22	< 0.8	2900	45	7	26	21000	4	4300	230	< 1.5	27	< 1	23	54	39
Area G sand	5037302	14795	0 - 15	8300	< 0.8	< 5	28	< 0.8	3100	50	8	39	26000	6	5000	240	< 1.5	35	< 1	25	56	35
Area H sand	5037303	14796	0 - 15	7000	< 0.8	< 5	29	< 0.8	2800	55	8	33	23000	5	4500	230	< 1.5	30	< 1	21	56	32
<b>Walden Daycare Centre #1, 500 Niemi Drive, Lively</b>																						
Area A grass	5037238	14711	0 - 5	8800	< 0.8	< 5	37	< 0.8	4200	30	6	38	12000	8	2800	200	< 1.5	<b>49</b>	< 1	31	29	27
		14712	0 - 5	10000	< 0.8	< 5	39	< 0.8	4400	31	7	42	14000	9	2800	210	< 1.5	<b>52</b>	< 1	36	31	30
Area B sand	5037239	14718	0 - 15	5700	< 0.8	< 5	19	< 0.8	3000	29	8	20	13000	3	3800	170	< 1.5	21	< 1	19	30	19
	5037240	14713	0 - 15	5800	< 0.8	< 5	22	< 0.8	3900	28	7	18	12000	3	4100	180	< 1.5	18	< 1	24	29	17
Area C mulch	5037241	14714	0 - 15	5900	< 0.8	< 5	20	< 0.8	4000	27	8	34	13000	4	3700	170	< 1.5	35	< 1	25	27	22
Area D sand	5037242	14715	0 - 15	5200	< 0.8	< 5	18	< 0.8	2200	28	10	31	12000	5	3500	150	< 1.5	30	< 1	16	25	29
Area E grass	5037243	14716	0 - 5	9600	< 0.8	< 5	59	< 0.8	4900	38	17	<b>92</b>	18000	17	4000	260	< 1.5	<b>110</b>	< 1	36	34	51
		14717	0 - 5	9700	< 0.8	< 5	67	< 0.8	5000	36	13	<b>93</b>	17000	37	4000	270	< 1.5	<b>95</b>	< 1	39	37	58
<b>Walden Daycare Centre #2 at St. James School, 280 Anderson Drive, Lively</b>																						
This daycare is located in the same building as St. James School, Sudbury Catholic District School Board. See St. James School above for the results.																						
<b>Walden Play and Learn, 3 Westview Crescent, Lively</b>																						
Area A sand	5037236	14709	0 - 15	7800	< 0.8	< 5	32	< 0.8	4900	28	6	53	18000	4	4700	160	< 1.5	25	< 1	26	29	27
Area B sand	5037237	14710	0 - 15	8300	< 0.8	< 5	26	< 0.8	4600	30	7	28	17000	6	4700	220	< 1.5	28	< 1	35	38	24
Area C grass	5037235	14707	0 - 5	11000	< 0.8	< 5	30	< 0.8	3200	21	6	41	14000	10	2600	110	< 1.5	<b>73</b>	< 1	23	22	21
		14708	0 - 5	9100	< 0.8	< 5	45	< 0.8	2700	30	6	<b>61</b>	13000	8	2700	160	< 1.5	<b>73</b>	< 1	33	31	31

Table F (results in bold)	NG	1.0	14	190	1.0	NG	67	19	56	NG	55	NG	NG	2.5	43	1.4	NG	91	150
Table A (results in bold and underlined)	NG	13	20	<u>750</u>	12.0	NG	<u>750</u>	40	225	NG	200	NG	NG	5.0	150	10	NG	200	600
< - less than the Method Detection Limit. All beryllium (Be) results were <0.5 µg/g. NG - no guideline.																			

