

# ENVIRONMENTAL ASSESSMENT

## LONG-TERM WASTE MANAGEMENT STRATEGY

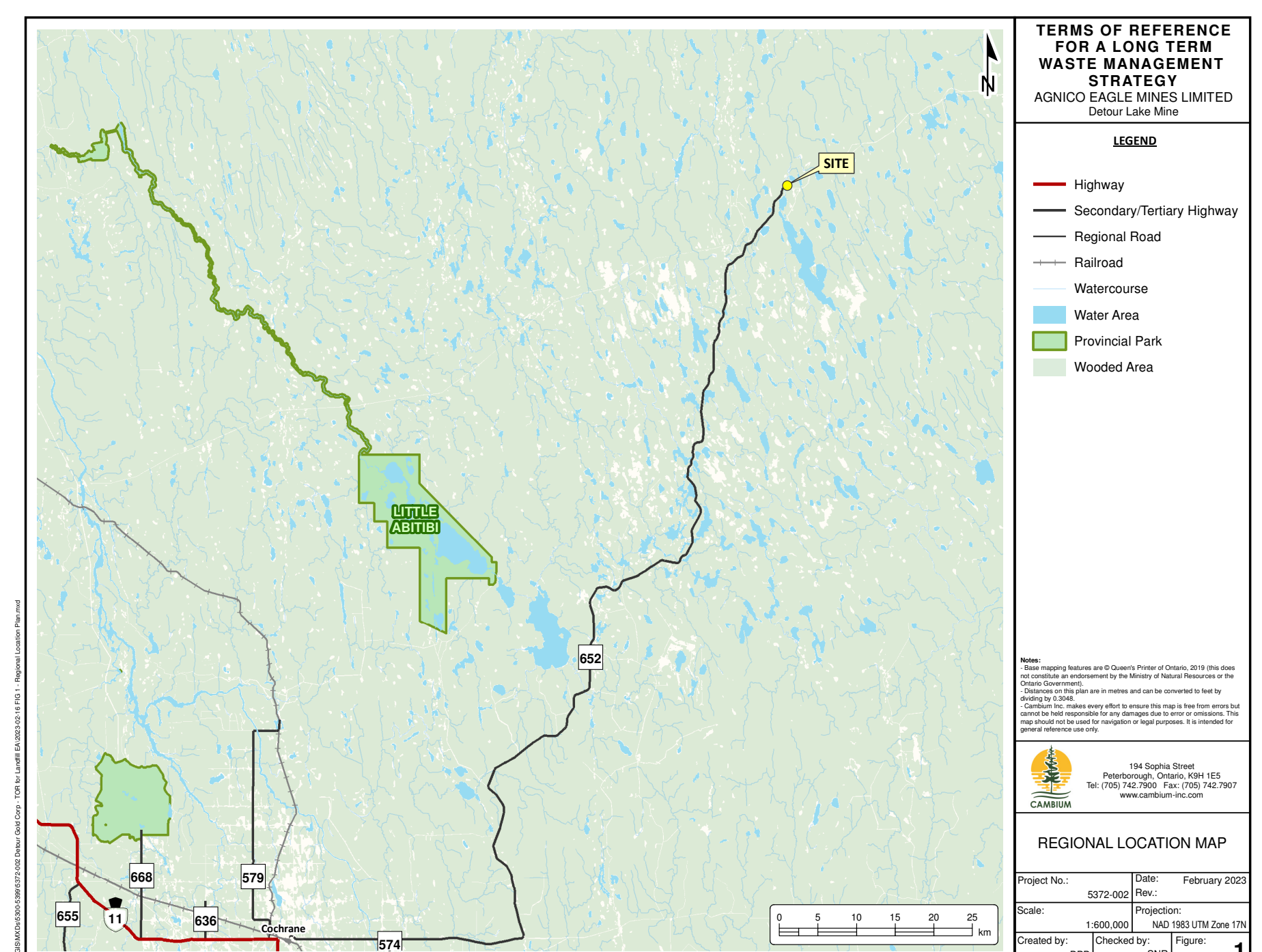
### DETOUR LAKE MINE SITE

The purpose of the Long-Term Waste Management Strategy is to allow Agnico Eagle to continue to provide Detour Lake Mine (DLM) with non-hazardous, solid waste management for the remainder of the Life of Mine, which is estimated to be greater than 30 years.

