

ENVIRONMENTAL ASSESSMENT REGISTRATION DOCUMENT

Woodville Pit Expansion Project

Woodville, Kings County, Nova Scotia

Class I Undertaking

Prepared for

Dexter Construction Company Limited

Prepared by

Area East Environmental

September 2026

September 22, 2026

Nova Scotia Department of Environment and Climate Change
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Attention: Meghan Rafferty, Environmental Assessment Officer

Environmental Assessment Registration Document: Proposed Woodville Pit Expansion Project

On behalf of Dexter Construction Company, Area East Environmental is pleased to submit this Environmental Assessment Registration document for the proposed expansion of the existing Woodville Pit (the Project), located in Woodville, Kings County, Nova Scotia for your review and consideration.

Please do not hesitate to contact the undersigned with any questions regarding the information presented herein.

Sincerely,

AREA EAST ENVIRONMENTAL

A handwritten signature in dark ink, appearing to read 'P. Koke', with a stylized flourish at the end.

Paul Koke, M.A., CISEC, LEED AP
Principal, Environmental Specialist

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1.0 Introduction

Dexter Construction Company Limited (herein referred to as “Dexter”) of Bedford, Nova Scotia is proposing to expand the existing Woodville Pit (“the Site”) located in the Woodville area of Kings County, Nova Scotia. The existing pit is located at 987 Bligh Road, at approximately NAD83 UTM Zone 20, Easting 368538 and Northing 4998227 and is located on PID 55064547.

The pit is currently operating under a Nova Scotia Industrial Approval (IA), No. 2011-075309-02 issued to Dexter, for a pit or quarry of less than four (4) hectares. The current IA has an expiry date of January 25, 2031. A copy of the IA is attached in **Appendix A** (“Property Information”). An approval to expand the footprint of the site is required under the Nova Scotia Environmental Assessment Regulations. The registration of this Environmental Assessment (“EA”) and this EA Registration Document (“EARD”) is in response to Schedule A of the Environmental Assessment Regulations, Class I Undertaking B.2.:

A pit or quarry, other than a pit or quarry exempted under Section 4 of the regulations for the Department of Transportation and Infrastructure Renewal, that is larger than 4 ha in area for extracting one of the following:

- (a) ordinary stone;
- (b) building or construction stone;
- (c) sand;
- (d) gravel;
- (e) ordinary soil.

The Woodville Pit Expansion Project (“the Project”) will allow Dexter to continue to provide an important source of aggregate material for local projects in Kings County and neighboring areas within Nova Scotia.

Table 1.1 provides a current concordance for the information prescribed by section 9(1A)(b)(i)–(xviii) of the Environmental Assessment Regulations, as consolidated through N.S. Reg. 144/2026.

Table 1.1: Concordance with section 9(1A)(b)(i)–(xviii) of the Environmental Assessment Regulations

Provision	Required information	Location and coverage in this EARD
(i)	The name of the proposed undertaking	Section 2.1.
(ii)	The location of the proposed undertaking	Section 2.3; Figures 1 and 2; Appendix B.
(iii)	The name, address and identification of the proponent	Section 1.1; Appendix A.
(iv)	A list of all contact persons for the proposed undertaking and their contact information	Section 1.1.



Provision	Required information	Location and coverage in this EARD
(v)	If the proponent is a corporation, the name and signature of the corporation's chief executive officer or a person having signing authority	Section 15.0.
(vi)	Details of the nature and sensitivity of the area surrounding the proposed undertaking	Sections 2.3, 6.0 and 7.1–7.10; Appendices B–E.
(vii)	The purpose and need for the proposed undertaking	Section 3.1.
(viii)	The proposed construction and operation schedules for the undertaking	Section 5.4 and Table 5.3; Section 13.0.
(ix)	A description of the proposed undertaking	Sections 2.2, 2.3, 3.0 and 5.0.
(x)	Environmental baseline information	Sections 6.0 and 7.1 to 7.10; Appendices C–E.
(xi)	A list of all licences, certificates, permits, approvals and other authorizations required for the proposed undertaking	Sections 3.4 and 12.0.
(xii)	All sources of any public funding for the proposed undertaking	Section 14.0.
(xiii)	All steps taken by the proponent to identify the concerns of the public and the Mi'kmaq of Nova Scotia about the adverse effects or the environmental effects of the proposed undertaking	Section 4.0 and Table 4.1; Sections 7.10 and 10.3.
(xiv)	A list of all concerns expressed by the public and the Mi'kmaq of Nova Scotia about the adverse effects or the environmental effects of the proposed undertaking	Section 4.0 and Table 4.1; Section 10.3. Table 4.1.
(xv)	All steps taken or proposed to be taken by the proponent to address concerns identified under subclause (xiv)	Section 4.0; VEC-specific mitigation in Section 7.0; Section 9.3; Section 10.5.
(xvi)	An assessment of environmental effects of the proposed undertaking that are related to climate change, including both positive and adverse effects	Sections 7.1, 8.0 and 11.0.
(xvii)	A plain language summary of the proposed undertaking, its environmental effects (positive and adverse) and proposed mitigation, suitable for publication on a government website	Not included in the EARD. A standalone, web ready plain language summary is provided separately to NSECC for publication purposes.
(xviii)	The environmental effects of the proposed undertaking, including both positive and adverse effects	Sections 7.0 to 11.0 and 13.0.



1.1 Project Proponent and Consulting Team

Dexter Construction is a private Canadian company. It is incorporated under the laws of Nova Scotia and registered to do business in Nova Scotia under the *Nova Scotia Corporations Registration Act*. Dexter's Company Profile Report from the Nova Scotia Registry of Joint Stock Companies is attached in **Appendix A** "Property Information."

Proponent Address:

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Bedford, NS, B4A 3Z2
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Proponent Contact:

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Consultant Contact:

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Environmental Consultant
Phone: 902-877-1776

2.0 Overview of the Undertaking

2.1 Name of the Undertaking

The name of the undertaking is the "Woodville Pit Expansion Project", which is also referred to as "the Project" or "the Undertaking".

2.2 Summary Description of the Undertaking

Dexter proposes to expand the working footprint of the existing Woodville Pit to produce aggregate, primarily used in the local highway and construction industry. The proposed Undertaking involves the expansion of the existing Nova Scotia Environment and Climate Change (NSECC) approved pit from a less than four hectare (ha) pit to a 19.44 ha pit. Other than the proposed 15.44 ha increase in size, it is expected that continued use of the Site will be identical, or very similar, to historic use of the pit. A plan showing the existing NSECC approved

pit permit area, the proposed expanded 19.44 ha pit area, and the 27.1 ha EA Study Area and its boundary for the proposed pit expansion is illustrated in **Appendix B**.

2.3 Location

The pit is located on private land (PID # 55064547), leased to Dexter. The proposed pit expansion will encompass a maximum total of 19.44 ha. The pit is located at 987 Bligh Road near Woodville, Kings County, Nova Scotia, NAD83 UTM Zone 20, Easting 368538 and Northing 4998227). The site location is shown in Figures 2.1 and 2.2 (below). There is no designated municipal zoning in this area of Woodville, Kings County.

Figure 2.1 – Regional Location of Undertaking

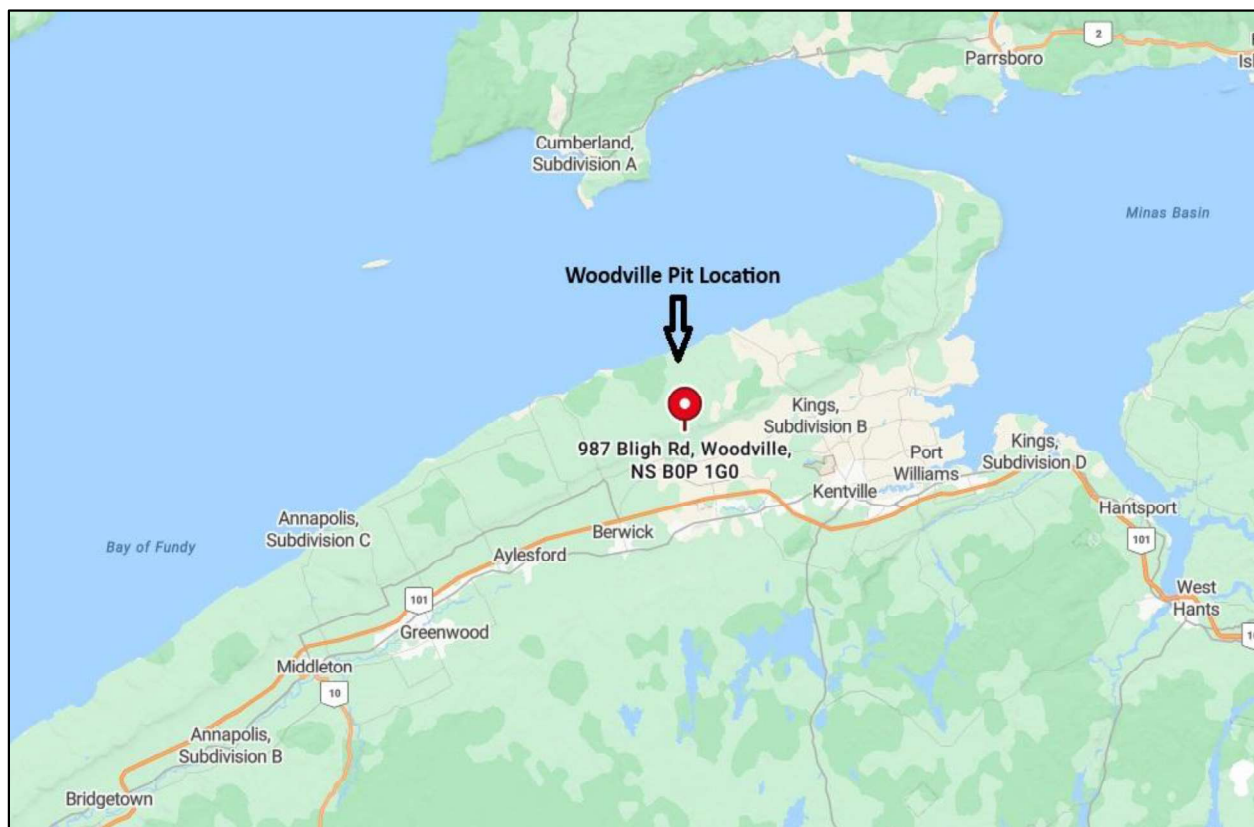
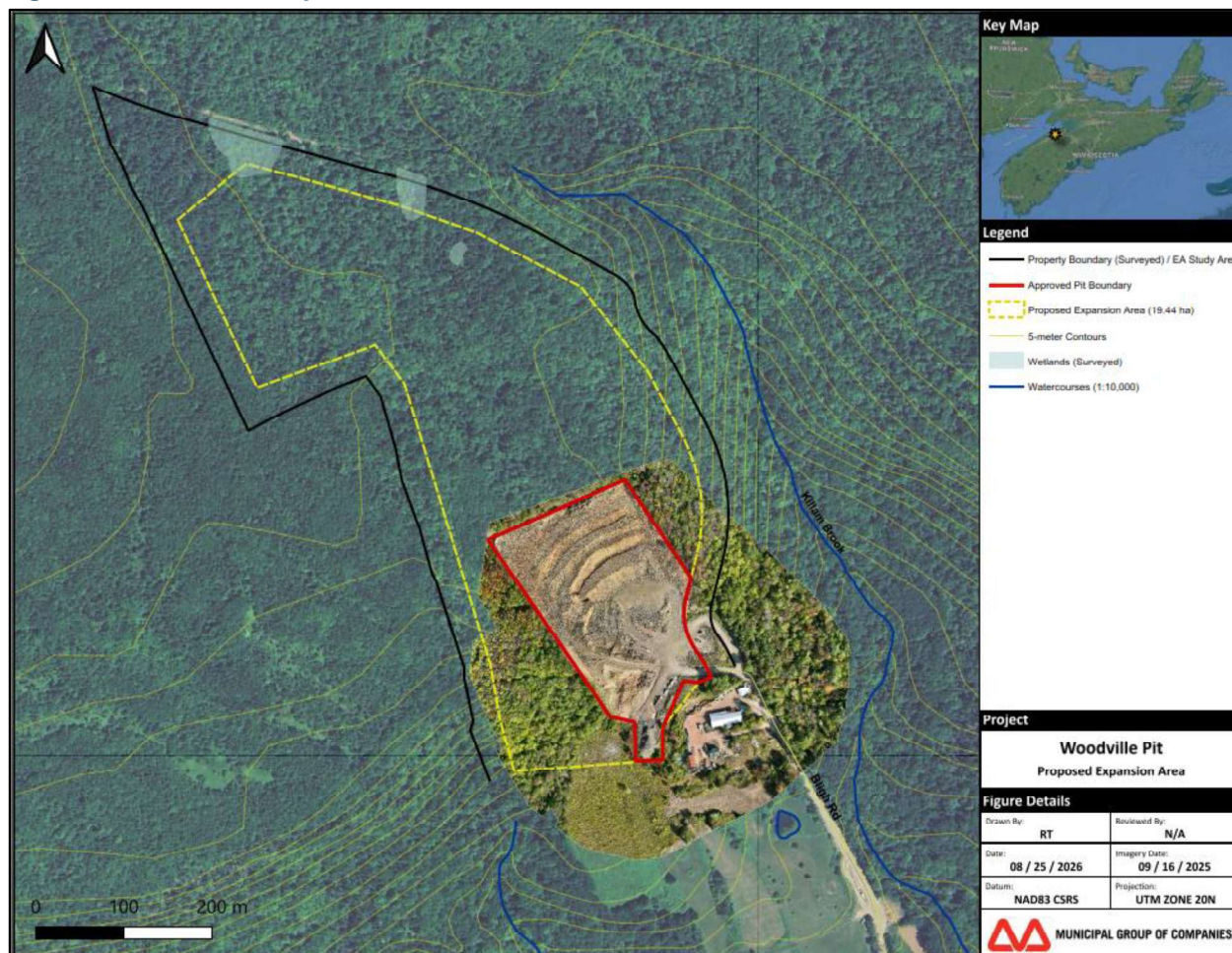


Figure 2.2 – Site and Study Area Location

3.0 Scope of the Undertaking

Dexter proposes to expand the working footprint of the existing Woodville Pit for the continuing purpose of extracting and supplying aggregate for the local construction industry. Other than the proposed increase in size, it is expected that continued use of the Site and operations will be identical, or very similar, to historic use of the pit.

The existing pit has been operated as a NSECC approved pit since 2011, operating under a NSECC Industrial Approval (2011-075309-02) for a less than four hectare pit. A working pit excavation slope has been developed in the northern portion of the existing Permit Area and will be advanced to the north. Some, but limited, advancement will occur to the east of the west. The existing pit slope ranges from approximately 25-40 metres high. When active, the site is operated periodically during the road construction season to provide construction aggregates for local projects as well as Nova Scotia Department of Public Works (NSDPW) projects in the area.

The scope of this application is for expansion of the existing site footprint to a maximum of 19.44 ha, from the existing 4 ha pit. Existing and future pit activities will include clearing and



grubbing of vegetation and overburden, excavation of aggregate, use of a portable crusher and/or screener for crushing and screening of aggregate products, stockpiling of aggregate products, operation of a portable truck scale and scale house, and trucking of aggregate products. Operation of a portable asphalt plant is not anticipated for the use at the site, however, if required, a separate NSECC approval process will be undertaken in the future. The quantity of aggregate produced at the Site each year will be dependent on demand and activity within the local construction industry. Similar to previous years, it is anticipated that the site will be operational during some construction seasons, but not necessarily during every year.

Site access is via Bligh Road, a provincially-owned and maintained gravel road aligned north-south, off Arnold Road. There are no off-site related support facilities, other than the provincial highway network.

It is anticipated that future operations will involve the extraction of approximately 50,000 tonnes/year during years in which the pit is active. However, the annual quantity may vary depending on local demand and associated project requirements.

3.1 Purpose and Need for the Undertaking

Dexter is proposing to expand the existing Woodville Pit, allowing for the continued production of aggregate, primarily used in the road and local construction industry. Continued development and operation of the Site will ensure that a quality aggregate supply is available to support local infrastructure needs in the future. The primary benefit will be to the people of Nova Scotia via the continued construction and maintenance of the Provincial highway system.

3.2 Description of Existing Pit Operations

The existing pit has been operated as a NSECC approved pit since 2011. A working pit excavation slope has been developed in the northern portion of the existing Permit Area and has advanced primarily to the north, with some limited advancement to the west. Current operations involve clearing and grubbing, excavation of aggregate, crushing and stockpiling of aggregate, and associated trucking on an as required basis. The pit is operated in accordance with an existing IA (Approval No. 2011-075309-02). A copy of the IA is attached in **Appendix A**. The pit operates in accordance with applicable environmental laws and regulations, including the Nova Scotia Pit and Quarry Guidelines. These Guidelines apply to all pit and quarry operations in the province and provide separation distances for operations, blasting limits, surface water discharge limits, suspended particulate matter limits, sound level limits and requirements for a reclamation plan and security bond. Dexter has been committed to using Best Management Practices in all phases of its existing operations at the Woodville Pit, including the on-site management of air quality, greenhouse gas emissions, noise, dust, and water quality, and has operated in accordance with applicable Federal and Provincial legislation and standards.

Operation of the Woodville Pit occurs on an as required basis when Dexter has contract work in the area. Off-site activities and facilities that support the Woodville Pit include the use of the

provincial highway network. When active, the site is operated periodically during the road construction season to provide construction aggregates for local projects as well as Nova Scotia Department of Public Works projects in the area.

Site operations and historic excavation have not encountered the water table as evidenced by the lack of water ponding on the pit floor and no upwelling of water through the pit floor. As a result of the topography at the Pit and sloped nature of the landscape, some water may flow across the pit floor during significant precipitation events and periods of snow and frost melt. Surface water drains off the Site through a maintained discharge ditch at the southeast corner of the site.



Figure 3.1. Aerial site imagery of the existing Woodville Pit (September 16, 2025).

3.3 Description of Proposed Future Pit Operations

Dexter proposes to expand the working footprint of the existing Woodville Pit to produce aggregate, primarily used in the local highway and construction industry. Other than the proposed increase in size, from 4 ha to 19.44 ha, it is expected that continued use of the site will be identical, or very similar, to historic use of the pit. Specifically, future pit activities will include clearing and grubbing of vegetation and overburden, excavation of aggregate, use of a portable crusher and/or screener for crushing and screening of aggregate products, stockpiling



of aggregate products, operation of a portable truck scale and scale house, and trucking of aggregate products. Operation of a portable asphalt plant is not anticipated for use at the Pit, however, if required, a separate NSECC approval process will be undertaken.

The quantity of aggregate produced at the Pit each year will be dependent on demand and activity within the local construction industry. Similar to previous years, it is anticipated that the site will be operational during some construction seasons, but not necessarily during every year. For example, operations at the Woodville Pit occurred during construction seasons in 2023 and 2024, but no operational activities have occurred on site during 2025 and 2026. Site access will continue to be via Bligh Road, a provincially-owned and maintained gravel road aligned north-south, intersecting Arnold Road to the south of the Project. There are no off-site related support facilities, other than the provincial highway network.

It is anticipated that future operations will involve the extraction of approximately 50,000 tonnes/year during years in which the pit is active. However, the annual quantity may vary depending on local demand and associated project requirements.

3.4 Environmental Management

3.4.1 Regulatory Compliance

Throughout the life of the Project, Dexter will adhere to the conditions of regulatory approvals and permits issued for the Project and in consultation with the appropriate regulatory authorities.

3.4.2 Erosion, Sediment Control and Water Management

Most precipitation and snowmelt readily infiltrate into the subsurface based on the high permeability of the sands and gravels at the Site. Any surface water resulting from major precipitation or snowmelt events will continue to be controlled by means of pit floor grading, berms, and swales, and will continue to be directed off-property through existing drainage systems that discharge to the southeast and southwest corners of the Site. The flows will be periodically monitored in accordance with terms and conditions in the future Industrial Approval and the Nova Scotia Pit and Quarry Guidelines (NSEL 1999) to monitor for total suspended solids (TSS) levels. In the unlikely event that run off from the property exceeds discharge limits, as determined through monitoring, additional ESC controls will be considered, and/or pumping of sediment laden water may be directed to a vegetated area at the southwest corner of the Site.

Surface water monitoring has been carried out at the site discharge, as well as downgradient surface water locations during the past 12 months (2025/2026) to help establish baseline conditions for the Project. Details regarding the surface water monitoring locations and results are provided in **Appendix D**.



3.4.3 Dust and Noise Control

Dust control will be undertaken during dry weather conditions with the application of water or the application of environmentally friendly dust suppressants in high traffic areas (i.e. pit floor operating area). Water requirements for dust control are below the thresholds that would trigger Water Withdrawal Approval requirements. Berms of grubbing material that may be placed around the perimeter of the pit area may be seeded and/or covered with mulch to minimize erosion and dust generation.

Consistent with current operations and conditions, forest cover within the property buffers will aid in mitigating noise and dust from operational activities.

3.4.4 Hazardous Materials

Fuel storage does not occur with typical site operations. During periods when operational activities are occurring at the Woodville Pit, mobile fuel trucks are used to refuel equipment and machinery. In the unlikely event that storage tanks are used, fuel storage will be located, at minimum, more than 100 m from the nearest surface water body. Preventive maintenance of equipment may be required to be performed on-site by qualified personnel and contractors. Used oil and filters will be stored for a short time and removed from the site and disposed of in an appropriate manner.

Refueling activities will not be conducted within 30 m of any watercourse or wetland, and equipment operators will remain with the equipment during refueling in accordance with the Petroleum Management Regulations of the Nova Scotia *Environment Act*.

In the event of a leak or spill during refueling, maintenance, or general equipment operation, immediate action will be taken to stop and contain the spilled material. Spill kits containing spill response materials and equipment will be available on-site at a strategic location in the area of the pit development and material processing to permit immediate clean up if a spill were to occur.

All contaminated material will be collected and stored in an appropriate manner so as not to be re-released to the environment until such time as it will be transported to an approved treatment/disposal facility. Spills in quantities greater than those listed in Schedule A of the Environmental Emergency Regulations, NS Reg 16/2013 will be reported to the 24-hour environmental emergencies reporting system (1-800-565-1633). All equipment operators and those responsible for refueling and maintaining equipment will undergo mandatory spill response training, which will be documented. Mobile equipment will be equipped with spill kits for immediate response and containment should a spill occur.

The Canadian Standards Association publication “Emergency Planning for Industry” (CAN/CSA-Z731-03; CSA 2003) will be consulted as a reference in the preparation of contingency planning.

3.5 Project Schedule

Dexter plans to undertake the Project in phases, likely to span several decades. The



anticipated Project schedule, which is subject to change based on market and project demands and local construction activity, is provided in Table 3.1. Following EA approval, Dexter will seek an amendment to the existing Industrial Approval and any other permits or approvals required before expanding the working footprint. Initial site preparation and expansion development are anticipated to begin no earlier than 2027, subject to receipt of the required approvals and Project demand. Operations will continue on an intermittent, as-required basis during construction seasons, with aggregate extraction of approximately 50,000 tonnes/year in years when the Pit is active. Progressive reclamation will occur as areas become inactive. Final decommissioning and reclamation will follow the cessation of aggregate extraction; the timing will depend on market demand, the rate of material removal and available aggregate reserves.

Table 3.1. Anticipated Project Schedule

Project Phase	Anticipated Schedule
Project Planning and Environmental Assessment	2025/2026
Industrial Approval Amendment and other Required Approvals	Following EA approval; anticipated Q1 2027
Initial Site Preparation and Phased Expansion Development	2027 onward; phased as required following receipt of approvals
Operation and Maintenance	2027 onward; intermittent and demand-driven during construction seasons
Progressive Reclamation	Throughout operations as areas become inactive
Decommissioning and Final Reclamation	After aggregate extraction ceases; timing depends on material demand, rate of extraction and available aggregate reserves

3.6 Alternatives Considered

Pits are established where quality aggregate reserves are identified, and applicable environmental and logistical considerations are satisfied. Dexter maintains a strategic network of NSECC approved aggregate pits and quarries around the province to support local infrastructure projects. The development of an aggregate pit is an important asset to the local community. An alternative to the proposed Woodville Pit expansion is to develop a new pit or quarry nearby. Considering quality, environmental, and logistical constraints, it is preferred to proceed with an expansion of the existing site rather than the development of a new pit or quarry nearby.



