



Department of Public Works
Building Infrastructure Design & Construction

SITE INVESTIGATION SUMMARY NORTHSIDE MIDDLE SCHOOL

June 16, 2023

Northside Middle School – Site Investigation Summary

The Department of Public Works has performed an evaluation and investigation of 4 potential sites in North Sydney and Sydney Mines for the development of a new Junior High – Middle School. The site evaluations focused on various combinations of 4 parcels of land adjacent to Memorial Drive:

1. PID 15169659 - CBVRCE land - existing Memorial High School site west of Memorial Dr.
2. PID 15169659 - CBVRCE land east of Memorial Drive
3. PID 15005242 - CBRM land south of Birchwood Drive
4. PID 15581267 – Former Magna property east of Memorial Drive

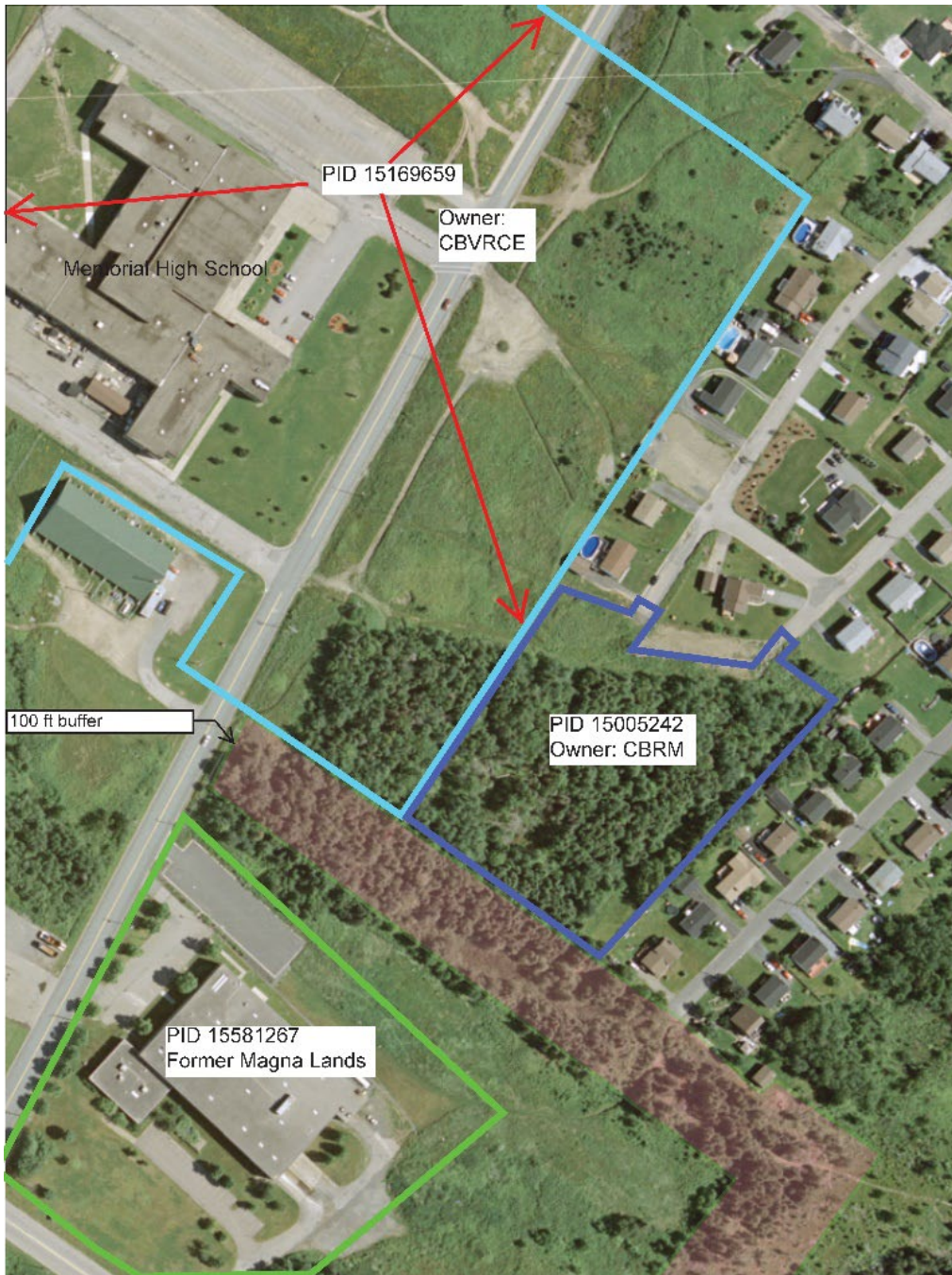


Figure 1- Location of Parcels & PIDs at Memorial Drive

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A detailed summary of the conditions at each site, along with DPW's review comments can be found in **Appendix A**.

The existing Sydney Mines Middle School site was also reviewed, however, it was concluded that this site does not have sufficient land to accommodate the new school. A desktop study eliminated over 15 other sites, a summary of the conditions at the non-viable sites can be found in **Appendix B**.

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The following report summarizes the opportunities and constraints from the 4 sites that were evaluated beyond the desktop studies. Based on our preliminary findings, it is DPW's recommendation that the new Northside Middle School be located at the site located north-west of the existing Memorial High School.

Enhancements:

Based on the information provided by the Department of Education and Early Childhood Development, DPW is proceeding with the understanding that there will be no enhancements and the school program consists of 260 students, school bus access for approximately 10 buses, and 40 staff/visitor parking spaces. Student parking is not required due to the grade levels accommodated.

Prospective Site Locations:

Figure 2 below outlines the potential site locations that were considered. A more detailed site location plan can be found in Appendix A

