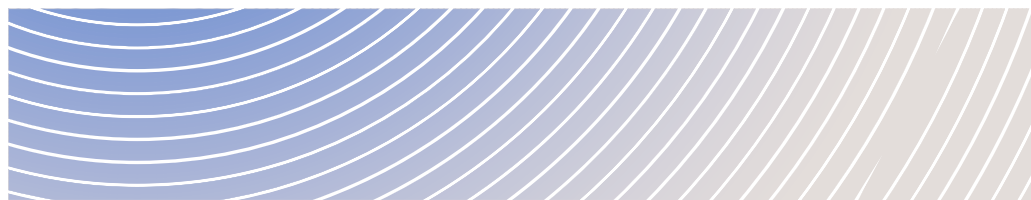


# Analysis Report



WHETHER TO DESIGNATE THE **TENAS PROJECT** IN BRITISH COLUMBIA  
PURSUANT TO THE *IMPACT ASSESSMENT ACT*

June 2022



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## Purpose

The Impact Assessment Agency of Canada (the Agency) prepared this report for consideration by the Minister of Environment and Climate Change (the Minister) in responding to a request to designate the Tenas Project (the physical activities referred to as the Project) pursuant to section 9 of the *Impact Assessment Act* (the IAA).

## Project

The Project, proposed by Telkwa Coal Limited (the Proponent), is the construction, operation, decommissioning, and reclamation of a new open-pit coal mine located about 25 kilometres south of Smithers, British Columbia (B.C.). The Project would have a production rate of 775,000 to 825,000 tonnes per year of metallurgical coal over 26.5 years, which is well-below the 5,000 tonnes per day threshold for a new coal mine as described in the IAA's *Physical Activities Regulations* (the *Regulations*).

The Project is currently undergoing a provincial environmental assessment process carried out by B.C.'s Environmental Assessment Office (EAO). The Proponent's Application (equivalent to an Impact Statement under the IAA) was accepted to the Review Phase on April 27, 2022. The Project is in the Yintah, or traditional territory, of the Wet'suwet'en, who have been engaged on the provincial environmental process.

## Context of Request

The Proponent contacted the Agency in 2018 to confirm any requirements related to the *Canadian Environmental Assessment Act, 2012*, and again in 2020 to confirm any requirements related to the IAA. In both cases, the Agency communicated to the Proponent that we agreed with the Proponent's view that the Project was not described in the *Regulations Designating Physical Activities* and the *Physical Activities Regulations*, while noting that the Minister did retain power to designate projects.

On July 19, 2021, the Minister received a request to designate the Project for federal impact assessment from the Northwest Institute for Bioregional Research. The Northwest Institute for Bioregional Research is an environmental non-governmental organization based in Smithers, B.C. The letter expressed concerns about potential effects of the Project, including selenium discharges into fish-bearing waters; impacts to the critical habitat of the Telkwa herd of woodland caribou; and effects to other endangered plants, invertebrates, birds, and mammals.

On July 30, 2021, the Agency notified the Proponent of the designation request and requested additional information. The Agency requested advice and/or input from federal authorities, B.C.'s EAO, and potentially affected Indigenous groups. The Agency shared with the Minister the outcome of analysis and engagement in fall 2021. In November 2021, the Minister responded with reasons to the request. The Minister indicated that to allow for a better evidenced-based understanding of the predicted impacts and mitigation measures to address any impacts in federal jurisdiction, or adverse direct or incidental effects, from the Project, it



would be beneficial for the Agency to undertake further analysis of the expected additional information from the provincial environmental assessment process.

In March 2022, the Proponent shared the Application for an Environmental Assessment Certificate developed as part of the provincial environmental assessment process with the Agency for review. The Agency notified and invited federal and provincial authorities and Indigenous groups to update the advice and comments which had previously been shared.

The Proponent provided the Agency with information about the Project, the potential adverse effects, proposed design and mitigation measures, and its view that the Project should not be designated on August 26, 2021. On April 19, 2022, the Proponent confirmed that its previous comments remained up to date.

Advice on applicable legislative mechanisms and potential effects was received from Environment and Climate Change Canada (ECCC), including ECCC's Canadian Wildlife Service, Fisheries and Oceans Canada (DFO), Health Canada (HC), Transport Canada (TC), Natural Resources Canada (NRCan) and B.C.'s EAO. The Agency also received comments from one of the three Indigenous groups contacted (Office of the Wet'suwet'en).

The Agency has prepared this analysis report after the Proponent has collected detailed information required for the provincial environmental assessment. This has allowed the Agency to inform its analysis with detailed scientific data and information about the proposed Project, its potential effects, the proposed mitigation measures, and the potential residual effects as predicted by the Proponent.

## Project Context

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### Project Overview

The proposed Project would be a new open-pit metallurgical coal mine located south of Smithers, B.C. The Project is small in scale since the production rate would be less than half of the capacity listed by the *Regulations* (5,000 tonnes per day), and would be in close proximity to existing infrastructure in the area including roads, power, and rail. The current estimated capital cost of the Project is \$123.5 million and it is anticipated to generate 3,125 person-years of employment over its lifespan, including employment and economic opportunities to Indigenous groups, and people in the Bulkley Valley.

The Project is located on provincial Crown land and freehold land parcels owned by the Proponent. It is located in the traditional territory of the Gitdumden Cas Yex and Laksilyu Kwen Bea Yex houses of the Wet'suwet'en (see Figure 1).

