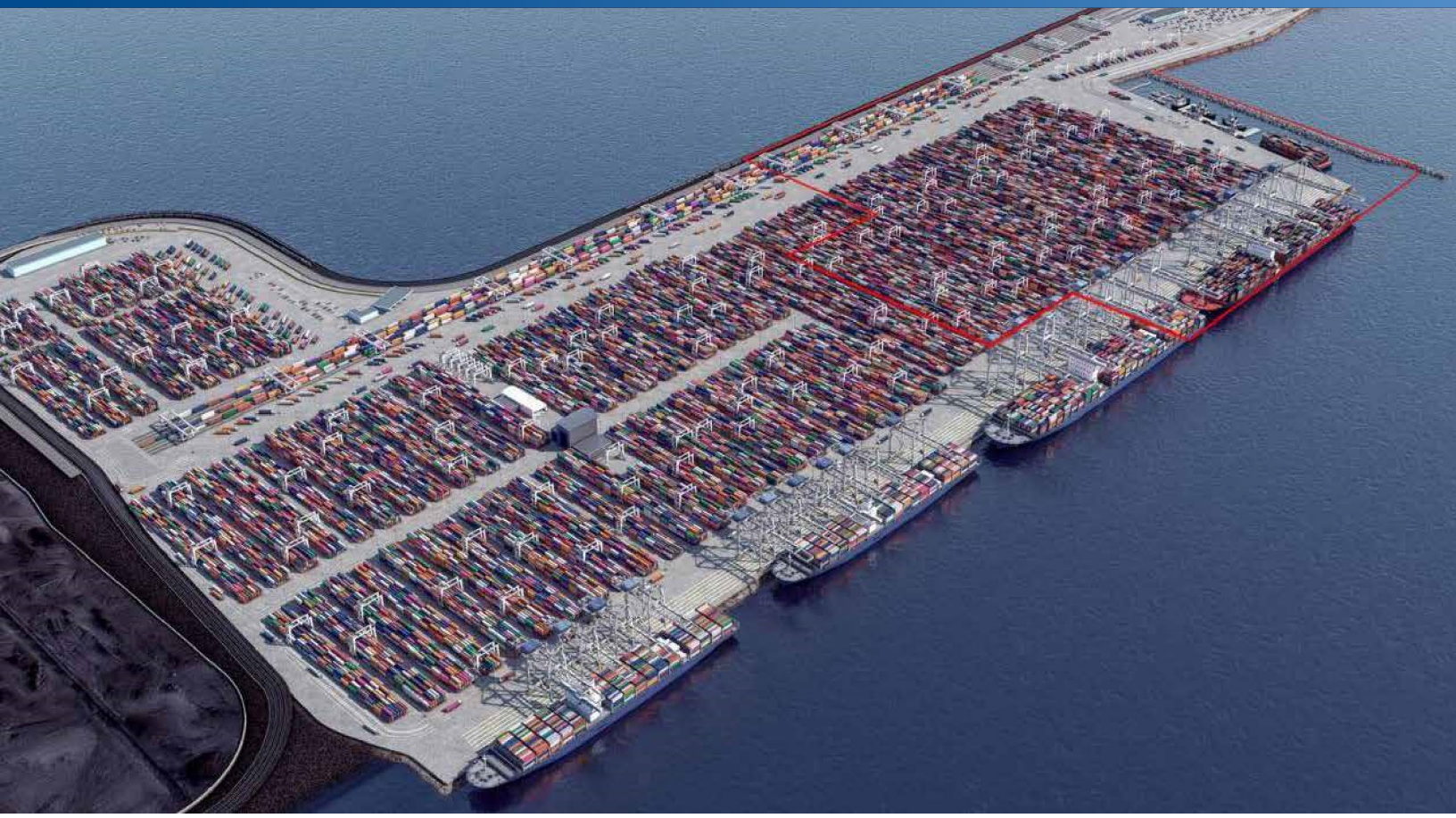
GLOBAL CONTAINER TERMINALS
DELTAPORT EXPANSION
BERTH FOUR PROJECT (DP4)



Summary of the Detailed Project Description

October 2021

Submission to the Impact Assessment Agency of Canada

GLOBAL CONTAINER TERMINALS CANADA

Submitted by GCT with expert input provided by its advisors.

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	DEFINITION
AIA	Archaeological Impact Assessment
AOA	Archaeological Overview Assessment
BC	British Columbia
BCEAA	British Columbia Environmental Assessment Act
BCEAO	British Columbia Environmental Assessment Office
CAC	Criteria Air Contaminants
CHE	Container Handling Equipment
DFO	Fisheries and Oceans Canada
DP3	Deltaport Third Berth Project
DP4	Deltaport Expansion Berth Four Project (the Project)
DPD	Detailed Project Description
DPW	Dubai Ports World
DWT	Deadweight tonnage
ECCC	Environment and Climate Change Canada
EMS	Environmental Management System
EMSP	Environmental Management System Procedures
EOP	Environmental Operating Procedures
EPIC	BCEAO's Project Information Centre (EPIC)
FPIC	Free Prior and Informed Consent
FREMP	Fraser River Estuary Management Plan
FTE	Full-Time Equivalent
GBA+	Gender-Based Analysis Plus
GCT	Global Container Terminals Canada Limited Partnership
GCT Deltaport	Global Container Terminals Deltaport Container Terminal
GCT Vanterm	Global Container Terminals Vanterm Modernization and Densification Project
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IAA	Impact Assessment Act
IAAC	Impact Assessment Agency of Canada
IBA	Important Bird Area

ACRONYM/ ABBREVIATION	DEFINITION
IK	Indigenous Knowledge
IPD	Initial Project Description
Joint Guidelines	Tailored Impact Statement Guidelines/ Application Information Requirements
JSOIE	Joint Summary of Issues and Engagement
MOU	Memorandum of Understanding
PIN	Participating Indigenous Nation
RBT2	Roberts Bank Terminal 2 Project
SRKW	Southern Resident Killer Whale
SSIGA	Salish Sea Indigenous Guardians Association
ULCV	Ultra Large Container Vessel
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
USA	United States of America
VC	Valued Component
VFPA	Vancouver Fraser Port Authority
VLCV	Very Large Container Vessel
WMA	Wildlife Management Area

SYMBOLS AND UNITS OF MEASURE

SYMBOL/ UNIT OF MEASURE	DEFINITION
%	percent
cm	centimetre
CO_2	carbon dioxide
ha	hectare
km	kilometre
kt	kiloton
$ktCO_2e$	kilotonnes of carbon dioxide equivalent
m	metre
m^2	square metre
tCO_2e	tonnes of carbon dioxide equivalent
TEU	twenty-foot equivalent unit

TABLE OF CONTENTS

INTRODUCTION 1
1.1 Project Status and History 1
1.2 Proponent Overview 10
1.3 Project Purpose, Need and Benefits 11
1.4 Environmental Assessment Requirements 14
2 ENGAGEMENT SUMMARY 16
2.1 Indigenous Engagement 16
2.2 Government, Public and Stakeholder Engagement 17
3 PROJECT DESCRIPTION 18
3.1 Project Updates and Changes 18
3.2 Components and Activities 18
3.3 Project Alternatives and Alternative Means 21
4 LAND AND WATER USE 23
5 REGULATORY CONTEXT 24
6 ENVIRONMENTAL AND SOCIAL SETTING 25
6.1 Biological Setting 25
6.2 Social Setting 27
7 POTENTIAL EFFECTS OF THE PROJECT 29
7.1 Project Updates and Changes 29
7.2 Potential Environmental Effects 29
7.3 Wastes and Atmospheric Emissions 33
7.4 Potential Effects on Heritage Resources 36
7.5 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities 37
8 INDIGENOUS ENGAGEMENT 40
8.1 Project Updates and Changes 40
8.2 Introduction 40
8.3 Summary of Preliminary Engagement with Indigenous Nations 41
8.4 Summary of Planned Engagement Activities and Opportunities to Work Together 47
9 ENGAGEMENT AND CONSULTATION WITH GOVERNMENTS, THE PUBLIC AND OTHER PARTIES 48
9.1 Public, Stakeholder and Government Engagement 49
10 REFERENCES 52
10.1 DPD 52
10.2 DPD Summary Reference List 52

LIST OF FIGURES

Figure 1: GCT Deltaport Expansion, Berth Four Project Area 3
Figure 2: GCT Deltaport Expansion, Berth Four Project Location. 5
Figure 3: Marine Shipping Route for Container Ships. 7
Figure 4: Project Review and Impact Assessment Process. 9
Figure 5: Predicted Demand vs Capacity of West Coast Canada Container Ports (Black Quay Consulting 2021) 12
Figure 6: Preliminary Project Schedule. 21

LIST OF TABLES

Table 1: Proponent Information. 10
Table 2 GCT Deltaport Vessel Calls and Size. 18
Table 3: Potential Effects in Relation to Impact Assessment Requirements. 30
Table 4: Other Potential Effects of the Project. 32
Table 5: Changes that May Occur Outside of Canada Due to the Project. 32
Table 6: Potential Solid, Liquid and Hazardous Waste for the Project. 33
Table 7: Potential Atmospheric Emissions. 34
Table 8: Potential Effects on Heritage Resources from Project activities. 37
Table 9: Preliminary Identification of Potential Effects to Indigenous Interests Resulting from Project Activities. 38
Table 10: Summary of Key Issues Raised by Indigenous Nations. 42

LIST OF APPENDICES

Appendix A Responses to Summary of Issues

INTRODUCTION

1.1 Project Status and History

The GCT Deltaport Expansion, Berth Four Project (DP4 or the Project) is being proposed by Global Container Terminals Canada Limited Partnership (GCT), the long-term operator of GCT Deltaport Terminal. As proposed, DP4 is an expansion to the existing marine terminal primarily on federal lands in the City of Delta, British Columbia (BC). Project construction and operation activities may also overlap Tsawwassen First Nation and Government of BC water lots.

The Project involves the expansion of the existing terminal container storage and handling area, the addition of a fourth berth on the east side of the Roberts Bank Causeway, the expansion of the existing Intermodal rail yard, and the relocation of several buildings and related services. The Project will require dredging to provide safe access for ships, and the relocation of the existing tug basin to the north end of the new berth four area. Consideration is also being given to a new short sea shipping berth in response to government initiatives and potential business feasibility of distributing currently trucked goods in containers via barge services. If it is determined that short sea shipping capability is not required, the terminal footprint will remain unchanged as the area currently identified as being required for a short sea shipping berth would be used for terminal operations, such as container storage and/or the (un)loading of container trucks, however, the area of dredging may be reduced. In addition, a proposed new marina for fishing and crabbing vessels is being considered in response to feedback from Tsawwassen First Nation (Figure 1).

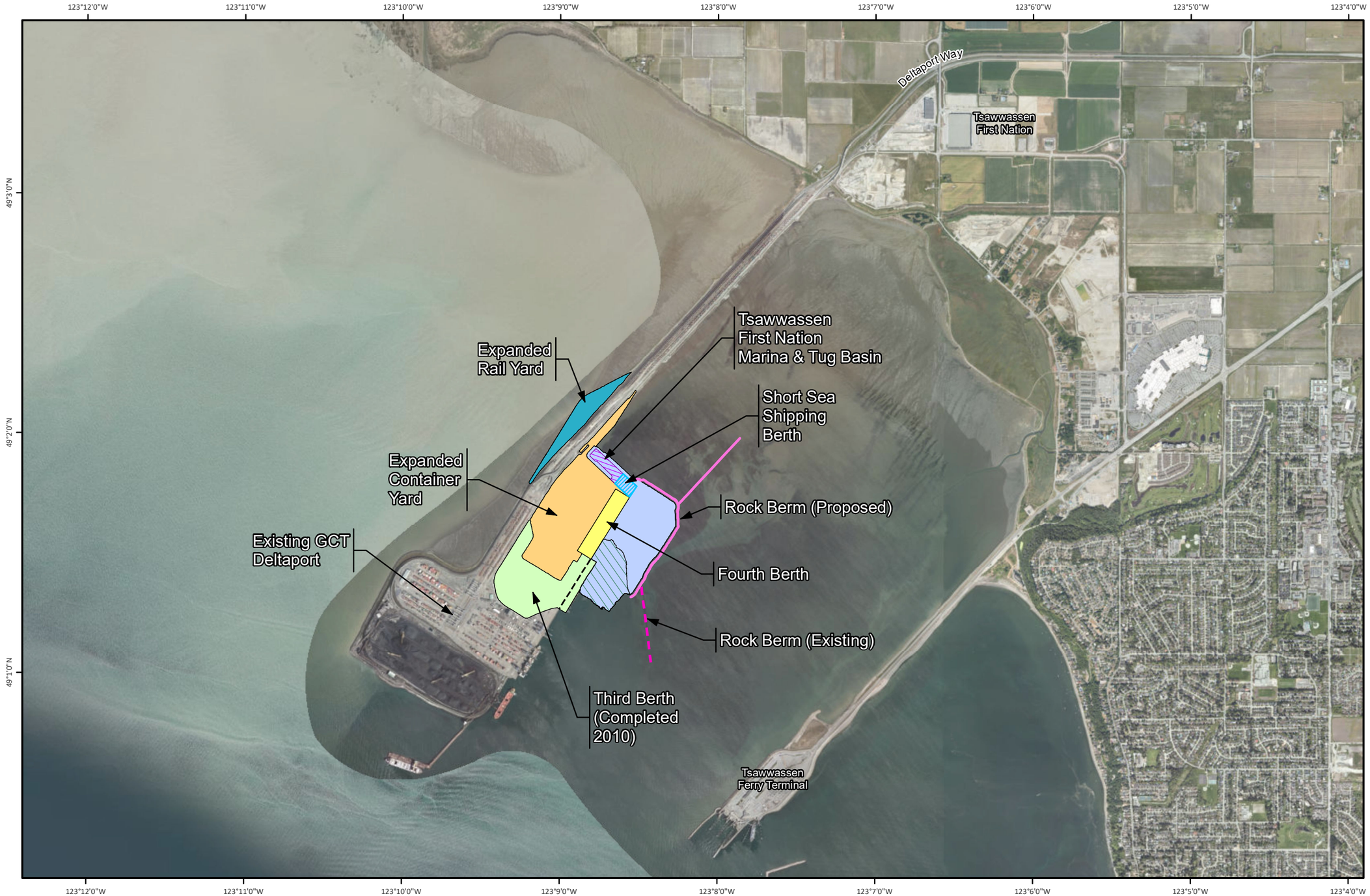
The Project is located within the boundaries of the City of Delta. The coordinates for the center of the DP4 expansion are approximately 49°01’25’’ N 123°09’10’’ W (Figure 2). The coordinates for the proposed endpoint of the marine shipping route (Buoy J) that is incidental to the Project are 48°29'45" N, 124°59'29" W (Figure 3).

GCT currently holds all required permits, tenures, and approvals to operate at the GCT Deltaport Terminal. A federal impact assessment and/or provincial environmental assessment may be required prior to securing any additional permits or approvals necessary to advance DP4. The Project has not been previously assessed by the provincial or federal governments. Currently, this Project is subject to a coordinated approach by the federal Impact Assessment Agency of Canada (IAAC) and the British Columbia Environmental Assessment Office (BCEAO) to align their respective processes. Based on this approach, the term “Impact Assessment” is applied henceforth to describe both the impact assessment and the environmental assessment processes for the Project.

The Initial Project Description (IPD) was completed by GCT and submitted to the IAAC and BCEAO on September 18, 2020. The IPD was published on the Canadian Impact Assessment Registry and the BCEAO’s Project Information Centre (EPIC) website, and a public engagement period on this document was held from October 13 to November 27, 2020. On December 23, 2020, the IAAC and BCEAO issued a Joint Summary of Issues and Engagement document (JSOIE) to GCT which reflected the comments received during the public engagement period and provided an outline of the key issues specific to the Project. Appendix C2 of the Detailed Project Description (DPD; included in this DPD summary as Appendix A) includes a summary of the issues raised in the JSOIE. The Early Engagement Plan for the Project was also completed by GCT and submitted to the BCEAO and published on their provincial registry on September 28, 2020.

This page has been intentionally left blank for printing purposes.

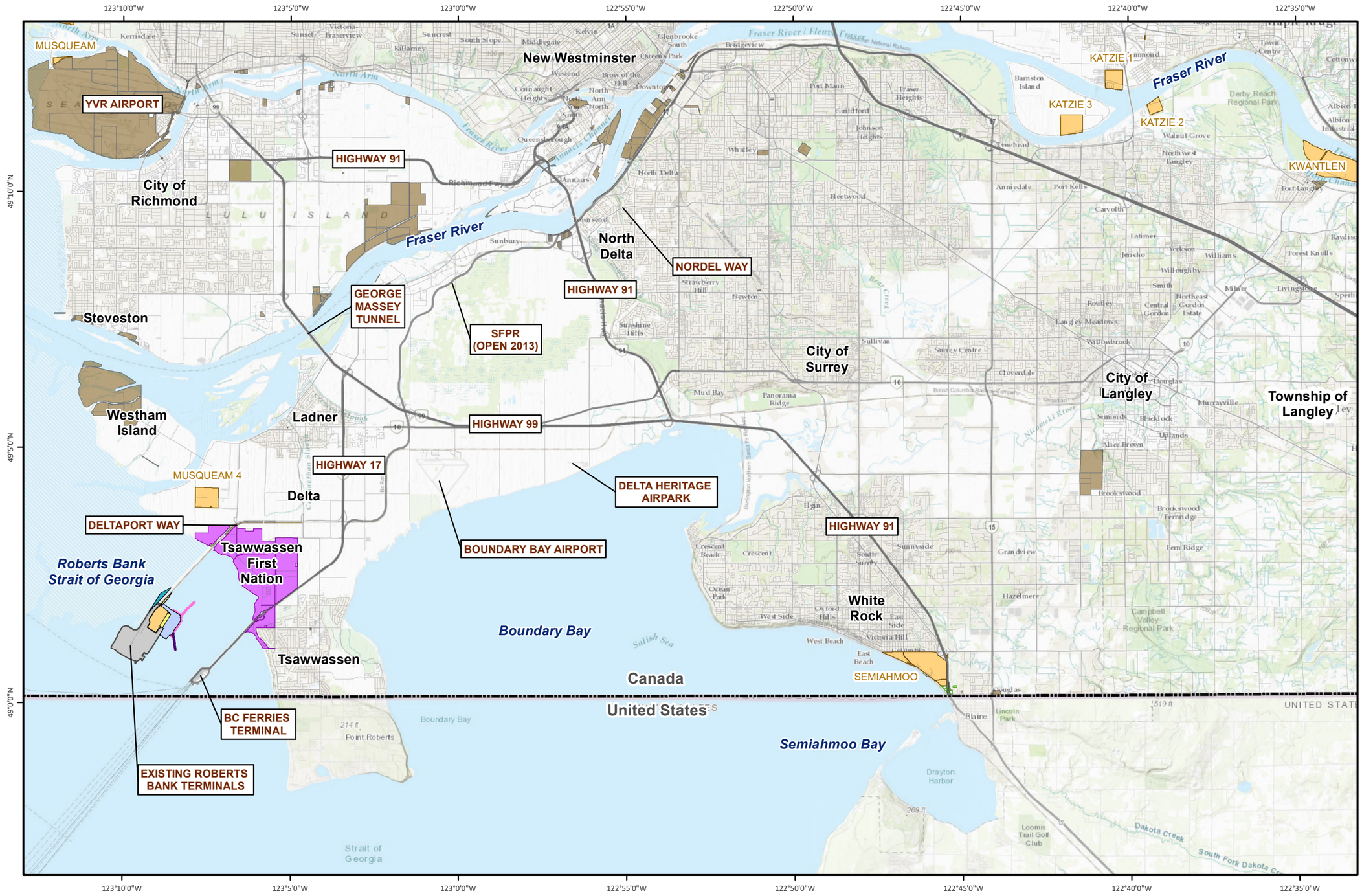
Figure 1: GCT Deltaport Expansion, Berth Four Project Area.



GCT Deltaport Expansion Berth Four Project

K:\Data\Project\GCT10314-NV\A_MXD\Detailed_Project_Description\A_Report_Maps\DPD_Summary\GCT10314_Fig1_Project_Area_20210812_v0_1_TD.mxd

Figure 2: GCT Deltaport Expansion, Berth Four Project Location.



Legend

- Fourth Berth
- Expanded Container Yard
- Expanded Rail Yard
- Fourth Berth Dredge Area
- Existing Roberts Bank Terminals
- First Nation Reserve
- Provincial Parks
- Tsawwassen First Nation Lands
- Federal Land
- Rock Berm (Existing)
- Rock Berm (Proposed)

National Topographic System (NTS) map number: 092B14, 092G02, and 092G03.

0 1 2 3 4 km

N

Scale: 1:140,000

Projection: NAD 1983 UTM Zone 10N

Data Sources:

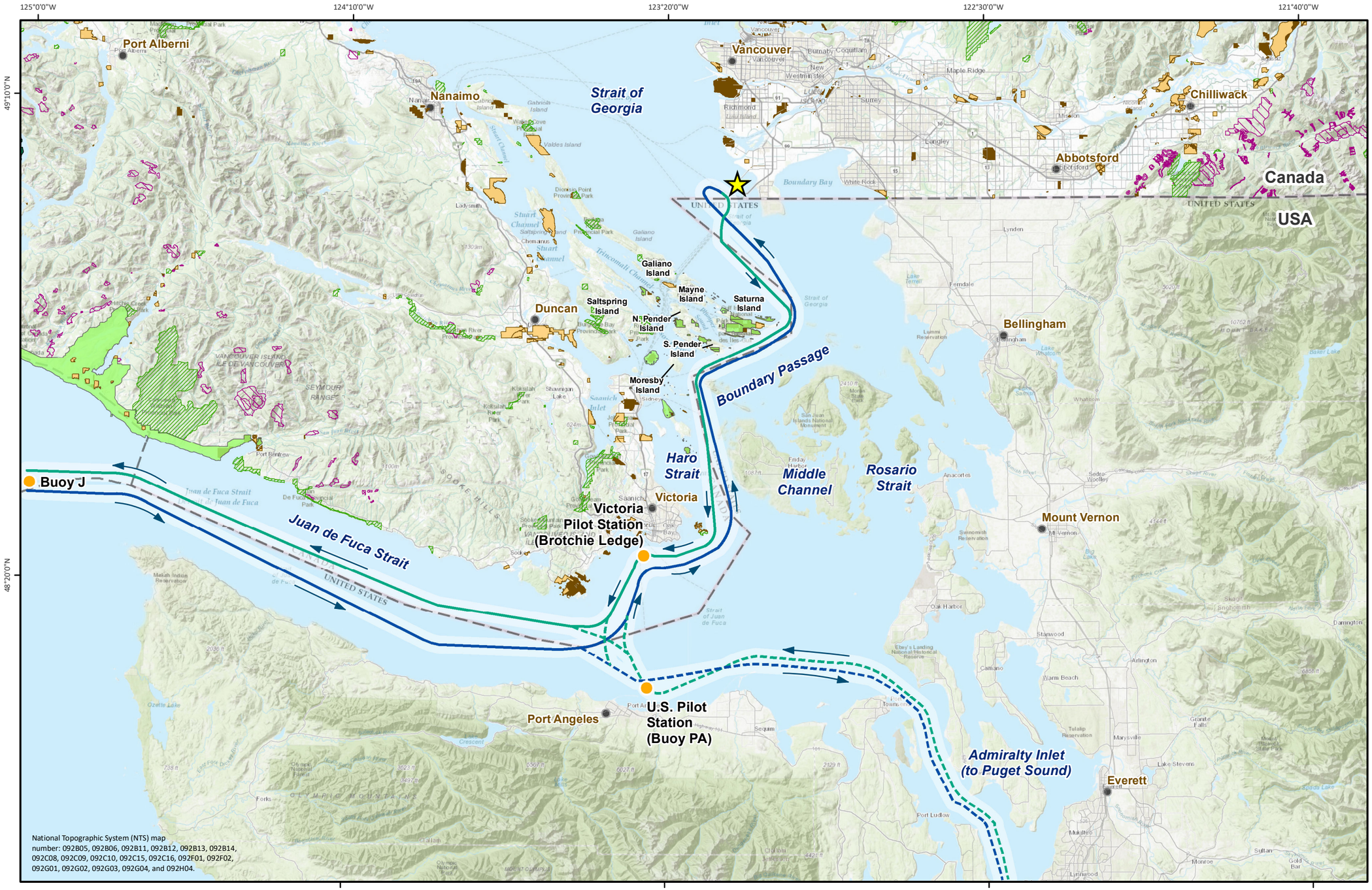
a) Project area, Existing Deltaport Terminal, Ausenco 2021.
b) First nation reserve and national parks, FLNRO 2020.
c) Provincial parks, Ministry of Environment 2021
d) Tsawwassen First Nation Lands, Ministry of Indigenous Relations and Reconciliation.
e) Federal Land (ParcelMap BC), DataBC 2021.
f) Topographic map, Esri Online Service.

GLOBAL CONTAINER TERMINALS CANADA

GCT Deltaport Expansion Berth Four Project

K:\Data\Project\GCT10314-NV\A_MXD\Detailed_Project_Description\A_Report_Maps\DPD_Summary\GCT10314_Fig2_Project_Location_20210909_v0_4_TD.mxd

Figure 3: Marine Shipping Routes for Container Ships.



Legend

- DP4 Project
- Pilot Station
- Federal Land
- First Nation Reserve
- National Parks
- Protected Areas
- Provincial Parks
- Wildlife Habitat Area - Approved
- Canada/US border

Shipping Route

- Project-Associated Outbound Shipping Route
- Outbound Non-Project Associated U.S.A Route
- Project-Associated Inbound Shipping Route
- Inbound Non-Project Associated U.S.A Route

0 5 10 15 20 km

N

Scale: 1:750,000

Projection: NAD 1983 UTM Zone 10N

Data Sources:
a) DP4 project, Hatfield 2021.
b) First nation reserve, national parks, and wildlife habitat areas, FLNRO 2020 to 2021.
c) Provincial parks and protected areas, Ministry of Environment 2021
d) Shipping route and pilot station, digitized using RBT2 Marine Shipping Supplemental Report, 2015.
e) Federal Land (ParcelMap BC), DataBC 2021.
f) Topographic map, Esri Online Service.