Dexter operates pits throughout Nova Scotia and Atlantic Canada and uses modern, industry standard methodologies in all phases of the extraction, processing, and delivery of aggregates. Alternative processes are considered in terms of their efficiency, cost effectiveness and environmental mitigation advantages. Operations at the Woodville Pit will be assessed on an ongoing basis to ensure that the best available techniques are being utilized in all phases of operations.

3.7 Regulatory Context and Other Approvals Required

As noted in the previous section, the existing Woodville Pit is subject to an existing Industrial Approval (**Appendix A**), which includes conditions related to operational sound levels, separation distances, particulate emissions, surface water quality, groundwater management, reclamation, regulatory reporting as well as site-specific conditions. Prior to pit expansion, the existing IA will be amended based on the results derived from the various studies and assessments that form this Environment Assessment, and the EA Approval conditions. The amended IA will outline the operational requirements of the future pit operation. Environmental monitoring information that is collected from the site will be provided to NSECC as part of an annual report.

It is understood that additional environmental approvals, permits, and/or authorizations may be required in the future. Wetland alteration approvals will be obtained prior to the removal of wetland habitat identified within the proposed pit expansion area. At this time, no other approvals, permits, and/or authorizations are expected to be required in support of this application.

This environmental assessment addresses federal responsibilities under key legislation, including the *Fisheries Act*, *Migratory Birds Convention Act* (MBCA), and *Species at Risk Act* (SARA). Provincially, the project must comply with the *Nova Scotia Environment Act* and related Wetland Conservation Policy (2011). Detailed regulatory frameworks and specific requirements for fish habitat, migratory birds, wetlands, and species at risk (both federally and provincially) are discussed comprehensively in the discussion pertaining to each VEC.

4.0 Engagement

Dexter has engaged the public, regulatory agencies, and the Mi'kmaq of Nova Scotia, as outlined below in Table 4.1. Community and Mi'kmaq engagement to date have focused on notifying local elected officials and community representatives. Engagement efforts have included email correspondence, letters, as well as formalized meetings (virtual and onsite).

Dexter has followed guidance from the “Proponent’s Guide: The Role of Proponents in Crown Consultation with the Mi'kmaq of Nova Scotia”. In this regard, Dexter sent an early engagement letter to the nearest First Nation communities (Annapolis Valley First Nation), the Kwikmu'kw Maw-klusuaqn Negotiation Office (KMKNO), and the Native Council of Nova Scotia (NCNS) summarizing the Project and advising of the tentative timeline to register the Project for Environmental Assessment. The Nova Scotia Office of L'nu Affairs was copied on all

correspondence. A follow-up notification letter was also sent to all noted First Nation representatives, advising of the EA registration date, public viewing locations, and timelines for the submission of comments. Additional information regarding engagement efforts completed to date for the Woodville Pit Expansion Project is included in **Appendix C (Engagement)**.

Table 4.1. Woodville Pit Environmental Assessment – First Nations, Public and Regulatory Engagement Summary

First Nations Engagement		
Contact (Date)	Description of Engagement	Summary of Engagement
Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) (August 20, 2025)	Virtual meeting Copied on Early Engagement Letter (sent via email)	• Meeting to introduce the Woodville Pit Expansion Project. Reviewed site maps and photos. • Discussed the scope of existing operations and the scope of the proposed expansion. • Noted that first environmental studies are expected fall 2025. EA registration expected summer 2026. • Indicated that Dexter will follow up with an Early Engagement Letter in the coming weeks.
Native Council of Nova Scotia (September 10, 2025)	Meeting Early engagement letter (sent via email)	• Meeting to introduce the Woodville Pit Expansion Project. Discussed typical pit operations, and scope of proposed project. Reviewed site maps and photos. Provided presentation package to attendees following meeting. • Discussed planned environmental studies and timelines. • Indicated that Dexter will follow up with an Early Engagement Letter in the coming weeks.
Nova Scotia Office of L'nu Affairs (October 21, 2025)	Proposed Engagement Plan Copied on Early Engagement Letter (sent via email)	• Proposed early engagement approach for the Woodville Pit Expansion Project.
Annapolis Valley First Nation (November 3, 2025)	Early engagement letter (sent via email)	• Early Engagement Letter, including project summary and anticipated timeline, offer to discuss project, and commitment to send a follow up notification letter prior to EA registration.
Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) (November 3, 2025)	Early engagement letter (sent via email)	• Early Engagement Letter, including project summary and anticipated timeline, offer to discuss project, and commitment to send a follow up notification letter prior to EA registration.



First Nations Engagement		
Contact (Date)	Description of Engagement	Summary of Engagement
Native Council of Nova Scotia (November 3, 2025)	Early engagement letter (sent via email)	• Early Engagement Letter, including project summary and anticipated timeline, offer to discuss project, and commitment to send a follow up notification letter prior to EA registration.
Native Council of Nova Scotia (September 22, 2026)	Pre-EA Registration submission engagement and notification letter (sent via email)	• Notification letter, including planned EA registration date, copy of draft public notice and publish locations, location of hard and electronic copies, deadline for submission of comments, offer to meet to discuss.
Nova Scotia Office of L'nu Affairs (September 22, 2026)	Pre-EA Registration submission engagement and notification letter (sent via email)	• Forwarded Pre-EA Registration submission engagement and notification letter sent to First Nations.
Annapolis Valley First Nation (September 22, 2026)	Pre-EA Registration submission engagement and notification letter (sent via email)	• Notification letter, including planned EA registration date, copy of draft public notice and publish locations, location of hard and electronic copies, deadline for submission of comments, offer to meet to discuss.
Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) (September 22, 2026)	Pre-EA Registration submission engagement and notification letter (sent via email)	• Notification letter, including planned EA registration date, copy of draft public notice and publish locations, location of hard and electronic copies, deadline for submission of comments, offer to meet to discuss.

Public Engagement		
Contact (Date)	Description of Engagement	Summary of Engagement
Local Community – Elected Officials District 3 Councillor Municipality of the County of Kings (September 9, 2026)	Pre-EA Registration submission engagement and notification letter (sent via email)	• Email to notify of Project and upcoming EA Registration, including an offer to meet to discuss.



Public Engagement		
Contact (Date)	Description of Engagement	Summary of Engagement
Local Community – Elected Officials MLA, Kings North Province of Nova Scotia (September 9, 2026)	Pre-EA Registration submission engagement and notification letter (sent via email)	• Email to notify of Project and upcoming EA Registration, including an offer to meet to discuss.
Nearest Residents to Project (Bligh Road) (September 15, 2026)	Pre-EA Registration submission engagement and notification letter (sent via regular mail)	• Letter to notify of Woodville Pit Expansion Project upcoming EA Registration • Offer to discuss the Project, answer questions, and receive feedback • Included copy of Plain Language Summary and Map

Regulatory Agency Engagement		
Contact (Date)	Description of Engagement	Summary of Engagement
Nova Scotia Environment and Climate Change, and Nova Scotia Natural Resources (August 21, 2025)	Virtual meeting, including the following representatives: • NSECC EA Manager • NSECC Business Relationship Manager • NSECC EA Officer • DNRR Regional Biologist • DNRR Provincial Regulatory Affairs Biologist • DNRR Resource Scientist	• Meeting to introduce the Woodville Pit Expansion Project. Discussed typical pit operations, and scope of proposed project. • Reviewed site maps and photos. • Provided presentation package to attendees following meeting. • Discussed planned environmental studies and timelines. • Questions / comments and discussion included in potential SAR in vicinity of Project, study boundaries and methodologies, results of preliminary desktop review of SAR. • Public engagement approach and issues to focus on.



Regulatory Agency Engagement		
Contact (Date)	Description of Engagement	Summary of Engagement
Nova Scotia Environment and Climate Change (June 25, 2026)	On-site meeting at the Woodville Pit, including the following representatives: • NSECC Business Relationship Manager • NSECC EA Officer • NSECC District Manager, Kentville Office • NSECC Regional Engineer	• Site visit and tour of the Woodville Pit (site inactive). Site visit offered to EA Branch and regulatory review stakeholders. • Discussed the history of the site, the quarrying process, scope of site activities (as and when needed), and scope of proposed expansion (no change in frequency or activities). • Confirmed environmental field work and assessments that have been completed. • Discussed nearby structures and traffic associated with the pit. • Confirmed that First Nations engagement has been initiated. • Discussed and reviewed water management

4.1 Next Steps

On the date of EA Registration, the public will be notified of the EA Registration by a Notice in both the Chronicle Herald and the Annapolis Valley Register.

As part of the subsequent Industrial Approval Amendment process, Dexter will develop a Mi'kmaq Communication Plan and a Complaint Resolution Procedure.

5.0 Environmental Assessment Scope and Summary of Methods

The scope of the environmental assessment of the Project under the Nova Scotia Environmental Assessment Regulations of the Nova Scotia *Environment Act* is discussed within the following sections.

5.1 Scope of the Environmental Assessment

The Project must be registered for an EA as a Class I Undertaking pursuant to the Environmental Assessment Regulations of the *Nova Scotia Environment Act*. This EARD is intended to fulfill the requirements for registration of the Project under the provincial regulation and to initiate the EA review of the Project.

The Project includes development of an extension to the currently active Woodville Pit for aggregate extraction in Woodville, Nova Scotia. The scope of the Project to be assessed under the EA Regulations includes expansion related activities associated with the existing pit and related facilities and infrastructure, operation of the pit and related facilities, and eventual



reclamation and closure of the site at the end of Project life. The scope of the Project to be assessed is limited to the facilities and activities that will be conducted on the Project Site, up to and including the time that trucks arrive at and leave the Project Site but excludes the transportation of materials on the provincial road and highway network as well as activities that are carried out by third parties.

The scope of the assessment has been determined based on the requirements for Project registration under the subject legislation and as outlined in “A Proponent’s Guide to Environmental Assessment” (NSECC 2025). The methods of assessment were selected with the consideration of the proposed Project phases and activities, the existing environment and operations at the Site, stakeholder/regulatory consultations, regulatory framework, and on the associated identification of, and evaluation of the potential for the Project to interact with Valued Environmental Components (VECs) following the implementation of mitigation measures.

5.1.1 Approach

The Environmental Assessment follows “A Proponent’s Guide to Environmental Assessment” (NSECC 2025) and “Guide to Preparing an EA Registration Document for Pit and Quarry Developments in Nova Scotia” (Nova Scotia Environment 2009) and uses assessment methodology typical for environmental assessments of this nature. For this assessment a list of VECs, and project activities and outcomes for the expansion of the existing pit were developed. Potential for interactions of these project-related activities with VECs was identified. Where interactions were identified, and there was potential for significant impacts, mitigating actions or activities have been suggested that will avoid the impact or reduce it to acceptable levels before the project proceeds. The process ensures that all potentially significant impacts on VECs are identified and all potential impacts on them have been considered, and sufficient mitigation planned. These aspects of the Project are fully dealt with in Section 6.0 (Environmental Effects Assessment) of this EARD. The assessment also considered the Nova Scotia Class I Environmental Assessment Checklist and the Environmental Assessment Supplemental Checklist: Pits and Quarries (NSECC 2026a, 2026b).

Dexter and AEE met with the Nova Scotia Environmental Assessment Branch and the Nova Scotia Department of Natural Resources Wildlife Division in July 2025 to confirm the EARD requirements, including requirements for wildlife assessment, specific biophysical surveys, and to preliminarily evaluate the scope of the Project and assessment. To help confirm the assessment scope and characterize the Study Area, field visits, reconnaissance and biophysical surveys were completed on the following dates:

- September 13 and 16, 2025; and
- May 16, 2026, June 25, 2026 and July 5, 2026.

General field survey and reconnaissance coverage is presented in Figure 5.1. Dexter also led a site tour of the Woodville Pit area with NSECC representatives on June 25, 2026, to review existing site conditions, and discuss the proposed Project, environmental studies and site-specific Project components and plans.

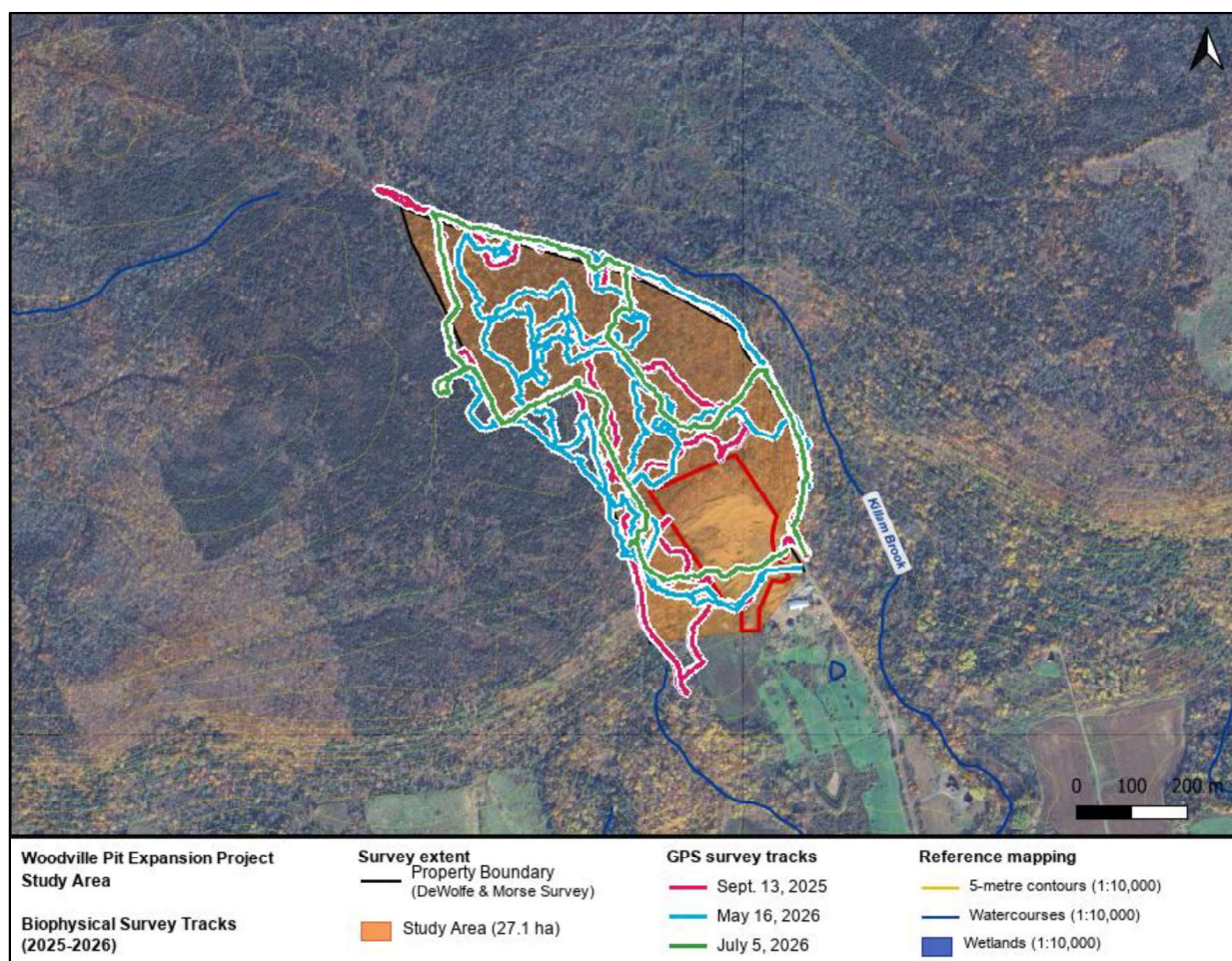


Figure 5.1. Biophysical survey tracks recorded on September 13, 2025, May 16, 2026, and July 5, 2026.

5.2 Valued Environmental Components

VECs are those components of the biophysical and socioeconomic environments that are of value or interest to regulatory agencies, the public, other stakeholders, and Indigenous peoples. VECs are typically selected for assessment on the basis of the following: regulatory issues, scientific concern, legislation, guidelines, policies, and requirements; input arising from consultation with regulatory agencies, the public, stakeholder groups, and First Nations; field reconnaissance; and professional judgment.

For this assessment a list of VECs and project activities for the proposed pit expansion were developed and the potential for interactions of these activities with VECs were identified. Where interactions were identified and there was potential for significant impacts, mitigating actions or activities have been identified that will avoid the impact or reduce it to acceptable levels before the project proceeds. This process ensures that potentially significant impacts on VECs are identified and potential impacts on them have been considered and sufficient mitigation planned and implemented.

The VECs selected for this EA Registration document, and the rationale for their selection in relation to the Project, are outlined in Table 5.1, below. The environmental effects and



potential impacts of the Project along with their significance and suggested mitigations are outlined in Section 6.0.

Table 5.1. Valued Environmental Components for the Project, and Rationale for their Selection

Valued Environmental Component (VEC)	Rationale for Selection of the VEC
Atmospheric Environment	Emissions of particulate matter (e.g., dust), light and combustion gases related to Project activities may interact with the atmospheric environment and nearby receptors.
Acoustic Environment	Noise and vibration related to Project activities may interact with nearby receptors.
Water Resources	The Project may interact with surface water drainage as a result of site development and the presence of the pit. The Project may interact with groundwater through project activities resulting in a change in the quality or quantity of groundwater resources.
Fish and Fish Habitat	Fish and fish habitat are protected by the federal <i>Fisheries Act</i> . The Project may interact with fish and fish habitat through the Project activities by temporary changes in water quality or sediment quality in downgradient, offsite watercourses.
Vegetation	The loss of vegetation on the Project site (including flora species at risk and species of conservation concern if present).
Wetlands	The Project activities may involve the removal of some wetland areas onsite in the distant future.
Wildlife and Wildlife Habitat	The loss of vegetation on the Project site may result in the loss of wildlife habitat, and Project activities may interact with wildlife (e.g., sensory disturbance due to Project activities) including wildlife species at risk and species of conservation concern.
Socioeconomic Environment	The Project may interact with labour and economy through the generation of employment and associated expenditures. The Project may result in continued levels of truck traffic on provincial roads leading to the Project site.
Archaeological, Cultural and Heritage Resources	Heritage resources (e.g., archaeological, paleontological, or built heritage resources) are protected under the <i>Nova Scotia Special Places Protection Act</i> . Though there are no known heritage resources that may be affected by the Project, earth moving activities on the Project site may result in the potential accidental discovery of previously unknown heritage resources that may be present on the Project site.
Traditional Land and Resource Use	The Project is in the traditional Mi'kmaq territory. It is known that the general area of the Project has historically been, and may be currently



Valued Environmental Component (VEC)	Rationale for Selection of the VEC
	used by, Indigenous persons for practicing traditional activities such as hunting, fishing, trapping, and gathering through the practice of unextinguished Aboriginal and treaty rights. Continued engagement with Indigenous peoples is required to determine the extent of potential traditional land and resource use of the area.
Effects of the Environment on the Project	Natural forces and other effects of the environment (such as climate change and other natural hazards or risks) may pose a risk to the Project components and their longevity, or cause delays in the Project.

6.0 Environmental Effects Assessment

6.1 Atmospheric Environment

6.1.1 Assessment Background

The atmospheric environment is a valued environmental component because air quality, climate and light quality support the health and well-being of people, wildlife, vegetation and other biota. For this assessment, air quality refers to the composition of ambient air and the presence of contaminants; climate includes greenhouse gas emissions associated with fuel combustion; and light quality refers to the intensity, direction and duration of unwanted outdoor lighting.

Project activities that may interact with the atmospheric environment include clearing and grubbing, excavation, crushing and screening, aggregate stockpiling, movement of mobile equipment, and trucking. The principal contaminants of interest are fugitive dust and particulate matter, together with combustion gases and greenhouse gases from diesel-powered equipment and vehicles. Temporary task lighting may also be required during periods of limited daylight.

It is recognized in this assessment that air emissions will be managed in accordance with the Nova Scotia *Environment Act*, the Air Quality Regulations, the Nova Scotia Pit and Quarry Guidelines, the amended Industrial Approval for the Site, and other applicable federal and provincial requirements. A significant adverse effect would occur if Project emissions caused frequent exceedances of applicable ambient air quality criteria beyond the Site boundary or created a persistent off-site nuisance.

6.1.2 Existing Conditions

The Woodville Pit is located in a rural area of Kings County where existing air quality is influenced by natural sources and by intermittent residential, light commercial, agricultural, forestry and transportation activities. The Pit has operated under a provincial Industrial Approval since 2011, and it is used periodically during the road construction season when aggregate is required for local projects.



Existing sources of emissions at the Site include dust from exposed aggregate, internal travel routes, excavation, crushing, screening, stockpiling and loading, as well as combustion emissions from mobile equipment and haul trucks. The Project does not propose an asphalt plant. Other than the gradual expansion of the working footprint, the type and general intensity of future activities are expected to remain similar to historic operations, with production anticipated to be approximately 50,000 tonnes in an active year.

The surrounding forest cover and topography provide significant separation from off-site receptors to the north, east and west. To the south, there is an existing commercial roof truss (wood) manufacturer. Existing vegetation retained along the Site perimeter also functions as a partial wind, visual and dust buffer. No persistent atmospheric effects associated with the existing Pit have been identified in the information reviewed for this assessment.

6.1.3 Potential Environmental Effects

The air quality and atmospheric environment screening applies the operating basis described in Section 3.3: intermittent daytime operation, portable rather than fixed processing, no asphalt plant, and retained forested buffers. The principal off-site risk is therefore short-duration fugitive dust during dry weather rather than a continuous point-source emission.

Greenhouse gas effects are assessed qualitatively by considering the sources of fuel combustion, the intermittent operating schedule, and whether the expansion would materially change equipment use, operating frequency, operating hours or Project attributable haulage relative to existing operations. Emissions will arise primarily from mobile equipment, portable processing equipment and haul trucks, and will vary with actual activity and fuel use. As the expansion is intended to extend the life of the existing Pit without materially increasing operating intensity, a material increase in emissions during a comparable active operating period is not anticipated. Emissions will nevertheless continue over the extended Project life. It is also noted that with technological advances, some of the heavy equipment used at the site in the future may include electric powered heavy equipment, which would generate less emissions than their diesel powered equivalent. This assessment does not rely on an assumed annual fuel allowance or a production-based emissions intensity. Where quantification is required, an inventory should use recorded fuel consumption by fuel type, a defined boundary for Project-attributable haulage, and applicable federal emission factors (ECCC 2025).

Without mitigation, the Project could affect the atmospheric environment through the following pathways:

- Fugitive dust generated during tree clearing, overburden handling, excavation, crushing, screening, stockpiling, loading and vehicle movement on unpaved surfaces;
- Combustion gases and greenhouse gas emissions from heavy equipment, portable processing equipment and haul trucks;
- Localized dust deposition on nearby vegetation or properties during dry and windy conditions;
- Temporary light spill or glare if work is required during low light conditions (not currently planned); and



- Smoke or volatile emissions associated with an accidental fire or release of hazardous material, as assessed under accidents, malfunctions and unplanned events.

These effects would be most likely during active operating periods and would be intermittent. Dust and combustion emissions are expected to decrease rapidly with distance from the source.

6.1.4 Proposed Mitigation Measures

Dust control performance will be verified by an operator at the start of each active shift and during crushing, screening and hauling. Vehicle speed within the active Site will be limited to 20 km/h unless a lower posted limit applies; drop heights will be minimized; and crushing, screening or hauling may be reduced or paused when visible dust persists beyond the property boundary. A substantiated off-site complaint, persistent visible dust crossing the boundary or a regulatory authority request will trigger additional source control, documented follow-up and, if the condition recurs, Dexter may consider a quantitative particulate monitoring or dispersion assessment.

With respect to greenhouse gas emissions, Dexter will continue to avoid unnecessary idling, maintain engines and optimize loads and routes. Fuel consumption and Project attributable haul activity will be tracked during active years. A material change in equipment use, operating hours, production or haul distance will trigger a review of the qualitative assessment and, where warranted, a fuel-based GHG estimate and consideration of additional reduction measures.

The following measures will be implemented to avoid or reduce effects on air and light quality:

- Apply water or another approved dust suppressant to internal travel routes, working areas (limited to the Pit floor) and aggregate stockpiles when dry conditions cause visible dust;
- Reduce vehicle speeds on the Site and manage material drop heights where practical;
- Maintain vehicles, engines and processing equipment in good working order and remove equipment producing excessive emissions from service until repaired;
- Avoid unnecessary idling and coordinate equipment and truck movements to reduce fuel use;
- Retain perimeter vegetation (large mature mixed woods) to the north, east and west, and use working faces, overburden piles or berms as wind and visual barriers where practical;
- Stabilize inactive exposed soils and progressively reclaim areas no longer required for operations;
- Use only the lighting needed for safe operations and direct fixtures downward and inward to limit light spill beyond the Pit area; and
- Respond promptly to air quality complaints and undertake additional dust control or monitoring if required by NSECC or the amended Industrial Approval.