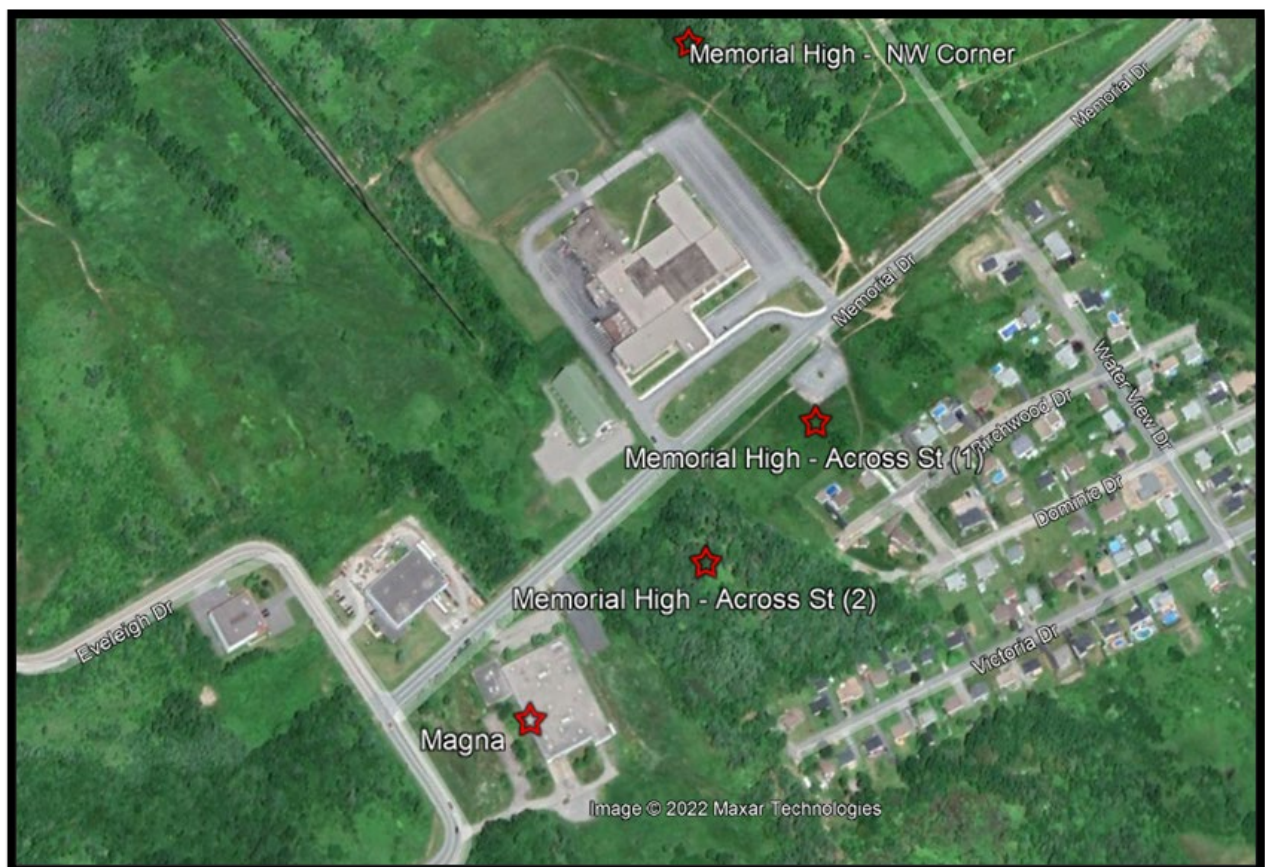


Figure 2 – Prospective Sites Considered

Recommended Location – Northwest Corner of Existing Memorial High School Site:



Figure 3 – *Proposed* School Site

Summary

The proposed Northside Middle School is intended to replace the existing Sydney Mines Middle School. Based on preliminary site selection analyses, constructing a new school on the site of the existing Memorial High School was determined to be the most viable option.

The existing Memorial High School land parcel is approximately 27 acres in size and is owned by the Cape Breton Victoria Regional Centre for Education (CBVRCE); currently zoned under the Residential Urban C Zone, and already contains the functioning Memorial High School. The adjacent sports field is also owned by CBVRCE.

1. Site Location and Size

The proposed location of the school is the existing Memorial High School site in Sydney Mines. The site is bounded by Memorial Drive to the East, an existing residential subdivision to the North, and a large tract of undeveloped land owned by CBRM to the West and South. The site is located approximately 1.5 km South of the existing Sydney Mines Middle School, and approximately 0.5km North of the newly constructed Northside Health Centre.

The site is approximately 27 acres in size and includes the existing Memorial High school, sports field, and parking lots. There is sufficient area on site to accommodate the construction

of a new school building, additional parking, driveways, and school bus access (see Appendix C for preliminary site test fit schematic). It is proposed that the new school would share the sports field facility with the existing high school.

It is noteworthy to mention that the existing Memorial Drive crosses through this property parcel with no established Right-of-Way. DPW's Real Property has been in contact with CBRM regarding potentially establishing a ROW. Establishing this ROW would divide the existing parcel into 2:



Figure 4 – Unestablished Memorial Drive ROW

2. General Terrain & Topography

