ISLANDS TRUST CONSERVANCY

Coats Millstone Nature Reserve Property Management Plan Gabriola Island

PREPARED BY
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Duncan, BC

APPROVED BY
Islands Trust Conservancy Board on October 5, 2021 Resolution ITC-2021-041
Gabriola Historical & Museum Society on February 22, 2022
Nanaimo Area Land Trust on January 26, 2022

i. Executive Summary

Islands Trust Conservancy acknowledges and respects that Gabriola Island is within the traditional territory of Coast Salish Peoples, Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, SEMYOME (Semiahmoo) First Nation, Snuneymuxw First Nation, Stz'uminus (Chemainus) First Nation and Ts'uubaa-asatx (Lake Cowichan) First Nation. The historical relationship to the land, culture, and spirit of this place continues to this day. Islands Trust Conservancy is committed to honouring the rich history of Indigenous stewardship in the lands and waters of the Islands Trust Area and to building mutually respectful relationships between Indigenous and non-Indigenous partners in conservation. Therefore, this Management Plan for the Coats Millstone Nature Reserve is a living document that will evolve as opportunities for knowledge sharing arise and understanding grows[1].

The Coats Millstone Nature Reserve (CMNR) is a relatively small (0.25 ha) site of unique historical value, with potential to provide high ecological values to a multitude of species. The property is an old sandstone quarry encompassing benches and cliffs sloping to the northwest. There are about 30 millstone pools on the rocky shelves on the eastern side of CMNR, which provide historical value to the site, as they represent the industrial history of Gabriola Island. The property is in the Coastal Douglas-fir moist maritime (CDFmm) biogeoclimatic zone and varies in structural stage due to disturbance from quarrying in the early 20th century. The upper and mid portions of the property are steep and dry (except the millstone pools), while the lower portion of the property has deeper, moist soils.

Wildlife species were assessed under the lens of potential critical breeding habitat. This provides management efforts a focus toward areas directly related to the reproductive success of documented species of conservation concern. Species of conservation concern with confirmed, or future potential critical breeding habitat in CMNR include the Northern Pygmy-owl, *swarthi* subspecies (*Glaucidium gnoma swarthi*), Band-tailed Pigeon (*Patagioenas fasciata*), Evening Grosbeak (*Coccothraustes vespertinus*), Northern Red-legged Frog (*Rana aurora*), and the Western Toad (*Anaxyrus boreas*).

Ecological succession over the next number of decades will move this area into a designation of high-quality habitat for species that this report has documented to potentially use for breeding. Increasing forest cover over time will create shade and allow for further development of the understorey. This will result in increased biodiversity as new microhabitats are introduced.

The prominent issue of the site is public safety, which resulted in its closure to the public in 2004. The exposed cliff edges and the deep millstone pools are currently a danger to the public with a high hazard for injury. Stakeholder discussions are ongoing as to how to make the site safer. A second issue of concern is the presence of invasive plant species (i.e., Scotch Broom), of which management recommendations have been outlined to achieve eradication. Management options (short- and long-term) for the protection of the historical and ecological

[1] First Nations/reconciliation content written by Lisa Wilcox, Islands Trust

integrity of Coast Millstone Nature Reserve will be considered by the ITC, and other stakeholders to ensure public safety and ecological conservation.

Table of Contents

Tables, Figures, and Maps

List of Tables

List of Figures

List of Appendices

ii Acknowledgements

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1 Introduction

Gabriola Island is situated within the territory of the Coast Salish Peoples, who share a rich history of stewardship in the lands and waters of the Islands Trust Area that inspires the work of Islands Trust Conservancy (ITC) and its partners.

The Coats Millstone Nature Reserve is a relatively small (0.25 ha) site of mid-seral and mature stages of forest succession with unique historical values. The property is an old sandstone quarry encompassing benches and cliffs sloping to the northwest. There are about 30 millstone pools on the rocky shelves on the eastern side of CMNR, which provide historical value to the site, as they represent the industrial history of Gabriola Island. Islands Trust Conservancy (ITC) is the property owner, and covenant holders include the Gabriola Historical & Museum Society (GHMS) and the Nanaimo & Area Land Trust (NALT).

