

Summary of Issues – Marban Gold Mine Project

The Summary of Issues summarizes the issues raised by the public and Indigenous peoples during the public consultation period on the summary of the Initial Project Description for the Marban Gold Mine Project (the Project) of O3 Mining Inc (the Proponent) that took place from December 1 to 21, 2022. Issues raised by federal authorities were also added to the document. All of these issues are drawn from comments submitted through the Canadian Impact Assessment Registry (reference number 84117). The issues have been grouped into different categories.

The Proponent will then be required to provide a Detailed Project Description which must include responses to the issues raised in the Summary of Issues. All of this information will be used by the Impact Assessment Agency of Canada (the Agency) to determine whether an Impact Assessment is required under section 16 of the *Impact Assessment Act*. In the event that an Impact Assessment is deemed necessary, this information will also be used to develop the Tailored Guidelines which provide and describe the necessary guidance and requirements for the Proponent's Impact Statement.

1. Project Description
Need for information on the routes taken for the transport of inputs, outputs and finished products.
Need for information on the categories of land (public or private) and their location (map) in the project area.
Need for a description of the businesses in the vicinity or on the land that would be acquired by the Proponent to carry out the Project.
Need for information on the consequences of the purchase of the properties of the former Dubuisson dump and the Multi-Tri Environnement company, particularly with regard to the disposal or management of the residual materials and contaminated soils currently present.
Need for information on the extraction process chosen in comparison to other processes used for open-pit mines, notably the one used at the Canadian Malartic Mine.
Need for information on the percentage of water reuse in the mine process.
Need for information on the possibilities of extending the operation of the mine beyond the planned 9.6 years.
Importance of including the municipalities of Val-d'Or and Malartic in the study area.
Need for information on how the Gervais Road bypass would be constructed and its potential effects on Lake De Montigny, the presence of wetlands and the high water mark.
Need for information on how the Proponent wishes to include riparian strips or buffer zones to protect terrestrial and aquatic habitats.
Need for information on natural and man-made seismic hazards, and how they would be taken into account in the design of the Project.
Concerns about the seismicity that could be induced by the Marban mining operation and whether it is a problem.
Need to clarify each potential change listed in Table 1 (Main potential changes to environmental components) of the Initial Project Description, i.e., add the significance of the effect (minor, medium, major), and specify for each effect whether it is temporary (short and medium term) or permanent.
Relevance of doing business with Ecologo certified suppliers and the possibility of acquiring this certification.
Need for information on the Proponent's intentions to develop partnerships in research projects to optimize the rehabilitation and restoration stages.

2. Rationale for the Project, need for the Project and alternatives for carrying out the Project

Importance of further clarifying and detailing the rationale for a gold mine project, for the region and for Quebec society, in a context where demand seems to favour critical and strategic mineral mines.

Need for information on the public interest of a gold mine project, which seems to be mainly economic, compared to the effects on the environment and the human environment.

Need for information to better understand the positive effects of the Project on the development and maintenance of the socio-economic net of the region, given the volatility of the gold price and market fluctuations.

Need for information on the potential economic benefits of the Project, including the economic benefits for the towns of Val-d'Or and Malartic, the Abitibi-Témiscamingue region, the province of Quebec and Canada.

Concerns about the merits of the Project for the region, and more broadly for the province, in a context of a shortage of qualified labour that is generally unavailable in the region; a housing crisis; a lack of childcare places; and the reduction and closure of local services and businesses in the region.

Need for information on alternative solutions, project alternatives, variants and technologies considered, including the mining process chosen, the ore processing plant, the location of the tailings facility, water management and the diversion of Keriens Creek.

Public concerns about the Proponent's ability to divert Keriens Creek.

Need for information on the economic viability of the scenario in which only the Marban pit would be exploited. This scenario would avoid the diversion of the Keriens Creek.

Need for information on the analysis of scenarios that would allow the pits to be backfilled, rather than flooded, including the use of mining waste.

Need for information on the closure and restoration scenarios for the site, considering the different project variants. Specify whether the Proponent plans to partially or fully backfill the pits in these scenarios.

Importance of considering dry-stacking to reduce the effects of tailings management.

Need for information on the possibility of reusing mine waste in an environmentally responsible way by allowing companies to revalue these materials (e.g., gravel).