6.1.5 Residual Effects and Summary

With the proposed mitigation, effects on the atmospheric environment are expected to be low in magnitude, localized to the Site and immediate surroundings, intermittent during active operating periods, and reversible when activities cease. No increase in the frequency or duration of individual operating events is expected relative to existing operations; accordingly, no associated change in atmospheric effects during comparable active operating periods is anticipated. The expansion will extend the overall life of the Pit, and associated greenhouse gas emissions will continue over that longer period, but the type of equipment and general operating intensity are not expected to materially change. Project operations will continue over the long term, and with technological advances, it is noted that some of the heavy equipment used at the site in the future may include electric powered heavy equipment, which would generate less emissions than their diesel powered equivalent.

Dust and combustion emissions are not expected to cause an exceedance of applicable air quality criteria beyond the Site boundary. Lighting effects, if any, will be temporary and controlled through fixture selection and direction. The residual environmental effects on the atmospheric environment are therefore predicted to be not significant, with a high level of confidence. Any monitoring required by NSECC will be incorporated into the amended Industrial Approval.

6.2 Acoustic Environment

6.2.1 Assessment Background

The acoustic environment includes sound and vibration that may be perceived by people or wildlife. It is a VEC because excessive noise or vibration can affect human comfort, use and enjoyment of property, wildlife behaviour, and, in the case of vibration, nearby structures.

Potential Project sources include mobile equipment, excavation, portable crushing and screening, loading, and truck movements. The assessment considers the existing rural soundscape, the intermittent operating schedule, separation from off-site receptors, and the continued application of the Site's Industrial Approval and the Nova Scotia Pit and Quarry Guidelines.

The Nova Scotia Guidelines for Environmental Noise Measurement and Assessment, effective October 1, 2023 (NSECC 2023, Appendix 1), establish location specific permissible sound levels at receptors. The one hour equivalent A-weighted sound limits, LAeq (1 hour), are as follows for daytime (07:00–19:00), evening (19:00–23:00) and nighttime (23:00–07:00), respectively:

- Rural: 53 dBA daytime, 48 dBA evening and 40 dBA nighttime.
- Urban residential: 58 dBA daytime, 53 dBA evening and 45 dBA nighttime.
- Industrial: 65 dBA daytime, 60 dBA evening and 55 dBA nighttime.

The surrounding rural residential setting is the basis for applying the rural limits to nearby homes. Classification is determined at the receptor; the presence of an industrial source or the adjacent truss manufacturing operation does not, by itself, justify applying industrial limits



to surrounding residences. Rural areas include sparsely populated residential, agricultural and natural settings; urban residential areas are population centres as defined in the Guidelines; industrial areas are predominantly occupied by industrial or commercial activities.

A significant adverse effect would occur if Project-related sound frequently exceeded an applicable receptor limit. Any confirmed exceedance would require investigation and corrective action.

6.2.2 Existing Conditions

The existing acoustic environment is typical of a sparsely populated rural area with residences, local roads, agricultural and forestry activity, other light commercial/industrial activities and intermittent use of heavy equipment. The immediate neighbour to the south of the Woodville Pit includes a residence and an associated year-round commercial roof truss (wood) manufacturing operation. In addition to that residence, the nearest off-site residence is just over 500 m south of the existing Pit, with several other residences within approximately 800 m. These southern residences are relevant noise sensitive receptors and must be considered when assessing potential acoustic effects. Residences to the north, east and west are reported to be more than 1 km from the Site boundary. Intervening terrain and retained forest cover provide screening in those directions, but receptor-specific sound levels depend on source location, terrain and operating conditions.

The Woodville Pit has operated as a NSECC permitted pit since 2011 and aggregate extraction occurred at the property for many years prior to 2011. Pit operations are only active when aggregate is required for local construction work. Existing Pit activities therefore form part of the present sound environment but are not continuous.

The principal existing Site sources of sound are excavation equipment, portable crushing and screening equipment, loaders, haul trucks and vehicle movements. Forest cover, intervening terrain and distance provide attenuation between operations and off-site receptors. The proposed expansion will not introduce a fundamentally different operating process or a sustained increase in the annual production rate.

6.2.3 Potential Environmental Effects

Without mitigation, clearing, excavation, processing and trucking could cause temporary increases in sound at nearby receptors. Equipment start-up, reversing alarms, material handling and truck movements may be noticeable during active periods.

Noise effects would be intermittent and associated with active construction-season operations. The gradual movement of the working face within the approved expansion area may alter the relative distance and screening between individual sources and receptors over the life of the Project. However, a distance of over 1 km between the Project and receptors to the north, east, and west will remain.

6.2.4 Proposed Mitigation Measures

Routine operations will be limited to the daytime period (07:00–19:00) when possible. It is



noted that expansion of the pit will be predominantly to the north and therefore increase setback distances to residential receptors located to the south. Stationary processing equipment will be located to maximize separation and use the pit face, stockpiles or a purpose-built berm as shielding. If a substantiated noise complaint is received, Dexter will consider conducting noise monitoring to verify that the limits in the Industrial Approval are being achieved. If exceedances are confirmed then the results will be used to inform additional mitigation efforts.

The following mitigation measures will be implemented:

- Operate in accordance with the applicable receptor-specific sound criteria described in Section 6.2.1 and the operating conditions of the amended Industrial Approval;
- Maintain engines, exhaust systems, mufflers and other noise control components in good working order;
- Locate portable crushing and screening equipment, where practical, to use the working face, stockpiles, overburden and natural terrain as acoustic screening;
- Retain mature vegetation around the Site perimeter where practical;
- Avoid unnecessary idling, limit unnecessary use of horns, and use broadband reversing alarms where safe and practicable;
- Schedule the loudest activities during daytime hours and communicate unusual short-term activities when warranted;
- Blasting is not required for the mechanical excavation of unconsolidated materials at the site.
- Document and investigate noise complaints and implement corrective measures where Project activities are confirmed as the source.

With technological advances, some of the heavy equipment used at the site in the future may include electric powered heavy equipment, which would generate less noise than their diesel powered equivalent.

6.2.5 Residual Effects and Summary

Following mitigation, Project sound is expected to be intermittent, localized and very similar in character to the sound produced by existing Pit operations. The expanded footprint will extend the duration over which aggregate can be supplied from the Site, but it is not expected to materially change the types of sound sources or create continuous operations.

With the proposed mitigation, residual effects on the acoustic environment are predicted to be not significant. This is a qualitative prediction; separation distances and the intermittent schedule alone do not demonstrate compliance with the receptor-specific limits in Section 6.2.1. Noise monitoring or modelling, required by NSECC or the amended Industrial Approval, will assess the maximum anticipated operating conditions and include the nearby southern residences. Any confirmed exceedance will inform additional source controls and follow-up verification.



6.3 Water Resources

6.3.1 Assessment Background

Water resources include surface water and groundwater that support people, aquatic and terrestrial ecosystems, wetlands and vegetation. Surface water includes watercourses, wetlands, water bodies and drainage pathways. Groundwater is water stored in surficial materials and fractured bedrock and may supply private wells or discharge to wetlands and watercourses.

Water resources were selected as a valued environmental component because clearing, excavation and reshaping of the Site may alter drainage, runoff and infiltration, and because sediment or an accidental release could affect water quality. The assessment considers the Project Area and downgradient drainage features, including the surface water features identified during field assessment and assessment of Killam Brook.

A significant adverse effect would occur if the Project caused a sustained deterioration in surface-water or groundwater quality, materially reduced the reliable yield of an existing water supply, or caused an unmitigated alteration to an off-site receiving watercourse. Applicable regulatory requirements include the *Environment Act*, the Nova Scotia Pit and Quarry Guidelines, the Site's Industrial Approval and, where fish habitat may be affected, the federal *Fisheries Act*.

6.3.2 Existing Conditions

6.3.2.1 Surface Water Resources

The Woodville Pit and associated Study Area are located on the southern slope of the North Mountain in King's County. Elevations are generally 100 to 190 m above sea level. Topography at the Site is described as predominantly hilly and steeply sloping to the south. The general area is predominantly woodland, underlain by sandy loam. The proposed pit expansion area is within a single Catchment Area encompassing a total of approximately 275.3 hectares. Surface drainage currently follows the local topography and established pathways around the existing Pit.

The existing Pit floor is dry under normal conditions. Historic excavation has not encountered the water table, as indicated by the absence of persistent ponding and groundwater upwelling through the Pit floor. Future extraction is expected to remain above the water table, and routine dewatering is not anticipated.

A Water Balance Assessment was prepared for the purposes of planning for expansion of the Pit, to support the environmental assessment, and to estimate changes in surface water flow and assess the potential impact of the proposed pit expansion on the local hydrological regime (**Appendix D**).

There are two site drainage features that currently convey surface water off-site. Both drainage features (refer to the Baseline Surface Water Monitoring report in **Appendix D**) are located near the southernmost corners of the site. Both drainage features are intermittent in nature,

dependent on precipitation and seasonal conditions, and surface water is conveyed to well vegetated areas off property. Each drainage features eventually connects to the broader drainage network associated with Killam Brook.

No fish bearing watercourses occur within the existing permitted Pit footprint or the proposed expanded Site footprint. Potential effects on downgradient aquatic habitat are assessed separately in the Fish and Fish Habitat VEC section (Section 6.4.)

Three small, previously unmapped wetlands were identified and delineated within the Study Area during 2025 and 2026 field work associated with this environmental assessment. Potential effects on wetland habitat are assessed separately in the Wetlands VEC section (Section 6.6.)

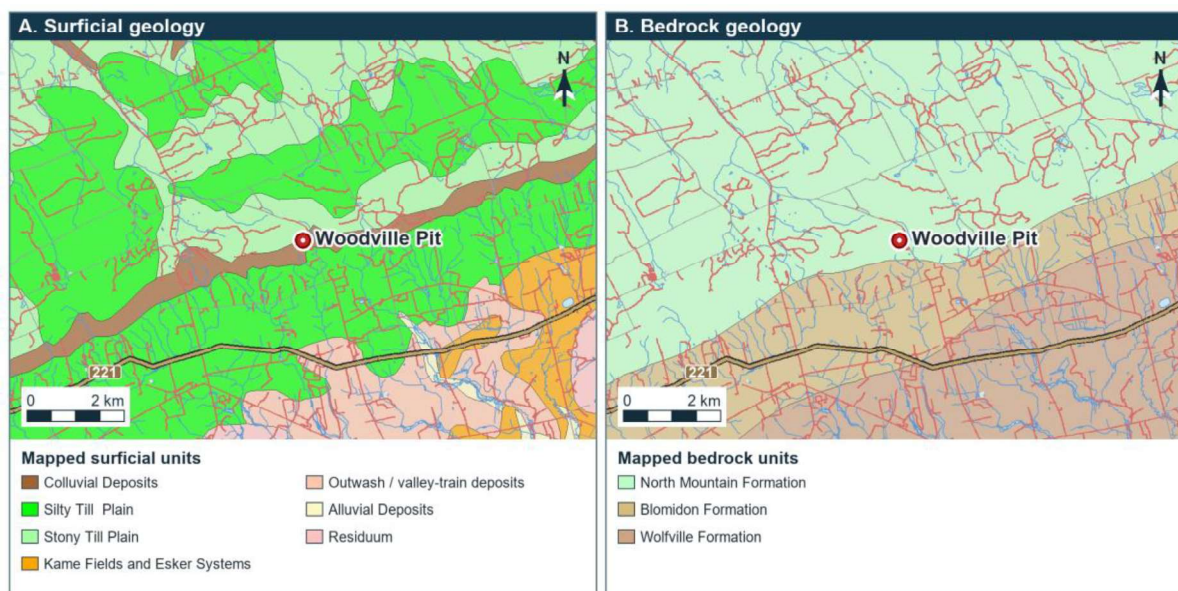
Baseline surface water monitoring was completed in 2025 and 2026 at locations selected to characterize background and downgradient conditions; the monitoring information is compiled in **Appendix D**.

6.3.2.2 Groundwater Resources

Geology

The Project is located on the south facing slope of the North Mountain. Based on provincial surficial geology mapping, the Woodville Pit is within Quaternary colluvial deposits. This mapped unit is described as a complex mixture of glacial deposits, weathered and frost-shattered rock, and soil formed by downslope creep or mass movement on valley sides. The regional unit description indicates that thickness may increase from less than 1 m near the upper slope to about 5 m downslope and identifies valley side springs and seeps as a characteristic consideration (Stea et al. 1992; NSDNR 2006a). Surrounding mapped materials include stony and silty till plains on the North Mountain and glaciofluvial, alluvial, and residual deposits towards the Annapolis Valley. These regional boundaries are approximate; observations in the existing Pit and future working faces provide the most direct evidence of site conditions.

Bedrock beneath the Project is mapped as the Early Jurassic North Mountain Formation of the Fundy Group. At provincial scale, the unit is described as tholeiitic plateau basalt with an aggregate regional thickness of approximately 270 m (Keppie 2000; NSDNR 2006b). More detailed provincial mapping of the North Mountain basalt from East Arlington to Harbourville confirms basaltic bedrock across this part of Kings County (Kontak and Webster 2010). Downslope to the south, bedrock transitions regionally through the Blomidon Formation to the Wolfville Formation on the valley floor. The North Mountain Formation is classified as a volcanic bedrock groundwater region, in which groundwater movement and well productivity are governed mainly by joints, fractures, weathered zones, and contacts between lava flows. Figure 6.1 shows the regional surficial and bedrock setting around the Project reference point.



Sources: Nova Scotia DNR, DP ME 36 (surficial geology), DP ME 43 (bedrock geology); GeoNOVA NSTDB roads and water. Projection: NAD83 UTM Zone 20N. Project point from EARD coordinates (368538 E, 4998227 N); marker is not a project boundary.

Figure 6.1. Regional Surficial and Bedrock Geology in the Woodville Pit Area

Acid Rock Drainage Potential

Acid rock drainage (ARD) can develop where sulphide bearing rock is disturbed and exposed to air and water, allowing sulphide minerals to oxidize, produce acidity, and mobilize metals. Microbial activity can accelerate these reactions. The provincial bedrock acid rock drainage potential digital product was developed for southwestern Nova Scotia and its mapped extent does not reach the Woodville Project; therefore, it does not assign a site-specific high, moderate, or low ARD category to the Project (NSDNR 2013).

The Project is underlain by North Mountain Formation basalt rather than the Halifax Formation slate that is identified in provincial geohazard mapping as the principal sulphide bearing slate unit. No sulphide bearing slate is mapped at or adjacent to the Project reference point (Keppie 2000; NSDNR 2006b). On the available desktop evidence, the potential for material ARD generation is considered low; however, regional mapping is not a substitute for material testing. If excavation encounters visibly sulphidic material, persistent sulphide odour, or pronounced rust-coloured weathering, the material will be assessed using appropriate static acid-base accounting or equivalent testing.

Groundwater Conditions

The Nova Scotia Groundwater Atlas maps the Project within the volcanic bedrock groundwater region and the glaciolacustrine/till plains/colluvial surficial groundwater region; no provincially mapped surficial aquifer polygon intersects the Project reference point (NSDNR 2026). In the colluvial and till materials, groundwater is expected to occur locally as perched water and as springs or seeps along slope or material contacts. In the North Mountain basalt, groundwater is stored and transmitted primarily through fractures, joints, weathered zones, and interflow contacts. Regional Kings County hydrogeological information describes basalt well yields as variable because they depend on secondary permeability rather than primary pore space

(Nova Scotia Department of Environment 1994). Based on topography and the Site's position on the south slope of the North Mountain, the broad groundwater gradient is inferred to be southward toward the Annapolis Valley and the Killam Brook drainage system, although local flow directions may be controlled by fractures and seasonal perched zones.

The existing Woodville Pit floor is typically dry under normal conditions, with no persistent ponding or groundwater upwelling observed. Historic excavation has not encountered the water table, and future extraction is planned to remain above it. No permanent groundwater withdrawal or routine dewatering is proposed. These observations support a low potential for direct interaction with the regional bedrock aquifer.

A current query of the Nova Scotia Well Logs Database identified 20 public well records within 2 km of the EARD Project reference point. Eighteen are reported as domestic wells and two as agricultural wells (not irrigation). The mapped records range from approximately 0.73 to 1.98 km from the reference point. Table 6.1 summarizes the available construction and yield information, and Figure 6.2 shows the mapped well, topographic surface water and tertiary-watershed context. The query was completed in August of 2026 using the provincial hosted well log service.

Table 6.1. Summary of Public Well Logs within 2 km of the Project Centre Point

Parameter	n	Minimum	Maximum	Average
Well depth (m bgs)	8	27.4	42.6	35.0
Casing depth (m bgs)	8	11.9	24.4	16.7
Depth to bedrock (m bgs)	8	1.5	19.8	6.2
Static water level (m bgs)	5	7.3	18.3	9.9
Reported well yield (L/min)	8	22.7	90.8	49.7

Notes: bgs = below ground surface. Public well positions and log attributes vary in accuracy, may be incomplete and have not been field-verified. Source: Nova Scotia Well Logs Database hosted feature service, queried August 17, 2026.

The 2 km screening records indicate well depths of 19.8 to 91.3 m and reported yields of 12.5 to 227 L/min. Static water levels are reported for 10 records and range from 1.5 to 18.3 m bgs. These data are consistent with variable supplies from fractured basalt but cannot predict the condition, yield or present use of an individual receptor well.

Soil and overburden conditions will be observed as each phase of the Woodville Pit expansion is advanced, including thickness, texture, drainage, evidence of seepage and suitability for reclamation. Topsoil and suitable overburden will be stripped separately, stabilized and reserved for progressive reclamation.

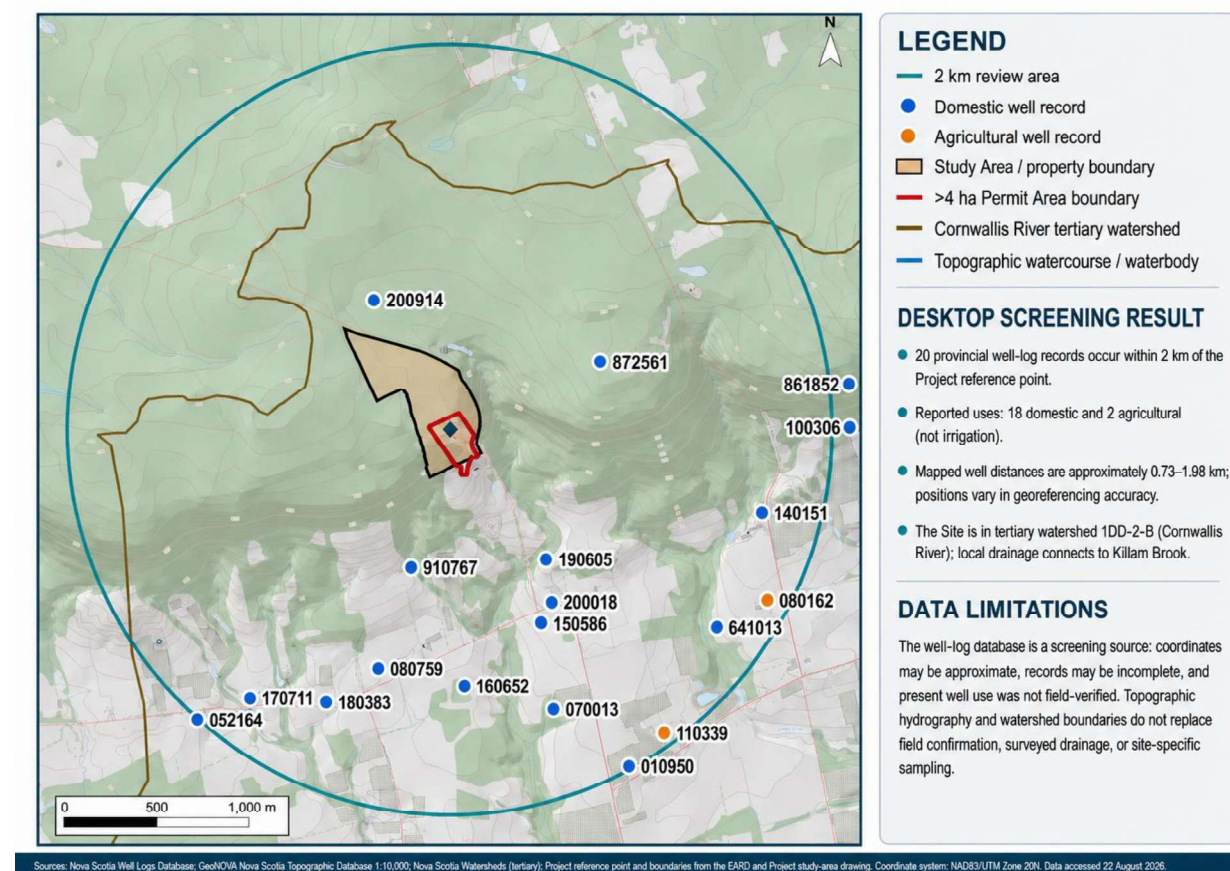


Figure 6.2. Public Water-Well Records and Surface-Water Context within 2 km of the Woodville Pit Reference Point

Figure 6.2 shows the 2 km hydrographic and groundwater receptor context. The Project lies in provincial tertiary watershed 1DD-2-B (Cornwallis River). Within the local 275.3 ha catchment, the two intermittent Site drainage pathways connect through vegetated off-property areas to Killam Brook; no mapped or field confirmed fish bearing watercourse occurs within the Study Area for the Project.

Consistent with baseline surface water monitoring completed for the Project in 2025 and 2026, an operational surface water monitoring program is planned to include a representative background or upstream station, the controlled Site discharge and a downgradient Killam Brook station. An approval limit exceedance, visible sediment leaving the Site or a statistically and practically meaningful downgradient change from background will trigger source inspection, containment or suspension of the contributing activity, corrective work and confirmatory sampling.

6.3.3 Potential Environmental Effects

Without mitigation, the Project could interact with water resources through the following pathways:

- Localized changes to runoff, infiltration and drainage patterns as vegetation and overburden are removed and the working area is reshaped;



- Erosion of exposed soil and release of sediment laden runoff to downgradient drainage features during rainfall or snowmelt;
- Changes in wetland area or function where future expansion of the pit cannot avoid a delineated wetland;
- Accidental release of fuel, lubricants or other hazardous materials affecting surface water or groundwater; and
- A potential localized change in groundwater flow if excavation were to approach the water table.

The primary credible pathway is sediment in surface runoff. A material groundwater interaction is considered unlikely because extraction is planned to remain above the water table and the Project does not require a groundwater withdrawal.

6.3.4 Proposed Mitigation Measures

The following measures will be incorporated into Project design and operations:

- Minimize the disturbed area and phase clearing and grubbing so that land is opened for pit operations and aggregate extraction only as required;
- Maintain a minimum 30 m separation from watercourses and wetlands and obtain a wetland alteration approval before any authorized wetland disturbance;
- Prepare and implement a surface water management plan through the Industrial Approval process;
- Install appropriately sized erosion and sediment control measures before ground disturbance and inspect them regularly, before and after major rainfall events, and during spring melt;
- Direct clean water around active disturbed areas where practical, retain sediment laden water for settling, and discharge only in accordance with approval conditions;
- Stabilize exposed soils, drainage outlets and inactive slopes as soon as practical and progressively reclaim completed areas;
- Store and handle fuels and hazardous materials in accordance with applicable requirements, keep spill kits available, and conduct fueling and maintenance at least 30 m from wetlands and surface waters;
- Notify NSECC if unexpected groundwater inflow, erosion or a water quality concern is observed; and
- Continue surface water monitoring at representative background and downgradient locations in accordance with the terms and conditions of the amended Industrial Approval.

6.3.5 Residual Effects and Summary

The Project will gradually change drainage patterns within the developed portion of the Site, but these changes will be managed through phased development, drainage controls, sediment management and progressive reclamation. No groundwater withdrawal is proposed, and excavation is expected to remain above the water table. Effects on groundwater quantity and



quality are therefore expected to be negligible.

With properly designed and maintained controls, sediment laden runoff is not expected to affect downgradient water quality or fish habitat. The surface water monitoring program will verify performance and allow corrective action if an unexpected change is identified. Residual effects on water resources are predicted to be not significant, with a moderate to high level of confidence.

