



Federal Decision Statement
Annual Report
2023

Énoncé de décision fédérale
Rapport annuel
2023

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Préparé pour l'Agence d'évaluation d'impact du Canada

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Woodfibre LNG General Partner Inc. (Woodfibre LNG) is constructing a liquefied natural gas (LNG) export facility (the Project) on the former Woodfibre Pulp Mill site in Nexwnéwu7ts Átlk' a7tsem (Howe Sound), approximately seven kilometers south of Skwxwú7mesh (Squamish). The Project is located on the historical location of a Skwxwú7mesh Úxwumixw (Squamish Nation) village known as Swiyát in British Columbia. The land is a fee simple, industrially zoned, brownfield site with more than 100 years of industrial use and deep-water marine access.

The Project was issued approvals under environmental assessment (EA) processes administered by the Province of British Columbia, Squamish Nation, and the Government of Canada during 2015 and 2016. On 17 March 2016 the Canadian Environmental Assessment Agency, now the Impact Assessment Agency of Canada (IAAC), issued a Federal Decision Statement (FDS) as part of a substituted process under the Canadian Environmental Assessment Act, 2012 (SC 2012, c. 19, s. 52). The FDS was re-issued on 07 March 2018 to account for material changes to the Project.

Subsequent to re-issuance, on 07 June 2022, Woodfibre LNG submitted an application to amend two conditions of the FDS, Condition 3.8 relating the marine mammal exclusion zones and Condition 6.4, relating to marine water and sediment quality in the Project Area. This amendment was approved on 04 August 2023. In 2023, IAAC also reviewed Woodfibre LNG's proposal for a floating worker accommodation (Floatel) and determined that an amendment to the FDS was not required on 29 November 2023.

This report is intended to demonstrate the regular, transparent, and proactive approach Woodfibre LNG is taking with regulators. Woodfibre LNG aims to achieve this through clarity, cooperation and continued compliance with all Project commitments and regulatory conditions. Furthermore, this report is intended to highlight Woodfibre LNG's commitment to delivering on the socioeconomic and environmental benefits highlighted through the EA process for the Project.

During this reporting period, Woodfibre LNG concluded Pre-Construction phase activities, which included landfill closure, concrete slab removal, rail line removal, substation distribution upgrades, building demolition, as well as commencement of the permanent passenger dock installation and geotechnical investigative drilling.

Woodfibre LNG continued to advance materials in preparation for the Construction phase. This included updating various management plans such as the Emergency Response Plan for Construction, the Communication Protocol for Marine Transportation and the Archaeological and Heritages Resources Management Plan.

Woodfibre began Construction phase activities on 02 November 2023. Works undertaken during 2023 consisted largely of site preparation, and included mobilization of equipment and material, clearing, grubbing, and leveling of the process area and laydown areas. Marine in water works were also undertaken and included the installation of the permanent passenger dock and breakwater, and pile installation for the Floatel mooring. Shoreline demolition, excavation, and revetment also occurred. Other activities carried out included excavations and backfilling and setting up infrastructure required for construction

Where applicable, previously developed follow-up monitoring programs were implemented in support of any works that occurred during this reporting period. The results of these follow-up monitoring programs are summarized in this annual report.

The Project was successful in maintaining compliance with the FDS during the reporting period. This was achieved through planning, an extensive multi-level monitoring program, and the deployment of mitigation measures. A strong presence of Environmental Monitors ensured that environmental incidents were identified in the Certified Project Area (CPA), while environment and construction teams determined the sources of incidents

and implemented measures to address them. Incidents included a small number of spills, turbidity events, and an elevated pH event.

Exceedances of WQG were observed during baseline monitoring of freshwater and marine water. The exceedances observed were generally in line with results from baseline monitoring results from 2021 and 2022. The exceedances are not considered to be associated with Project-related activities and were expected. There were no exceedances during in-situ water quality monitoring during marine in water works during 2023, with the exception of dissolved oxygen (DO) during the permanent passenger dock installation.

Concentrations of several total metals exceeded sediment quality guidelines (SQG) in 2023, however these results were in line with levels detected in 2021 and 2022 baseline monitoring.

Consultation with Indigenous Groups (referred to as Aboriginal Groups in FDS Section 1.1, and defined as Squamish Nation, Tsleil-Waututh Nation, Cowichan Tribes First Nation, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Musqueam Indian Band, Penelakut Tribe, Stz'uminus Nation and Métis Nation British Columbia) and stakeholders continued on a number of management plans and follow up programs throughout 2023. When expressed or shared, the views and information communicated by Indigenous Groups were given full and impartial consideration.

In summary, Woodfibre LNG continued to advance the Project in 2023 through the continuation of a range of works including site preparation, mobilization and marine in water works. Woodfibre LNG is committed to a careful and proactive approach through the implementation of following up monitoring programs and mitigation measures to ensure that the Project continued to be compliant with all FDS conditions.

Woodfibre LNG General Partner Inc. (Woodfibre LNG) construit une installation d'exportation de gaz naturel liquéfié (GNL) (le projet) sur le site de l'ancienne usine de pâtes et papiers Woodfibre à Nexwnéwu7ts Átlk'a7tsem (baie Howe), à environ sept kilomètres au sud de Skwxwú7mesh (Squamish). Le projet est situé sur le site historique d'un village Skwxwú7mesh Úxwumixw (Nation Squamish) que l'on appelle Swiyát en Colombie-Britannique. Il s'agit d'une friche industrielle en fief simple, dont l'utilisation industrielle remonte à plus de 100 ans et qui bénéficie d'un accès maritime en eau profonde.

Le projet a reçu en 2015 et 2016 des approbations en vertu des processus d'évaluation environnementale (EE) gérés par la Province de la Colombie-Britannique, la Nation Squamish et le gouvernement du Canada. Le 17 mars 2016, l'Agence canadienne d'évaluation environnementale, qui s'appelle aujourd'hui l'Agence d'évaluation d'impact du Canada (AEIC), a publié une déclaration de décision fédérale (DDF) en vertu d'un processus de substitution en vertu de la *Loi canadienne sur l'évaluation environnementale* (2012) (L.C. 2012, ch. 19, art. 52). La DDF a été republiée le 7 mars 2018 pour tenir compte des changements importants apportés au projet.

Après la republication, le 7 juin 2022, Woodfibre LNG a présenté une demande de modification de deux conditions de la DDF, la condition 3.8 relative aux zones d'exclusion des mammifères marins et la condition 6.4, relative à la qualité des eaux marines et des sédiments dans la zone du projet. Cette modification a été approuvée le 4 août 2023. En 2023, l'AEIC a également examiné la proposition de Woodfibre LNG pour une installation flottante d'hébergement pour les travailleurs (Floatel) et, le 29 novembre 2023, a déterminé qu'une modification à la DDF n'était pas nécessaire.

Ce rapport vise à démontrer l'approche régulière, transparente et proactive que Woodfibre LNG adopte auprès des agences de réglementation. Woodfibre LNG vise à atteindre cet objectif par la clarté, la coopération et le respect continu de tous les engagements du projet et des conditions réglementaires. En outre, ce rapport vise à souligner l'engagement de Woodfibre LNG à concrétiser les avantages socio-économiques et environnementaux mis en évidence par le processus d'évaluation environnementale du projet.

Au cours de la période en question, Woodfibre LNG a achevé les activités de la phase de préconstruction, qui comprenaient la fermeture de la décharge, l'enlèvement des dalles de béton, l'enlèvement de la voie ferrée, l'amélioration de la distribution de la sous-station, la démolition du bâtiment ainsi que le début de l'installation du quai permanent pour les passagers et du forage d'investigation géotechnique.

Woodfibre LNG a continué à faire progresser la documentation en vue de la phase de construction. Il s'agissait notamment de mettre à jour divers plans de gestion comme le plan d'intervention d'urgence pour la construction, le protocole de communication pour le transport maritime et le plan de gestion des ressources archéologiques et patrimoniales.

Woodfibre LNG a commencé le 2 novembre 2023 les activités de la phase de construction. Les travaux entrepris au cours de l'année 2023 ont consisté principalement en la préparation du site, y compris la mobilisation de l'équipement et du matériel, le défrichage, l'essouchement et le nivellement de la zone de traitement et des aires de dépôt. Des travaux maritimes dans l'eau ont également été entrepris et comprenaient l'installation du quai permanent pour passagers et du brise-lames ainsi que l'installation de pieux pour l'amarrage du Floatel. On a également effectué des travaux de démolition, d'excavation et de revêtement du littoral en plus d'autres activités, notamment des travaux d'excavation et de remblayage ainsi que la mise en place de l'infrastructure nécessaire à la construction.

Le cas échéant, on a mis en œuvre des programmes de contrôle de suivi élaborés précédemment à l'appui de tous les travaux réalisés au cours de la période couverte par le présent rapport. Les résultats de ces programmes de suivi sont résumés dans le présent rapport annuel.

Le projet a réussi à assurer la conformité avec la DDF pendant la période couverte par le rapport. Ce résultat a été obtenu grâce à la planification, à un vaste programme de surveillance à plusieurs niveaux et au déploiement de mesures d'atténuation. Une forte présence de personnes pour surveiller l'environnement a permis d'identifier les incidents environnementaux dans la zone de projet (ZP), tandis que les équipes chargées de l'environnement et de la construction ont déterminé les sources des incidents et mis en œuvre des mesures pour y remédier. Les incidents comprenaient un petit nombre de déversements, des épisodes de turbidité et un épisode de pH élevé.

Des dépassements des critères de qualité de l'eau ont été observés lors de la surveillance de référence des eaux douces et des eaux marines. Les dépassements observés étaient généralement conformes aux résultats de la surveillance de base de 2021 et 2022. Les dépassements ne sont pas considérés comme associés aux activités liées au projet et étaient attendus. Il n'y a eu aucun dépassement lors de la surveillance in situ de la qualité de l'eau pendant les travaux maritimes dans l'eau en 2023, à l'exception de l'oxygène dissous (OD) pendant l'installation du quai permanent pour les passagers.

Les concentrations de plusieurs métaux totaux ont dépassé les lignes directrices relatives à la qualité des sédiments (LDQS) en 2023, mais ces résultats correspondaient aux niveaux détectés lors des contrôles de référence de 2021 et 2022.

La consultation des groupes autochtones (que l'on appelle groupes autochtones dans la section 1.1 de la DDF et qui se définissent comme la Nation Squamish, la Nation Tsleil-Waututh, la Première nation des tribus Cowichan, la Première nation Halalt, la Première nation Lake Cowichan, la Première nation Lyackson, la Bande indienne Musqueam, la Tribu Penelakut, la Nation Stz'uminus et la Nation métisse de Colombie-Britannique) et des parties prenantes s'est poursuivie sur un certain nombre de plans de gestion et de programmes de suivi tout au long de l'année 2023. Lorsqu'ils ont été exprimés ou communiqués, les points de vue et les renseignements communiqués par les groupes autochtones ont été pris en compte de manière complète et impartiale.

En résumé, Woodfibre LNG a continué à faire avancer le projet en 2023 en poursuivant une série de travaux, notamment la préparation du site, la mobilisation et les travaux maritimes dans l'eau. Woodfibre LNG s'engage à adopter une approche prudente et proactive par la mise en œuvre de programmes de suivi et de mesures d'atténuation afin de s'assurer que le projet continue d'être conforme à toutes les conditions de la DDF.