## BACKGROUND

### CURRENT DLM LANDFILL

- » Detour Lake Mine (DLM) is the largest gold mine in Canada and located about 185 km via Highway 652, northeast of the Town of Cochrane in northeastern Ontario.
- » Agnico Eagle currently operates a landfill to provide solid non-hazardous waste disposal for the site-based workforce. The current workforce is about 1,000 and expected to increase to about 2,000 by 2030.
- » Original approval (last amended 1994) was for a 6.15 ha landfill site and a total volume of at least 228,000 m<sup>3</sup>
- » Since 2018, several waste diversion strategies have been implemented including cardboard bailing and onsite recycling for typical blue box items, which has resulted in nearly a 40% reduction in landfilled materials.
- » As of December 2022, the remaining capacity of the existing landfill was 55,000 m<sup>3</sup> or 8 years.
- » DLM is situated within the homelands of Indigenous Nations including Moose Cree First Nation (MCFN), Taykwa Tagamou Nation (TTN), and Apitipi Anicinapek Nation (AAN), formerly Wahgoshig First Nation (WFN). These lands are also recognized as being important to the Metis Nation of Ontario as lands they have and continue to use, and by the Cree Nation of Quebec who have asserted Indigenous Rights.



## WASTE MANAGEMENT NEEDS

To allow Agnico Eagle to continue providing solid non-hazardous waste service to the DLM, a minimum of 150,000 m<sup>3</sup> disposal capacity is required, not accounting for workforce increases or demolition resulting from mine closure.



AGNICO EAGLE



**CAMBium**  
Consulting & Engineering



# ALTERNATIVES

## Alternative 1 – Do Nothing

This alternative does not address the rational for the undertaking. Although this is not considered a reasonable alternative to the undertaking this alternative will be considered for comparison purposes. This alternative provides a benchmark against which all other alternatives will be measured.

## Alternative 2 – Increase Diversion

Strategies to enhance the waste diversion rate at the DLM through waste reduction, material recycling, and reuse will be considered. Education and awareness will also be considered. Although this alternative does not address the rational for the undertaking, this alternative will be considered in combination with the preferred alternative.

## Alternative 3 – Establish New Landfill

This alternative would consist of developing a new landfill within the DLM site.

## Alternative 4 – Export Waste

This alternative consists of exporting waste to a disposal facility off the DLM site in Ontario, Quebec, Manitoba, and/or the United States.

## Alternative 5 – Expand the Existing Landfill

This alternative involves maintaining the existing landfill and adding capacity through expansion. Expansion can be completed in various methods including horizontally, vertically, mining (including recompacting of existing landfilled waste), etc.

## Alternative 6 – Implement New or Alternative Waste Management Technologies

The suitability of new waste management technologies for the management of non-hazardous solid wastes at DLM will be considered. Criteria for review of this ‘Alternative To’ may include but not necessarily be limited to the equipment and facility requirements for Agnico Eagle based on DLM site population and waste generation data and costs for the implementation and operation of this alternative as suited to Agnico Eagle.

## Alternative 7 – Other Alternatives

Agnico Eagle has provided six alternatives to the undertaken. Through the EA process, Agnico Eagle may include additional alternatives or combinations of the proposed alternatives that have not been specified in this TOR but will be detailed in the EA.

A combination of ‘Alternative(s) To’ will also be considered. Although several of the identified ‘Alternative(s) To’ will not address the rational for the undertaking, if considered in combination, the rational for the undertaking will be met.



# EA METHODOLOGY AND STEPS

## STUDY AREAS

Two preliminary generic study areas for the assessment have been identified as follows:

*Site Study Area* – The area of land within which the ‘Alternative To’ and ‘Alternative Method’ of the project may occur has been defined and will be limited to the DLM site, the area depicted on Figure 2.