6.4 Fish and Fish Habitat

6.4.1 Assessment Background

Fish and fish habitat includes aquatic life (such as fish and benthic macro invertebrate species/populations) and the habitat that supports them, including mapped and unmapped (field identified) watercourses. Fish and fish habitat is considered a VEC because of their importance in supporting freshwater aquatic life as a fisheries resource for humans, as food source for other wildlife, and in providing recreational opportunities, which are of importance to the public, stakeholders, and First Nation communities.

Fish and fish habitat was selected as a VEC to be assessed due to the possible environmental effects of:

- A potential change or alteration of, disruption to, or removal of aquatic (including fish) habitat as a result of the Project; and
- Effects to aquatic species listed under the federal *Species at Risk Act* and/or the *Nova Scotia Endangered Species Act*.

The aquatic environment (including fish and fish habitat) is also protected through the federal *Fisheries Act*. Section 35(1) of the *Fisheries Act* prohibits the harmful alteration, disruption, or destruction (HADD) of fish habitat; Section 34.4(1) prohibits the death of fish by means other than fishing; and Section 36(3) prohibits the release of a deleterious substance into waters frequented by fish.

Although there are no fish bearing aquatic environments within the footprint of the Project, the Project has the potential to affect fish and fish habitat through changes in hydrology, water quality and quantity, and productivity.

The information regarding the presence and characterization of fish and fish habitat within the project footprint was derived from several sources including existing databases and secondary information sources (i.e., desktop analysis), as well as field assessment.

6.4.1.1 **Desktop Analysis**

To evaluate the potential for aquatic species of conservation concern (SOCC) and/or aquatic species at risk (SAR) within the general area of the Project, readily available information from the following reputable sources was reviewed:

- Atlantic Canada Conservation Data Centre (AC CDC);



- Fisheries and Oceans Canada (DFO);
- Nova Scotia Department of Natural Resources (NSDNR);
- Nova Scotia Department of Environment and Climate Change (NSECC);
- The federal Species at Risk Registry;
- The provincial Species at Risk Registry;
- The Committee on the Status of Endangered Wildlife in Canada (COSEWIC);
- Publicly available GIS map layers (e.g., ecological land classification, forest inventory Special Management Zones, watercourses, and wetlands); and
- High resolution aerial photography.

In this EARD, we define SAR as are those species that are listed as “Extirpated”, “Endangered”, “Threatened”, or “Special Concern” on Schedule 1 of the federal *Species at Risk Act* (SARA) or on the Nova Scotia *Endangered Species Act* (NS ESA). In addition, we define SOCC as those species that are not SAR but are listed in other parts of SARA, NS ESA, by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), or are regionally rare or endangered by the Atlantic Canada Conservation Data Centre (AC CDC) (i.e., those species with AC CDC S-ranks of “Critically Imperiled” [S1], Imperiled [S2], or Vulnerable [S3] in the province of Nova Scotia).

A custom, site-specific AC CDC data report (AC CDC 2025b; refer to **Appendix E**) was obtained for a 5 km radius around from the Project’s center. According to the AC CDC records review, there is one record of an aquatic SAR and two records of aquatic SOCC that have been historically observed within 5 km of the Project. The Atlantic salmon (*Salmo salar*) inner Bay of Fundy population, a SAR, is ranked as S1 (rare) by the AC CDC and is also listed as “Endangered” by COSEWIC and SARA. American eel (*Anguilla rostrata*), an SOCC, is ranked as S3 (vulnerable) by the AC CDC and is listed as “Threatened” by COSEWIC, but not under SARA or NS ESA. Brook trout (*Salvelinus fontinalis*), an SOCC, is also ranked S3 by the AC CDC but is not listed under COSEWIC, SARA or NS ESA.

6.4.1.2 Field Assessment

Field observations made during the 2025 and 2026 reconnaissance and biophysical surveys were reviewed together with the baseline surface water data provided in **Appendix D**. The assessment examined the Project Footprint, the two intermittent Site drainage features and their downstream connection to the Killam Brook drainage network. Because no fish bearing watercourse or waterbody was identified within the Project Footprint, no fish capture survey or instream habitat measurement was warranted within the proposed disturbance area.

6.4.2 Existing Conditions

No fish bearing aquatic habitat was identified within the Project Footprint. Surface water leaves the Site through two intermittent drainage features near the southern portion of the property; both depend on precipitation and seasonal melt conditions, discharge to well vegetated off property areas and ultimately connect to the Killam Brook drainage network. Killam Brook is therefore the relevant downstream aquatic receptor. Figures 6.3 provides a representative view of typical off-site discharge area between the Site and Killam Brook

located approximately 40 m to east of the southeast corner of the Site. Figure 6.4 shows the primary drainage ditch at the Site, conveying flows through a constructed drainage ditch with several maintained check dams.



Figure 6.3. Representative view of the intermittent Site drainage feature in the forested area between the Site and Killam Brook (September 16, 2025).



Figure 6.4. Representative view of primary drainage ditch beside the main Site access (September 16, 2025).

Direct alteration of fish habitat is not anticipated because no instream work is proposed. The credible interaction pathway is indirect and relates to a potential change in runoff, erosion or sediment transport, or an accidental release reaching the drainage network. The aquatic findings and their assessment implications are summarized in Table 6.2.

Table 6.2. Summary of Aquatic Habitat Findings

Receptor or Feature	Field Finding	Assessment Relevance
Project Footprint	No fish bearing watercourse or waterbody identified.	No direct harmful alteration, disruption or destruction of fish habitat is anticipated.
Intermittent Site Drainage	Two precipitation and season dependent drainage features convey runoff to vegetated off property areas.	Provides a potential indirect pathway for sediment or accidental release if controls fail.
Killam Brook Drainage Network	Downstream receiving network connected to the Site drainage features.	Protected through drainage design, vegetated separation, erosion and sediment controls, spill prevention and surface water monitoring.

The broader aquatic context in Figure 6.2 identifies that Project drainage is part of the Killam Brook–Cornwallis River network even though no fish habitat occurs within the footprint. The



assessment therefore treats surface water quality and quantity as the pathway to downstream fish habitat. No instream work, fish capture, water withdrawal from fish bearing water or direct harmful alteration, disruption or destruction of fish habitat is proposed.

6.4.3 Potential Environmental Effects

Without mitigation, the Project could interact with fish and fish habitat in the following ways:

- Construction and operation could result in the indirect loss of fish habitat in areas where the presence of Project related facilities cause a change in surface water availability, with potential to alter habitat in downstream areas of Killam Brook;
- Construction in the areas of the surface water drainage from the site that will require removal of surface materials including vegetation and soils (i.e., topsoil and overburden) could increase erosion rates in proximity to the aquatic receptors; and
- A spill or fire could occur as an accident or unplanned event which could affect water quality and downstream fish habitat.

6.4.4 Proposed Mitigation Measures

The following standard mitigation measures have been identified to reduce the likelihood of occurrence or minimize potential extent of effects of the Project on fish and fish habitat.

Planned standard mitigation measures for the proposed Project include the following:

- The area to be disturbed by the Project will be minimized to the extent possible to only that area which is required to accomplish the Project objectives;
- Design surface water drainage to minimize changes in drainage;
- Maintaining the three on site wetlands where possible. If wetland impacts are unavoidable, a wetland alteration approval and associated compensation will be arranged;
- Construction and operation activities will comply with the conditions of regulatory permits and approvals;
- Maintain as much mature vegetation along the Site perimeter as practicable to provide a vegetated buffer between the Project Footprint and the Killam Brook drainage network;
- Proper erosion and sediment control measures will be installed and checked regularly and prior to and after storm events to ensure they are continuing to operate properly to minimize potential effects to adjacent habitat.

6.4.5 Residual Effects and Summary

The Project has been developed and designed to minimize the area of disturbance of the project footprint to which is required to meet the Project objectives and to minimize any potential risks to fish and fish habitat located in off site watercourses. As presented above, no watercourses are present within the project footprint and therefore no alteration to fish habitat is anticipated.

Consistent with existing operations and maintenance activities at the Site, it is anticipated that



surface water drainage from the project footprint will continue to be conveyed along existing pathways. The Water Balance Assessment completed for the purposes of planning for expansion of the Pit, which included an estimate of changes in surface water flow and the local hydrological regime as a result of the proposed pit expansion (**Appendix D**) provided support to this assessment. Localized changes in surface water hydrology and drainage arising from the reshaping of the Project site over the life of the project, on or adjacent to, the Project Footprint are expected to be small in magnitude.

Activities during construction and operation and maintenance could result in erosion of surficial soils and corresponding sedimentation of surface runoff that, unmitigated, could affect downgradient receiving water quality. The Project will be conducted in a manner that minimizes the potential for such effects to occur, including the use of properly designed, sized, and maintained erosion and sedimentation control structures to prevent such releases. These structures will be visually inspected prior to and following major precipitation events and following spring melts and maintained accordingly to ensure their effectiveness. With these measures, water quality in downgradient receiving watercourses is not expected to be adversely affected. The potential failure of erosion and sedimentation control devices is assessed as an accident, malfunction, or unplanned event in Section 8.0.

Aquatic environment concerns primarily relate to potential sediment releases from the Site to the site drainage network. Field assessments indicate minimal potential impact on aquatic habitats, with key habitats such as fish bearing watercourses located downgradient of the Project Area largely unaffected. Well maintained and designed erosion and sediment control measures will adequately address and any potential impacts, consistent with current conditions observed at the site.

With implementation of the mitigation measures described above, the residual environmental effects of the Project on fish and fish habitat during all phases are rated not significant, with a high level of confidence. No separate fish specific monitoring program is proposed because no direct fish habitat alteration is anticipated; however, the surface water monitoring program described in Section 6.3 and **Appendix D** will verify that Site controls protect downgradient water quality and will trigger corrective action if an unexpected change is identified.

6.5 Vegetation

6.5.1 Assessment Background

Vegetation is a VEC because plant communities provide habitat, support ecological processes and may include SAR or SOCC. Project clearing and grubbing will directly remove vegetation within the areas required for aggregate extraction and supporting activities.

The assessment considers common and uncommon vascular plants, vegetation communities, potential habitat for listed species, and the relationship between vegetation, wetlands and wildlife habitat. SAR are species listed under the federal *Species at Risk Act* or the *Nova Scotia Endangered Species Act*. SOCC include provincially rare species and species ranked S1, S2 or S3 by the Atlantic Canada Conservation Data Centre.

6.5.1.1 Desktop Analysis

The desktop review considered the custom, site-specific AC CDC data report for the Project vicinity, federal and provincial species at risk registries, publicly available ecological and forest mapping, wetland information, aerial imagery and other available information describing vegetation and habitat in the Woodville area. The review was used to identify species and habitat types requiring attention during field surveys.

6.5.1.2 Field Assessment

Qualified biologists completed vegetation and wetland surveys and reconnaissance on September 13, 2025, May 16, 2026 and July 5, 2026. The surveys characterized upland and wetland vegetation communities, documented vascular plants and lichens encountered, searched suitable habitat for SAR and SOCC identified through the desktop review, and supported delineation of wetland upland boundaries. The dated survey coverage is shown in Figure 5.1 and the complete botanical records are provided in **Appendix F**.

6.5.2 Existing Conditions

The Study Area contains the existing disturbed Pit, previously harvested or cleared land, regenerating vegetation, upland forest and forested wetland habitat. Past forestry activity has produced a mosaic dominated by immature and regenerating stands, with more limited mature vegetation remaining along portions of the Site perimeter and in wetter areas.

The combined vascular plant data set collected contains 127 records representing 126 unique taxa. No vascular plant listed under SARA or the NS ESA was identified. Swan's Sedge (*Carex swanii*) is ranked S3 and is the principal plant SOCC in the inventory; American Beech (*Fagus grandifolia*) is ranked S3S4. Arctic Firmoss (*Huperzia arctica*) is recorded as unconfirmed and unranked. There were 21 lichen observations representing 19 taxa, all ranked S5. Table 6.3 summarizes the botanical findings; full records are provided in **Appendix F**.

Table 6.3. Summary of Botanical and Lichen Survey Results

Survey Component	Survey Dates	Result	Assessment Relevance
Vascular plants	Sept. 13, 2025; May 16 and July 5, 2026	127 records; 126 unique taxa; no SARA or NS ESA listed plant recorded.	<i>Carex swanii</i> (S3) requires avoidance or species-specific measures if encountered in a clearing phase.
Lichens	Sept. 13, 2025 and May 16, 2026	21 observations; 19 taxa; all recorded taxa ranked S5.	No lichen SAR or SOCC was identified in the submitted field data.
Vegetation communities	All field visits	Disturbed Pit, regenerating upland forest, mature perimeter forest and forested wetlands.	Phased clearing and retention of perimeter and wetland habitat reduce the extent and rate of vegetation loss.

6.5.3 Potential Environmental Effects

The principal effect will be the phased, direct removal of vegetation through clearing, grubbing and overburden removal. This will reduce the area of upland and, where separately authorized,



wetland vegetation within the developed footprint and may cause temporary fragmentation of remaining plant communities.

Other potential effects include accidental damage outside the approved clearing limits, introduction or spread of invasive plants by equipment, dust deposition on adjacent vegetation, altered edge conditions, and damage from an accidental spill or fire. During reclamation, vegetation will re-establish progressively, although the composition and structure of restored communities will differ from pre-development conditions for a period of time.

6.5.4 Proposed Mitigation Measures

The following mitigation measures will be implemented:

- Limit clearing to the area required for safe and efficient operations and clearly identify disturbance boundaries before work begins;
- Phase clearing over the operating life of the Pit and retain mature perimeter vegetation and undisturbed habitat where practical;
- Avoid identified SAR and SOCC occurrences and establish an appropriate setback if a listed plant or sensitive plant community is encountered;
- Have an appropriate qualified professional confirm the identification and recommend protection measures for any suspected SAR encountered during clearing;
- Clean earth moving equipment before it enters the Site when it has operated in an area containing invasive plants, and monitor disturbed areas for establishment of invasive species;
- Use erosion, sediment and dust controls to protect vegetation outside the working area;
- Implement spill prevention and emergency response procedures; and
- Progressively stabilize and revegetate areas no longer required for operations using species and methods appropriate to the final reclamation objectives.

6.5.5 Residual Effects and Summary

Development of the Project will result in a medium to long term loss of vegetation within the active extraction footprint. The effect will occur gradually because clearing will be phased over the operating life of the Pit. The affected area consists largely of existing disturbance, previously harvested land and regenerating vegetation, while comparable habitat remains in the surrounding landscape.

With avoidance of sensitive features, control of disturbance boundaries, invasive species precautions and progressive reclamation, the Project is not expected to affect the sustainability of a plant SAR or SOCC population in Nova Scotia. Residual effects on vegetation are predicted to be not significant, with a high level of confidence. Confidence reflects the completed multi-date inventory and extensive survey coverage of the Study Area. Given the long duration of the Project, it is expected that follow up activities will consist of routine environmental inspections, confirmation of sensitive occurrences before clearing and any



species-specific measures required by regulatory authorities.

6.6 Wetlands

6.6.1 Assessment Background

In Nova Scotia, a wetland is defined as the following (Nova Scotia Wetlands Conservation Policy, issued in 2011):

“A marsh, swamp, fen, or bog that either periodically or permanently has a water table at or near above the surface, or that it is saturated with water and also sustains aquatic processes as indicated by the presence of poorly drained soils, hydrophytic vegetation and biological activities adapted to wet conditions.”

Wetlands are significant due to their relationship with water resources, wildlife and wildlife habitat, and other biological and physical components addressed as VECs in this EARD. Also, wetlands are widely recognized as providing a host of ecosystem functions and benefits including, but not limited to, filtering out pollutants and heavy metals, mitigating flood events, and providing habitat to many SAR in Nova Scotia. Project activities have the potential to cause adverse environmental effects through the proposed physical destruction of some wetland habitat.

Nova Scotia’s wetlands have been given specific protection pursuant to the *Nova Scotia Environment Act* and the Nova Scotia Wetland Conservation Policy. The Nova Scotia Wetland Conservation Policy and regulatory processes are guided towards the goal of achieving no net loss of wetland function (Nova Scotia Environment 2011). Wetland compensation for alterations of a delineated wetland is often required as a condition of a wetland alteration permit when a net loss of wetland function occurs. In addition to the protection provided to wetlands through the Nova Scotia Wetland Conservation Policy, the Federal Policy on Wetland Conservation (Government of Canada 1991) is applicable if the Project is located on federal lands, federal funding is provided for the Project, or if federal decisions or approvals related to wetlands are required for the Project. In the case of the Project, there are no triggers for the Federal Policy on Wetland Conservation to be implemented.

The information regarding the presence and characterization of wetlands within the Project Footprint was derived from several sources including existing databases and secondary information sources (i.e., desktop analysis), as well as field assessment.

6.6.1.1 Desktop Analysis and Field Assessment

Following desktop review, wetland and adjacent upland conditions were assessed during the September 13, 2025 and July 5, 2026 growing season surveys, with additional Site reconnaissance on May 16, 2026. Trained biologists certified in wetland delineation and functional assessment in Nova Scotia applied the field methods described below. The dated survey tracks are shown in Figure 5.1.

The methods of wetland determination and delineation used in the wetland surveys were based upon established protocols for wetland delineation, in particular, the U.S. Army “Corps

of Engineers Wetland Delineation Manual” (Environmental Laboratory 1987). Wetland delineation data sheets that were adapted from U.S. Army Corps of Engineers form for Northeast-North Central Regional Supplement for use in Nova Scotia (USACE 2012) were used to record data collected in the field. Wetland determination and delineation primarily focused on establishing the wetland-upland edge and was based on the presence of positive indicators for three parameters:

- Hydric (wet) soil conditions;
- Hydrophytic (wet adapted) vegetation; and
- Wetland hydrology.

Three wetlands were identified within the 27.1 ha Study Area. Their delineated areas, field indicators and vegetation are summarized in Section 6.6.2 and Tables 6.4 to 6.7.

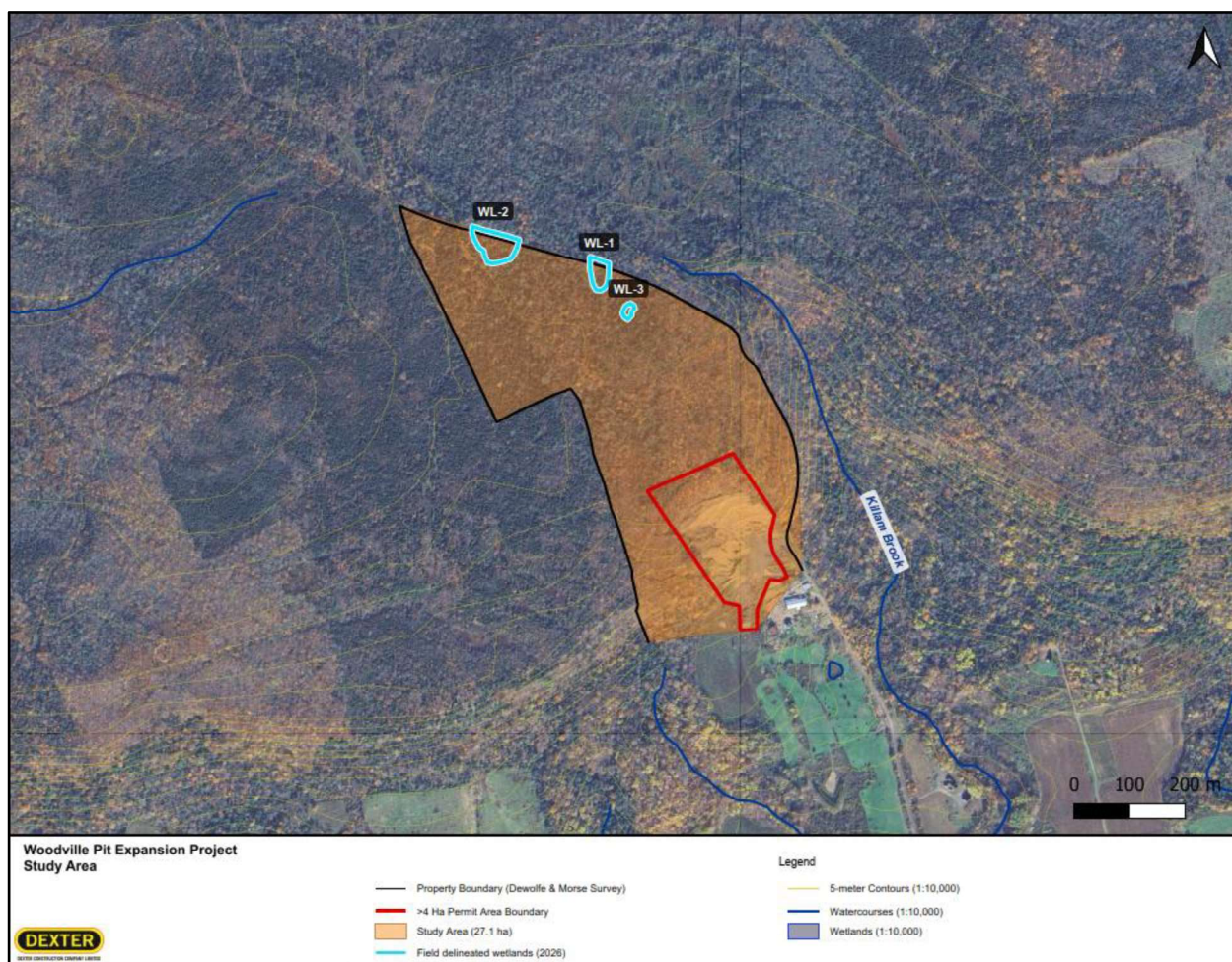


Figure 6.5. Woodville Pit Expansion Project Study Area and Field-Delineated Wetlands

6.6.2 Existing Conditions

Three small, forested wetlands, identified as WL-1, WL-2 and WL-3, were delineated within the 27.1 ha Study Area during 2025 and 2026 field investigations. Only the southernmost edges of WL-1 and WL-2 are located within Dexter’s 19.44 ha proposed expansion area, while WL-3 is

located entirely within the proposed expansion area. Wetland determinations were based on the combined presence of hydrophytic vegetation, hydric soil indicators and wetland hydrology indicators. The wetlands occur in the northern part of the Study Area and together occupy approximately 0.545 ha (5,454 m²), or about 2.0% of the Study Area. Table 6.4 provides a summary of wetlands present within the Study Area.

Table 6.4. Summary of Delineated Wetlands in the 27.1 ha Study Area

Wetland	Approximate area	Wetland type	Location within Study Area
WL-1	0.161 ha (1,613 m ²)	Treed/shrub swamp	Northern portion; approximate centroid E 368341, N 4998637
WL-2	0.347 ha (3,466 m ²)	Treed/shrub swamp	Westernmost and largest wetland; approximate centroid E 368153, N 4998687
WL-3	0.038 ha (375 m ²)	Treed swamp	Easternmost and southernmost of the three wetlands; approximate centroid E 368394, N 4998567

Note: Coordinates are approximate UTM Zone 20N centroids, rounded to the nearest metre. The combined delineated area is approximately 0.545 ha (5,454 m²).

The vegetation recorded during field investigations include obligate wetland (OBL), facultative wetland (FACW) and facultative (FAC) species across the tree, shrub and herb strata. OBL species occur almost always in wetlands, FACW species usually occur in wetlands, and FAC species occur in both wetlands and uplands; a plus sign indicates a tendency toward the wetter end of an indicator category. These field data support the wetland determinations but do not, by themselves, constitute a wetland functional assessment or a determination of Wetlands of Special Significance. Any required functional assessment and regulatory classification will be completed or confirmed through the Nova Scotia wetland alteration approval process.

6.6.2.1 Wetland WL-1 - Treed/Shrub Swamp

WL-1 is a treed/shrub swamp in the northern portion of the Study Area. Its area is approximately 0.161 ha (1,613 m²), with an estimated perimeter of 163 m. The approximate centroid is E 368341, N 4998637 (UTM Zone 20N). WL-1 lies approximately 50 m north of WL-3 and 132 m east of WL-2, measured as minimum boundary-to-boundary distances.

The recorded hydric soil indicator was a histic epipedon (H2). Wetland hydrology indicators consisted of surface water in small pockets (A1), a high water table (A2), saturation (A3) and water stained leaves (B9). Vegetation included black spruce and red maple in the tree stratum; Canada holly, speckled alder and yellow birch in the shrub stratum; and a graminoid/fern herb layer dominated by Canada manna grass, woolly bulrush, cinnamon fern and interrupted fern.