1.1 Islands Trust Conservancy

Since time immemorial, the lands and waters between Vancouver Island and mainland British Columbia have been home to the Coast Salish People, whose ecological, cultural, and spiritual connections to this place continue to this day. In 1974, the Province of British Columbia recognized this region as a special place within the province where the unique beauty, cultural heritage, rural character, and diverse ecosystems should be protected for future generations. Through the *Islands Trust Act*, the province established the Islands Trust, a special purpose government, with the following mandate (known as the Object of the Islands Trust):

> *"To preserve and protect the trust area and its unique amenities and environment for the benefit of the residents of the Trust Area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia."* (Islands Trust 2020a)

In 1990, through the enactment of a section of the Islands Trust Act, the Province established the Islands Trust Fund, now called the Islands Trust Conservancy (ITC), as a conservation land trust to assist in carrying out the "preserve and protect" mandate. Part 6 of the Islands Trust Act establishes the corporate status, responsibilities, and governance structure of the Islands Trust Conservancy. The Board of the ITC is one of the sixteen corporate entities[2] charged to uphold the Object of the Islands Trust. Since 1990, the ITC has protected over 1,300 hectares (3,220 acres) of land as nature reserves and conservation covenants.

The vision of the ITC is that the islands and waters of the Salish Sea will be a vibrant place of culture and ecology where humans live and work in harmony with the natural world. This special place will have a network of protected areas that preserve in perpetuity the native species and natural systems of the islands. Engaged residents and conservation partners will work together to protect large natural areas and key wildlife habitat. Viable ecosystems will flourish alongside healthy island communities.

[2] The corporate entities charged to uphold the Object of the Islands Trust are the Trust Council, the Executive Committee, twelve local trust committees, one island municipality, and the Islands Trust Conservancy Board.

The mission of the ITC is to protect special places by encouraging, undertaking, and assisting in voluntary conservation initiatives within the Islands Trust Area. ITC nature reserves are managed to maintain, preserve, and protect the natural features and values of ecosystems.

1.2 Purpose of Islands Trust Conservancy Management Plans

ITC management plans provide background information and set out the direction of property management as follows:

- Provide general and descriptive information on the property, including location, history, and land use.
- Set out the conservation goals and objectives for the property.
- Identify the ecological and/or cultural values and features of the property.
- Describe the management issues associated with the property.
- Provide short-, medium- and long-term management recommendations (action items or tasks) on issues such as species at risk protection, ecological restoration, public access, educational and research opportunities, invasive species management, and signage needs.
- Preserve and protect cultural, spiritual, and sacred locations.

Once the management plan process is completed, the ITC works to carry out the management actions or strategies identified in the plan, as resources allow. Following general practice and as outlined in the conservation covenant and statutory right of way, the ITC revises the Management Plan every ten years.

1.3 The Scope of Islands Trust Conservancy Management Plans

Consistent with the Islands Trust Reconciliation Declaration (Islands Trust 2020b), ITC recognizes that nature reserves may be places of great cultural and spiritual significance to First Nations. Cooperative management of these protected places will provide opportunities to establish and maintain mutually respectful relationships between Islands Trust Conservancy and First Nations, as well as upholding the guiding principles of United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)[3] and the Truth and Reconciliation (TRC) Calls to Action. Relationship-building, knowledge-sharing, healing, and establishment of trust take time. Islands Trust Conservancy is committed to developing a parallel *Management Plan for Areas of Cultural Heritage and Sacred Significance*. This parallel Management Plan sets out guiding principles for cooperative collaboration between ITC and First Nations with traditional and treaty territories and cultural interests in the area defined by one or more nature reserve. Moreover, the Management Plan defines the common vision, objectives, policies, and best management practices for the nature reserve(s) to ensure that its natural values and cultural heritage and sacred significance are maintained for future generations.

[3] The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is an international instrument adopted by the United Nations on September 13, 2007, to enshrine (according to Article 43) the rights that "constitute the minimum standards for the survival, dignity and well-being of the indigenous peoples of the world." The UNDRIP protects collective rights that may not be addressed in other human rights charters that emphasize individual rights, and it also safeguards the individual rights of Indigenous people. Canada signed in 2010.

1.4 Protected Area Purpose

The purpose of the establishment and management of the Coats Millstone Nature Reserve (CMNR) is to:

- Preserve and protect, in perpetuity, the historical, natural and scenic values of the site.
- To allow natural succession of the CMNR's ecosystems to occur unimpeded; and
- To protect the site in accordance with the objectives of the Islands Trust and Islands Trust Conservancy.