Need for information on the possibility of carrying out all or part of the Project underground to reduce the environmental effects of an open-pit mine.

3. Air quality

Need for information on emissions and dispersion of air contaminants from project activities (including blasting with ammonium nitrate explosives), and their potential effects on air quality and health, for all phases of the Project.

4. Surface water, drinking water and groundwater

Need for information on the vulnerability of groundwater resources and on the potential effects of the Project, particularly due to dewatering of the mine pits (drawdown) on recharge and discharge areas and on water supplies (artesian wells, lakes, wetlands). Provide information on the mitigation or protection measures to be implemented to reduce the effects of the Project and on the necessary follow-up programs.

Need for information on the location, characterization and vulnerability of the esker under the Marban pit.

Concerns about the potential effects of the Project on the esker below the Marban pit and the potential loss of this quality drinking water recharge for the population.

Need for information on water management alternatives, particularly with regard to the diversion of the Keriens Creek.

Need for information on the design of the Keriens Creek diversion (dimensions of the future watercourse, area of influence, life span of the diversion, etc.) and its potential effects on the catchment areas that are likely to be affected and more specifically on Lake De Montigny and Lake Vassant.

Need for information on potential contamination of surrounding watercourses by air emissions, and on mitigation measures that can be put in place to minimize the effects.
5. Wetlands and water bodies
Need for information on the potential direct and indirect effects of the Project on wetlands and water bodies and their ecological functions during each phase of the Project.
Importance of taking into account the regional plan for wetlands, water bodies and natural environments currently being developed for the Vallée-de-l'Or RCM when describing wetlands and analyzing the effects of the Project on them.
6. Terrestrial fauna, flora, birds and species at risk
Importance of carrying out a comprehensive inventory at the appropriate time for all potentially affected flora and fauna species, including special status species.
Need for information on potential effects of the Project on migratory birds and species at risk likely to occur in the study area and their habitats and anticipated mitigation measures to reduce these effects.
Need for information on the effects of the Keriens Creek diversion on the nesting (nesting site and nesting activity) of the Trumpeter Swan, a species of interest.
Need for information on the possibility of keeping intact portions of lots where mining operations would have no impact or mining potential on sensitive natural environments. Before considering habitat compensation, the Proponent should first consider avoidance scenarios considering that the study area is already heavily impacted.
Need for information on the positive effects of the option of not carrying out the Project for the safeguarding of endangered animal and plant species.
Need for information on the presence and risk of spread of invasive alien species in the study area by project activities.
Need for information on potential and cumulative effects of the Project on woodland caribou habitat (range QC1 – Val-d'Or) and anticipated mitigation measures taking into account the recommendations from the Independent Panel on Woodland and Mountain Caribou's Final Report ¹ , the Amended Recovery Strategy for the Woodland Caribou, Boreal Population, in Canada ² and the threshold of disturbance of the caribou range QC1, in which the Project is located, which is already exceeded.
Need for information on the Proponent's proposed compensation for caribou habitat. This compensation should be done in consideration of the Amended Recovery Strategy for the Woodland Caribou, Boreal Population, in Canada ² . Indigenous peoples question the possibility of funding individual supplementation or depredation initiatives that would be administered by a public entity, once the habitat is restored and the caribou are released.
Need for information on the threshold of undisturbed habitat required for wildlife species valued by Indigenous Nations.
Need for information on the effects of increased road traffic generated by the Project on the risk of wildlife collisions, which could lead to injuries and fatalities.
7. Fish and their habitat
Need for information on fish species present and their habitats in streams and water bodies in the study area, including lake sturgeon, whose current status is of concern under the <i>Species at Risk Act</i> .
Need for information on potential effects of the Project on fish and fish habitat in watercourses and water bodies likely to be affected by the Project, including potential effects caused by the Keriens Creek diversion.