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ACRONYM AND ABBREVIATIONS	
Acronym	Definition
AA-CFMP	Archaeological Awareness and Chance Find Management Plan
AHRMP	Archaeological and Heritage Resource Management Plan
AIP	Approval in Principle
Al	Aluminum
As	Arsenic
BC	British Columbia
BCER	British Columbia Emergency Response
BMP	Best Management Practices
CCG	Canadian Coast Guard
CPA	Certified Project Area
CCME	Canadian Council of Ministers of the Environment
Cd	Cadmium
Cr	Chromium
Cu	Copper
CEMP	Construction Environmental Management Plan
CFMP	Chance Find Management Plan
DFO	Department of Fisheries and Oceans
DO	Dissolved Oxygen
DPA	Development Permit
DOS	District of Squamish
EA	Environmental Assessment
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
ECCC	Environment and Climate Change Canada
EM	Environmental Monitor
EPP	Environmental Protection Plan
ESC	Erosion and Sediment Control
EWP	Environmental Work Plan
EWAL	Estuary Water Aquatic Life
FAA	Fisheries Act Authorization
FWAL	Fresh Water Aquatic Life
HHRA	Human Health and Risk Assessment
Hg	Mercury

ACRONYM AND ABBREVIATIONS	
Acronym	Definition
IAAC	Impact Assessment Agency of Canada
ISQG	Interim Sediment Quality Guideline
LNG	Liquefied Natural Gas
Pb	Lead
MoE	Ministry of Environment and Climate Change Strategy
MMO	Marine Mammal Observers
MOF	Module Offloading Facility
MOTI	Ministry of Transportation & Infrastructure
MWAL	Marine Water Aquatic Life
PAH	Polycyclic Aromatic Hydrocarbons
RCMSAR	Royal Canadian Marine Search and Rescue
PCB	Polychlorinated Biphenyls
PEL	Probable Effects Levels
POPCs	Persistent Organic Pollutants
PPA	Pacific Pilotage Authority
QP	Qualified Professional
SAR	Search and Rescue
SC	Statutes of Canada
SLRD	Squamish-Lillooet Regional District
SARA	Species at Risk Act
SNEAA	Squamish Nation Environmental Assessment Agreement
SQG	Sediment Quality Guidelines
TAC	Technical Advisory Committee
TOC	Total Organic Carbon
TIC	Total Inorganic Carbon
TC	Transport Canada
V	Vanadium
Zn	Zinc
WGQ	Water Guidelines Quality
WSA	Water Sustainability Act
VOC	Volatile Organic Compounds
WLNG	Woodfibre LNG
WQG	Water Quality Guidelines

1.0 INTRODUCTION

Woodfibre LNG General Partner Inc. (Woodfibre LNG) is constructing and will operate, the Woodfibre Liquefied Natural Gas (LNG) Export Facility (the Project) on the former Woodfibre Pulp Mill site in Nexwneú7ts Átlk'a7tsem (Howe Sound), approximately seven kilometers south of Skwxwú7mesh (Squamish). The Project is on the historical location of a Skwxwú7mesh Úxwumixw (Squamish Nation) village known as Swiyát in British Columbia (BC). The land is a fee simple, industrially zoned, brownfield site with more than 100 years of industrial use and deep-water marine access. Figure 1 shows the Project location and Figure 2 shows the layout, Certified Project Area (CPA) and key Project components.

The Project was subject to Environmental Assessment (EA) processes administered by the Province of BC, Squamish Nation, and the Government of Canada. The Project was assessed through a substituted process. The BC Environmental Assessment Office (EAO) issued Environmental Assessment Certificate (EAC) #E15-02 for the Project on 26 October 2015.

BC EAO have to date approved three amendments to the EAC. The first amendment to the EAC for changes to the cooling process was issued on 12 July 2017. The second amendment, to clarify the definition of construction, was issued on 19 July 2019. The third amendment, to add temporary floating worker accommodation (Floatel), workforce accommodation on board a marine construction vessel, and associated infrastructure to the Certified Project Description during construction was issued on 01 November 2023 (see Section 2.3).

On 25 October 2020, the EAO approved a request to extend the date by which the designated Project was required to have substantially started construction and issued a certificate extension order to 26 October 2025, under Section 31 of the BC *Environmental Assessment Act*.

Squamish Nation conducted an independent review of the application for an EAC under its own EA process. On 14 October 2015 Squamish Nation entered into the Squamish Nation Environmental Assessment Agreement (SNEAA) with Woodfibre LNG Limited.

The Canadian Environmental Assessment Agency, now the Impact Assessment Agency of Canada (IAAC), issued a Federal Decision Statement (FDS) as part of the substituted process under the *Canadian Environmental Assessment Act*, 2012 (SC 2012, c. 19, s. 52) on 17 March 2016. The FDS for the designated Project was re-issued on 07 March 2018 to accommodate the same material change to the Project as accounted for by the first amendment to the EAC. On 07 June 2022, Woodfibre LNG applied to IAAC to amend two conditions of the FDS relating to the marine mammal exclusion zones and marine water and sediment quality (Conditions 3.8 and 6.4). The amendment was approved and the amended FDS was issued on 04 August 2023.

The 2023 annual report is intended to demonstrate the proactive approach Woodfibre LNG is taking across all phases of the Project when engaging in regulatory processes. Woodfibre LNG aims to achieve this through transparency, cooperation and continued compliance with all Project commitments and regulatory conditions, including conditions outlined in the FDS. Furthermore, this report is intended to highlight Woodfibre LNG's commitment to delivering on the socioeconomic and environmental benefits highlighted through the EA process for the Project, while ensuring impacts are minimized.

This report has also been developed in accordance with the information requirements outlined in FDS Conditions 2.6.1 through 2.6.5 and in compliance with reporting and publication objectives described in FDS Condition 2.7 and 2.8, respectively. Concurrent with submission to IAAC, this report will be posted publicly to the Woodfibre LNG website. IAAC and Indigenous Groups (referred to as Aboriginal Groups in FDS Section 1.1, and defined as Squamish Nation, Tsleil-Waututh Nation, Cowichan Tribes First Nation, Halalt First Nation, Lake



Cowichan First Nation, Lyackson First Nation, Musqueam Indian Band, Penelakut Tribe, Stz'uminus Nation and Métis Nation British Columbia) will be notified of its availability once posted.

Figure 1 Location Overview

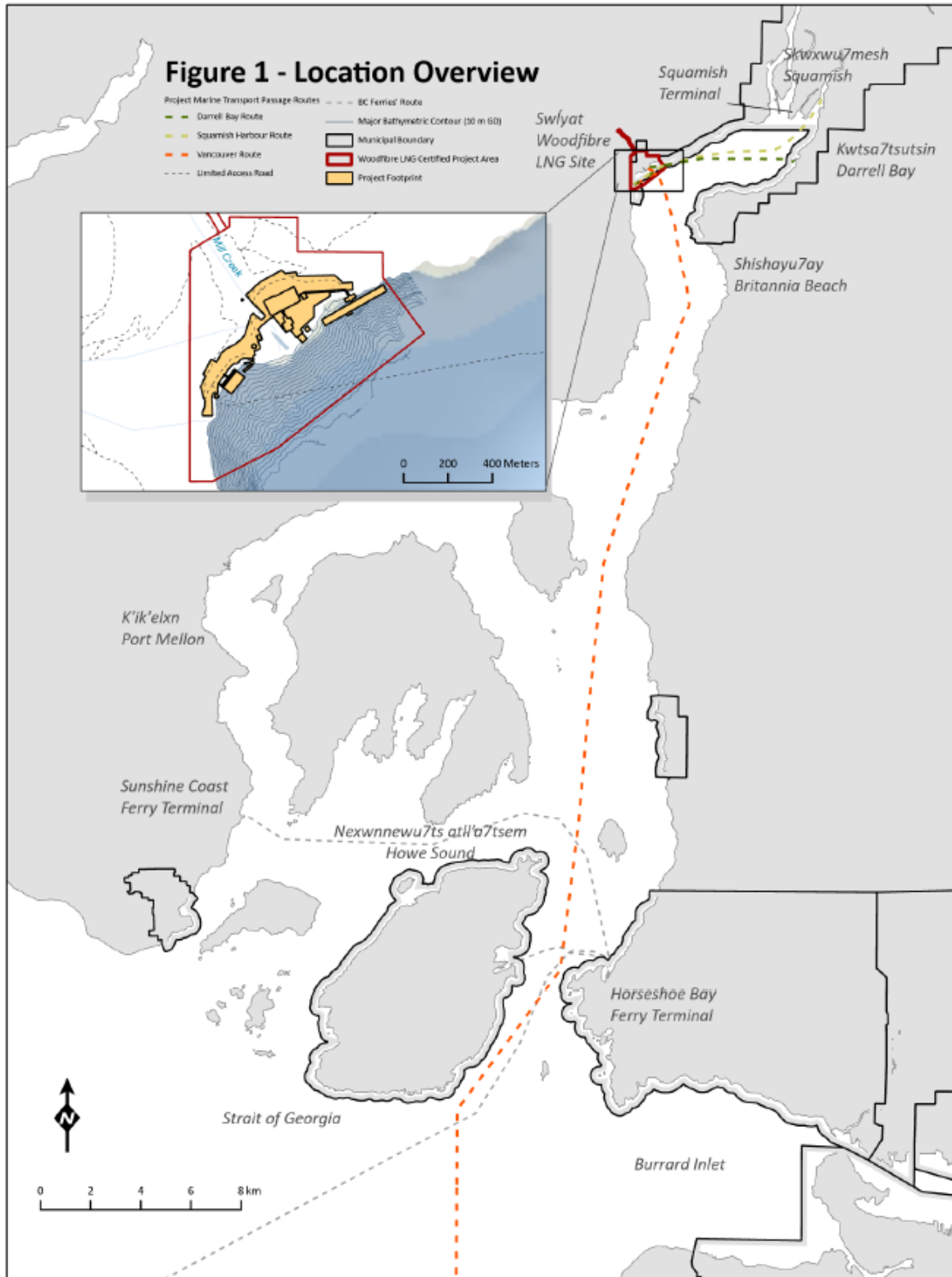
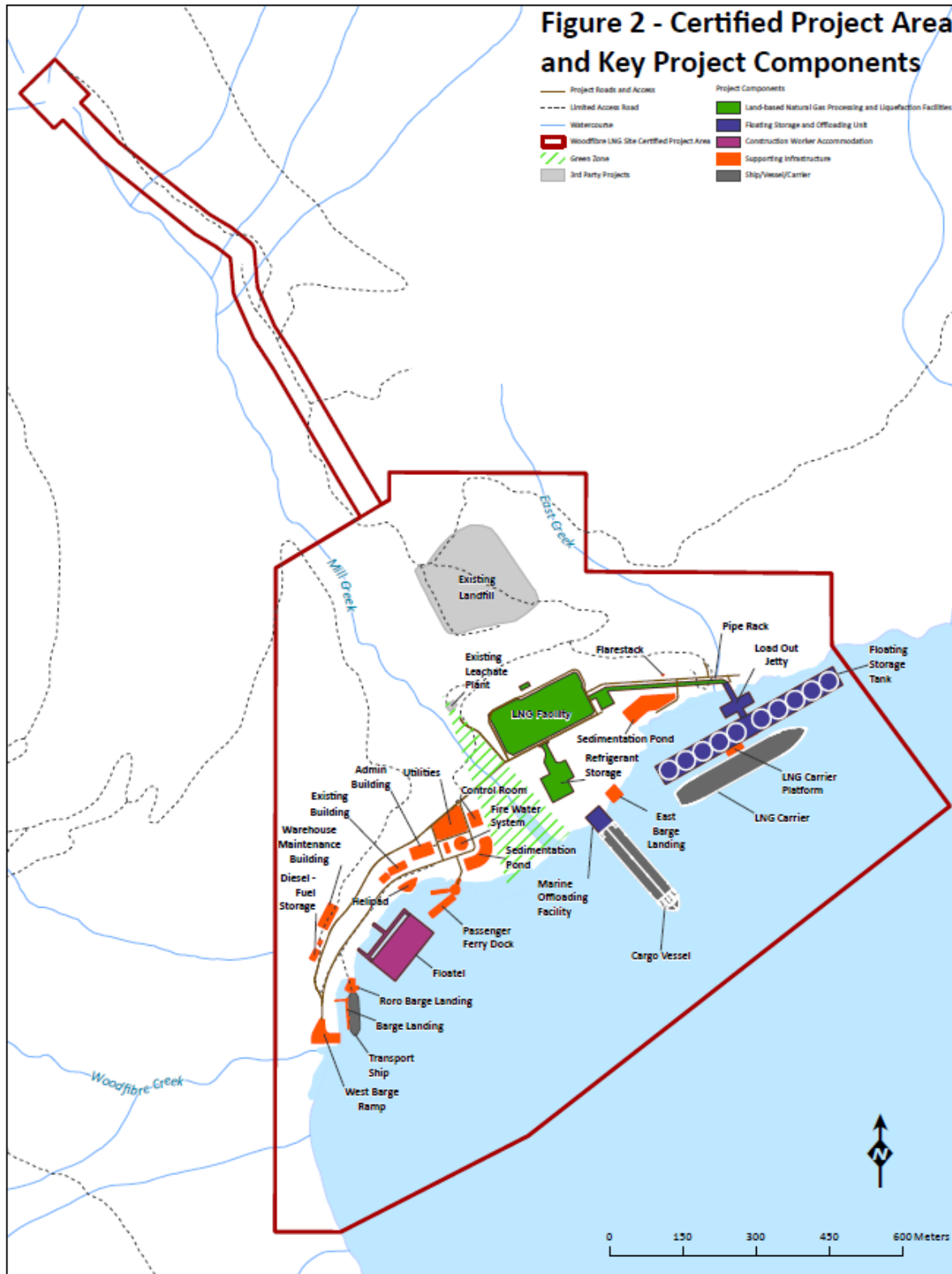


Figure 2 Certified Project Area



2.0 PROJECT ACTIVITIES

2.1 Site Activities

Woodfibre LNG operates under multiple regulatory agencies, which have different interpretations of what constitutes construction. Woodfibre LNG maintains that work carried out between 01 January 2023 and 01 November 2023 did not constitute construction. This aligns with the perspective of other agencies. Woodfibre LNG acknowledges IAAC has determined that a portion of the work carried out during this time period meets their definition of construction.