Table 6.5. Wetland WL-1 Vegetation by Stratum

Common name	Scientific name	Wetland indicator	Absolute cover (%)
Common name	Latin name	Wetland Indicator	Absolute Cover %
Black Spruce	<i>Picea mariana</i>	FACW	15
Red Maple	<i>Acer rubrum</i>	FAC	5
		Total Cover =	20
Shrub Stratum – Plot size : 5m2	Shrub Stratum – Plot size : 5m2	Shrub Stratum – Plot size : 5m2	Shrub Stratum – Plot size : 5m2
Canada Holly	<i>Ilex verticillata</i>	FACW+	15
Speckled Alder	<i>Alnus incana</i>	FACW	10
Yellow Birch	<i>Betula allegheniensis</i>	FAC	5
		Total Cover =	30
Herb Stratum – Plot Size: 2m2	Herb Stratum – Plot Size: 2m2	Herb Stratum – Plot Size: 2m2	Herb Stratum – Plot Size: 2m2
Canada Manna Grass	<i>Glyceria canadensis</i>	OBL	20
Woolly Bulrush	<i>Scirpus cyperinus</i>	FACW	15
Cinnamon Fern	<i>Osmunda cinnamomea</i>	FAC	15
Interrupted Fern	<i>Osmunda claytoniana</i>	FAC	15
Three-way Sedge	<i>Dulichium arundinaceum</i>	OBL	10
Devil's Beggar-ticks	<i>Bidens frondosa</i>	FACW	5
Arrow-leaved Tearthumb	<i>Polygonum sagittatum</i>	OBL	5
Nodding Sedge	<i>Carex gynandra</i>	FACW	3
Sallow Sedge	<i>Carex lurida</i>	OBL	3
Small Bedstraw	<i>Galium trifidum</i>	FACW	3
Swamp Aster	<i>Symphyotrichum puniceum</i>	FACW	1
		Total Cover =	95



Figure 6.6. Representative view of Wetland WL-1, showing the treed/shrub swamp and graminoid ground layer (July 5, 2026).

6.6.2.2 Wetland WL-2 - Treed/Shrub Swamp

WL-2 is a treed/shrub swamp in the northwestern portion of the Study Area. It is the largest of the three delineated wetlands, approximately 0.347 ha (3,466 m²) in area with an estimated perimeter of 246 m. Its approximate centroid is E 368153, N 4998687 (UTM Zone 20N). The eastern boundary of WL-2 is approximately 132 m from WL-1.

The recorded hydric soil indicator was a histic epipedon (H2). Wetland hydrology indicators consisted of surface water (A1), a high water table (A2), saturation (A3), water stained leaves (B9) and stunted or stressed plants (D1). Black spruce and red maple formed the tree layer, while speckled alder was prominent in the shrub layer. The herb stratum included Canada manna grass, nodding sedge, cinnamon fern, interrupted fern, woolly bulrush and Devil's beggar-ticks.

Table 6.6. Wetland WL-2 Vegetation by Stratum

Common name	Scientific name	Wetland indicator	Absolute cover (%)
Common name	Latin name	Wetland Indicator	Absolute Cover %
Black Spruce	<i>Picea mariana</i>	FACW	20

Common name	Scientific name	Wetland indicator	Absolute cover (%)
Red Maple	<i>Acer rubrum</i>	FAC	10
		Absolute Cover =	30
Shrub Stratum – Plot size : 5m2	<i>Shrub Stratum – Plot size : 5m2</i>	Shrub Stratum – Plot size : 5m2	Shrub Stratum – Plot size : 5m2
Speckled Alder	<i>Alnus incana</i>	FACW	25
Canada Holly	<i>Ilex verticillata</i>	FACW+	5
Yellow Birch	<i>Betula allegheniensis</i>	FAC	5
		Total cover =	35
Herb Stratum – Plot Size: 2m2	<i>Herb Stratum – Plot Size: 2m2</i>	Herb Stratum – Plot Size: 2m2	Herb Stratum – Plot Size: 2m2
Canada Manna Grass	<i>Glyceria canadensis</i>	OBL	15
Nodding Sedge	<i>Carex gynandra</i>	FACW	15
Cinnamon Fern	<i>Osmunda cinnamomea</i>	FAC	15
Interrupted Fern	<i>Osmunda claytoniana</i>	FAC	10
Woolly Bulrush	<i>Scirpus cyperinus</i>	FACW	10
Devil's Beggar-ticks	<i>Bidens frondosa</i>	FACW	10
Arrow-leaved Tearthumb	<i>Polygonum sagittatum</i>	OBL	5
Bristly Dewberry	<i>Rubus hispidus</i>	FACW	3
Dwarf Enchanter's Nightshade	<i>Circaea alpina</i>	FACW	3
Sallow Sedge	<i>Carex lurida</i>	OBL	3
Small Bedstraw	<i>Galium trifidum</i>	FACW	3
Broom Sedge	<i>Carex scoparia</i>	FACW	1
Silvery Sedge	<i>Carex canescens</i>	OBL	1
White Turtlehead	<i>Chelone glabra</i>	OBL	1
		Total cover =	95



Figure 6.7. Representative view of Wetland WL-2, showing the treed/shrub swamp and graminoid and fern ground layer (July 5, 2026).

6.6.2.3 Wetland WL-3 - Treed Swamp

WL-3 is a small, treed swamp in the northeastern portion of the Study Area and is the easternmost and southernmost of the three delineated wetlands. It is approximately 0.038 ha (375 m²) in area, with an estimated perimeter of 77 m. The approximate centroid is E 368394, N 4998567 (UTM Zone 20N). Its northern boundary is approximately 50 m from WL-1.

The recorded hydric soil indicator was a histosol (H1). Wetland hydrology indicators consisted of surface water (A1), a high water table (A2), saturation (A3), water-stained leaves (B9) and stunted or stressed plants (D1). Black spruce was the principal tree species, Canada holly and yellow birch occurred in the shrub stratum, and cinnamon fern and interrupted fern were prominent in the herb layer. The field photograph presented in Figure 6.8 below also shows moss cover and exposed saturated soil.

Table 6.7. Wetland WL-3 Vegetation by Stratum

Common name	Scientific name	Wetland indicator	Absolute cover (%)
Common name	<i>Latin name</i>	Wetland Indicator	Absolute Cover %
Black Spruce	<i>Picea mariana</i>	FACW	35



Common name	Scientific name	Wetland indicator	Absolute cover (%)
Red Maple	<i>Acer rubrum</i>	FAC	10
Yellow Birch	<i>Betula allegheniensis</i>	FAC	5
		Total Cover =	50
Shrub Stratum – Plot size : 5m2	<i>Shrub Stratum – Plot size : 5m2</i>	Shrub Stratum – Plot size : 5m2	Shrub Stratum – Plot size : 5m2
Canada Holly	<i>Ilex verticillata</i>	FACW+	10
Yellow Birch	<i>Betula allegheniensis</i>	FAC	10
Sheep Laurel	<i>Kalmia angustifolia</i>	FAC	5
		Total Cover =	25
Herb Stratum – Plot Size: 2m2	<i>Herb Stratum – Plot Size: 2m2</i>	Herb Stratum – Plot Size: 2m2	Herb Stratum – Plot Size: 2m2
Cinnamon Fern	<i>Osmunda cinnamomea</i>	FAC	15
Interrupted Fern	<i>Osmunda claytoniana</i>	FAC	15
Sensitive Fern	<i>Onoclea sensibilis</i>	FACW	5
Nodding Sedge	<i>Carex gynandra</i>	FACW	3
Sallow Sedge	<i>Carex lurida</i>	OBL	3
Three-seeded Sedge	<i>Carex trisperma</i>	OBL	3
Northern Long Sedge	<i>Carex folliculate</i>	OBL	3
Small Bedstraw	<i>Galium trifidum</i>	FACW	3
		Total Cover =	50



Figure 6.8. Representative view of Wetland WL-3, showing fern and moss cover and exposed saturated soil (July 5, 2026).

A provincial desktop screening was completed for a 2 km radius around the Project center point (Figure 6.9). Six Provincial Wetland Inventory polygons intersect the review area: four are mapped as swamp and two as marsh. The screen did not identify a provincial desktop indicator of Wetland of Special Significance status within 2 km for the policy criteria reviewed, including salt marsh, protected or designated conservation lands, Nova Scotia–Eastern Habitat Joint Venture lands, designated protected water areas or a mapped provincial Significant Habitat record. No provincial protected area or conservation land polygon intersects the 2 km review area; accordingly, no direct or indirect Project interaction with a designated protected area is predicted.

The provincial inventory is a landscape scale screening source and does not replace the three field delineated wetlands in the 27.1 ha Study Area, and with some interaction with the proposed Woodville Pit expansion area.

Before any wetland alteration applications are submitted, a qualified wetland professional will complete WESP-AC or the then current NSECC-approved functional assessment for each potentially affected wetland and explicitly evaluate every WSS criterion in the Nova Scotia Wetland Conservation Policy. The evaluation will incorporate current species and critical-habitat information and relevant information provided through Mi’kmaq or public engagement.

A confirmed WSS will be avoided unless NSECC determines that an alteration may lawfully proceed; the Project footprint and staging will be revised where required. For any authorized non-WSS alteration, Dexter will document avoidance, minimization, function-based compensation and monitoring in the wetland approval application.

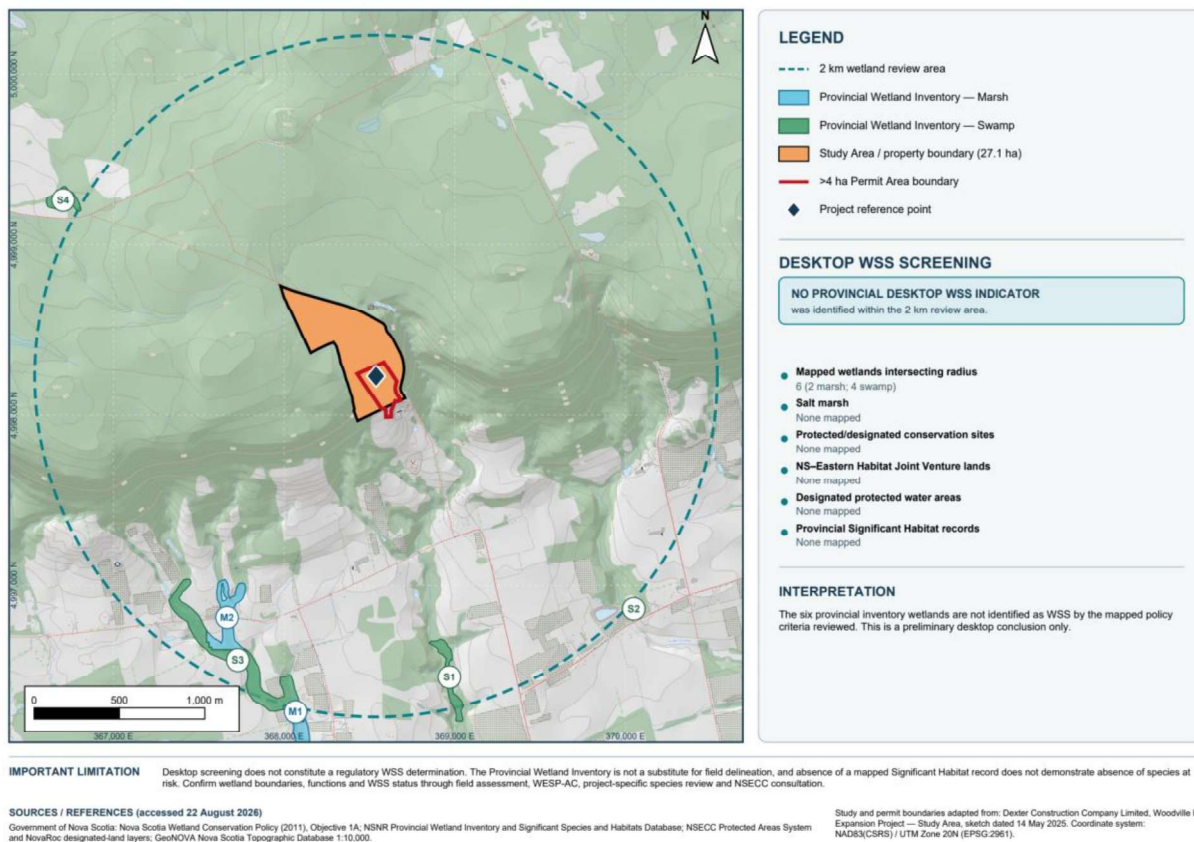


Figure 6.9. Provincial Wetland Inventory and Wetland of Special Significance Desktop Screening within 2 km of the Woodville Pit Expansion Project Center Point

6.6.3 Potential Environmental Effects

The Project may interact with wetlands during Site preparation, operations and reclamation. Potential effects include the following:

- Direct loss or alteration of wetland area and function where future extraction or supporting activities cannot avoid a delineated wetland;
- Indirect changes to wetland hydrology caused by clearing, overburden removal, reshaping of the Site, drainage controls or changes in runoff and infiltration;
- Erosion and the release of sediment laden runoff to wetlands during rainfall or snowmelt;
- Changes to wetland vegetation, edge conditions and wildlife habitat, including temporary sensory disturbance during active operations;
- Introduction or spread of invasive plants by vehicles, equipment or imported materials; Effects on wetland water or soil quality from accidental release of fuel, lubricants or



another hazardous material; and

- Re-establishment of wetland or wetland associated habitat during progressive and final reclamation, where feasible and consistent with the approved reclamation plan.

Direct effects would occur gradually because the Pit will be developed in phases. Indirect effects are most likely where work occurs near a wetland boundary or where Site drainage is not adequately controlled. Potential effects on water resources, fish habitat, vegetation and wildlife are addressed in the corresponding VEC sections.

6.6.4 Proposed Mitigation Measures

The following measures will be implemented to avoid or reduce effects on wetlands:

- Apply the avoidance–minimization–compensation sequence during design and operational staging, and limit disturbance to the area required for safe and efficient Project activities;
- Maintain a minimum 30 m separation from delineated wetlands where practicable and clearly identify wetland boundaries and approved disturbance limits before work begins;
- Do not alter a wetland until the required approval has been obtained from NSECC and all approval conditions, including compensation requirements, have been incorporated into the work plan;
- Avoid unauthorized alteration of any Wetland of Special Significance and consult NSECC if a wetland's status or supporting ecological information changes;
- Design Site drainage to maintain existing wetland inflow and outflow patterns to the extent practicable and to prevent uncontrolled discharge from active areas;
- Install appropriately sized erosion and sediment control measures before ground disturbance and inspect them regularly, before and after major rainfall events, and during spring melt;
- Stabilize exposed soil, drainage outlets and inactive slopes promptly and progressively reclaim areas no longer required for operations;
- Store and handle fuels and hazardous materials in accordance with applicable requirements, maintain spill response equipment at the Site, and conduct fueling and maintenance at least 30 m from wetlands where practicable;
- Clean earth moving equipment before it enters the Site when it has operated in areas containing invasive plants and monitor disturbed wetland margins for invasive species establishment; and
- Complete wetland, surface water or drainage monitoring required by the wetland alteration approval or amended Industrial Approval and apply adaptive management if an unexpected effect is observed.

6.6.5 Residual Effects and Summary

The Project may result in the long term direct loss of wetland area and function within portions of the final approved development footprint. The precise area will depend on detailed Pit staging and the extent to which the three delineated wetlands can be avoided. Any authorized



wetland loss will persist throughout the operational period and will be addressed through compensation required by NSECC.

Potential indirect effects on retained wetlands are expected to be localized and controllable through maintenance of setbacks, drainage design, erosion and sediment controls, spill prevention, progressive stabilization and monitoring. No unauthorized alteration of a Wetland of Special Significance is proposed. Reclamation may restore some wetland associated functions over time, but it is not assumed to replace regulatory compensation for authorized wetland loss.

With planned avoidance, minimization, regulatory authorization, compensation and environmental protection measures, the residual environmental effects of the Project on wetlands are predicted to be not significant, with a moderate to high level of confidence. Confidence will be increased through final design information, wetland approval review and any required monitoring. Monitoring results will be used to identify the need for corrective or adaptive management measures.

6.7 Wildlife and Wildlife Habitat

6.7.1 Assessment Background

Wildlife and wildlife habitat includes wildlife (fauna) and the habitats that support wildlife species. This VEC focuses on birds, mammals, herptiles and invertebrates within terrestrial components of their lifecycle, as well as the habitats that support them. Wildlife and wildlife habitat is selected as a VEC because of potential interactions between wildlife, its habitat, and proposed Project activities. Species of conservation interest (i.e., species at risk [SAR] and species of conservation concern [SOCC]) as identified by provincial and federal regulatory agencies, are of particular focus in this assessment because they are often susceptible to changes in the environment and are therefore useful indicators of ecosystem health and regional biodiversity.

Both provincial and federal legislation provides protection to designated bird, mammal, herptile, and other species at risk. Most bird species, specifically, are protected under the *Migratory Birds Convention Act* (MBCA).

6.7.1.1 Desktop Analysis

For this assessment, the Study Area was evaluated for presence of SAR and SOCC as well as the presence or absence of habitat used by those species. For the purposes of this assessment, the following definitions apply:

- Species at risk (abbreviated SAR): SAR are those species that are listed as “Extirpated”, “Endangered”, “Threatened”, or “Special Concern” on Schedule 1 of the federal *Species at Risk Act* (SARA) or on the *Nova Scotia Endangered Species Act* (NS ESA); and
- Species of conservation concern (abbreviated SOCC): SOCC are those species that are not SAR but are listed in other parts of SARA, NS ESA, by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), or are regionally rare or endangered by



the Atlantic Canada Conservation Data Centre (AC CDC) (i.e., those species with AC CDC S-ranks of “Critically Imperiled” [S1], Imperiled [S2], or Vulnerable [S3] in the province of Nova Scotia).

Other available information sources that were reviewed to help define known wildlife presence and habitats and potential for rare species within the Project Area included:

- A site-specific Atlantic Canada Conservation Data Centre report (AC CDC 2025b) which included a request for potential species at risk;
- Reports from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC);
- Ecological Reserves in the Maritimes;
- Environmentally Sensitive Areas database;
- Atlas of Breeding Birds of the Maritime Provinces;
- Important Bird Areas of Canada;
- Federally designated Migratory Bird Sanctuaries;
- Provincially identified deer wintering areas; and
- Identified Protected Wilderness Areas, and Nature Reserves.
- Department of Fisheries and Oceans (DFO) Species at Risk Mapping;
- Google Earth satellite imagery;
- The Nova Scotia Wetlands Inventory (NSDNRR 2023); and
- Publicly available geographic information systems (GIS) map layers.

Incidental observations conducted during the various field assessments completed to support development of the EARD were also used to collect information on the presence of wildlife within the Project Area, with an emphasis on SAR/SOCC.

6.7.1.2 Field Assessment

Field assessment comprised a fall reconnaissance and migration survey on September 13, 2025, spring migration point counts at eight stations on May 16, 2026, and breeding bird point counts at the same eight stations on July 5, 2026. Birds were identified by sight and sound, while mammals, amphibians and other wildlife were recorded incidentally by direct observation or sign. Reconnaissance and survey routes are shown in Figure 5.1. Station descriptions and complete records are provided in **Appendix F**.

During the 2025 and 2026 biophysical field program, AEE biologists also visually assessed accessible areas within the Study Area and nearby adjacent surveyed areas for potential bat habitat features, including large or cavity-bearing trees, snags and loose bark, rock crevices or openings, excavations, structures, and other evidence. This was an incidental habitat feature assessment completed during the broader biophysical surveys, rather than a stand alone acoustic or emergence survey.



6.7.2 Existing Conditions

6.7.2.1 Birds

Many bird species in Nova Scotia are migratory and either breed in the province during the summer months or pass through it during the spring and fall migratory periods. Jurisdiction for many migratory birds is federal, since migratory birds cross both provincial and international boundaries. The MBCA is the federal law which protects migratory birds in both Canada and the United States. The Act prohibits killing, injuring or harassing migratory birds, their nests, or their young. Furthermore, species listed pursuant the federal SARA or NS ESA are afforded further protection as harm, the destruction of their nest, eggs, or young is prohibited. Migratory birds that are protected under the MBCA in Canada, and that are relevant to the Project, include:

- Waterfowl (e.g., ducks and geese);
- Rails (e.g., coots, gallinules, sora, and other rails);
- Shorebirds (e.g., plovers and sandpipers); and
- Songbirds (e.g., thrushes and warblers).

Birds not addressed under federal jurisdiction include grouse, quail, pheasants, ptarmigan, hawks, owls, eagles, falcons, cormorants, pelicans, crows, jays, and kingfishers. Most birds not included in this list are protected under provincial laws, most notably the *Nova Scotia Wildlife Act*. The *Wildlife Act* provides the regulatory framework for the harvest, use and protection of wildlife species in Nova Scotia.

Important Bird Areas

The closest Important Bird Area (IBA) to the Woodville Pit Expansion Project is the Southern Bight, Minas Basin, Bay of Fundy IBA (NS020) (IBA Canada 2026), which is approximately 20 km east of the Project Area. The habitat in this area consists of salt marshes/brackish marshes, tidal rivers/estuaries, mud or sand flats (saline), inlets/coastal features (marine), arable and cultivated lands (IBA Canada 2026). With the high tides in the Bay of Fundy, it creates a large, open area for shorebirds to forage for invertebrates, in particular the Fundy mud shrimp (*Corophium volutator*). These areas are particularly important for shorebirds, including: Semipalmated Plovers (*Charadrius semipalmatus*), Purple Sandpiper (*Calidris maritima*), and Savannah Sparrow (*Passerculus sandwichensis*) during their fall migration, and significant numbers of Semipalmated Sandpipers (*Calidris pusilla*). Other species that use these areas for an important stopover during migration include Sanderlings (*Calidris alba*), Short-billed Dowitchers (*Limnodromus griseus*), Least Sandpipers (*Calidris minutilla*), Dunlins (*Calidris alpina*), White-rumped Sandpipers (*Calidris fuscicollis*), and Red Knots (*Calidris canutus rufa*).

Maritime Breeding Bird Atlas

The Maritime Breeding Bird Atlas (MBBA) database (Stewart et al. 2015) provides information on the presence of breeding bird species in counts conducted between 2006 and 2010. Within the MBBA Second Atlas, the Project Area lies within Region #16 (Annapolis Valley – Digby Neck), within Square #20LQ79 (Woodville Area). During the MBBA period of 2006-2010, a total of 151 species of birds were recorded within Square #20LQ79. Of these species, 45 were

confirmed as breeding, 29 were probable breeders, and 23 were possible breeders. There were 6 SAR, 16 SOCC, and 4 exotic species detected during the most recent MBBA period in this square. The species at risk included: Bank Swallow (*Riparia riparia*), Barn Swallow (*Hirundo rustica*), Bobolink (*Dolichonyx oryzivorus*), Canada Warbler (*Cardellina canadensis*), Common Nighthawk (*Chordeiles minor*), and Olive-sided Flycatcher (*Contopus cooperi*) (Stewart et al. 2015).

ACCDC Species at Risk Database Review

A review of the AC CDC data as compiled in a site-specific report (AC CDC 2025b) indicated that there were 121 records of 35 vertebrate SAR or SOCC historically observed within 5 km of the Woodville Pit Expansion Area. Of these species, 33 are bird species. Of these bird species, six are considered SAR, and the remainder are considered SOCC.

Bird SAR identified by the AC CDC or regional sources, together with species detected during the 2025–2026 Woodville Pit area surveys, are screened in Table 6.8. The table considers habitat requirements and potential to occur within the Project Area.