¹ Government of Quebec (2022). Rapport final de la commission indépendante sur les caribous forestiers et montagnards. https://mffp.gouv.qc.ca/documents/faune/especes/RA_Commission-independante-caribous-forestiers-montagnards.pdf

² Government of Canada (2020). Amended Recovery Strategy for the Woodland Caribou Canada (*Rangifer tarandus* caribou), Boreal Population, in Canada. https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-CaribouBorealeAmdMod-v01-2020Dec-eng.pdf

Need for information on the Proponent's proposed fish habitat compensation plan.
Need for information on the threshold of undisturbed habitat required for valued and harvested fish species, including lake sturgeon, by Indigenous Nations.
8. Human health and well-being
Need for information on the plan or strategy to be implemented by the Proponent for collecting disaggregated data that will allow it to analyze, in the impact statement phase, the impacts of the Project on human health resulting from changes in the social and economic conditions of the populations affected by the Project, in the project sector (Dubuisson, Vassan), the cities of Val-d'Or and Malartic, the Vallée-de-l'Or RCM, and Abitibi-Témiscamingue.
Need for information on the potential effects of hundreds of new resident employees coming to the area, including on childcare and health services that are already struggling to meet the needs of the population.
Need for information on the effects of the Project on the safety of girls and women, in relation to itinerant, rotational and camp-based workers. Pay particular attention to Indigenous women and girls ³ .
Need for information on the procedure for buying back land and compensation that would be paid to offset the effects of mining and transport activities.
Need for information on the Proponent's strategy to support residents in the area who would be affected by the buyout or relocation of their homes including: <ul style="list-style-type: none"> • Explain how this strategy would take into account those members of the community who are considered particularly vulnerable (see section 10 below); • Describe the monitoring mechanisms that would be put in place to ensure fair and proper implementation of the strategy; • Explain what communication channels should be established with residents throughout the process of buying or relocating houses.
Need for information on the strategy or methodology that would be used to assess the psychological effects of the Project on the population of the project area (e.g., effects related to the anxiety of being expropriated, relocated or living in the vicinity of an open-pit mine). Provide a description of the anticipated changes in the quality of life of this population.
Need for information on the relevance of developing and presenting a cohabitation guide that takes into account residents living near the Project, Indigenous communities and other land users.
Concerns about exploratory drilling and its negative effects on the environment and living environment.
Need for information on prevention methods that would be put in place to reduce or avoid incidents with Indigenous communities, including those related to hunting and fishing activities and those related to racism.
Need for information on the location of permanent, temporary or seasonal dwellings, cottages or camps including those of Indigenous peoples.
Need for information on the potential effects of noise (ambient noise), vibrations and other nuisances caused by the Project on health and well-being (e.g., sleep). Concerns that noise propagation is more important on a body of water such as Lake De Montigny.
Need for information on potential effects on human health related to changes in drinking water quality (surface and groundwater).
Need for information on the potential effects of the Project on increased road traffic, the sustainability of roads (including those linking cities) and the safety of road users.
Need for information on measures to contribute to sustainable mobility.
Need for information on contaminants emitted by the Project into the water, air or soil that may be absorbed in food trapped, fished, hunted, harvested (including Chaga mushroom) or grown by the

³ Government of Canada (2019). Reclaiming power and place: Final report of the National Inquiry into Missing and Murdered Indigenous Women and Girls. <https://publications.gc.ca/site/eng/9.867037/publication.html>

population and particularly by Indigenous communities for subsistence or medicinal purposes and their effects on physical and psychological health.
9. Social and economic conditions
Need for information on the regional and provincial economic impact of the Project and the main potential economic impact on the local population.
Need for information on the strategy for housing workers and the location and type of accommodation that would be used to house them.
Need for information on the potential impacts of the implementation of a fly-in/fly-out staffing strategy on the social and economic conditions of the region.
Concerns about the potential effects of the attraction of high wages in the mining sector on school drop-out, particularly for members of Indigenous communities.
Need for information on the number and types of direct and indirect jobs that would be created – full-time, part-time, permanent, temporary and others.
Need for information on the jobs that would be available for members of Indigenous communities, especially women, and the level of education required to obtain these jobs.
Need for information on the capacity of the regional and local labour market to provide the necessary workforce for the mine in a context of labour shortage.
Need for information on the potential socio-economic effects of the jobs that would be created by the mine, including more competitive wages compared to other employment sectors (public, cultural, SME, tourism, etc.), on the cost of living (increase in house prices and housing in general), on the community sector, the tourism sector (scarcity of tourist accommodation), the cultural environment, etc., and the potential social inequalities that would result.
Concerns about the temporary nature of the tax benefits and the influence of corporate donations on public acceptance of the Project.
Need for information on the potential effects of the mine on the organic certification of berries and herbs harvested in the area used by the micro-distilleries.
Need for information on the potential effects of the Project on recreational fishing.
10. Vulnerable population groups (GBA Plus)
Need for information on the plan or strategy that would be put in place by the Proponent to analyze the impacts of the Project on various groups of vulnerable populations (e.g., the elderly, people with disabilities, Indigenous women, youth, or any other category of population that might be disproportionately affected by the potential impacts of the Project).
Need for information on the number and rate of employment, labour force participation and unemployment of members of groups underrepresented in the local labour market such as women, Indigenous people, youth, visible minorities, single parents, immigrants and people with disabilities.
Importance of consulting, in addition to citizens, the organizations that work with various groups of the population in order to obtain a global picture of the potential effects on these vulnerable groups.
11. Indigenous peoples
Need for information on how the Proponent would ensure adequate participation of Indigenous peoples in the impact assessment process, taking into account their capacity.
Concerns about the possibility of the Proponent funding the follow-ups carried out by Indigenous peoples through a given envelope without accountability, thus allowing them to remain independent of the Proponent.
Concerns about the negative effects of the Project on the Indigenous rights and territory of Indigenous peoples.
Importance that the Proponent's impact assessment takes into account the concerns of Indigenous peoples and includes a commitment by the Proponent to respect the <i>United Nations Declaration on the Rights of Indigenous Peoples</i> .