The Project is currently undergoing a provincial environmental assessment. The provincial assessment was initiated on November 6, 2018, and B.C.'s EAO accepted the Application for a detailed review on April 28, 2022. The Application Review phase includes a detailed review by B.C.'s EAO, and the environmental assessment working group, including federal and provincial officials and Wet'suwet'en, and the public. The Project may receive a decision on whether it will be issued a provincial Environmental Assessment Certificate by the end of 2022.



Federal expert departments are participating in the provincial assessment and include ECCC's Canadian Wildlife Service. ECCC has conducted technical reviews of effects to water quality and wildlife (including southern mountain caribou), commented on provincial documents, including the Valued Components Selection Document, the Application Information Requirements, technical memos, and the preliminary review of the Proponent's Application for an Environmental Assessment Certificate.

DFO was invited by B.C.'s EAO and the Office of the Wet'suwet'en to join the working group meetings but had declined, citing its intention to be involved in future permitting decisions required under the *Fisheries Act*.

In addition to federal working group members, the EAO has worked with the provincial Ministry of Energy, Mines and Low Carbon Initiatives, Ministry of Environment and Climate Change Strategy and the former Ministry of Forest, Lands, and Natural Resources Development (now the Ministry of Forests and the Ministry of Land, Water and Natural Resource Stewardship), and the Office of the Wet'suwet'en. The Proponent has also been engaging with the Wet'suwet'en First Nation and the Witset First Nation, which are both Wet'suwet'en communities separate from Office of the Wet'suwet'en. EAO has sought public comments with regard to the draft Application Information Requirements, the Proponent's Application for an Environmental Assessment Certificate, and has hosted in-person and virtual information sessions for the public. Subsequent opportunities for public comment will occur on EAO's draft Assessment Report and proposed conditions.

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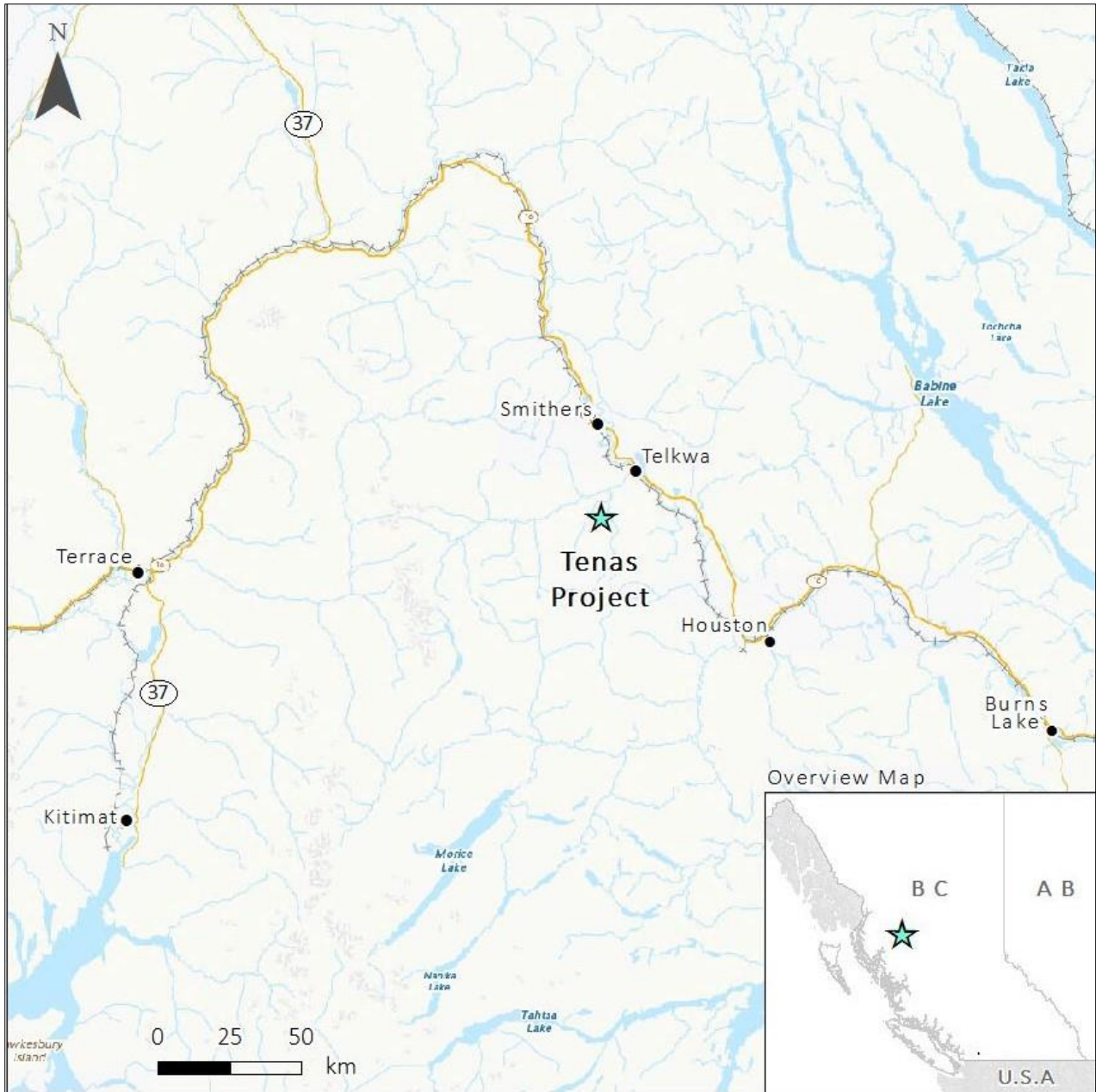
## Project components and activities

The Project would be an open-pit mining operation. It would include construction and operation of the following major components:

- open pit;
- coal processing plant with crusher and two circuits;
- materials handling systems for run-of-mine coal, processed rock, and processed coal, including conveyors, storage bins, and stockpiles;
- administration and other ancillary buildings;
- surface water management infrastructure, including a Tenas Control Pond dam and associated spillway and sedimentation ponds;
- water supply wells, storage, and distribution system;
- fuel and lube storage facilities;
- explosives magazine;
- mine roads within the mine site and a new 11-kilometre access road;
- 3.5 kilometre-long power line and substation;
- 2.5 kilometre rail loop connecting to the existing main Canadian National Railway line; and bridge over Goathorn Creek.