2.1.1 Pre-Construction Phase

Woodfibre LNG has met the FDS conditions required by IAAC, in accordance with the Agency's construction determination for Pre-Construction phase activities identified in this section.

Pre-Construction phase activities carried out in 2023 included demolition and upgrades to historical infrastructure, including building demolition, closure of the landfill and upgrades to the substation. Other activities carried out during the Pre-Construction phase included ongoing maintenance to existing infrastructure and the temporary passenger dock, and installation of a permanent passenger dock.

Nineteen structures, eight of which were buildings, were demolished during the reporting period. The areas were then levelled and graded. All waste materials were segregated following demolition. Concrete was sorted, processed, and crushed to appropriate size and used as backfill. Salvageable steel was barged offsite to be recycled. All other waste, including hazardous waste, was also barged offsite, and disposed of at an appropriate facility. An environmental protection plan (EPP) and an erosion and sediment control (ESC) plan was followed during demolition.

Upgrades were carried out to the substation and distribution system during the reporting period. Above ground electrical lines and power lines were installed, as well as underground electrical conduit through trenching/excavation. A new transformed and junction box were also installed, this included the installation of a concrete pad. An EPP was in place during the upgrades.

The closure of the historical landfill was complete during 2023, much of the closure work occurred prior to the reporting period. The landfill was lined with multiple layers of polyethylene, aggregate, and topsoil. The final layer of topsoil was planted with grass to assist in ESC. Ongoing maintenance to the leachate lines and plant was also complete. All works associated with the landfill closure followed a Landfill Closure Plan approved by the BC Ministry of Environment and Climate Change Strategy (MoE).

The temporary passenger dock installed during the previous reporting period underwent maintenance and repairs during 2023. A permanent passenger dock was installed at the end 2023. Activities carried throughout the year associated with the passenger dock included installation of an onshore dock abutment, pile installation, breakwater anchor installation, and breakwater installation. All piles and anchors were installed using vibratory hammer. A number of anchors failed and required pulling and replacement. A temporary breakwater for the passenger dock was installed at the end of 2023.

Geotechnical investigative drilling was conducted during 2023. A number of boreholes were drilled in the marine environment to inform the engineering design of the foundations associated with marine infrastructure of the future LNG facility. An environmental work plan (EWP) was followed during geotechnical drilling.

Rail tracks continued to be removed in 2023. The creosote timber and ties were stockpiled on poly sheeting until they were transported offsite via barge for disposal at an appropriate facility. Areas where rail lines were removed were levelled and graded. An EWP was in place during rail track removal.

Concrete slabs also continued to be removed during 2023. Slabs were broken up; rebar was then separated from concrete. Concrete was crushed and used as backfill. Soil was tested in situ and separated into clean and contaminated soil, which was used as backfill under an Approval in Principle (AiP) issued by BC MoE. An EWP was in place during concrete slab removal.

2.1.2 Construction Phase

The Construction phase began on 02 November 2023. All Construction phase activities were carried out in compliance with the conditions in the FDS.

Works undertaken during this phase consisted largely of site preparation, and included mobilization of equipment and material, clearing, grubbing, and leveling of the process area and laydown areas. Marine in water works were also undertaken and included the installation of the permanent passenger dock and breakwater, pile installation for the Floatel mooring. Shoreline demolition, excavation, and revetment also occurred. Other activities carried out included excavations and backfilling and setting up infrastructure required for construction.

Woodfibre LNG's construction contractor and subcontractors began to mobilize to the site following the commencement of the Construction phase of the Project in early November. Equipment and materials, as well as temporary construction trailers were brought to site via barges and staged in appropriate locations throughout November and December. Other activities undertaken in November and December included clearing and grubbing in the process and laydown areas as well as along the shoreline. Soil improvements were made throughout the site as required.

Marine in water works carried out as part of the Construction phase commenced in the second week of December and continued throughout the month. They included the installation of 36" piles for the Floatel mooring structure. A number of 20" temporary supporting piles were also installed and pulled. All piles were installed using vibratory hammers. Other marine in water works carried out include shoreline excavation which was carried out using a clamshell dredge. Shoreline demolition and the placement of riprap revetment was also carried out.

2.2 Implementation Schedule

Pursuant to FDS Condition 12, Woodfibre LNG provided IAAC an updated Implementation Schedule on 31 March 2023 which reflected the revised status for each activity related to conditions set out in the FDS. Pursuant to FDS Condition 7.4, the updated Implementation Schedule was sent to Indigenous Groups defined in Section 1.1 of the FDS and was posed on the Woodfibre LNG pursuant to FDS Condition 2.8.

Pursuant to FDS Condition 12.2, Woodfibre LNG will next provide an updated Implementation Schedule to IAAC on or before 31 March 2025.

2.3 Proposed Material Change to the Certified Project Description

In October 2019, in response to interests expressed by the local community, DoS, and other stakeholders, about impacts to the community from workers, in particular concerns about increases to gender-based violence, WLNG proposed a change to the Project to include a Floatel and supporting infrastructure.



On 06 August 2019, Woodfibre LNG informed IAAC of the proposed changes to the project. Around the same time an amendment application was submitted to the EAO. This amendment application was subject to a multi-agency technical review, which included the EAO, IAAC, Squamish Nation, Tsleil-Waututh Nation, the Technical Advisory Committee (TAC), and the public.

On 29 November 2023, IAAC issued a letter to inform Woodfibre LNG that mitigation measures and follow-up requirement currently included in the conditions of the FDS would address the environmental effects of the Project changes associated with the Floatel and that no amendment to the current conditions are required.

On 01 November 2023, the EAO approved the amendment, to add a Floatel, workforce accommodation on board a marine construction vessel, and associated infrastructure to the Certified Project Description during the Construction phase. Similarly, Squamish Nation approved an amendment to add a Floatel and associated infrastructure to the Project Description under SNEAA on 04 December 2023.

3.0 FOLLOW-UP MONITORING

As defined in the FDS, follow-up monitoring programs have been designed to verify the accuracy of the predictions made during the Project's EA and to determine the effectiveness of mitigation measures implemented to eliminate or reduce potential effects to the environment. Further, follow-up monitoring programs to support adaptive management strategies, and inform future similar activities in such a way that promotes sustainable development have been developed by Qualified Professionals (QP). The follow-up monitoring programs to comply with FDS conditions include:

- Fish and Fish Habitat, as it relates to FDS Conditions 3.1 through 3.10
- Migratory Birds, as it relates to FDS Conditions 4.2 and 4.3
- Human Health, as it relates to FDS Condition 6.5
- Land Use, as it relates to FDS Condition 7.2
- Species at Risk, as it relates to FDS Condition 9.3

The following sub-sections provide information on these follow-up monitoring programs as they relate to the scope of on-site works that occurred in 2023. Implementation of the follow-up monitoring programs, developed pursuant to applicable FDS Conditions, was undertaken by QPs with the suitable experience to provide accurate and defensible advice in support of Project compliance.

Consistent with FDS Condition 13.1, which requires the Project to retain all records pertaining to the ongoing compliance of Project activities with FDS Conditions, the results of observations and data (field measurements and/or laboratory analysis) collected in response to the implementation of a follow-up monitoring program, have been recorded in the form of environmental monitoring reports and include details described in Conditions 13.1.1 through 13.1.5. Pursuant to FDS Condition 13.2, records documenting compliance will be retained for 25 years following decommissioning by Woodfibre LNG, at a facility in Canada and close to the Project location.

3.1 Fish and Fish Habitat

Pre-Construction phase in water works completed in 2023 were as follows:

- Marine Geotechnical Drilling (16-19 August 2023, 20-25 September 2023)
- Passenger Dock Upgrades and Repair, and replacement (04 January -01 March 2023, 16-20 October 2023)

Construction phase in water works were completed in 2023 as follows:

- Shoreline demolition, excavation, and revetment works (01 December to 31 December 2023)
- Vibratory pile installation for Floatel mooring (10 December to 31 December 2023)

Pursuant to FDS Condition 3.1, all Pre-Construction and construction phase in water works were completed during the applicable timing windows of least risk.

Woodfibre LNG conducted additional baseline survey work to support the development of environmental management plans and permit applications. This included marine water quality data collection, hydrological surveys, and fish and fish habitat assessments.

Pursuant to FDS Condition 3.2.1, environmental monitors (EM) completed frequent ESC inspections to assure adequate implementation of ESC measures to mitigate adverse environmental effects on fish and fish habitat from changes in water quality throughout Pre-Construction and construction phase works. ESC measures implemented for terrestrial works included implementation of silt fences, wattle check dams, run off directing berms, and poly sheeting coverage of stockpiles adjacent to work areas.

Non-conformances relating to fish and fish habitat were noted by EMs during the t the Pre-Construction phase. The incidents were investigated, and corrective actions were implemented, Further information can be found in Table 1.

Table 1 Pre-Construction Non-Conformances and Corrective Actions

Pre-Construction Phase Non-Conformances			
Date	Type	Details	Corrective action
17 January 2023	Reportable spill	A minor sheen was identified on a barge deck during Pre-Construction phase activities. While placing containment measures, sheen migrated to water due to rain.	A spill curtain on the barge perimeter contained the majority of the sheen. An investigation identified a leak from a nozzle on a tidy tank that caused diesel to drip and spread with the rain.
06 April 2023	Reportable spill	An estimated total of 250 mL of hydraulic fluid was spilled while changing an excavator attachment at the clarifier demolition works area. A spill tray was not observed by the EM at the time of spill. It was estimated that < 100 ml of hydraulic fluid was not recovered and entered a catch basin.	Spill pads and absorbent material were placed within the spill area. Additional spill pads and absorbent booms were placed on the slope leading towards a nearby catch basin, as well as directly around the catch basin. Spill pads and absorbent booms were in place until the end of shift.
25 September 2023	Reportable spill	A contractor drilling crew noticed drip trays had been compromised due to overnight heavy rain. The contractor deployed a perimeter boom to contain the spill. The EM noticed a small amount of residual runoff (< 200ml) had escaped the perimeter boom and entered the marine environment.	Work was stopped and a spill response commenced. Clean up was completed using spill pads to absorb residual sheen from the water and deck.
10 June 2023	Elevated pH	Elevated pH levels were observed in stream N1 during routine water quality monitoring following rainfall. It was determined that jointed sands used as binding agents for hydro-turfs did not cure properly and was causing the elevated pH water that entered N1 stream via the southeast culvert.	Inflatable plugs were installed at the southeast and southwest culvert to contain elevated runoff water from the landfill in advance of future rainfall events. In addition, a CO2 tank was installed to control elevated pH water. Elevated pH water was not observed during routine water quality monitoring after corrective action was completed.
18 October 2023	Turbidity Event	Sediment-laden water from Mill Creek main road overflowed the gravel berm in front of Check Point A and water was draining into the marine environment. The EM immediately notified Woodfibre LNG.	The berm was reinstated, and a ditch was constructed to drain the pooling water into the settling pond. Sediment-laden water was not observed draining into the marine environment after corrective action completed.

Non-conformances relating to fish and fish habitat during the Construction phase were identified by EMs, investigations were conducted, and corrective actions were implemented, as is outlined in Table 2.

Table 2 Construction Phase Non-Conformances and Corrective Actions

Construction Phase Non-Conformances			
Date	Type	Details	Corrective action
10-12 November 2023	Turbidity Event	During a multi-day heavy precipitation event, turbid plumes were observed at outfall 3, where water pooled at the administration building and at the north barge ramp area. On 20 December 2023, another turbid plume was observed at outfall 3, isolated to the surface and dissipated rapidly.	Equipment was restricted from the area and rerouted up Woodfibre Main Road. Additional sandbags were installed along the berm to bolster protection and restrict sedimentation. Additional sandbags were added along the berm to address the turbid plume at outfall 3.
04 December 2023	Turbidity Event	During a heavy precipitation event, turbid waters were observed entering the marine environment and freshwater creeks at multiple points, but no recorded exceedances of water quality guidelines (WQG) occurred.	Proactive steps were taken in advance of the precipitation event, including additional berm construction, deployment of sediment fences, wattles, and catch basin filters. Temporary suspension of use for the West and Upper maintenance roads was implemented to mitigate the risk of WQG exceedances. Additional wattle/sandbag check dams were installed to slow runoff velocities from roads and ditches. Additional ESC inspections confirmed the functionality of measures along the perimeter of Mill Creek.
10 December 2023	Reportable spill	During vibratory hammering to install pilings for the Floatel mooring, approximately 5 ml of Envirollogic hydraulic oil was released to the water due to a loose fitting, which loosened as a result of the vibrations.	Once the leak was identified, work was stopped, and cleanup and investigation started immediately.
20 December 2023		During a heavy precipitation event, a turbid plume was observed at Outfall 3	The turbid plum was isolated to the surface and dissipated rapidly. No corrective action was required.