GLOBAL CONTAINER TERMINALS CANADA

GCT Deltaport Expansion Berth Four Project

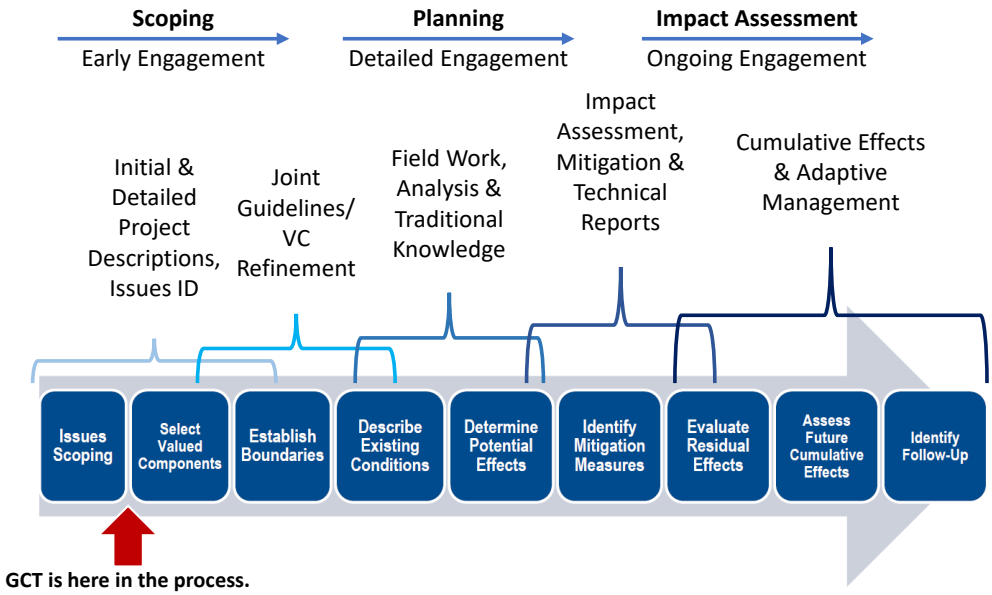
K:\Data\Project\GCT10314-NV\A_MXD\Detailed_Project_Description\A_Report_Maps\DPD_Summary\GCT10314_Fig3_Marine_Shipping_FN_Map_20210907_v0_3_TD.mxd

The DPD builds on the information provided in the IPD, with updates, revisions and further details reflecting ongoing engagement with Indigenous nations, the public, municipalities, provincial and federal government agencies and stakeholders. It also describes how engagement contributed to the changes to the Project and provides GCT's responses to the issues identified in the JSOIE document (Appendix A of this DPD summary). Following the filing of the DPD, the BCEAO will enter into the consensus-seeking phase with Participating Indigenous Nations (PIN) before making a recommendation regarding the Project's EA Readiness Decision. Under the *Impact Assessment Act* (IAA), a determination will also be made by the IAAC as to whether an impact assessment is required after acceptance of the DPD.

The Project will be jointly regulated by the BCEAO and IAAC and as a result, the requirements of these agencies will be included in the Tailored Impact Statement Guidelines/Application Information Requirements document (Joint Guidelines) for the Project. Figure 4 is a modification of the BCEAO's figure in the User Guide to show where GCT is currently at in the review process and highlighting the ongoing and additional opportunities for input and feedback.[1]

In anticipation of the Planning Phase, GCT is currently engaging with Indigenous nations and other government agencies and authorities to inform the Impact Assessment approach (to be defined in the Joint Guidelines by the BCEAO and IAAC). A first draft of the Joint Guidelines was prepared by GCT and submitted to IAAC and BCEAO who will further tailor the document to DP4 and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines to GCT.

Figure 4: Project Review and Impact Assessment Process[1].



[1] Figure modified from Figure 3 (The effects assessment steps), BCEAO – Effects Assessment Policy Version 1.0 (https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/environmental-assessments/guidance-documents/2018-act/effects_assessment_policy_v1_-_april_2020.pdf).

1.2 Proponent Overview

GCT, a majority Canadian-owned and operated company with headquarters in Vancouver, has operated on the west coast of Canada since 1907. GCT is responsible for operating both GCT Vanterm and GCT Deltaport and is currently one of the largest maritime employers in Canada. GCT holds all required permits, tenures, and approvals to operate at the GCT Deltaport Terminal.

The Project is intended to be funded entirely by GCT and private investment, and operated by GCT thereby ensuring that the assessment, approval, funding, development, and operation of the Project are fully integrated.

Table 1: Proponent Information.

PROJECT	
Proposed Project Name	GCT Deltaport Expansion, Berth Four Project (DP4)
Project Location	Roberts Bank, City of Delta, BC, Canada
Project Industrial Sector and Type	Marine Shipping
Proponent Name and Address	GCT Canada Limited Partnership 1285 Franklin Street, Vancouver, BC, Canada V6A 1J9
PRIMARY CONTACT INFORMATION	
Name	Mike McLellan, Vice President, Project Development
Mailing Address	Suite 610, The Landing, 375 Water Street, Vancouver, BC, Canada
Phone	<contact information removed>
Email	
Website	https://globalterminals.com/
SECONDARY CONTACT INFORMATION	
Name	Marko Dekovic, Vice President, Public Affairs
Mailing Address	Suite 610, The Landing, 375 Water Street, Vancouver, BC, Canada
Phone	<contact information removed>
Email	
Website	https://globalterminals.com/

GCT is a member of Green Marine, a voluntary, environmental certification program for the North American Marine Industry and the Vancouver Fraser Port Authority (VFPA) endorsed Climate Smart program, aimed at achieving reductions in greenhouse gas (GHG) emissions. GCT is committed to supporting and protecting the communities where the company operates and continuously evaluates initiatives that will contribute to sustainability through the Global Commitment initiative[1].

[1] https://globalterminalscanada.com/globalcommitment/

1.3 Project Purpose, Need and Benefits

The purpose of DP4 is to provide timely container handling capacity to Canadian exporters and importers based on historical and projected demand growth on the west coast of Canada. The Project's purpose also aligns with the objectives of the *Canada Marine Act*, including helping to ensure that Canada is provided with the marine infrastructure that it needs to support and promote its economic and social competitiveness and trade objectives.

DP4 represents an incremental expansion of west coast container terminal capacity aimed at efficiently and competitively serving Canadian exporters, consumers, and supply chains, as well as those dependent on USA destined gateway cargo. The development of DP4 is timed to meet forecasts for growth in container terminal demand and is designed to effectively accommodate increasing vessel size and volumes. Global marine shipping industry consolidation is resulting in fewer, but larger vessels, and greater competition. DP4 is positioned to respond to meet Canada's and our trading partners' needs.

GCT commissioned an independent study of demand for container capacity on the west coast of Canada (Black Quay Consulting 2021). Low, medium, and high growth scenarios were analyzed to 2050. These scenarios were then compared to existing and anticipated capacity at the five west coast of Canada container terminals: GCT Deltaport, Dubai Ports World (DPW) Centerm, GCT Vanterm and DPW Fraser Surrey Docks in Greater Vancouver, and DPW Fairview in Prince Rupert.

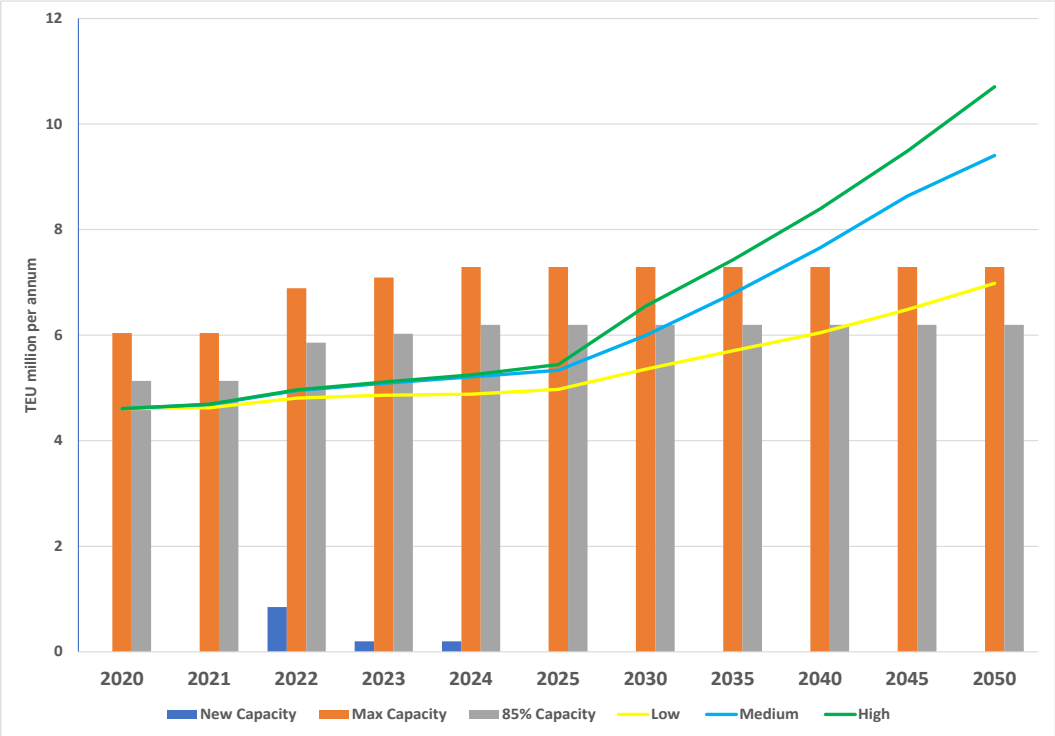
GCT has used the medium-growth scenario as its base case Project rationale, which is the industry standard used for project planning and the generally accepted port planning principle of ensuring new capacity is available once 85% capacity utilization is achieved. A comparison of capacity and demand is provided in Figure 5. The analysis demonstrates a potential requirement for additional capacity sometime in the 2030s. Annual growth in 2020 dipped below the average compound annual growth rate and posted only 2% growth, largely due to the COVID-19 pandemic. The COVID-19 pandemic during 2021 has had no negative impact on actual west coast of Canada volumes.

GCT's long history and experience in terminal operations within the Port of Vancouver allows the company to be uniquely positioned to meet the national demand for new container terminal capacity through the construction of this Project. The Project is expected to provide market-driven capacity that will meet the future needs of Canadian trade. The Project also aligns with the objectives of the VFPA Port 2050 Plan to accommodate Canada's trade needs, but at the same time maintaining a healthy environment and enabling thriving communities.

A preliminary assessment of potential Project adverse effects associated with DP4, compared against potential adverse effects of RBT2, suggests that the Project may also have a smaller adverse environmental effect at Roberts Bank. DP4 would increase capacity by 2.0 million twenty-foot equivalent units (TEU) compared to 2.4 million TEU for RBT2, but in a much smaller footprint and with the addition of only one expanded berth compared to three new berths for RBT2.

The preliminary capital cost estimate that GCT will invest is estimated at up to CAD 1.6 billion in capital and construction expenditures for the Project.

Figure 5: Predicted Demand vs Capacity of West Coast Canada Container Ports (Black Quay Consulting 2021).



GCT will provide an independent and objective assessment of the Project's economic impacts and benefits as part of the Project's assessment, including measures of economic activity such as Gross Domestic Product (GDP), employment, labour income, and government tax revenues. Based on Project information known to date and current and anticipated GCT Deltaport operations, the following is anticipated for the Project:

- Construction of DP4 is estimated to create total employment of 10,000 full-time equivalent (FTE) jobs in Canada, consisting of direct employment of 4,700 FTEs in BC, indirect and induced employment of 3,700 FTEs in BC, and indirect and induced employment of 1,600 FTEs in the rest of Canada over the approximately 4 years of construction. The operation of DP4 is expected to require an increase in the current GCT Deltaport workforce of approximately 1,000 additional permanent jobs when at capacity.
- Based on the latest forecasts, GCT anticipates that the projected annual operation costs of GCT Deltaport will average in excess of CAD 800 million over the first 5 years of operations and grow exponentially until at capacity.
- It is estimated that in excess of 90% of these annual operating costs will be incurred in BC.

Positive economic benefits are also projected for the City of Delta given GCT's large capital investment in the Project. In addition, according to the VFPA, Port of Vancouver activities annually provide 4,800 well-paying family-supporting jobs, CAD 1 billion in economic activity and nearly CAD 8 million in annual municipal property taxes paid by port tenants (Port of Vancouver 2020). These benefits would increase dramatically if the Project were to proceed.

Positive economic outcomes for Indigenous nations will also include training, employment and contracting opportunities. GCT is also committed to ensuring inclusiveness through its engagement activities and supporting economic opportunities, social needs and community well-being in a manner that is consistent with the principles of a Gender-Based Analysis Plus (GBA+) informed analysis.

In addition, the proposed Project's benefits and attributes also include:

- A cost-effective and timely way to address near-term container demand on the west coast of Canada.
- New investment in a physical area of operation where there are precedents of successful and recent container terminal development.
- Financing by institutional investor capital, thus removing financial risk to or demand upon the VFPA's or Federal government's financial capacity and fiscal frameworks.
- Involvement of an experienced terminal operator with a track record in operating similar infrastructure at Roberts Bank.
- Scalable delivery design that reflects changing industry trends and preserves optionality.
- Leverage of GCT Deltaport's existing footprint and infrastructure to build upon strong working relations with labour, customers, railways, and beneficial cargo owners as well as employment and economic benefits shared with the surrounding Indigenous nations, communities, and stakeholders.
- Leverage more efficient utilization of the existing berths, yard, and rail infrastructure at GCT Deltaport
- Less redundancy in terminal support areas than would result from operating two separate discrete terminals.
- Four contiguous berths future-proofing Port of Vancouver's ability to receive upsized vessels.
- A new marina for Tsawwassen First Nation is being considered to support fishing and other activities, where access to deeper water is not tide-bound.
- The option to accommodate short sea shipping in the future to move containers locally by barge, thereby reducing truck traffic in the region and environmental impacts.

- GCT is also focused on maintaining sustainable and environmentally responsible practices including the development of green infrastructure, examples of which are identified in Metro Vancouver's Regional Green Infrastructure Network Resource Guide[1].
- Expansion of Canada's largest on-dock marine terminal rail yard to become more effective in making Port of Vancouver a competitive destination for gateway cargoes.
- GCT's approach to incremental, environmentally responsible growth through the Project is in line with the Government of Canada's development of a blue economy strategy which is a key component for a more sustainable future to "build back bluer." In the case of marine transport, growing a sustainable blue economy requires an approach to create jobs in coastal communities while considering the rate of growth for shipping and ocean health.

1.4 Environmental Assessment Requirements

Under the federal IAA, the Project meets the criteria for a designated project in the Physical Activities Regulations, as a permanent expansion of an existing marine terminal designed to handle ships larger than 25,000 dead-weight tonnages (DWT). Under the BC *Environmental Assessment Act (BCEAA)*, the Project meets the criteria for a reviewable project within the Reviewable Projects Regulation; under transportation projects due to the area of direct physical disturbance of over 2 hectares (ha) of foreshore and submerged land at Roberts Bank. The Project has not been previously assessed by either provincial or federal government.

Under the Impact Assessment Cooperation Agreement between Canada and BC is the principle of "one-project, one-assessment" that will be followed by provincial and federal agencies for projects subject to assessment by both jurisdictions, such as DP4.

The Project is not expected to have operational emissions of 10,000 tCO_2e/yr or higher, and will not require reporting under the *Greenhouse Gas Industrial Reporting and Control Act* and the Greenhouse Gas Emissions Reporting Regulation.

In accordance with Section 95 of the IAA, the Project will incorporate Environment and Climate Change Canada (ECCC) information requirements for the Strategic Assessment on Climate Change (ECCC 2020). A key factor for consideration in the Strategic Assessment of Climate Change is the extent to which the effects of a project contribute or hinder the Government of Canada's ability to meet its commitments to climate change and net-zero emissions by 2050. The Strategic Assessment of Climate Change requires quantification of GHG emissions from a project, assessment of upstream emissions if emissions exceed 500 $ktCO_2e$, proponent's net zero-emission plan, and includes a new requirement for information regarding GHG mitigation measures and climate change resilience assessment.

[1] http://www.metrovancouver.org/services/regional-planning/PlanningPublications/ConnectintheDots.pdf

The Tsawwassen First Nation Final Agreement (the Treaty) provides Tsawwassen First Nation with certain rights and benefits regarding land and resources, and self-government over its lands and resources and its members (AECOM 2009). It provides certainty with respect to ownership and management of lands and resources and the exercise of federal, provincial and Tsawwassen First Nation governmental powers and authorities, including requirements for the assessment of proposed projects that could adversely affect Tsawwassen First Nation lands and rights.

The Project will also integrate the principles from the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and will demonstrate and provide the opportunity for free, prior and informed consent (FPIC) throughout the Project Impact Assessment and review process.

2 ENGAGEMENT SUMMARY

GCT has welcomed the opportunity to further engage Indigenous nations, the public, government agencies and stakeholders, and since the IPD was initially submitted to the BCEAO and IAAC in mid-September 2020, more than 500 interactions have been logged. These engagements have included:

- Individual e-mails to provide Project updates or coordinate meetings.
- Conference calls and virtual meetings to share Project information.
- Numerous letters and phone calls to keep the lines of communication open and to build meaningful relationships.
- Sharing an initial draft DPD to solicit further input to inform the DPD.

GCT has tracked all comments provided to date and identified those for further consideration and discussion during the development of the Joint Guidelines. A first draft of the Joint Guidelines will be prepared by GCT and submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to their issuance of the final Joint Guidelines.

2.1 Indigenous Engagement

Meaningful engagement and collaboration with Indigenous nations are core values for GCT. GCT recognizes that ongoing engagement that is transparent, collaborative and meaningful is an important aspect of incorporation of Indigenous nations' concerns and input throughout the Impact Assessment and review process. GCT is committed to developing and maintaining strong, mutually respectful relationships with all Indigenous nations involved in the Project. GCT's engagement with Indigenous nations has focused on providing information about the Project, considering input and maintaining avenues to provide feedback and participate throughout the Impact Assessment and review process. GCT will continue to consider Indigenous nations' input to shape engagement and inform the Project design to avoid, mitigate and/or address potential adverse effects.

GCT has engaged with Indigenous nations and organizations through virtual meetings, phone calls, emails, and visits to administrative offices. GCT has inquired with each potentially affected Indigenous nation or their respective representative organization regarding their preferred methods of engagement and adopted those methods when appropriate. GCT is also working to support Indigenous nations with appropriate levels of capacity funding and resourcing to participate in the engagement process.

The Project and associated marine shipping activities are either within or near the established or asserted traditional territories of 51 Indigenous nations, represented by 33 nations and organizations, as identified in the Consultative Areas Database and in the JSOIE report issued by the IAAC and BCEAO (BCEAO EPIC 2020). Sixteen of the potentially affected Indigenous nations submitted notices to engage as a PIN, which affords them procedural rights under the BCEAA, including "capacity funding, consensus-seeking processes, a procedure to communicate consent or withhold consent at specific decision points, and access to facilitated dispute resolution" (BCEAO 2019). IAAC guidance also asks proponents to indicate Indigenous nations that have self-identified as potentially affected by the Project (IAA 2019).

GCT has heard from many Indigenous nations regarding the importance of engagement and the development of Project assessment processes and documents which rely on both Indigenous Knowledge (IK) and western science. Several Indigenous nations have identified values and interests which will inform both the structure and content of the Impact Assessment (refer to the Indigenous nation specific "Summary of Key Issues Raised by Indigenous nations" tables within Section 8.4 of the DPD). GCT has and will continue to work with Indigenous nations on how to best reflect and apply this information in both Project documents and processes.

GCT's ongoing engagement with Indigenous nations is further described in Section 8 of this summary. GCT's preliminary understanding of potential effects on Indigenous interests is summarized in Section 7.5 of this summary. The current status of agreements GCT has signed with Indigenous nations is presented in Section 8.5 of the DPD, while Section 8.6 of the DPD summarizes how GCT has, to date, considered Indigenous nation interests and issues in the Project design. Section 8.7 of the DPD summarizes GCT's planned engagement activities and opportunities for GCT, Indigenous nations, IAAC, and BCEAO to work together throughout the Impact Assessment and review process.

GCT's responses to issues identified by Indigenous nations in the JSOIE report is provided in Appendix C1 of the DPD.

2.2 Government, Public and Stakeholder Engagement

Since 2016, GCT has engaged with municipalities, provincial and federal governments, the public and stakeholders on DP4. The learnings from these engagements have informed the development of the IPD and continued engagement has further informed the DPD. GCT will continue to maintain and strengthen relationships developed during its previous engagements, primarily with those located near the Project including but not limited to the City of Delta and the VFPA.

Governments, the public and other parties identified in Section 9 of this summary include all those that GCT engaged with in the development of the Engagement Plan and following the submission of the IPD. Appendix C2 of the DPD, (included as Appendix A of this DPD summary), includes a summary of the results of engagement undertaken with jurisdictions or other parties, including a description of how GCT intends to address the issues raised in the summary referred to in subsection 14(1) of the IAA (Summary of Issues) and the BCEAA. In addition to the comments received in the JSOIE, feedback from these groups was compiled into GCT's tracking database which sets out the dates of the engagement, correspondence and document exchanges, who was present from each organization, and the feedback received in relation to the Project.

Sections 8 and 9 of the DPD have been updated to reflect the additional input since receiving the JSOIE. As noted above, a lot of the comments received were related to scoping of the Project and the Impact Assessment related to recommended studies, marine shipping, road and rail, climate change and related sea-level rise, cumulative effects, marine spills and spill response. In addition, there were comments received highlighting the importance of engagement and of the creation of opportunities for Indigenous nations and under-represented groups, as well as the consideration of gender and age aspects during future engagement.

Documents, including the IPD, Early Engagement Plan and detailed presentations regarding the proposed Project, were made accessible to government, the public and stakeholders by posting the documents online and providing electronic copies directly to groups. When requested, document hard copies were provided for review.

3 PROJECT DESCRIPTION

3.1 Project Updates and Changes

Since the September 2020 submission of the IPD, GCT has continued to work on the design of the Project, including updates to Project activities, schedule, alternative means of carrying out the Project, and options to reduce the overall Project footprint based on feedback received through early engagement.

GCT will continue to advance the design as the Project navigates the Impact Assessment and review process and will focus on evaluating various technically feasible and financially viable options to address key issues raised during engagement.

3.2 Components and Activities

The proposed expansion of the total terminal footprint is approximately 56 ha to achieve the increase in capacity. This equates to a terminal footprint approximately two-thirds larger than existing. To provide the fourth berth and access for the larger container ships that are expected to call at the terminal, the berth face will be extended by approximately 560 metres (m).

The independent study of demand for container capacity on the west coast of Canada commissioned by GCT (Black Quay Consulting 2021), included a preliminary study of vessel calls and size at the expanded GCT Deltaport, including DP4. The results are provided in Table 2. While DP4 will result in an increase in capacity of 2 million TEU per annum at GCT Deltaport, there will only be a small increase in the number of vessels calling. This is due to the expected increase in the size of vessels, which will be facilitated by GCT Deltaport's four contiguous berths, and a greater proportion of containers loaded/unloaded at GCT Deltaport from each vessel. Currently, seven shipping services are calling at GCT Deltaport each week. This is predicted to increase to eight following the construction of DP4. GCT Deltaport is currently able to handle vessels up to the size of Very Large Container Vessel (VLCV) but current vessels calling are predominantly Post-Panamax. It is expected by 2035, the mix of shipping service vessels is projected to be 75% Post-Panamax size and 25% VLCV size.

Table 2 GCT Deltaport Vessel Calls and Size.

Year	Smallest Vessel Size	Largest Vessel Size	Calls per annum
Current 2020	~4,500 TEU – Panamax	~18,000 TEU – VLCV*	364
DP4 at Capacity	~10,000 TEU – Post-Panamax	~18,000 TEU – ULCV	416

* *Berth 3 is capable of handling 18,000 TEU vessels under certain tide conditions. At present, there are no 18,000 TEU vessels calling in Vancouver. The largest ship to have called GCT Deltaport at this time is approximately 14,000 TEU.*

The Project would also include the expansion of a portion of the existing causeway to accommodate a larger on terminal intermodal rail yard, a barge berth to accommodate anticipated future demand for short sea shipping, a possible Tsawwassen First Nation marina and the relocation of the existing tug basin. Dredging will be required to accommodate the various Project components.

The Project includes an expansion of approximately 12 of the 56 ha along the west side of the causeway. Of the 12 ha, 7 ha are for the expansion of the length of on-dock rail tracks to add rail handling capacity and 5 ha are for the expansion to buildings, trucks, gates, truck interchange area and roadways. The expansion would increase the width of the causeway at the location where the causeway alignment deflects due to an anecdotal survey error that occurred during the original 1960's construction.

The terminal expansion overlaps with the existing tug basin and therefore a new tug basin will be required to support operations. Based on the preliminary design of berth four, the existing tug basin would be temporarily relocated at some point during the process of dredging and landfilling so as to be accessible directly from the Roberts Bank causeway in the vicinity of the future Tsawwassen First Nation marina, within the proposed Project footprint. Ultimately, the new tug basin would be permanently located at the north end of berth four and the area temporarily used as a tug basin converted to a new Tsawwassen First Nation marina.

Based on GCT's engagements with Tsawwassen First Nation, a marina may be incorporated into the Project design that may include floating dock facilities for crabbing and fishing boats, a boat ramp for trailer launching, a floating dock for temporary mooring of launched boats, and parking for vehicles and trailers. The marina may be adjacent to or located within the water lot or portion thereof which is proposed to be transferred to Tsawwassen First Nation pursuant to a memorandum of agreement between Tsawwassen First Nation and VFPA. This is in line with GCT's commitment to work in collaboration with Indigenous nations to identify potential accommodation measures and to find opportunities for mutual benefit.