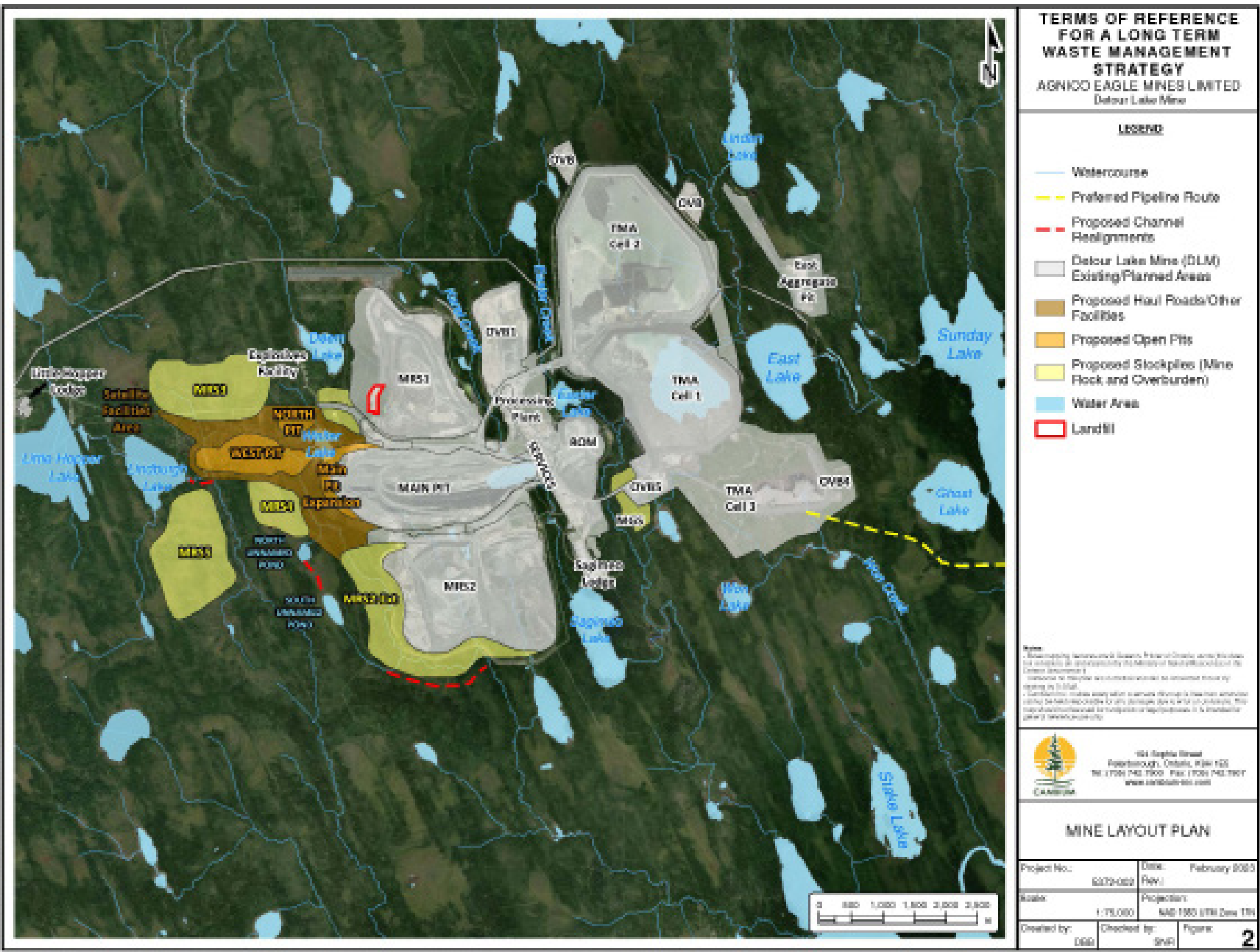


Figure 2

*Wider Study Area* – lands generally beyond the Site Study Area, that have the potential to be directly or indirectly affected by the project, which will extend to include adjacent Indigenous Nations and towns (Cochrane, etc.), where applicable, for various environmental components.

The study area for each component of the environment may vary in size depending on the alternatives to and alternative methods, and will be further defined in the EA. The Wider Study Area is not anticipated to be beyond the extents shown on Figure 5.