1.5 Protected Area Objectives

The Islands Trust Conservancy objectives for the management of the Coats Millstone Nature Reserve are as follows:

- Support and protect continued use of areas of sacred and cultural significance by First Nations as per Section 35 of the Constitution Act[4] and UNDRIP;
- Preserve the natural features and functioning of CMNR;
- To allow for continued, low impact recreational use and enjoyment of CMNR; To protect, and enhance where necessary, the natural succession processes of the plant and animal communities at the site;
- To ensure that permitted uses do not negatively impact the ecological attributes of CMNR; and
- To provide for educational and research opportunities, where deemed appropriate.

2 Property Information

CMNR is approximately 0.248 hectares (0.613 acres) in total area, bordering the right-of-way for Easthom Road on the southeastern (upslope) side. The shoreline of Descanso Bay, directly downslope of Easthom Road, is no more than 50 metres, horizontally, to the west of CMNR.

2.1 Location

CMNR is located on Gabriola Island, one of the Gulf Islands in the Strait of Georgia, directly east of Nanaimo. A short ferry trip from Nanaimo provides access to Gabriola Island. The Gabriola Island ferry terminal is located approximately 200 metres north of CMNR. To access CMNR from the ferry landing, turn right on to Easthom Road and enter the parking lot that will soon be on the eastern (upslope) side of the road. From this parking lot, walk a short distance south along Easthom road and traverse onto a rough trail spurring off the eastern (upslope) side of Easthom Road. This trail leads through an easement on an adjoining property and then into CMNR.

2.2 Legal description

The Coasts Millstone Nature Reserve includes those lands described as:

- Parcel Identification Number 018-560-601
- Lot 5, Section 20, Gabriola Island, Nanaimo District, Plan VIP57861.

[4] Section 35 of the Constitution Act, 1982 recognizes and affirms the existing aboriginal and treaty rights of the aboriginal peoples of Canada and the courts have stated that aboriginal rights include aboriginal title.

2.3 Legal Access

Legal access to CMNR is provided through an easement across the adjoining private property (325 Easthom Road; VIS 2994) positioned between the Easthom Road right-of-way and CMNR. This easement (EP081045 – EP081048) across the property is in favour of the Islands Trust Conservancy and has been registered by Mr. Coats.

2.4 Landscape Context

Coats Millstone Nature Reserve is located in the Gulf of Georgia region (now known as part of the Salish Sea). This area has been traditionally occupied by several local groups primarily described as the Central Coast Salish (Suttles 1990). The Central Coast Salish are comprised of five distinct language groups known as the Halkomelem, Squamish, Nooksack, Northern Straits, and Clallam (Suttles 1990). Halkomelem speakers traditionally lived in an area ranging from Harrison Lake and the Fraser Canyon to the mouth of the Fraser River on the mainland, across the Gulf Islands, and along southeastern Vancouver Island (Suttles 1990: 453). Three different dialects of the Halkomelem language have been distinguished, dividing the group further into the Island Hul'q'umi'num, and the Upriver Halkomelem, and the Downriver Halkomelem. The Island Hul'q'umi'num speakers commonly occupied winter villages on southeastern Vancouver Island (Suttles 1990). This assessment is within the Traditional Territory of Snuneymuxw First Nation, speakers of the Island Hul'q'umi'num.

CMNR located on the western shores of Gabriola Island (see Figure 1), less than 50 m from the shoreline of Descanso Bay, which encompasses all land to the west of the property. The only designated property between CMNR and Descanso Bay is the Easthom Road right-of-way. Properties surrounding CMNR are all residential and less than 200 m from the ferry terminal itself. There is no connectivity with Coats Millstone to other nature reserves. Nearby park lands include Descanso Bay Regional Park approximately 650 m to the north and Huxley Community Park approximately 1.1 km to the west (see Figure 2).

Figure 1. Location Map.