Optional infrastructure that may support the new barge berth is proposed as part of the Project to accommodate future potential demand for short sea shipping capability, including a fendering and mooring system and a barge to shore rail-mounted crane. The VFPA and Transport Canada are working with industry stakeholders to advance short sea shipping in the Port of Vancouver, to increase the sustainable movement of containers through the Port of Vancouver and beyond (VFPA 2020). GCT is pursuing the inclusion of infrastructure for a short sea shipping berth in anticipation that governments may mandate alternatives to trucking in the future, or that dynamics in the market may change. If it is determined that short sea shipping capability is not required, the terminal footprint would remain the same, and the area would be used for terminal operations, such as container storage and/or the (un)loading of container trucks. Construction activities would include preparation of the existing site to accommodate the expansion, fabrication and installation of concrete structures, and handling of material, including rock, sand and sediment via dredging and filling.

Some activities are incidental to the Project since they fall outside of GCT's care and control and are operated by third parties that are not directed by GCT and regulated separately. These may include the movement of container ships, short sea shipping barges and tugs, vessels associated with the Tsawwassen First Nation marina, and road and rail activities that take place outside of GCT's lease boundary. These incidental physical activities are highly regulated by various federal and/or provincial authorities. Concerns have been raised through early engagement that these activities could result in adverse effects, including adverse cumulative effects. It is GCT's understanding that the BCEAO and IAAC will ultimately be responsible for defining the scope of the Project and Impact Assessment.

The spatial boundaries associated with the assessment of the Project, including the local and regional study areas specific to each Valued Component (VC) will be defined in the separate Joint Guidelines.

Operational activities of DP4 will be similar to existing operations and therefore GCT's existing Environmental Management System (EMS) will only require updates to cover the additional capacity and reconfiguration of some areas of the terminal. GCT's Environmental Management System Procedures (EMSP) and Environmental Operating Procedures (EOP) are regularly reviewed and updated regardless of any terminal expansion. DP4 operations are planned for efficiency, including green infrastructure, while supporting quality well-paying jobs and community benefits. Operations will be planned in consultation with labour unions and local Indigenous nations.

GCT's existing EMS has been designed to capture, organize, and manage vessel, rail, yard, gate, and maintenance operations so that environmental risks are controlled and environmental management is integrated into daily terminal operations. GCT Deltaport is Green Marine certified, earning "Excellence & Leadership" in nearly every category.

Project infrastructure will be designed for a 100+ year service life. Similar to GCT's other terminals, plans include ongoing maintenance, refurbishment and replacement to ensure the assets will continue to function in perpetuity. Therefore, there is no intention to decommission and abandon the Project. The land will remain in perpetuity and its future use will be subject to applicable permitting, regulatory requirements and lease conditions, such as removal of container handling equipment (CHE) and returning the facility in good working order at the end of the lease, if not renewed.

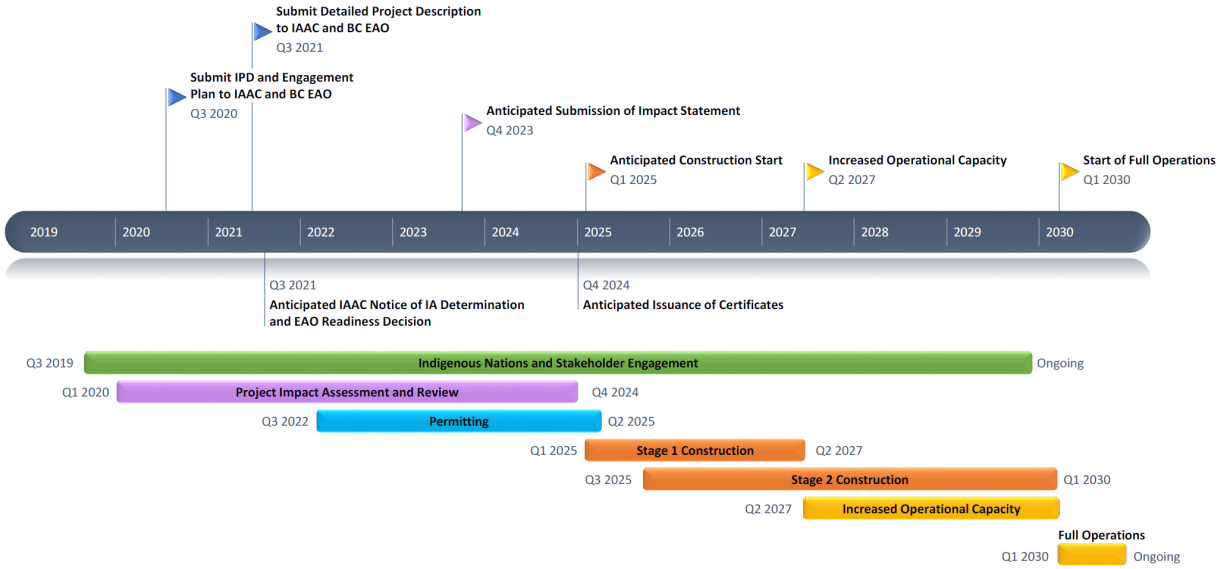
GCT will conduct additional marine traffic studies to support the Impact Assessment and build on the preliminary study of shipping traffic that Black Quay completed for GCT. These studies will be developed in collaboration with the local Indigenous nations who have expressed interest in better understanding expected marine traffic. The BCEAO and IAAC will ultimately be responsible for defining the scope of the DP4 assessment in collaboration with technical experts, Indigenous nations, stakeholders, the public, and federal and provincial regulators. There will also be increases in truck and rail traffic. Since GCT does not have care and control over the roads or rail, GCT will continue to collaborate with municipal government, Indigenous nations, the BC Ministry of Transportation and Infrastructure, and the rail companies, notably through the Gateway Transportation Collaboration Forum, to estimate traffic volumes and confirm any improvements that are required to the network as a result of a proposed container terminal expansion project at Roberts Bank. GCT will continue this collaboration throughout the Impact Assessment and review process identifying Indigenous nations and local community concerns raised regarding access, potential adverse effects on surrounding agricultural lands and potential traffic and safety concerns through participation in the Gateway Transportation Collaboration Forum.

The Project will involve habitat offsetting. Through the Impact Assessment and review process, and subsequent permitting, the extent of habitat offsetting required and the offsetting projects to meet this requirement will be determined. GCT has undertaken an initial review of habitat offsetting options and will be undertaking further engagement with Indigenous nations, regulators and other groups on offsetting measures, including

the development of offsetting plans. The habitat offsetting may be developed as part of the Project or as a separate project, depending on the location, and delivery model of the offsetting, for example, it may be off-site and/or developed in collaboration with Indigenous nations and/or a third party with funding from GCT.

Figure 6 provides the preliminary schedule for the Project. This schedule is contingent on Indigenous nation consultations and regulatory approvals.

Figure 6: Preliminary Project Schedule.



3.3 Project Alternatives and Alternative Means

Alternatives to the Project involve the expansion of another existing marine terminal or the development of a new marine terminal on the west coast of Canada. GCT has reviewed the analysis of government agencies and authorities and agrees that the demand cannot be met by expansion at the other existing container terminals. GCT considered a further expansion at the GCT Vanterm Terminal in Burrard Inlet of 1 million TEU. However, GCT has undertaken additional analysis and determined that DP4 is preferable for reasons of road and rail accessibility restrictions, limitations of vessel size imposed by the Lions Gate Bridge and increased tanker traffic associated with Westridge Terminal. Based on this assessment, the expansion of GCT Deltaport or the development of a new terminal are the only Project alternatives.

The VFPA is proposing the construction of the Roberts Bank Terminal 2 Project (RBT2), which has a planned capacity of 2.4 million TEU per annum. The proposed RBT2 project could meet the predicted demand in container capacity should it receive approvals, establish a sustainable business case, obtain a governmental borrowing limit increase, and identify a terminal operator. However, GCT believes DP4 can achieve a similar increase in capacity through expansion of the existing berth, compared to the new construction of three berths for RBT2, and approximately 56 ha of land reclamation: one-third the size of RBT2. Even with the dredging footprint that will be required, DP4, as proposed, will have a much smaller footprint than RBT2. DP4 is an

efficient and effective use of the existing GCT Deltaport infrastructure that provides the fullest optimization of the entire port complex. GCT believes that the Project location and design will result in a lower overall impact on the environment and provide more cost-competitive capacity compared to RBT2.

The following factors were considered when analyzing alternative means of carrying out the Project during the development of the concept design for DP4:

- Use of Best Achievable Technologies;
- Technical feasibility;
- Economic feasibility; and
- Potential effects, risks, and uncertainties.

The Project design was informed in part by the analysis of alternatives that was prepared for the DP3 environmental assessment and historical marine terminal development at Roberts Bank, and elsewhere in BC, since the 1950s. A detailed analysis of alternative means of carrying out the Project will be prepared specifically for DP4 once further engagement and baseline studies have taken place as part of the Project's Impact Assessment.

Alternative means of carrying out the Project that have been considered within the Project design process include:

- Marine terminal orientation and configuration of container storage and handling area;
- Construction methodology;
- Intermodal rail yard configuration;
- Dredge pocket configuration for the deep water access channel extension for Berth 4 and the shallow water access channel for configuration of the short sea shipping berth, tug basin, and marina; and
- Mode of operations.

GCT continues to assess Best Achievable Technologies that are shown to be economically feasible for container storage and handling configuration to maximize terminal operating efficiency. GCT is also aiming to minimize expansion to the west of the causeway, due to environmental concerns expressed by some local community-based environmental organizations, and the associated dredging required.

4 LAND AND WATER USE

GCT holds a long-term lease arrangement with VFPA for the GCT Deltaport Terminal. The DP4 expansion will be primarily within federal lands and waters. The federal lands are purported to be managed lands by the VFPA and within their purported navigational jurisdiction.[1] Based on the current Project design, the required dredging may extend into provincial aquatic crown land which is designated as a provincial Wildlife Management Area (WMA). Distances to Indigenous nations' reserves are provided in Section 8.2 of this summary. Other terrestrial federal lands, (identified to date), consisting of national parks, in the vicinity of the Project and associated marine shipping route are identified in Figure 2, and Figure 3.

Tsawwassen First Nation has two water lot leases, as set out in the Treaty. Tsawwassen First Nation has entered into a Memorandum of Agreement with VFPA, which would provide Tsawwassen First Nation with additional water lots on either side of the Roberts Bank Causeway. DP4 is expected to extend into these water lots, depending on the final design. Activities associated with the expansion of the intermodal railyard will extend into land on the causeway that is held by the BC Railway Company and potentially Tsawwassen First Nation industrial lands.

DP4 is within Planning Area 6 (Roberts Banks) of the VFPA's Land Use Plan. The VFPA's Land Use Plan designates the Roberts Bank terminal for use as a Port Terminal (Port Metro Vancouver 2014). The VFPA has stated that in planning for future capacity within the guidelines of the Land Use Plan, one of the principles includes increasing the capacity and efficiency of existing container terminals. DP4 meets this principle.

The existing GCT Deltaport, and therefore a portion of the area planned for DP4, is designated as Industrial under the Metro Vancouver Regional Growth Strategy, titled Metro 2040 Shaping our Future (Metro Vancouver 2017). The remaining area of DP4 is not designated within the strategy. However, tidal flats and wetlands are identified as natural features in the area. Similarly, much of DP4 would fall within land designated industrial within the City of Delta Official Community Plan, with the remainder not designated (The Corporation of Delta 2019). These plans are consistent with the objective to preserve industrial lands while supporting sustainable transportation choices and protecting and enhancing natural features and their connectivity.

The Tsawwassen First Nation Land Use Plan covers the water lots that are under lease or Memorandum of Understanding (MOU) to Tsawwassen First Nation. It describes the importance of the tidal marsh and water lots to Tsawwassen First Nation, for traditional and recreational use, and to wildlife (AECOM 2009).

The Project is within 15 km of a range of protected areas. This includes three regional parks, the Roberts Bank and other provincial WMAs, an Important Bird Area (IBA), and the Southern Resident Killer Whale (SRKW) Critical Habitat.

[1] The VFPA's administrative, permitting and other powers with respect to the Project, including those related to port operations, are currently the subject of judicial review.

5 REGULATORY CONTEXT

In addition to the federal and provincial Impact Assessment regulatory requirements described in Section 1.4 of this summary, the following key permits and approvals may be required for Project construction.

- *Fisheries Act* authorization – Fisheries and Oceans Canada (DFO)
- *Species at Risk Act* permit – DFO for aquatic Species at Risk
- Canadian Navigable Waters Act approval – Transport Canada
- Disposal at Sea permit – ECCC
- WMA authorization under the *Wildlife Act* – Ministry of Forests, Lands, Natural Resource Operations and Rural Development
- Amendment to existing lease agreement under the *Canada Marine Act* – VFPA
- Project and Environmental Review Permit under the *Canada Marine Act and IAA* – VFPA

6 ENVIRONMENTAL AND SOCIAL SETTING

This section provides a general description of the natural and human environment setting and initial information regarding known previous and ongoing studies in the region. The Project baseline and existing conditions will be developed and established in the Impact Assessment.

Indigenous nations have lived and sustained themselves and their way of life within their territory, which includes the Project area and marine shipping route, since time immemorial. IK is critical to the development of the Impact Assessment and GCT will continue to engage with Indigenous nations to develop Project related documents and processes that rely on both IK and western science. This includes the development of baseline conditions.

6.1 Biological Setting

The Project is located on Roberts Bank, which is part of a larger complex of interconnected marine, estuarine, freshwater, and agricultural habitats that form the Fraser River Estuary. Marine shipping will occur through the southern Georgia Strait and Juan de Fuca Strait, within the Salish Sea.

In the Salish Sea, there are an estimated 37 species of mammals, 172 species of birds, 253 species of fish, and more than 3,000 species of invertebrates (Gaydos and Brown 2011). Of these, 113 species are listed as threatened, endangered or are candidates for listing (Gaydos and Brown 2011).

The history of development at Roberts Bank dates to the late 1950s with the construction of the Tsawwassen Ferry Terminal and subsequent construction of the Roberts Bank coal terminal and container terminal expansions over several decades.

The Fraser River Estuary has been the subject of numerous environmental studies over the past few decades, and the Project is therefore supported by a large body of contemporary information that will inform the Impact Assessment. Relevant studies have been undertaken for the Environmental Assessments of DP3, RBT2 and other marine terminal projects and by organizations, such as Lower Fraser Fisheries Alliance, the Pacific Salmon Foundation and historically under the now disbanded Fraser River Estuary Management Program. Tsawwassen First Nation has also undertaken independent studies, such as the Dungeness Crab Abundance and Movement Study in the RBT2 Project Area (LGL 2017). The City of Delta and other municipalities have developed coastal flooding and climate change adaptation studies and strategies that are relevant to the Project. Habitat offsetting projects such as the VFPA's Tsawwassen Eelgrass Project will also provide useful data and information for the Impact Assessment. GCT will be seeking access to various studies undertaken by Federal Authorities and members of the Technical Advisory Committee to help inform the Impact Assessment.

The Project is not located in an area that has been subject to a regional assessment under the *Canadian Environmental Assessment Act* 2012, or the IAA. The Government of Canada's Strategic Assessment of Climate Change (Government of Canada 2020) guidance document has informed the approach GCT has used to estimate the Project's GHG emissions (in CO_2 equivalent units) for the DPD, as described in Section 7.3 of this summary.

In response to the calls to action voiced by many Indigenous leaders, in 2020 GCT established a CAD 200,000 fund to support Indigenous-led initiatives aimed at collaboration and fully supporting increased Indigenous-led research on cumulative effects. The funding has facilitated the creation of the Salish Sea Indigenous Guardians Association (SSIGA), aimed at increasing both participation and collaboration in the cumulative effects assessment of the south Salish Sea off BC's coast. The marine and terrestrial environments in City of Delta are widely acknowledged for having rich ecological significance that includes marine mammals, fish, and migratory birds. The Project is located on Roberts Bank, which is a complex ecosystem formed by the delta of the Fraser River. Roberts Bank consists of salt marshes, near the high-tide level, that gives way to gently sloping mudflats divided by tidal channels and hydraulic bedforms. Outside of the bedforms, marine vegetation and other habitats have developed. Roberts Bank, including the inter-causeway area, supports extensive native eelgrass beds (Hemmera Envirochem Inc. 2015).

On the mud surface of Roberts Bank, a biofilm is produced as diatoms and bacteria settle out of the seawater and bind to the mud, providing nutrient-rich forage for shorebirds, particularly sandpipers. The biofilm is predominantly located to the west of the causeway closer to the mouth of the Fraser River, with minimal biofilm in the inter-causeway area (Hemmera Envirochem Inc 2014).

The Project falls within the migratory Pacific Flyway and the Fraser River Estuary IBA. The IBA forms one of the richest and most important ecosystems for migrant and wintering waterbirds in Canada (IBA Canada 2020).

Roberts Bank neighbours one of the main entry channels into the Fraser River for the largest salmon run in BC. All five species of pacific salmon use the tidal marshes for food, shelter, and acclimatization to saltwater. The abundance of Pacific salmon populations in BC has declined in the past decade (Grant et al. 2020). In the Fraser River, 2019 returns of sockeye salmon were the lowest on record (PSC 2021) and returns of Chum, Chinook, and Coho were generally poor (Grant et al. 2020). Other fish drawn to Roberts Bank include white sturgeon, green sturgeon, steelhead, and anadromous cutthroat trout. Visiting herring, eulachon, flounders and sculpins are food sources for diving and wading birds.

Marine mammals are important components of the Fraser River Estuary and Roberts Bank ecosystem. The overall health of the marine environment is reflected through the presence of top predators, including toothed whales such as SRKW, baleen whales such as humpback whales, and seals and sea lions (Port Metro Vancouver 2014). The Project occurs within designated SRKW critical habitat, where the presence of SRKW is strongly correlated with the timing of salmon migration through these waters (DFO 2018).

Previous studies have demonstrated that water and sediment quality within the Project area are within the range of levels expected in an estuarine environment. Past studies have shown that there are no appreciable sediment contamination issues in the Project area (Review Panel 2020). Elevated copper, cadmium, and inorganic arsenic concentrations greater than the Canadian Interim Sediment Quality Guidelines have been detected and are attributed to naturally occurring conditions at Roberts Bank (Review Panel 2020). Elevated sediment concentrations of polychlorinated biphenyls have also been observed in the Project area, related to regional historical releases of those compounds.

6.2 Social Setting

City of Delta has a population of just over 102,000 people (Statistics Canada 2016) almost half of whom live in one of the two main town centers, either Ladner (pop. 22,193) or Tsawwassen (population 21,588). City of Delta has one of the fastest rates of industrial growth in the Greater Vancouver Area (City of Delta 2020; Statistics Canada 2016). The City of Delta is bordered by the Fraser River to the north and the Canada-US border to the south. Land use in City of Delta is a mixture of urban and industrial (28%), conservation and recreation (21%), and agricultural land (51%) (Metro Vancouver 2020).

City of Delta has one of the fastest rates of industrial growth in the Greater Vancouver Area (Delta 2020; Statistics Canada 2016). Average household income is 30% higher than the Canadian average and most census respondents occupied single-family detached homes in 2016 (Statistics Canada 2016). Leading industries and major employers include aerospace, manufacturing, construction, energy, transportation, deep sea and river shipping, communications and tourism. The local and regional economy is largely driven by the activities at GCT Deltaport – the largest container terminal in Canada (Trade and Invest British Columbia 2020). A healthy community is a priority identified in the City of Delta's Community Development Plan and includes the allocation of funds and support to services, such as mental health, drug use and addiction, poverty, and food security. Access to recreational facilities, parks and trails are also seen as essential to wellbeing (City of Delta 2017).

Air quality in City of Delta is generally good as the area is flat and exposed to ocean breezes from the Salish Sea but there are existing air emissions from trucks, trains, ships, and equipment associated with the operation of the Roberts Bank and BC Ferries terminals. Noise and vibration from ships, machinery, and existing road and rail traffic entering and exiting the terminal have long been a concern for Tsawwassen and City of Delta residents (City of Delta 2019).

Tsawwassen First Nation is the closest community occupying the foreshore and lands between the GCT Deltaport causeway on Roberts Bank and the BC Ferries Tsawwassen Terminal causeway. The GCT Deltaport terminal is approximately 3.5 kilometres (km) away from the nearest residence. Section 8 of this summary provides a preliminary list of other Indigenous nations potentially affected by the Project.

While outside of GCT's care and control, marine shipping associated with the operation of the Project may affect communities located within the Southern Gulf Islands and the coast of Vancouver Island. These Vancouver Island communities include Sidney, Victoria, Sooke and Port Renfrew.

A desktop assessment of publicly available documents revealed no existing seasonal or temporary residencies in the vicinity of the Project, such as seasonal trappers' cabins, wilderness resorts or housing for seasonal farmworkers.

There have been several archaeological assessments conducted in the area (Arcas 2008; Vancouver Port Authority 2005; Millennia Research Limited 2004), resulting in limited archaeological resource discovery. An Archaeological Impact Assessment (AIA) conducted as part of the DP3 environmental assessment found no archaeological sites in the Project area (Vancouver Port Authority 2005). An Archaeological Overview Assessment (AOA), conducted as part of the RBT2 environmental assessment, recorded three archaeological sites within the proximity of the RBT2 Project area.

GCT recognizes that the assessment of heritage resources is not limited to known archeological and cultural sites. GCT will conduct an AOA to first evaluate archaeological potential. The AOA results will be used to determine if an AIA is required. GCT will continue to work with Indigenous nations to ensure cultural and heritage resources are assessed and protected under the *Heritage Conservation Act* and in accordance with the requirements of Parks Canada for federal lands, including federal lands under water.

7 POTENTIAL EFFECTS OF THE PROJECT

7.1 Project Updates and Changes

The DPD has been updated from the IPD to reflect the following Project updates and changes:

- Updates to the description and management of emissions, discharges, and wastes based on Project phases to address DPD requirements;
- Additional information on GHG emissions, carbon sinks, methodology and approach to net-zero plan to address the ECCC guidance for Strategic Assessment of Climate Change (2020) and DPD requirements;
- Additional details on the scope of the socio-economic studies to reflect GBA+;
- Additional information provided on potential effects on fish and fish habitat, aquatic species and migratory birds;
- Additional information on the approach to proposed mitigation measures and a list of potential monitoring programs for potential inclusion in the Impact Assessment; and
- Incorporation of additional information related to issues and concerns provided from Indigenous nations through the JSOIE report and further engagement activities as they relate to the preliminary understanding of potential adverse effects on Indigenous interests from Project activities.

7.2 Potential Environmental Effects

Potential adverse effects that relate to IAA requirements have been identified based on past environmental studies. As a result of the biological setting in the marine environment at Roberts Bank, the potential adverse effects described in Table 3 are expected to be at the core of the Project's Impact Assessment.

Table 3: Potential Effects in Relation to Impact Assessment Requirements.

Component	Potential Effect	Activities and Anticipated Pathway of Effect	Potential Mitigation or Offsetting
Fish Habitat	Changes in fish habitat (Harmful Alteration, Disruption or Destruction), e.g., eelgrass within the DP4 footprint.	Terminal and railyard expansion construction, dredging, infilling, disposal at sea and associated marine transportation, leading to direct destruction or secondary effects, (e.g., change in water quality, sedimentation) leading to alteration of fish habitat. During operations: direct effects, (e.g., propeller wash or dendritic channel formation), or secondary effects, (e.g., changes in water quality due to an increase in wastewater discharge and propeller wash).	• DP4 is an expansion of the existing terminal which has allowed a smaller footprint than building a new terminal. • Scour protection and control structures to reduce the risk of dendritic channels. • Minimize dredging footprint within engineering design. • Habitat offsetting. • Reuse of dredged material as an alternative to disposal at sea, as far as practical.
Fish	Effects on fish, (e.g., crab, salmon).	Terminal construction and railyard expansion, dredging infilling, potential disposal at sea and associated marine transportation: leading to underwater noise, burial/crushing, reduced water quality, effects on migration. During operations: changes in water quality or underwater noise, including marine shipping. Light infiltration to the marine environment.	• Operational requirements of ships at berth to avoid discharge of deleterious substances. • Stormwater management to reduce impacts on water quality. • Voluntary ship speed restrictions and routing to reduce vessel noise and risk of marine mammal strike (outside GCT care and control). • Lighting plan that reduces light pollution beyond the Project footprint.

Table 3: (Cont'd.)

Component	Potential Effect	Activities and Anticipated Pathway of Effect	Potential Mitigation or Offsetting
Aquatic Species-at-Risk	Harm or disturbance of listed species, e.g., SRKW, stellar sea-lion. Changes in critical habitat.	Terminal construction and railyard expansion, dredging, infilling, potential disposal at sea and associated marine transportation: leading to underwater noise, potential for dust and particulate matter, reduced water quality, destruction of critical habitat, and reduction in prey species like juvenile salmon. During operations: shipping leading to underwater noise or vessel strike.	• Construction timing windows to avoid species-at-risk. • Offsetting for fish habitat. • Voluntary ship speed restrictions and routing to reduce vessel noise and risk of marine mammal strike (outside GCT care and control). Implementing measures that result from the Section 11 Conservation Agreement to support the recovery of SRKW (outside GCT care and control; A *Species at Risk Act* Section 11 Conservation Agreement 2019).
Migratory Birds	Harm or disturbance during construction and operations. Changes in habitat, (e.g., eelgrass) and food sources (e.g., biofilm).	Terminal construction and railyard expansion, dredging and infilling: change in habitat availability and avoidance changes in predator/prey dynamics, sensory disturbance (e.g., noise, light, and vibration) resulting in changes to migration or movement patterns or mortality due to increased traffic (road, rail, and shipping).	• Project location. • Avoidance of biofilm. • Construction timing windows to avoid bird nesting and migrations. • Habitat offsetting. • Measures to reduce noise, light and vibration.