## 5.0 SAMPLING LOCATION COORDINATES

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037002	Wanup Public School	513421	5136174	-80.825479	46.379009
5037003		513391	5136143	-80.82587	46.378728
5037004		513381	5136126	-80.826001	46.378575
5037005		513416	5136134	-80.825545	46.378647
5037006	Baron Academy Nursery (formerly)	504563	5142525	-80.940603	46.436281
5037007		504548	5142493	-80.940798	46.435993
5037008	All Nations -South End	504075	5142258	-80.946957	46.433884
5037009		504093	5142247	-80.946723	46.433782
5037010		504107	5142270	-80.946541	46.433989
5037011		504110	5142247	-80.946502	46.433782
5037012		504103	5142260	-80.946593	46.433899
5037013	St. Christopher	503249	5141813	-80.957712	46.429881
5037014		503186	5141847	-80.958532	46.430187
5037015		503203	5141834	-80.958311	46.43007
5037016	Algonquin Road Public School	500354	5142554	-80.995392	46.43656
5037017		500352	5142556	-80.995418	46.436578
5037018		500338	5142571	-80.9956	46.436713
5037019		500337	5142626	-80.995613	46.437206
5037020		500359	5142617	-80.995327	46.437127
5037021	Long Lake Public School	500548	5139146	-80.992871	46.405887
5037022		500550	5139207	-80.992844	46.406436
5037023	St. Benedict Secondary	501210	5142163	-80.98425	46.43304
5037024		501210	5142212	-80.98425	46.433481
5037025		501213	5142115	-80.984211	46.432608
5037026	Maple Tree Preschool Inc. #2	501212	5142383	-80.984224	46.43502
5037027		501227	5142383	-80.984028	46.43502
5037028		501212	5142368	-80.984224	46.434885
5037029	Lo-Ellen Park Secondary	500831	5143846	-80.98918	46.448187
5037030		500853	5143857	-80.988894	46.448286
5037031		500788	5143820	-80.98974	46.447953
5037032	R.L. Beattie Public School	500437	5144126	-80.99431	46.450708
5037033		500443	5144122	-80.994232	46.450672
5037034		500469	5144164	-80.993893	46.451047
5037035		500435	5144164	-80.994336	46.451047
5037036		500505	5144164	-80.993425	46.451047
5037037		500456	5144130	-80.994063	46.450744
5037038		500511	5144109	-80.993346	46.450555
5037039	Corpus Christi	498293	5145309	-81.022231	46.461352
5037040		498275	5145294	-81.022465	46.461217



**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037041	E.P. Sud Ouest Publique (Helene-Gravel)	498106	5145238	-81.024666	46.460713
5037042		498138	5145257	-81.024249	46.460884
5037043		498109	5145272	-81.024627	46.461019
5037044		498093	5145272	-81.024835	46.461019
5037045		498136	5145272	-81.024275	46.461019
5037046		498087	5145298	-81.024913	46.461253
5037047		499542	5145464	-81.005965	46.462746
5037048	MacLeod Public School	499540	5145431	-81.005991	46.462449
5037049		499533	5145493	-81.006082	46.46301
5037050	St. Theresa	499819	5145670	-81.002357	46.464603
5037051		499820	5145672	-81.002344	46.464621
5037052		499833	5145672	-81.002175	46.464621
5037053		499843	5145666	-81.002045	46.464567
5037055	Lockerby Composite School	499666	5145812	-81.00435	46.465881
5037056		499663	5145857	-81.004389	46.466286
5037057		499665	5145784	-81.004363	46.465629
5037058	La Garderie Touche a Tout Daycare	502578	5145537	-80.966425	46.463399
5037059		502566	5145544	-80.966581	46.463462
5037060		502582	5145545	-80.966373	46.463471
5037061		502570	5145552	-80.966529	46.463534
5037062	Laurentian Child & Family Centre	502581	5145486	-80.966386	46.46294
5037063		502554	5145507	-80.966738	46.463129
5037064		502565	5145510	-80.966594	46.463156
5037065		502569	5145519	-80.966542	46.463237
5037066		502550	5145517	-80.96679	46.463219
5037067		502555	5145527	-80.966725	46.463309
5037068		502567	5145530	-80.966568	46.463336
5037069	St. Francis	498970	5146965	-81.013418	46.476257
5037070		498933	5146989	-81.0139	46.476473
5037071		498924	5147049	-81.014017	46.47701
5037072	Jubilee Heritage Centre formerly at St. Francis	498947	5147095	-81.013717	46.477427
5037073		498960	5147087	-81.013548	46.477355
5037074	St. Denis	499547	5147138	-81.005901	46.477812
5037075		499526	5147161	-81.006175	46.478019
5037076		499554	5147214	-81.00581	46.478496
5037077	Wembley Public School	499558	5147460	-81.005758	46.480712
5037078		499591	5147478	-81.005328	46.480875
5037079		499531	5147452	-81.00611	46.48064
5037080		499580	5147496	-81.005472	46.481034
5037081		499507	5147441	-81.006423	46.480541
5037082		499621	5147457	-81.004938	46.480686
5037083	St. Michael	500380	5147489	-80.995049	46.480974

