



## Castle Project – Summary of Issues

### Context

The Impact Assessment Agency of Canada (the Agency) held a public comment period between October 14 to November 3, 2020, on the Initial Project Description submitted by the proponent, Teck Coal Limited, for the Castle Project (the Project). This document summarizes the comments received<sup>1</sup> during the comment period and it also summarizes issues raised during these previous activities:

- The designation request process under the *Impact Assessment Act*, summarized in the Agency's [Analysis Report](#); and
- The provincial environmental assessment process led by British Columbia's Environmental Assessment Office (EAO), summarized in the provincial [Summary of Engagement](#).

Underlined entries in the *Summary of Issues* table below highlight new issues raised during the comment period led by the Agency on the Initial Project Description. The Agency received a total of 66 comments during the comment period. The Canadian Impact Assessment Registry contains all the submissions received (Reference Number 80702, or at this [Link](#)).

### Next Steps

As part of the Detailed Project Description, the proponent will need to provide a response to the *Summary of Issues*. The *Summary of Issues* and the proponent's responses will help inform the Agency's decision as to whether an impact assessment will be required and, if so, the issues that are to be addressed in the assessment.

If the Agency determines that an impact assessment is required, the next public comment opportunity will be on the Tailored Impact Statement Guidelines and Public Participation Plan. The Agency will be making funding available to help support participation in this comment period. The comment period, along with information on how to apply for funding, will be advertised on the Canadian Impact Assessment Registry.

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<sup>1</sup> Note that this document provides a summary of comments received; it does not evaluate those concerns, nor does it define what is to be addressed in the impact assessment.

## Summary of Issues

Element	Issue
<b>Air Quality</b>	<ul style="list-style-type: none"> <li>• Effects to air quality and impacts of those effects on human health <u>and recreation sites</u></li> <li>• Effects to the biophysical environment, and ecosystem health and function resulting in impacts to air quality from dust and greenhouse gas emissions</li> </ul>
<b>Aquatic Resources</b>	<ul style="list-style-type: none"> <li>• Effects to aquatic species, specifically reductions in the abundance of certain species (for example, mayflies) and increased tissue selenium and nitrate concentrations</li> </ul>
<b>Climate Change and GHG Emissions</b>	<ul style="list-style-type: none"> <li>• Impacts of upstream and downstream greenhouse gas (GHG) emissions, particularly carbon dioxide and methane emissions</li> <li>• Implications of upstream GHG emissions to Canada's ability to meet national GHG reduction commitments and climate goals</li> <li>• Climate impacts of downstream GHG emissions from use of mined coal</li> <li>• Effects of deforestation, including the loss of carbon sinks</li> <li>• <u>The resilience of the Project to climate change</u></li> <li>• <u>The need for the proponent to ensure that information described in the Strategic Assessment of Climate Change is provided</u></li> <li>• <u>Consideration of offsetting direct GHG emissions of the Project</u></li> </ul>
<b>Cumulative Effects</b>	<ul style="list-style-type: none"> <li>• Coal mining has been occurring in the Elk Valley for over 100 years which has resulted in changes to the biophysical and human environment, including cumulative effects to land, water, resources and Indigenous peoples</li> <li>• Importance of cumulative effects assessments</li> <li>• Long-term and cumulative effects to wildlife and species at risk, including effects to migration corridors and species at risk such as Grizzly Bear and Whitebark Pine</li> <li>• Long-term and cumulative effects to fish and fish habitat, including Westslope Cutthroat Trout, Bull Trout, Mountain Whitefish and smaller species <u>in B.C. and the United States</u></li> <li>• <u>Cumulative effects of the Project on Indigenous peoples' physical and cultural heritage, current use of lands and resources for traditional purposes, sites or things of historical archeological or cultural important, as well as health, social or economic conditions, and on the exercise of Aboriginal and Treaty rights</u></li> </ul>
<b>Differential Impacts upon Diverse Persons and Groups</b>	<ul style="list-style-type: none"> <li>• Differential impacts based on sex and gender, which may include groups identified by age, place of residence, ethnicity, socio-economic status, employment status or disability for example, in a variety of ways including: <ul style="list-style-type: none"> <li>○ employment opportunities,</li> <li>○ access to revenues;</li> <li>○ access to safe and affordable housing;</li> <li>○ compensation or benefits and expanded investment in the local community;</li> <li>○ decision making roles for new innovation and technologies; and</li> <li>○ access to services and programs that account for the perspective, knowledge and experiences of individuals and communities.</li> </ul> </li> <li>• The Project may create and exacerbate existing inequalities.</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>• Delays caused by impact assessments to the Project's timeline, thus impacting employment</li> </ul>