Importance that the restoration of the Project is aimed at enabling members of Indigenous peoples to use the site after mine closure as part of the exercise of their rights and to be able to practise their traditional way of life there, to the extent possible.
Concerns about the trust relationship between the Proponent and Indigenous peoples, and the strategies put in place by the Proponent to maintain this relationship.
If the Project goes ahead, it is important to do so in partnership with the Indigenous peoples affected, particularly in terms of profit sharing.
12. Navigation
Need for information on the navigability of rivers that may be affected by the Project, taking into account, among other things, the current uses of Indigenous peoples.
Need for information on river properties and potential effects of the Project that may affect navigability (e.g., effects on groundwater and catchment areas, changes to average flows and water levels, etc.).
13. Cumulative effects
Concerns about the cumulative effects of the Project on the environment and on the population, given its location, intensive open pit mining and ongoing and future development activities in the area (mining, forestry, etc.).
Concerns about the carrying capacity of ecosystems to support these developments, particularly with regard to the cumulative effects of the addition of contaminants to surface and groundwater.
Need for information on the methodologies that would be used to analyze the cumulative effects of the Project.
Concerns about the carrying capacity of the Harricana River watershed to receive another mining effluent generating project in an already affected watershed.
Concern about cumulative effects on lake sturgeon which are fished by the Algonquin people and which bioaccumulate contaminants.
Need for information on the cumulative effects of the Project on the current use of the land by Indigenous peoples taking into account the effects of other mines (past, present and future) and any other development activities growing in the area such as recreation and tourism or resort activities.
Need for information on the cumulative effects of the Project on the potential reduction of areas of interest for mushroom and berry picking, considering that demand is growing for the remaining intact sites.
Need for information on the cumulative effects of the Project on the total loss of hunting camps, temporary shelters and chalets.
Concerns about seismic shaking, which has become more frequent in recent years, leading to fears of effects on aquatic, terrestrial and infrastructure wildlife and damage to homes.
14. Accidents and malfunctions
Need for information on potential accident and malfunction scenarios that could lead to the release of contaminants into the surrounding environment for each phase of the Project, and their potential effects on human health and the environment.
15. Climate change and greenhouse gas emissions
Details required on the estimation of greenhouse gas emissions by providing information on direct emissions, indirect (energy-related) emissions and other indirect emissions emitted for each phase of the Project, including those related to the transport of fuel and materials.
Need for information on the possibility of carbon sequestration, purchasing carbon credits or any other means of mitigating the effects of greenhouse gas emissions.
Need for information on the effect of the Project's greenhouse gas emissions on the achievement of governments' greenhouse gas emissions and climate change targets.
Need for information on the effects of climate change on the Project, especially on spring flooding of the diverted watercourse (Kerriens Creek).
16. Monitoring and surveillance

Need for information on necessary monitoring programs on air and water quality.

Need for information on the Proponent's intention to involve representatives of Indigenous peoples in the various monitoring programs throughout the life of the Project.