Figure 1: Project Location





# Analysis of Designation Request

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## Authority to designate the Project

The *Physical Activities Regulations* identify the physical activities that constitute designated projects. The Project, as described in the information provided by the Proponent, is a coal mine with a production rate of 775,000 to 825,000 tonnes per year (2,123 to 2,260 tonnes per day), and as such, is not described in the *Regulations*. This production rate is less than half of the 5,000 tonnes per day threshold for new coal mines listed in the *Regulations*.

Under subsection 9(1) of the IAA the Minister may, by order, designate a physical activity that is not prescribed in the *Regulations*. The Minister may do this, if, in the Minister's opinion, the physical activity may cause adverse effects within federal jurisdiction or adverse direct or incidental effects, or public concerns related to those effects warrant the designation.

The carrying out of the Project has not substantially begun and no federal authority has exercised a power or performed a duty or function that would permit the Project to be carried out, in whole or in part.<sup>1</sup>

Given this understanding, the Agency is of the view that the Minister may consider designating this Project pursuant to subsection 9(1) of the IAA.

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## Potential adverse effects within federal jurisdiction

The potential for adverse effects within federal jurisdiction, as defined in section 2 of the IAA, are summarized below and in Annex I. The Agency is of the view that potential changes in the environment that would cause effects within federal jurisdiction would be evaluated in the provincial assessment, which is already advanced, and existing federal and provincial regulatory processes.

### Fish and fish habitat

The Project may directly affect fish habitat from construction of the mine site infrastructure and may affect fish health as a result of changes to water quality, including selenium, due to mine discharges and effluents. Species present in the Project area include Pacific salmon, trout, and char, which support Indigenous, recreational, and commercial fisheries.

With respect to effects to fish habitat, the Proponent has proposed a number of mitigation measures focused on limiting the project footprint through design. Key effects include infilling several non-fish bearing tributaries to Tenas Creek located within the mine footprint and the loss of fish habitat (including Dolly

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<sup>1</sup> The Minister must not make the designation if the carrying out of the physical activity has substantially begun, or a federal authority has exercised a power or performed a duty or function in relation to the Project (subsection 9(7) of IAA).



Varden habitat) in the Four Creek mainstem. The Proponent intends to create new fish habitat to offset the loss as part of an authorization under the *Fisheries Act*. After considering mitigation, the Proponent concluded that changes to fish habitat would not be significant.

Water quality effects, including effects from increases in selenium levels and potential change in fish health, have been a focus in the provincial environmental assessment. The Proponent has proposed standard mitigation measures, including limiting in-stream activities, implementing a mine water management plan, and maximizing use of contact water to minimize withdrawals from streams. The Proponent has identified potential exceedances of water quality guidelines and site-specific thresholds for selenium, cadmium, and thallium during the post-closure phase. For selenium, the predictions only exceeded tier 1 site-specific thresholds (total selenium), while the predictions were below the tier 2 site-specific thresholds (dissolved selenium). The affected areas are predicted to be 14% of the local study area and 2% of the regional study area. Federal and provincial technical experts are currently evaluating the Proponent's methodology to determine if the predictions in the Application are appropriate and if the methodology would avoid exceedances of contaminants, including selenium.

Average baseline studies conducted by the Proponent of fish tissues showed no exceedances of provincial guidelines with respect to selenium levels. The Proponent will seek an Authorization under the *Fisheries Act* and will work with DFO to offset all adverse effects to fish and fish habitat. DFO has a preliminary view that all effects to fish and fish habitat can be managed through conditions pursuant to a *Fisheries Act* authorization. After considering mitigation measures, the Proponent concluded that there would be no residual effects to fish health. Notwithstanding the Proponent's conclusion that there would be no effects to fish health, the Agency is aware that the technical review is ongoing.

The proposed *Coal Mining Effluent Regulations* under the *Fisheries Act* are currently being developed by ECCC that would provide effluent quality standards for coal mining in Canada, including this project. These proposed Regulations are expected to be published in the *Canada Gazette*, Part I in late 2022. Final regulations are expected one year later, in 2023. These regulations would prescribe selenium as a deleterious substance, and include maximum thresholds that would apply to the Project.

B.C.'s EAO, supported by the working group that includes the Office of the Wet'suwet'en, Ministry of Forests, Lands, and Natural Resource Operations, and others, is in the process of conducting a detailed technical review of the Proponent's Application, including sections on water quality and fish. While DFO is not currently participating in the provincial environmental assessment, DFO would lead a future *Fisheries Act* authorization process during the permitting phase of the Project. The Agency is of the view that the provincial assessment and other regulatory processes would provide a framework to address the potential adverse effects in federal jurisdiction to fish and fish habitat.