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic		
		Easting	Northing	Longitude	Latitude	
5037084	Alexander Public School	500349	5147908	-80.995453	46.484744	
5037085		500385	5147894	-80.994984	46.484618	
5037086	Alexander Public School & Alex. Kids	500392	5147889	-80.994893	46.484573	
5037087	Maple Tree Preschool Inc. #1	500715	5147777	-80.990685	46.483565	
5037088		500715	5147776	-80.990685	46.483556	
5037089	E.P. Jeanne-Sauve	500965	5148383	-80.987426	46.489016	
5037090		500960	5148380	-80.987491	46.488989	
5037091		500913	5148403	-80.988104	46.489196	
5037092		500890	5148322	-80.988404	46.488467	
5037093		500890	5148312	-80.988404	46.488377	
5030970		500970	5148105	-80.987362	46.486514	
5037094		St. Thomas (formerly)	501602	5148531	-80.979126	46.490349
5037095			501578	5148558	-80.979438	46.490592
5037096	501568		5148571	-80.979569	46.490709	
5037097	501571		5148552	-80.97953	46.490535	
5037098	Gatchell School	497959	5146826	-81.026587	46.475004	
5037099		497971	5146833	-81.026431	46.475067	
5037100		497978	5146836	-81.026339	46.475091	
5037101		497985	5146844	-81.026248	46.475166	
5037102	St. Anthony	497987	5146826	-81.026222	46.475001	
5037103		497960	5147227	-81.026576	46.47861	
5037104		497960	5147200	-81.026576	46.478367	
5037105	St. Albert Child Care Centre	499335	5148519	-81.008665	46.490243	
5037106	Princess Anne Public School	499054	5148085	-81.012326	46.486337	
5037106		499054	5148085	-81.012326	46.486337	
5037107		499068	5148095	-81.012143	46.486427	
5037108		499057	5148099	-81.012286	46.486463	
5037109	Montessori School of Sudbury	499464	5148386	-81.006984	46.489043	
5037110		499455	5148386	-81.007101	46.489043	
5037111		499462	5148361	-81.00701	46.488818	
5037113	Cotton Candy Daycare	500025	5149564	-80.999674	46.499648	
5037114		500021	5149569	-80.999726	46.499693	
5037115	Lansdowne Public School	499701	5149304	-81.003896	46.497305	
5037116		499718	5149320	-81.003675	46.497449	
5037117		499657	5149320	-81.00447	46.497449	
5037118	St. David	499399	5149961	-81.007833	46.50322	

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037119	Queen Elizabeth II Public School	500474	5150353	-80.993822	46.506748
5037120		500454	5150353	-80.994083	46.506748
5037121		500494	5150353	-80.993561	46.506748
5037122		500448	5150308	-80.994161	46.506343
5037123		500445	5150375	-80.9942	46.506943
5037124		500382	5150380	-80.995021	46.506988
5037125		500341	5150363	-80.995555	46.506835
5037126		500422	5150399	-80.9945	46.507159
5037127	Sudbury Better Beginnings	500374	5149975	-80.995126	46.503347
5037128		500390	5149955	-80.994917	46.503164
5037129	St. Joseph - Sudbury	500319	5149845	-80.995843	46.502174
5037129		500319	5149845	-80.995843	46.502174
5037130		500415	5149845	-80.994591	46.502174
5037131	Sudbury Secondary School	500047	5149193	-80.999388	46.496309
5037132		500072	5149192	-80.999062	46.4963
5037133		500022	5149192	-80.999713	46.4963
5037134	Marymount Academy	500408	5149260	-80.994683	46.496912
5037135	College Notre Dame	500592	5149518	-80.992285	46.499234
5037136	Junior Citizens Daycare	500789	5148903	-80.989719	46.493699
5037137		500798	5148923	-80.989601	46.493879
5037138		500800	5148928	-80.989575	46.493924
5037139	St. Jean (formerly)	503095	5148974	-80.959669	46.494328
5037140		503113	5148925	-80.959435	46.493887
5037141	E.S.C l'Heritage	504699	5149363	-80.938763	46.497823
5037142		504699	5149411	-80.938763	46.498255
5037143		504697	5149310	-80.93879	46.497346
5037144	Adamsdale Public School	504734	5149054	-80.93831	46.495041
5037145		504709	5149040	-80.938636	46.494913
5037146		504709	5148992	-80.938637	46.494481
5037147		504729	5149023	-80.938376	46.49476
5037148	Pius XII	505407	5148576	-80.929546	46.490735
5037149	Ecole St. Remi (formerly)	507095	5148155	-80.907557	46.486927
5037150	Smiles 'N' Freckles Daycare	507597	5148120	-80.901017	46.486607
5037151	E.P. Jean-Ethier-Blais	506234	5152180	-80.918722	46.523159
5037152		506200	5152220	-80.919164	46.523519
5037153		506200	5152180	-80.919165	46.523159
5037154		506200	5152158	-80.919165	46.522961
5037155	St. Dominique	505958	5152452	-80.922317	46.525609
5037156		505908	5152480	-80.922968	46.525862
5037157		505977	5152483	-80.922068	46.525888
5037158		506042	5152522	-80.92122	46.526238
5037159		505950	5152524	-80.92242	46.526257