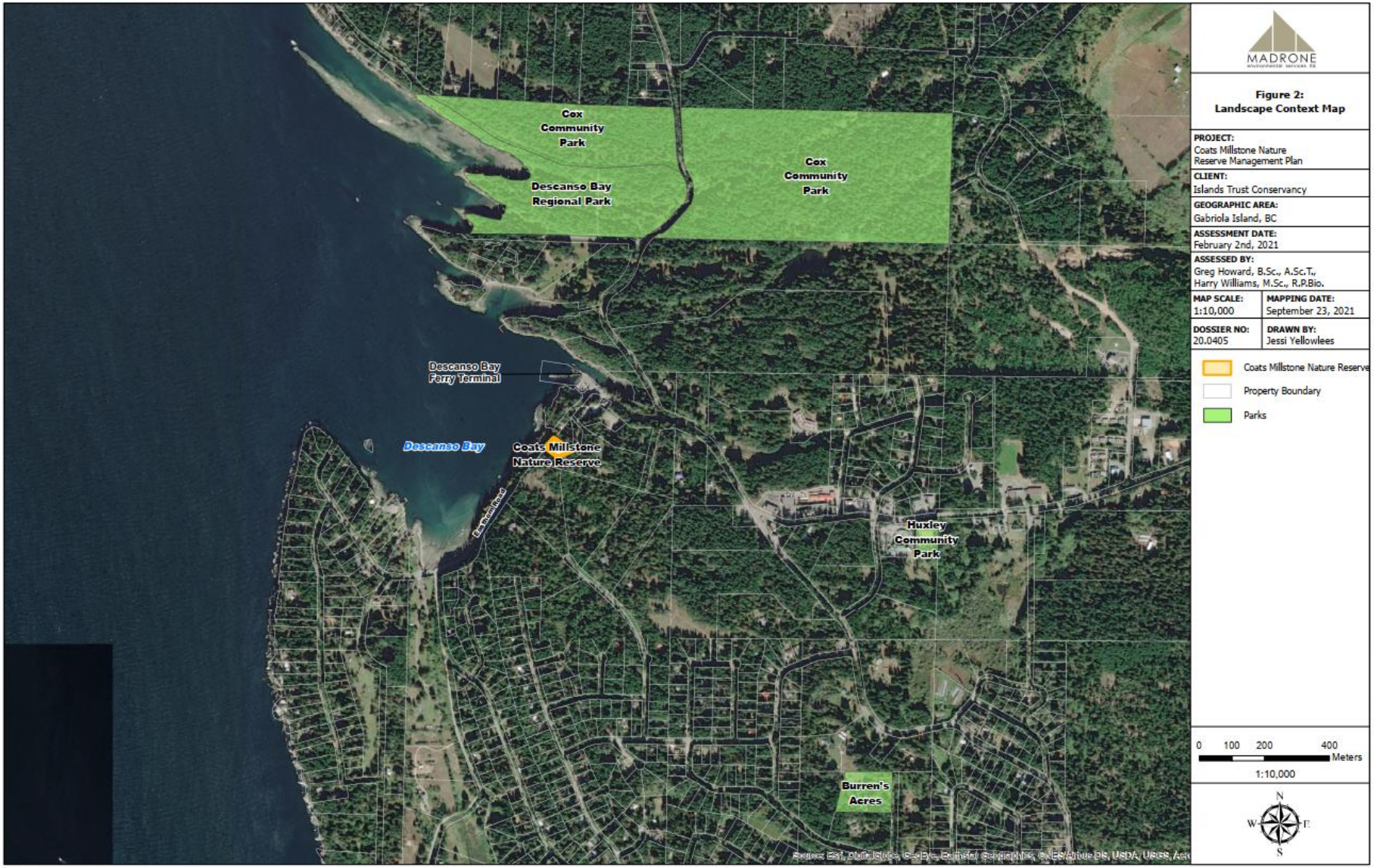

Figure 2. Landscape Context Map.

2.5 Site History

The ethnographic information for this region states that there were five or six associated local groups living in the Nanaimo area (Barnett 1935-1936, 1955: 22-23): the *kwelsiwlh*, the *teytexen*, the *yeshexen*, the *enwines*, the *xwsol'exwel*, and the *tleltxw*. Although they are often referred to by their anglicized name, the "Nanaimo" First Nation, the groups are collectively known as the Snuneymuxw. These groups consisted of the household (established kin group) along with several dependent households or kin groups. The local group *tletxw* are identified as being from a large and important village site called *Tle:ltxw* on Gabriola Island.