### Migratory birds and avian species at risk

The Project may affect migratory birds and avian species at risk through habitat loss/alteration, increase in mortality risk, and changes to movement patterns. The Proponent has proposed standard mitigation measures, including limiting the Project footprint, managing attractants, and establishing "no activity" buffers around any nests. The Proponent has identified less than 2% loss in migratory bird habitat. After considering mitigation, the Proponent concluded that changes to migratory breeding birds, listed bird species, and raptors would not be significant.





The Agency is of the view that the provincial assessment and other regulatory processes would provide a framework to address the potential adverse effects in federal jurisdiction to migratory birds.

## Species at risk

The Project may affect species identified under the *Species at Risk Act* including caribou, wolverine, grizzly bear, bats (little brown myotis and northern myotis), and Western toad.

The Telkwa herd is part of the northern ecotype of woodland caribou that resides in the Southern Mountain National Ecological Area and, therefore, classified as part of the southern mountain population under the *Species at Risk Act*. It is a small, isolated herd with 25 individuals during the last count in 2019. The Proponent predicts an increase in disturbance to caribou critical habitat (15.19 hectares, or 0.012% change to mapped critical habitat in the recovery strategy) while noting that current disturbance (i.e., without the Project) already exceeds the thresholds recommended in the 2014 recovery strategy<sup>2</sup>.

Project construction would remove or disturb less than 1% of grizzly bear, bat, and furbearers (used to represent wolverine) habitat in the regional study area. The Proponent predicted greater effects to Western toad (removal of up to 8.2% of habitat in the regional study area). After considering mitigation, the Proponent concluded that changes to wildlife would not be significant.

ECCC's Canadian Wildlife Service is participating in the provincial assessment as a member of the provincial working group. Most recently, ECCC provided comments and advice on caribou and wildlife as part of B.C.'s preliminary review (screening) of the Application. The Agency is of the view that the provincial assessment and other regulatory processes would provide a framework to address the potential adverse effects in federal jurisdiction to species at risk.

## Federal lands

There are no federal lands within the Project area and no Project-related effects to federal lands are anticipated. The nearest federal lands to the Project is the Witset First Nation's (a part of Wet'suwet'en) Jean Baptiste 28 reserve, located 18 kilometres northeast of the Project.

## Effects outside Canada

The Project has the potential to generate greenhouse gases during all phases of the Project. The Proponent estimated that project-related GHG emissions would be 68,973 tonnes of carbon dioxide equivalent, which represents 0.10% of existing emissions in B.C. and 0.01% of existing emissions in Canada. The predicted emission intensity is well within the range of other coal mines in Western Canada. After considering mitigation, the Proponent concluded that greenhouse gas emissions would not be significant.

The Agency is of the view that the provincial assessment and other regulatory processes would provide a framework to address the potential adverse effects in federal jurisdiction.

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<sup>2</sup> [https://www.registrelep-sararegistry.gc.ca/virtual\\_sara/files/plans/rs\\_woodland\\_caribou\\_bois\\_s\\_mtn\\_pop\\_0114\\_e.pdf](https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/rs_woodland_caribou_bois_s_mtn_pop_0114_e.pdf)



## Indigenous peoples of Canada

The Project is located within the territory, or Yintah, of the Wet'suwet'en and specifically within the territory for the Laksilyu Kwen Bea Yex House and Gitdumden Cas Yex House. The Office of the Wet'suwet'en (leadership comprised of hereditary chiefs) and Wet'suwet'en First Nation (with elected leadership) responded to the Agency's request for comments. Métis Nation British Columbia was also contacted for information; however, the Agency did not receive a response.

The Project may impact intangible and physical aspects of cultural heritage, including changes to physical features like archaeological sites from land disturbance, changes to connection to the land, and changes to knowledge systems. The Office of the Wet'suwet'en identified travel trails leading to caribou harvest areas within the mine site and shared that there are artifacts within the ground (cache pits, pit houses, burial sites) that would require a trained eye to locate.

The current use of lands and resources for traditional purposes may be affected by changes to the quality, quantity, and accessibility of fish, wildlife, and plant resources. Office of the Wet'suwet'en noted that concerns about the land are inextricably linked to complex social structures and customs; the cumulative effects of development in the area to the use of lands and resources for traditional purposes are of particular concern.

The Project may adversely impact the health, social, or economic conditions of Indigenous peoples, including changes to food security, changes to the cost of living and reduced/lost access to community services from an influx of workers to the area, and changes to community cohesion. Office of the Wet'suwet'en shared with the Agency that each house territory must be able to provide from the lands and waters or otherwise would be seen as poor.

The Proponent and Office of the Wet'suwet'en have signed a Project Assessment Agreement. The Proponent's Application for an Environmental Assessment Certificate describes that, as part of that agreement, the Proponent has proposed a number of potential options which may mitigate impacts on Wet'suwet'en. Options include a collaborative governance model for the Project, establishment of an intergenerational trust fund, equity ownership in the Project, and Wet'suwet'en involvement in mitigation, monitoring, and access planning.

B.C.'s EAO is consulting with Office of the Wet'suwet'en and Wet'suwet'en First Nation as part of the provincial assessment and Office of the Wet'suwet'en confirmed that all comments shared with the Agency were also shared with B.C.'s EAO. B.C.'s process also includes consideration of cumulative effects. The Agency is of the view that the provincial assessment and other regulatory processes would provide a framework to address the potential adverse effects in federal jurisdiction to Indigenous peoples.

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## Potential adverse direct or incidental effects

Direct or incidental effects refer to effects that are directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out, in whole or in part, of a project, or to a federal authority's provision of financial assistance to a person for the purpose of enabling that project to be carried out, in whole or in part.