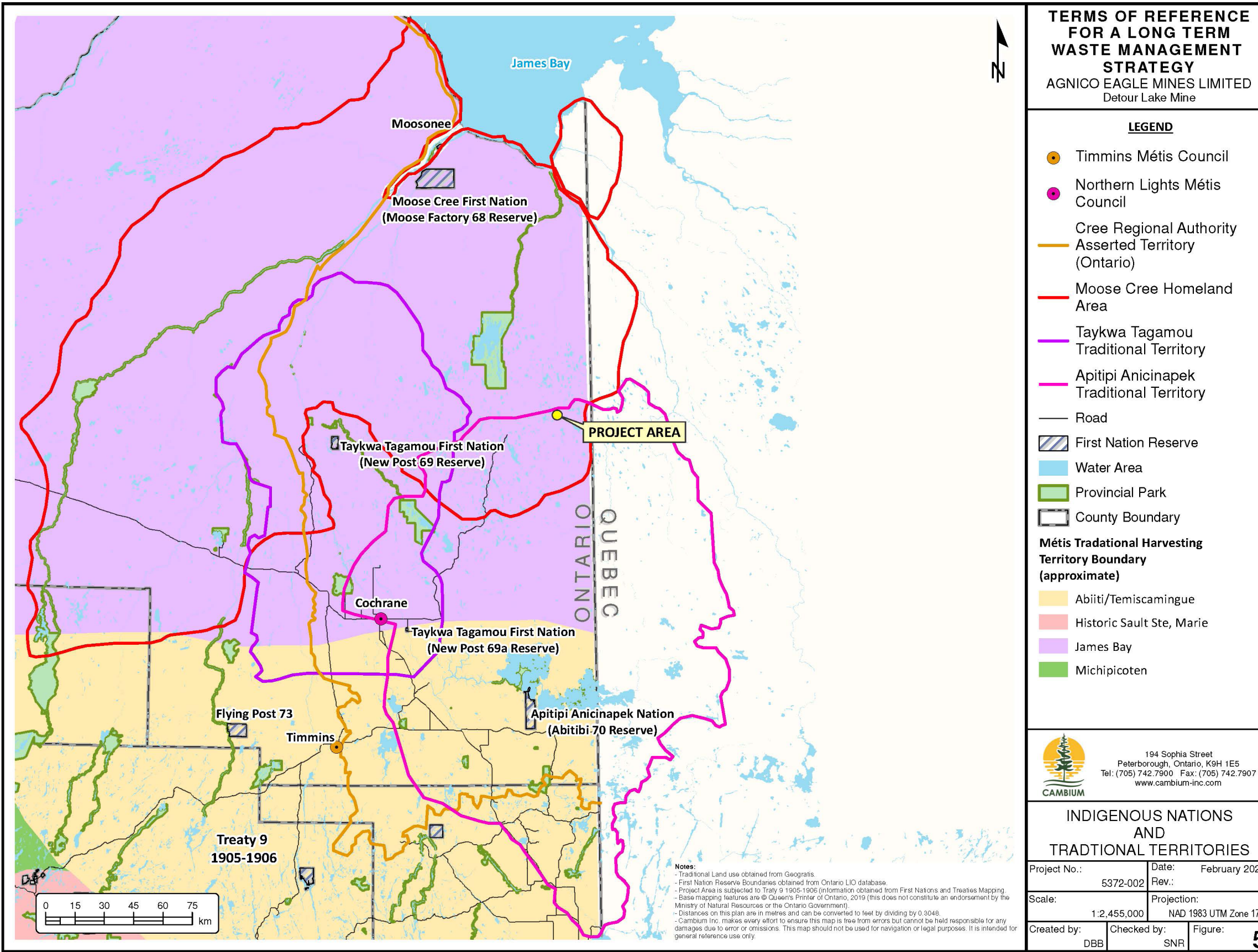


Figure 5



AGNICO EAGLE



**CAMBium**  
Consulting & Engineering



# EA METHODOLOGY AND STEPS

## STEPS

It is proposed that the EA work will be undertaken in a series of steps as follows:

### Step 1 – Characterize Existing Environmental Conditions

The primary source of the detailed description of the environment will be existing reports. DLM has been subject to extensive baseline, environmental monitoring, and technical studies, as per provincial and federal regulatory requirements. Where data gaps are identified with respect to the detailed description of the environment, additional studies will be planned. In these cases, work plans will be prepared and submitted to Indigenous Nations and Government Review Team (GRT) members for their review and concurrence.

### Step 2 – Evaluate and Compare ‘Alternatives To’

In this step, each ‘Alternative To’ the proposed undertaking will be examined to determine if it would ultimately be approvable under the EPA. This screening step is included to eliminate any alternative(s) that would not likely be approvable. Should an alternative be found to not be approvable due to unacceptable net effects (i.e., no further refinement of mitigation is possible) or technical reasons, then the alternative would be eliminated from further consideration.

A comparative evaluation of feasible ‘Alternatives To’ the proposed undertaking will be conducted to identify the preferred alternative. At this point, additional ‘Alternatives To’ the project may be considered, that may have been identified by the public or other parties during the EA process.

### Step 3 – Identify the Preferred ‘Alternative To’

The outcome of the comparative ranking exercise will be used to identify the preferred alternative to the undertaking.

### Step 4 – Identify the ‘Alternative Methods’

The ‘Alternative Methods’ are the different ways the project can be implemented. Once a preferred Alternative To the undertaking is selected, a reasonable range of ‘Alternative Methods’ will be identified and described at a sufficient level of detail (i.e., conceptual designs) so that potential effects of the preferred alternative to the undertaking on each environmental component can be assessed and compared.

### Step 5 – Evaluate and Compare ‘Alternative Methods’

Each ‘Alternative Method’ will be assessed qualitatively to predict the effects on the environment. The alternatives will be compared using the environmental sub components and indicators. As part of this comparison, the advantages and disadvantages of each ‘Alternative Method’ will be described.

### Step 6 – Identify the Preferred ‘Alternative Method’

The outcome of comparative ranking exercise will be used to identify the preferred ‘Alternative Method’.

### Step 7 – Refine Mitigation Measures and determine Net Effects

Assessment of potential effects will be done using appropriate objectives, standards, policies, and regulations. The remaining effects or net effects, if any, will be documented.

### Step 8 – Prepare the EA Report

An EA report will be prepared, consisting of the main EA study report, technical supporting documents as appropriate, and a Consultation Record.



**AGNICO EAGLE**



**CAMBIUM**  
Consulting & Engineering

# ENVIRONMENTAL COMPONENTS

The environment is defined as those environmental components that may be affected by the project. These parameters will form the basis of the evaluation criteria for each of the ‘Alternatives To’ and ‘Alternative Methods’ evaluations. These criteria and indicators are preliminary and subject to refinement and will be confirmed during the EA.