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037160	St. Charles College	505619	5151727	-80.926745	46.519091
5037161		505545	5151671	-80.927711	46.518587
5037162		505619	5151727	-80.926745	46.519091
5037163		505545	5151671	-80.927711	46.518587
5037164	St. Bernadette	505292	5151381	-80.931012	46.515979
5037165		505256	5151359	-80.931482	46.515782
5037166	Churchill Public School	504968	5151678	-80.935233	46.518652
5037167		504952	5151705	-80.935441	46.518895
5037168		504929	5151726	-80.935741	46.519084
5037169		504987	5151736	-80.934985	46.519173
5037170		505063	5151727	-80.933994	46.519092
5037171		505083	5151740	-80.933733	46.519209
5037172	Play and Learn Daycare	504614	5152820	-80.939837	46.528935
5037173		504614	5152820	-80.939837	46.528935
5037174	Westmount Avenue Public School	504605	5150640	-80.939976	46.509316
5037175		504582	5150659	-80.940275	46.509484
5037176		504575	5150685	-80.940366	46.509721
5037177		504549	5150694	-80.940705	46.509799
5037178		504518	5150709	-80.941109	46.509934
5037179		504564	5150701	-80.940509	46.509862
5037180		504563	5150719	-80.940522	46.510027
5037181		Ecole Leon XIII	504005	5150896	-80.947794
5037182	503959		5150958	-80.948393	46.512179
5037183	503955		5150929	-80.948446	46.511918
5037184	Carl A. Nesbitt Public School	503841	5152248	-80.949921	46.523789
5037185		503841	5152226	-80.949921	46.523591
5037186		503841	5152267	-80.949921	46.52396
5037187		503849	5152279	-80.949816	46.524068
5037188		503788	5152379	-80.950611	46.524968
5037189		503788	5152320	-80.950611	46.524437
5037190		503788	5152347	-80.950611	46.52468
5037191		503793	5152238	-80.950547	46.523699
5037192		503788	5152277	-80.950612	46.52405
5037193	St. Raphael	503317	5151666	-80.956757	46.518557
5037194	Felix Ricard	502383	5151892	-80.968932	46.520592
5037195		502402	5151912	-80.968684	46.520771
5037196		502364	5151868	-80.96918	46.520376
5037197		502349	5151977	-80.969375	46.521357
5037198		502353	5152016	-80.969323	46.521708
5037199		502379	5152016	-80.968984	46.521708
5037200		502366	5152025	-80.969153	46.521789