The Project as described may require a *Fisheries Act* authorization, administered by DFO, and an approval under the *Canadian Navigable Waters Act*, administered by TC. More detailed information would be required to understand the scope of these effects. The direct or incidental effects related to the authorization and approval would be typically limited or addressed through the due diligence of the federal authority.

The Agency is of the view that the provincial assessment and other regulatory processes would provide a framework to address the potential adverse effects in federal jurisdiction.

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## Public concerns

The concerns expressed by the requester and Indigenous groups engaged by the Agency include:

- Discharge of mining effluent into fish-bearing waters;
- Presence of selenium in the project area;
- Effects of mine impacts to fish and fish habitat on the health of the local Indigenous peoples;
- Social and economic impacts of the mine to the local Indigenous community; and
- Endangered and threatened species, including the Telkwa herd of southern mountain caribou and their habitats.

The Proponent's Application as part of the provincial environmental assessment, as well as letters published in a local media outlet, indicated that members of the public have also expressed concerns about climate change and access to recreational sites impacts from the Project.

The concerns expressed relate to certain adverse effects within federal jurisdiction, including fish and fish habitat, effects outside Canada (greenhouse gases), species at risk, and effects to Indigenous people of Canada. However, the Agency is of the view that these concerns are likely to be addressed through the application of standard mitigation measures, the provincial environmental assessment, and existing regulatory mechanisms (see Annex I).

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## Potential adverse impacts on the rights of Indigenous peoples

The Agency considered potential impacts to, and sought comments from: Office of the Wet'suwet'en, Wet'suwet'en First Nation, and Métis Nation British Columbia. The Project is located within the territory of the Wet'suwet'en and within the territory for the Laksilyu Kwen Bea Yex House and Gitdumden Cas Yex House. The Office of the Wet'suwet'en has described how existing development and impacts across the land base have constrained the practice of rights and way of life. Significant declines in fish populations in the territory have led to fishing bans, some wildlife and fish species have been extirpated, and large areas of forests have been removed, which reduced the landscape available for cultural practices.

There is the potential for the Project to cause adverse impacts on rights that are recognized and affirmed by section 35 of the *Constitution Act, 1982*. The Agency notes that Indigenous peoples are being consulted as part of the provincial assessment and would be consulted as part of future permitting processes (Annex



II). Further, the federal regulatory processes would also require departments to consult, and where appropriate, accommodate, for the impacts associated with their powers, duties or functions.

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## Regional and strategic assessments

There are no regional or strategic assessments pursuant to sections 92, 93, or 95 of the IAA that are relevant to the Project.

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## Conclusion

To inform its analysis, the Agency sought and received input from the Proponent, Office of the Wet'suwet'en, Wet'suwet'en First Nation, Métis Nation B.C., ECCC, DFO, HC, TC, NRCan, and British Columbia.

The Agency considered the potential for the Project to cause adverse impacts on the rights that are recognized and affirmed by section 35 of the *Constitution Act, 1982*.

The Project is relatively small compared to projects typically assessed under the IAA. The potential for adverse effects, as described in subsection 9(1) of the IAA, would be limited through project design and the application of standard mitigation measures. The Agency is satisfied that the provincial environmental assessment, federal and provincial regulations and permitting requirements, and consultation processes with Indigenous nations provide a framework to address the potential for adverse effects within federal jurisdictions, adverse direct or incidental effects, and impacts on section 35 rights.



# Annexes

## Annex 1: Analysis Table

Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
<p>A change to fish and fish habitat, as defined in subsection 2(1) of the <i>Fisheries Act</i></p>	<p><u>Proponent</u></p> <p>The Proponent has considered the potential for effects to fish habitat from construction of mine, the mine site infrastructure and effects to fish health as a result of changes to water quality due to mine discharges and effluents. Species present in the Project area include Pacific salmon, trout, and char which support Indigenous, recreational, and commercial fisheries.</p> <p>In its Application for an Environmental Assessment Certificate, the Proponent has proposed a number of mitigation measures focused on limiting the project footprint through design (clustering project components, aligning linear features on a common right-of-way, using a loop design configuration for the rail, backfilling the open pit, and placing processed rock in the management ponds instead of separate stockpile). Key effects include the infilling of Texas Creek tributaries (non-fish bearing habitats) within the mine site and loss of fish habitat (including Dolly Varden habitats) in the Four Creek mainstem as a result of reduction of winter baseflows due to dewatering of the open pit. The Proponent has indicated offsetting of fish habitat will be required in accordance with the <i>Fisheries Act</i>. After considering mitigation and the commitment to develop</p>	<p>A <i>Fisheries Act</i> authorization may be required if the Project will result in death of fish or the harmful alteration, disruption or destruction of fish habitat.</p> <p>The proposed <i>Coal Mining Effluent Regulations</i> under the <i>Fisheries Act</i> are currently being developed by ECCC that would apply to coal mining in Canada, including this project. These proposed regulations are expected to be published in the Canada Gazette, Part I in late 2022. Final regulations are expected one year later, in 2023.</p> <p>An environmental assessment certificate under the provincial Environmental Assessment Act (2002) could include conditions related to effects to fish and fish habitat, and to water quality including selenium.</p>