The land area at the centre of the site is relatively flat and is currently occupied by Memorial High School, a parking lot, and sports field. Otherwise, the site generally slopes from North to South. Memorial Drive is at a slightly lower elevation than the proposed school location. There is a steep elevation change along portions of the northeast corner of the site, between the existing parking lot and the residential development on Moffatt Avenue. There is a plateau at the northwest corner adjacent to the existing sports field, which is suitable for the proposed new building. The requirement for additional parking and improved traffic flow may require grading portions of the site.

3. Transportation & Accessibility

Current driveway access to the site is from Memorial Drive, there are no opportunities to provide additional driveway access from the north, south, or west. There are three existing driveways, one at the northern end of the site for passenger and delivery vehicles, an adjacent driveway for school bus access, and a driveway at the southern end of the site. The existing school bus

loop has a dedicated entrance from Memorial Drive and exits onto the southernmost driveway at the site. There is a driveway that loops around the existing Memorial High School, at the rear of the building, the driveway passes between the school and the sports field.

4. Active Transportation

There is a sidewalk leading north along Memorial Drive and a marked crosswalk leading to connecting paths across the street to the site. No sidewalks exist along Memorial Drive to the south of the site; however an informal foot path is worn in the grass directly behind the adjacent curb, indicating regular pedestrian traffic.

5. Hazards, Legal Issues, & Environmental Concerns

The site is not adjacent to any known hazards that impact noise or air quality and there are no watercourses or wetlands on the site. There is a wetland and watercourse located down gradient to the west of the site, on the undeveloped lands currently owned by CBRM.