Element	Issue
<b>Conditions</b>	<p>income and economic stability that residents and their families rely upon</p> <ul style="list-style-type: none"> <li>• Lack of long-term economic and environmental sustainability of the coal industry due to decreased of market demand for coal, and the need for development of green alternatives and green jobs</li> <li>• Loss of cultural and tourism values, including reduced access, changes to plant, fish and wildlife resources, disturbance of visual quality and increase of noise</li> <li>• Changes to local population, employment, income and training opportunities, and worker safety</li> <li>• Influx of a work force for the Project could reduce access to housing, health care, infrastructure, and community services that address people’s specific needs, restrict their options and potentially compromise their health</li> <li>• Possibility of proponent-funded infrastructure and community resources that improve the local quality of life and compensate for Project effects</li> <li>• <u>Financial benefits of the Project for employees and for the province of British Columbia</u></li> <li>• <u>Concerns about the economic justification of the Project, including a comparison to the previously asserted life of mine for the Swift operation</u></li> <li>• <u>Concerns about the adequacy of financial security of the Project including costs associated with certain mitigation measures such as water treatment</u></li> </ul>
<b>Ecosystems, Vegetation, and Soils</b>	<ul style="list-style-type: none"> <li>• Loss of biodiversity, and effects to wilderness areas and environmentally sensitive lands, <u>including wetland, riparian, and floodplains ecosystems; grassland and brushland ecosystems; old growth and mature forests; avalanche path ecosystems; Karst ecosystems; and listed/endangered ecological communities</u></li> <li>• Loss of critical grasslands and associated effects to Bighorn Sheep that winter in the grasslands</li> <li>• Loss of high-elevation mountain slopes and associated effects to Whitebark Pine</li> <li>• Loss of mature and old growth forests and associated effects to Grizzly Bear and other species</li> <li>• <u>Loss of soils and inadequate restoration, including impacts to soil quantity, quality, distribution, and its contribution as a critical determinant of ecosystems</u></li> </ul>
<b>Federal Lands</b>	<ul style="list-style-type: none"> <li>• Effects to connectivity corridors and long-term implications for wildlife populations within the Rocky Mountain National Parks, including to the Kootenay National Park, a national park and connectivity corridor from Waterton-Glacier International Peace Park in Alberta and Montana and the Rocky Mountain parks complex for wide-ranging wildlife, including Grizzly Bears and Wolverines</li> </ul>
<b>Fish and Fish Habitat</b>	<ul style="list-style-type: none"> <li>• Impacts to fish and fish habitat due to increased selenium, nitrate, sulphate, nickel, and cadmium concentrations and calcite deposits from effluent discharge points and seepage from tailings storage and waste rock impoundments</li> <li>• Contaminant levels in fish that migrate from the Project area to Montana</li> <li>• <u>Consideration of U.S. Environmental Protection Agency, State of Montana, and State of Idaho water quality and fish tissue thresholds</u></li> <li>• Threats to downstream endangered fish populations, including Westslope Cutthroat Trout, adding to recent declines in the Fording River near the Project site, and White Sturgeon</li> <li>• Degradation or loss of fish habitat, and resulting impacts on fish populations. Fish habitat includes Chauncey Creek and its tributary streams due to clearing of vegetation during construction,</li> </ul>