Table 6.8. Bird Species at Risk Screening for the Project Area

Species	Ranking	Habitat Characteristics	Potential to Occur in the Project Area
Bank Swallow	AC CDC S3B; NS ESA Endangered; SARA Threatened	Bank Swallow nests in colonies within Burrows in vertical or near-vertical faces (ECCC 2022). Nesting colonies are generally located along vertical faces of river bluffs, lakeshores, coastlines, aggregate pits, road-cuts, retaining walls and within piles of sand, gravel, or sawdust (COSEWIC 2013). Feeds primarily on flying insects (ECCC 2022).	Suitable nesting habitat with the vertical faces of the aggregate pit.
Chimney Swift	AC CDC S2S3B; NS ESA Endangered; SARA Threatened	Chimney Swift habitat is characterized by the availability of suitable vertical cavities for nesting and roosting, particularly accessible masonry chimneys with rough interior surfaces, together with nearby landscapes that support abundant aerial insects. Natural nesting and roosting habitat include large hollow trees, particularly within mature forest. Foraging occurs over a broad range of urban, agricultural, forested, wetland and aquatic habitats, and therefore habitat suitability is influenced more by aerial insect abundance and availability of nesting/roosting structures than by a single vegetation community (ECCC 2023a).	Suitable nesting habitat is not present within the Project Area.
Barn Swallow	AC CDC S3B; NS ESA Endangered;	Typically inhabit open areas near human settlements and land uses including parks, ball fields, golf courses and agricultural	Suitable nesting habitat is not present within the

Species	Ranking	Habitat Characteristics	Potential to Occur in the Project Area
	SARA Threatened	fields where they forage for flying insects. These birds will typically construct their nests on human-made structures, and rarely in more natural locations such as cliffs, caves, or hollowed trees (COSEWIC 2021). Feeds primarily on flying insects and may occasionally take insects from the ground or on vegetation (NatureServe 2023).	Project Area. Suitable habitat is present adjacent (south) to the Project Area and the species could potentially forage within the Project Area.
Canada Warbler	AC CDC S2S3B; NS ESA Endangered; SARA Threatened	Preferred breeding habitat includes wet, mixed deciduous-coniferous forests with a well-developed shrub layer but will breed in stands regenerating after natural and anthropogenic disturbances (COSEWIC 2020).	Potential to nest within cleared and forested areas of the Project Area.
Olive-sided Flycatcher	AC CDC S3B; NS ESA Threatened; SARA Special Concern	Nests in open, forested areas, often with many conspicuous perches (i.e., tall trees or snags alongside open areas) (Environment Canada 2016). Diet is comprised almost entirely of flying insects (NatureServe 2023).	Potential to nest within forested areas of the Project Area.
Bobolink	AC CDC S2S3B; NS ESA Vulnerable; SARA Threatened	Nest in lush meadows, open grassland and hayfields (COSEWIC 2022). Bobolink is an obligate grassland specialist and a consumer of agricultural insects (COSEWIC 2022).	Unlikely to be present within the Project Area. The agricultural fields located to the south of the Project Area may provide suitable habitat for Bobolink.
Evening Grosbeak	AC CDC S3B; NS ESA Vulnerable; SARA Special Concern	Evening Grosbeak habitat is typically associated with mature and older coniferous or mixed wood forests, particularly stands containing spruce, fir, pine and deciduous trees.	Potential to nest within mature, forested areas of the Project Area.
Eastern Wood-Pewee	AC CDC S3S4B; NS ESA Vulnerable; SARA Special Concern	Eastern Wood-pewee lives in most forest types across its range and nests in a wide variety of deciduous tree species (ECCC 2023b).	Potential to nest within mature, forested areas of the Project Area.

Bird surveys were completed by experienced observers able to identify species by song, call and sight. The September 13, 2025, reconnaissance documented fall migrants and resident birds along the survey traverse. On May 16 and July 5, 2026, point counts were completed at



eight stations representing mature deciduous forest, mixedwood forest, treed-swamp margins and the pond area. The number of individuals detected at each station and the time of each count were recorded in the field and are documented in **Appendix F**.

The fall 2025 survey recorded 79 individuals of 26 species. The May 2026 Spring migration point counts recorded 121 individuals of 33 species, and the July 2026 breeding bird point counts recorded 108 individuals of 35 species. Across the three dates, 53 different bird species were documented. Counts describe detections during each survey and are not interpreted as population estimates because survey timing and methods differed among visits.

Two legally listed bird species were confirmed during the July 5, 2026, point counts. One Canada Warbler (*Cardellina canadensis*) was detected at PC4 location; the species is Endangered under the NS ESA and Threatened under Schedule 1 of SARA. Four Eastern Wood-Pewees (*Contopus virens*) were detected at PC1, PC2, PC3 and PC7; the species is Vulnerable under the NS ESA and of Special Concern under Schedule 1 of SARA. No listed bird SAR was observed during the Spring 2026 breeding survey effort.

The Canada Warbler detection at PC4 is consistent with the mixedwood/treed swamp habitat described for the survey station. Eastern Wood-Pewee detections occurred at mature deciduous forests and mixedwood/treed swamp stations. These detections confirm that habitat used by listed birds occurs within the Study Area and require Project mitigation to emphasize phased clearing, retention of wetland and perimeter habitat where practicable, and protection of active nests.

Table 6.9 summarizes survey effort and results by date. Complete fall observations, point-count station descriptions and species by station data are provided in **Appendix F**.

Table 6.9. Bird Survey Summary by Date

Date	Survey	Stations	Species	Individuals	Approx. GPS Track
Sept. 13, 2025	Fall migration / reconnaissance	Traverse	26	79	5.7 km
May 16, 2026	Spring migration point counts	8	33	121	8.8 km
July 5, 2026	Breeding bird point counts	8	35	108	3.1 km

Incidental wildlife observations made during the September 13, 2025, reconnaissance survey are summarized under the mammal and herptile subsections and in Table 6.10.

6.7.2.2 Mammals

No mammal SAR or SOCC was observed in the submitted 2025 and 2026 field data, and no confirmed bat roost, hibernaculum or other protected-mammal habitat feature was documented within the Project footprint or nearby adjacent areas assessed in the field. This field result does not negate the location-sensitive bat record identified by the desktop review described below. The incidental mammal records are common species ranked S5.

Five mammal species were recorded on September 13, 2025: Red Squirrel by direct observation, and Eastern Coyote, Red Fox, Raccoon and White-tailed Deer by scat, tracks or other sign. The observations confirm routine use of the Study Area by common, mobile mammals but do not indicate a mammal SAR constraint.

The Project area does not fall within an area known for Mainland moose (*Alces alces americana*), and there are no known mainland moose concentration areas or core habitat for the Mainland moose at or near the Project Area. Mainland Moose are listed by NS ESA as Endangered and are ranked by the AC CDC as S1 (Critically Imperilled within the province of Nova Scotia). Although these animals are wide ranging, the potential for moose to be present within the Project area is extremely low.

ACCDC Species at Risk Database Review

The site-specific AC CDC Data Report (June 25, 2025) identifies “Bat Hibernaculum or bat species occurrence” as present within the location-sensitive query for the Project. Because locations are suppressed, the report does not disclose precise coordinates or distinguish whether the protected record represents a hibernaculum, roost, or another bat occurrence. The public rare-species table lists the nearest bat record as Little Brown Myotis (*Myotis lucifugus*) at approximately 1.8 ± 0.1 km from the study point; Northern Myotis (*Myotis septentrionalis*) and Tri-colored Bat (*Perimyotis subflavus*) are listed at approximately 17.5 km and 17.6 km, respectively. All three species are Endangered under the federal *Species at Risk Act* and the Nova Scotia *Endangered Species Act*.

Bat Habitat Field Review and Regulatory Engagement

The habitat feature review did not document a confirmed maternity roost, hibernaculum, bat sign, cave or mine opening within the Project footprint or nearby adjacent surveyed areas. Because the assessment was not a targeted acoustic or emergence survey and the ACCDC record is location-sensitive, absence of a field detection is not interpreted as absence of bats from the broader landscape.

Dexter and AEE met with NS DNR in 2025 and discussed potential bat habitat in the general vicinity of the Project. Dexter will continue to engage with NS DNR regarding potential bat habitat in the area, including confidential clarification of the location-sensitive record, and appropriate avoidance, timing or setback measures before the applicable clearing or blasting phase.

Abandoned Mine Openings and Bat Habitat

A review of the Nova Scotia Abandoned Mine Openings Database (DP ME 10, Version 9, 2024) identified no mapped abandoned mine opening within the Project footprint and one mapped record within 5 km of the Project reference coordinate. The Ross Corner (Vernon Mines) iron occurrence (RCI-1-001) is approximately 3.1 km from the Project reference point. It is classified as a “Pit” on private woodland, is recorded as “Not Inspected,” and has unknown depth, underground-working, flooding and ponding information. The provincial database cautions that it is not a complete inventory and that positions and conditions, particularly on private land, may be uncertain or change over time.

The Ross Corner record cannot be equated with the location-sensitive ACCDC record on the available public data, and its recorded pit type and unknown dimensions do not establish that it is suitable bat hibernation habitat. Nevertheless, caves and accessible shafts, adits, slopes or sufficiently deep excavations can provide stable winter habitat. The mapped Ross Corner feature is outside the Project footprint and will not be directly disturbed by the Project (ECCC 2018).

Field Surveys

Incidental mammal and amphibian observations, detection types and field notes are listed in Table 6.10 and **Appendix F**.

6.7.2.3 Herptiles

The September 13, 2025, reconnaissance recorded Green Frog (*Lithobates clamitans*), Wood Frog (*Lithobates sylvaticus*) and American Toad (*Anaxyrus americanus*), all ranked S5. Green Frogs were observed at the small pond along the western property edge, a Wood Frog was observed in adjacent forest, and an American Toad was observed near the ATV road along the eastern edge of the Study Area (outside of the proposed Pit expansion area). No turtle, reptile SAR or amphibian SAR was recorded in the field data collected.

Wood Turtle

The ACCDC public taxa table lists the nearest Wood Turtle (*Glyptemys insculpta*) record at approximately 10.9 ± 0.05 km from the study reference point, and the location-sensitive table does not identify Wood Turtle as present within the Project query.

Desktop review of provincial species and habitat information, aerial imagery, drainage and wetland mapping, together with field verification by AEE during the 2025 and 2026 surveys, confirmed that Wood Turtle habitat is not present within the Project footprint or nearby adjacent surveyed areas. No clear, perennially flowing watercourse with suitable substrate, basking features, overwintering pools and connected riparian or nesting habitat was identified, and no Wood Turtle individual or sign was observed. The small pond and treed wetlands support common amphibians but do not constitute Wood Turtle habitat.

Table 6.10. Incidental Wildlife Observations, September 13, 2025

Group	Common Name	Scientific Name	Detection	Field Note
Amphibian	Green Frog	<i>Lithobates clamitans</i>	Direct Observation	Many in the small pond along the western property edge.
Amphibian	Wood Frog	<i>Lithobates sylvaticus</i>	Direct Observation	One individual noted near the pond, but in the woods.
Amphibian	American Toad	<i>Anaxyrus americanus</i>	Direct Observation	One individual noted near the ATV road along the eastern edge of site.
Mammal	Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Direct observation	Throughout site.
Mammal	Coyote	<i>Canis latrans</i>	Scat	Along ATV road.
Mammal	Red Fox	<i>Vulpes vulpes</i>	Scat	Along historic road near western edge of site.
Mammal	Raccoon	<i>Procyon lotor</i>	Tracks	In mud in puddle along ATV road.



Group	Common Name	Scientific Name	Detection	Field Note
Mammal	White-tailed Deer	<i>Odocoileus virginianus</i>	Scat and tracks	Throughout site.

6.7.2.4 Managed and Significant Areas

A GIS scan completed by AC CDC did not identify any managed areas or biologically significant sites located within 5 km of the centre of the Project Area. Significant Areas are sites with a conservation designation and management that qualifies them for listing in the Canadian Protected and Conserved Areas Database (CPCAD).

6.7.3 Potential Environmental Effects

As part of the desktop assessment, the habitat requirements of wildlife species identified as potentially occurring within and/or near the Study Area were compared to the range of environmental conditions within the Study Area to determine if suitable habitat was present for these taxa. Knowledge of the habitats present within the Project area was determined through an interpretation of aerial photography, topographic and geological mapping, as well as information obtained through field surveys (**Appendix F**). In instances where appropriate habitat was present for a particular species, that taxon was potentially present in the Project area, mitigation identified, and potential impacts assessed.

Several activities (i.e., vegetation clearing, grubbing, materials processing) related to the Project have the potential to interact with wildlife and wildlife habitat. Potential effects on wildlife include direct mortality, habitat loss, and fragmentation. These potential effects are discussed in this section.

6.7.3.1 Birds

The primary possible effects to birds due to the proposed Project development include habitat loss and fragmentation, destruction of nests, direct mortality due to collision, and noise disturbance. The purpose of the desktop review and field surveys aimed to refine constraints mapping by identifying protected species, habitats, or features (such as a colony tree or raptor nest) to confirm effective mitigation during construction activities in order to be compliant with federal and provincial legislation.

The Project may interact with birds and bird habitat in the following ways:

- Construction activities may alter or destroy migratory bird habitat;
- Activities may destroy or alter habitat for bird SAR or SOCC;
- Noise from Project activities may deter birds from migrating into and using the Project area;
- Vegetation clearing and grubbing activities may destroy bird nests and breeding habitat (including SAR/SOCC), and result in habitat fragmentation; and
- Noise from Project activities may result in the abandonment of nests or increased rates of predation and exposure of hatchlings and eggs during temporary abandonment.



In addition, the operation and maintenance of the Project may result in sensory disturbance to, and avoidance by, birds due to noise and human activity, and incidental bird collisions with vehicles travelling on the new roads.

6.7.3.2 Mammals

The Project may interact with wildlife (fauna) and their habitat in the following ways:

- Clearing and grubbing of vegetation (habitat) during construction will cause a change in vegetation (flora) quality and/or quantity (i.e., a disturbance to wildlife habitat);
- Although much of the Study Area was once cleared for logging purposes, the footprint of the pit expansion will cause loss of immature and mature vegetation that currently provides habitat for wildlife;
- Disturbance from vehicles and construction equipment may cause wildlife avoidance or disruption of wildlife activity (such as breeding and/or feeding);
- Noise, dust, combustion fuel emissions, and vibration may cause disturbance to wildlife species during the Project;
- Mobile equipment uses during the construction or operation, and maintenance activities may cause direct injury or death of wildlife, particularly to small wildlife such as rodents and shrews, through collisions or destruction of dens and food sources;
- Medium and large sized mammals are unlikely to suffer direct mortality from Project activities as they would flee the area in response to human presence and noise. However, such avoidance of behaviour could result in changes to normal movements, migrations, and other life cycle processes;
- Following vegetation clearing, there will be local habitat fragmentation while the pit is operational, making it difficult for mammals to move from one side of the pit to the other due to lack of cover and increased risk of predation.
- Potential bat-specific effects include removal of a day or maternity-roost feature during vegetation clearing; injury or mortality if an occupied feature is removed; localized loss of forest edge, wetland margin and other foraging or commuting habitat; and temporary avoidance caused by noise, vibration, dust, lighting and human activity. These pathways are assessed precautionarily because of the location-sensitive ACCDC record, even though no confirmed bat roost or hibernaculum was documented in the Project footprint.

The operation and maintenance of the Project may also result in wildlife encounters, sensory disturbance to and avoidance by wildlife due to noise and human activity, and incidental wildlife collisions.

6.7.3.3 Herptiles

The Project may interact with herptiles and their habitat (if present) in the following ways:

- Following vegetation clearing, there will be local habitat fragmentation while the pit is operational, making it difficult for herptiles to move from one side of the pit to the other due to lack of cover and increased risk of predation; and
- Loss of foraging habitat may occur from wetland alterations, should they be used for



such purposes.

Because desktop and field surveys confirmed that Wood Turtle habitat is absent from the Project footprint and nearby adjacent surveyed areas, the Project is not expected to cause direct habitat loss, displacement, injury or mortality to Wood Turtle. Residual risk is limited to an unexpected occurrence and will be managed through the regulatory-notification procedure.

6.7.4 Proposed Mitigation Measures

6.7.4.1 *Birds*

- Clearing and grubbing activities will be scheduled to the extent possible outside of the typical breeding bird and migratory bird season (early April to late August for nesting zone C2) so that eggs and flightless young are not inadvertently harassed or destroyed. At a minimum, if complete avoidance of these activities during the specified timeframe is not feasible, nest searches will be undertaken by a qualified biologist and avoidance setbacks will be established around active nests. Nest searches will only be completed following consultation with Environment and Climate Change Canada (ECCC);
- No one shall disturb, move or destroy migratory bird nests. If a nest is found within the Project Footprint, an appropriate setback will be established around the nest in which human activities will be restricted until the young fledge and leave the area or until the nest naturally fails;
- On-site materials storage that may attract ground nesting birds will be examined for bird nests during the nesting season, and disturbance avoided if nests are present until after the nesting season;
- On-site workers will receive reference material that will help them identify species that could be attracted to habitats created by Project operations (e.g., Bank Swallow). If workers encounter birds that they suspect may be nesting within the Project Area, a biologist will be contacted to determine whether nesting is occurring and to locate the nest. Note: nests should not be flagged since this increases the probability of predation; and,
- If a SAR is encountered, contact will be made to a Species at Risk Biologist at NS DNR.

6.7.4.2 *Mammals*

- Retain vegetated movement corridors and perimeter cover where practicable;
- Maintain low vehicle speeds;
- Secure food and waste;
- Prohibit feeding or harassment of wildlife;
- Inspect inactive equipment, stockpiles and work areas before disturbance where wildlife could shelter; and,
- report any suspected SAR to a qualified biologist and the NSDNR.
- Phase vegetation removal and retain large cavity trees, suitable snags, loose-bark trees, forested movement corridors and wetland-edge vegetation where practicable and safe;
- Target tree clearing outside the active bat period (generally May 1 through October 31),



where practicable and as confirmed with NS DNR. If clearing during that period or removal of a high value potential roost feature is unavoidable, a qualified biologist will complete the survey work and regulatory consultation appropriate to the feature before removal;

- Keep routine operations within daytime hours; avoid unnecessary night lighting and, where lighting is required for safety, use the minimum practicable intensity, downward shielding and warm-spectrum fixtures directed away from forest edges, wetlands and watercourses;
- Record bat observations, incidents, field decisions and regulator communications, and report any suspected bat SAR occurrence to NS DNR in accordance with the Project wildlife reporting procedure.

6.7.4.3 Herptiles

- Protect the pond, wetlands and wetland margins through the setbacks and drainage controls described in Sections 6.3 and 6.6;
- Before clearing or ground disturbance near wet habitat, inspect the work area for amphibians and turtles, allow animals an unobstructed opportunity to leave, and obtain qualified biologist and/or NSDNR advice if a protected species is encountered.

6.7.5 Residual Effects and Summary

The Project will result in vegetation clearing and the loss of some immature and mature vegetation within the Project Footprint. Vegetation clearing required for the Project will happen gradually in phases over several decades as resources from the Pit are required. There exists ample vegetation and forested land in proximity to the Project for wildlife species to use as higher value habitat than that affected by the Project. Due to the existing activities associated with the Woodville Pit operations, there are also not expected to be species sensitive to human activities inhabiting the Project Area.

Project activities are likely to result in sensory disturbance to wildlife and thus wildlife is likely to avoid the areas where Project activities are to take place, thereby limiting the potential for wildlife encounters, injury, or mortality of wildlife species. Operation of the site, including physical activities (e.g., crushing) will result in some noise and likely avoidance by wildlife. Given the relatively limited area of disturbance and only infrequent use of the Pit for operations, substantive interactions between the Project and wildlife and wildlife habitat are not anticipated.

The field surveys confirm that the Study Area provides habitat for common wildlife and for at least two listed birds: Canada Warbler and Eastern Wood-Pewee. Because both species were detected at forest or treed wetland survey stations, retained wetland habitat, mature perimeter vegetation and phased clearing will contribute to maintaining habitat connectivity and reducing the rate of habitat loss.

Project activity will create localized sensory disturbance and habitat loss within active phases, and mobile wildlife are expected to avoid areas where clearing, extraction or processing is



occurring. Avoidance of active nests, staged disturbance, maintenance of retained habitat and progressive reclamation will reduce the likelihood of direct mortality and limit the spatial and temporal extent of effects.

With the bat specific measures in Section 6.7.4, the Project will not directly disturb the mapped Ross Corner abandoned mine record, and no known roost or hibernaculum occurs within the Project footprint. Residual effects on bats are predicted to be low and not significant, with moderate confidence because the ACCDC record is location-sensitive. Continued NS DNR engagement, phase-specific habitat review and targeted surveys or setbacks if required provide an adaptive means of resolving that uncertainty before the relevant work proceeds.

For Wood Turtle, the absence of suitable habitat within the Project footprint and nearby adjacent surveyed areas, supported by both desktop and field review, means no direct Project interaction is expected. With wetland, drainage and wildlife stop work measures, residual effects on Wood Turtle are predicted to be not significant, with a high level of confidence.

With application of the mitigation measures described in Section 6.7.4, including avoidance of active nests and scheduling clearing outside the migratory bird nesting period (typically mid-April to late August in this location of Nova Scotia) where practicable, residual effects on wildlife and wildlife habitat are rated not significant, with a moderate to high level of confidence. No separate long-term wildlife monitoring program is proposed. Follow up will consist of pre-vegetation clearing checks when seasonal avoidance is not practicable, incident and SAR reporting, and any species-specific monitoring or setbacks required through regulatory agency review.

6.8 Socioeconomic Environment

6.8.1 Assessment Background

The Woodville Pit Expansion Project may interact with the socioeconomic environment through land and resource use, transportation, employment and economic activity. These interactions are important because they can influence the daily lives of people who live, work or travel near the Site.

Land and resource use includes residential, agricultural, forestry, commercial and recreational use of public and private land. Employment and economy include direct employment, contracting, purchase of goods and services, and the broader benefit associated with a reliable local supply of construction aggregate. The assessment considers the privately owned Project Area, nearby land uses, Bligh Road and Arnold Road, and the communities that may experience Project traffic or economic activity.

A significant adverse effect on land and resource use would be an uncompensated loss of resource value or a permanent material restriction on regional access or use. A significant adverse economic effect would be a sustained Project-related decrease in employment or economic activity; a positive effect would be a sustained Project-related contribution to employment or the local and regional economy.



6.8.2 Existing Conditions

The Project is located at 987 Bligh Road in the rural community of Woodville, Kings County, on privately owned land. The surrounding area has a mix of residential, commercial/light industrial, agricultural and forestry uses. There are also recreational trails (hiking and ATV use) located to the east and north of the Project Study Area. The existing Pit has operated under an Industrial Approval since 2011 and is an established component of local land use.

The Pit operates intermittently during the road construction season when aggregate is required for local infrastructure work. Access is from Bligh Road, a provincially owned and maintained gravel road connected to Arnold Road. Aggregate is hauled from the Site using the provincial road network. No off-site support facilities are proposed.

The Project Area includes existing disturbed land, previously logged or regenerating land, forest and small wetlands. Recreational access to the privately owned operating area is restricted for safety. The existing operation supports Dexter personnel and third-party contractors and contributes to local economic activity through wages, services, fuel, maintenance and transportation purchases. The current EARD does not identify a fixed number of positions attributable solely to this intermittently operated Pit.

6.8.3 Potential Environmental Effects

6.8.3.1 Land Use

The expansion will gradually convert additional vegetated and previously harvested land to industrial aggregate use. During active periods, dust, noise, lighting and visual change could create temporary nuisance effects for nearby residents or affect the perceived enjoyment of adjacent property. The Project may also temporarily reduce opportunities for informal forestry or recreation within the privately owned development area.

Effects on agricultural or recreational uses could occur indirectly if Project runoff affected water resources or downstream habitat; those pathways are addressed through the water resources and fish habitat assessments. The expansion does not introduce a new land use at the Site, and the type of activity will remain similar (or identical) to existing operations.

6.8.3.2 Transportation

Construction equipment will be mobilized to and from the Site as needed. During operations, haul trucks will continue to use Bligh Road, Arnold Road and the provincial highway network. Truck traffic will vary with demand for aggregate and may be noticeable to nearby residents during active contracts. Because future production is expected to remain approximately 50,000 tonnes in an active year, a material change from historic traffic levels is not anticipated.

6.8.3.3 Employment and Economy

The Project will allow Dexter to continue supplying aggregate for local road and construction projects. It will maintain opportunities for company personnel and contractors and generate purchases of goods and services. Continued access to a local aggregate source can also reduce the distance that material must be transported from alternative sources. The effect on employment and the economy is expected to be positive but modest because operations are



intermittent.

A typical active shift is expected to require approximately one Site supervisor, one to three equipment operators, a scale/loadout function when required and contracted haul drivers, with maintenance, environmental and specialist support mobilized as needed. This is a planning estimate rather than a hiring commitment. The Project may provide intermittent direct employment and local procurement over several decades. Dexter will track active days, tonnes shipped, truck movements, complaints and corrective actions so that socioeconomic predictions can be checked against actual operations.

6.8.3.4 Public Health and Safety

The public health and safety assessment links Project sources to exposure pathways and receptors as follows:

- Fugitive dust and diesel exhaust may reach workers and the nearest southern residential/lumber property by inhalation;
- Noise may cause annoyance or interfere with daytime activities;
- haul traffic may increase collision, road dust and pedestrian/cyclist risk on Bligh and Arnold Roads;
- Sediment or an accidental release could reach private water supplies or downstream users through groundwater or drainage; and
- An uncontrolled slope failure, fire or unauthorized access could cause direct injury.