The Coats Millstone Nature Reserve is an area that demonstrates the industrial history of Gabriola Island. The first mention of the potential value of Gabriola sandstone cliffs was recorded in 1867. In 1902, the property was purchased by the Vancouver Granite Company from its pre-emptor John Canessa to extract and market the sandstone. Island historians have noted that materials quarried from CMNR were used for construction of the Gabriola House in Vancouver and the San Francisco Mint, and for repairs on the parliament buildings in Victoria.

In 1907, the quarry fell into disuse as andesite became the chosen structural material by the building industry. In 1930, Bill Coats bought the property from the Vancouver Granite Co., where he marketed the durability of sandstone to J.A. & C.H. McDonald Co. by mounting sandstone wheels on the rear shaft of a Model A Ford. This tactic convinced J.A. & C.H. McDonald Co. to lease the quarry for millstone production. Millstones were quarried from CMNR in the 1930s and purchased by pulp mills in Port Alberni, Powell River, and Finland. The extraction of these millstones leaves the significant landmark of approximately 30 deep, cylindrical holes on CMNR. Cylinders of sandstone bedrock extracted from these holes were up to 1.5 m in length prior to processing for shipment. Eventually artificial materials superseded sandstone, leading to the closure of quarrying activities. Blasting holes, abandoned pieces of old machinery and discarded stones are also scattered throughout CMNR as a visible reminder of the industrial processes that once took place here.

Mr. Clyde Coats (son of Bill Coats) sought out to ensure the rich history of this site was protected for years to come, leading to his donation of the property to the Islands Trust Conservancy in 1993. In 2012, a conservation covenant for the Coats Millstone Nature Reserve was finalized between the Islands Trust Conservancy (the owner), the Nanaimo & Area Land Trust and the Gabriola Historical and Museum Society. The intent of the agreement was stated as follows:

a) *To protect, conserve, maintain, enhance or restore the Land and the Amenities;*
b) *To prevent any occupation or use of the Land that will impair or interfere with the Land or the Amenities; and*
c) *To preserve the Land as a nature reserve.*

This conservation covenant on the Coats Millstone Nature Reserve is effective in perpetuity.

2.6 Anthropogenic Features

As due diligence, a query for known archaeological sites in or approximate to Coats Millstone Nature Reserve was conducted using the Provincial Database, Remote Access to Archaeological Data (RAAD). The closest known site is DhRx-56, a shell midden site located 260 m north east of CMNR. This site was assessed under Heritage Conservation Act permit 2007-0034. In addition to known archaeological sites, RAAD also provides an archaeological predictive model for the region. Coats Millstone does not overlap with any areas of predicted archaeological potential (Archaeology Branch 2021).

CMNR is limited in anthropogenic structures as the covenant currently restricts building of structures other than signage. Signage was observed on the property, along with a congregation of millstone pools in the sandstone bedrock. A summary of anthropogenic features is described in Table 1 and shown in Figure 3.

Table 1. Anthropogenic features observed at Coats Millstone Nature Reserve.

Anthropogenic Feature	Description	Condition	Photopoint Location
Trails	Walking trails for personal use throughout property as mapped	10-60 cm varying width, average 30 cm	P7
Millstone Pools	Cylindrical holes in the sandstone bedrock approximately 1.5 m in diameter and 1.5 m deep	Some moss growth, organic debris accumulated at the bottom.	P1
CMNR Boundary Sign	Embedded metal pole signage at surveyed corners of the property boundary; approximately 1.5 m in height. Sign is metal and approximately 30 cm X 20 cm.	Good condition, no signs of vandalism or degradation.	None
Danger – Cliff Sign	Embedded metal pole signage near the cliff edge on western boundary of the property; approximately 1.5 m in height. Sign is metal and approximately 30 cm X 20 cm.	Good condition, no signs of vandalism or degradation.	None