Woodfibre LNG implemented a number of mitigation measures during Pre-Construction phase in water works to ensure full compliance with conditions applicable to the scope of work undertaken, and no adverse impacts occurred, they were as follows:

- Pursuant to FDS Condition 3.2.1. ESC measures were implemented during the passenger dock upgrade and maintenance works. These measures included operating vessels at an appropriate distance from the shore to prevent grounding, physical disturbance to the seabed and suspension of sediments from propeller scour. Pursuant to FDS Condition 3.2.3, during in-water works with the potential to affect marine water quality, EMs completed in-situ analysis of water quality criteria at warning and compliance

stations to determine if implementation of additional mitigation measures (i.e., sediment curtain around in-water works) were required.

No instances of non-conformance were recorded by the EMs as a result of changes in marine water quality during the passenger dock upgrade and maintenance works. However, DO measurements were below the lower limits of WQGs. This is further discussed in Section 3.3 (Human Health).

- Pursuant to FDS Conditions 3.8.1, 3.8.2 and 3.8.3, during the passenger dock upgrade and maintenance works with the potential to generate underwater noise in excess of 160 decibels, EMs completed marine mammal observation monitoring within the appropriate marine mammal exclusion zone radius, as determined by a QP using hydrophone point verification monitoring. Hydrophone monitoring was completed at a distance of 10 m from the installation location to verify the criteria for the protection of fish were not exceeded, and at the marine mammal exclusion zone.
- Pursuant to FDS Condition 3.8.5, ramp-up procedures were in place for start-up and sound dampening technology (i.e., bubble curtains) were implemented during all in water activities with the potential to generate underwater noise in excess of the criteria for the protection of marine mammals. Pursuant to FDS Condition 3.8.4, works were not started or were paused when marine mammals were observed within the exclusion zone and did not re-start until 30 minutes had passed without observation of marine mammals within the zone.

No instances of non-compliance were recorded by the Environmental Monitor as a result of underwater noise impacts during in water Pre-Construction phase activities.

Similar to Pre-Construction phase, a number of mitigation measures were deployed during Construction phase marine in water works to ensure full compliance with conditions applicable to the scope of work undertaken, and no adverse impacts occurred, they were as follows:

- Pursuant to FDS Condition 3.2.1, during shoreline demolition, marine excavation, and revetment works, ESC measures were implemented. These measures included installation of slit curtains around work areas on the marine side, as well as installation of wattle/sandbag check dams on shore to prevent turbid waters leaving the work area. Pursuant to FDS Condition 3.2.3, during in-water works with the potential to affect marine water quality, EMs completed in-situ analysis of water quality criteria at warning and compliance stations to determine if mitigation measures were effective and no additional measure were required. Silt curtains also acted to create a fish exclusion zone. Fish and invertebrate salvages were completed within the exclusion zone prior to commencement of work. Pre work sonar scans were used to confirm silt curtains were effectively excluding fish and remained so for the period required at the start of each day of marine excavation.

No instances of non-conformance were recorded by the EM as a result of changes in marine water quality during shoreline demolition, marine excavation or revetment works.

- Pursuant to FDS Conditions 3.8.1, 3.8.2 and 3.8.3, during shoreline excavation and marine pile installation associated with the Floatel mooring, Marine Mammal Observers (MMO) completed marine mammal observation monitoring within the appropriate marine mammal exclusion zone radius. Hydrophone point verification monitoring was completed at a distance of 10 m, 150 m, 500 m, and 1000 m from the source activity to verify the criteria for the protection of fish were not exceeded, and at the pinniped and cetacean exclusion zones.

- Pursuant to FDS Condition 3.8.5, ramp-up procedures were in place for start-up and sound dampening technology (i.e., bubble curtains) was implemented during vibratory pile installations. Pursuant to FDS Condition 3.8.4, works were not started or were paused when marine mammals were observed within the exclusion zones and did not re-start until 30 minutes had passed without observation of marine mammals within the zone.

3.2 Migratory Birds

The protection of migratory birds, their nests, and eggs were considered during the Pre-Construction and Construction phase activities in the CPA during the reporting period. A number of Pre-Construction phase activities were carried out which had the potential to impact birds during nesting season, including building demolition. Pursuant to FDS Condition 4.1, a QP monitored birds (including barn swallow (*Hirundo rustica*)) entering buildings that were opened during demolition. When a bird was observed flying into a building or on the exterior of a building with signs of nesting behavior (e.g., carrying nest materials, perched on beam or ledge inside, mud droplets added to wall or ledge), demolition work was paused and a QP inspected the nest location to determine what exclusion measures would be appropriate to deter nesting (e.g., remove nesting materials and sealing off the nest site). Exclusion methods used materials available on-site such as tarps, poly-wrap, garbage bags, snow fencing, and spray foam to block or deter bird entry. Small holes and crevices providing entry to buildings were plugged with the materials, while larger entrances including windows and doors were closed or tarped where possible. Because of high winds on site and debris from demolition activities, tarps often did not remain in place or intact, even when stapled to the structure. In these cases, consistent monitoring of the opening was required. During the 2023 nesting season, QPs removed the materials of 40 nests, including 11 barn swallow nests early in the nest-building stage upon discovery and when determined that the nest could not remain and become occupied without being damaged or destroyed by Project activities. No completed nests were removed and no nests with eggs or young were removed or disturbed.

Barn swallow nests were present on buildings that were scheduled for demolition in early 2023. Barn swallow nests, whether occupied or not, are considered a residence under the *Species at Risk Act* (SARA). Woodfibre LNG applied for and received a permit under section 73 of SARA to be able to install exclusion measures to prevent barn swallows from nesting on buildings prior to and during demolition, to demolish structures that support barn swallow nests during the residence period, and to remove new nesting materials as and where barn swallows attempt to build a nest prior to the onset of egg-laying. The permit (SARA-PYR-2023-0793) was issued on 11 May 2023. To compensate for the loss of barn swallow nests and encourage nesting outside of the demolition site, Woodfibre LNG constructed an artificial nesting structure prior to arrival of the barn swallows for the 2023 nesting season. Prior to building demolition, eight old barn swallow nests were removed to “seed” artificial nest cups on the compensation structure installed in early 2023.

Pre-clearing nest sweeps were carried out during the Construction phase prior to execution of clearing and grubbing of the process area, laydown areas and the shoreline. A known bald eagle nest within the CPA had a buffer applied prior to clearing.

Pursuant to FDS Condition 4.3, a Pre-Construction phase follow-up program for migratory birds was developed in 2022. The follow-up program outlines the mitigation measures applicable to migratory birds and the steps that will be taken to determine the effectiveness of mitigation measures used to protect migratory birds. The air-cooling system has not been installed; therefore, the follow-up program was not implemented during this 2023 reporting period.

3.3 Human Health

Pursuant to FDS Condition 6.1, best management practices (BMP) were implemented to minimize noise and air emissions during Pre-Construction and Construction phase activities. Measures implemented are outlined in the Pre-Construction Environmental Management Plan (P-CEMP), and the Construction Environmental Management Plan (CEMP). Measures addressing greenhouse gas emissions, exhaust gasses from fuel combustion and dust were all implemented and include maintenance of vehicles in good working order, preventing idling of vehicles, and turning off machinery when not in use. Dust control measures implemented included covering stockpiles, maintenance of paved surfaces, and minimizing of drop distances of material. Measures which have been implemented for minimizing noise include the use of less noisy machinery such as vibratory hammers for piling, the orientation of machinery away from receptors, scheduling works at specific times where background noise is higher and utilizing existing onsite barriers for screening nearby receptors.

Pursuant to FDS condition 6.2, Woodfibre LNG has developed an internal protocol for noise complaints through the online ticketing system located on the Woodfibre LNG website at <https://woodfibrelng.ca/contact-us/>. Members of the public are clearly directed on this webpage to utilize the ticketing system for raising any questions, concerns, or complaints.

Pursuant to FDS Condition 6.4, water and sediment quality for the Project were monitored throughout 2023. Project activities were limited prior to November when the Construction phase began. In December, marine in water works commenced in the foreshore and shoreline areas of the Project; however, no discharges to the environment were reported in association with these activities. Therefore, the 2023 water and sediment monitoring results are considered to represent an extension of the baseline monitoring for the Project. Pre-Construction phase marine in water works for the permanent passenger dock installation was conducted in January 2023. Water quality was monitored each day the in marine works were active. Similarly daily water quality monitoring was undertaken during Construction phase marine in water works, including pile installations for the Floatel and shoreline demolition, excavation, and revetment.

The water quality results were screened against WQG developed by the Canadian Council of Ministers of the Environment (CCME) and Environment and Climate Change Canada (ECCC) for the protection of freshwater, estuarine and marine water aquatic life (FWAL, EWAL and MWAL, respectively). Results for marine sediment samples were screened against the Canadian sediment quality guidelines (SQG) developed by the CCME (Interim Sediment Quality Guideline (ISQG) and Probable Effects Levels (PEL)) for the protection of aquatic life.

Freshwater and marine water quality stations were monitored monthly in 2023. Water quality monitoring was conducted at Woodfibre, Mill and East Creeks and at two ditches in the western area of the CPA. Marine water was monitored at four nearshore stations within the CPA, and two reference stations north and south of the CPA. The passenger dock marine monitoring station was located 25 m from the works area and the reference station south of the CPA was monitored as a background station. Laboratory analysis was conducted for general parameters, nutrients, metals, methyl mercury, dioxins and furans, polycyclic aromatic hydrocarbons (PAH) and volatile organic compounds (VOC). Field measurements were also collected for general parameters. The passenger dock marine monitoring and other marine in water works only consisted of field measurements.

Marine sediment quality was monitored in November and December 2023. Grab samples were collected from the nearshore stations within the CPA. Laboratory analysis was conducted for pH, moisture content, particle size, total organic carbon (TOC), total inorganic carbon (TIC), metals, strong acid extractable metals, hydrocarbons, PAH, light and heavy extractable petroleum hydrocarbons, polychlorinated biphenyls (PCB), and dioxins and furans.

The 2023 freshwater data are considered to represent baseline conditions and exceedances of the WQG are summarized in Table B.1 of Appendix B. Similar to the 2021 and 2022 monitoring results, parameter concentrations are within WQG for the protection of FWAL and EWAL, with the exception of field pH, field dissolved oxygen (DO), total aluminum (Al), total chromium (Cr), and dissolved copper (Cu). The waters for Woodfibre, Mill and East creeks and the two ditches in the western area of the CPA are occasionally outside the lower limit of the pH WQG. Two samples from East Creek exhibited DO below the lower limit of the WQG. Exceedances of the total Al and dissolved Cu WQGs were observed occasionally in all creek waters and ditches with maximum values up to 5.7 and 6.8 times greater than the corresponding WQG, respectively. An exceedance of the total Cr WQG was observed in a discrete sample from Woodfibre Creek in March 2023 that was 1.1 times greater than the WQG.

The 2023 marine water quality guideline exceedances are summarized in Table B.2 of Appendix B. Similar to the 2021 and 2022 monitoring results, parameter values fell within the WQG limits for the protection of MWAL, with the exception of field DO, total cadmium (Cd), total chromium (Cr) and total vanadium (V). Field DO measurements were below the lower limit of the WQG in most deep-water samples and occasionally in shallow water samples in November and December 2023. Total Cd concentrations were up to 1.1 times greater than the WQG in three deep water samples. Total Cr was non-detectable in most marine water samples; however, raised detection limits in some samples were 3.3 times greater than the WQG. Total Cr was detected up to 1.7 times the hexavalent Cr WQG in one shallow and two deep water samples. The majority of the exceedances for total V are attributed to elevated detection limits, which are 2 to 4 times greater than the WQG. Total V exceeded the WQG in one deep water sample in December 2023 that was 2.0 times greater than the WQG.

The 2023 marine in water works for the passenger dock WQG exceedances are summarized in Table B.4 of Appendix B. Field measurements fell within the WQG limits, with the exception of field DO. Field DO measurements were below the lower limit of the WQG in most deep-water samples and occasionally in shallow water samples. The 2023 marine sediment screening results are summarized in Table B.3 of Appendix B. The results are comparable to the 2021 and 2022 datasets. Concentrations of several total metals (Arsenic (As), Cd, Cr, Cu, lead (Pb), mercury (Hg), Zinc (Zn)) and PAHs (acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, 2-methylnaphthalene, naphthalene, phenanthrene and pyrene) were above the corresponding SQG by up to 38 and 83 times the guideline value, respectively. Of the metal parameters, concentrations of Cu most frequently exceeded the guideline. Of the PAHs, concentrations of acenaphthene, acenaphthylene, fluorene and phenanthrene are most frequently elevated above the probable effect level (PEL). Concentrations of total PCBs were below detection limit in all marine sediment samples; however, detection limits are up to 3x greater than the ISQG value.