6.8.4 Proposed Mitigation Measures

6.8.4.1 Land Use

- Apply the atmospheric and acoustic mitigation measures described in this EARD, including dust suppression, equipment maintenance and retention of perimeter vegetation;
- Use directional lighting and limit illumination to that required for safe operations; Maintain secure Site access and clear signage to protect workers and the public;
- Manage surface water and sediment in accordance with the surface-water management plan and the amended Industrial Approval;
- Maintain a complaint-response process, document concerns and implement corrective measures where Project activities are confirmed as the source; and
- Progressively reclaim areas that are no longer required for aggregate production or supporting activities.

6.8.4.2 Transportation

- Require truck drivers to obey posted speed limits, warning signs and load security requirements and to adjust driving to road, weather and visibility conditions;
- Maintain Site access and promptly address mud, dust or aggregate tracked onto public roads;
- Avoid unnecessary queuing or idling near residences and coordinate deliveries during active projects; and



- Address transportation accidents through the Project's emergency-response and spill-contingency procedures.

6.8.4.3 Employment and Economy

No mitigation is required for the anticipated positive economic effect. Dexter will use qualified local and regional workers, contractors and suppliers where practical and consistent with Project requirements.

6.8.4.4 Public Health and Safety

- Implement the air quality and dust controls in Section 6.1, including a 20 km/h maximum Site speed, water or approved suppressant during dry conditions, minimized drop heights;
- Maintain engines, exhaust systems, mufflers and pollution-control equipment in good working order, avoid unnecessary idling and remove equipment producing excessive noise or emissions from service until repaired;
- Limit routine operations to 07:00-19:00 when possible, Monday to Saturday, and locate portable crushing, screening and loading activities to maximize separation and shielding from occupied receptors;
- Require Site and haul drivers to obey posted speeds, use legal and secured loads, adjust to road, weather and visibility conditions, avoid unnecessary queuing or idling near residences and promptly remove mud, dust or aggregate tracked onto public roads;
- Protect private water supplies and downstream users through the surface water management plan, erosion and sediment controls, secondary containment, spill-prevention and response procedures and the monitoring program described in Sections 6.3 and 8.0;
- Maintain controlled Site access, gates, warning signs, setbacks, barriers and routine working-face and slope inspections; prohibit unauthorized entry and correct any unsafe access, slope or traffic condition before affected work resumes;
- Maintain emergency response procedures, spill kits, fire-prevention equipment and worker training appropriate to the active phase; comply with fire restrictions and promptly contact emergency services and NSECC when an incident meets a reporting threshold;
- Apply applicable occupational health and safety procedures, including task-specific training, personal protective equipment, equipment inspections, safe separation of workers and mobile equipment and immediate reporting and correction of hazards; and
- Record a substantiated health, dust, noise, traffic or water supply complaint within one business day, investigate the relevant source, pathway and monitoring information promptly, document the response and corrective action, and undertake additional monitoring or operational controls where the Project is confirmed or reasonably suspected to be the source.



6.8.5 Residual Effects and Summary

6.8.5.1 *Land Use*

The Project will result in a long-term change in land use within the expanded working footprint. However, it is an expansion of an established Pit on private land rather than the introduction of a new industrial use. Nuisance effects will be intermittent and managed through the atmospheric, acoustic, water-management and complaint-response measures described in this EARD. Land will be progressively reclaimed as areas become available.

6.8.5.2 *Transportation*

Truck traffic will continue during active aggregate contracts but is not expected to increase materially above historic levels. With safe-driving requirements, access maintenance and operational coordination, residual effects on transportation are expected to be low in magnitude, intermittent and not significant.

6.8.5.3 *Employment and Economy*

Continued operation of the Woodville Pit will support direct and indirect employment, purchases from local and regional businesses, and the availability of aggregate for infrastructure projects. The residual effect on employment and economy is expected to be positive and modest.

6.8.5.4 *Public Health and Safety*

With source controls, restricted access, vehicle and speed controls, equipment maintenance, spill prevention, water monitoring and the complaint-response process, complete exposure pathways are expected to be infrequent, localized and below levels likely to cause an adverse human health effect. A substantiated health, dust, noise, traffic or water-supply complaint will be recorded within one business day, investigated promptly, and closed only after the response and any corrective action is documented. Immediate hazards will be reported through emergency channels.

6.8.5.5 *Summary*

Overall, the Project will extend an existing land use without materially changing operations. With mitigation, residual effects on land use, transportation, and public health and safety are predicted to be not significant, while employment and economic effects are positive. Health and safety risks will be managed using the controls described above. Predictions have moderate to high confidence. Follow-up will include complaint and incident tracking, corrective action, and Industrial Approval compliance monitoring.

6.9 Archaeological, Cultural and Heritage Resources

6.9.1 Assessment Background

Archaeological, cultural, and historical resources, both human-made and naturally occurring, are those resources related to the past that remain to inform present and future societies of that past. Archaeological, cultural, and historical resources are highly delicate features of the



environment, and their integrity is susceptible to ground-disturbing activities. Project activities that include surface or subsurface ground disturbance have the potential for interaction with Archaeological, cultural, and historical resources, where they are present. Accordingly, earth moving activities represent the component of the Project with the greatest potential for interaction with archaeological, cultural, and historical resources that might be contained in surface soils or rock.

To understand the potential for encountering archaeological resources during the lifespan of the Project, an Archaeological Resource Impact Assessment (ARIA) Screening and Reconnaissance was conducted by Cultural Resource Management Group Limited (CRM Group) in 2025. The ARIA utilized Mi'kmaw engagement, background research, and archaeological fieldwork to search for, document, and provide management recommendations for cultural historical resources and areas with archaeological resource potential related to the Project (CRM Group, 2025).

The Nova Scotia Department of Communities, Culture, Tourism and Heritage reviewed and accepted the ARIA, and it will be submitted directly to NSECC to support the EARD review.

6.9.2 Potential Environmental Effects

The 2025 Archaeological Screening and Reconnaissance phase of the ARIA for the Project indicated that there are no reported archaeological sites, cemeteries, or other cultural heritage features in the vicinity of the Study Area but noted that it had not been previously subjected to archaeological investigation. The Study Area is situated relatively distant from navigable waterways, historic railways, and areas of known settlement and industrial development.

Fieldwork, including reconnaissance and an exploratory shovel test identified that the Study Area primarily consists of shallow, rocky, and poorly drained soils with steeply sloped, undulating terrain. These factors would have been a deterrent to both wildlife and humans in the area. Existing pit development activities have significantly impacted areas of past agricultural usage within the Study Area. No evidence of Pre-contact or historical cultural resources was found within the Study Area during any component of the ARIA.

6.9.3 Proposed Mitigation Measures

Based on the results of the ARIA, CRM Group offered the following management recommendations for the Study Area:

- The entire Study Area be cleared of further requirements for archaeological investigation.
- An ARIA involving archaeological reconnaissance be applied to any proposed expansion of the Project impact area.
- If archaeological deposits, paleontological material or human remains are encountered during any activity within the Study Area, work will stop, the discovery area will be protected and the Special Places Program at Communities, Culture, Tourism and Heritage will be contacted at spp@novascotia.ca or 902-424-6450. If human remains are suspected, the RCMP will also be contacted immediately. If the find may be Mi'kmaq in origin, the Office of L'nu Affairs and the appropriate Mi'kmaq representatives will be



notified in coordination with CCTH; no material will be moved except as directed by the responsible authorities.

6.9.4 Residual Effects and Summary

Any ground disturbance or earth moving activity has the potential to uncover previously undiscovered heritage resources. With respect to the Woodville Pit Expansion Project, it is possible that previously undiscovered heritage resources in the form of artifacts could be found in the surface soils (including topsoil and overburden) during the Project. However, based on the results of the ARIA, these resources are unlikely to be present in the Project Area.

In summary, residual effects on archaeological, cultural and historic resources are predicted to be not significant with a high level of confidence for the assessed Study Area. Routine archaeological monitoring is not proposed; follow up consists of the chance find protocol, worker orientation and a new archaeological review before ground disturbance outside the ARIA assessed area.

6.10 Traditional Land and Resource Use

6.10.1 Assessment Background

Traditional land and resource use refers to the exercise of traditional activities and practices by Indigenous peoples, including hunting, fishing, trapping, gathering plants, foods and medicines, travel, teaching, ceremony, and other cultural uses of land and water. These practices may be understood through Indigenous knowledge and oral history, current use information, archaeological evidence and historical records.

Traditional land and resource use was selected as a valued environmental component to acknowledge the Mi'kmaq relationship with the lands and resources of Mi'kma'ki, to assess potential Project effects in accordance with the Nova Scotia Environmental Assessment Regulations, and to provide information that may assist the Province in carrying out its duty to consult with the Mi'kmaq of Nova Scotia. This assessment does not replace Crown consultation or Indigenous-led current-use research.

The assessment considers the privately owned Project Study Area and proposed expansion area and the surrounding area within which Project-related changes to access, vegetation, wildlife, water, fish habitat, air quality or the acoustic environment could affect traditional activities. Effects are considered during phased Site development, operation and maintenance, decommissioning, and reclamation.

A significant adverse residual effect would occur if the Project caused a permanent, unmitigated loss of access to, or availability of, land or resources that are currently used for traditional purposes or otherwise caused an unaccommodated material interference with the exercise of an Aboriginal or treaty right.

6.10.2 Existing Conditions

The Project is located near Woodville in Kings County, NS, within Mi'kma'ki, the traditional and



ancestral territory of the Mi'kmaq. The Site is privately owned and contains an existing provincially approved aggregate Pit that has operated intermittently since 2011. Access to the active working area is restricted for safety and security.

The broader area is rural and includes residential, agricultural and forestry land, regenerating and mature vegetation, wetlands, drainage features and downgradient fish habitat. These resources may support hunting, fishing, trapping, plant gathering, travel and other traditional activities. The presence and importance of any particular traditional activity can only be confirmed through engagement with Mi'kmaq communities and knowledge holders.

Dexter initiated early engagement by providing Project information to nearby First Nation communities, the Kwi'mu'kw Maw-klusuaqn Negotiation Office and the Native Council of Nova Scotia. The Nova Scotia Office of L'nu Affairs was copied on the correspondence. Follow-up notification is planned or has been provided in association with EA registration, and a Mi'kmaq Communication Plan is to be developed through the subsequent Industrial Approval amendment process.

At the time of preparing this EARD, no site-specific Indigenous current use study or interviews with Mi'kmaq knowledge holders had been completed for the Project, and no Project-specific traditional-use location within the proposed development footprint had been confirmed. This absence of reported information is not evidence that traditional use is absent. Information provided through review of the EA or subsequent engagement will be considered in Project planning and mitigation.

A 2025 Archaeological Resource Impact Assessment identified generally low archaeological potential within the Study Area and did not identify a known archaeological site that would prevent the Project from proceeding. Archaeological, cultural and heritage resources, including the procedure for an unexpected discovery, are assessed separately in Section 6.9.

6.10.3 Potential Environmental Effects

Project activities could affect traditional land and resource use through changes in access, availability or quality of resources, and the experience of carrying out traditional activities. Potential pathways include the following:

- Continued restriction of access to the active Pit and gradual expansion of the restricted industrial area for worker and public safety;
- Phased clearing and grubbing that removes plants or habitat and temporarily reduces the availability of resources within the development footprint;
- Alteration of wetlands or drainage patterns, or an accidental release of sediment or hazardous material, affecting water, fish, wildlife or plant resources;
- Noise, vibration, dust, lighting, truck traffic and human activity causing sensory disturbance or temporary avoidance by wildlife and reducing the quality of nearby land-use experiences;
- Discovery or disturbance of a previously unknown archaeological, cultural or heritage resource during ground disturbance; and
- Progressive and final reclamation that restores vegetation and some habitat functions,

creating the potential for renewed use of parts of the Site after safe closure.

Effects will occur gradually because the Pit will be developed in phases and operates only when aggregate is required. The greatest direct effect will be within the approved working footprint. Indirect effects beyond the Site are expected to be localized and are addressed through the mitigation developed for water resources, fish and fish habitat, vegetation, wetlands, wildlife, the atmospheric environment, the acoustic environment and accidents or malfunctions.

6.10.4 Proposed Mitigation Measures

The following measures will be implemented to avoid or reduce effects on traditional land and resource use:

- Continue engagement with Mi'kmaq communities and organizations through the EA review, Industrial Approval amendment, Project implementation and reclamation planning, and provide timely information about material design or schedule changes;
- Consider relevant Project-specific information provided by Mi'kmaq communities and, where appropriate, revise avoidance, mitigation, monitoring or reclamation measures in consultation with NSECC and the Office of L'nu Affairs;
- Minimize the disturbed footprint, phase clearing and retain mature vegetation and buffers around property boundaries, wetlands and watercourses where practical;
- Apply the mitigation and monitoring measures established for water, fish habitat, vegetation, wetlands, wildlife, air quality, noise and accidental releases to maintain the resources that may support traditional activities;
- Where requested and practicable, discuss opportunities for culturally important plant or resource gathering before clearing, subject to landowner permission, Site safety, seasonal availability and the Project schedule;
- Restrict access only to the areas and periods required for safe operations and communicate temporary access or traffic changes that may affect nearby land users;
- Follow the archaeological chance-find procedure: stop work, protect the discovery area and notify the appropriate provincial authority and Mi'kmaq representatives if a suspected archaeological or cultural resource is encountered;
- Use native species and consider culturally important species in progressive and final reclamation where ecologically appropriate and available; and
- Maintain a process for receiving, documenting and responding to concerns, and cooperate with any accommodation measures directed by the Crown in relation to potential adverse effects on asserted or established Aboriginal or treaty rights.
- Consider and incorporate Mi'kmaq Traditional Knowledge in reclamation planning, where possible.

6.10.5 Residual Effects and Summary

The Project will continue and gradually expand an existing industrial use on private land. Access to the active working footprint will remain restricted during operations, and clearing will reduce the availability of plants and wildlife habitat within the developed area. These



effects will be long-term but local in geographic extent and will occur progressively rather than all at once.

No Project-specific traditional use site has been confirmed within the proposed development footprint based on the information available for this EARD. However, the assessment recognizes that available information is incomplete and that additional knowledge may be provided through further Mi'kmaq engagement or Crown consultation. If new information identifies a potentially affected use or right, the Project design and mitigation will be reviewed and additional avoidance, mitigation, monitoring or accommodation may be required.

Indirect effects on resources outside the working footprint are expected to be low with implementation of the environmental protection measures described throughout this EARD. Progressive and final reclamation will restore vegetation and habitat functions over time and may support future traditional use once the Site is safely closed, although reclaimed conditions will not immediately be equivalent to pre-development conditions.

On the basis of current information, and subject to ongoing engagement, Crown consultation and implementation of appropriate mitigation or accommodation, residual environmental effects on traditional land and resource use are predicted to be not significant, with a moderate to high level of confidence. Follow-up will consist of continued engagement, tracking of Project-related concerns and implementation of additional measures where warranted by information received.

7.0 Effects of the Environment on the Project

7.1.1 Assessment Background

Effects of the environment on the project are those effects related to risks of natural hazards and influences of the natural environment on the Project. Potential effects of the environment on any project are a function of project or infrastructure design in the context of its receiving environment, and ultimately how the project is affected by the natural environment. These effects may arise from physical conditions, landforms, and site characteristics or other attributes of the environment which may act on the Project such that the project components, schedule, and/or costs could be substantively and adversely changed.

7.1.2 Potential Effects

Based on the nature of the undertaking, the following environmental attributes have been identified as having a potential effect on the Project and are considered in this assessment:

- climate and climate change;
- severe weather events, including wind, precipitation, floods, hail, electrical storms, and tornadoes;
- seismic activity; and
- forest fires resulting from causes other than the Project.



7.1.3 Proposed Mitigation Measures

The engineering design of the Project will consider and incorporate potential future changes in the forces of nature that could affect its operation or integrity (e.g., climate change), and Project components and infrastructure will be designed and built to adapt to or withstand these effects. Mitigation strategies for minimizing the likelihood of a significant adverse effect of the environment on the Project are inherent in the planning process being conducted, the application of engineering design codes and standards, construction practices, and monitoring. To address these environmental effects, proactive design, planning, and maintenance are required in consideration of the potential normal and extreme conditions that might be encountered throughout the life of the Project.

7.1.3.1 Climate and Climate Change

- Disruption of Project activities and delays to the Project schedule will be avoided by scheduling tasks that require precise and/or timely movements for periods when the weather conditions are favourable.
- Extreme precipitation events are an expected work condition, and the Project schedule allows for weather conditions typical for the region. The Project will account for storm allowances (i.e., 1-in-100-year 24-hour flood event). These allowances are sufficiently conservative to account for extreme weather events and to consider increase in the frequency and/or severity of significant storm events that might arise from climate change over the life of the Project. As such, site water management features will be in place to manage potential increased site run-off from precipitation events that could occur.
- Erosion because of extreme precipitation and potential flooding is not anticipated to have a substantive adverse effect on the Project due to standard mitigation measures that will be implemented (e.g., conveyance of site water to vegetated areas, use of erosion and sedimentation control structures).
- Heat and drought adaptation will include potable water, rest/shade and work-rest controls appropriate to the temperature and workload, enforcement of provincial fire restrictions, additional dust-control water from an approved source and suspension of dust generating work when controls are ineffective.
- High wind warnings will trigger securing of loose materials and reassessment of crushing, screening, lifting and tree hazards.

7.1.3.2 Forest Fires

The Project and related infrastructure are constructed primarily of materials that are not flammable (e.g., topsoil, grubbings, rock, sand and gravel). Through integrated and coordinated emergency response capabilities at the local and provincial levels, project personnel will mobilize away from the Project area if forest fires are affecting the local area, and will only return under clear and safe conditions, as determined by emergency response agencies in the province.



7.1.4 Residual Effects and Summary

The potential effects of the environment on all Project phases will be considered in the planning and design of the Project and in the scheduling of Project activities to limit delays, prevent damage to infrastructure and the environment, and to maximize the safety of staff. Compliance with regulatory standards is expected to account for weather extremes, and forest fire threats through built-in factors of safety to prevent undue damage to infrastructure from such events. Although it is possible, even likely, for the Project footprint to experience extreme environmental conditions during the Project lifecycle, a substantive delay (e.g., a delay for more than one season) is not anticipated.

No substantial damage to Project infrastructure are anticipated because of natural environmental conditions due to the design and type of activities proposed. Therefore, the effects of the environment are not expected to adversely affect the Project in a manner that cannot be planned for or accommodated through design and other mitigation and adaptive management strategies. As a result, the effects of the environment on the Project are expected to be not significant.

While there is potential for natural forces to affect the Project, it is not likely to have a substantive effect due to planned mitigation and design. Dexter will continue to monitor changing information regarding climate change and design, and operations will be managed adaptively so that the effects of the environment on the Project will be mitigated if new situations develop. Accordingly, the effects of the environment on the Project are considered not significant, with a high level of confidence.

8.0 Accidents, Malfunctions, and Unplanned Events

8.1 Assessment Background

This section identifies accidents, malfunctions, and unplanned events that may occur during the proposed Project's lifespan. The assessment focuses on events that are considered credible based on the Project description and the experience of the EA team in assessing similar projects.

8.2 Potential Effects

Based on the nature of the Project, knowledge of the environment within which the Project is located, as well as the experience of Dexter, the following credible accidents, malfunctions, and unplanned events have been identified as having the potential to occur during the Project and are discussed in this section.

8.2.1 Failure of an Erosion and Sediment Control (ESC) Measure

Failure of erosion and sedimentation control (ESC) measures designed to prevent exposed soil from mobilizing and entering undisturbed areas may occur as a result of extreme rainfall or spring run-off. This event includes a structural failure of the water management infrastructure



on-site. A failure of an ESC measure could result in mass wasting of soil or siltation of receiving watercourses. The discharge of sediment to watercourses during storm events or spring run-off following the failure of an ESC measure could occur during all phases of the Project.

8.2.2 Pit Slope Failure

A slope failure may occur due to two principal reasons: failure of working faces of the pit due to improper design and/or operational procedures; or failure of overburden slopes above the working face. Improperly designed and operated open pits could result in a slope failure that could pose a safety hazard to workers, damage to equipment as well as negative effects to the atmospheric and socioeconomic environments during all phases of the Project.

8.2.3 Vehicle Accident

A vehicle accident is possible during the Project. A vehicle accident includes a collision with other vehicles, pedestrians, wildlife, or structures/objects, and potentially poses a risk to the health and safety of workers, the public, or wildlife. A fire or fuel spill could also occur because of a vehicle collision, compounding the initial effects by potentially threatening surface water, groundwater, fish and fish habitat, wildlife and wildlife habitat, vegetation, and wetlands.

8.2.4 Fire

An accidental fire could potentially be caused during the Project. Sources of potential for fire include hot exhaust or equipment, discarded cigarettes, or sparks. Wildlife including migratory birds could be killed directly and fire poses a safety risk. Surface water quality can be affected indirectly if runoff from a burned area enters a watercourse. Significant fires may result in smoke which could impact air quality.

8.2.5 Accidental Release of a Hazardous Material

An accidental release of fuel used in vehicles or mobile equipment on-site may occur during refueling of machinery or trucks as a result of human error or equipment malfunction, potentially affecting surface water, groundwater, fish and fish habitat, wildlife and wildlife habitat, vegetation, and wetlands. Loss of petroleum hydrocarbons, hazardous materials or other substances that may volatilize and adversely impact the ambient air quality.

8.2.6 Discovery of an Archaeological, Cultural, or Historical Resource

Previously undiscovered archaeological resources (i.e., artifacts) could be uncovered during excavation of topsoil and overburden as well as from other earth moving activities on the site during the Project. Similarly, if present, palaeontological resources (i.e., fossils) could be uncovered during extraction in the operation and maintenance phase of the Project as the underlying bedrock may be exposed.

8.3 Proposed Mitigation Measures

8.3.1 Failure of an Erosion and Sediment Control (ESC) Measure

Key mitigation to prevent a failure of erosion or sedimentation control measures includes:



- Contingency plans will be developed for extreme rainfall events including:
 - monitoring of surface run-off conditions during heavy rainfall/spring run-off and operational observations to evaluate the need for improvements in surface runoff control;
 - Cover will be applied to highly erodible areas, not required as part of operations;
 - Regular clean-out of check dams will be conducted, and
 - Provision of sediment and erosion control materials onsite, during periods of site activity.

8.3.2 Pit Slope Failure

Key mitigation to prevent a slope failure includes:

- Pit slope angles will be established using standard of practice approaches and methodologies combined with Dexter's experience with aggregate removal;
- The pit will be operated in accordance with health and safety-based requirements limiting the pit face height and defining established setbacks; and
- Pit face inspections will occur during operational periods, and an Emergency Response Plan will be in place.

8.3.3 Vehicle Accident

Key mitigation to prevent a vehicle accident includes:

- During operations, the necessary barriers and signage will be displayed to minimize the potential for vehicle accidents;
- During operations and maintenance, appropriate road design and speed limit postings will be in place to minimize the potential for vehicle accidents; and
- Drivers and equipment operators will heed wildlife warning signs and reduce speed in areas identified as posing a potential risk of wildlife collision on site.

8.3.4 Fire

Key mitigation to prevent an accidental fire includes:

- Compliance with applicable fire bans; and
- Development of a contingency plan for fires.

8.3.5 Accidental Release of a Hazardous Material

Key mitigation to prevent an accidental release of a hazardous material includes:

- A Spill Contingency Plan will be developed for various substances anticipated to be on-site during the Project;
- Fueling or the changing of oil and lubricants will be conducted at a minimum distance of 30 m from wetlands and surface water bodies;
- Releases caused by motor vehicle accidents are addressed initially by local emergency response agencies and directed by NSECC. Subsequently, site contractors will contain



the spill and remove contaminated soils and sediment for disposal;

- Additionally, all fuels on-site will be stored in accordance with all provincial regulations and emergency spill kits will be available on-site; and
- Minor spills can typically be cleaned up effectively with minimal long-term impacts, and major spills are not likely based on quantities of hydrocarbons anticipated to be on-site during construction/operation and maintenance.