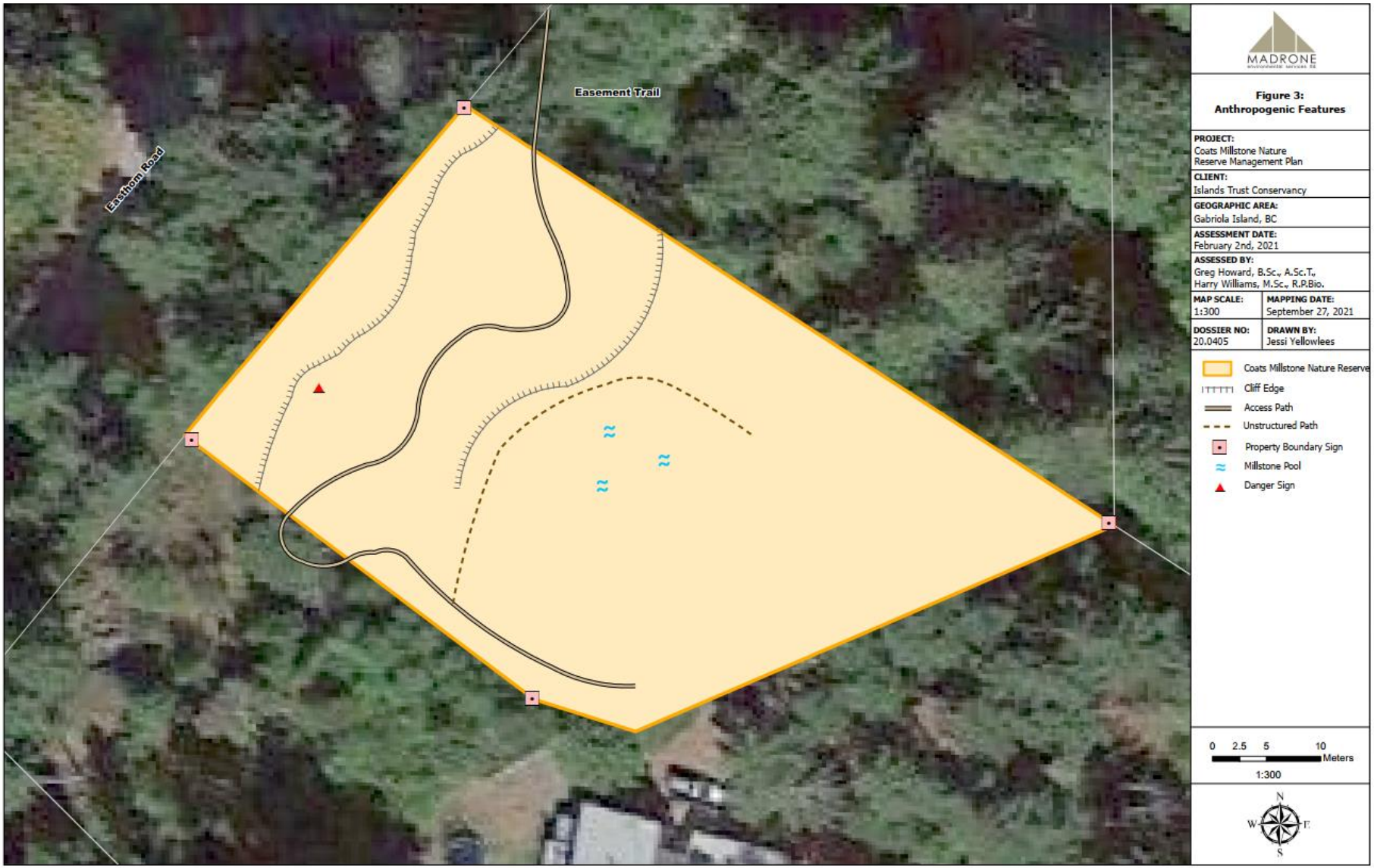

Figure 3. Anthropogenic Features.

2.7 Undersurface Rights

Undersurface rights for CMNR for mining of gold, silver, ore and coal are held by her majesty the Queen in right of the Province of British Columbia (the Crown). Coal Tax Sales Notice (TSN) was forfeited to the crown in November of 1938.

2.8 Notations, Charges, Liens and Interests

The Title owner of CMNR is the Islands Trust Conservancy, registered as of December 1993. No charges, liens or interests exist on CMNR title at the time this management plan was finalized.

CMNR is not immediately accessible from any public roads and requires an easement through Strata Lot 1 (EP081045 – EP081048), directly north of CMNR. The easement has been registered by Mr. Coats in favour of the Islands Trust Conservancy to provide access from a small parking lot on the upslope (east) side of Easthom Road.