Water quality monitoring results during the passenger dock works are summarized in Table B.4 of Appendix B. The WQG for field pH and field turbidity were met and comparable water quality was observed at the monitoring station and the reference station for each monitoring event. Field DO measurements were below the lower limit of the WQG in most deep-water samples as well as occasional shallow water samples. During the shoreline excavation and piling installation, field measurements for pH and turbidity were taken. There were no recorded exceedances.

Pursuant to FDS Condition 6.5, a human health and risk assessment (HHRA) was completed in 2022 based on fish and shellfish monitoring program conducted in July and September 2022. Further studies were not conducted in 2023. The main objective of the 2022 HHRA was to evaluate the potential for POPCs exposure in human receptors pre- and post-construction. Based on the results of the problem formulation, the main route of POPCs exposure for human receptors was the consumption of contaminated seafood. A marine monitoring program was developed to evaluate POPCs tissue concentrations and determine the potential for human exposure. Dungeness crab (*Metacarcinus magister*) meat and hepatopancreas as well as sole (*Parophrys vetulus*) meat were collected from two areas, Woodfibre and Squamish Study Area. Overall, the human health risk associated with exposure to

PAH, dioxins, furans, tributyltin, Cd, Cu, Pb and Zn from Dungeness crab meat, hepatopancreas, and sole meat is considered negligible to low. However, the health risk from the ingestion of Hg and methylmercury is defined as “moderate”.

Follow-up marine monitoring programs to fulfill FDS conditions 6.5.2 and 6.5.3 related to confirm HHRA model predictions and assess POPCs tissue accumulation will be undertaken within two years of the start of construction (by November 2025). If human exposure risks due to the consumption of contaminated seafood are identified during this program, then the tissue sampling program will continue for a minimum of 3 years post-construction. Dungeness crab meat and hepatopancreas as well as sole meat will be collected from the same study areas and using the same protocols as previous programs to allow temporal comparisons. Newly collected tissue data will also be compared to historical data for the analysis of trends.

3.4 Land Use

Pursuant to FDS Condition 7.1, Woodfibre LNG has developed a communications protocol for marine transportation during construction. The protocol is outlined in the Construction Marine Transportation Management and Monitoring Plan which is posted Woodfibre LNG’s website (<https://woodfibrelng.ca/wp-content/uploads/2023/10/construction-marine-transportation-management-and-monitoring-plan-1.pdf>). Information required to be communicated to the public as part of the protocol can be found on the website at <https://woodfibrelng.ca/construction/marine-transportation-schedule/>.

Pursuant to FDS Condition 7.3, Woodfibre LNG developed an Access Protocol for Indigenous Groups, which was shared with Indigenous Groups and will allow opportunities for marine and land access around the CPA.

In support of FDS Condition 7.2, data was collected in 2023 by buoys installed in 2022 which will be used in the follow-up monitoring for wake effects.

3.5 Archaeological and Heritage Resources

Pursuant to FDS Condition 8.1.1, in February 2023 an Archaeological Impact Assessment Interim report was prepared for the investigation conducted for the Mill Creek extension of the CPA in 2022. No archaeological materials were identified, however an area of elevated potential for archaeological material was identified.

Pursuant to FDS Condition 8.1.2 to 8.1.3, an Archaeological and Heritage Resource Management Plan (AHRMP) for construction was developed in consultation with Indigenous Groups prior to the start of the Construction phase. This plan outlines procedures and practices for on-site monitoring of Construction phase activities that may impact an archaeological or heritage structures, sites, or things. The AHRMP also includes a Chance Find Management Plan (CFMP).

An Archaeological Awareness and Chance Find Management Plan (AA-CFMP) program was also developed during 2023. The program is provided to all staff working in the CPA and is conducted through a one hour long in person presentation. It provides participants with information about the significance of archaeological materials and the legal requirements surrounding them.

In June 2023, a suspected chance find occurred. An excavator operator identified what was believed to be obsidian flakes (the byproduct of making stone tools) in a show excavation on the site. Work was halted in the immediate vicinity of the find and it was cordoned off. The project archaeologist and a Squamish Nation archaeological technician visited the site shortly thereafter and were able to collect and document the findings. On-site investigations determined that the material found was unlikely archaeological and therefore not an archaeological

site. Geochemical testing of the samples later confirmed this material was industrial slag. Once the find was confirmed to be historical in origin, the area was cleared of archaeological concern and works resumed.

3.6 Listed Species at Risk

A dusk emergence survey was completed at the end of March 2023 to watch for bats emerging from buildings. An active bat detector was used during this survey, and while bat species were detected, none were little brown myotis (*Myotis lucifugus*). Pursuant to FDS Condition 9.1 ultrasonic acoustic recorder units (i.e., passive bat detectors) were installed in sites with potential for maternity roosts. This data will be analyzed in early 2024, and if active roosts or hibernacula are detected, buffer zones will be established in consultation with relevant government authorities. As no little brown myotis hibernacula or active roosts were identified in 2023, no buffer zones were established, per FDS Condition 9.1.

Pursuant to FDS Condition 9.2, the previously installed bat boxes were inspected for occupancy. No bats were found.

Pursuant to FDS Condition 9.3, a follow-up monitoring program for little brown myotis was developed. The monitoring program addresses commitments made during the environmental assessment such as a requirement to undertake pre-clearing maternity roost surveys should tree clearing or building demolition works occur outside the least risk window for bat roosting (September 1 to May 15 inclusive) and the establishment of acceptable non-disturbance buffer zones (as determined by a QP) around active maternity roosts. Prior to building demolition, the interior and exterior of buildings were inspected systematically by searching areas where bats could enter (e.g., behind siding, along vents, ducts, equipment, and shelving). Biologists looked for evidence of bat use (i.e., guano, urine stains, bats). An active bat detector was also used to detect acoustic bat activity. Bat detectors were deployed inside and outside the Powerhouse & Warehouse building. No little brown myotis were detected acoustically. In addition, ultrasonic acoustic recorder units were installed near the site of the future air-cooling system and flare. These data will be used to verify accuracy of the environmental assessment as it pertains to the air-cooling system and will help determine effectiveness of mitigation measures by providing a more recent baseline to compare against.

4.0 ADDITIONAL MITIGATION MEASURES

Woodfibre LNG is committed to a careful and precautionary approach to the implementation of mitigation measures required to comply with the FDS conditions. Mitigation strategies are based on validated methods and models supported by assurances of QPs that specialize in their respective areas of practice. Informed by the best available information and knowledge, including community and Indigenous Traditional Knowledge, the follow-up monitoring programs described in Section 3 of this document were subject to processes of adaptive management which require that implemented measures be evaluated and adjusted as required to achieve a set objective. It is a systemic approach for continually improving existing management strategies by learning from earlier experiences.

Pursuant to FDS Condition 6.4, baseline water quality samples continue to be collected from freshwater and marine locations across the CPA. Similar to 2021 and 2022, water samples collected from various locations throughout 2023 were observed to exceed CCME guidelines. Samples of freshwater were observed to exceed CCME limits for field pH, field DO, total Al, total Cr and dissolved Cu. Samples of marine water were observed to exceed CCME limits for field DO, total Cd, total Cr and total V. Marine sediment results from 2023 indicate that total Cd, Cr, Cu, Pb, Hg, and Zn and PAHs were above the SQGs. Given the known elevated baseline concentrations of metals in Howe Sound, and from historical baseline water quality sampling within the CPA, QPs determined no additional mitigation measures were required. Notifications were provided to relevant government authorities and Indigenous Groups in accordance with FDS Condition 6.4.

4.1 Accidents and Malfunctions

Pursuant to FDS Condition 11.5, Woodfibre LNG has developed a communication plan related to accidents and malfunctions. As described in Section 5.1, Indigenous Groups were invited to provide input on the plan, which was incorporated into the plan.

4.2 Emergency Response Plans and Communications with Indigenous Groups

Pursuant to FDS Condition 11.3 an Emergency Response Plan for construction was developed and consulted on with Indigenous Groups and relevant federal and provincial agencies throughout 2023.

5.0 OFFSETTING

Pursuant to FDS Condition 3.11, and in-line with the offsetting requirements set out in applicable environmental legislation, project permits and relevant policies, offsetting plans to compensate for residual Project impacts to fish and fish habitat were developed during 2023. Specifically, offsetting plans were developed through permitting processes for the following authorizations:

- *Fisheries Act* Authorization (FAA)
- *Water Sustainability Act* (WSA), Section 11, Changes in and About a Stream Authorization
- District of Squamish (DOS), Development Permit (DPA) 1

These plans were developed in consultation with Squamish Nation, Tsleil-Waututh Nation, and Musqueam Indian Band and applicable regulatory agencies (Fisheries and Ocean Canada (DFO), the BC Energy Regulator (BCER), and DOS). Further development of the plans will be undertaken in 2024. Construction of habitat for compensation is also planned to begin in 2024.

6.0 CONSULTATION AND ENGAGEMENT

6.1 Indigenous Consultation

Woodfibre LNG remains committed to conducting robust consultation activities with all of the Indigenous Groups stipulated in the FDS. Pursuant to FDS Condition 2.6.3, this section summarizes Woodfibre LNG's engagement activities with Indigenous Groups in 2023 related to FDS conditions. Engagement activities will be ongoing for the life of the Project and will continue to be tailored to the phase of the Project and associated activities planned at the time of engagement.

As communicated in the Woodfibre LNG 2020, 2021 and 2022 annual reports, consultation with Indigenous Groups occurred across a range of different aspects related to the Project, and as required by the FDS conditions. This included consultation on the following Plans: P-CEMP, CEMP, AHRMP (FDS Condition 8.1), the communication plan for accidents and malfunctions (FDS Condition 11.5) and Pre-Construction Emergency Response Plan (FDS Condition 11.3).

In 2023, Woodfibre LNG undertook the following activities:

- Consulted, invited, and incorporated input from Indigenous Groups in development of the follow-up program to determine the effectiveness of mitigation measures for fish and fish habitat (FDS Condition 3.14) and Fisheries Act authorization (FDS Condition 3.11).
- Consulted, invited, and incorporated input from Indigenous Groups into Woodfibre LNG's Marine Mammal Management Plan (FDS Condition 3.8 protection of marine mammals) and FDS Condition 6.4 (water quality monitoring).
- Consulted, invited, and incorporated input from Indigenous Groups in development of a Construction communications protocol related to marine transportation (FDS Condition 7.1).
- Consulted, invited and incorporated input from Indigenous Groups in development of a Construction Phase access management plan to ensure opportunities for marine and land access around the Project area (FDS Condition 7.3).
- Consulted, invited and incorporated input from Indigenous Groups on the ARHMP (FDS Condition 8.1).
- Consulted, invited and incorporated input from Indigenous Groups on development of a Construction Phase communications plan related to accidents and malfunctions (FDS Condition 11.5).
- Consulted, invited and incorporated input from Indigenous Groups on development of a Construction Emergency Response Plan (FDS Condition 11.3).
- Consulted, invited and incorporated input from Indigenous Groups on development of a Community Services and Infrastructure Management Plan, including a Noise Complaint Mechanism (FDS Condition 6.2).
- Consulted, invited and incorporated input from Indigenous Groups on the Woodfibre LNG Canadian Navigable Waters Act Application (FDS Condition 7.1).

6.2 Stakeholder Engagement

Pursuant to FDS Condition 2.6.3, this section summarizes how views and information received through stakeholder engagement activities were provided full and impartial consideration by Woodfibre LNG in 2023 related to FDS conditions. Engagement activities will be ongoing for the life of the Project and will continue to be tailored to the phase of the Project and associated activities planned at the time of engagement.

In 2023, Woodfibre LNG undertook the following activities:

- Engaged stakeholders in the development of the Project's Emergency Response Plan for construction including the BCER. Any comments received on the plan were taken into consideration and incorporated where appropriate. In addition, a tabletop exercise was held with various stakeholders (FDS Condition 11.3).
- Engaged stakeholder on a number of changes which were made to the Marnie Transportation Management and Monitoring Plan which houses the communication protocol for marine transportation to EAO, Transport Canada (TC), The Canada Coast Guard (CCG), Pacific Pilotage Authority (PPA), DFO, DOS, BC Ferries, Squamish-Lillooet Regional District (SLRD), BC Coastal Pilots, Howe Sound Biosphere Region Initiative Society, Canadian Coastal Sailing, Squamish Yacht Club, Marine Stewardship Initiative, Squamish Needs a Boat Launch Committee, Western Canada Marine Response Corp, Squamish Terminals, Mercury Transport Inc., Nature Squamish (Squamish Environmental Conservation Society), BC Marine Logistics, BC Marine Logistics, Metro Vancouver, Royal Cdn Marine SAR, Royal Canadian Marine Search and Rescue (RCMSAR), Squamish Marine Services, Squamish SAR, Squamish Stream keepers, Nature Squamish (Squamish Environmental Conservation Society), Clear Seas, Squamish Harbour Authority, West-Barr Contracting Ltd, Squamish Harbour Boat Rentals Ltd., Squamish Wind Sport Society, and Ministry of Transportation & Infrastructure (MOTI). Where appropriate, comments received from stakeholders were incorporated into the plan.