Through the Impact Assessment and other permitting processes, GCT is committed to assessing these changes, and either avoiding, mitigating or offsetting the Project effects. Through the Impact Assessment and review process, as more information becomes available, other physical activities associated and incidental to the Project with potential adverse effects may be considered. The Project footprint is predominantly on federal lands. No changes to the environment are anticipated in a province other than the province of BC, in which the Project is proposed. Other potential Project adverse effects that may occur within or outside of federal lands are presented in Table 4.

Table 4: Other Potential Effects of the Project.

Component	Potential Effect	Activities and Anticipated Pathway of Effect	Potential Mitigation or Offsetting
Wetlands	Changes in wetland habitat, if wetland habitat is identified within the DP4 footprint	Terminal construction, dredging leading to direct destruction or secondary effects, e.g., change in water quality, leading to effects of wetlands. During operations: secondary effects, e.g., changes in water quality	• Expansion of the existing terminal to minimize footprint. • Scour protection and control structures to reduce the risk of dendritic channels. • Habitat offsetting.
Wildlife	Effects on terrestrial wildlife	Terminal construction and operations, e.g., noise, light.	• Shore Power. • Use of electric and/or high-efficiency cranes and other equipment. • Auto decoupling tractor-trailers.

The Project could contribute cumulatively to potential effects on the environment and other assessment pillars (economic, social, heritage and health) associated with past, present or future projects in the surrounding area. A cumulative effects assessment will be completed in the Impact Assessment.

The Project is approximately 2 km from the border of the USA, and ancillary activities associated with marine shipping will transit through USA waters. Table 5 lists changes that, as a result of carrying out the Project may occur outside of Canada. These potential changes will be further explored through the Impact Assessment and review process.

Table 5: Changes that May Occur Outside of Canada Due to the Project.

Component	Potential Project Related Changes Outside of Canada
Air Quality	Increases in some criteria air contaminants (CACs) during operations due to marine shipping.
Noise and Vibration	Increases in perceptible noise levels during construction and operations due to material handling and shipping.
Light	Increases in light trespass and sky glow levels during construction and operations.
Marine Sediment and Water Quality	Temporary increase in turbidity and sediment deposition during construction following sediment re-suspension (dredging and disposal at sea).
Underwater Noise	Increased underwater noise during operations due to marine shipping.

7.3 Wastes and Atmospheric Emissions

Project construction and operations activities have the potential to produce solid, liquid, and hazardous wastes, as well as emit CACs, GHGs, and change levels of light, noise and vibration.

During the construction and operation of the Project, wastes produced will either be disposed of in accordance with applicable regulations or will be reused or recycled where feasible. GCT has an EMS for its operations at GCT Deltaport specifically for the management of wastes. A summary of wastes that are likely to be generated by the Project is provided in Table 6, including potential mitigations measures.

Table 6: Potential Solid, Liquid and Hazardous Waste for the Project.

Waste Type	Waste Examples	Potential Mitigation
Solid Waste	• Packing materials from the shipping of Project components for construction. • Materials from overpass demolition. • Construction waste, including wood, metal, and concrete. • Municipal waste, including paper, plastics and glass during both construction and operations. • Soil and material excavated from the Project footprint. • Non-hazardous solid waste. • Dredge waste.	• Waste management plan for segregation and recycling schemes during construction. • Waste management requirements under existing GCT Deltaport EMS.
Liquid Waste	• Domestic wastewater from office and terminal facilities, including washrooms, during operations.	• Treated and effluent discharged under the existing *Environmental Management Act* waste discharge permit (PE-14865), which will be amended for an increase in volume, as required. • There is no liquid waste discharge from vessels berthed at GCT Deltaport.
Hazardous Waste	• Waste oils, petroleum products and solvents. • Batteries. • Oil filters. • Chemical cleaning fluids. • Paints. • Antifreeze.	• Hazardous waste management within GCTs existing Waste Management Plan for construction, including storage, transportation, and disposal requirements. • Waste management requirements under existing GCT Deltaport EMS, including reduction.

Table 6: (Cont'd.)

Waste Type	Waste Examples	Potential Mitigation
Stormwater	• Discharges of stormwater resulting from precipitation.	• Stormwater management system and discharge as per the existing EMS. The system will be upgraded for an increase in area and flow, as required. • Additional mitigations to avoid increased contaminant or sediment concentrations in stormwater discharge during construction will be detailed in the Construction Environmental Management Plan.

The Project falls under Metro Vancouver's Integrated Air Quality and Greenhouse Gas Management Plan, which aims to protect public health and the environment, improve visual air quality, and minimize the region's contribution to global climate change through an adaptive management approach. Potential atmospheric emissions that are likely to result from the Project are described in Table 7, along with proposed mitigation measures.

Table 7: Potential Atmospheric Emissions.

Atmospheric Emissions	Activities and Anticipated Pathway of Effect	Potential Mitigation
CACs	Construction: Increased emissions associated with fossil fuel-powered vehicles and equipment. Dust through soil transfer, infilling and wind erosion from stockpiles of fill material. Operations: Increased emissions associated with fossil-fuel-powered equipment, shipping, road, and rail.	• Shore Power. • Use of electric and/or high-efficiency cranes and other equipment. • Auto decoupling tractor-trailers.
GHGs	Construction and operation: Increased emissions from fossil fuel-powered vehicles and equipment (including non-road diesel engines, generators, and light plants), site clearing activities, infilling activities, dredging, terminal and railyard expansion construction activities.	
Light	Construction and operation: Increased lighting to support Project activities, primarily during nighttime operations.	
Noise and Vibration	Construction: Increased noise and vibration resulting from activities, such as pile driving and compaction. Operations: rail operations, container handling adjacent to the Project. Increased noise from the re-location of the new overpass. Increased noise from shipping, road, and rail activities.	

GCT has a proven track record of excellence towards sustainability and GHG emissions reductions which will extend to the DP4 Project design and operations. GCT's achievements include top levels in the Green Marine certification system for all its terminals and an annual reduction of 3.7% in GHG emissions intensity (per TEU) across its Canadian operations. GCT also measures its carbon footprint and calculates emission as per the GHG Protocol Corporate Accounting and Reporting Standard and is Climate Smart Certified.

The ECCC's Strategic Assessment of Climate Change (ECCC 2020) guidance document has informed GCT's preliminary approach to estimate the Project's GHG emissions (in CO_2 equivalent units) for this DPD. Appendix E of the DPD estimates emissions from the Project and net emissions or avoided relative to what would occur in the absence of the Project (i.e., a base case or business as usual scenario). As the expansion in terminal capacity provided by the Project is necessary to meet growing demand in western Canada, a reasonable scenario, in the absence of the Project, is that another expansion project will be constructed to meet growing demand. This selection is conservative, as it is the most economical and lowest emission method of adding terminal capacity. Base case emissions are modelled using actual GHG emissions from the existing GCT Deltaport facilities, including forecasted emissions reductions. Choosing this modelling approach aligns with GHG quantification principles: conservativeness by using a modern, efficient site for the base case; accuracy by using real, not estimated data; and consistency, by aligning conditions and boundaries of the Project and base case.

The approach used to establish the Project and base case boundaries and emissions estimates are consistent with the Climate Lens [1], the guidance referred to in the Strategic Assessment of Climate Change, ISO 14064-2:2019[2], and the GHG Protocol for Project Accounting[3]. GHG emission sources, sinks and reservoirs include direct emissions (scope 1) and indirect energy emissions (scope 2). The approach follows the principles of GHG Project Accounting as recommended by the Climate Lens, which is used to ensure the inventory represents a faithful, true and fair account of total and net GHG emissions.

Emissions or removals that are of consequence to the Project but occur at GHG sources or sinks not owned or controlled by GCT (scope 3), including marine shipping, truck and rail locomotives emissions, are not included in the scope of the GHG quantification specified by the Strategic Assessment of Climate Change.

Further details regarding the scope, procedures, and methods for the GHG assessment will be developed in the Joint Guidelines. A number of the comments that were provided to GCT on the draft DPD were related to the scope of the GHG assessment. GCT has tracked all the comments provided to date and identified those for further consideration and discussion during the development of the Joint Guidelines. A first draft of the Joint Guidelines was prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuances of the final Joint Guidelines.

Based on the initial estimate completed for the DPD, the Project is anticipated to:

- Generate 230,869 tCO_2e total emissions including construction, operations and decommissioning, equivalent to 9,620 tCO_2e per year over the life of the Project up to 2050.

[1] https://www.infrastructure.gc.ca/pub/other-autre/cl-occ-eng.html
[2] ISO 14064-2:2019 – Greenhouse gases – Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements
[3] The Greenhouse Gas Protocol for Project Accounting (World Resources Institute/World Business Council - Revised Edition)

- Produce 87,866 tCO_2e less total emissions relative to an alternative project required to meet increasing container terminal demand among Canadian west coast ports, equivalent to 3,561 tCO_2e per year over the life of the Project up to 2050.

The Project will aim to avoid or reduce emissions by investigating and considering efficient operations and management systems in design. Initial estimates from these measures have been included in the Project's GHG emissions profile, including:

- Electrified yard cranes;
- Continued use of propane-fueled light-duty vehicles; and
- Possible adoption of hybrid, electric or battery-powered light-duty vehicles.

While not included in the scope of the DPD, the Project is also forecast to reduce indirect emissions as follows.

- Offer ships access to shore power, reducing the need to burn fuel while at berth;
- Accommodate larger ships to use the terminal, reducing the number of ships needed to transport goods;
- Layout and configuration improvements to reduce travel distances for support equipment;
- Market greater capacity to load containers onto rail as opposed to road, thereby reducing emissions required to transport goods via over-the-road-trucks to and from the terminal;
- Reduce truck idling time by improving truck flows and travel distances and managing an improved and robust container reservation system; and
- Adding ship capacity through the fourth berth will further optimize the rail yard and will be an attractive proposition to global shipping alliances (bigger ships, fewer calls).

GCT will continue to refine and report on GHG emissions as the Project progresses through detailed design and the Impact Assessment and review process.

7.4 Potential Effects on Heritage Resources

Project activities, e.g., excavation or dredging, during construction may result in disturbance and/or destruction of heritage resources. Potential effects to Heritage Resources are summarized in Table 8.

GCT is committed to working with Indigenous nations and regulators to develop appropriate mitigation and monitoring plans to address potential Project effects, including those related to physical and cultural heritage resources.

Table 8: Potential Effects on Heritage Resources from Project activities.

Component	Potential Effect	Activities and Anticipated Pathway of Effect	Potential Mitigation
Physical and cultural heritage.	• Damage, disturbance or destruction of sites or materials.	• Construction activities (e.g., excavation or dredging) may impact the integrity of sites or materials pertaining to physical and cultural heritage.	• Avoid sites with potential physical and cultural heritage value. • Conduct AOA in accordance with the Guidelines and Objectives set forth in AOA as General Land Use Planning Tools – Provincial Standards and Guidelines (2009) and measures presented by Parks Canada, as appropriate. • Influenced by AOA findings and if deemed necessary, conduct AIA.
Any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.	• Damage, disturbance or destruction of structure, site or things of significance.	• Construction activities (e.g., excavation or dredging) may impact the integrity of any structures, sites or things of importance.	• Conduct AOA to determine the presence of structure, site or thing of potential cultural significance. If presence is detected, avoid structure, site or thing. Conduct AIA, if deemed necessary.

7.5 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities

GCT drew its updated understanding of the Project's potential effects on Indigenous interests from the information provided by Indigenous nations during Project-specific engagement activities, from regulatory guidance, the JSOIE, and the potential Project effects which Indigenous nations identified in their notices to engage as PINs. GCT's Impact Assessment will assess the Project's potential effects on Indigenous interests identified by Indigenous nations. The potential effects listed in Table 9 are presented in aggregate for all engaged Indigenous nations. The Impact Assessment will assess the Project's potential effects on an Indigenous nation's interests individually. Specific information relating to the ways each Indigenous nation has identified and understands its interests will be presented in the Joint Guidelines.

GCT is committed to continued engagement and consultation with Indigenous nations, including to better understand how they may be affected through all phases of the Project.

Table 9: Preliminary Identification of Potential Effects to Indigenous Interests Resulting from Project Activities.

Indigenous Interest	Potential Effect	Project Phase	
		Construction	Operations
Harvesting and Subsistence Activities	Effects of the Project on Indigenous rights to harvesting enshrined in historical and modern treaties and the Constitution.	X	X
	Effects on harvesting for Food, Social, and Ceremonial purposes.	X	X
	Effects on historical and contemporary preferred harvesting sites and accessibility of culturally important harvesting sites.	X	X
	Changes to the abundance, distribution or quality of resources relied upon to engage in harvesting and subsistence activities.	X	X
	Effects of the Project on current and future availability, quality, and quantity of country foods.	X	X
Cultural Use Sites and Areas	Effects of Project activities on the cultural and ceremonial use of areas in and around the Project area.	X	X
	Physical disturbance of cultural, heritage, archaeological, paleontological, and architectural sites, including through changes to: • Physical and cultural heritage; • Access to physical and cultural heritage; • Cultural value, spirituality, or importance associated with physical and cultural heritage; and • Sacred, ceremonial culturally important places, objects, or things, including languages, stories and traditions. • Visual aesthetics over the life of the Project and post-Project abandonment or decommissioning.	X	X
	Effects of increased marine traffic on the access and use of culturally important marine environments.	X	X
	Effects of the Project on the use of travel ways, navigable waterways, and water bodies.	X	X
Cultural Continuation	Increased disruption to the protection, and persistence of Indigenous culture.	X	X
	Effects on the cultural practice of distributing food to community members and Elders.	X	X

Table 9: (Cont'd.)

Indigenous Interest	Potential Effect	Project Phase	
		Construction	Operations
Cultural Continuation (Cont'd.)	Effects of Project activities on the interruption of intergenerational transmission of IK.	X	X
	Changes to the ability to fish, hunt, trap and gather for cultural or ceremonial activities and practices.	X	X
	Effects on the cultural continuation of food sovereignty.	X	X
	Effects on Indigenous culture and teachings linked to the health and persistence of culturally important species, including SRKW.	X	X
Indigenous Governance Systems	Effects of Project-related shipping traffic on Indigenous Interests.		X
	Effects on Indigenous nations' ability to govern and safely access Indigenous marine territory	X	X
	Changes in the ability to manage and make decisions in accordance with traditions, cultures, governance, and/or practices, now and in the future.	X	X
	Effects on Indigenous nations' ability to practice Indigenous law.	X	X
Economic Activities	Effects on Indigenous and economic rights to marine fisheries and commercially licensed fishing, hunting, trapping, and gathering.	X	X
	Economic losses from Project effects on harvesting.	X	X
	Economic benefits from the Project through business opportunities and employment.	X	X
Indigenous Health and Wellbeing	Changes to the experience when exercising an Indigenous Interest, including the presence of visual disturbances, changes in air quality, effects of vibrations, and acoustic disruption.	X	X
	Effects on Indigenous health due to: • Changes in harvesting and subsistence activities; • Changes in air quality and water quality; and • Effects of vibrations and acoustic disturbance.	X	X

As identified in Section 8.3 of this summary, GCT has undertaken a focused effort during the early engagement phase in reaching out to the 51 identified Indigenous nations, represented by 33 nations and organizations, potentially affected by the Project to provide Project information and better understand their interests and concerns and how GCT can best work with Indigenous nations throughout the Impact Assessment and review process. GCT is committed to continued engagement with Indigenous nations and consideration of their input as it relates to Project design, mitigation and management, and potential opportunities.

8 INDIGENOUS ENGAGEMENT

8.1 Project Updates and Changes

Since the release of the IPD in September 2020, GCT made the following changes to expand and update the Indigenous engagement section of the DPD, respond to issues raised in the JSOIE, and meet BCEAO and IAAC requirements:

- Identification and information for the 51 Indigenous nations, represented by 33 nations and organizations with potential interests in the Project has been consolidated in Section 8.3 of the DPD to include the information provided in the IPD as well as any updates that were identified in the early engagement phase;
- Addition of Individual Sections 8.4.1 to 8.4.34 of the DPD, to summarize GCT's engagement, issues and Indigenous interests raised by each of the 51 Indigenous nations, represented by 33 nations and organizations identified in the JSOIE or through Project engagement activities;
- Section 8.5 of the DPD, summarizes the agreements GCT has made with Indigenous nations;
- Section 8.6 of the DPD, identifies GCT's preliminary consideration of Indigenous interests in Project design; and
- Opportunities for GCT, Indigenous nations, IAAC, and the BCEAO to work together have been added to Section 8.7 of the DPD, which summarizes GCT's planned engagement activities moving forward.

8.2 Introduction

GCT is committed to working meaningfully with the Indigenous nations with an interest in the proposed Project. As currently defined, the Project falls within or near the traditional territories, lands ratified by treaty, or other recognized areas of various Indigenous nations.

GCT has engaged with 51 Indigenous nations, represented by 33 nations and organizations which are listed below (BCEAO EPIC 2020). Of the 33 Indigenous nations and organizations identified in the JSOIE, 16 have submitted notices to engage as a PIN to the BCEAO (BCEAO EPIC 2020). Those nations have been indicated below with an asterisk. Nations are listed in alphabetical order with the estimated distance from the nation's administrative office to the Project provided in brackets. Those nations listed below with an asterism (⁂) have requested the distance not be recorded.

- Cowichan Tribes (45 km)*
- Ditidaht First Nation (125 km)*
- Esquimalt Nation (No'ilung Si'em 'i' sche'le'chu)*⁂
- First Nations of the Maa-nulth Treaty Society, which represents Huu-ay-aht First Nation,Ka:'yu:'k't'h'/Che:k'tles7et'h First Nations, Toquaht Nation, Uchucklesaht Tribe, and Yuułuʔiłʔatḥ Government*⁂
- Halalt First Nation (46 km)*
- Katzie First Nation (40 km)
- Kwantlen First Nation (46 km)
- Kwikwetlem First Nation (35 km)
- Leq'á:mél First Nation (85 km)
- Lyackson First Nation (42 km)*
- Malahat First Nation (53 km)*
- Matsqui First Nation (60 km)

- Métis Nation British Columbia (27 km)
- Musqueam Indian Band (23 km)*
- Pacheedaht First Nation (105 km)*
- Pauquachin First Nation (50 km)*
- Penelakut Tribe (37 km)
- Popkum First Nation (87 km)
- Sci'anew (Beecher Bay) First Nation (84 km)*
- Seabird Island First Nation (107 km)
- Semiahmoo First Nation (28 km)
- Shxw'ōwhámél First Nation (120 km)
- S'ólh Téméxw Stewardship Alliance, which includes member nations Aitchelitz First Nation, Chawathil First Nation, Cheam First Nation, Kwaw-kwaw-Apilt First Nation, Sumas (Semá:th) First Nation, Shxwhá:y Village, Skowkale First Nation, Skwah First Nation, Soowahlie First Nation, Skawahlook (Sq'ewá:lwx) First Nation, Sq'éwlets First Nation, Squiala First Nation, Tzeachten First Nation, Yakweakwioose First Nation, and Yale First Nation*(87 km – being the distance to the People of the Rivers Referrals Office representing S'ólh Téméxw Stewardship Alliance)
- Songhees First Nation (65 km)
- Squamish Nation (34 km)
- Stz'uminus First Nation (45 km)*
- Tsartlip First Nation (55 km)
- Tsawout First Nation (51 km)
- Tsawwassen First Nation (<5 km)*
- Tseycum First Nation (45 km)
- Tsleil-Waututh Nation*⁂
- T'Sou-ke First Nation (82 km)*
- Ts'uubaa-asatx (Lake Cowichan) Nation (70 km)

8.3 Summary of Preliminary Engagement with Indigenous Nations

This section describes GCT's engagement with Indigenous nations and a summary of Indigenous Interests and issues raised by Indigenous nations during the early engagement phase. It describes how GCT intends to address issues, including the perspectives of Indigenous nations on potential Project effects and a description of how Indigenous nations plan to engage with GCT moving forward. GCT is committed to engaging identified Indigenous nations and organizations throughout the Impact Assessment process and beyond to identify appropriate information needs and requirements and to incorporate IK in the identification and assessment of potential Project effects. For a comprehensive record of GCT's engagement with Indigenous nations, see section 8.4 of the DPD.

Prior to engaging Indigenous nations, GCT undertook a comprehensive review of relevant agreements, MOUs, assessment protocols, treaties, and other publicly available information about potentially affected Indigenous nations. Where information was available, GCT used assessment protocols or assessment bodies identified by Indigenous nations to initiate early engagement.

GCT began early engagement with Indigenous nations in the fall of 2016. GCT has communicated with the Indigenous nations and organizations through virtual meetings, phone calls, emails, and visits to administrative offices to confirm receipt of information and to answer any preliminary questions. Where contact information was not available, GCT made requests to the Indigenous nations for appropriate contacts regarding engagement on the Project. GCT will continue to seek feedback on topics of interest, point-of-contact and identify nation-specific consultation policies, protocols, or preferences to better inform their engagement efforts.

To support this work, GCT will verify an appropriate level of resourcing required and provide support, including capacity funding, to Indigenous nations when requested, that meet the needs of each Indigenous nation.

GCT acknowledges that due to the challenges created by the COVID-19 pandemic and the number of projects in the region for consideration by each Indigenous group, capacity may continue to be a concern, even after many of their offices formally re-open. GCT is committed to providing capacity funding, when requested and that meets the needs of each Indigenous group.

Preliminary engagement has focused primarily on information sharing about the Project, recording concerns, and responding to questions to support the Indigenous nations in understanding the proposed Project and ensuring fulsome input and participation in the impact assessment process. GCT will continue to engage with Indigenous nations about ongoing concerns related to project planning and assessment. This input will then be used to shape the engagement process through the life of the Project. Further details are provided in the GCT DP4 Early Engagement Plan.

GCT has developed its understanding of Indigenous Interests and mitigations from the Indigenous nations' input on the JSOIE, Indigenous nations' notices to engage as PINs, and through ongoing engagement. GCT will continue to engage with Indigenous nations to develop mitigation measures and management plans that address potential effects on Indigenous Interests. Table 10 provides a summary of the Key Issues raised by Indigenous nations in the DPD. The summary is not comprehensive. See section 8.4 of the DPD for a complete lists of the issues raised by Indigenous nations, and GCT's responses to those issues. For many of these issues GCT will continue to engage with Indigenous nations during the project planning and assessment phase, including on the preliminary list of potential effects on Indigenous Interests identified in the DPD in Section 7.5 and list of potential effects on Indigenous Interests identified in the draft Joint Guidelines.

Table 10: Summary of Key Issues Raised by Indigenous Nations.

Issues Raised	GCT Response
Concerns about the impacts of accidents and malfunctions, including concerns related to contamination from containers being lost at sea and impacts on water quality, fish, birds, shellfish, marine mammals, aquatic plants, wildlife, cultural and heritage sites, safety, the health of the ocean and resources, the physical and mental health of Indigenous Nations.	The Impact Assessment is required to assess the potential for malfunctions and accidents, and associated potential Project environmental effects, including effects on marine use, wildlife, vegetation, fish, marine resources, human health and Indigenous Interests. GCT is planning a risk-based approach for the assessment of malfunctions and accidents that could impact VCs and Indigenous Interests identified for the Project. This may include assessment of the consequence of incidents and consider potential environmental, economic, social, cultural and health effects and effects to Indigenous Interests.

Table 10: (Cont'd.)

Issues Raised	GCT Response
Concerns about marine shipping noise on SRKW, juvenile fish and ocean fauna species. Request that underwater acoustic equipment be turned down or off to reduce underwater noise around the terminal.	GCT appreciates Indigenous nations' concern regarding underwater noise from marine shipping. GCT understands that the primary source of underwater noise from shipping is from the propellers. Underwater noise generated at the terminal will be considered in the assessment and mitigations implemented to minimize underwater noise. GCT is required to work under Transport Canada's Underwater Noise Reduction Initiative. GCT will continue to engage with Indigenous nations on this issue during the Project planning and assessment phase.
Contribution of ships, port operations, trains, and trucks to greenhouse gas, particulate, and pollutant emissions, and resulting impacts on ambient air quality and local air quality.	The Impact Assessment is required to assess potential Project impacts on air quality. GCT is committed to reducing and avoiding GHG emissions where possible throughout the advancement of the Project. The Impact Assessment will describe the Project's contribution to the best achievable technologies to mitigate GHG emissions from the Project. The factors to be considered in the Impact Assessment, and the scope of those factors, will be described in the Project Joint Guidelines. The IAAC and BCEAO will engage with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.
Concerns about impacts to coastal archaeological sites from erosion associated with vessel wakes and rising sea levels.	The Impact Assessment is required to assess the potential impacts of the project on physical and cultural heritage. The assessment of potential effects on coastal geomorphology may include an assessment of the effects of vessel wakes. The assessment could be focused on the maneuvering of vessels in the vicinity of the proposed project and consider the potential wake effects from ship traffic in the shipping corridors. GCT will continue to engage with Indigenous nations on this issue during the Project planning and assessment phase, including on how the preliminary list of potential effects on Indigenous Interests identified in the Joint Guidelines can incorporate effects on areas of high archaeological potential.
Assessment should extend beyond the 12 nautical mile limit to 200 nautical miles.	The spatial scope of the Impact Assessment will be determined by the IAAC and the BCEAO. Notwithstanding this determination, GCT will work with Indigenous nations to determine potential options to assess Project-related marine shipping effects in their traditional territory, which may extend beyond the spatial scope determined by the IAAC and the BCEAO. Such assessment will explore opportunities to partner with regulators and Indigenous nations on potential mitigation options and wider management initiatives.

Table 10: (Cont'd.)