Environmental Component	Sub-component	Rationale	Indicator	Potential Data Source
Natural				
Atmospheric	Air quality (odour, dust)	Various alternatives and associated operations can produce gases containing contaminants that degrade air quality. Depending on the alternative, particulates (dust) and odour may also be produced.	Predicted concentrations of air quality indicator compounds (including particulate) at DLM site boundary. Expected site-related odour at sensitive receptors.	Published meteorological and climate data. Published emission factors. Existing site-specific studies. Applicable provincial regulations, standards, and guidelines. Proposed facility characteristics.
Atmosphere	Noise	Various Alternatives To or Alternative Methods will generate noise and could affect receptors.	Predicted noise levels at sensitive receptors.	Equipment list and expected utilization. Manufacturer's noise data. Existing noise studies. Proposed facility characteristics.
Surface water	Quality, Quantity	Contaminants associated with Alternatives To or Alternative Methods and associated operations could seep or runoff into surface water and adversely affect water quality and aquatic life. Physical works my disrupt existing surface water flows.	Predicted effect on surface water quality within the DLM site and subwatersheds within the Wider Study Area. Predicted change in drainage areas.	Existing site-specific studies (e.g., site characterization reports, etc.). Published flow data from MECP, MNRF. Results from ongoing monitoring. Land Information Ontario (LIO). Air photos. Local climate data. Proposed facility characteristics.
Groundwater	Quality, Quantity	Contaminants associated with Alternatives To or Alternative Methods and associated operations could enter the groundwater and impact off-site groundwater. Physical works my disrupt existing groundwater flows.	Predicted effect on groundwater quality at DLM site boundary and the Wider Study Area. Predicated groundwater flow characteristics.	Existing site-specific studies (e.g., site characterization reports, well logs, etc.). Results from ongoing monitoring. Published regional sources and data on regional geological and hydrogeological conditions. Existing geological mapping. Proposed facility characteristics.
Biology/Ecology	Aquatic communities and habitat	Various Alternatives To or Alternative Methods could remove or disturb the functioning of natural aquatic habitats and species, including rare, threatened, or endangered species.	Predicted change in surface water quality. Predicted impact on aquatic habitat and biota.	Existing site-specific studies. LIO. MNRF Species at Risk List. Natural Heritage Information Centre. Various Species Atlases (e.g., Reptile and Amphibian, Breeding Bird, etc.). Proposed facility characteristics.
Biology/Ecology	Terrestrial communities and habitat	Various Alternatives To or Alternative Methods could remove or disturb the functioning of natural terrestrial habitats and species, including rare, threatened, or endangered species.	Predicted impact on terrestrial vegetation communities, wildlife habitat, and wildlife. Various factors will be considered such as direct disturbance to habitat, impacts to wildlife corridors, and long term (chronic) impacts to habitat from emissions.	
Climate	Project Effects on Climate Change, Climate Change Effects on the Project	Various alternatives and associated operations can produce green house gases. Various Alternatives To or Alternative Methods could be impacted by changing climate (severe weather, increased/decrease precipitation, etc.)	Predicted GHG emissions. Use of predictive climate models to assess impacts on the project.	Documented local and regional climate data. Predictive Climate models. GHG generation modelling.
Socio-Economic				
Land-Use / Planning	Effects on current and future land uses (tourism, forestry, mining) Effects on traditional land uses (hunting, fishing, gathering, etc.)	Various Alternatives To or Alternative Methods could affect the use and enjoyment in the vicinity of the site.	Predicted impact on land uses.	Applicable provincial plans, acts, regulations, standards and guidelines, and policies. Aerial photographic and topographic mapping. Partner Indigenous Nations.
Archaeology	Presence of known / potential archaeological features in the study area	Construction of various Alternatives To could disturb portions of the DLM site.	Predicted archaeological resources potentially affected.	Existing archaeological studies and reports. Available TEK reports. Ontario Archaeological Sites Database. Partner Indigenous Nations.
Cultural Heritage Resources; Consideration of Indigenous and Treaty Rights	Presence of cultural heritage features; Potential impact on Indigenous treaty rights	Traditional land use practices could be impacted by various Alternatives To or Alternative Methods.	Predicted impact on identified traditional land uses and access to traditional territories by Indigenous and non-Indigenous persons.	Available TK reports. Partner Indigenous Nations.
Effects on local communities	Community facilities, community concerns	Various Alternatives To or Alternative Methods could impact the enjoyment of residents properties (e.g., increased truck traffic on transportation routes).	Predicted interference of residential properties.	Applicable provincial plans, acts, regulations, standards and guidelines, and policies. Aerial photographic and topographic mapping. Property owners. Municipal agencies. Partner Indigenous Nations.
Technical and Built Environment				
Transportation	Access routes, roads, trails	Various Alternatives To or Alternative Methods may impact the traffic in the Wider Study Area.	Predicted effect on the transportation routes.	Aerial photographic and topographic mapping. Review of Official Plans, Zoning by-laws and other local plans. Traffic data. Municipal Offices.
Economic				
Available financial resources	Ability for Agnico Eagle to implement the alternative in a manner that is practical and financially realistic	Different methods of waste management have different costs.	Estimated costs associated with implementation of Alternatives To and Alternative Methods.	Existing operational cost information. Cost feasibility assessments.
Effects on local communities	Employment, provision, and procurement of products and/or services	Various Alternatives To or Alternative Methods could impact employment opportunities, procurement of products and/or services, etc.	Predicted effect on local employment. Predicted effects on local businesses and commercial activities.	Existing information on site employment (current and projected workforce, employee's home locations). Review of existing commercial activity. Expected change to local business and commercial activity. Census data.
Cumulative Impacts				
Effects in combination with existing projects	Net effects of proposed alternative combined with predicted effects of existing projects (mining operations, forestry, power, etc.)	Various Alternatives To or Alternative Methods could compound impacts from existing, planned, or future projects.	Predicted impacts of cumulative impacts will be considered for all components and subcomponents.	As noted.