Element	Issue
	<p>erosion and sedimentation, and Kilmarnock Creek due to waste rock dumps</p> <ul style="list-style-type: none"> <li>• Past and ongoing investigations by Environment and Climate Change Canada (ECCC) on effects to water quality and fish, including fish kills in Line Creek.</li> </ul>
<b>Human Health and Well-Being</b>	<ul style="list-style-type: none"> <li>• Effects to air quality and health impacts to local residents, <u>employees</u>, tourists, and recreational users</li> <li>• Impacts to drinking water due to increased selenium and nitrates, dust emissions, noise, and from impacts to traditional foods due to changes in water and air quality</li> <li>• Concerns around maintaining local employment, training opportunities, and local suppliers to ensure community wellbeing</li> <li>• Effects to the health of Indigenous peoples through impacts to the exercise of Indigenous rights and use, now and in the future, of the lands and resources for traditional purposes, such as, hunting, fishing, plant and animal harvesting and cultural practices, in the Project area</li> </ul>
<b>Indigenous Peoples' Cultural, or Physical and Heritage</b>	<ul style="list-style-type: none"> <li>• Loss of cultural, historical, sacred and archeological sites and resources</li> <li>• Impacts to culture, spirituality and Indigenous knowledge</li> <li>• Impacts to archaeological sites and participation of Indigenous nations in archaeological monitoring work</li> <li>• <u>Concerns with the notification processes when artifacts are found during ground disturbance or while on the land in general</u></li> </ul>
<b>Indigenous Peoples' Current Use of Lands and Resources</b>	<ul style="list-style-type: none"> <li>• Loss of access to, and sensory disturbance impacting preferred places, preferred species and resources, and preferred practices central to Indigenous use, language and identity</li> <li>• Loss of access to ancestral territories for spiritual, cultural and subsistence uses</li> <li>• Loss of opportunity to carry out cultural practices, including teaching, traditional use and harvesting activities, fishing, hunting and gathering, in both the Project area and the surrounding area where Project effects may occur</li> <li>• Land and resource use for cultural purposes will be adversely affected by the Project's impacts on wildlife habitat, migratory birds, fish and fish habitat, as well as air and water quality and the ecological balance</li> <li>• Impacts to Indigenous people's ability to carry out important religious, legal and cultural practices</li> <li>• Impacts of contaminants in air and dust on the quality of, and confidence in (avoidance of), traditional foods, including plants, berries, and wild game</li> <li>• Impacts to Indigenous stewardship of the lands and resources</li> <li>• Impacts of changes to water quality on the health and quality of fish</li> <li>• <u>Impacts to the Oldman River system with cultural and environmental importance to Siksika Nation and Kainai Nation</u></li> <li>• Cumulative effects in the region on country foods including water quality, air quality, and impacts to wildlife and their habitat, due to the high density of existing and proposed coal mining operations in the Elk Valley</li> <li>• Impacts on Indigenous peoples' ability to harvest plants for food, medicinal and ceremonial purposes, including stems, leaves, roots and berries</li> <li>• Cumulative impact of all projects in the area on the ability of Indigenous peoples to practice their</li> </ul>