Issues Raised	GCT Response
Concerns about emissions associated with the Project and contribution to climate change impacts.	GCT is committed to addressing the issue of climate change and reducing and avoiding GHG emissions where possible throughout the advancement of the Project. The Impact Assessment will describe the Project's total emissions, best achievable technologies to mitigate GHG emissions and other potential sources of climate change from the Project and address the extent to which the effects of the Project hinder or contribute to BC and Canada's environmental obligations and climate change commitments.
Concern about the Project impacts on Indigenous culture and Indigenous nations' ability to continue cultural traditions, connect with places of significance, transmit intergenerational knowledge and maintain connections.	The Impact Assessment is required to assess potential Project impacts on Indigenous interest and culture, including cultural continuation.
Concerns about the cumulative effects of the Project and other projects in the area especially on the productive ecosystem within the Project location, including the health of the mudflats, eelgrass, biofilm, marine mammals, fish, crab, and other wildlife.	The Impact Assessment is required to assess potential cumulative impacts. To assess the cumulative effects on a given VC, the Project residual effects will be assessed in combination with the potential effects of other past, present, and reasonably foreseeable projects (projects that are either proposed or have been approved to be built but are not yet built). The presence of biofilm in proximity to the Project is understood to be limited in comparison to the RBT2 project. GCT plans to complete field surveys focused on biofilm in 2021/2022. GCT understands that one of the main threats from the project on biofilm is indirect, via changes to salinity. The Project inter-causeway area is a fully marine environment (unlike north of the causeway, where salinity changes seasonally with the freshet). There is no expectation that the project will alter salinity, but further assessment is required. The factors to be considered, and the scope of those factors, will be described in the Project Joint Guidelines. The IAAC and BCEAO will engage with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.
Economic benefits from the Project through business opportunities and employment	GCT will continue to engage with Indigenous nations about possible economic opportunities and Project benefits during the Project planning and assessment phase.

Table 10: (Cont'd.)

Issues Raised	GCT Response
Concern about the effects of Project construction, operation and marine shipping on water quality, fish/fish habitat (including Sockeye, Chinook and Coho salmon), migratory birds, shellfish, aquatic plants, marine mammals, wildlife, the propagation of invasive species, the health of the ocean and the subsequent effects to resources.	The Impact Assessment is required to assess potential Project effects on water quality, fish, vegetation, wildlife, marine resources, and Indigenous Interests.
Concerns about Project effects and associated marine shipping on Indigenous nations' hunting, fishing, and harvesting areas and resources for Food, Social, Ceremonial (FSC), and economic purposes.	The Impact Assessment is required to assess potential Project effects of the project on marine resources, fish, wildlife, and Indigenous Interests. Section 7.8 of the DPD identifies the preliminary potential Project effects on Indigenous Interests, such as harvesting and subsistence activities, which includes the right to harvest for Food, Social, and Ceremonial purposes, effects on historical and contemporary harvesting sites and accessibility of culturally important harvesting sites, change in abundance, distribution or quality of resources, and current and future availability, quality, and quantity of foods.
Concerns about impacts on Indigenous health and well-being, including health impacts due to the inability to harvest for cultural and traditional purposes, impacts of increased traffic in the western trade corridors and the management of health effects due to increased traffic, visual and noise disturbance from project construction and operation and its effects on community health.	The Impact Assessment is required to assess potential Project impacts on human health and Indigenous Interests, including impacts on air quality, water quality, and effects on traditional use activities. The Impact Assessment will characterize sensory disturbances during construction and operation in the Noise and Vibration and the Light assessment sections.
Concerns related to Project infringements on Indigenous or Treaty rights and title, including resource harvesting and other traditional practices.	The Impact Assessment is required to assess potential Project effects on Indigenous Interests and rights. GCT will continue to engage with Indigenous nations during the Project planning and assessment phase to refine the potential effects on Indigenous Interests and Treaty rights and title identified in the Joint Guidelines.

Table 10: (Cont'd.)

Issues Raised	GCT Response
Concerns about the impacts of increased frequency of vessel traffic, the larger sizes of vessels and short sea shipping including impacts on fish, fish habitat, fishing rights, and cumulative effects.	The Impact Assessment is required to assess potential Project effects on marine use, marine navigation, and Indigenous Interests. GCT is pursuing a Project design that accommodates a short sea shipping berth to accommodate future market demand and in anticipation that governments may mandate alternatives to trucking in the future, or dynamics in the market may change. To GCT's knowledge, only two examples of short sea shipping exist in the region, and no other short sea shipping services are currently being planned outside of GCT Deltaport. As such, it is not possible at this stage to ascertain if, when or where such facilities outside of GCT Deltaport would be constructed. It is similarly not feasible to make predictions about the volumes of marine traffic associated with short sea shipping, or shipping routes, which are not clearly defined unlike shipping routes for traditional container vessels (which GCT will assess, along with potential impacts associated with the construction of the short sea shipping berth).
Concerns about potential impacts on migratory birds. Impacts on waterfowl flight paths in the area may impact Indigenous nations' ability to harvest waterfowl.	The Impact Assessment is required to assess potential Project impacts on wildlife and Indigenous Interests. Based on preliminary studies, the Project location is considerate of avoiding biofilm as migratory bird habitat and chinook salmon habitats on the north side of the causeway. Biofilm will be further considered in the assessment of potential Project effects including as a pathway to potential effects to shorebirds including the Western Sandpiper.
Concerns about safety for Indigenous nation members who are travelling by boat to reach fishing and harvesting areas and when carrying out these activities.	The Impact Assessment is required to assess potential effects on marine navigation from the Project. Project effects on travel are also included with effect on Cultural Use Sites and Areas and in the preliminary list of potential effects on Indigenous Interests identified in the DPD, Section 7.5.
Principles of UNDRIP and FPIC should be reflected in the document.	The Federal and Provincial governments have taken various steps to incorporate UNDRIP principles into the new Impact Assessment process. GCT will be following this process during the Project planning and assessment phase.
Concerns related to effective monitoring of water quality, water clarity, contaminated surface water runoff and the subsequent effects on human health, the biophysical environmental and onsite habitat features during construction and operation phases of the Project.	The Impact Assessment is required to assess the potential Project impacts on water quality and clarity. The factors to be considered, and the scope of those factors, will be described in the draft Joint Guidelines, and will be confirmed through additional engagement with Indigenous nations, stakeholders, the public, federal and provincial regulators.

8.4 Summary of Planned Engagement Activities and Opportunities to Work Together

GCT will continue engagement with Indigenous nations to keep them informed about any updates to the Project or the Impact Assessment and review process. These efforts will be coordinated with the regulatory agencies so that Indigenous nations are receiving the most current information about the Impact Assessment and review process and the opportunities to engage. Based on engagement with the Indigenous nations outlined in Section 8.4 of the DPD, GCT expects to continue carrying out the following engagement activities:

- Provide the capacity required to enable Indigenous nations to fully participate in the Impact Assessment and review process;
- Provide Project updates and solicit further and ongoing feedback on the Project design and solicit feedback from Indigenous nations on the Impact Assessment, including Indigenous Interests, VC selection, Impact Assessment methodology, mitigations, monitoring, and Project residual and cumulative effects;
- Seek opportunities for participation of Indigenous nations throughout the Impact Assessment;
- Seek input on processes for issues resolution;
- Develop additional engagement tools as requested or directed by Indigenous nations;
- Continue engagement with Indigenous nations during and beyond the regulatory agencies' review of the Joint Guidelines;
- Develop Framework Agreements and MOUs with Indigenous nations to support longer-term relationships; and
- Develop Project related documents and processes that rely on both IK and western science, along with support in the development of nation-specific IK studies.

9 ENGAGEMENT AND CONSULTATION WITH GOVERNMENTS, THE PUBLIC AND OTHER PARTIES

GCT has been operating in City of Delta for more than 20 years and the company is focused on continuing to be a responsible neighbour by being open and engaged when responding to community requests and concerns. Since 2015, GCT has been proactively meeting with the City of Delta, its neighbouring municipalities, the provincial government of BC, the Government of Canada, and others in relation to the Project.

GCT has continued to conduct engagement with local stakeholders, the public, the City of Delta, its neighbouring municipalities, the provincial government of BC, and the Government of Canada in accordance with Federal and Provincial requirements since the submission of the IPD in September 2020.

As stated in Section 1.1 of this summary, the agencies published the JSOIE report to GCT in December 2020 which was based on feedback received from Indigenous nations, federal authorities, local stakeholders and the public during the public comment period on the IPD. GCT's proposed approach to addressing each of the issues summarized in the JSOIE report is presented in Appendix C2 of the DPD and included in this DPD Summary as Appendix A. Key issues raised in the Summary of Issues table within the JSOIE report include:

- Potential effects of malfunctions and accidents including human health effects and risk analysis;
- Potential effects of noise (terrestrial) and air quality including impacts to sensitive ecosystem receptors;
- Clarity on details on the alternatives to the Project;
- Clarity on the Project activities resulting in GHG emissions and the Project's contribution to Canada's environmental commitments;
- Consideration of cumulative effects and GBA+;
- Potential effects of the Project on socio-economic conditions, economic conditions, fish and fish habitat, geological hazards, human health and well-being, marine use, marine mammals, wildlife, migratory birds, wetland transboundary effects and visual environment;
- Consideration about marine shipping, road and rail and short sea shipping;
- Potential effects of the Project on Indigenous peoples' rights and title and impacts from malfunctions and accidents that may interact with cultural values; and
- Clarity on the inclusion of UNDRIP in the Project.

9.1 Public, Stakeholder and Government Engagement

GCT has conducted multiple in-person meetings and presented to the Mayor and Council as a whole to provide updates on the Project over the years. GCT hosted the Mayor and senior staff at an in-person briefing at GCT Deltaport on March 6, 2019, followed by a tour of the terminal which allowed for an open dialogue on the Project location, environmental and community effects, and engagement opportunities. On May 13, 2020, GCT met virtually with the City of Delta to provide a further update on the Project and, in particular, the development of the IPD. GCT understands that the City of Delta wrote to the Minister of Environment and Climate Change in July 2020 requesting that the DP4 Project be assessed as a potential alternative to the proposed RBT2 Project[1]. On December 7, 2020, GCT provided an additional update on the Project to the City Council and senior staff at the City of Delta and addressed specific questions from Council. By incorporating feedback from these agencies during the past 23 years in operations at Roberts Bank, GCT has established strong lines of communication and understands the capacity and needs of these municipalities, provincial and federal government agencies.

GCT has been actively engaging with provincial and federal officials, relevant Ministries, department staff and agencies, including the IAAC and the BCEAO to describe the Project, solicit early feedback, and incorporate that feedback into its IPD, DPD, and Early Engagement Plan. GCT has also engaged with DFO. To ensure that engagement is focused and relevant, GCT has created a list of the groups, populations, or individuals that will be engaged with as part of public and stakeholder engagement. This includes all those who could be directly or indirectly affected by the Project such as residents from nearby communities, businesses and business groups, non-government organizations, academic institutions, community groups, recreation groups, tenure holders and other public stakeholders.

To date, engagement activities have generally been well received and GCT has held regular informal and formal meetings with community groups and stakeholders through the development of the IPD and DPD. GCT also participated in two public engagement webinars hosted by the BCEAO and IAAC on the IPD on November 5, 2020, and November 10, 2020. These webinars were advertised widely in local newspapers, details posted online, and mailed directly to stakeholders and municipalities. Specific early engagement activities include the development of a Project website (https://globalterminalscanada.com/projectupdates/), newsletters to all City of Delta, Ladner and Tsawwassen First Nation residents regarding GCT's yearly activities and providing an update on the Project, social media and traditional print advertising, individual and group meetings with local and provincial environmental groups, voice messages to all City of Delta residents regarding the Project, a review of feedback from groups in relation to previous port expansion projects and emails to stakeholder groups to solicit feedback on preferred frequency and method of engagement. GCT has also carefully considered feedback about previous port expansion projects.

[1] https://delta.civicweb.net/document/197779?id=8e66b3ab-b5f7-4b17-8540-57444fec6cc4

Overall topic areas of engagement and feedback included the following:

- Human Health: light, noise, air quality, truck traffic, access to fisheries, and transportation infrastructure;
- Environment: biofilm, eelgrass, marine conservation and conservation areas, migratory birds, shorebirds, barn owls, appropriate habitat offsetting, marine invertebrates, Pacific Salmon, SRKW, marine traffic, and underwater noise; and
- Economy: container capacity requirements, Project funding, and mode of operations.

To support further engagement throughout the Impact Assessment and review process GCT is considering the following planned public and stakeholder engagement activities:

- Regular updates the Project website, including highlighting GCT and regulator led engagement opportunities;
- Advertise public engagement opportunities with the local media and social media channels;
- Virtual engagement sessions with stakeholders;
- Site tours of the Project site;
- Face-to-face meetings;
- Telephone town halls;
- Open houses;
- Traditional means of notification such as print media, direct mail, website and emails;
- Innovative online community engagement tools;
- Newsletters;
- Informational videos;
- Social media;
- E-newsletters;
- Surveys (online, phone, mail, in-person); and
- Fact sheets, FAQs.

GCT has also considered potentially affected populations that may be underrepresented by traditional engagement methods, such as public open houses and town halls. GCT is proposing the following measures to reach under-represented communities:

- Provide a variety of in-person and virtual engagement methods and locations.
- Multiple times of day for in-person and virtual engagement methods.

- All public locations will be as close as possible to public transit for increased accessibility.
- Any news releases will be distributed to relevant in-language media.
- Project materials will be in digital and print form.
- All public venues chosen will be wheelchair-accessible locations.

GCT has the following goals for engaging with municipalities and government agencies (where appropriate, taking COVID-19 restrictions into account) so that they can better understand the proposed Project, ask questions, and provide feedback:

- Provide email updates to municipalities and government agencies on the Project;
- Share community engagement opportunities;
- Track concerns raised by municipalities and government agencies;
- Provide formal and timely responses to municipalities and government agencies related to Project concerns;
- Offer multiple in-person presentations to staff and council;
- Offer GCT Deltaport site tours;
- Request feedback on public and stakeholder engagement activities; and
- Consider feedback regarding Project design and communicate the results of these considerations.

In addition to the above, GCT will continue to seek recommendations from municipalities and elected officials on how best to engage their community on the Project such as locations for the open houses, or suggested community events. In addition to publicly available demographic information, GCT will seek feedback from local governments on reaching underrepresented populations to ensure engagement activities are inclusive and representative. Further details can be found in the GCT DP4 Early Engagement Plan.

Given the evolving response and associated impacts of COVID-19, and the capacity of organizations and individuals to provide feedback at this time, GCT is proposing the following methods of digital engagement be used to ensure robust engagement still takes place. These methods will continue to be deployed for engagement purposes should in-person meetings be permitted in the future. Towards that end, GCT will:

- Establish video conferencing via Zoom for smaller groups and Facebook live for larger groups;
- Conduct telephone town halls for those without the capability to connect via the internet;
- Ensure online engagement tools are well distributed and easily found on the GCT's Project website; and
- Consider and incorporate further engagement methods, as directed or requested.

10 REFERENCES

10.1 DPD

Global Container Terminals. July 2001. Deltaport Expansion Berth 4 Project, Detailed Project Description. [Cited August 27, 2021]. Available from: https://www.projects.eao.gov.bc.ca/api/public/document/60edde0ff2bad60022390a52/download/Detailed%20Project%20Description_final_20210709_EAO.pdf

10.2 DPD Summary Reference List

A Species at Risk Act Section 11 Conservation Agreement to Support the Recovery of the Southern Resident Killer Whale. 2019. [Cited June 18, 2020]. Available from: https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/Ca-SrkwErs-v00-2019May-Eng.pdf

AECOM. January 2009. Tsawwassen First Nation Land Use Plan. [Cited March 10, 2020]. Available from: http://www.tsawwassenfirstnation.com/pdfs/TFN-About/Information-Centre/Strategic-Planning/TFN_Land_Use_Plan.pdf

Arcas Consulting Archaeologists Ltd., 2008. Lehigh Richmond Distribution Centre – Area Fronting Lot K Archaeological Overview Assessment. In: Project Description, Lehigh Construction Materials Terminal Phase 1 Aggregates, 2012. [Cited March 18, 2020]. Available from: https://www.portvancouver.com/wp-content/uploads/2015/03/view-the-application1.pdf

BCEAO EPIC. 2020. Deltaport Expansion Berth 4 Project. [Cited February 24, 2021]. Available from: https://www.projects.eao.gov.bc.ca/p/5f7229183f4bc0002165e839/project-details;currentPage=1;pageSize=10;sortBy=-datePosted;ms=1614193580472.

BCEAO. 2019. Early Engagement Policy Version 1.0, [Cited June 3, 2020]. Available from: https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/environmental-assessments/guidance-documents/2018-act/early_engagement_policy_version_1.pdf

Black Quay Consulting. 2021. Container Port Capacity Options on the West Coast of Canada, Update No.1 Report. Prepared for Global Container Terminals, Vancouver, BC.

City of Delta. 2020. About Delta. [Cited July 26, 2021]. Available from: https://www.delta.ca/discover-delta/about-delta

City of Delta. 2019. Comments on Supplementary Information Received After July 6, 2018. Letter to C. Parker, Panel Manager, Roberts Bank Terminal 2 Project, Canadian Environmental Assessment Agency. [Cited March 23, 2020]. Available from: https://aeic-iaac.gc.ca/050/documents/p80054/126645E.pdf

City of Delta. 2017. Delta's Social Profile- 2017. [Cited March 19, 2020]. Available from: http://delta.ca/docs/default-source/human-resources-and-corporate-planning/delta-social-profile.pdf?sfvrsn=8

Environment and Climate Change Canada (ECCC). 2020. Strategic Assessment of Climate Change [Cited August 31, 2020]. Available from: https://www.strategicassessmentclimatechange.ca/

Fisheries and Oceans Canada (DFO). 2018. Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada. [Cited January 2021]. Available from: https://www.sararegistry.gc.ca/virtual_sara/files/plans/Rs-ResidentKillerWhale-v00-2018Aug-Eng.pdf

Gaydos, J. K. and N.A. Brown. 2011. Species of Concern within the Salish Sea: Changes from 2002 to 2011. Proceedings of the 2011 Salish Sea Ecosystem Conference, October 25-27, 2011, Vancouver, BC: 1-12.

Government of Canada. 2020. Strategic Assessment of Climate Change [Cited July 30, 2020]. Available from: https://www.strategicassessmentclimatechange.ca/15112/widgets/61020/documents/36886

Hemmera Envirochem Inc. 2015. Adaptive Management Strategy 2014 Annual Report Deltaport Third Berth, Delta, BC. Hemmera, NHC, Precision Identification Biological Consultants. Prepared for Port of Vancouver. July 2015; [Cited March 8, 2020]. Available from: https://www.portvancouver.com/wp-content/uploads/2015/10/AMS-2014-Final-Annual-Report1.pdf

Hemmera Envirochem Inc. 2014. Roberts Bank Terminal 2 Technical Data Report. Marine Vegetation Intertidal Marsh, Foreshore Habitat and Invertebrate, Eelgrass, Ulva, and Biomat Survey Results. Prepared for Port of Vancouver. [Cited May 2014]. Available from: https://iaac-aeic.gc.ca/050/documents/p80054/107589E.pdf

Impact Assessment Act (IAA) S.C. 2019, c 28, s.1. retrieved from https://laws.justice.gc.ca/eng/acts/I-2.75/index.html

IBA Canada. 2020. Boundary Bay- Roberts Bank- Sturgeon Bank (Fraser River Estuary) Delta, Richmond, Surrey, White Rock, British Columbia; [Cited March 11, 2020]. Available from: https://www.ibacanada.ca/site.jsp?siteID=BC017

Legislative Services Branch. 2019. Constitution Act of 1982. [CitedJuly 27, 2021]. Available from: https://laws-lois.justice.gc.ca/eng/const/page-12.html#h-39

LGL Environmental Research Associates. 2017. [Cited March 30, 2020]. Available from: https://iaac-aeic.gc.ca/050/documents/p80054/121286E.pdf

Metro Vancouver. 2020. [Cited March 23, 2020] Available from: http://www.metrovancouver.org/metro2040/land-use-designation/Pages/default.aspx.

Metro Vancouver. July 2017 (Updated to). Regional Growth Strategy Bylaw No. 1134, 2010. Metro Vancouver 2040 Shaping our Future. Adopted by the GVRD Board on July 29, 2011 and updated to July 28, 2017. [Cited March 7, 2020]. Available from: http://www.metrovancouver.org/services/regional-planning/PlanningPublications/RGSAdoptedbyGVRDBoard.pdf

Millennia Research Limited. November 2004. Roberts Bank Archaeological Overview Assessment and Archaeological Impact Assessment Permit 2004-100. Prepared for Vancouver Port Authority, Vancouver, BC. [Cited March 17, 2020]. Available from: https://www.portvancouver.com/wp-content/uploads/2015/03/techvols_tv12_roberts_bank_aoa_aia_nov13_04.pdf

Port Metro Vancouver. October 2014. Land Use Plan. [Cited March 8, 2020]. Available from: https://www.portvancouver.com/wp-content/uploads/2015/06/port-metro-vancouver-land-use-plan-english.pdf

Review Panel. March 2020. Federal Review Panel Report for the Roberts Bank Terminal 2 Project (Cited April 7, 2020) Available from: https://iaac-aeic.gc.ca/050/evaluations/proj/80054

Statistics Canada. 2016. Statistics Canada Census Profile 2016 Census. Delta. [Cited March 18, 2020]. Available from: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=5915011&Geo2=CD&Code2=5915&Data=Count&SearchText=Delta&SearchType=Begins&SearchPR=01&B1=All&TABID=1.

The Corporation of Delta. March 2019. City of Delta Official Community Plan. Bylaw No. 2950, 1985. [Cited March 23, 2020]. Available from: https://delta.civicweb.net/filepro/documents/37999?preview=39403

Vancouver Fraser Port Authority (VFPA). 2020. Short sea shipping June 2020 update (Cited July 28, 2020). Available from: https://www.portvancouver.com/wp-content/uploads/2020/07/VFPA-Short-Sea-Shipping-June-2020-Update.pdf

Vancouver Port Authority. January 2005. Environmental Assessment Application for the Deltaport Third Berth Project. Vancouver, BC. [Cited March 8, 2020]. Available from: https://projects.eao.gov.bc.ca/p/588510a1aaecd9001b813339/documents;currentPage=1;pageSize=40;sortBy=;type=5cf00c03a266b7e1877504d4;ms=1585332729897

APPENDIX A

RESPONSES TO SUMMARY OF ISSUES

APPENDIX A: SUMMARY OF ISSUES RAISED AS IDENTIFIED IN THE JOINT SUMMARY OF ISSUES AND ENGAGEMENT.