# CONSULTATION ACTIVITIES

---

Agnico Eagle is committed to finding a suitable solution for solid waste management for the remainder of the Life of the Mine. This includes full and open dialogue with local and regional stakeholders and Indigenous Nations.

To achieve this, the following principals of engagement are used to guide the consultation program:

- Capacity Building
- Honest, open, and transparent communication
- Timely
- Mutual respect

Stakeholders and Indigenous Nations have been and will continue to be engaged with regards to this project, in dialogue about:

- Project design
- Potential environmental effects
- Mitigation measures
- Follow-up and environmental monitoring

## POTENTIALLY AFFECTED AND INTERESTED INDIGENOUS NATIONS INCLUDE:

- » Moose Cree First Nation (MCFN)
- » Taykwa Tagamou Nation (TTN)
- » Apitipi Anicinapek Nation (AAN), formerly Wahgoshig First Nation (WFN)
- » Metis Nation of Ontario (MNO)
- » Crees of the First Nation of Waskaganish and member Nations of the Grand Council of the Crees (Eeyou Istche) (FNW)

## STAKEHOLDERS INCLUDE:

- » General Public, Local Businesses, and Landowners
- » Government Review Team

## SUMMARY OF CONSULTATION ACTIVITIES ON THE TOR

During the early stages of this project, the following consultation was completed:

- » Meeting with MECP to discuss designation of the project under the Act
- » Notice of Commencement
- » Microsite was published on the Agnico Eagle website
- » Presentation of the landfill permitting process during Environmental Update Meeting with partner Indigenous Nations
- » Distribution of initial draft TOR (dated March 21, 2023) to partner Indigenous Nations and the Project Officer MECP for a high level review
- » Revision of draft TOR to address comments and recommendations from the initial review by the partner Indigenous Nations and MECP



**AGNICO EAGLE**



**CAMBIUM**  
Consulting & Engineering



# CONSULTATION ACTIVITIES

## CONSULTATION ACTIVITIES PROPOSED FOR EA

Consultation objectives for Stakeholders and Indigenous Nations are included in the TOR. Consultation activities will include report sharing, technical review and comment, engagement, and meetings. The following consultation is planned at a minimum:

- » Notice of Commencement for the EA by mail, local newspapers, on the project website, company social media, and radio, including details of the project, the EA process, and contact information, as a minimum.
- » Distribution of environmental work plans to partner Indigenous Nations and GRT.
- » Distribution of environmental studies to partner Indigenous Nations and GRT.
- » Distribution of working draft EA for Indigenous Nations review and comment at key milestones (outlined below)
- » Indigenous engagement sessions to discuss key decisions.
- » Circulation of draft EA for Indigenous Nations, GRT, and stakeholder review and comment.
- » Community Open Houses and/or site tours, to be determined.
- » Project Website.
- » Final EA Report to be provided to Indigenous Nations, GRT, and interested stakeholders who have submitted comments on the draft EA and/or wish to receive a copy. Notice of the final report availability will be provided.

There are several key decision-making milestone points when consultation will occur during preparation of the EA. The main milestones include:

- » proposed work plans for data collection
- » evaluation and assessment of the Alternatives To
- » selection of the preferred Alternative To the undertaking
- » identified Alternative Methods;
- » evaluation and assessment of the Alternative Methods
- » selection of the preferred Alternative Method
- » proposed mitigation and monitoring

The scheduling of the consultation activities will be developed during the EA when it is clearer how the planning process is progressing.