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037201	Centre Educatif Etoile du Nord	500544	5151499	-80.992908	46.517062
5037202		500544	5151499	-80.992908	46.517062
5037203	E.S. Macdonald Cartier	500870	5151885	-80.988658	46.520532
5037204		500870	5151845	-80.988658	46.520172
5037205		500870	5151925	-80.988657	46.520892
5037206	Cedar Park Daycare	503361	5152630	-80.956176	46.527229
5037207		503358	5152625	-80.956215	46.527187
5037208	Ernie Checkeris Public School	503768	5153119	-80.950865	46.531631
5037209		503735	5153114	-80.951296	46.531583
5037210		503725	5153120	-80.951426	46.531637
5037211		503702	5153120	-80.951726	46.531637
5037212	St. Andrew	503993	5152573	-80.947936	46.526713
5037213		503990	5152478	-80.947976	46.525858
5037214		503979	5152431	-80.94812	46.525435
5037215	Lasalle Secondary	504654	5152456	-80.939319	46.525655
5037216		504654	5152420	-80.939319	46.525331
5037217		504603	5152435	-80.939984	46.525467
5037218		504704	5152435	-80.938667	46.525466
5037219	Sacred Heart (formerly)	505877	5152147	-80.923377	46.522868
5037220	Cyril Varney Public School	505778	5153103	-80.924655	46.531469
5037221		505738	5153103	-80.925177	46.53147
5037222		505818	5153103	-80.924134	46.531469
5037223		505712	5153115	-80.925516	46.531578
5037224		505709	5153090	-80.925555	46.531353
5037225		505709	5153058	-80.925556	46.531065
5037226		505719	5153028	-80.925426	46.530795
5037227	Jessie Hamilton Public School	491363	5140925	-81.1124	46.421842
5037228		491379	5140959	-81.112192	46.422148
5037229		491326	5140952	-81.112882	46.422084
5037230		491307	5140926	-81.113129	46.42185
5037231		491242	5140936	-81.113975	46.421939
5037232		491342	5140936	-81.112673	46.421941
5037233		491363	5140992	-81.112401	46.422445
5037234		491349	5140971	-81.112583	46.422256
5037235	Walden Play and Learn	489540	5140698	-81.136119	46.419776
5037236		489563	5140692	-81.135819	46.41972
5037237		489551	5140682	-81.135975	46.419629
5037238	Walden Daycare Centre	488827	5141553	-81.145418	46.427459
5037239		488811	5141557	-81.145626	46.427492
5037240		488809	5141556	-81.145652	46.427483
5037242		488835	5141564	-81.145314	46.427556
5037243		488832	5141571	-81.145353	46.427619

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
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Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037244	St. James	488546	5141945	-81.149084	46.430982
5037245	St. Paul	488584	5142397	-81.148601	46.435048
5037246		488561	5142436	-81.148901	46.435399
5037247	Lively District High School	489202	5142537	-81.14056	46.436318
5037248	George Vanier Public School	489176	5142672	-81.140901	46.437533
5037249		489169	5142690	-81.140993	46.437695
5037250		489218	5142689	-81.140355	46.437686
5037251		489238	5142718	-81.140095	46.437948
5037252		489240	5142749	-81.14007	46.438227
5037253		489233	5142778	-81.140162	46.438488
5037254		Copper Cliff Public School	494367	5146850	-81.073378
5037255	494367		5146904	-81.073379	46.475682
5037256	494377		5146902	-81.073248	46.475665
5037257	494367		5146896	-81.073379	46.47561
5037258	494367		5146781	-81.073377	46.474576
5037259	494390		5146787	-81.073078	46.47463
5037260	494411		5146870	-81.072805	46.475377
5037261	494453		5146867	-81.072258	46.47535
5037262	Our Lady of Fatima	484984	5138653	-81.195341	46.401285
5037263	St. Paul	511593	5148986	-80.848931	46.494343
5037264		511604	5149029	-80.848787	46.49473
5037265	Notre Dame De La Merci	511426	5148991	-80.851107	46.494394
5037266	St. Pierre	505299	5148367	-80.930955	46.488854
5037267	Ecole St. Pierre (formerly)	516454	5148102	-80.785619	46.486289
5037268	Teddybear Daycare #1, First Baptist	508385	5154781	-80.89063	46.546546
5037269	St. Augustin	508982	5155316	-80.882833	46.55135
5037270		508954	5155302	-80.883198	46.551228
5037271		509012	5155302	-80.882442	46.551224
5037272	Robert Jack Public School	509964	5155582	-80.870017	46.55373
5037273		509940	5155603	-80.87033	46.553919
5037274		509881	5155550	-80.871101	46.553443
5037275	RJ Kids at Robert Jack Public School	509943	5155546	-80.870292	46.553406
5037276	St. John	510424	5155952	-80.864008	46.557053
5037277		510439	5156056	-80.86381	46.557989
5037278		510452	5155916	-80.863644	46.556728
5037279	E.S.C. l'Horizon	499337	5160295	-81.008656	46.596218
5037280		499293	5160255	-81.00923	46.595858
5037281	Valleyview Public School	498704	5160147	-81.016919	46.594885
5037282		498685	5160166	-81.017168	46.595056
5037283		498739	5160164	-81.016463	46.595038
5037284		498739	5160165	-81.016463	46.595047
5037285		498670	5160236	-81.017364	46.595686