7.0 CLOSURE

This report has been prepared in fulfillment of the conditions set out in the FDS (as amended August 2023) issued to Woodfibre LNG for the Woodfibre LNG Project.

APPENDIX A Federal Decision Statement Table of Concordance for the Woodfibre LNG Project (2023 Update)

Condition No.	Condition	Notes
2.1	The Proponent shall, throughout all phases of the Designated Project, ensure that its actions in meeting the conditions set out in this Decision Statement are considered in a careful and precautionary manner, promote sustainable development, are informed by the best available information and knowledge, including community and Aboriginal traditional knowledge, are based on validated methods and models, are undertaken by qualified individuals, and have applied the best available economically and technologically feasible mitigation measures.	Refer to the Federal Decision Statement Annual Report for 2023 for additional information.
2.2	The Proponent shall, where consultation is a requirement of a condition set out in this Decision Statement: 2.2.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject of the consultation; 2.2.2 provide sufficient information and a reasonable period of time to permit the party or parties being consulted to prepare their views and information; 2.2.3 provide a full and impartial consideration of any views and information presented by the party or parties being consulted; and 2.2.4 advise the party or parties that have provided comments on how the views and information received have been considered by the Proponent.	Refer to Section 6 [Consultation and Engagement] of the attached report for additional information.
2.3	The Proponent shall, where consultation with Aboriginal groups is a requirement of a condition set out in this Decision Statement, and prior to initiating that consultation, communicate with each Aboriginal group to determine the manner by which to satisfy the consultation requirements referred to in Condition 2.2, including methods of notification, the type of information and the period of time to be provided when seeking input, the process for full and impartial consideration of any views and information presented and the means by which each Aboriginal group will be informed of how the views and information received have been considered by the Proponent.	Refer to Section 6 [Consultation and Engagement] of the attached report for additional information.
2.4	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement: 2.4.1 undertake monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure(s); 2.4.2 determine whether additional mitigation measures are required based on the monitoring and analysis undertaken pursuant to condition 2.4.1; and 2.4.3 if additional mitigation measures are required pursuant to condition 2.4.2, implement the additional mitigation measures and monitor them pursuant to condition 2.4.1.	Refer to Section 3 [Follow-Up Monitoring] of the attached report for more information. Further, refer to Section 3.6 [Listed Species at Risk] and Section 4 [Additional Mitigation Measures] of the attached report for additional information.
2.5	Where consultation with Aboriginal groups is a requirement of a follow-up program, the Proponent shall discuss with each Aboriginal group opportunities for the participation of that Aboriginal group in the implementation of the follow-up program as set out in condition 2.4.	Refer to Section 6 [Consultation and Engagement] of the attached report for additional information.
2.6	The Proponent shall, commencing in the reporting year that implementation of the conditions set out in this Decision Statement begins, prepare an annual report that sets out: 2.6.1 the activities undertaken in the reporting year to comply with each of the conditions set out in this Decision Statement; 2.6.2 how the Proponent complied with condition 2.1; 2.6.3 for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation; 2.6.4 the results of the follow-up program requirements identified in conditions 3.14, 4.3, 6.5, 7.2 and 9.3; and 2.6.5 any additional mitigation measures implemented or proposed to be implemented by the Proponent, as determined under condition 2.4.	This report has been structured consistent with the requirements of this condition and includes, as appropriate, the information requirements described by Conditions 2.6.1 – 2.6.5.
2.7	The Proponent shall submit to the Agency the annual report referred to in Condition 2.6, including an executive summary in both official languages, no later than March 31 following the reporting year to which the annual report applies.	As per the attached Project Federal Decision Statement Annual Report for 2023.

Condition No.	Condition	Notes
2.8	The Proponent shall publish on the Internet, or any medium which is widely publicly available, the annual report and the executive summaries referred to in Conditions 2.6 and 2.7, any plan(s) to offset the loss of fish and fish habitat referred to in Condition 3.11, the archaeological and heritage resources management plan referred to in Condition 8.1, the decommissioning plan referred to in Condition 10.1, the annual report referred to in Condition 10.3, the reports referred to in Conditions 11.4.3 and 11.4.4, the Communication Plan referred to in Condition 11.5, the implementation schedule referred to in Condition 12.1 and any update(s) or revision(s) to the above documents, upon submission of these documents to the parties referenced in the respective Conditions. The Proponent shall keep these documents publicly available for 25 years following the end of operation or until the end of decommissioning of the Designated Project, whichever comes first. The Proponent shall notify the Agency and Aboriginal groups of the availability of these documents once they are published.	- Relevant reports have been posted to the Woodfibre LNG web portal at https://woodfibrelng.ca/ - The following documents were published online in 2023: - Federal Decision Statement Annual Report for 2022 (including executive summaries) - Project Implementation Schedule - Update (as per Condition 12)
2.9	The Proponent shall notify the Agency and Aboriginal groups in writing no later than 60 days after the day on which there is a transfer of ownership, care, control or management of the Designated Project in whole or in part.	Not applicable to the 2023 reporting period.
2.10	The Proponent shall consult with Aboriginal groups prior to initiating any material change(s) to the Designated Project that may result in adverse environmental effects, and shall notify the Agency in writing no later than 60 days prior to initiating the change(s).	Not applicable to the 2023 reporting period.
2.11	In notifying the Agency pursuant to condition 2.10, the Proponent shall provide the Agency with an analysis of the adverse environmental effects of the change(s) to the Designated Project, as well as the results of the consultation with Aboriginal groups.	Not applicable to the 2023 reporting period.
3.1	The Proponent shall conduct in-water construction activities during timing windows of least risk for the area, unless otherwise agreed to by relevant federal and provincial authorities. If in-water construction activities cannot be conducted during timing windows of least risk, the Proponent shall develop and implement additional mitigation measures, in consultation with Fisheries and Oceans Canada and Aboriginal groups, to protect fish during sensitive life stages.	Refer to Section 3.1 [Fish and Fish Habitat] of the attached report for more information.
3.2	The Proponent shall implement measures to mitigate adverse environmental effects of the Designated Project on fish and fish habitat from changes to water quality during all phases of the Designated Project. The mitigation measures shall include: 3.2.1 implementing erosion control measures and sediment control measures during all phases of the Designated Project; 3.2.2 revegetating disturbed riparian areas, using native plant species, after construction; 3.2.3 using silt control measures around in-water construction activities; and 3.2.4 preventing wet concrete or cement-laden water from entering the marine environment.	Refer to Section 3.1 [Fish and Fish Habitat] of the attached report for more information.
3.3	The Proponent shall implement measures to mitigate adverse environmental effects of the Designated Project on fish, including mortality, physical injury and behavioral change, during all phases of the Designated Project. The mitigation measures shall include: 3.3.1 isolating instream construction activities in Mill Creek from adjacent streamflow; 3.3.2 salvaging and relocating fish during instream construction activities requiring isolation of freshwater fish habitat in Mill Creek; 3.3.3 maintaining minimum flow in Mill Creek and Woodfibre Creek to support fish and fish habitat; 3.3.4 designing, installing and operating a water intake structure to avoid or reduce the risk of injury and mortality to fish in Mill Creek and Woodfibre Creek; 3.3.5 taking into consideration the British Columbia Marine and Pile Driving Contractors Association's Best Management Practices for Pile Driving and Related Operations when conducting pile installation; and 3.3.6 implementing low-noise methods or sound dampening technologies to reduce the intensity of the sound generated or the level of sound propagation through the water column if underwater pressure pulse levels exceed 30 kilopascals during pile installation.	Refer to Section 3.1 [Fish and Fish Habitat] of the attached report for more information.
3.4	The Proponent shall prevent or avoid the destruction of fish, or any potentially harmful effects to fish habitat, during all phases of the Designated Project when using explosives in or around water frequented by fish.	Not applicable to the 2023 reporting period.
3.5	The Proponent shall remove existing creosote-treated piles in a manner to prevent the mobilization of deleterious substances in water frequented by fish, and taking into consideration navigational safety.	Not applicable to the 2023 reporting period.
3.6	The Proponent shall design, install and operate any marine water intake to avoid or reduce the incidental capture of fish through entrainment and impingement, including the risk of entrainment of Pacific herring (<i>Clupea pallasii</i>) larvae.	Not applicable to the 2023 reporting period.

Condition No.	Condition	Notes
3.7	The Proponent shall design, install and operate any marine discharge diffuser to prevent the deposit of a deleterious substance in water frequented by fish.	Not applicable to the 2023 reporting period.
3.8	The Proponent shall establish and maintain marine mammal underwater noise impact areas for all construction activities to avoid adverse behavioural change in or injury to marine mammals. In doing so, the Proponent shall: 3.8.1 identify each construction activity that generates underwater noise levels greater than 160 decibels and the periods of time when each activity occurs; 3.8.2 establish the boundary of the marine mammal underwater noise impact area for each construction activity identified in condition 3.8.1 at the distance from the activity at which the underwater noise level is predicted to reach 160 decibels; 3.8.3 employ a marine mammal observer, who is a qualified individual, and require that person to detect and report the presence of marine mammals in the marine mammal underwater noise impact area during construction activities identified in condition 3.8.1; 3.8.4 stop or not start the construction activities identified in condition 3.8.1 if a marine mammal is detected in the marine mammal underwater noise impact area, and only begin or continue the construction activities identified in condition 3.8.1 once the marine mammal has moved out of the marine mammal underwater noise impact area; and 3.8.5 implement mitigation measures, including sound dampening technology and soft-start procedures, to reduce construction noise levels in the marine mammal underwater noise impact area.	Refer to Section 3.1 [Fish and Fish Habitat] of the attached report for more information.
3.9	The Proponent shall require that LNG vessels associated with the Designated Project respect speed profiles applicable to the operation of the Designated Project, subject to navigational safety, to prevent or reduce the risks of collisions between LNG vessels and marine mammals.	Not applicable to the 2023 reporting period.
3.10	The Proponent shall require that LNG vessels and tug operators associated with the Designated Project report collisions with marine mammals in Howe Sound to the Canadian Coast Guard within two hours of a collision occurrence, and notify Aboriginal groups in writing.	Not applicable to the 2023 reporting period.
3.11	The Proponent shall, in consultation with Fisheries and Oceans Canada and Aboriginal groups, develop and implement any plan(s) required to offset the loss of fish and fish habitat associated with the carrying out of the Designated Project.	Refer to Section 5 [Offsetting] of the attached report for more information.
3.12	For any fish habitat offset areas proposed in any offsetting plan(s) under condition 3.11, and prior to submitting the offsetting plan to Fisheries and Oceans Canada, the Proponent shall determine whether there are adverse effects: 3.12.1 on migratory birds and their habitats; 3.12.2 on terrestrial species, including amphibians and reptiles, and their habitats; 3.12.3 on listed species at risk and their habitats; 3.12.4 on the current use of lands and resources for traditional purposes by Aboriginal peoples; 3.12.5 on the flow rates, water depths or water widths that may affect the passage of a vessel, including a vessel used by Aboriginal peoples in the context of their current use of lands and resources for traditional purposes; 3.12.6 on physical and cultural heritage and structure, site or thing that is of historical, archaeological, paleontological or architectural significance to Aboriginal peoples; and 3.12.7 from potential sources of contamination including polycyclic aromatic hydrocarbons, dioxins, furans, copper, lead, zinc, tri-n-butyltin, arsenic, cadmium and methyl-mercury in the receiving environment.	Refer to Section 5 [Offsetting] of the attached report for more information.
3.13	The Proponent shall, if there are adverse effects on any of the elements set out in conditions 3.12.1 to 3.12.7, avoid or lessen those adverse effects.	Not applicable to the 2023 reporting period.
3.14	The Proponent shall, in consultation with Fisheries and Oceans Canada and Aboriginal groups, develop, prior to construction, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures identified under Conditions 3.1 to 3.10.	Refer to Section 3.1 [Fish and Fish Habitat] and Section 6 [Consultation and Engagement] of the attached report for more information.
4.1	The Proponent shall carry out all phases of the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's Avoidance Guidelines. The Proponent's actions in applying the Avoidance Guidelines shall be in compliance with the <i>Migratory Birds Convention Act</i> , 1994 and with the <i>Species at Risk Act</i> .	Refer to Section 3.2 [Migratory Birds] of the attached report for additional information.