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Accidents and Malfunctions	1	Potential for adverse environmental and human health effects from accidents and malfunctions. This includes collisions, grounding, allision (the running of one ship upon another ship that is stationary), and/or spills during the operation of marine vessels, and hazardous material spills caused by train derailment, road and rail transport, and/or operation of land-based machinery	As identified in GCT's DPD, Section 7.9 and in accordance with both federal and provincial requirements, the Impact Assessment will include an assessment of potential accidents or malfunctions. The scope of the Impact Assessment has yet to be confirmed, including the scope of factors associated with marine shipping and road and rail transport. The decision ultimately lies with federal and provincial regulators who will provide opportunities for members of the public, Indigenous nations and others to provide input via formal engagement to be carried out once it is determined that the Project is ready to formally enter the cooperative assessment process at the end of the early engagement/planning phase.	Section 7.9.2. Accident or Malfunction Scenarios
Accidents and Malfunctions	2	Effects of accidents and spills on the environment will differ off the continental shelf due to the presence of different environmental dynamics; the scope of the impact assessment must include this area	The scope of the Impact Assessment has yet to be confirmed, including the scope of factors associated with marine shipping. The decision ultimately lies with federal and provincial regulators who will provide opportunities for members of the public, Indigenous nations and others to provide input via formal engagement to be carried out once it is determined that the Project is ready to formally enter the cooperative assessment process at the end of the early engagement/planning phase.	N/A
Accidents and Malfunctions	3	Concern that the Project should not proceed until a proper risk analysis is conducted, and until there is a world class emergency response program and resources in place to deal with a major spill into the marine environment	As identified in GCT's DPD, Section 7.9 and in accordance with both federal and provincial requirements, the Impact Assessment will include an assessment of potential accidents or malfunctions. Transport Canada has the authority over marine shipping in Canada under the *Canada Shipping Act*, 2001. Transport Canada works with other federal departments and agencies to fulfill their mandate and responsibilities. In BC, the main partners include the Canadian Coast Guard, the Pacific Pilotage Authority, Environment and Climate Change Canada and the VFPA. The Canadian Coast Guard is the lead federal agency responsible for ensuring an appropriate response to marine pollution incidents.	Section 7.9. Public and Environmental Safety
Accidents and Malfunctions	4	Details regarding the type of cargo being transported, to better tailor any required emergency response, as well as a list of applicable compensation regimes that apply in the event of different types of spills.	Although outside GCT's care and control, it is understood that Transport Canada has an internal division for Cargoes and Ship-Port Interface which is responsible for managing a variety of marine safety programs focused on safety-related aspects for marine carriage of all types of cargo, including containers. Liability and compensation for spills are defined under the *Marine Liability Act*. Transport Canada, under the *Canada Shipping Act* and associated regulations and standards, manages the National Ship-Source Oil Spill Preparedness and Response Regime which is built on international and domestic cooperation. Liability and compensation for ship-source oil pollution in Canada are based on International Conventions developed by the International Maritime Organization, which makes sure the polluter pays. If a vessel has an oil spill, the ship-owner would be liable for cleanup. The international marine community has adopted a number of conventions through the International Maritime Organization that govern ship-owner liability and international compensation funds. Applicable compensation regimes that would apply if there was a spill Include the ship-owner's required insurance and limit of liability. Additional compensation may be paid by international funds financed by industry and distributed by the International Oil Pollution Compensation Funds in the case when the ship-owner is not liable, unable to meet their liability or the damage surpasses their limit of liability. If the costs of ship-sourced oil pollution were more than the amount of compensation available from the International conventions, Canada's Ship Source Oil Pollution Fund would help make sure all victims are compensated. In 2014, Canada also adopted amendments to the Marine Liability Act to address liability and compensation for incidents involving hazardous and noxious substances, which includes strict liability for the ship-owner with compulsory insurance and the creation of an international fund. Under the Oceans Protection Plan, the Government of Canada is also working to make further improvements to the Ship Source Oil Pollution Fund regarding compensation to those affected by ship-source spills.	N/A

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Accidents and Malfunctions	5	Question regarding who will be held financially and physically responsible for the cost of cleaning up a spill and seeking most detail on GCT's spill response plan	Liability and compensation for ship-source oil pollution in Canada are based on International Conventions developed by the International Maritime Organization, which makes sure the polluter pays. Vessels that transit Canadian waters are required to have a shipboard oil pollution emergency plan, as well as arrangement with the "Western Canada Marine Response Corporation (WCMRC)" for physical clean-up of an oil spill. The WCMRC is certified by Transport Canada and provides 24-hour emergency response to oil spills. Vessels in Canadian waters must report oil spills immediately to the Canadian Coast Guards and polluters are responsible for and will be held financially responsible to pay for the spill clean-up. After the spill is cleaned up, the Government of Canada conducts enforcement investigations into the causes of the spill and works with the polluter and response partners to recover the cost of the clean-up. If a Vessel has an oil spill, the ship-owner would be liable for cleanup. If the costs of the spill are more than the shipowner's limit of liability, additional compensation could be paid by international funds financed by industry and distributed by the International Oil Pollution Compensation Funds. If the costs of ship-sourced oil pollution are more than the amount of compensation available from the international conventions, Canada's Ship-source Oil Pollution Fund can help make sure all victims are compensated. As identified in GCT's DPD, Section 7.9, in addition to GCT's Emergency Response Plan, GCT has contracts with Quantum Murray Environmental (Emergency Response) and with Western Canada Marine Response Corporation (Transport Canada's Certified Marine Spill Response Organization) for 24- hour response, mitigation and clean up in circumstances where there is potential for a hazardous spill or leak that occurs during operation. GCT's Emergency Response Plan includes terminal spill mitigation measures and response. The Spill Reporting Regulation of the *Environmental Management Act* requires that spills in excess of reportable quantities be reported to the Emergency Management of BC. GCT's Safety, Security and Environment Advisor, or delegate, is responsible for making this assessment and contacting appropriate authorities should a major spill happen on the dock. The DP4 Impact Assessment will describe the environmental management plans, including spill response plans, that will be developed for construction as well as any updates that will be made for operational management plans.	Section 7.9. Public and Environmental Safety
Acoustic Environment	1	Effects due to noise causing disturbance to the local population. A noise assessment of the area, including sensitive receptors, should be conducted. The assessment should be in accordance with Health Canada's guidance to compare baseline, Project-sourced noise, and Project + baseline noise levels, and should include cumulative effects.	The Impact Assessment will include a noise assessment that will assess the effects of noise from the Project in accordance with Health Canada requirements and all other applicable requirements. The noise assessment will describe baseline conditions, identify sensitive noise receptors, present the project noise levels, baseline noise levels, and compare noise emissions from Project activities to relevant Health Canada criteria, provincial and federal Guidelines and municipal bylaws. A cumulative effects assessment and proposed mitigation measures will be included in the noise assessment. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7 Potential Effects of the Project
Acoustic Environment	2	An analysis of local transportation options (short sea shipping and truck transportation) would permit an assessment of their positive and negative effects on noise.	The Impact Assessment will include a noise assessment which will consider all potential noise sources associated with Project activities, and potential cumulative effects. The factors to be considered (including short sea shipping and truck activities), and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 3.4.4 Physical Activities Incidental to the Project, Section 3.9. Alternative Means of Carrying out the Project, Section 7.4. Emissions and Discharges
Acoustic Environment	3	Concerns regarding increased vessel noise and light pollution at Project site through Project development, implementation, and future increased port/facility uses.	The Impact Assessment will include noise and visual assessments that take into account the potential effects of various activities during all phases of the Project and will follow applicable assessment as per the Joint Guidelines.	Section 7.4. Emissions and Discharges

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Alternative Means of Carrying Out the Project	1	Clarity as to the feasibility of expanding Deltaport seaward to use one berth of the adjacent coal terminal (Westshore) when that lease is up for renewal in 2026, as well as an assessment of costs versus benefits of this option.	Westshore operates the multi-user coal loading facility at Roberts Bank, B.C. which serves Canadian and U.S. shippers of metallurgical and thermal coal. The terminal began operating in 1970 and Westshore owns all of the facilities, upgrades and operating equipment at the terminal. Westshore recently completed their latest upgrades to the terminal which cost in excess of CAD 240 million and the terminal has a stated capacity of 33 mm tonnes. Westshore is a very strong and viable business that has handled an average of 30 mm tonnes per year between 2017-2019 and is projected to handle in excess of 25mm tonnes in 2021. Westshore has an existing property lease with the VFPA with the current lease to expire December 31, 2026, and, Westshore has five (5) renewal options that extend to the year 2066. GCT has met with Westshore previously to discuss any potential alternative options to the DP4 expansion Project on the Westshore leased lands. At that time, Westshore Management confirmed that Westshore is a very viable business, has invested millions of capital expenditures recently to grow their business and has existing contracts with customers and the VFPA. It was also concluded that the estimated cost to convert the existing Westshore Berth 1 and backup lands into container space was not feasible, not practical or prudent and would be cost-prohibitive compared to the proposed DP4 expansion Project.	Section 3.9 Alternative Means of Carrying Out the Project
Alternatives to the Project	1	Clarity and further detail as to why the Port of Prince Rupert was not considered as an alternative to the Project.	Prince Rupert's capacity expansion was considered in GCT's assessment of container terminal capacity and volume projections in Table 2 of the DPD, however, if is not considered a viable alternative to meet the need and purpose of DP4 for various reasons. The Prince Rupert Port Authority's (PRPA) September 2020 Land Use Plan discusses existing and potential future container capacity, by stating: "Existing annual container capacity at the Fairview Container terminal is 1.35mm TEU's. Long-term Fairview Container Terminal capacity is estimated at approximately 2.4 mm TEU's, with the next phase of expansion expected to be completed by 2022, increasing its annual capacity to 1.8 mm TEUs. Future expansion phases (beyond 1.8 mm TEU's) will be challenged by the ability to maintain full operational capacity during construction. The development of a new second container terminal on South Kaien Island with a potential capacity of 2.5 mm TEUs was identified as the next possible stage in expanding port container terminal capacity. It is important to note the development of this project will require significant investigation and an Impact Assessment before an investment decision could be considered." The PRPA has stated that Fairview Terminals will not be expanded beyond 1.8 mm TEUs in 2022 and has not commenced, nor engaged the IAAC on the assessment of a potential second container terminal at South Kalen Island at this time. All major world container shipping lines call in the Port of Vancouver because of the supply chain's ability to efficiently and cost-effectively handle and distribute container traffic through to all of the major destinations in North American. In addition, Vancouver has a strong demand for imports because of the population base, therefore, making Vancouver a must port of call for all shipping lines. On average, 33% of all container imports coming into Vancouver are designated for the Greater Vancouver area and interior of B.C. Over 47% of all exports arriving in Vancouver come from within B.C. and are necessary for the shipping lines to have a balanced trade of moving containers by rail as their contracts with the railways stipulate this requirement. Failing to have a balanced trade of overall imports and exports in their contracts with the railways generally results in penalties to the shipping lines, which informs the decision-making process to determine what ports a shipping line will discharge and load at.	Section 1.3.2. Need for the Project and Rationale

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Alternatives to the Project	2	Further assessment of alternatives required, including on whether lands at Fraser Surrey Docks could be re-purposed to provide for expanded container capacity.	GCT has reviewed all the potential alternatives to the Project and believes that the proposed expansion at Deltaport is the best alternative. As stated in the DPD, Section 3.8, GCT has reviewed analysis of government agencies and agrees that terminals on the Fraser River including DP World Fraser Surrey (previously referred to as Fraser Surrey Docks) have limited growth capacity as they cannot accommodate Post-Panamax and larger container vessels, because they cannot safely navigate the Fraser River. DP World Fraser Surrey is limited by the size of the container vessels that can navigate the George Massey Tunnel and also limited by the vessel turning radius in the river itself. The current deep-sea channel is designed to accommodate two-way ship traffic of vessels up to 270 metres in length, 32.3 meters in breadth, and 11.5 meters in draft (the vertical distance between the waterline and the bottom of the ship's hull). As a one-lane channel, the existing Fraser River channel can accommodate larger vessels as long as the draft remains at 11.5 metres or less and the length does not compromise the vessel's ability to safely navigate the river bends or turn round at its destination. GCT's understanding is that the maximum size container vessel allowed to navigate the Fraser River to DP World Fraser Surrey is approximately 5,000 TEUs with an overall length of 295m and a maximum draft of 11.5 metres. This is the main reason why today DP World Fraser Surrey only has 3 or 4 smaller container vessels calling weekly. DP World Fraser Surrey was recently sold in 2020 and the current owner is expected to continue to handle container, bulk and breakbulk cargoes at this facility from ships that fall within the restrictions of the Fraser River. In addition, GCT's analysis of existing and future ship sizes is noted in the DPD in Section 3.4.4 under table 6. Currently at Deltaport, of the 364 annual ship calls only about 6% of these ship calls could potentially navigate the Fraser River to DP World Fraser Surrey. The other 94% of the existing ships cannot navigate the Fraser River due to the size of the vessels. Under the proposed DP4 Project, ship sizes will only continue to increase in size due to the economy of scale. The "Analysis of capacity options on the West Coast of Canada", which was provided by Black Quay consultants in 2019, indicates that the 2035 ship fleet size serving Deltaport with the proposed expansion will be in the 10,000 to 17,000 TEU range. None of these ships would be able to navigate the Fraser River to DP World Fraser Surrey even if they could re-purpose lands to accommodate containers.	Section 1.3. Project purpose, Need and Rationale
Alternatives to the Project	3	Clarity and further detail regarding the need for both Roberts Bank Terminal 2 Project (RBT2) and Deltaport Berth 4 Project (DP4), and how DP4 will consider RBT2 in its alternative assessment should RBT2 be approved.	Based on multiple independent studies, GCT's own operational and market experience, and taking into account existing, approved known container capacity expansion projects on the West Coast of Canada, 2.0M to 2.4M additional capacity will be required sometime in the 2030s. This finding is further supported by the publicly available Black Quay study which is referenced in Section 10 in the DPD. VFPA has previously stated their preference for the exclusion of GCT as a terminal operator for RBT2, thus that project cannot be considered as an alternative to DP4 Project for GCT, as per the definition within the Impact Assessment guidance and thus it will not be further considered in the alternatives assessment. RBT2 is considered within the rationale for the need for DP4, as per section 1.3.2 of the DPD. There are many unknowns associated with the proposed RBT2 project, such as the uncertainty associated with regulatory approvals, whether the VFPA is able to secure required financing and procurement for construction and thereafter a feasible business case to support terminal operator procurement to allow RBT2 to move forward. As such, it would be challenging to further consider RBT2 in the DP4 alternatives assessment. Based on our knowledge, research and experience, DP4 is the most technically feasible and financially viable way forward to build competitive container capacity for Canada. This is further illustrated in the CPCS study available here: https://www.ceaa-acee.gc.ca/050/evaluations/document/130300	Section 1.3.2. Need for the Project and Rationale, Section 1.3.3. Benefits Section 3.8 Alternatives to the Project
Atmospheric Environment	1	Effects on air quality from the Project, resulting in impacts to sensitive ecosystem receptors, contamination of nearby land and waterbodies, and effects on plants, wildlife, fish and fish habitat, and human health	The Impact Assessment will assess the effects of air quality from the Project and how potential pathways of effects could impact other receptors such as, but not limited to, human health. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.4. Emissions and Discharges

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Atmospheric Environment	2	Use of the most stringent Canadian Ambient Air Quality Standards, B.C. Ambient Air Quality Objectives or regional standards, to undertake an assessment of existing baseline, Project-only, and future (baseline + Project), and cumulative effects.	The Impact Assessment will include an air quality assessment that will consider the effects of air emissions generated from the Project activities listed in Section 3.4 of the DPD. The Air Quality assessment will be characterized with an assessment of existing conditions, baseline, project-only, future, and cumulative effects sections, all of which will align with relevant federal and provincial guidance including BC Air Quality Objectives and Canadian Ambient Air Quality Standards. The potential effects of the Project emissions on community air quality will be determined by evaluating the local airshed and atmospheric dispersion. If dispersion modelling is deemed to be required, it will adhere to the BC Air Quality Dispersion Modelling Guidelines (2015). / The factors to be considered, and the scope of those factors will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.4. Emissions and Discharges, Section 7.11 Potential Cumulative Effects
Atmospheric Environment	3	Clarify the effectiveness of providing shore power as a mitigation measure to reduce emissions, if individual vessels are not required to have this technology.	Shore power is an effective mitigation measure to reducing CAC and GHG emissions and improving local air quality as it reduces vessel emissions and fuel consumption by allowing vessels to plug into the clean electrical grid and turn off their auxiliary diesel engines while docked. As stated in Section 7.4.1, GCT has shore power available at DP3 and is planning on providing further shore power connections for the DP4 Project. It is appreciated that not all container vessels currently have the technology to connect to shore power however the effectiveness of shore power for just one vessel has shown to eliminate 95 tonnes of air pollutants per vessel on average when connected to shore power during a typical stay at dock, which is equivalent to removing 20 vehicles off the road for a year. The capacity of the container vessel fleet that serves the west coast of North America for connecting to shore power is steadily increasing as newer vessels come online. This is particularly the case for the largest class of vessels, which the DP4 is designed to serve. It should be noted that container vessels to western North America tend to exhibit a chain of service to more than one port on the west coast rather than single origin-destination trips. This means that requirements for vessel shore power in California affect the vessels that stop at west coast Canadian ports. As such, shore power is expected to be a very effective mitigation at DP4.	Section 7.4.1. Air emissions
Archaeology	1	Impacts on archaeological resources at the Project site and impacts to archaeological sites from waves and resulting erosion from marine shipping	Based on past studies completed in the Roberts Bank area, GCT is aware of four archaeological sites and one heritage site that are all located over a kilometre away from the Project area. The most likely occurrence of archaeological features would be the wooden remains of tidal sturgeon weirs located around an infilled historic tidal channel that previously drained Canoe Passage and cuts across the Roberts Bank causeway approximately 300 m to 400 m from shore. Although it is not anticipated that the Project would interact with any known archaeological sites, if an archaeological site is encountered on provincial lands, the Project will proceed, at minimum, with procedures in accordance with conditions of a Section 12.4 Alteration Permit under the *Heritage Conservation Act*. Similarly, if any archaeological work is conducted on federal lands, the Project will proceed in accordance with federal archaeological practices and compliance requirements in coordination with Parks Canada. Any permitted alteration or mitigation of the site will be done with appropriate levels of consultation and collaboration with Indigenous nations to develop appropriate mitigations to address potential heritage effects. The Project will also comply with the requirements of the City of Delta's bylaws for Designated Heritage Properties. In regard to impacts associated with marine shipping, past studies have also concluded that ship-wake waves associated with similar Projects would not result in an adverse effect on archaeological or heritage sites in BC or the USA.	Section 7.7 Potential Effects on Heritage Resources
Archaeology	2	Request for the conduct of an archeological overview assessment/archeological Project assessment to understand existing baseline conditions).	An archaeological overview assessment was completed by Millennia Research Ltd in November 2014 (https://iaac-aeic.gc.ca/050/documents/p80054/101346E.pdf) and baseline archaeological conditions are well understood in the onshore, subtidal and intertidal areas, including the intertidal area overlapped by the DP4 expanded rail yard. The report did not recommend that additional AIA work be completed in the intertidal zone, but that further work be focused on developing appropriate mitigations, such as a Chance Find Procedure for all construction work. GCT is reviewing the report's conclusions and recommendations to help inform the Impact Assessment and understands the importance of protecting archaeological and heritage sites for future generations.	Section 7.7. Potential Effects on Heritage Resources

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Agricultural Land Reserve	1	Concerned that the Project will negatively impact surrounding farmland in the provincial Agricultural Land Reserve (ALR), both as a result of heavy particulates and air contaminants settling on the soil, and from the conversion of ALR land to industrial land.	Under the proposed Deltaport expansion, GCT has no plans to negatively impact surrounding farmland in the Provincial Agricultural Land Reserve (ALR), as the lands required to expand are not within or subject to the BC ALR. As noted in the DPD, Section 3.9 and Section 7.5, although outside the care and control of GCT, there is a potential for the railways to require upgrades by a third party not solely related to the Project. Any specific upgrades that may be required to support DP4 have not yet been determined. GCT will continue to liaise with the rail companies, who would be responsible for the construction and operation of any upgrades that might be required. VFPA has recently acquired provincial ALR lands that have an option for transportation needs development in the area. The factors to be considered, and the scope of those factors, related to rail upgrades required for the Project will require further consultation and engagement with relevant agencies, Indigenous nations and rail companies. Air emissions will be assessed as stated in the DPD.	Section 7.5 Potential Socio-Economic Effects
Climate Change and Greenhouse Gas (GHG) Emissions	1	Contribution of the Project's emissions on Canada's environmental commitments and climate change, and how this could impact regional, provincial and federal targets.	GCT is committed to reducing and avoiding GHG emissions where possible throughout the advancement of the Project. Section 7.4.3 of the DPD provides an estimate of the Project's emissions in accordance with the ECCC approach stated in the Strategic Assessment on Climate Change and federal and provincial guidance. This will be updated in the Impact Assessment as required. The Impact Assessment will also estimate the emissions generated from the Project based on the Project phases as stated in Section 3.4 of the DPD, describe the Project's contribution to best available technologies to mitigate GHG emissions from the Project and address the extent to which the effects of the Project hinder or contribute to BC and Canada's environmental obligations and climate change commitments.	Section 7.4.3. Greenhouse Gas Emissions
Climate Change and Greenhouse Gas (GHG) Emissions	2	Clarity on the scope of activities included in the GHG emissions estimates (including incidental physical activities), and descriptions of the methodologies and assumptions used for the quantification of GHG emissions from each activity.	Section 7.4.3 of the DPD adheres to the scope requirements stated in ECCC's Strategic Assessment of Climate Change in addition to federal and provincial requirements for a DPD. GHG methods, assumptions emission factors and emission data are presented in Section 7.4.3. This information will be updated as applicable in the Impact Assessment. which will provide a quantification of the net GHG emissions generated from various phases of the Project, including methodology, data, assumptions and emissions factors used for the quantification of the Project's GHG emissions. The scope of the assessment will align with the requirements of ECCC's Strategic Assessment of Climate Change guidance and any relevant provincial and federal requirements.	Section 7.4.3. Greenhouse Gas Emissions
Climate Change and Greenhouse Gas (GHG) Emissions	3	Consideration of best available technologies, best environmental practices, and mitigation measures to reduce GHG emissions.	GCT is committed to reducing and avoiding GHG emissions where possible through the best available technologies, mitigation measures and environmental practices as the Project design evolves and the project formally enters the assessment process. The use of low carbon technologies and electric equipment are some of the key opportunities GCT will consider while electrized yard cranes and hybrid/battery-powered vehicles are currently being considered for the Project. Additional best available technologies will be considered as per the ECCC's Strategic Assessment of Climate Change guidance. The Impact Assessment will also describe the best available technologies to mitigate GHG emissions associated with the Project and address the extent to which potential effects hinder or contribute to BC and Canada's environmental obligations and climate change commitments.	Section 7.4.3. Greenhouse Gas Emissions
Climate Change and Greenhouse Gas (GHG) Emissions	4	Clarity of the type of activities that would result in impacts on carbon sinks by ecosystem type.	Section 7.4.3 of the DPD, in accordance with the ECCC's Strategic Assessment of Climate Change guidance requirements, provides a description of activities that would result in an impact on carbon sinks. The Impact Assessment will further assess the impact of the Project on carbon sinks including land areas directly impacted by the Project based on ecosystem type.	Section 7.4.3. Greenhouse Gas Emissions
Culture	1	Harm from cultural interference, loss of culture, or limited access to traditional territories and access to traditional foods, and potential for Project to result in significant cumulative effect on aspects of Indigenous current use and cultural heritage.	The Impact Assessment will evaluate the potential effects of the Project on Indigenous Interests including resources for traditional purposes. Cumulative effects will also be addressed as part of the Impact Assessment where residual effects cannot be completely mitigated. Information obtained from engagement activities will be included in the Impact Assessment where application, and with consent from relevant Indigenous nations, as application materials to further address potential effects of the Project on Indigenous Interests. GCT is committed to engaging and consulting with potentially affected Indigenous nations and looks forward to continued engagement to better understand this concern. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.8. GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Culture	2	Effects to marine mammals resulting in effects to Indigenous spirituality, culture, heredity, cosmology and mythology.	The Impact Assessment will include an assessment of the effects on marine mammals from the Project. The scope of the marine mammal assessment and its effects on Indigenous spirituality, culture, heredity, cosmology and mythology have not yet been defined. Indigenous Knowledge from Indigenous nations will also be incorporated into the assessment. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines. GCT appreciates this issue and looks forward to continued engagement during this process.	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Culture	3	Effects of increased marine shipping activity on cultural health, including from reduced access to fishing and harvesting sites, reduced ability to travel in small vessels for subsistence travel, and effects to important cultural marine mammals such as Southern Resident Killer Whale (SRKW).	GCT understands concerns about the cumulative effects of shipping on marine use and is very pleased to see federal government, Indigenous Nation and other initiatives, e.g., Transport Canada's Cumulative Effects of Marine Shipping as part of the Oceans Protection Plan, and the Salish Sea initiative as part of the Trans Mountain Pipeline Expansion Project, which are at the strategic cumulative level, rather than the project level. GCT is keen to support these initiatives and will build on the results within the Impact Assessment to understand the role of DP4. The increase in the number of ships calling at GCT is predicted to be small relative to the increase in the volume of containers shipped (~14% increase in shipping for an ~83% increase in container volume), and very small relative to existing shipping in the Salish Sea. Marine use will be assessed within the Impact Assessment and GCT is committed to working with Indigenous nations and other marine users to avoid effects on marine use. GCT's experience of operating Deltaport and Vanterm and close relationship with the shipping lines will support this process. SRKW will be assessed as part of the Impact Assessment and a Species at Risk Act permit may be required. GCT understands its responsibility of operating and previously constructing within SRKW critical habitat over many years and again appreciates the extensive work that is underway to better understand the cumulative effects on SRKW and how better to protect this iconic species. GCT is also evaluating specific studies to inform the Impact Assessment on key issues such as underwater noise and food availability and is looking to collaborate with Indigenous nations and researchers in such assessments, in addition to specialists that are already part of GCT's team.	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Cumulative Effects	1	Cumulative effects (including from marine shipping) on the Salish Sea ecosystem, the Fraser River estuary, air quality, noise and vibration, sensory disturbance, migratory birds, wetlands, underwater noise, Southern Resident Killer Whales, fish and fish habitat, wildlife species, climate change, and intangible cultural heritage.	The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.11 Potential Cumulative Effects
Cumulative Effects	2	Lack of an appropriate baseline from which to measure existing cumulative effects and need for a holistic cumulative effects assessment incorporating Indigenous knowledge of all past and present development, to inform the DP4 impact assessment.	GCT acknowledges the importance of assessing cumulative effects and potential Project impacts on Indigenous rights and Interests and looks forward to collaborating with all Indigenous nations to incorporate Indigenous knowledge into the Project assessment, not limited to the assessment of cumulative effects. GCT looks forward to advancing an assessment that is informed by Indigenous knowledge and western science and engaging with Indigenous nations on the types of Indigenous knowledge that may be available.	Section 7.11 Potential Cumulative Effects, Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Cumulative Effects	3	Request that cumulative effects assessment incorporate the 40 different infrastructure Projects being advanced by the Greater Vancouver 2030 Program.	To assess the cumulative effects on a given VC, the residual effects of the Project will be assessed in combination with the potential effects of other reasonably foreseeable Projects (Projects that are either proposed (public disclosure) or have been approved to be built, but are not yet built) and activities that overlap with the effects of the Project. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.11 Potential Cumulative Effects

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Cumulative Effects	4	Cumulative effects on Indigenous Group's ability to engage in current use of lands and resources for traditional purposes, practice their culture, governance, as well as impacts to Indigenous rights. This includes the extent to which the ability to exercise such rights that have already been lost.	The Impact Assessment will require an assessment of the current use of lands and resources for traditional purposes. The assessment will also include the cumulative impacts on biophysical VCs such as impacts on wildlife populations and impacts on specific sites of traditional use, recognizing the current ability to practice an Indigenous right may already be constrained due to factors such as previous developments. GCT is committed to continuing to work with Indigenous nations to better understand baseline conditions and to support the analysis of the effects on Indigenous peoples that result from changes to the environment and on health, social and economic conditions that could result from the Project. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Cumulative Effects	5	Ability of Indigenous nations to participate meaningfully in the management of those effects.	GCT is committed to continuing to work with Indigenous nations throughout the Impact Assessment process, and should the Project receive the necessary approvals and advance to construction and work together to find mutually beneficial arrangements to manage potential effects into the future. GCT is interested to learn more about the ways in which Indigenous nations would like to participate in the assessment and management of cumulative effects, so that we can discuss where opportunities may exist. GCT welcomes further engagement on this issue and looks forward to continued engagement on this issue as the Impact Assessment progresses.	Section 8.4 Summary of Preliminary Engagement with Indigenous nations, Section 8.7 Summary of Planned Engagement Activities and Opportunities to Work Together
Cumulative Effects	6	Interest in long-term plans to assess cumulative effects from increased ship and tanker traffic to and from the site prior, during, and after construction, as well as into future.	GCT understand the importance of the assessment cumulative effects, including those associated with increased ship traffic in the Salish Sea. Although some of the issues identified are beyond GCT's care and control as GCT including the DP4 Project will not handle tanker traffic and will only handle container vessels. Cumulative effects will be addressed as part of the Impact Assessment. GCT welcomes further engagement on this issue and looks forward to engaging on this issue as the Project progresses through the assessment process.	Section 7.11 Potential Cumulative Effects
Current and Future Generations	1	Concern that further degradation of Roberts Bank will reach a tipping point and reduce the quality of life for Lower Mainland residents, as well as destroy natural resources for future generations.	GCT appreciates the importance of Roberts Bank to residents of the Lower Mainland. The Impact Assessment will include mitigation measures and monitoring programs to avoid, minimize, restore or otherwise offset potential effects from the Project. GCT welcomes further discussion on this concern and the opportunity to further engage and consult on this issue.	Section 7.13 Mitigation and Management Approaches Section 7.14 Monitoring
Differential Impacts upon Diverse Persons and Groups Differential Impacts upon Diverse Persons and Groups	1	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: • Employment opportunities; • Access to revenues; • Access to safe and affordable housing; • Compensation or benefits and expanded investment in the local community; • Decision making roles for new innovation and technologies; and • Access to services and programs that account for the perspective, knowledge and experiences of individuals and communities	Gender-based analysis plus (GBA+ analysis) approach will be used to collect gender-disaggregated data and assess other vulnerability factors, such as age, sex, gender, ethnicity, disability and socio-economic status in particular through the assessment of VCs in the social, economic, and health pillars. Further disaggregation may be used, wherever relevant. Culturally relevant research and consultation will be conducted to obtain inclusive quantitative and qualitative data. Findings of the GBA+ analysis will inform the development of the assessment methodology and the design of mitigation and enhancement measures, to ensure equitable distribution of economic benefits and opportunities generated by the Project. GCT team members have also completed GBA+ training and look forward to further engaging and consulting on this issue.	Section 7.5 Potential Socio-economic effects