**AGNICO EAGLE**

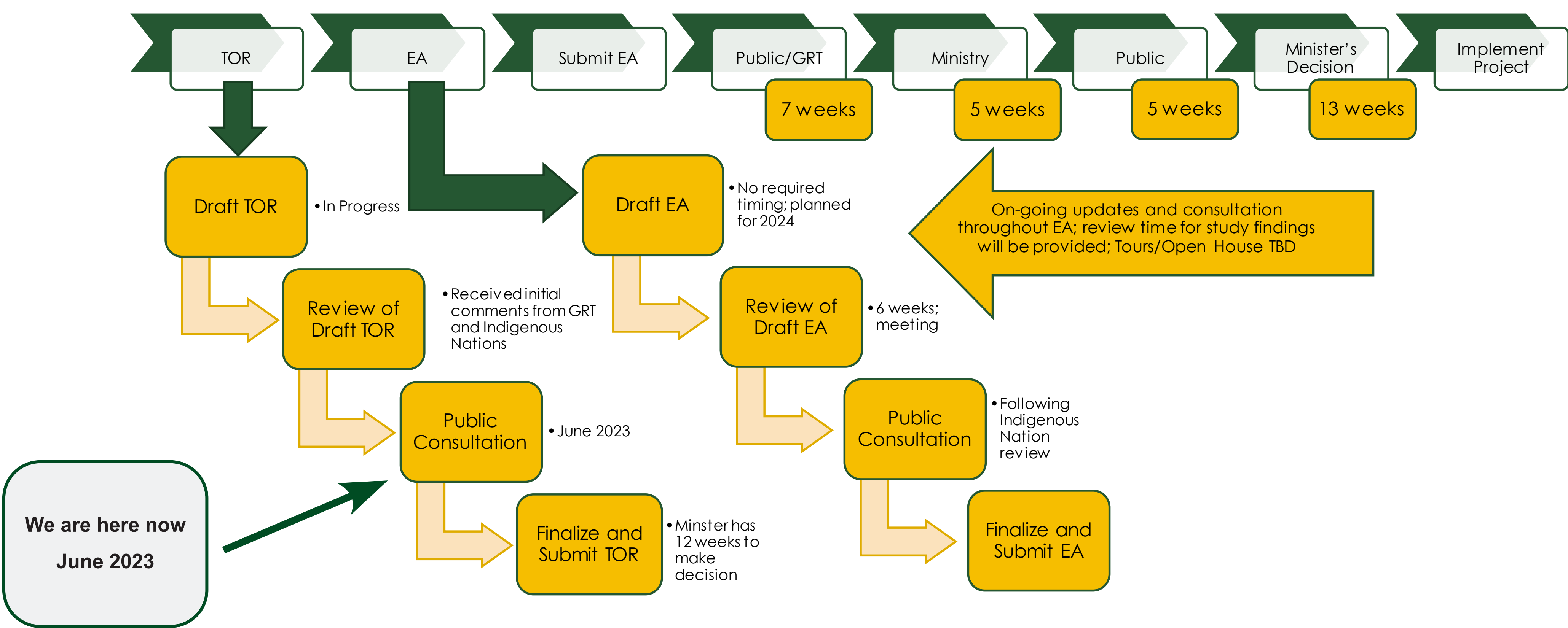


**CAMBIUM**  
Consulting & Engineering

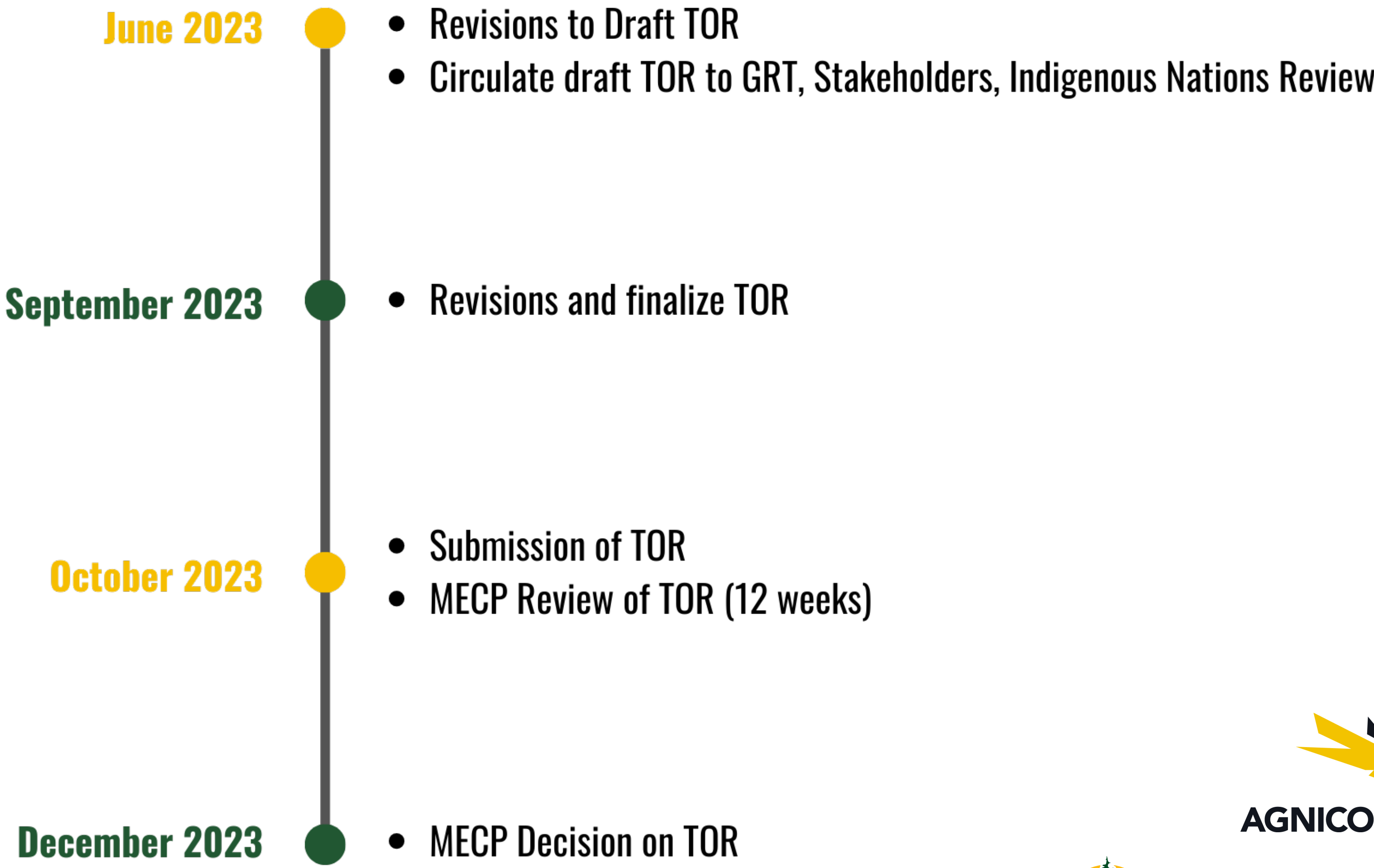


# TIMELINES AND NEXT STEPS

EA timelines are dependent on the Minister’s decision about the TOR and the EA cannot proceed without an approved TOR. A decision about the approval of the TOR is anticipated in early 2024 (12 weeks after submission).



## NEXT STEPS:





# COMMITMENTS

This table will be carried forward to the EA study report and the EA will include information on how the commitments made in the TOR have been addressed in the EA, and the location of this information within the EA documents.

ID	TOR Commitments
1	The EA will be prepared in accordance with subsections 6(2)(a) and 6.1(2) of the <i>EA Act</i> .
2	Agnico Eagle will contact Indigenous Nations to discuss their consultation needs and continue to involve them throughout the EA process.
3	Agnico Eagle will share workplans with Indigenous Nations and GRT members for their review and concurrence.
4	Agnico Eagle will provide a final detailed description of the environment in the EA.
5	Agnico Eagle will consider the stated purpose of this EA during the EA process and will refine the purpose if required. The final purpose statement will be provided in the EA study report.
6	During the EA, the study area(s) may be further refined when more detailed information is known.
7	During the EA, the preliminary criteria and indicators for each of the environmental components will be refined and described in the EA study report.
8	The preferred alternative to the undertaking will be assessed from the perspective of climate change.
9	The individual Alternative Methods of the preferred alternative to the undertaking will be identified, refined, and confirmed during the EA, and described in the EA study report.