In 2012, a conservation covenant for the Coats Millstone Nature Reserve was finalized between the Islands Trust Conservancy (the Owner), the Nanaimo & Area Land Trust and the Gabriola Historical and Museum Society. The Nanaimo & Area Land Trust and the Gabriola Historical and Museum Society are effectively the 'Covenant Holders' given that:

a) The Islands Trust Conservancy (current Owner) is the registered owner of certain lands located at Lot 5, Section 20, Gabriola Island, Nanaimo District, Plan VIP 57861;

b) The Land contains significant amenities including flora, fauna and natural and cultural features of great importance to the Owner, the Covenant Holders and the public;

c) The Owner wishes and has agreed to grant to the Covenant Holders a covenant pursuant to section 219 of the *Land Title Act,* to restrict the use of the Land;

d) A statutory right of way in favour of the Covenant Holders is necessary for the operation and maintenance of the covenant created by this Agreement and for the undertakings of the Covenant Holders; and

e) The Nanaimo & Area Land Trust and the Gabriola Historical Museum Society have each been designated by the British Columbia Minister of Environment, Land and Parks as a person authorized to accept covenants and as a person authorized to accept statutory rights of way, pursuant to sections 218 and 219 of the *Land Title Act*.

The intent of the agreement was stated as follows:

a) To protect, conserve, maintain, enhance or restore the Land and the Amenities;
b) To prevent any occupation or use of the Land that will impair or interfere with the Land or the Amenities; and
c) To preserve the Land as a nature reserve.

This conservation covenant on the Coats Millstone Nature Reserve is effective in perpetuity.

2.9 Local Planning Designations

The Gabriola Island Land Use Plan (Bylaw No. 177, 1999)[5] currently designates the property as 'Park 2' (Passive Recreation Community Park) and the parcel is designated as 'Park' in the Gabriola Island Official Community Plan (Bylaw No. 166, 1997)[6]. There are no Development Permit Areas located in CMNR, as the zoning in this area only permits development of structures that would accommodate passive outdoor activities. Development of buildings on a property zoned as Park 2 is prohibited. No Riparian areas are located on CMNR that would elicit assessments under the Riparian Areas Protection Regulation[7].

2.10 Existing Public and Other Use

Currently there is one public access point through a trail spurring off Easthom Road. This is the entry and exit point for public to access the property, and there are no structures prohibiting access into CMNR via this trail. Maps of the trail progression through the property is shown in Figure 3 (section 2.6).

3 Inventory by Ecological Community[8]

ITC acknowledges that there is a wealth of Traditional Ecological Knowledge and a long history of ecosystem stewardship among the First Nations whose territory encompasses CMNR. ITC will strive to work with First Nations knowledge holders to deepen its understanding, improve its stewardship practices, and, ultimately, support the transfer of Traditional Ecological Knowledge to younger generations within First Nations communities to ensure that it is not lost. At this time, the ecological information presented in this management plan was formed using systems that are based in foundations of Western science.

3.1 Ecological Significance

CMNR is unevenly aged, ecologically, due to the recent disturbance conducted during quarrying activities in the early 20th century. The area in general is mature (structural stage 5 to 6), as evidenced by a mixed forest of Douglas-fir (*Pseudotsuga menziesii*), Western red cedar (*Thuja plicata*), big leaf maple (*Acer macrophyllum*), arbutus (*Arbutus menziesii*), and red alder (*Alnus rubra*). Cavities were observed in trees on CMNR, which are likely used by either primary or secondary cavity nesters (e.g., woodpeckers, owls). As the trees in CMNR continue to mature, more of these cavities will be created by wildlife. An ephemerally flowing watercourse is located just beyond the northern border of the property, but never encroaches in it. The main water feature in CMNR is the millstone pools, which were filled with water at the time of observation. Some of these pools are likely to contain water perennially. These millstone pools could progress into high-quality amphibian habitat over the next number of

[5] http://www.islandstrust.bc.ca/media/342215/blgb177-lub-consolidated-february-7-2017.pdf [Accessed July 4, 2020]
[6] http://www.islandstrust.bc.ca/media/350052/blgb166-ocp-consolidated-sept-2-2019.pdf [Accessed July 4, 2020]
[7] https://www.canlii.org/en/bc/laws/regu/bc-reg-178-2019/latest/bc-reg-178-2019.html [Accessed January 6, 2020]
[8] Ecological communities are used by the B.C. Conservation Data Centre and NatureServe to describe both forested and non-forested natural areas. More information about ecological communities, including descriptions of ecological communities in the Islands Trust Area, can be found on the B.C. Conservation Data Centre website.

decades as ecological succession occurs. Further discussion on wildlife habitat potential is provided in section 3.8.