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Differential Impacts upon Diverse Persons and Groups	2	The Project may create and exacerbate existing inequalities.	Gender and diversity analysis (GBA+) will be conducted to collect comprehensive socio-economic data disaggregated based on but not limited to gender, age, disability and socio-economic status. As part of this analysis, linkages between inequalities at different community levels will be examined. Impacts on vulnerable populations and inequalities across several domains (e.g., employment, access to health care, etc) will also be examined. Indigenous and public engagement, as well as key informant interviews will be conducted to understand risk perceptions, existing barriers and specific needs and gaps. Data will be used to track inequalities and design economic effects mitigation and enhancement measures, ensuring equitable distribution of economic benefits and opportunities, generated by the Project.	Table 14 List of anticipated baseline studies for the Project, Section 7.5 Potential Socio-economic Effects
Economic Conditions	1	Effects of the Project on the local and regional economy (including BC Tourism and commercial fisheries), local job creation, and labour force.	As part of the Project assessment, GCT will conduct an economic analysis and will provide an objective assessment of the Project's contribution to the local and regional economy, including measures of economic activity such as GDP, employment, labour income and government tax revenues. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Table 14 List of anticipated baseline studies for the Project, Section 7.5 Potential Socio-economic Effects
Economic Conditions	2	Consideration of employment barriers for under-represented groups and hiring strategies to ensure they are represented.	Existing barriers to education and training, as well as to obtaining and retaining employment among both Indigenous and non-Indigenous populations will be examined. Data sources may include the Industry Training Authority and National Collaborating Centre for Indigenous Health. Secondary research may be supplemented by key informant interviews. A gendered and equity-informed approach will be considered to design economic effects mitigation and enhancement measures, to ensure equitable distribution of economic benefits and opportunities, generated by the Project. GCT will also consult with BC Maritime Employers Association and International Longshore and Warehouse Union regarding hiring strategies.	Section 7.5 Potential Socio-economic Effects Section 3.7.3 Workforce Environment
Economic Conditions	3	Effects of the Project to Indigenous communities, and details on compensation, including emergency compensation, for any impacts, as well as how wealth generated will be shared.	Through ongoing engagement, GCT has identified potential environmental and socio-economic effects on Indigenous communities. GCT will continue working and engaging with Indigenous communities to develop culturally appropriate assessment methods and design mitigation and enhancement measures. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 8.4 Summary of Preliminary Engagement with Indigenous nations
Economic Conditions	4	Clarity on the accuracy of market projections for the container shipping industry.	Market projections and forecasts for the container shipping industry are provided by consultants specializing in world economics. The port sector is closely related to the changes in global economic activity and international trade. Market projections typically include three separate scenarios including a low forecast, medium forecast and high forecast. The forecast used to determine the need for the DP4 project is based on the medium forecasted analysis provided by Black Quay in 2019. Container volumes on Canada's west coast have had an average compounded annual growth rate of 4.1% per year from 2010 to 2020 and have been in line with previous market forecasts. Annual growth in 2020 dipped below the average compound annual growth rate and posted only 2% growth, largely due to the COVID-19 pandemic. GCT plans on updating the previous Black Quay forecast report during the preparation of the assessment for the Project to better determine the effects of COVID-19 on global activity and international trade developments.	Section 1.3.2 Need for the Project and Rationale
Economic Conditions	5	Concern that opportunity costs of building the Project are higher than the stated benefits due to lack of appropriate valuation of the benefits that the local environment provides.	GCT acknowledges the concern and appreciates the numerous values that Roberts Bank provides our community. Our long history of operations, including past expansions at Deltaport, has resulted in an in-depth understanding of those values and GCT is committed to avoiding and reducing impacts to the extent possible in collaboration with Indigenous nations, regulators, members of the public and various stakeholder groups.	N/A
Ecosystems	1	Effects of the Project on the sensitive Fraser River estuary and Salish Sea ecosystem, including on globally significant wetlands and critically important bird habitat.	The Impact Assessment will consider potential Project effects on wetlands and wildlife habitat in the assessment of marine resources. Marine habitat will be mapped and opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects to critical ecosystems will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project and will be confirmed through additional engagement with Indigenous nations, stakeholders, the public, federal and provincial regulators.	Section 7.2 Potential effects in Relation to *Impact Assessment Act* Requirements, Section 7.3 Potential Environmental Effects on Federal Land in a Province Other than the Province in which the Project is Proposed to be Carried Out or Outside Canada

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Effects on the Environment on the Project	1	Effects of the environment on the Project such as earthquakes, climate change, and sea-level rise.	The Impact Assessment will include an assessment of any change to the Project that may be caused by the environment, as per requirements stated in Section 22(1)(j) of the Impact Assessment Act and provincial requirements. The assessment will describe environmental factors such as extreme weather conditions, natural hazards and climate change as well as include mitigation measures to reduce the likelihood of effects on the Project. The Joint Guidelines document will present the applicable events within the "Effects of the Environment on the Project" section. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.10 Effects of the Environment on the Project
Effects on the Environment on the Project	2	Clarity on incorporation of climate change considerations into Project design, and the development of habitat compensation plans.	As per the requirements of ECCC's Strategic Assessment of Climate Change in addition to federal and provincial requirements, the inclusion of a climate resilience assessment will be required to assess the ability of the Project and Project design to anticipate, withstand, recover and adapt in response to climate-related hazards. The development of habitat compensation plans will be completed in accordance with federal and provincial requirements. The Joint Guidelines will provide information for the Impact Assessment on how the Project is resilient to and at risk from both the current and future impacts of climate change. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 1.4 Environmental Assessment Regulatory Requirements
Environmental and Impact Assessment Processes	1	Concerns about the credibility of information generated throughout the assessment process and the opportunity to participate in the process.	It is the view of GCT that this comment is outside of their care and control. GCT will re-direct this comment to the BC EAO and the IAAC who are leading the Impact Assessment process and are in the best position to address this concern.	N/A
Environmental and Impact Assessment Processes	2	Concerns regarding public confidence in the assessment process; including need for greater openness and transparency regarding the process and opportunities for meaningful public engagement	It is the view of GCT that this comment is outside of their care and control. GCT will re-direct this comment to the BC EAO and the IAAC of Canada who are leading the Impact Assessment process and are in the best position to address this concern.	N/A
Environmental and Impact Assessment Processes	3	Clarification on scope of impact assessment, including effects from road, rail activities and marine shipping.	The scope of the Impact Assessment will ultimately be decided by federal and provincial regulators, acknowledging that some issues are beyond GCT's care and control. The IAAC and BC EAO will provide opportunities for members of the public, Indigenous nations and others to provide input via formal engagement on the scope of the DP4 assessment and the factors to be considered once it is determined that the Project is ready to formally enter the cooperative assessment process at the end of the early engagement/planning phase.	N/A
Environmental and Impact Assessment Processes	4	Clarification on how size of the ships will be assessed, as opposed to just the increase in number.	The scope of the Impact Assessment has yet to be confirmed, including the scope of factors associated with marine shipping. The decision ultimately lies with federal and provincial regulators who will provide opportunities for members of the public, Indigenous nations and others to provide input via formal engagement to be carried out once it is determined that the Project is ready to formally enter the cooperative assessment process at the end of the early engagement/planning phase.	N/A
Environmental and Impact Assessment Processes	5	Effects must be avoided, and mitigation measures pursued to the greatest extent, including rehabilitation, planting of native species/removal of invasive species, effective monitoring, and placing openings into the Roberts Bank and ferry causeway.	GCT's goal is to reduce the Project footprint to the extent possible with a focus on avoiding impacts from the outset (including direct, indirect and cumulative effects).GCT has already adjusted some project components based on feedback from Indigenous nations, stakeholders and agencies such as minimizing expansion on the west side of the causeway. GCT is also aware of existing hydraulic openings in the Roberts Bank causeway. GCT looks forward to continuing to collaborate with regulators, Indigenous nations, the public and stakeholders to better understand and assess the values that are of key importance, including appropriate mitigation and compensation where impacts cannot be avoided.	Section 7.12 Determination of Potential Effects, Section 7.13 Mitigation and Management Approaches, Section 7.14 Monitoring
Fish and Fish Habitat	1	Effects on fish and fish habitat (including salmon and crab) through habitat destruction and degradation, dredging, pile driving noise/vibrations, impediments to migration, and mortality.	The Impact Assessment will consider potential Project effects on fish and fish habitat in the Marine Resources assessment. Marine habitat will be mapped and opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects to critical ecosystems will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2.1 Fish and Fish Habitat and Aquatic Species

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Fish and Fish Habitat	2	Effects to fish from changes in marine water quality and sediment re-suspension	The Impact Assessment will consider potential Project effects of water quality on fish and fish habitat in the Marine Resources assessment. Opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects to critical fish species will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2.1 Fish and Fish Habitat and Aquatic Species
Fish and Fish Habitat	3	Effects to Indigenous peoples and Indigenous rights as a result of adverse effects to fish.	The Impact Assessment is required to assess effects to Indigenous Interests, which include rights to harvest, including fish. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project and will be confirmed through additional engagement with Indigenous nations, stakeholders, the public, federal and provincial regulators. GCT is committed to consulting on this concern and looks forward to continued engagement with you during this process	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Fish and Fish Habitat	4	Request for a clear description of measures to avoid and mitigate effects to fish and fish habitat, and a description of offsetting measures for any residual effects following avoidance and mitigation. Measures must speak to their effectiveness and feasibility.	The Impact Assessment will consider potential Project effects on fish and fish habitat in the Marine Resources assessment. Marine habitat will be mapped and opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects to critical ecosystems will be clearly described including their effectiveness and feasibility. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2.1 Fish and Fish Habitat and Aquatic Species
Fish and Fish Habitat	5	Concern that Project will negate existing environmental remediation programs and provincial and federal commitments, aimed at restoring resources (including fish) in the Fraser River.	GCT appreciates the importance of the Fraser River and will support any applicable restoration efforts for fish and fish habitat for the Fraser River. The Impact Assessment will adhere to federal and provincial commitments related to fish and fish habitat in the Fraser River. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	N/A
Geology, Geochemistry, and Geological Hazards	1	Inclusion of a seismic hazard assessment and effects related to seismic activity	The inclusion of a seismic hazard assessment will be included in the Impact Assessment as per federal requirements under Section 22(1)(j) of the *Impact Assessment Act*. GCT anticipates earthquakes to be included in the seismic hazard assessment. Further details on the seismic hazard assessment will be presented in the Joint Guidelines. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.10 Effects of the Environment on the Project
Geology, Geochemistry, and Geological Hazards	2	Inclusion of the effects of the Project on tidal and coastal geomorphic environments, including increased sedimentation on the foreshore and wake effects.	Coastal geomorphology and sediment transport will be assessed within the Project assessment. This will include potential effects on Roberts Bank, such as ship wake and propeller wash. It will also include assessment and mitigation to avoid dendritic channels forming. Given GCT's experience operating Deltaport and in particular, constructing Deltaport Third Berth, GCT is best placed to understand these issues and has already incorporated them into the engineering design for DP4 undertaken to date.	N/A
Human Health	1	Concern regarding effects to human health from increased air, light, vibration and noise pollution, including from marine, road and rail activities.	The Impact Assessment will consider potential Project effects to human health associated with air pollution, vibration and noise within local and regional assessment areas, which have yet to be defined. The proposed scope of the human health assessment will be presented in the Joint Guidelines A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines. Due to the project's offshore location, exposure of human residents in the area to light associated with the Project is anticipated to be minimal and will not be quantitatively assessed as part of the Impact Assessment for human health risk assessment.	Section 7.6 Potential Effects on Human Health and Community Wellbeing

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Human Health	2	Concern regarding effects to Indigenous health because of real or perceived changes in the quality of marine species relied upon for food harvesting, health and cultural identity.	The Impact Assessment will consider potential Project effects on the quality of harvestable marine food items, as well as human health risk implications, within the local assessment area. Effects to Indigenous nations' health, including relationships to harvesting, will be addressed as part of the Project assessment. Application materials will also further address the potential effects of the Project on Indigenous Interests that have been identified in initial engagement activities. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Human Health	3	Inclusion of maps and diagrams identifying human receptor locations and distances between them and the Project.	The human health assessment will include maps and figures depicting human receptor locations and distances between the Project and those receptors will be included in the Project Assessment. Relevant locations will be determined through a problem formulation and consideration of the local study area developed as part of the Project assessment.	N/A
Human Health	4	Request for meaningful engagement on mitigations and compensation for effects to air quality, noise, light pollution.	As the Project progresses through detailed design, GCT is committed to implementing and considering mitigations and compensations for air quality, noise and light pollution and incorporating successful design elements from previous developments at Roberts Bank. Mitigation measures for potential Project effects will be outlined as part of the Impact Assessment which will be shared with Indigenous nations, regulators and the public for review and comment.	Section 7.13 Mitigation and Management Approaches
Human Health	5	Increased psychological and emotional stress from uncertainty over Project effects.	Uncertainty is a key component that must be addressed in all project assessments. Under federal and provincial guidelines, predictions of residual effects to VCs or Indigenous interests require characterization of uncertainty and the level of confidence in predicted residual effects. This may include a description of the nature and degree of uncertainty and confidence related to the data, modeling and methods used in the analysis of effects. Where uncertainty exists, additional monitoring or adaptative management may be required as a condition of project approvals to ensure mitigations are effective and works as predicted. The same approach will be required for the DP4 Impact Assessment to reduce uncertainty (and stress).	N/A
Indigenous People's Right	1	Concerns raised by Indigenous nations about shipping effects on fishing and harvesting rights, food security, use/enjoyment of treaty lands, and human health effects from pollution that negatively impact treaty rights, aboriginal title, governance rights, and culture.	The Impact Assessment is required to assess effects to Indigenous Interests, which include rights to harvest, including fish. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities
Indigenous People's Right	2	Clarity on how the United Nations Declaration on the Rights of Indigenous People's will be applied to the assessment.	GCT supports the principles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). The processes set out in the *Impact Assessment Act* and the BC *Environmental Assessment Act* align fundamentally with the objectives of Free, Prior and Informed Consent. As a result, through participation in the Impact Assessment, Indigenous nations can provide their Free, Prior and Informed Consent in relation to the Project. Further information about this can be found in the following document: https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/environmental-assessments/environmental-assessment-revitalization/documents/free_prior_informed_consent_in_an_ea_context.pdf.	Section 1.4 Environmental Assessment Regulatory Requirements.
Indigenous People's Right	3	Clarity on whether the alternatives assessment considered impacts to Indigenous rights, including fishing grounds.	The Impact Assessment will include an assessment of "alternative means of carrying out the project", and a rationale for the preferred approach/design based on various factors, including technical feasibility and financial viability. The Project location considers minimizing impacts to no float zones at Roberts Bank and avoidance of Indigenous crabbing grounds where possible. Feedback from ongoing engagement with Indigenous nations is also being used to inform the preferred alternative, and GCT welcomes further discussions to understand concerns in more depth, and to explore ways GCT can address concerns throughout the Impact Assessment process.	Section 3.9 Alternative Means of Carrying out the Project

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Indigenous People's Right	4	Impacts from accidents and malfunctions to Aboriginal and or Treaty rights, including resource harvesting, traditional practices and culture and heritage sites.	The Joint Guidelines must include a risk-based approach for the assessment of malfunctions and accidents that could impact Indigenous Interests identified for the Project. GCT appreciates this concern and will provide additional information about effects from accidents and malfunctions to Indigenous Interests including Aboriginal and Treaty rights during the Project assessment. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the Joint Guidelines.	Section 7.9 Public and Environmental Safety
Indigenous People's Right	5	Concern of the usage of past accommodation measures or old data from past Projects being utilized as supplementary or supporting information to support this proposed Project.	GCT is committed to ensuring the Impact Assessment contains robust, applicable, current, defensible and appropriate data. There will be many different sources used to support the assessment of the Project, which will be clearly described in Project Assessment. If there are any specific concerns about certain data that may be used to assess the Project, GCT would welcome that information. GCT looks forward to further engagement and consultation on this issue.	N/A
Indigenous People's Right	6	Potential Project interactions with sense of place and identity including increased disruption of sense of place as a result of changes to valued places and place characteristics (e.g., from marine traffic, noise disturbances and ecological changes); disruption of identity and increased disconnection from cultural heritage due to direct and indirect Project effects on fishing, ceremonies, gatherings, and consumption of traditional foods.	The Impact Assessment will evaluate potential project interactions as it relates to Indigenous rights and interests and associated sense of place and identity. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines. GCT looks forward to ongoing engagement to understand this concern in more detail, and to explore ways in which this concern can be expressed and addressed within the Impact Assessment and associated processes and documents.	N/A
Infrastructure and Services	1	Concern over port expansion and increases in road traffic, congestion and accidents on highways, bridges, tunnels, and increased rail shipping impacting safety and infrastructure in the Lower Mainland, Fraser Valley and Fraser Canyon.	The scope of the Impact Assessment has yet to be confirmed, including the scope of factors associated with road and rail. The decision ultimately lies with federal and provincial regulators, acknowledging that some issues are beyond the care and control of GCT. The BC EAO and IAAC will provide opportunities for members of the public, Indigenous nations and others to provide input via formal engagement on the scope of the Project and the factors to be considered once it is determined that the Project is ready to formally enter the assessment process at the end of the early engagement/planning phase.	Section 3.4. Project Activities
Infrastructure and Services	2	Shipping efficiencies should be a priority over development, including the development of off-site parking, container storage, and loading in areas that are less sensitive.	GCT continues to look at ways to be innovative and to maximize the land property provide to us under our lease arrangements. Since January 2010 when the area at Deltaport was last expanded to its current footprint, TEU throughput has increased from 1,125,047 TEU to 1,795,661 TEU during those ten years. This is a result of GCT's operational improvements through a combination of continued movement towards higher stacking container handling equipment and to the extent possible minimizing the time that shipping containers need to dwell at our terminals. GCT has exhausted currently known opportunities to remove from the terminal non-essential personnel and related ancillary infrastructures such as parking lots, office buildings and other structures that don't necessarily have to be on the actual terminal that services ships and cargoes. This included discussions in years past with the Tsawwassen First Nation about the availability of some of their lands to investigate the possibility of empty container storage not directly unloaded from trains and loaded to vessels however these lands have since been developed for other industrial uses. All other lands in close proximately to Deltaport are either classified under the Agriculture Land Reserve or otherwise not available to GCT. Therefore GCT is seeking to expand the Deltaport terminal through the DP4 expansion Project.	N/A
Land and Resource Use	1	Concern over zoning, as proposed development area for DP4 is not designated as "Industrial" under the Metro Vancouver Regional Growth Strategy.	As stated in Section 4.2, the existing GCT Deltaport and therefore a portion of the area planned for DP4 is designated as Industrial under the Metro Vancouver Regional Growth Strategy. The remaining area of DP4 is not covered by the plan and GCT will work with relevant agencies to engage further on this issue, if required. Much of DP4 would fall within land designated industrial within the City of Delta Official Community Plan, with the remainder not designated. The Impact Assessment will describe baseline conditions for land and resource use, such as the identification of land zoning, relevant land use plans or community plans that may be affected by the Project. This will include the location of and access to industrial land uses in the vicinity of the Project.	Section 4.2 Planning Context and Zoning

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Marine Use (Excluding Navigation)	1	Concern over effects on aquatic environments including water quality, marine mammals, fish and plant habitats, invasive species, harvesting, safety, culture, heritage, and economy caused by shipping and presence of ships	The Impact Assessment will consider potential Project effects (including shipping) to marine species and ecosystems in the Marine Resources assessment. Opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects to critical ecosystems will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2.1. Fish and Fish Habitat and Aquatic Species
Marine Use (Excluding Navigation)	2	Concern about disposal of dredged material and if it will be disposed of in the Salish Sea.	Dredged material will be re-used for causeway and terminal land reclamation and/or creation of new habitat within the Project as an alternative to disposal at sea. As stated in Section 3.3 if re-use material is limited, there may be potential for disposal at sea at an approved location, however the disposal at sea requirement has not yet been determined, and therefore a disposal site has not been identified. Additional permitting associated with disposal at sea may also require additional consultation led by federal authorities.	Section 3.3 Project Overview and Components
Marine Shipping	1	Request for marine shipping to be scoped into the assessment.	It is the view of GCT that this comment is outside of their care and control. As per guidance in the JSOIE report, GCT will re-direct this comment to provincial and/or federal agencies that are in a position to address this issue.	N/A
Marine Shipping	2	Clarity regarding increases in marine shipping should the short sea shipping berth not be constructed.	As explained in the DPD Section 3.4.4, a short sea shipping berth is being considered for inclusion into the Project, as marine shipping of containers on barges along the coast aligns with federal government initiatives and Metro Vancouver plans, and GCTs objective to increase operational efficiency and reduce impacts of truck transportation from GCT Deltaport. Short sea shipping is estimated to be 3.7 times more fuel-efficient than transportation by truck (Metro Vancouver, 2020a) which in turn leads to reduced fuel costs and consumption, reduced GHG emissions, less noise and air pollution. Short sea shipping would not be expected to affect the volume of containers or the size of the ships calling at GCT Deltaport and therefore there will be no increase in marine shipping should the short sea shipping berth not be constructed. Different stakeholders have suggested the inclusion or exclusion of the short sea shipping capability into the Project.	Section 3.4.4 Physical activities incidental to the Project
Marine Shipping	3	Request for a ship size and traffic study to evaluate the impacts of larger vessels (e.g., from Panamax to Post-Panamax and Ultra Large Container Vessel-size vessels) with detailed description of frequency, routing, speed, transit time of vessels, types and sizes of vessels, density statistics, cargo types, ports of origin and destination, and identification of areas where close encounters or crossing traffic is likely to support marine safety.	The rationale for the Project is to provide timely container handling capacity to Canadian exporters and importers based on historical and projected demand growth on the west coast of Canada. In 2019 GCT engaged Black Quay Consulting to provide an analysis of the timing of various container capacity options in British Columbia, and theoretical resultant effects on the future container fleet calling on the west coast of Canada. The report is included in the reference section of the DPD. The expected number of ships, ship size, frequency, basic routing and other important information for the DP4 Project are provided therein. By 2035, with DP4 built, the expected fleet size would include 8 weekly container services calling at Deltaport from the Far East. These services would come directly from Asia to the Pacific Northwest ports, including Vancouver and would be in the 10,000 to 17,000 TEU classes of ships. GCT plans on performing further analysis on future container volume projections for BC during the preparation of the EA and will include all pertinent information required to assess the effects of marine shipping. Although out of GCT's care and control, GCT will work closely with federal departments like Transport Canada and the Canadian Coast Guard during the eventual operation of DP4 to ensure Marine Aids to Navigation and communications and traffic services continue with their good work to regulate marine traffic as per the legislation according to local conditions, issue and disseminate navigation warnings and continue to ensure safe vessel passage in Canadian waters.	Section 1.3.2. Need for the Project and Rationale, Section 3.4.4. Physical Activities Incidental to the Project
Marine Shipping	4	Concern for effects on Indigenous people's environment, health, culture, heritage sites and rights including management, fishing, harvesting, transmission of knowledge and safety on the water	Potential effects to Indigenous people's environment, health, culture, heritage sites and rights will be addressed in the Project assessment. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.8 Potential Effects of Project-Related Changes on Indigenous Peoples
Marine Shipping	5	Concern regarding safety hazards from increased vessel traffic, loss of fishing gear, and the inhibition of harvesting activities.	Marine use and marine navigation will assess concerns regarding safety hazards from vessel traffic, as per federal and provincial requirements. The effects to Indigenous nations' ability to harvest is also within the scope of the assessment, as part of effects to Indigenous Interests. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.8 GCT's Preliminary Understanding of Potential Effects on Indigenous Interests from Project Activities