10	<p>Agnico Eagle commits to consult with partner Indigenous Nations on the key decision making milestone points, including:</p> <ul style="list-style-type: none"> <li>proposed work plans for data collection;</li> <li>evaluation and assessment of the ‘Alternatives To’;</li> <li>selection of the preferred ‘Alternative To’ the undertaking;</li> <li>identify the ‘Alternative Methods’;</li> <li>evaluation and assessment of the ‘Alternative Methods’;</li> <li>selection of the preferred ‘Alternative Method’; and,</li> <li>proposed mitigation and monitoring.</li> </ul>
11	A cumulative impact assessment will be completed and described in the EA study report.
12	Agnico Eagle commits to developing a monitoring framework during the preparation of the EA.
13	Where appropriate, existing commitments to monitoring and mitigation implemented at the DLM site will be incorporated into the compliance monitoring program to be developed and expanded on where necessary.
14	<p>The list of TOR commitments will be provided in the EA study report together with the way in which these commitments were addressed during the EA and the location of the information within the EA documents.</p> <p>The EA Report will also include a list of commitments made by Agnico Eagle during the preparation of the EA studies and during consultation throughout the EA process</p>



# THANK YOU

---

Cambium and the Project Team thank you for your attendance and comments on the project.

If you have any further questions please reach out to one of the persons listed below.

## Project Leads

---

### **Cambium**

**Stephanie Reeder, P.Geo., C.E.T.**

Group Manager - Solid Waste

stephanie.reeder@cambium-inc.com

### **Cambium**

**Heather Dzurko, M.Sc.**

Senior Project Manager - Solid Waste

heather.dzurko@cambium-inc.com

**Agnico Eagle, Detour Lake Mine**

**Melissa Leclair, M.Sc.**

Environmental & Sustainability Manager

melissa.leclair@agnicoeagle.com

Check out the webpage for the project here!