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p>offsetting measures, the Proponent has concluded that there are residual but not significant changes in fish habitat.</p> <p>With respect to change in fish health, the Proponent has proposed standard mitigation measures including limiting in-stream activities, implementation of management plans (erosion protection and sediment control plan, metal leaching/acid rock draining management plan), and maximizing use of contact water. While the Proponent has identified potential exceedances to thresholds (i.e. site performance objectives for selenium, cadmium, thallium, and nitrite during low-flow (winter) conditions), the affected areas are a small portion (less than 2%) of the regional study area. After considering mitigation measures, the Proponent has concluded that there are no residual effects to fish health.</p> <p><u>Fisheries and Oceans Canada</u></p> <p>The Project has the potential to cause death of fish and loss of fish habitat from construction and operations. DFO is of the view that these effects can likely be managed through conditions pursuant to a <i>Fisheries Act</i> authorization or a letter of advice.</p> <p><u>Environment and Climate Change Canada</u></p> <p>The Project has the potential to cause changes in water quality (e.g., through increases in selenium, nitrate, sulphate concentrations and other metals of concern, as well as deposition of calcite in the receiving environment) which</p>	



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p>may affect fish health. ECCC has been an active participant in the provincial assessment and has provided expert advice on water quality, reviewed key documents, and participated in working group meetings with the Proponent.</p> <p><u>B.C.'s Environmental Assessment Office</u>            B.C.'s EAO has shared their views that the provincial assessment is a comprehensive process that will fully consider and address concerns related to water quality parameters of potential concern, including selenium. The potential effects of mine effluent on fish have been raised as a key theme. EAO has confirmed that should selenium or any other constituent of concern be identified as an outstanding concern as the assessment progresses, EAO will work with the working group to identify mitigation and/or conditions related to water quality which could include water treatment. EAO further confirmed that waste discharge permits under the <i>Environmental Management Act</i> can include conditions related to water quality.</p>	
<p>A change to aquatic species, as defined in subsection 2(1) of the <i>Species at Risk Act</i></p>	<p>No adverse effects to marine plants are anticipated, as there is no interaction between the Project and the marine environment.</p>	
<p>A change to migratory birds, as defined in subsection 2(1) of the <i>Migratory Birds Convention Act, 1994</i></p>	<p><u>Proponent</u>            The Project may affect migratory birds and avian species at risk through habitat loss/alteration, increase in mortality risk, and changes to movement patterns. The Proponent has proposed standard mitigation measures including limiting the project footprint, managing attractants, and establishing</p>	<p>A permit under section 73 of the <i>Species at Risk Act</i> may be required if a listed migratory bird (individual or residence) is affected by the Project.</p>



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p>“no activity” buffers around any nests, among others. The Proponent identified small (less than 2%) reductions in habitat (1.6% change in suitable nesting habitat in the regional study area for migratory breeding birds, 1.3% change for listed avian species, and 0.8% change for raptors). After considering mitigation measures, the Proponent concluded that there would be low-magnitude and not significant effects to migratory breeding birds, listed bird species, and raptors.</p> <p><u>Environment and Climate Change Canada</u></p> <p>Project activities may also lead to changes in water quality through increased selenium concentrations that may adversely impact migratory birds, such as spotted sandpipers and American dippers. Elevated selenium concentrations in the diet of water birds may have the potential to cause lead to embryo toxicity and reproductive deformities.</p> <p>Other migratory birds in the Project area include: American bittern, barn swallow, bank swallow, black swift, common nighthawk, eared grebe, evening grosbeak, great blue heron, olive-sided flycatcher, red-necked phalarope, and western grebe.</p>	<p>A permit under the Migratory Birds Convention Act, 1994 may be required if Project activities affect migratory birds.</p>
A change to the environment that would occur on federal lands	The nearest federal land is the Witset First Nation’s (a member of the Office of the Wet’suwet’en) Jean Baptise 28 reserve located 18 km northeast of the Project. No effects to federal lands are anticipated.	



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
<p>A change to the environment that would occur in a province other than the one in which the project is being carried out or outside Canada</p>	<p><u>Proponent</u>            The Project is located approximately 200 km from the B.C.-Alaska border. Adverse effects in other provinces or outside Canada are expected to be limited.</p> <p>The Proponent estimated that project-related GHG emissions would be 68,973 tonnes of carbon dioxide equivalent units which represents 0.10% of existing emissions in B.C. and 0.01% of existing emissions in Canada. The predicted emission intensity (83.9 tonnes carbon dioxide equivalent units per kilotonne of processed coal) is well within the range of other coal mines in Western Canada (the industry profile in Western Canada ranges from 50.9 to 95.3 tonnes of CO<sub>2</sub>-equivalent units per kilotonne of processed coal). The Proponent characterized this as a medium magnitude but not significant effect.</p> <p><u>Environment and Climate Change Canada</u>            The Project may result in an increase in greenhouse gas emissions in Canada.</p>	<p>The proposed Clean Fuel Standard Regulations, which would reduce the lifecycle carbon intensity of fuels used in mobile and stationary equipment and could incent the use of electric or zero-emission technologies in lieu of that equipment.</p> <p>The Project would be subject to federal greenhouse gas emissions reporting, pursuant to the Canadian Environmental Protection Act, 1999, because it emits 10 kilotonnes or more of greenhouse gas emissions, in carbon dioxide equivalent units per year.</p>
<p>With respect to the Indigenous peoples of Canada, an impact - occurring in Canada and resulting from any change to the environment - on physical and cultural heritage</p> <p>With respect to the Indigenous peoples of Canada, an impact</p>	<p><u>Proponent</u>            The Project is located within the territory of the Wet'suwet'en and proximal to places of cultural importance for the Wet'suwet'en people. The Project may result in changes to a sense of place and connection to land, change in Wet'suwet'en knowledge and cultural transmission, and changes to physical cultural heritage features.</p> <p>The Proponent and Office of the Wet'suwet'en have signed a Project Assessment Agreement which provides guidance</p>	<p>Indigenous consultation is a requirement of the provincial EA under B.C.'s <i>Environmental Assessment Act</i> (2002).</p> <p>The <i>Heritage Conservation Act</i> (regulated by the provincial Forests, Lands, Natural Resource Operations &amp; Rural Development) prohibits the disturbance of archaeological sites except under the authority of a permit.</p>