8.3.6 Discovery of an Archaeological, Cultural, or Historical Resource

In the unlikely event that an archaeological, palaeontological, or cultural resource or artifact is discovered during the construction or operation and maintenance phases of the Project, the following procedure will be followed:

- Work will be stopped immediately, and the area will be marked to prevent further disturbance. An exclusion zone of 100 m surrounding the find will be established.
- Dexter will immediately contact the Special Places Program at spp@novascotia.ca or 902-424-6450 and follow its direction.
- If bones or human remains are found, work in the area must cease, and the RCMP shall be immediately notified. No one shall disturb, move, or reburial uncovered human remains.
- If the discovered resources are related to Indigenous culture, both the Nova Scotia Office of L'nú Affairs and Special Places Program will be contacted to determine how best to proceed with respect to repatriation of the resources.

8.4 Residual Effects and Summary

8.4.1 Erosion and Sediment Control (ESC) Failure

The installation, maintenance, and monitoring of erosion and sedimentation control structures is a routine activity on construction sites and industrial operations and is well understood by site managers and construction personnel. With daily visual monitoring of erosion and sedimentation control devices (during periods of site activity), conducting maintenance of them as necessary, periodically removing accumulated sediment, and active water management on-site, the risk of failure of erosion and sediment control measures occurring is expected to be low.

With the implementation of mitigation measures, contingency and emergency response procedures, and best practices, the potential residual environmental effects of a failure of an erosion and sedimentation control measure on surface water, fish and fish habitat, vegetation and wetlands, wildlife and wildlife habitat, and traditional land and resources during all phases of the Project are not significant, with a high level of confidence.

8.4.2 Pit Slope Failure

The risk of slope failure during the Project is expected to be low with the implementation of good working practices and preventative measures, and adherence to applicable provincial regulations and guidelines for the safe operation of aggregate pits.



With preventive and mitigation measures, safe working practices, compliance with occupational health and safety legislation, and the low probability of slope failure, the potential residual environmental effects of a slope failure on VECs during the Project are considered not significant, with a high level of confidence.

8.4.3 Vehicle Accident

Though vehicle accidents may occur with any project, particular attention will be paid to conducting Project operations in a careful and safe manner to reduce the risk of a serious vehicle accident. With the implementation of mitigation measures, contingency and emergency response procedures, and best practices, the potential residual environmental effects of a vehicle accident on the socioeconomic, atmospheric, and acoustic environments, water resources, fish and fish habitat, and wildlife and wildlife habitat during the Project are considered not significant, with a high level of confidence.

8.4.4 Fire

An accidental fire may occur with any project. Mitigation measures, contingency planning, emergency response procedures and best practices will be implemented during the Project to reduce the environmental effects. The potential residual environmental effects of a fire on the socioeconomic environment, atmospheric environment, vegetation, wetlands, water resources, fish and fish habitat, wildlife and wildlife habitat, and traditional land and resource use during the Project is expected to be not significant, with a high level of confidence.

8.4.5 Accidental Release of a Hazardous Material

With careful implementation of best practices of fuel storage and refueling of equipment from mobile tankers, the risk of spills occurring during the Project is expected to be low. The risk of contamination from spills and leaks will be reduced further by preventive measures, contingency planning, spill response, and mitigation. The potential residual environmental effects of an accidental release of hazardous material on the atmospheric environment, water resources, fish and fish habitat, vegetation and wetlands, wildlife and wildlife habitat, and traditional land and resource use during the Project is expected to be not significant, with a high level of confidence.

8.4.6 Discovery of an Archaeological, Cultural, or Historical Resource

Given the generally low archaeological potential of the Project site, as determined by CRM Group through the ARIA completed in 2025, the potential to encounter previously undiscovered archaeological, cultural, or historical resources during construction and operation and maintenance of the Project is believed to be low. With the implementation of mitigation measures, contingency and emergency response procedures, and best practices, the potential residual environmental effects on archaeological, cultural, and historical resources during the Project is expected to be not significant, with a moderate level of confidence.

9.0 The Mi'kmaq of Nova Scotia

The Mi'kmaq are the founding people of Nova Scotia. The Project is located within Mi'kma'ki, the traditional and ancestral territory of the Mi'kmaq, where Mi'kmaq ancestors have lived for more than 11,000 years. The relationship of the Mi'kmaq with the lands and waters of Mi'kma'ki is continuing and encompasses cultural, spiritual, ecological, social and economic dimensions.

This section considers how the Woodville Pit Expansion Project may interact with Mi'kmaq communities, rights and interests. It should be read with Section 4.0 (Engagement), Section 6.9 (Archaeological, Cultural and Heritage Resources), Section 6.10 (Traditional Land and Resource Use), the biophysical VEC assessments in Section 6.0, and Section 12.0 (Project Closure and Rehabilitation). The assessment is not a substitute for Crown consultation, Indigenous led research or information provided by Mi'kmaq knowledge holders.

9.1 Mi'kmaq Context and Rights

The Project is in the Annapolis Valley region and within the traditional Mi'kmaq district of Kespukwitk. Traditional district relationships and boundaries are cultural matters and should be confirmed through engagement with the Mi'kmaq. Mi'kmaq communities exercise communal Aboriginal and treaty rights throughout Nova Scotia, including rights associated with hunting, fishing, trapping and gathering for food, social and ceremonial purposes and the treaty right to pursue a moderate livelihood. Mi'kmaq communities may also assert Aboriginal title and interests in stewardship, ceremony, travel, teaching and the protection of cultural heritage.

Existing Aboriginal and treaty rights are recognized and affirmed by section 35 of the *Constitution Act, 1982* and are informed by the Peace and Friendship Treaties. The Crown has the legal duty to consult and, where appropriate, accommodate when contemplated Crown conduct may adversely affect asserted or established rights. The Crown may delegate procedural aspects of consultation to a proponent, such as providing information, receiving concerns and developing mitigation; responsibility for consultation and accommodation remains with the Crown.

9.2 Nearest Mi'kmaq Communities

Based on the Project's location in Kings County and regional First Nation reserve locations, the nearest reserve community is Annapolis Valley First Nation at Cambridge No. 32, near Cambridge Station. Glooscap First Nation at Glooscap No. 35, near Hantsport, approximately 35 km east-southeast of the Study Area, is the next closest reserve community. L'sitkuk (Bear River) First Nation lies farther to the southwest (approximately 98 km from the Study Area to Bear River No. 6) and may also have regional interests. Engagement should include the communities and any rights or consultation organizations they designate, including the Kwilmu'kw Maw-klusuaqn Negotiation Office where applicable.

The proximity of a reserve boundary does not define or limit the geographic extent of Mi'kmaq



rights, traditional activities, cultural connections or community interests. Mi'kmaq people may exercise rights and undertake traditional activities away from reserve lands, and members of other Mi'kmaq communities may use or hold knowledge about the Project area.

9.3 Engagement and Information Available

As described in Section 4.0, Dexter provided early Project information to nearby First Nation communities, the Kwilmu'kw Maw-klusuaqn Negotiation Office and the Native Council of Nova Scotia, with the Nova Scotia Office of L'nu Affairs copied on correspondence. Follow-up notification regarding EA registration was also provided, and Dexter has committed to developing a Mi'kmaq Communication Plan during the subsequent Industrial Approval amendment process.

A 2025 Archaeological Resource Impact Assessment used Mi'kmaq engagement, background research and field reconnaissance and identified generally low archaeological potential within the Study Area. No known archaeological site that would prevent the Project from proceeding was identified.

9.4 Potential Interactions with Mi'kmaq Rights and Interests

Project activities may interact with the exercise of Mi'kmaq rights and interests through the pathways described below. These pathways apply across phased Site development, intermittent operation and maintenance, decommissioning and reclamation:

- Restricted access to the active Pit and gradual expansion of the industrial working area, which may affect travel, harvesting, gathering or ceremony within the footprint;
- Clearing and grubbing, which will remove vegetation and wildlife habitat and may reduce the availability of plants, animals or other resources within the developed area;
- Changes to wetlands, drainage, surface water, groundwater, fish habitat or resource quality, including changes arising from sediment release or an accidental spill;
- Noise, vibration, dust, lighting, truck traffic and human activity, which may disturb wildlife or reduce the quality and experience of nearby traditional activities;
- Disturbance of a previously unknown archaeological, cultural, sacred or heritage resource during ground disturbance; and
- Progressive and final reclamation, which can restore vegetation and some habitat functions and may support renewed use of safely accessible areas, while not immediately recreating pre-disturbance conditions.

The greatest direct change will occur within the privately owned development footprint, which contains an existing approved Pit and where access is already restricted for safety. Indirect effects beyond the Site are expected to be localized if the environmental protection measures in Sections 3.4, 6.0 and 8.0 are implemented. Potential positive interactions may arise through Indigenous employment or procurement opportunities.



9.5 Mitigation, Follow-up and Commitments

In addition to the VEC-specific measures in Section 6.0 and the traditional land and resource use measures in Section 6.10, Dexter will implement the following commitments:

- Continue engagement with Annapolis Valley First Nation, Glooscap First Nation, other Mi'kmaq communities or organizations that identify an interest, and the Office of L'nu Affairs through EA review, the Industrial Approval amendment, Project implementation and reclamation planning;
- Provide timely notice of material changes to the Project design, footprint or schedule and, on request and subject to appropriate confidentiality protections, share relevant environmental, archaeological, monitoring and reclamation information;
- Meet with Mi'kmaq communities or organizations on request to discuss Project-related questions, concerns, rights or interests and document the concern, response, commitment, responsible party and follow-up status;
- Review and, where appropriate, revise avoidance, mitigation, monitoring, access or reclamation measures in response to credible Project-specific information provided through Mi'kmaq engagement or Crown consultation;
- Where requested and practicable, discuss opportunities to gather culturally important plants or other resources before clearing, subject to landowner permission, Site safety, seasonal availability and the Project schedule;
- If a suspected archaeological or cultural resource or human remains are encountered, stop work in the discovery area, protect the location and notify the appropriate provincial authorities and Mi'kmaq representatives in accordance with the chance-find procedure;
- Use native species and consider culturally important species in progressive and final reclamation where ecologically appropriate and available, and invite Mi'kmaq input on reclamation objectives and monitoring; and
- Consider practical Indigenous employment, contracting, procurement or training opportunities associated with Project work, consistent with Project needs and procurement requirements.

9.6 Residual Effects and Follow-up

The Project will continue and gradually expand an existing industrial use on private land. Access to the active working footprint of the Woodville Pit will remain restricted, and phased clearing will result in a long-term, localized reduction in vegetation and wildlife habitat. With the mitigation and monitoring described in this EARD, indirect changes to water, fish, wildlife, vegetation, air quality and the acoustic environment outside the working footprint are expected to be low.

Based on currently available information, and subject to ongoing engagement, Crown consultation and any required accommodation, residual adverse effects on traditional land and resource use and related Mi'kmaq interests are predicted to be not significant, with a high level of confidence.



Follow-up will consist of maintaining the engagement and concern-response record; documenting how Project-specific information affected Project design, mitigation, monitoring or reclamation; and implementing additional avoidance, mitigation, monitoring or accommodation measures where warranted.

10.0 Potential Cumulative Environmental Effects

Cumulative environmental effects are changes to the environment that are caused by an action in combination with other past, present, and future human actions (Government of Canada 2022). Specific to the nature of the undertaking, cumulative effects are combined impacts that may occur when pits and quarries or other types of projects that are in the same region. The cumulative effects are based on the effects and impacts identified in the previous sections.

A documented cumulative effects search was completed in 2026 using publicly available information including, but not limited to, ongoing agriculture, forestry, residences and road use, and publicly registered aggregate projects that may overlap in time or use portions of the regional road and aggregate market network. The Nova Scotia Environmental Assessment Registry, the Project's provincial desktop mapping, and the local land use information was also consulted. Table 10.1 records the projects carried forward for this assessment

Table 10.1. Cumulative Effects Project and Activity Inventory

Past, present or reasonably foreseeable activity	Public status / scale	Potential overlapping VEC or pathway	Cumulative conclusion and management
Existing Woodville Pit and proposed expansion (within the Study Area)	Existing approved operation since 2011; approximately 50,000 tonnes in an active future year.	Direct continuation of disturbance; dust, noise, traffic, water, habitat, GHG and reclamation.	Assessment baseline includes the existing Pit. Phasing, buffers, monitoring and progressive reclamation prevent simultaneous disturbance of the entire footprint.
Agriculture, forestry, residences and local road use (includes adjoining lands; distances vary across the surrounding area)	Ongoing rural land uses surrounding the Project.	Regional habitat loss/fragmentation, erosion, traffic, dust, noise and private well demand.	Project controls are source-specific. Retained buffers, drainage controls, receptor verification and complaint response reduce additive local effects; no shared water withdrawal is proposed.

Past, present or reasonably foreseeable activity	Public status / scale	Potential overlapping VEC or pathway	Cumulative conclusion and management
Blair Road Pit Expansion, Waterville (approximately 8 km south-southwest)	Approved with conditions in 2023; 17.5 ha and public description of 30,000 tonnes/year plus up to 75,000 tonnes/year for new markets.	Regional aggregate haulage, road safety, dust, noise and GHG; separate local water and habitat effects.	No footprint overlap. Potential regional traffic interaction will be managed through legal loads, route/road authority requirements and dispatch records; no continuous combined-source exposure at the Woodville receptors is predicted.
Coldbrook Sand Pit Expansion (approximately 8.5 km southeast)	Approved with conditions in 2014; 15.7 ha and public description of 20,000 tonnes/year plus up to 100,000 tonnes/year for new markets.	Regional aggregate haulage, road network and GHG; separate local biophysical footprint.	Same management conclusion as Blair Road Pit Expansion (above).
Morden Road Sand Pit Expansion, Auburn (approximately 19 km southwest)	Approved with conditions in 2025; approximately 5.46 ha and 10,000 tonnes/year.	Regional haulage, aggregate supply and GHG; separate local water/habitat effects.	Scale and separated footprint limit additive biophysical effects.
Sturk Quarry Expansion, Morristown (approximately 20 km south-southwest)	Approved with conditions on August 26, 2026; proposed 52.9 ha expansion and 60,000–70,000 tonnes/year.	Reasonably foreseeable regional haulage, dust/noise in its own receptor area, habitat change and GHG.	No direct footprint or 2 km water/wetland overlap with the Woodville Pit expansion footprint. Recheck provincial EA registry status and shared-route assumptions before Woodville expansion is initiated.
Highway maintenance and construction contracts (variable distance along local and regional roads; contract specific)	Intermittent provincial and local work that may generate demand and traffic.	Short-term overlap in haul traffic, road dust, noise and public safety.	Use contract-specific routing and scheduling; investigate complaints.

Expansion of the Woodville Pit and its continued use as a local source of aggregate will have minimal cumulative effects on most VECs, in part because of the small size of the development relative to other uses of the local area where land clearing has been undertaken. Specifically, through significant levels of agricultural activities present in this region of Nova Scotia. At the proposed 19.44 ha maximum size of the Woodville Pit, it will occupy less than



0.25% of the land within 10 km. There are no other pits or quarries within 1 km of the study area.

The Pit will also be reclaimed at the end of its useful life. Other than the gradual increase in the total operational footprint of the site, site activities are not planned to change in scope or increase in frequency from past use. Reduction in forest cover at the site will compound the overall effects of land clearing for the regional area. Planned restoration of the pit to natural conditions after its useful life will, in the long term, counteract the effect of present forest loss.

Apart from the expanded footprint, Project operations will remain within the current activity envelope. The principal cumulative pathway is intermittent truck traffic and associated emissions on the regional road network; effects on air quality, noise, wetlands, vegetation, wildlife, groundwater and archaeology are expected to remain localized and are not expected to combine materially across separate project footprints. With the operating assumptions in Section 3.3 and the trigger-based commitments in Table 11.1, cumulative residual effects are predicted to be not significant, with a high level of confidence.

11.0 Other Regulatory Approvals Required

Federal approvals are not required for the Project. Additional provincial Approvals required include an amendment to the current provincial Industrial Approval, and potentially a wetland alteration permit and associated compensation, if avoidance of the wetland feature(s) is not feasible. No provincial water withdrawal or watercourse alteration approvals will be required.

Environmental monitoring is dictated by the Pit and Quarry Guidelines and the Industrial Approval for the site. Typical monitoring at pits includes surface water monitoring, and groundwater monitoring, where relevant. Noise and dust monitoring is typically conducted at the request of NSECC.

Surface water monitoring will be conducted as per the terms and conditions of the IA and is expected to include both background (upstream) and downstream water quality in the watercourses potentially affected by pit operations. It is expected that a condition of EA approval will be to develop a surface water management plan for the site, through the IA process. A surface water monitoring program will be included with the surface water management plan. It is expected that surface water monitoring locations will be generally consistent with the monitoring locations established for the recent baseline surface water monitoring that was completed in 2025 and 2026 for the site (refer to **Appendix D**).

The surface water monitoring network will allow for on-going monitoring to verify that surface water runoff from the pit does not have an impact of downgradient receptors. Given the nature of the site, operations, and potential receptors, groundwater monitoring requirements are not anticipated. If required, groundwater monitoring will be conducted as per the Terms and Conditions of the IA.

Other specific parameters that may be monitored will be included in the amended IA.



All monitoring results are maintained by Dexter and provided to NSECC as part of an Annual Report for the Pit. If a monitored parameter exceeds a limit noted in the IA, Dexter is required to immediately notify NSECC of the exceedance.

Table 11.1 consolidates the principal avoidance, mitigation, monitoring and adaptive-management commitments in this EARD. More stringent requirements in an EA approval, amended Industrial Approval or other authorization will prevail. Dexter's Site Supervisor is accountable for daily implementation; the designated environmental representative is responsible for technical review, reporting and close-out verification.

Table 11.1. Summary of Environmental Commitments, Monitoring and Adaptive-Management Triggers

Item	Commitment / Monitoring	Trigger and Required Action	Timing / Record
Production and Schedule	Use approximately 50,000 tonnes in an active year and routine hours of 07:00–19:00 Monday–Saturday, when possible.	Material increase in production, hours, or equipment: update affected predictions and approvals before change.	Annual production, active day and operating hour records; Site Supervisor.
Air and dust	20 km/h Site speed; minimize drops; water/suppress fines; inspect during active shifts.	Persistent visible dust beyond boundary or substantiated complaint: reduce/pause source, correct and consider particulate monitoring/modeling if recurrent.	Active shifts and complaints; operations/ environmental representative.
GHG	Track on-site fuel and Project attributable haul activity; maintain equipment, avoid idling and optimize loads/routes.	Material change in equipment use, operating hours, production or haul distance: review the GHG assessment, quantify emissions using activity/fuel records where warranted, and review reduction measures.	Annual active year inventory; Operations Manager.
Noise	Maximize processing setbacks/shielding; daytime routine operations only.	Monitoring and relocation, shield or limit operation as needed.	As triggered; environmental representative.
Traffic and safety	Use approved access, legal loads, speed controls, signage, and contractor orientation.	Material increase beyond Table 5.1 or recurring safety complaint/incident: update route and traffic safety review with NS DPW (authority).	Each active period and incident; Site Supervisor.

Item	Commitment / Monitoring	Trigger and Required Action	Timing / Record
Groundwater	Keep excavation above groundwater.	Persistent seepage, non-storm ponding, excavation within 2 m of verified well complaint: investigate and monitor.	As triggered; qualified hydrogeologist/ environmental representative.
Surface water	Monitor background, discharge and downgradient conditions; inspect controls around ≥ 25 mm/24 h rainfall and spring melt.	Limit exceedance, uncontrolled/visible off-site sediment or meaningful downgradient change: contain, suspend source, repair and confirm by sampling.	Pre-expansion and active season approval; environmental representative.
Fish habitat	No instream work; protect drainage and downstream Killam Brook through water controls and spill prevention.	Design change creating direct aquatic interaction: field verify habitat and resolve provincial and federal requirements (e.g. <i>Fisheries Act</i>) before work.	Design review and incidents; qualified aquatic professional.
Wetlands / protected areas	If avoidance of wetlands is not possible, complete WESP-AC and WSS determination; apply avoidance, minimization, compensation; obtain approval before alteration.	Confirmed WSS or new protected/significant habitat information: avoid/revise design and consult NSECC; no unauthorized alteration.	Before wetland application and each phase; qualified wetland professional.
Vegetation and wildlife	Phase clearing; target tree clearing outside the active bat period (generally May 1 to October 31); minimize night lighting; Invasive species management; progressive native revegetation measures.	Bat, potential roost or hibernaculum, SAR/SOCC, active nest or new critical-habitat information: stop applicable work, establish a setback, obtain qualified biologist and NS DNR direction, and complete targeted survey if required.	NS DNR engagement (as necessary) prior to applicable clearing or blasting phase; pre-clearing review and during work; qualified biologist/Site Supervisor.
Archaeology and culture	Submit accepted ARIA directly to NSECC; worker orientation and chance-find protocol; no work outside assessed area without review.	Suspected artifact, fossil or human remains: stop, protect, contact CETH and other authorities/Mi'kmaq representatives as applicable.	Before ground disturbance and as triggered; Site Supervisor/Licensed Archaeologist.

Item	Commitment / Monitoring	Trigger and Required Action	Timing / Record
Engagement / Mi'kmaq	Maintain dated issues register; accessible communication; continued engagement; track response and Project influence.	New credible effect, right, use, receptor or accommodation information: review design/mitigation and coordinate with the Crown and affected party.	Pre-EA registration through closure; Project Manager.
Waste and spills	Segregate, contain and remove waste to approved destinations; maintain spill kits and train operators.	Reportable or off-site release: stop, contain, call emergency line, recover/characterize waste, investigate and sample as required.	Active periods and incidents; Site Supervisor.
Climate / extreme weather	Use current IDF information and $\geq 20\%$ precipitation design allowance; heat, wind and fire controls.	Forecast/observed ≥ 25 mm/24 h, erosion, unsafe heat/wind/fire: inspect, suspend affected work and correct.	Operational periods start up activities, forecast events and post-event; qualified designer/Site Supervisor.
Reclamation	Progressively stabilize inactive areas, conserve soil, establish safe slopes/drainage and native cover, and monitor performance.	Erosion, unstable slope, invasive dominance, poor vegetation or unsafe access: repair, reseed/replant and continue monitoring.	Annual and for at least two growing seasons after final work or as approval requires; operations manager.

12.0 Project Closure and Rehabilitation

The pit will be reclaimed in accordance with NSECC requirements and industry standards. Dexter maintains a Rehabilitation Plan for the pit. As per the Terms and Conditions of the Industrial Approval, the Reclamation Plan is updated every three years and submitted to NSECC for review. The Rehabilitation Plan includes provisions for progressive reclamation of areas that are no longer required for aggregate production or supporting activities. A reclamation bond which reflects the total disturbed area of the site is maintained. The value of the bond is updated every three years in accordance with the updated Reclamation Plan to ensure that the bond value reflects the size and scope of future rehabilitation efforts at the site.

A preliminary Rehabilitation Plan will be submitted with the Industrial Approval amendment and kept current as the footprint and sequence change. the progressive reclamation approach that will be used throughout the development and operational phases of the site, Final Reclamation Plan considerations, and estimated reclamation costs given the current development extent of the site. Closure objectives are public safety, physical and chemical stability, controlled drainage, erosion resistance, native vegetative cover, prevention of



invasive-species dominance and a landform compatible with surrounding rural land uses.

Progressive and final reclamation will include the following minimum considerations:

- Removal of facility infrastructure
- Surface contouring and drainage patterns
- Site stabilization
- Objectives for final land use
- Safety
- Mi'kmaq Traditional Knowledge

Performance will be demonstrated by stable slopes without progressive movement, no uncontrolled sediment discharge, drainage functioning as designed, no exposed hazardous material or waste, safe restricted access where hazards remain, and a self-sustaining vegetative cover appropriate to the approved land use. A final closure report will document the completed works, photographs, as-built grades and drainage, monitoring results, remaining maintenance and any request for release of reclamation security.

13.0 Funding

No public or government funding is involved in the execution of this undertaking. All costs will be solely funded by Dexter Construction Company Limited.

14.0 Closing

This document is submitted on behalf of Dexter Construction Company Limited

24 / 09 / 26

Gary Rudolph, P.Eng.
Director of Aggregates and Pavement Rehabilitation
Dexter Construction Company Limited

Date



15.0 Limitations

This document was prepared by Area East Environmental (AEE) on behalf of Dexter Construction Company Limited. AEE has used the degree of care and skill ordinarily exercised under similar circumstances at the time the work was performed by reputable members of the environmental consulting profession practicing in Nova Scotia. AEE assumes no responsibility for conditions which were beyond its scope of work. There is no warranty expressed or implied by AEE.

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This document has been prepared by a team of environmental professionals on behalf of Dexter Construction Company Limited.

16.0 References

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