Element	Issue
	rights now and in the future
<b>Indigenous peoples' Aboriginal and Treaty Rights</b>	<ul style="list-style-type: none"> <li>• Impacts on the exercise of Aboriginal and Treaty rights and related cultural practices</li> <li>• Adverse effects, such as to wildlife habitat, migratory birds, and fish and fish habitat and environmentally sensitive habitats including grassland and brushland ecosystems, avalanche path ecosystems, Karst ecosystems, Bighorn Sheep winter range and Westslope Cutthroat Trout habitat, endangered ecological communities, mature and old growth forests, and wetlands, could impact the exercise Aboriginal and Treaty rights and related cultural practices</li> <li>• Significant and unsustainable cumulative impacts of coal mining and resource extraction, logging and development taking of lands and subsequently altering the landscape, diminishing the ability to exercise Aboriginal and Treaty rights and related intergenerational transfer of culture, knowledge, practices and language</li> </ul>
<b>Migratory Birds and their Habitat</b>	<ul style="list-style-type: none"> <li>• Impacts to migratory birds, including their habitat, from Project activities leading to destruction, disturbance and fragmentation of habitat (e.g., foraging, nesting), habitat avoidance, sensory disturbance and the inadvertent disturbance and destruction of individuals, nests and eggs</li> <li>• Impacts to migratory bird species reliant on aquatic environments currently affected by selenium and other pollutants (e.g., embryotoxicity and reproductive deformities), including the Spotted Sandpiper, American Dipper, Harlequin Duck, Northern Waterthrush, Varied Thrush, and Canada Goose</li> <li>• Impacts to Rocky Mountain Flyway, an internationally important habitat area for migratory birds</li> <li>• Impacts to migratory bird species reliant on grasslands, including raptors, Black-backed and Three-toed Woodpeckers, Brown Creeper, Northern Flicker and Pacific Wren are protected under the <i>Species at Risk Act</i></li> </ul>
<b><u>Project Design</u></b>	<ul style="list-style-type: none"> <li>• <u>Uncertainty around the duration of project phases including operations, reclamation, closure, and post-closure and the lifespan of existing infrastructure</u></li> <li>• <u>Inadequate level of detail to understand mitigation measures and adverse effects</u></li> <li>• <u>Lack of consideration of alternative means to the Project, including a smaller, shallower mine with a shorter lifespan</u></li> <li>• <u>Lack of consideration of alternatives to the Project, including alternative methods of making steel</u></li> </ul>
<b><u>Public Engagement</u></b>	<ul style="list-style-type: none"> <li>• <u>Create opportunities for virtual public engagement sessions designed to allow all participants to speak, to engage with each other, and discuss conflicting evidence about the Project</u></li> </ul>
<b>Reclamation</b>	<ul style="list-style-type: none"> <li>• Inadequate reclamation at the existing Fording River Operations site</li> <li>• Teck's ongoing environmental stewardship and reclamation commitments and initiatives may be sufficient, including the Elk Valley Water Quality Plan and investments in water quality research and development</li> <li>• Concerns about the proponent's fisheries restoration initiatives, and the legacy of accountability during reclamation</li> <li>• <u>Concerns about sufficiency of information provided on reclamation including plans for long-term water treatment and estimated costs of financial assurance</u></li> <li>• Benefits of the Project's proposed reclamation efforts and forward-thinking technologies that would be consistent with ongoing efforts for existing mines in the Elk Valley to reclaim and rehabilitate lands impacted by mining</li> </ul>