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Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037286	Val Caron Public School	499562	5161840	-81.00572	46.610122
5037287		499573	5161787	-81.005576	46.609649
5037288	St. Kevin (Bishop Alexander C.C.S.S)	500126	5162193	-80.998354	46.613299
5037289		500105	5162111	-80.998629	46.612561
5037290	Notre Dame de l'Esperance	498850	5161790	-81.015017	46.609671
5037291		498862	5161770	-81.014861	46.609491
5037292		498907	5161759	-81.014273	46.609392
5037293	Immaculate Conception	499043	5162095	-81.012498	46.61242
5037294	Confederation Secondary School	498560	5162173	-81.018806	46.613118
5037295		498560	5162173	-81.018806	46.613118
5037296	Valley East Co-op-Raymond Plourde Arena	498574	5162426	-81.018624	46.615394
5037297		498586	5162410	-81.018467	46.61525
5037298		498564	5162410	-81.018754	46.61525
5037299		498564	5162422	-81.018754	46.615358
5037300		498565	5162434	-81.018741	46.615466
5037301		498564	5162445	-81.018754	46.615565
5037302		498586	5162445	-81.018467	46.615565
5037303	Notre Dame du Rosaire	498586	5162431	-81.018467	46.615439
5037304		496033	5161353	-81.0518	46.605728
5037305		495982	5161353	-81.052466	46.605728
5037306	Ste. Therese	499777	5166711	-81.002914	46.653962
5037307		499778	5166766	-81.002901	46.654453
5037308		499750	5166702	-81.003267	46.653877
5037309	St. Joseph - Hanmer	500521	5166250	-80.993191	46.649809
5037310		500502	5166242	-80.99344	46.649737
5037311		500521	5166230	-80.993191	46.649629
5037312	Shooting Star Daycare	501085	5165040	-80.985824	46.638919
5037313		501085	5165055	-80.985824	46.639054
5037314		501085	5165070	-80.985824	46.639189
5037315		501085	5165085	-80.985824	46.639324
5037316		501105	5165055	-80.985562	46.639054
5037317		501105	5165095	-80.985562	46.639414
5037318	Pinecrest Public School	499247	5165110	-81.009839	46.63955
5037319		499209	5165061	-81.010335	46.639109
5037320		499218	5165050	-81.010217	46.63901
5037321		499248	5165029	-81.009825	46.638821
5030971		499214	5165065	-81.01027	46.639149
5037322	Northeastern Secondary	510767	5156256	-80.859526	46.559783
5037323		510852	5156240	-80.858418	46.559638
5037324		510877	5156215	-80.858092	46.559416
5037325	Garderie Jardiniere Francophone formerly at Ecole ND	504106	5166467	-80.94634	46.651754
5037326		504071	5166467	-80.946797	46.651754

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Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037327	Notre Dame	504074	5166374	-80.946759	46.650913
5037328		504024	5166435	-80.947411	46.651462
5037329		504017	5166390	-80.947503	46.651057
5037330	St. Michel	505121	5166475	-80.933075	46.651819
5037331		505120	5166432	-80.933088	46.651432
5037332	Redwood Acres Public School	504610	5166820	-80.939749	46.654923
5037333		504640	5166820	-80.939357	46.654923
5037334		504580	5166820	-80.940141	46.654923
5037335		504665	5166807	-80.939031	46.654806
5037336		504665	5166858	-80.93903	46.655265
5037337		504665	5166775	-80.939031	46.654518
5037338		504610	5166710	-80.93975	46.653933
5037339	E.S. Hanmer	504373	5167420	-80.942841	46.660324
5037340		504290	5167420	-80.943926	46.660325
5037341		504373	5167378	-80.942842	46.659946
5037342		504331	5167420	-80.94339	46.660325
5037343	E.P. Foyer Jeunesse & Garderie Jardiniere Francophone	504335	5167218	-80.94334	46.658507
5037344		504296	5167218	-80.943849	46.658507
5037345		504296	5167186	-80.94385	46.658219
5037345		504296	5167186	-80.94385	46.658219
5037346		504335	5167186	-80.94334	46.658219
5037347	St. Anne	502556	5167032	-80.966593	46.656842
5037348		502528	5166999	-80.966959	46.656545
5037349		502512	5166976	-80.967168	46.656338
5037350		502491	5166951	-80.967443	46.656113
5037351	Capreol High School - Millennium Centre	506018	5172175	-80.921277	46.703103
5037352	St. Mary	505992	5172126	-80.921618	46.702662
5037353	Capreol Child Care Centre at St. Mary	505966	5172085	-80.921959	46.702294
5037354	C.R. Judd Public School	505983	5173357	-80.92172	46.713745
5037355		505970	5173304	-80.921891	46.713264
5037356		506003	5173344	-80.921458	46.713623
5037357	Falconbridge Public School	514090	5158361	-80.816108	46.578669
5037358		514066	5158358	-80.816422	46.578639
5037359		514102	5158364	-80.815951	46.578692
5037360	Teddy Bear Daycare #2 - Centennial Park	514311	5158361	-80.813224	46.578664
5037361	E.P. Franco Nord	492131	5154824	-81.10264	46.546936
5037362		492114	5154881	-81.102863	46.547449
5037363		492122	5154777	-81.102757	46.546513
5037364		492104	5154817	-81.102992	46.546873