There are also active ATV trails passing through the proposed school site location. These trails connect to the adjacent residential subdivisions and show indications of relatively high use, with areas of localized ponding and severe erosion. These trails would be directly impacted by the proposed school building and should be considered for realignment around the school site.

The proposed site is outside the zone of influence from any known mine workings in the area. Geotechnical field work is complete and voids that would indicate the presence of mine workings were not encountered. However, it is noted that the existing Memorial High School has not experienced any subsidence due to underlying mine workings.

6. Access to Services

Power:

Three phase power is available on Memorial Drive. The power supply to the existing Memorial High School is underground. The existing transformer vault is owned and maintained by NSPI.

Water:

The existing Memorial High School is serviced from the municipal water distribution system on Memorial Drive via a 200 mm water lateral that supplies the domestic and sprinkler systems. There is a fire hydrant on Memorial Drive and a private fire hydrant on the site. There are backflow prevention devices inside the existing school at the service entrance point.

Sanitary sewer:

The site is connected to the municipal sanitary sewer collection system on Memorial Drive.

Storm Sewer:

The site is connected to the municipal storm sewer collection system on Memorial Drive. There is also an existing storm water collection system on the site via a network of catchbasins and manholes.

Communications:

Communication services are available from existing services on Memorial Drive.

Heating:

There is an opportunity to connect the new school to the biomass heating system that was recently installed at Memorial High School.

7. Adjacencies

The site is located on the edge of a large residential area. There are buffers located between the school site and most adjacent residential properties. The large undeveloped tract of land to the south and west provides an additional buffer for neighbouring business park properties.

The current sports field appears to be in reasonably fair condition. Although there are signs of localized undulation, no obvious signs of flooding or significant grades are noted.

The school site is also adjacent to the Northside Community Pool.

8. Cost Factors

The site is flat enough to not cause excessive development costs to locate a school. Cost factors are further described in the summary table presented in Appendix A. The land is currently owned by the CBVRCE.

9. Relevant Information

Number of students	<ul style="list-style-type: none">Projected enrolment of 260 students
Topographic Information	<ul style="list-style-type: none">Existing sports field is relatively flat and in fair condition.Parking lots and areas adjacent to existing school are relatively flat.Areas to the northwest of the existing school are at a higher elevation.Memorial Drive to the east is downslope of the proposed school location.
Legal Survey	<ul style="list-style-type: none">Existing school and driveways are fully within property boundaries.There is sufficient land to accommodate a new school within the property boundaries.
Transportation	<ul style="list-style-type: none">A formal Traffic Impact Statement (TIS) has not been undertaken to verify Memorial Drive has sufficient capacity to accommodate additional student population. DPW has completed an in-house review and indications are that Memorial Drive has sufficient capacity to accommodate the new school population.There are currently 3 driveways accessing the site from Memorial Drive, including a bus loop.Sight lines on Memorial Drive appear acceptable. Maximum speed is posted for 50 kph, 30 kph when students are present.The projected number of parking stalls required for

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	<p>grades 6 to 12 (including the existing high school) is approximately 300-350.</p> <ul style="list-style-type: none">• Currently there is parking for approximately 265 vehicles.
Phase 1 ESA	<ul style="list-style-type: none">• A Phase 1 ESA was completed for the site, there are no concerns with the land at the northwest corner of the site.
Geotechnical	<ul style="list-style-type: none">• Geotechnical investigations indicate that the site is generally underlain by fill material overlaying native glacial till and bedrock.• The thickness of the fill encountered varies from 1.2 metres to 3.6 metres.• Bedrock was encountered in all boreholes at depths ranging from 2.4 m to 4.2 m below ground surface.• Coal was encountered in 3 boreholes at depths of 2.7 m to 5.0 m below ground surface. The coal thickness was 1.2 m at boreholes # 2 and 7, and 0.2 m at borehole #8.• The geotechnical investigation did not identify any voids underground in any of the boreholes drilled as part of the field investigation.
Historical Coal Mines	<ul style="list-style-type: none">• DPW contacted the Nova Scotia Department of Natural Resources and Renewables regarding historical mine workings in the Sydney Mines and North Sydney area.• The area immediately north of the Memorial High School site is known to have underground mine workings, mine workings are not expected at the school site based on historical records.
Services	<ul style="list-style-type: none">• Municipal services are available to the site from Memorial Drive.• Water and Sewer laterals are currently connected to Memorial High School• Three phase power is available on Memorial Drive.• Communications is available on Memorial Drive.