Element	Issue
<b>Social Conditions</b>	<ul style="list-style-type: none"> <li>• Loss of access to areas used for recreational purposes</li> <li>• Effects of declining fish populations to the local tourism industry, including fly fishing tourism</li> <li>• <u>Effects to hunting guides from changes to wildlife populations</u></li> </ul>
<b>Species at Risk and their Habitat</b>	<ul style="list-style-type: none"> <li>• Impacts to federally listed Species at Risk, including their habitat, as a result of habitat loss, alteration and fragmentation, direct and indirect mortality, <u>environmental emergencies</u>, sensory disturbance and functional habitat loss and introduction of invasive species</li> <li>• Potential adverse effects to Species at Risk reliant on high-elevation grasslands, high-elevation mountain slopes, connectivity corridors, mature and old growth forest, and wetlands</li> <li>• Threats to species listed in the <i>Species at Risk Act</i> and their habitat, including Grizzly Bear (special concern), American Badger (endangered), Olive-sided Flycatcher (threatened), Barn Swallow (threatened), Bank Swallow (threatened), Western Toad (special concern) and Whitebark Pine (endangered)</li> <li>• Threats to downstream endangered fish populations, including Westslope Cutthroat Trout and White Sturgeon</li> <li>• Inadequate reclamation efforts and plans to date for the Project, both in general and with a focus on critical habitat for Species at Risk</li> </ul>
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>• Need for environmentally sustainable and socially responsible mining projects to meet ongoing global demand for steel and the development of sustainable infrastructure, such as renewable energy infrastructure</li> </ul>
<b>Transboundary Effects</b>	<ul style="list-style-type: none"> <li>• Transboundary effects in the United States (U.S.) and traditional Tribal territory of U.S. Tribes including elevated selenium and <u>nitrogen</u>, as well as impacts to aquatic resources in the Elk River, Koocanusa Reservoir, the Kootenai River, and the Kootenai watershed in Idaho and Montana</li> <li>• Transboundary impacts of the Project in the U.S. from water pollution to fish populations and fish habitat downstream in the Koocanusa Reservoir and into the U.S. Kootenai River</li> <li>• Transboundary impacts to White Sturgeon in the Kootenai River</li> <li>• <u>Inclusion of transboundary environments in assessment study areas</u></li> <li>• Transboundary effects in Alberta, including from selenium pollution and on wide-ranging species and their habitat spanning Alberta-B.C. such as Bighorn Sheep, Grizzly Bear and Wolverine</li> <li>• Transboundary impacts of the Project from greenhouse gas emissions, including combustion of coal produced from the Project</li> </ul>
<b><u>Transportation</u></b>	<ul style="list-style-type: none"> <li>• <u>Impacts from the transportation of coal by road and rail, including impacts on wildlife</u></li> <li>• <u>Impacts from coal spills transported by rail into waterways along the rail route</u></li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>• <u>Negative impacts of the project on groundwater and surface water quality and quantity from mining activities including accidental releases</u></li> <li>• Nitrate levels flowing from waste rock dumps could be above provincial and federal guidelines for decades after mining ends</li> <li>• Ground and surface water quality concerns due to an inability to capture and treat increased inputs of contaminants such as selenium and nitrates</li> <li>• Ground and surface water quantity concerns from water usage at the Project and water seepage,</li> </ul>

Element	Issue
	<p>combined with drying effects from climate change</p> <ul style="list-style-type: none"> <li>• Effectiveness of mitigation of effects to water quality including unproven technology that lacks independent verification of effectiveness, including the unproven Saturated Rock Fill technology with little public information available on its functionality and reliability</li> <li>• Concerns regarding coordinated efforts to improve water quality in the Elk Valley</li> <li>• Need for evidence-based water treatment measures for effective water treatment</li> <li>• Concerns with using unproven technology for water quality treatment that may not prove effective <u>and that has little public information available to verify the volume of wastewater treated</u></li> <li>• Need for government transparency, oversight and enforcement of water quality standards at Elk Valley mines</li> <li>• Potential non-compliance with water quality objectives in the Elk Valley Water Quality Plan</li> <li>• Potential non-compliance with the Boundary Waters Treaty</li> <li>• Concerns with regulatory mechanisms that have not adequately regulated water pollution from active mining projects in the Elk Valley</li> <li>• Concerns that the provincial regulatory system will not adequately protect the watershed</li> <li>• <u>Concerns over the need to consider the Coal Mining Effluent Regulations that are being developed by Environment and Climate Change Canada</u></li> <li>• <u>Concerns about impacts to Ktunaxa tradition and practice of rights from Project effects to water and water flow, which have an inherent right and value to Ktunaxa Nation, and affect Ktunaxa assessment of traditional knowledge, language, economic, social, education, employment, lands, and resources, among others</u></li> <li>• <u>Need for adequate water quality monitoring at the site location, and upstream and downstream of the Project</u></li> </ul>
<b>Wetlands</b>	<ul style="list-style-type: none"> <li>• Effects to wetlands along the Fording River and Kilmarnock Creek through construction and changes to water quality, including wetland loss, reduction, alteration and change in wetland function</li> <li>• Effects to wetland communities and ecological functions, thereby also affecting the availability and/or quality of wetland habitat for migratory birds and other wildlife</li> </ul>