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Marine Shipping	6	Clarity required regarding operational details, including vessel movements, for short sea shipping activities.	As explained in the DPD Section 3.4.4, a short sea shipping berth is being considered for inclusion into the Project, as marine shipping of containers on barges along the coast aligns with federal government initiatives and Metro Vancouver plans, and GCTs objective to increase operational efficiency and reduce impacts of truck transportation from GCT Deltaport. Short sea shipping is estimated to be 3.7 times more fuel-efficient than transportation by truck (Metro Vancouver, 2020a) which in turn leads to reduced fuel costs and consumption, reduced GHG emissions, less noise and air pollution. However, GCT is considering a short sea shipping berth in anticipation of future use as there are currently no off-terminal short sea shipping facilities to accommodate container movement from GCT Deltaport and none are planned. It is not possible at this stage to ascertain if/when or where such facilities would be constructed. It is therefore also impossible to define the vessel routes or volumes associated with short sea shipping. If plans for off-terminal short-sea shipping facilities are progressed during the Impact Assessment it may be possible to define vessel operational requirements associated with barging to that facility, and incorporate them into the Impact Assessment at that time.	Section 3.4.4 Physical activities incidental to the Project
Marine Mammals	1	Concern regarding the lack of assessment of impacts to Southern Resident Killer Whale, and the applicability of Section 11 of the Species at Risk Act.	SRKW will be assessed within the Project assessment. The Project location is considerate of avoiding chinook salmon habitat which is a key species in the SRKW diet. GCT will undertake studies to meet the requirements of *the Species at Risk Act*, including construction and operation of the Project within SRKW critical habitat. Therefore, there will be an extensive assessment of effects on SRKW, and associated mitigation and monitoring developed. To date, one Conservation Agreement has been implemented under Section 11 of the *Species at Risk Act* for SRKW. This is between DFO, VFPA and organizations representing the shipping industry, including those that call at Deltaport. The purpose of the conservation agreement is to develop, implement, monitor, assess and adapt voluntary measures to reduce the contribution of large commercial vessels to threats to SRKW and advance research and educational outreach to better understand how large commercial vessels contribute to threats to SRKW and their critical habitat, through the Enhancing Cetacean Habitat and Observation Program. GCT has discussed Conservation Agreements with DFO and is investigating ways to further support the existing or future conservation agreements.	Table 14 List of anticipated baseline studies for the Project, Section 7.2.1 Fish and Fish Habitat and Aquatic Species
Marine Mammals	2	Concern about effects of marine shipping and short sea shipping to Southern Resident Killer Whale, including from increased underwater noise, ship strikes and physical disruption, anchorages (including resuspension of seabed contaminants like PCBs), and toxic fuel spills, and other non-acoustic pathways. This will lead to changes to behavior, foraging and survival.	GCT understands its responsibility of operating and constructing within SRKW critical habitat over many years and again appreciates the extensive work that is underway to better understand the cumulative effects on SRKW and how better to protect this iconic species. SRKW will be a crucial part of the Impact Assessment which will assess the potential effects on SRKW, consider the potential of Project activities and determine appropriate mitigation and monitoring requirements to address the potential effects. A cumulative effects assessment will also be completed regarding marine shipping and marine mammals. A *Species at Risk Act* permit may be required. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Table 14 List of anticipated baseline studies for the Project, Section 7.2.1 Fish and Fish Habitat and Aquatic Species
Marine Mammals	3	Concern about effects on marine mammals (including cetaceans and seals/sea lions) and reduction in their access to prey through reduced ability to forage, low prey availability, the alteration and destruction of fish habitat, and fish mortality (Chinook salmon).	Marine mammals will be included in the Project assessment, including SRKW which may also require a permit under the *Species at Risk Act*. GCT understands its responsibility operating within marine mammal habitat and appreciates the extensive work that is underway to better understand the cumulative effects on SRKW and how better to protect this iconic species. GCT will also be delivering specific studies within the Impact Assessment on key issues such as underwater noise and food availability and is looking to collaborate and support Indigenous nations and researchers in such assessments, in addition to specialists that are already part of GCT's team.	Table 14 List of anticipated baseline studies for the Project, Section 7.2.1 Fish and Fish Habitat and Aquatic Species
Marine Mammals	4	Concern about marine noise levels and monitoring with respect to Southern Resident Killer Whale.	Underwater noise monitoring will be assessed within the Project assessment. SRKW will be a crucial part of the Impact Assessment which will assess the potential effects on SRKW, consider the potential of Project activities and determine appropriate mitigation and monitoring requirements to address the potential effects. The DPD includes a description of potential preliminary mitigations to reduce underwater noise during construction and operations.	Table 14 List of anticipated baseline studies for the Project, Section 7.2.1 Fish and Fish Habitat and Aquatic Species
Marine Mammals	5	Clarity regarding the effectiveness of speed restrictions, vessel routing and construction mitigation measures as mitigation measures to reduce adverse effects to Southern Resident Killer Whale and its critical habitat.	The Impact Assessment will include a description of proposed mitigation measures, including those related specifically to reducing potential adverse effects to SRKW and their habitat. Where there is high uncertainty about the mitigation effectiveness (for example, where mitigation measures are proposed to be implemented for which there is little experience or questions about their effectiveness), a range of likely, plausible and possible outcomes will be assessed and additional studies, mitigation or adaptive management plans may be proposed.	Table 14 List of anticipated baseline studies for the Project, Section 7.2.1 Fish and Fish Habitat and Aquatic Species

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Migratory Birds	1	Concern over potential impacts to the Pacific Flyway and degrading the environment for migratory/overwintering shorebirds and waterfowl, birds of prey, and species at risk.	The Impact Assessment will consider potential Project effects on wildlife, species at risk, and their habitat in the Wildlife Resources assessment. Opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2.2 Migratory Birds, Table 14 List of anticipated baseline studies for the Project
Migratory Birds	2	Concern for effects to biofilm, and corresponding effects to migratory birds.	The Impact Assessment will consider potential Project effects on waterbirds and their habitat requirements in the Wildlife Resources assessment. Based on preliminary studies, the Project location is considerate of avoiding critical biofilm presence on the west side of the causeway. Opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2.2 Migratory Birds, Table 14 List of anticipated baseline studies for the Project
Migratory Birds	3	Clarity regarding distance of the Project to the Western Hemisphere Shorebird Reserve Network Site.	The Fraser River Estuary has been designated as a Western Hemisphere Shorebird Reserve Network Site (CA06) and is overlapped by the Project Area.	Section 4.3 Proximity to Parks and Protected Areas, Table 10 Parks and Protected Areas Located Within the Vicinity of the Project
Migratory Birds	4	Additional clarity required regarding effects pathways, including habitat degradation due to terminal operations, pollution associated with increased train and truck traffic (e.g., road, rail, and ship traffic), and climate change impacts.	The Impact Assessment will describe potential pathways by which the Project components and terminal activities could impact various VCs of the biophysical or human environment, including Indigenous interests. Effects pathways will be assessed through the selection of appropriate VCs, sub-components and intermediate components which will be described in the Joint Guidelines and subject to further engagement and approval by federal and provincial regulators.	Section 7.2.2 Migratory Birds, Table 14 List of anticipated baseline studies for the Project
Navigation	1	Concern that navigational hazards are high in the Tsawwassen Ferry/Roberts Bank/Fraser River delta area and safety restrictions should be assessed and increased to mitigate collisions, spills and risk to public safety.	It is the view of GCT that this comment related to increased safety restrictions is outside of their care and control. As per guidance in the JSOIE report, GCT will re-direct this comment to provincial and/or federal agencies who are in a position to address this issue, in this case, VFPA, Coast Guard, Marine Communication and Traffic Services, Aids to Navigation and Transport Canada (under the *Canadian Navigable Waters Act*) as appropriate for jurisdiction. Potential issues associated with collisions, spills and public safety will be included in the Project assessment.	N/A
Other	1	Consideration to re-establish the Fraser River Estuary Management Plan, which could inform future provincial and federal assessments.	It is the view of GCT that this comment is outside of their care and control. As per guidance in the JSOIE report, GCT will re-direct this comment to provincial and/or federal agencies that are in a position to address this issue. But GCT is supportive of the re-establishment of the Fraser River Estuary Management Plan.	N/A
Other	2	Plans and reports referenced in the Initial Project Description should be made public, such as a waste management plan and the Black Quay Consulting report.	The Black Quay Consulting report is included as a reference within the reference Section 10 of DPD. The report is also publicly available on the federal government website (https://www.ceaa-acee.gc.ca/050/documents/p80054/130087E.pdf). The Impact Assessment will include further details regarding a waste management plan.	Section 10 References
Other	3	Clarity on why Canada should risk its environment to handle U.S. container traffic coming through Roberts Bank, which could be handled by U.S. ports.	Canada is a trading nation and through working with the USA, Canada and the USA form a single North American shipping container market. Like the free flow of trade, environmental impacts do not stop at artificial national borders, but rather impact our collective ecosystem. Therefore, limiting the free flow of container trade between the USA and Canada would not result in Canadian environmental benefits, with any potential negative effects of trade localized in the USA and not materialize across an artificial 49th parallel. Furthermore, the level of US containerized cargo imports via Canadian ports as a share of total US port traffic remains marginal, averaging less than 3% over the past decade. Meanwhile, Canadian imports transiting through US ports represent a higher proportion of Canada's domestic cargo; at least 3 times the average of US cargo moving through Canadian ports. Simply put, US ports handle a substantially higher percentage of Canada-bound containerized cargo than Canadian ports handle US-bound cargo. (Source:https://tc.canada.ca/en/corporate-services/policies/north-american-shipping-container-market) Further information on West Coast of Canada container origin/destination trade is available in the Mercator report, GCT provided to the RBT2 Review Panel during the Socio-Economic Impacts hearing: https://www.ceaa-acee.gc.ca/050/evaluations/document/130305	Section 1.3 Project Purpose, Need, and Rationale

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Other	4	Potential effect of COVID-19 on Projected employment and job creation data, and potential effect of COVID-19 on trade.	The projected employment and job creation data for the construction and operation of the Project is not expected to be affected by COVID-19. Port workers in marine container terminals have been deemed essential service workers by Health Canada because of the role that the movement of containerized goods has in the economic welfare of Canada. World and Federal health agencies, including the World Health Organization and Health Canada, expect the COVID-19 pandemic to be contained and manageable through the implementation of the ongoing vaccination programs. GCT does not envision COVID-19 will have any negative effect on trade once the Project is completed and operational in ten years by 2030. Based just on 2020 container trade, Vancouver had a 2% increase in volumes as compared to 2019. In addition, volumes on the West Coast of North America (Canada/USA) were flat when comparing the same time period. Trade volumes started to pick up during Q4, 2020 after the initial concerns of COVID-19 worldwide and today all West Coast container ports are reporting high trade volumes, with Vancouver posting a 17% increase to volumes in January 2021 as compared to January 2020. However, GCT plans on updating the previous Black Quay forecast report during the preparation of the Impact Assessment to determine the effects of COVID-19 on global activity and international trade developments.	Section 3.7 Project workforce
Other	5	Alternative uses/activities associated with the short sea shipping portion of the Project if short sea shipping is deemed unfeasible.	Short sea shipping does not substantially affect the terminal footprint required. If it is determined that short sea shipping is not economically viable, the terminal footprint and construction techniques would remain the same, as the area would be required for container storage expansion and the increase in the transfer of containers between ocean-going vessels and inland road transportation. The removal of the short sea shipping berth could result in a small reduction in the size of the dredge pocket through the reconfiguration of the terminal.	Section 3.9 Alternative Means of Carrying out the Project
Project Contribution to Sustainability	1	Metro Vancouver recommends incorporating Regional Green Infrastructure Network Resource Guide into development principles, design, and Project planning to enhance habitat, shade and other ecosystem services within built environment.	A core focus for GCT is ensuring that the Project maintains sustainable and environmentally-responsible practices as it advances the Project design. GCT will review and consider practices such as green infrastructure opportunities as stated in Metro Vancouver's Regional Green Infrastructure Network Resource Guide along with other related application resources. To learn more about GCT's Global Commitment visit https://globalterminals.com/globalcommitment/	Section 3.4.2 Operations, Section 1.3.3 Project Benefits
Project Contribution to Sustainability	2	Concern regarding further development and the ability to maintain the ecological integrity of Roberts Bank and the Salish Sea.	GCT acknowledges the concerns and is committed to advancing the Project through a robust and coordinated assessment process under the federal *Impact Assessment Act* and provincial *Environmental Assessment Act* to evaluate potential effects to Roberts Bank and the Salish Sea. The assessment will also require an assessment of cumulative effects including those associated with other past, present and reasonably foreseeable projects that may overlap in time and space. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7 Potential Effects of the Project
Public and Stakeholder Engagement	1	Concerned about consultation fatigue and duplication of efforts after being involved in the environmental assessment process for the Roberts Bank Terminal 2 Project.	GCT acknowledges that consultation fatigue, particularly in a digital setting, and duplication of effort is a concern for some stakeholders and the general public. GCT is working closely with its expert advisors to review all studies completed in the Project area and build upon the considerable depth of research already conducted. This includes studies and research made publicly available through the development of other proposed and completed projects in the area by subject matter experts, local Indigenous nations, and non-governmental organizations. GCT is committed to ensuring robust engagement is completed with all stakeholders and, to combat consultation fatigue, GCT has been utilizing a number of platforms and engagement methods to ensure there are a variety of ways to provide feedback on the proposed Project. Please refer to our Early Engagement Plan for additional details on how GCT will actively engage with stakeholders and the public throughout the process.	Section 6.1 Past and Present Environmental Studies in the Region, Section 7 Potential Effects of the Project
Purpose of and Need for the Project	1	Clarity on Project purpose, given potential that a future world economy could require less cargo shipping and greater local resilience.	The purpose of the Project is to provide timely container handling capacity to Canadian exporters and importers based on historical and projected demand growth on the west coast of Canada. The Project's purpose also aligns with the *Canadian Marine Act* Section 4 (a) to ensure that Canada is provided with the marine infrastructure that it needs to support and promote the country's economic and social competitiveness and trade objectives. GCT is constantly monitoring economic trends and does not currently foresee less demand for less cargo shipping but the Project's incremental approach is designed to act accordingly should market conditions change.	Section 1.3 Project, Purpose, Need and Rationale

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Purpose of and Need for the Project	2	Clarity on Project need, given existing port capacity on the West Coast.	Container volumes on Canada's west coast have had an average Compounded Annual Growth Rate of 4.1% per year since 2010-2020, but it also included sharp declines during economic downturns and recoveries. The Project represents an approach of incremental expansion of west coast container terminal capacity aimed at timely, efficiently and competitively delivering container capacity to Canadian exporters, consumers, and supply chain partners. The development of the Project is timed to meet forecasts for growth, while the incremental approach provides for market fluctuations in container terminal demand and is designed to effectively accommodate increasing vessel size. GCT feels that the Project is the right-sized approach to deliver Canada's and our trading partners' needs.	Section 1.3.2. Need for the Project and Rationale
Social Conditions	1	Concern over impacts to local municipalities as a result of increased road/rail traffic.	GCT has been operating at Deltaport since 1997 and acknowledges the concerns raised by local municipalities associated with increased road and rail traffic. GCT is proposing to advance DP4 concurrently with over 40 different infrastructure projects and studies being advanced by the Greater Vancouver 2030 Program to expand existing off terminal road and rail infrastructure. Identification and mitigation of road, rail and other potential network constraints will be essential to the national supply chain, the local economy, and the quality of life for residents who live along the transportation corridor. The Impact Assessment will require an assessment of air quality, noise, vibration and other factors associated with increased road and rail traffic, and the scope of the assessment will be confirmed by federal and provincial regulators following additional engagement with municipalities, Indigenous nations and other interested parties.	Section 1.3.3 Project Benefits Section 7 Potential Effects of the Project
Social Conditions	2	Concern over lack of appropriate funding for the provision of emergency services on Port Lands.	GCT Deltaport has a comprehensive Emergency Response Plan that covers all potential major accidents and malfunctions, including defined strategies to prevent and mitigate environmental impacts associated with emergency events. GCT stress-tests the plans by conducting collaborative exercises with the City of Delta first responders. The design, construction and ongoing operation/maintenance of the Project will meet all stringent codes and standards requirements. All contractors will also be required to develop their own Emergency Response Plans that are aligned with and approved by GCT. Additionally, GCT has contracts with Quantum Murray Environmental (Emergency Response) and with Western Canada Marine Response Corporation (Transport Canada's Certified Marine Spill Response Organization) for 24-hour response, mitigation and clean-up in circumstances where there is potential for a hazardous spill or leak. The environmental assessment will consider the potential accidents and malfunctions that may occur due to the construction and additional operational aspects of the Project at GCT Deltaport, the potential effects of such incidents and mitigation measures that will be implemented as part of the Project's design. Throughout the development of the Project, GCT will engage with Delta Police to ensure that their concerns are incorporated. As part of the Project, a new building for security will be added. GCT is dedicated to protecting both cargo and the harbour. All loaded imports and exports are kept in highly secured, monitored areas, with the VFPA providing security services outside of the terminal, and the Canadian Border Services Agency providing inspection of cargoes.	N/A
Species at Risk, Wildlife and their Habitat	1	Construction and operation will negatively affect wildlife, species at risk, and their habitat in the Project area, including as a result of harm and disturbance, changes in critical habitat, mortality or injury, reduced food source availability, and disruption in predatory/prey relationships.	The Impact Assessment will consider potential Project effects to wildlife, species at risk, and their habitat in the Wildlife Resources assessment including positive and negative effects. Opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects have already been considered and will be further identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2 Potential Effects in Relation to *Impact Assessment Act* Requirements Section 7.12 Determination of Potential Effects Section 7.13 Mitigation and Management Approaches
Species at Risk, Wildlife and their Habitat	2	Concern about road or rail infrastructure, increased capacity to existing linear transportation corridors, and increases in road or rail traffic that could result in increased wildlife injury/mortality.	The Impact Assessment will consider changes to road and rail transportation to/from GCT Deltaport. Potential Project effects to wildlife, species at risk, and their habitat will be considered in the Wildlife Resources assessment. The factors to be considered, and the scope of those factors, will be described in the joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2 Potential Effects in Relation to *Impact Assessment Act* Requirements
Species at Risk, Wildlife and their Habitat	3	Sensory disturbances (noise, vibration, lighting) from construction and operation may cause changes to a species' movement, migration patterns, avoidance or attraction to an area.	The Impact Assessment will characterize sensory disturbances during construction and operation in the Noise and Vibration and the Light assessment sections. Potential effects of sensory disturbance to wildlife will be considered in the Wildlife Resources assessment. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project, and will be confirmed through additional engagement with Indigenous nations, stakeholders, the public, federal and provincial regulators.	Section 7.4.2 Noise, Vibration and Light Emissions Section 7.2.2 Birds

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Species at Risk, Wildlife and their Habitat	4	Potential effects and proposed offset for overlap with Roberts Bank Wildlife Management Area.	Based on the current design the slope of the dredge pocket and crest protection overlaps the WMA by only approximately one hectare. GCT is evaluating design options to minimize the dredge area and to confirm if the WMA can be avoided while ensuring the safe operation of DP4. More broadly the Impact Assessment will consider potential Project effects to parks and protected areas and identify opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	N/A
Transboundary	1	Inclusion of transboundary environments in assessment study areas.	The Joint Guidelines will describe spatial boundaries, including local and regional study areas for each VC included in assessing the potential adverse and positive environmental, health, social and economic effects of the Project. In some cases, spatial boundaries may extend to areas outside of Canada where transboundary effects (and potentially cumulative effects) are expected. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.11 Potential Cumulative Effects
Transboundary	2	Effects on fish and fish habitat from DP4 will have significant direct impacts for Indigenous people and their treaty rights in the US, especially as it relates to increased vessel movements in US shipping lanes and the effects on subsistence culture and spiritual ways of life.	Potential effects to Indigenous Interests as a result of effects to Indigenous rights to harvest, including fisheries, will be addressed in the Project assessment. Section 7.3 of the DPD will also contain a section that contains information about anticipated effects outside of Canada, including US waters from shipping activities. GCT welcomes ongoing engagement opportunities on this topic, including suggestions for habitat enhancement projects to understand these interconnections further, and to explore how they could be reflected in the Impact Assessment.	Section 7.3 Potential Environmental Effects on Federal Lands in a Province Other than the Province in which the Project is Proposed to be Carried Out or Outside Canada
Visual Environment	1	Concern for visual effects from anchorages and their resulting light and air emissions.	The Impact Assessment will require an assessment of potential visual and air quality impacts, that will consider those associated with vessel anchorages. The factors to be considered, and the scope of those factors will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.6 Potential Effects on Human Health and Community Wellbeing, Section 7.3 Potential Environmental Effects on Federal Lands in a Province Other than the Province in which the Project is Proposed to be Carried Out or Outside Canada
Visual Environment	2	Concern from visual effects from the Port, marine ships, and impacts to the health of communities.	The Impact Assessment will require an assessment of potential visual and human health impacts, including those associated with the proposed DP4 expansion at Deltaport and marine ships. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.6 Potential Effects on Human Health and Community Wellbeing
Transportation (Land)	1	Request that a traffic impact assessment be completed, and that road and rail be scoped into the assessment at a regional scale to address concerns about increased traffic and resulting light, noise and air pollution.	GCT has been operating at Deltaport since 1997 and understands the concerns raised about increased road and rail traffic. The Impact Assessment will require an assessment of air quality, noise, vibration and other factors associated with increased road and rail traffic, and the scope of the assessment will be confirmed by federal and provincial regulators following additional engagement with municipalities, Indigenous nations and other interested parties. Section 7.5 of the DPD confirms that a traffic impact assessment will be conducted to better understand changes in traffic volumes. The traffic impact assessment will be completed in collaboration with municipalities, Indigenous nations, the BC Ministry of Transport and Infrastructure, and rail companies.	Section 7.5 Potential Socio-economic Effects

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Water Quality and Processes	1	Concern about effects of construction on water quality from on-site activities, in-water works, incidental activities (including oil, fuel, hazardous waste spills), dredging, deposition of soils and sediments to waterbodies via surface water run-off, and the deposition of wastewater, storm water, sanitary sewer, dust and particulates, affecting aquatic receptors such as fish, marine mammals, and aquatic plants. Increased discharges and waste will interact with perceptions on safety of harvested food.	The Impact Assessment will assess the potential effects of construction activities on environmental quality (i.e., water quality and sediment quality) and biological receptors. Planned mitigation and management measures, such as Environmental Protection Plans, will be considered as part of the assessment process. Residual effects, that remain after the application of mitigation and management measures, will be detailed and assessed. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7 Potential Effects of the Project
Water Quality and Processes	2	Concern about crest protection and introduction of rock fill impacting sediment movement within the delta and surrounding areas, as well as eelgrass beds and other critical habitat processes like nutrient transfer.	The Impact Assessment will address potential direct (e.g., habitat within the footprint of proposed facilities) and indirect (e.g., alterations to habitat from changes in sediment movement) effects of the Project. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2 Potential Effects in Relation to *Impact Assessment Act* Requirements
Water Quality and Processes	3	Clarity regarding the quantity of water that the Project will utilize, and how this may impact the City of Delta's municipal water forecasts.	As the Project design evolves, further clarity on the quantity of water the Project is expected to utilize will be determined. GCT will engage with the City of Delta regarding the forecasts for municipal water quantities once this level of information is determined. The Impact Assessment will include further details on the quantity of water and potential impacts to the City of Delta's municipal water forecasts.	Section 7.4.4 Solid, Liquid and Hazardous Waste
Wetlands	1	Concern for effects to critical staging and overwintering habitats for wildlife such as intertidal/subtidal wetlands, eelgrass, marsh, mudflats, and sand flats.	The Impact Assessment will consider potential Project effects on wildlife habitat in the Wildlife Resources assessment. Intertidal and subtidal habitats will be mapped and opportunities to avoid, minimize, restore, compensate, or offset potential adverse effects to critical habitats will be identified. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2 Potential Effects in Relation to *Impact Assessment Act* Requirements Section 7.3 Potential Environmental Effects on Federal Lands in a Province Other than the Province in which the Project is Proposed to be Carried Out or Outside Canada
Wetlands	2	Geomorphological processes such as dendritic erosion, disturbance of natural sediment distribution processes, and wetland recession may increase as a result of additional industrial activity and engineered structures such as causeways and pilings.	The Impact Assessment will address potential issues associated with Project activities, including those associated with dendritic erosion, sediment distribution and wetland recession associated with the construction of the expanded causeway and other structures. The factors to be considered, and the scope of those factors, will be described in the Joint Guidelines for the Project. A first draft of the Joint Guidelines will be prepared by GCT and then submitted to IAAC and BCEAO who will tailor the document and consult on it with Indigenous nations, stakeholders, the public, federal and provincial regulators prior to the issuance of the final Joint Guidelines.	Section 7.2 Potential Effects in Relation to *Impact Assessment Act* Requirements
Wetlands	3	Alteration of natural sedimentation processes may alter the natural water quality regime that supports habitat functions for migrating and overwintering birds (i.e., Biofilm) and lead to further degradation and loss of wetlands habitat for species as salmon and migratory birds.	GCT understands the ecological importance of Roberts Bank and has made efforts in the early design phase to minimizing construction on the east side of the causeway to limit impacts on biofilm and birds in the region. The Impact Assessment will include issues associated with water quality, wetland habitat and function, salmon, migratory birds and various other factors to inform regulatory decision making. The scope of these studies and the factors to be considered will be informed by additional engagement with Indigenous nations, the public, government agencies and stakeholders and ultimately confirmed by federal and provincial regulators.	Section 7.2 Potential Effects in Relation to *Impact Assessment Act* Requirements Section 7.3 Potential Environmental Effects on Federal Lands in a Province Other than the Province in which the Project is Proposed to be Carried Out or Outside Canada

APPENDIX A: (CONT'D.)

Topic	Number	High-level Summary of Issue	GCT Response	Addressed in the DPD
Wetlands	4	Concern about the effectiveness of mitigation and remediation efforts as estuarine habitat restoration and compensation programs have suffered a very high failure rate and have not been successful in replacing/relocating hatchery areas, nesting areas, or aquatic migratory paths.	To ensure mitigation and compensation programs are effective, monitoring, follow-up reporting and adaptive management programs are generally required as a condition associated with project and permitting approvals. The Impact Assessment will inform where additional monitoring or adaptive management may be required to address the uncertainty associated with the predicted effectiveness of mitigation.	Section 7.13 Mitigation and Management Approaches Section 7.14 Monitoring