Appendix A – Site Assessment Summary Table

Site 1: North West corner of existing Memorial High School Property	
General Information	Area 1 on enclosed sketch "Site Locations Memorial Drive"
Location	300 Memorial Drive
Property Identifier (PID)	15169659
Size	Total of 27.5 acres on west side of Memorial Drive
Availability	Site is currently owned by CBVRCE; Sports field is owned by CBVRCE
Zoning	Residential Urban C (RUC)
Bussing	Approximately 10 Busses required for middle school
Cost of Services to Site:	
Power	n/a (existing)
Water	n/a (existing)
Sewer	n/a (existing)
Roadways	n/a (existing)
Sub-Total	0
On-Site Development Costs:	
Land Acquisition	n/a (CBVRCE owns land))
On-site Mass Earthworks and Clearing	\$100,000.00
On-Site Building Demolition	n/a
On-Site Environmental Remediation	n/a
Sub-Total	\$100,000.00
Site Comments	Site relies on shared sports field with existing High School



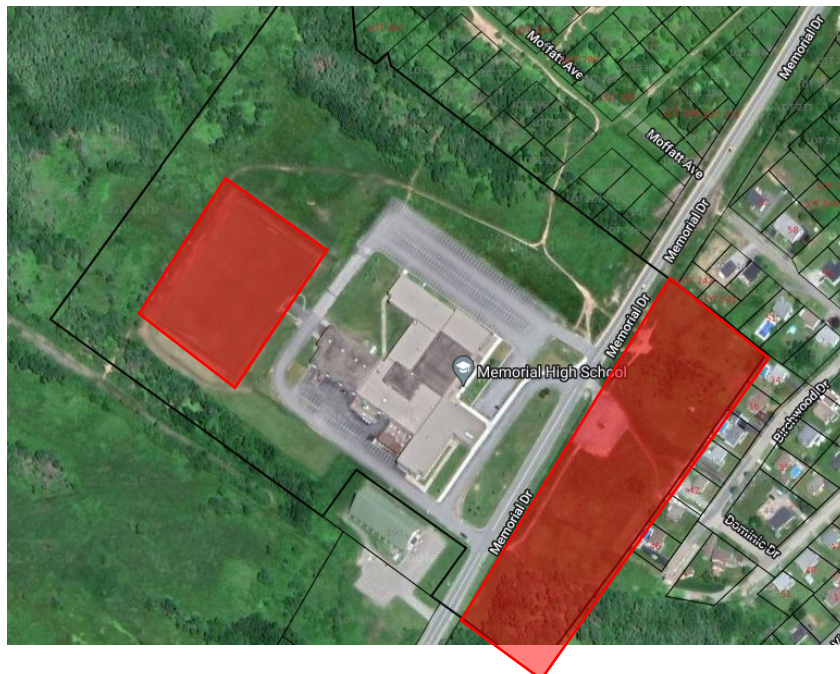
Site 2: CBVRCE Land east of Memorial Drive + CBRM Land	
General Information	Area 2 on enclosed sketch "Site Locations Memorial Drive"
Location	300 Memorial Drive / Waterview Drive Extension
Property Identifier (PID)	15169659 / 15005242
Size	5.5 acres (CBVRCE) + 5.0 acres (CBRM)
Availability	Site is currently owned by CBVRCE and CBRM, respectively
Zoning	Residential Urban C (RUC)
Bussing	Approximately 10 Busses for middle school
Cost of Services to Site:	
Power	n/a (existing)
Water	n/a (existing)
Sewer	n/a (existing)
Roadways	n/a (existing)
Sub-Total	0
On-Site Development Costs:	
Land Acquisition	\$40,000.00
On-site Mass Earthworks and Clearing	\$800,000.00
On-Site Building Demolition	n/a
On-Site Environmental Remediation	n/a
Sub-Total	\$840,000.00
Site Comments	Requires purchase of CBRM land Topographic challenges will impact site development costs Potential driveway conflict with Memorial High School