<p>Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i></p>	<p>Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts</p>	<p>Relevant Legislative Mechanisms</p>
<p>- occurring in Canada and resulting from any change to the environment - on any structure, site, or thing that is of historical, archaeological, paleontological or architectural significance</p>	<p>to the Proponent. As part of that agreement, the Proponent has proposed a number of potential options including a collaborative governance model for the Project which would enable Wet'suwet'en participation at the board and at senior manager levels, establishment of an intergenerational trust fund, equity ownership in exchange for access to the lands, and Wet'suwet'en involvement in mitigation, monitoring, access planning.</p> <p><u>Office of the Wet'suwet'en</u> Wet'suwet'en identified that there are travel trails leading to caribou harvest areas within the mine area and that artifacts within the ground (cache pits, pit houses, burial sites) require a trained eye to locate. Wet'suwet'en also note the connection between archaeological effects and human health.</p>	
<p>With respect to the Indigenous peoples of Canada, an impact - occurring in Canada and resulting from any change to the environment - on current use of lands and resources for traditional purposes</p>	<p><u>Proponent</u> The Proponent noted the dynamic relationship between Wet'suwet'en and their territory (Yintah) and the widespread interactions between the Project and environmental components. The Project may result in changes in abundance or quality of wildlife, fish, and plant resources; changes to the utility of lands and waters for harvesting; and changes in access to the territory, including the Telkwa Pass which is part of an essential trail corridor. As described above, the discussions between the Proponent and Office of the Wet'suwet'en as part of the Project Assessment Agreement are ongoing.</p>	<p>Indigenous consultation is a requirement of the provincial EA under B.C.'s <i>Environmental Assessment Act</i> (2002).</p>



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p><u>Office of the Wet'suwet'en</u></p> <p>Wet'suwet'en described how historical and cumulative effects have eroded the way of life and ability of Wet'suwet'en to meaningfully exercise Aboriginal rights, and expressed concerns about how the assessment of effects to current use of lands and resources for cultural purposes underestimates changes to date.</p>	
<p>Any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada</p>	<p><u>Proponent</u></p> <p>The Proponent noted that health is a multifaceted concept and that the Project may affect physical health from exposure to environmental media (air, water, traditional foods) with elevated levels of contaminants.</p> <p><u>Health Canada</u></p> <p>The Project may result in discharges of contaminants of potential concern (COPCs) into surface and groundwater, which may be directly consumed by people, or be taken up by fish or wildlife consumed by people in the area. In addition, there is the potential for coal dust to be deposited onto plants and soils.</p> <p>The Project may also potentially result in adverse impacts to the local air quality through fugitive dust and combustion emissions which can have direct and indirect (e.g., aerial deposition of contaminants onto food sources) health impacts to humans.</p> <p>The Project may result in increased noise which can affect the health of the local community.</p>	<p>Indigenous consultation is a requirement of the provincial EA under B.C.'s Environmental Assessment Act (2002).</p>



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p><u>Natural Resources Canada</u></p> <p>The Project may also result in both positive and negative changes to Wet'suwet'en socio-economic status, community well-being and cultural sustainability. Natural Resources Canada noted that the Proponent indicates that with 90 to 100 full-time employees may be required for the 20-year operation period. The Project anticipates sourcing all employment from local communities which could result in an increase in commuting from local communities or, if the Project is unsuccessful in sourcing all positions from local communities, increases in local populations, which could result in negative impacts to the local community.</p> <p>Project operations can also impact local communities. The Proponent has highlighted that local communities raised concern related to transportation methods, which resulted in the Proponent establishing a dedicated transport road. Increased traffic could result in negative economic and socio-economic impacts on communities. Local economies may also be impacted by an influx of population onto the community</p>	
Adverse direct or incidental effects	Most federal authorizations, i.e., authorizations under the <i>Explosives Act</i> , <i>Species at Risk Act</i> , and <i>Migratory Birds Convention Act, 1994</i> , are unlikely to result in adverse direct or incidental effects. The <i>Fisheries Act</i> and <i>Canadian Navigable Waters Act</i> authorizations have the potential to result in adverse direct or incidental effects. More detailed information, in particular a permit application or draft offsetting plan for the <i>Fisheries Act</i> authorization, would be	<i>Fisheries Act</i> Canadian Navigable Waters Act



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p>required to understand the scope of these effects. The potential effects that are directly linked or necessarily incidental to a federal authorization would be limited and addressed through the due diligence of the federal authority.</p>	
<p>Species at risk</p>	<p><u>Proponent</u></p> <p>The Project may affect species at risk including caribou, wolverine, grizzly bear, bats (little brown myotis and northern myotis), and Western toad.</p> <p>The Telkwa herd is part of the northern ecotype of woodland caribou that resides in the Southern Mountain National Ecological Area and, therefore, classified as part of the southern mountain population under the <i>Species at Risk Act</i>. It is a small, isolated herd with 25 individuals during the last count in 2019. The Proponent predicted an increase in disturbance to caribou critical habitat (15.19 hectares, or 0.012% change to mapped critical habitat in the recovery strategy), while noting that current disturbance (i.e., without the Project) already exceeds the thresholds recommended in the 2014 recovery strategy.</p> <p>The Project will be constructed on previous disturbed habitat from forestry cutblocks so disturbances to wildlife is limited. The Project construction may remove or disturb less than 1% of grizzly bear, bat, and furbearers (used to represent wolverine) habitat. The Proponent predicted greater effects to Western toad (removal of up to 8.2% of habitat or 1,072 hectares) and proposed mitigation measures including establishing no-disturbance buffers around important habitat features. After considering</p>	<p>An authorization may be required under the <i>Species at Risk Act</i> if there are impacts to a species at risk, any part of their critical habitat or the residences of their individuals in a prohibited manner.</p>



Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	<p>mitigation, the Proponent concluded that there would not be significant changes to wildlife.</p> <p><u>Environment and Climate Change Canada</u></p> <p>Southern mountain caribou: The Project location is within the range of the Telkwa herd of Woodland caribou, southern mountain population (also referred to as northern caribou). Southern mountain caribou are listed as Threatened under Schedule 1 of the <i>Species at Risk Act</i>. In 2018, the Minister determined that southern mountain caribou are facing imminent threats to their recovery and identified the Telkwa local population unit (LPU) as one of ten LPUs of particular concern. A closure of licensed hunting of caribou from the Telkwa herd is currently in place.</p> <p>Wetlands: The Project may directly and indirectly affect wetlands through the construction of terrestrial components as well as changes to water quality. Effects on wetlands may include wetland loss, reduction, alteration, and change in wetland function. The Proponent has indicated the Project will overlap riparian and wetland habitats. The Project has the potential to adversely affect these wetland communities and ecological functions, thereby also affecting the availability and/or quality of wetland habitat for migratory birds and other wildlife.</p>	

## Annex 2: Potential federal and provincial authorizations relevant to the Project

Authorization	Description
<b>Federal</b>	
<i>Fisheries Act</i>	An authorization under paragraph 34.4(2)(b) of the Fisheries Act is required when any activity that is not fishing results in the harmful alteration, disruption or destruction (HADD) to fish habitat. Prior to issuing such authorizations consultations with potentially impacted Indigenous groups would be undertaken. Under section 36(3) the Act also prohibits the deposit of deleterious substances into waters frequented by fish unless authorized by regulations or other federal legislation.
<i>Canadian Navigable Waters Act</i>	An authorization is required for construction of works in, on, over, under, through, or across navigable waters that may interfere with navigation. The Proponent has indicated that the access road would cross several streams including Goathorn Creek.
<i>Migratory Birds Convention Act, 1994</i>	A permit is required for all activities affecting migratory birds (e.g., clearing of vegetation, disturbance to nest), with some exceptions. The Act prohibits killing, harming or collecting adults, young and eggs of migratory birds.
<i>Species at Risk Act</i>	A permit under section 73 is required if activities may affect a species listed on Schedule 1, including any part of its critical habitat or the residences of listed individuals.
<i>Canadian Environmental Protection Act, 1999</i>	A project requires greenhouse gas emissions reporting, if ten kilotonnes or more of greenhouse gas emissions are emitted in carbon dioxide equivalent units per year. This would be in addition to reporting required from the Strategic Assessment of Climate Change as part of an impact assessment review.
<i>Explosives Act</i>	A factory licence is required for manufacturing and storage of bulk explosives. The Proponent has indicated that, a third party would likely apply for the licence and own the facility located on the mine site.
<i>Coal Mining Effluent Regulations (pending)</i>	The Coal Mining Effluent Regulations (CMER; proposed under the Fisheries Act) are currently being developed and would provide effluent quality standards to deposit deleterious substances (selenium, nitrate and suspended solids). These proposed regulations are expected to be published in the Canada Gazette, Part I in late 2022. Final regulations are expected one year later, in 2023.
<i>Clean Fuel Standard Regulations (pending)</i>	The proposed Clean Fuel Standard (CFS) Regulations under the Canadian Environmental Protection Act would reduce the lifecycle carbon intensity of fossil fuels used in mobile and stationary equipment in the construction and operational phases of projects. In addition to the use of lower carbon fossil fuels that would be supplied, the CFS would incent some GHG reduction measures (such as the use



Authorization	Description
	of electric or zero emission technologies in lieu of fossil fuel equipment) that would enable the Proponent to generate credits for trade. The proposed regulations were published in Canada Gazette, Part I, in 2020. Final regulations are targeted for publication in spring 2022.
<b>Provincial</b> (select authorizations only)	
<i>Environmental Assessment Act (2002)</i>	The Environmental Assessment Certificate allows the project to proceed to permitting and other authorizations. The Environmental Assessment Certificate may include legally binding conditions to ensure that potential effects are minimized.
<i>Mines Act</i>	Permits are required for all phases of project development, including management of water quality, waste and metal leaching and acid rock drainage, and geotechnical design. Permits outline closure and reclamation obligations including security.
<i>Environmental Management Act</i>	The Act regulates industrial and municipal waste discharge, pollution, hazardous waste and contaminated site remediation. The Act provides the authority for introducing wastes into the environment, while protecting public health and the environment. Each mine in B.C. is required to apply for, obtain and comply with conditions in a Waste Discharge permit and includes requirements related to discharge quality and quantity, development and implementation of management plans, monitoring programs and reporting.
<i>Water Sustainability Act</i>	Approvals are required for works in and about a stream including the stream crossings along the access road.
<i>Heritage Conservation Act</i>	Site alteration permits are required for alteration or removal of archaeological or paleontological sites, should any sites be identified by the Proponent