Condition No.	Condition	Notes
4.2	The Proponent shall: 4.2.1 restrict flaring to the minimum required during operation, maintenance activities or emergencies to prevent the accumulation of natural gas and protect from overpressure; 4.2.2 minimize flaring required for operation and maintenance activities during night time and during periods of migratory bird vulnerability; and 4.2.3 control operational lighting to avoid attracting migratory birds.	Not applicable to the 2023 reporting period.
4.3	The Proponent shall develop, prior to construction and in consultation with Aboriginal groups, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the environmental effects of the air cooling system on migratory birds and to determine the effectiveness of the mitigation measures used to avoid harm to migratory birds, their eggs and nests, including the measures used to comply with conditions 4.1 and 4.2.	Refer to Section 3.2 [Migratory Birds] and Section 5 [Consultation and Engagement] of the attached report for additional information.
5.1	The Proponent shall utilize electric drives during operation for the compression of natural gas or utilize other technology that would result in equivalent or reduced greenhouse gas emissions.	Not applicable to the 2023 reporting period.
5.2	The Proponent shall implement a leak detection and repair system to control fugitive emissions at the site of the Designated Project during operation.	Not applicable to the 2023 reporting period.
6.1	The Proponent shall implement noise and air emission reduction measures during all phases of the Designated Project to avoid or reduce adverse environmental effects on human health, including: 6.1.1 complying with the Waste Discharge Regulation under British Columbia's Environmental Management Act for air emissions; 6.1.2 following best management practices and guidance from the British Columbia Oil and Gas Commission's Noise Control Best Practices Guidelines; and 6.1.3 complying with the operational noise requirement of the British Columbia Oil and Gas Commission's Liquefied Natural Gas Facility Regulation.	Refer to Section 3.3 [Human Health] of the attached report for additional information.
6.2	The Proponent shall, in consultation with Aboriginal groups and other parties who may be adversely affected by the noise caused by the Designated Project, develop, prior to construction, and implement, during all phases of the Designated Project, a mechanism for receiving noise complaints associated with the Designated Project. The Proponent shall respond in a timely manner to any noise complaint(s) received.	- Contact information is available on the Woodfibre LNG website at https://woodfibrelng.ca/contact-us/. Refer to Section 3.3 [Human Health] of the attached report for additional information. - Refer to Section 6 [Consultation and Engagement] of the attached report for additional information.
6.3	The Proponent shall install and manage exterior lighting from all components of the Designated Project and during all phases of the Designated Project to prevent excessive emanation of light, by following the International Commission on Illumination's CIE 150:2003 Guide on the limitation of the Effects of Obtrusive light from Outdoor lighting Installations, while meeting marine transportation and aviation safety requirements.	Not applicable to the 2023 reporting period.
6.4	The Proponent shall monitor, during construction and operation, water quality and sediment, using as a benchmark the Canadian Council of Ministers of the Environment's <i>Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life</i> , and shall communicate any exceedance(s) of the Guidelines attributable to the Designated Project to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances.	Refer to Section 3.3 [Human Health], Section 4 [Additional Mitigation Measures] and Section 6 [Consultation and Engagement] of the attached report for additional information.

Condition No.	Condition	Notes
6.5	The Proponent shall, in consultation with Aboriginal groups and relevant health authorities, develop, prior to construction, and implement a follow-up program to verify the assessment predictions regarding the bioavailability and bioaccumulation of contaminants in fish consumed by humans. The follow-up program shall include: 6.5.1 prior to the commencement of marine in-water construction activities, establishing baseline conditions in the tissue of shellfish and groundfish for polycyclic aromatic hydrocarbons, polychlorinated dibenzo-p-dioxins and furans, copper, lead, zinc, tributyltin, arsenic, cadmium and methylmercury and using this information to update the human health risk assessment for the consumption of shellfish and groundfish; 6.5.2 during marine in-water construction activities, monitoring the re-suspension and bioavailability of polycyclic aromatic hydrocarbons, dioxins, furans, copper, lead, zinc, tri-n-butyltin, arsenic, cadmium and methyl-mercury in the tissue of shellfish and groundfish; and 6.5.3 if a potential for human health risk is identified in the updated human health risk assessment for the consumption of shellfish and groundfish referred in condition 6.5.1 or through monitoring referred in condition 6.5.2, conducting additional sampling of polycyclic aromatic hydrocarbons, dioxins, furans, copper, lead, zinc, tri-n-butyltin, arsenic, cadmium and methyl-mercury in the tissue of shellfish and groundfish to confirm the assessment predictions regarding the bioavailability and bioaccumulation of contaminants in fish consumed by humans. If required, additional sampling shall start immediately upon completion of marine in-water construction activities and continue for one year following completion of marine in-water construction activities. The Proponent shall communicate the results of the follow-up program, including the results of any additional sampling, to Aboriginal groups.	Refer to Section 3.3 [Human Health] of the attached report for additional information.
7.1	The Proponent shall, in consultation with Aboriginal groups and other marine users, develop, prior to construction, and implement, during all phases of the Designated Project, a communication protocol related to marine transportation. The communication protocol shall include procedures and practices for sharing information between the Proponent and Aboriginal groups and other marine users on the following: 7.1.1 location and timing of construction activities associated with the Designated Project-related, location and timing of ferry and water taxi traffic associated with the Designated Project and location of the marine access route to be used by LNG vessels associated with the Designated Project in Howe Sound; 7.1.2 location and timing of traditional activities by Aboriginal groups and of activities by other marine users; 7.1.3 Designated Project-related safety procedures, such as navigation aids, updated navigational charts and use of escort tugboats; 7.1.4 areas where navigation may be controlled for safety reasons; 7.1.5 speed profiles and schedules applicable to the operation of LNG vessels associated with the Designated Project; and 7.1.6 ways in which Aboriginal groups and other marine users can provide feedback to the Proponent about adverse environmental effects related to navigation caused by activities associated with the Designated Project, including construction activities and the operation of ferry and water taxi and LNG vessels.	Refer to Section 3.4 [Land Use] and Section 6 [Consultation and Engagement] of the attached report for additional information.
7.2	The Proponent shall, in consultation with Aboriginal groups, develop, prior to construction, and implement, during the construction and operation phases of the Designated Project, a follow-up program to verify the accuracy of the predictions made during the environmental assessment in relation to the effects of the wake generated by Designated Project-related vessels on the current use of lands and resources for traditional purposes and on physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance. The follow-up program shall include: 7.2.1 monitoring during the construction period and the first two years of operation of the degree of wake generated by Designated Project-related vessels and of adverse environmental effects on harvesters caused by vessel wake attributable to Designated Project-related vessels at key harvest sites and during key harvest periods for Aboriginal groups and on physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance located on or near the shoreline and identified in consultation with Aboriginal groups; and 7.2.2 providing the results of the follow-up program and details of any additional mitigation measures implemented as a result of the follow-up program to Aboriginal groups.	Refer to Section 3.4 [Land Use] and Section 6 [Consultation and Engagement] of the attached report for additional information.
7.3	The Proponent shall, prior to construction, consult with Aboriginal groups to seek opportunities for marine and land access around the Project area for Aboriginal groups to practice their current use of land and resources for traditional purposes and to pursue socioeconomic opportunities, subject to safety requirements in the Project area.	Refer to Section 3.4 [Land Use] and Section 6 [Consultation and Engagement] of the attached report for additional information.

Condition No.	Condition	Notes
7.4	The Proponent shall provide Aboriginal groups with the implementation schedule and any update(s) or revision(s) to that schedule as stated in condition 12 at the same time the Proponent provides the schedule to the Agency.	Refer to Section 2.2 [Implementation Schedule] and Section 6 [Consultation and Engagement] of the attached report for additional information.
8.1	The Proponent shall, in consultation with Aboriginal groups, develop, prior to construction, and implement, during all phase of the Designated Project, an archaeological and heritage resources management plan for the Designated Project. The archaeological and heritage resources management plan shall take into account the British Columbia's Handbook for the Identification and Recording of Culturally Modified Trees. The archaeological and heritage resources management plan shall include: 8.1.1 a description of structures, sites or things of historical, archaeological, paleontological or architectural significance (including culturally modified trees) that may be encountered by the Proponent during construction; 8.1.2 procedures and practices for on-site monitoring of construction activities that may affect a structure, site or thing of historical, archaeological, paleontological or architectural significance (including culturally modified trees) and for the identification and removal of that structure, site or thing; and 8.1.3 a chance find protocol, should a previously unidentified structure, site or thing of historical, archaeological, paleontological or architectural significance (including culturally modified trees) be discovered by the Proponent or brought to the attention of the Proponent, during construction, by an Aboriginal group or another party.	Refer to Section 3.5 [Archaeological and Heritage Resources] and 6 [Consultation and Engagement] of the attached report for additional information.
9.1	The Proponent shall conduct pre-clearing surveys to determine the distribution of little brown myotis (<i>Myotis lucifugus</i>), and establish, in consultation with relevant government authorities, buffer zones around active hibernacula and active roosts.	Refer to Section 3.6 [Listed Species at Risk] of the attached report for additional information.
9.2	The Proponent shall, prior to construction and throughout all phases of the Designated Project, install and maintain roosting structures to offset any loss of little brown myotis (<i>Myotis lucifugus</i>) roosting habitat.	Refer to Section 3.6 [Listed Species at Risk] of the attached report for additional information.
9.3	The Proponent shall develop and implement a follow-up program to monitor the little brown myotis (<i>Myotis lucifugus</i>) usage of buffer zones and roosting structures to determine the effectiveness of the mitigation measures throughout all phases of the Designated Project and to verify the accuracy of the environmental assessment as it pertains to the environmental effects of the air cooling system on little brown myotis (<i>Myotis lucifugus</i>).	Refer to Section 3.6 [Listed Species at Risk] of the attached report for additional information.
10.1	At least one year prior to the end of operation, the Proponent shall develop, in consultation with Aboriginal groups and relevant government authorities, and submit to the Agency a decommissioning plan. The decommissioning plan shall include a description of: 10.1.1 any consultation undertaken by the Proponent during the development of the decommissioning plan, including any issues raised by Aboriginal groups and other parties during consultation and how these issues were addressed by the Proponent; 10.1.2 the components of the Designated Project that will be decommissioned by the Proponent and the components that will not be decommissioned; 10.1.3 the desired end-state objectives of the Project area; 10.1.4 the components of the environment that may be adversely affected by decommissioning activities or by components of the Designated Project that will not be decommissioned; 10.1.5 how the Proponent will mitigate and monitor adverse environmental effects from decommissioning activities; 10.1.6 how the Proponent will conduct in-water and land-based decommissioning activities (including the location, the scheduling and sequencing of activities); 10.1.7 the plan for progressive reclamation, if appropriate; and 10.1.8 the manner and timing of consultation of Aboriginal groups and other relevant parties throughout the decommissioning phase.	Not applicable to the 2023 reporting period.
10.2	The Proponent shall implement the decommissioning plan referred in condition 10.1.	Not applicable to the 2023 reporting period.

Condition No.	Condition	Notes
10.3	The Proponent shall, from the reporting year in which decommissioning begins until the end of the decommissioning phase or for a maximum of 25 years, submit to the Agency a written annual report no later than March 31 of the following reporting year. The written annual report shall include a description of: • 10.3.1 the decommissioning activities undertaken by the Proponent during the reporting year; • 10.3.2 any adverse environmental effects identified by the Proponent with respect to the decommissioning activities identified in condition 10.3.1; • 10.3.3 a description of the mitigation measures that were implemented by the Proponent to mitigate the adverse environmental effects identified in condition 10.3.2 and the results of any associated monitoring; • 10.3.4 any modifications made to the decommissioning plan referred in condition 10.1; and • 10.3.5 consultation undertaken by the Proponent with Aboriginal groups and other relevant parties during the reporting year.	• Not applicable to the 2023 reporting period.
11.1	The Proponent shall take all reasonable measures to prevent accidents or malfunctions that may result in adverse environmental effects.	• Refer to the Construction EMP for more information; measures are included applicable and tailored to the proposed scopes of work.
11.2	The Proponent shall, prior to construction, consult with Aboriginal groups on the measures to be implemented to prevent accidents or malfunctions.	• Refer to Section 6 [Consultation and Engagement] of the attached report for additional information.
11.3	The Proponent shall, prior to construction and in consultation with relevant federal and provincial authorities and Aboriginal groups, develop an emergency response plan in relation to the Designated Project.	• Refer to Section 6 [Consultation and Engagement] of the attached report for additional information.
11.4.1	In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall implement the emergency response plan referred to in condition 11.3 and shall notify relevant federal and provincial authorities and Aboriginal groups of the accident or malfunction as soon as possible and, in writing, the Agency.	• Not applicable to the 2023 reporting period.
11.4.2	In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall implement the emergency response plan referred to in condition 11.3 and shall implement immediate measures to mitigate any adverse environmental effects associated with the accident or malfunction.	• Not applicable to the 2023 reporting period.
11.4.3	Submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction took place. The written report shall include: • 11.4.3.1 a description of the accident or malfunction and of its adverse environmental effects; • 11.4.3.2 the measures that were taken by the Proponent to mitigate the adverse environmental effects of the accident or malfunction; • 11.4.3.3 any views received from relevant federal and provincial authorities and Aboriginal groups with respect to the accident or malfunction, its adverse environmental effects or measures taken by the Proponent to mitigate adverse environmental effects; • 11.4.3.4 a description of any residual adverse environmental effects, and any additional measures required by the Proponent to mitigate residual adverse environmental effects; and • 11.4.3.5 details concerning the implementation of the emergency response plan referred to in condition 11.3.	• Not applicable to the 2023 reporting period.
11.4.4	In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall implement the emergency response plan referred to in condition 11.3 and shall submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction took place, on the changes made to avoid a subsequent occurrence of the accident or malfunction, and on the implementation of any additional measures to mitigate residual adverse environmental effects taking into account the information in the written report submitted pursuant to condition 11.4.3.	• Not applicable to the 2023 reporting period.