Site 3: Two Parcels: DPW Land + Privately Held Land	
General Information	Area 3 on enclosed sketch "Site Locations Memorial Drive"
Location	235 Memorial Drive
Property Identifier (PID)	15581267 / 15892292
Size	5.3 acres + 3.0 acres
Availability	Site is currently owned by private holdings and the Province of NS, respectively
Zoning	Northside Business Park (NBP)
Bussing	Approximately 10 Busses for middle school
Cost of Services to Site:	
Power	n/a (existing)
Water	n/a (existing)
Sewer	n/a (existing)
Roadways	n/a (existing)
Sub-Total	0
On-Site Development Costs:	
Land Acquisition	\$750,000.00
On-site Mass Earthworks	\$150,000.00
On-Site Building Demolition	\$1,000,000.00
On-Site Environmental Remediation	\$1,500,000.00
Sub-Total	\$3,150,000.00
Site Comments	Requires purchase of privately held land. Requires demolition of existing building Significant Wetland present on DPW land 100 ft (30.5 metre) no-cut buffer on DPW land

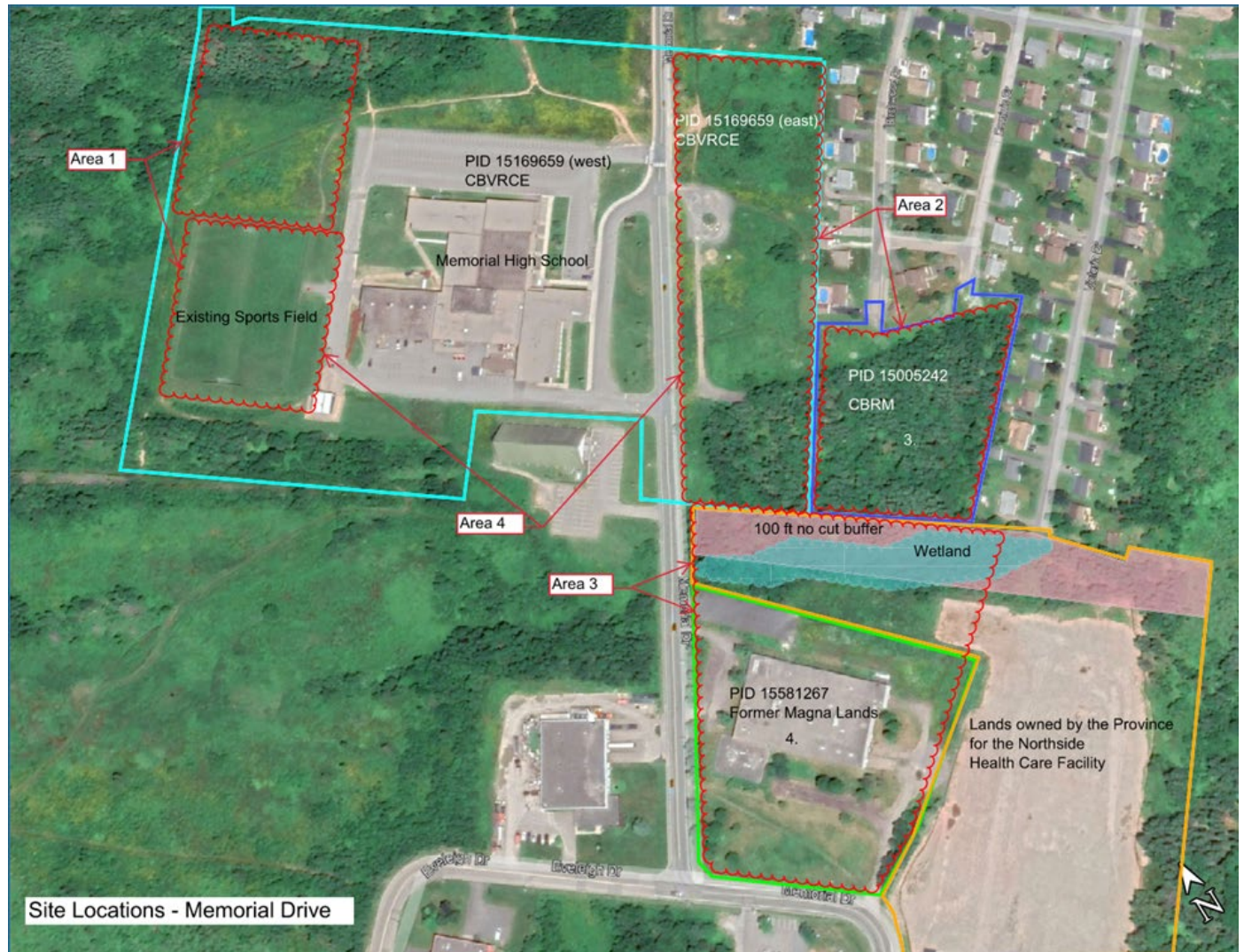


Site 4: Two Parcels: CBVRCE land East of Memorial Drive + Existing Sports Field	
General Information	Area 4 on enclosed sketch "Site Locations Memorial Drive"
Location	300 Memorial Drive
Property Identifier (PID)	15169659
Size	5.5 acres + sports field
Availability	Both land parcels are currently owned by CBVRCE
Zoning	Residential Urban C (RUC)
Bussing	Approximately 10 Busses for middle school
Cost of Services to Site:	
Power	n/a (existing)
Water	n/a (existing)
Sewer	n/a (existing)
Roadways	n/a (existing)
Sub-Total	0
On-Site Development Costs:	
Land Acquisition	n/a (CBVRCE)
On-site Mass Earthworks	\$250,000.00
On-Site Building Demolition	n/a
On-Site Environmental Remediation	n/a
Sub-Total	\$250,000.00
Site Comments	<p>Site relies on shared sports field with existing High School</p> <p>Use of sports field requires pedestrian crossing of Memorial Drive</p> <p>Topographic challenges may increase site development costs</p> <p>Potential driveway conflict with Memorial High School</p>



Appendix B – Detailed Site Location Plan

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Appendix C – Summary of Other Sites Reviewed

Northside School: Summary of Non-Viable Sites

PID	Provincial Land	Size	Owner	Comments