**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
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Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037365	Garderie du Triangle Magique at St. Agnes	491631	5155040	-81.109166	46.548874
5037366		491640	5155040	-81.109049	46.548874
5037367		491631	5155065	-81.109166	46.549099
5037368		491640	5155065	-81.109049	46.549099
5037369		491631	5155090	-81.109167	46.549324
5037370		491640	5155090	-81.109049	46.549324
5037371	Association for Community Living	491740	5155052	-81.107744	46.548987
5037372		491736	5155054	-81.107797	46.549005
5037373	Ste. Marie	491174	5155525	-81.115136	46.553236
5037374		491094	5155490	-81.116179	46.55292
5037375	Chelmsford Valley District School	485137	5157538	-81.193954	46.571242
5037376		485092	5157575	-81.194542	46.571574
5037377		485188	5157575	-81.19329	46.571577
5037378	Services De Garde De Rayside - Balfour	484963	5157769	-81.196232	46.573317
5037379		484955	5157762	-81.196336	46.573254
5037380		484963	5157757	-81.196232	46.573209
5037381		484976	5157762	-81.196062	46.573255
5037382	E.S.C. Champlain	484706	5157571	-81.199579	46.57153
5037383		484666	5157623	-81.200103	46.571997
5037384		484724	5157631	-81.199346	46.57207
5037385	Jacques Cartier	484304	5157925	-81.204837	46.574706
5037386		484332	5157910	-81.204471	46.574572
5037387		484388	5157933	-81.203741	46.57478
5037388	Chelmsford Public School	485482	5158252	-81.189474	46.577676
5037389		485413	5158260	-81.190375	46.577746
5037390		485406	5158302	-81.190468	46.578124
5037391		485526	5158359	-81.188903	46.578639
5037392	Mgr Cote	485189	5158328	-81.193301	46.578353
5037393		485189	5158368	-81.193302	46.578713
5037394	St. Charles	485523	5158757	-81.188955	46.582221
5037395		485495	5158788	-81.189321	46.5825
5037396	St. Joseph - Chelmsford	484741	5159125	-81.199174	46.585516
5037397		484726	5159057	-81.199367	46.584903
5037398		484770	5159074	-81.198794	46.585057
5037399		484770	5159033	-81.198792	46.584688
5037400	St. Etienne	474810	5159821	-81.328838	46.59148
5037401		474830	5159821	-81.328577	46.591481
5037402	Larchwood Public School	474275	5159085	-81.335781	46.584836
5037403		474275	5159109	-81.335782	46.585052
5037404		474258	5159116	-81.336005	46.585115
5037405	Circle of Friends	473496	5159299	-81.345961	46.586735

**Table B5:** Coordinates of School and Daycare Sampling Stations, in Map Datum NAD83  
(coordinates were obtained using GPS and are accurate to approximately 30 m)

Station	Location	UTM		Geographic	
		Easting	Northing	Longitude	Latitude
5037406	Levack Public School (formerly)	469960	5165490	-81.392518	46.642297
5037407		469920	5165430	-81.393037	46.641755
5037408	Levack District High School (now Levack	469638	5165811	-81.396747	46.645171
5037409	R.H. Murray Public School	475745	5136367	-81.31541	46.380444
5037410		475745	5136367	-81.31541	46.380444
5037411		475684	5136429	-81.316207	46.380997