Condition No.	Condition	Notes
11.5	The Proponent shall develop and implement a communication plan in consultation with Aboriginal groups. The communication plan shall be developed prior to construction and shall be implemented and maintained up to date during all phases of the Designated Project. The plan shall include: 11.5.1 the types of accidents or malfunctions requiring a notification by the Proponent to the respective Aboriginal groups; 11.5.2 the manner by which Aboriginal groups shall be notified by the Proponent of an accident or malfunction and of any opportunities for the Aboriginal groups to assist in the response to the accident or malfunction; and 11.5.3 the contact information of the representatives of the Proponent that the Aboriginal groups may contact and of the representatives of the respective Aboriginal groups to which the Proponent provides notification.	Refer to Section 4.1 [Accidents and Malfunctions] and Section 6 [Consultation and Engagement] of the attached report for further detail.
12.1	12.1 The Proponent shall submit an implementation schedule for conditions contained in this Decision Statement to the Agency, or anyone designated pursuant to section 89 of the Canadian Environmental Assessment Act, 2012, at least 30 days prior to the start of construction. The implementation schedule shall indicate the commencement and completion dates for each activity relating to conditions set out in this Decision Statement.	Not applicable to the 2023 reporting period.
12.2	12.2 The Proponent shall submit an update to this implementation schedule in writing to the Agency, or anyone designated pursuant to section 89 of the Canadian Environmental Assessment Act, 2012, every two years on or before March 31, until completion of the activities.	Refer to Section 2.2 [Implementation Schedule] of the attached report for additional information.
12.3	12.3 The Proponent shall provide the Agency, or anyone designated pursuant to section 89 of the Canadian Environmental Assessment Act, 2012, with a revised implementation schedule if any material change(s) occur from the initial schedule referred to in condition 12.1 or any subsequent update(s). The Proponent shall provide the revised implementation schedule at least 30 days prior to the implementation of the change.	Refer to Section 2.2 [Implementation Schedule] of the attached report for additional information.
13.1	The Proponent shall maintain a written record, or a record in an electronic format compatible with that used by the Agency, and retain and make available that record to the Agency, or anyone designated pursuant to section 89 of the <i>Canadian Environmental Assessment Act, 2012</i>, at a facility close to the Designated Project in Canada (local facility). The record shall include information related to the implementation of the conditions set out in this Decision Statement, and the results of all associated monitoring, including: 13.1.1 the place, date and time of any sampling, as well as techniques, methods or procedures used; 13.1.2 the dates and the analyses that were performed; 13.1.3 the analytical techniques, methods or procedures used in the analyses; 13.1.3 the names of the persons who collected and analyzed each sample and documentation of any professional certification(s) relevant to the work performed that they might possess; and 13.1.5 the results of the analyses.	Refer to Section 3 [Follow-Up Monitoring] of the attached report for additional information.
13.2	The Proponent shall retain and make available upon demand to the Agency, or anyone designated pursuant to section 89 of the Canadian Environmental Assessment Act, 2012, the information referred to in condition 13.1 at a facility in Canada close to the Designated Project (or at another location within Canada and agreed upon by the Agency, should the local facility no longer be maintained). The information shall be retained and made available throughout construction and operation, and for 25 years following the end of operation or until the end of decommissioning of the Designated Project, whichever comes first.	Refer to Section 3 [Follow-Up Monitoring] of the attached report for additional information.



APPENDIX B

Water Quality Exceedances

Table B.3 Summary of Freshwater WQG Exceedances for the 2023 Baseline Program

Parameter	Units	WQG (LT)	N	N >WQG	Commentary
Field pH	pH units	6.5 - 9.0 (FWAL); 7.0 - 8.7 (EWAL)	56 (FWAL) 12 (EWAL)	26 (FWAL) 5 (EWAL)	Field pH measured in freshwater samples were occasionally below the lower limit of the FWAL and EWAL guidelines, respectively.
Field Dissolved Oxygen (DO)	mg/L	>=9.5 (FWAL); >=8 (EWAL)	56 (FWAL) 12 (EWAL)	2 (FWAL) 0 (EWAL)	Field DO measured in samples collected from East Creek (SW-04) on July 20 th and August 25 th were slightly below the FWAL WQG.
Total Aluminum (Al)	mg/L	0.028-0.65 ¹ (FWAL)	56 (FWAL) 12 (EWAL)	31 (FWAL) 0 (EWAL)	Total Al concentrations were 1.1 to 5.7 times greater than the corresponding FWAL guidelines for samples collected from all freshwater stations.
Total Chromium (Cr)	mg/L	0.001 (FWAL)	56 (FWAL) 12 (EWAL)	1 (FWAL) 0 (EWAL)	Total Cr measured in a sample collected from Woodfibre Creek (SW-01) on March 16 th was slightly above the FWAL WQG.
Dissolved Copper (Cu) ³	mg/L	0.00020-0.0037 ¹ (FWAL)	56 (FWAL) 12 (EWAL)	35 (FWAL) 0 (EWAL)	Dissolved Cu concentrations were 1.0 to 6.8 times greater than the corresponding FWAL guidelines for samples collected from all freshwater stations.

Notes:
 CCME = Canadian Council of Ministers of the Environment.
 ECCC = Environmental and Climate Change Canada.
 WQG = CCME Canadian Water Quality Guidelines for the Protection of Aquatic Life, or the Federal Water Quality Guidelines published by ECCC. LT = long-term freshwater aquatic life guideline. For the 2022 dataset, variable dependent guidelines were calculated for each sample using sample specific parameter values. The nearest boundary value was used if a variable was outside the formula range.
 N = number of samples
 Non-detect results are screened using the detection limit value.
² A range for long-term WQGs is provided since guidelines were calculated on a sample specific basis.

Table B.4 Summary of Marine Water WQG Exceedances for the 2022 Baseline Program

Parameter	Units	WQG (LT)	Location	N	N >WQG	Commentary
Field Dissolved Oxygen (DO)	mg/L	≥8.0	Surface	70	8	Field DO levels were below the WQG lower limit in all deep water samples except one.
			Deep	70	57	
Total Cadmium (Cd)	mg/L	0.00012	Surface	78	0	Total Cd concentrations were 1.01 and 1.1 times greater than the WQG in deep water samples collected on November 15 th at WQ2 and December 14 th at WQ1. One deep water sample collected from reference station WQR1 on September 19 th was 1.1x greater than the WQG.
			Deep	72	3	
Total Chromium (Cr) ¹	mg/L	0.0015	Surface	78	0	Total Cr concentrations were 1.3 and 1.7 times greater than the WQG in two deep water samples collected on April 26 th at reference station WQR1 and on December 14 th from station WQ1, respectively.
			Deep	72	2	
Total Vanadium (V)	mg/L	0.005	Surface	78	48	Total V was not detectable in the majority of monitoring samples; however, the detection limit (<0.01 mg/L) observed for most samples is 2x greater than the WQG. A lower detection limit was achieved in Q4 2023 (<0.004 mg/L) below the WQG. One deep-water sample collected from station WQ1 on December 14 th was 2x greater than the WQG.
			Deep	72	55	

Notes:
 CCME = Canadian Council of Ministers of the Environment.
 ECCC = Environmental and Climate Change Canada.
 WQG = CCME Canadian Water Quality Guidelines for the Protection of Aquatic Life, or the Federal Water Quality Guidelines published by ECCC. LT = long-term freshwater aquatic life guideline.
 N = number of samples.
 Non-detect results are screened using the detection limit value.
¹ WQG for total chromium is not specified; therefore, the guideline value for hexavalent chromium was used for screening. The guideline value for trivalent chromium is 0.056 mg/L.

Table B.5 Summary of Marine Sediment SQG Exceedances for the 2023 Baseline Program

Parameter	Units	CCME Guideline	N	N >ISQG	N>PEL	Commentary
Total Arsenic	mg/kg	7.24 (ISQG); 41.6 (PEL)	24	10	0	- Total As concentrations are up to 5x greater than the ISQG value. - Total Cu most frequently shows concentrations above the SQG. T-Cu concentrations are up to 38x and 7x greater than the ISQG and PEL, respectively. - Total Pb concentrations are up to 13x and 4x greater than the ISQG and PEL, respectively. - Total Cd, Cr, and Zn concentrations are up to 1.7x greater than the corresponding ISQG value. - Total Hg concentrations are up to 3x greater than the ISQG value.
Total Cadmium	mg/kg	0.7 (ISQG); 4.2 (PEL)	24	1	0	
Total Chromium	mg/kg	52.3 (ISQG); 160 (PEL)	24	1	0	
Total Copper	mg/kg	18.7 (ISQG); 108 (PEL)	24	24	2	
Total Lead	mg/kg	30.2 (ISQG); 112 (PEL)	24	6	1	
Total Mercury	mg/kg	0.13 (ISQG); 0.7 (PEL)	24	2	0	
Total Zinc	mg/kg	124 (ISQG); 271 (PEL)	24	3	0	
Acenaphthene	mg/kg	0.00671 (ISQG); 0.0889 (PEL)	24	24	15	- Total PAH concentrations are elevated above the ISQG or PEL in the majority of marine sediment samples. - Of the PAHs, concentrations for acenaphthene, acenaphthylene, fluorene and phenanthrene most frequently exceed the PEL. - PAH concentrations are up to 83x greater than the corresponding ISQG value and up to 6x greater than the corresponding PEL value.
Acenaphthylene	mg/kg	0.00587 (ISQG); 0.128 (PEL)	24	24	4	
Anthracene	mg/kg	0.0469 (ISQG); 0.245 (PEL)	24	21	12	
Benzo(a)anthracene	mg/kg	0.0748 (ISQG); 0.693 (PEL)	24	23	11	
Benzo(a)pyrene	mg/kg	0.0888 (ISQG); 0.763 (PEL)	24	20	9	
Chrysene	mg/kg	0.108 (ISQG); 0.846 (PEL)	24	23	11	
Dibenz(a,h)anthracene	mg/kg	0.00622 (ISQG); 0.135 (PEL)	24	23	5	
Fluoranthene	mg/kg	0.113 (ISQG); 1.494 (PEL)	24	24	10	
Fluorene	mg/kg	0.0212 (ISQG); 0.144 (PEL)	24	22	12	
2-Methylnaphthalene	mg/kg	0.0202 (ISQG); 0.201 (PEL)	24	17	2	
Naphthalene	mg/kg	0.0346 (ISQG); 0.391 (PEL)	24	22	3	
Phenanthrene	mg/kg	0.0867 (ISQG); 0.544 (PEL)	24	21	12	
Pyrene	mg/kg	0.153 (ISQG); 1.398 (PEL)	24	23	11	
Total Polychlorinated Biphenyls (PCB)	mg/kg	0.0215 (ISQG); 0.189 (PEL)	24	16	0	Concentrations of total PCBs were below detection limit in all marine sediment samples; however, detection limits are up to 3x greater than the ISQG value.

Notes:
CCME = Canadian Council of Ministers of the Environment
ISQG = Interim Sediment Quality Guidelines
PEL = Probable Effects Levels
N = number of samples

Table B.6 Summary of Marine Water WQG Exceedances for the 2023 Passenger Dock Replacement Program

Parameter	Units	WQG (LT)	Location	N	N >WQG	Commentary
Field Dissolved Oxygen (DO)	mg/L	≥8.0	Surface	26	11	Field DO levels were below the WQG lower limit in most deep water samples and frequently in shallow water samples.
			Deep	26	22	

Notes:

CCME = Canadian Council of Ministers of the Environment.

ECCC = Environment and Climate Change Canada.

WQG = CCME Canadian Water Quality Guidelines for the Protection of Aquatic Life, or the Federal Water Quality Guidelines published by ECCC. LT = long-term marine aquatic life guideline.

N = number of samples.

Non-detect results are screened using the detection limit value.