15885775	Memorial Drive	Portion	DPW	Share site occupied by new Northside healthcare facility. Insufficient space on remainder of lot. Wetland and buffer zone occupy a significant portion of remaining lands
15068349	Main Street, Florence	26 acres	DNR	Outside of catchment area
15164866	334 Main Street, Sydney Mines	34 acres	DNR	Area of known mine shafts, watercourse on site
15505324	73 Tobin Road, North Sydney	100 acres	DNR	Area of known mineshafts and mine workings
15511199	Main Street, Sydney Mines	55 acres	DNR	Area of known mine workings, only access to Municipal roads is via a narrow private road. Site is otherwise landlocked.
PWGSC Land				
No PWGSC land available in the catchment area				
CBRM Properties:				
15793631	South and West of Memorial High School	91 acres	CBRM	Reserved for future business/industrial use, significant wetland and pond at N-W corner
15701063	Hillier Drive	7 acres	CBRM	Watercourses, insufficient land
15580467	Hillier Drive	3 acres	CBRM	Insufficient land
15032246	Hillier Drive	< 1 acre	CBRM	Size, topography very steep
Various	Lands west of Memorial Drive	47 acres	CBRM	In 2021, CBRM opted to subdivide the land into many smaller parcels for future business/industrial use
15005242	South of Birchwood Drive	5 acres	CBRM	Size, topography, requires consolidation with adjacent CBVRCE land
Other				
15581267	Former Magna land, Memorial Drive	5.3 acres	Private landowner	Significant cost to remove regulated materials and demolish building, requires purchase of adjacent land to gain enough land area for school site.
15176464	CBVRCE - existing Sydney Mines School	2.8 acres	CBVRCE	Insufficient land
15013998	Former Thompson JH site - North Sydney	2.9 acres	Private landowner	Insufficient land, school has been demolished and the land sold to a private citizen
15582984	69 Hartigan Drive, North Sydney	25 Acres	Private landowner	Active industrial manufacturing on site
15577224	83 Hilier Avenue	3.7 acres	Private landowner	CBRM land sold to private landowner in 2021. New owner has constructed a business on the site. Insufficient land, topography is problematic.

Appendix D – Preliminary Site Assessment Test Fit Schematic