Queries were made on-line with the BC Conservation Data Centre (CDC), the Wildlife Tree Stewardship Atlas, the Sensitive Ecosystem Inventory, and e-Bird. The only documented occurrence of a rare species and/or ecological community was a CDC masked occurrence. The CDC was contacted regarding this occurrence but due to a Confidentiality and Non-disclosure agreement required to obtain this sensitive data, the details of this occurrence cannot be publicly shared. However, the information provided by the CDC was considered in the development of this management plan and does not warrant any management actions.

3.2 Climate

Climatic normals were obtained from weather data collected at the Gabriola Island Weather Station[9] by Environment Canada between the years 1981 and 2010. This weather station is at an elevation of 46.00 m above sea level (ASL), approximately 9.5 km east of CMNR. Mean annual precipitation (rainfall) at the weather station was 922.9 mm and mean annual snowfall was 34.7 cm (Government of Canada 2021). The monthly averages for daily average, minimum and maximum temperature and monthly averages for precipitation are shown in Figure 4, below.

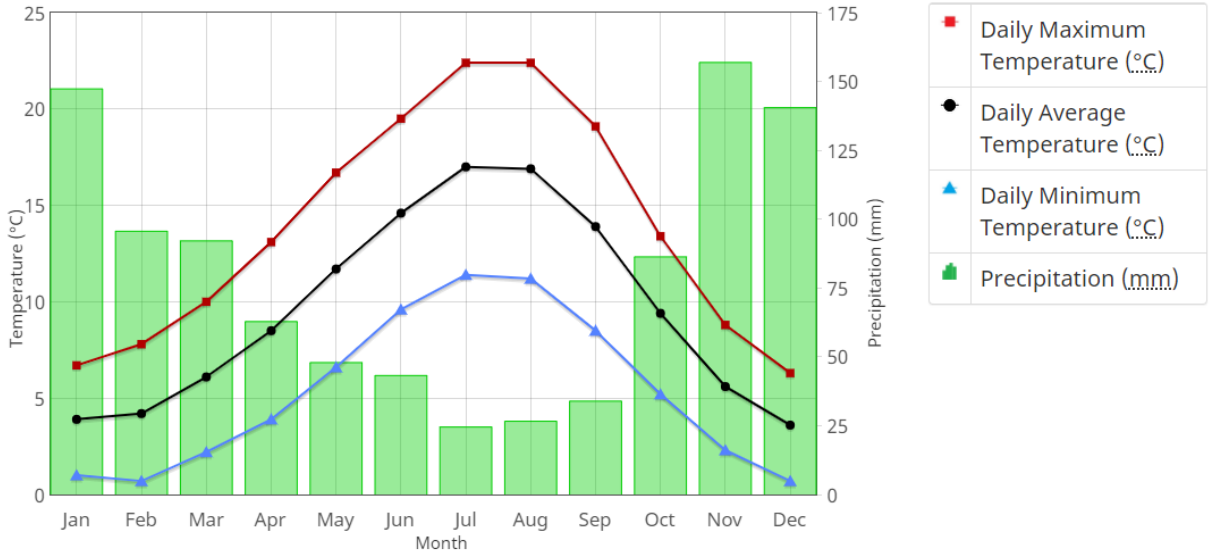

Figure 4. Maximum, average, and minimum monthly temperatures and average monthly rainfall from 1981-2010 at the Gabriola Island weather station monitored by Environment Canada.

9 https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?searchType=stnProx&txtRadius=200&selCity=&selPark=&optProxType=custom&txtCentralLatDeg=49&txtCentralLatMin=10&txtCentralLatSec=33&txtCentralLongDeg=123&txtCentralLongMin=51&txtCentralLongSec=34&txtLatDecDeg=&txtLongDecDeg=&stnID=172&dispBack=0 [Accessed January 6, 2021]

A secondary source for historical climate modelling was consulted. A modelling program was developed by the University of British Columbia that incorporates historical climate data and uses it to model annual, seasonal and monthly variables at any given geographic point. This addresses differences in elevation and general location between the subject site and the weather station monitored by Environment Canada, which can sometimes be significant. This model provides a mean annual precipitation (rainfall) at CMNR of 1206 mm, and a mean annual snowfall of 30.1 cm (Wang et al. 2016).

3.3 Geology and Physiology

Bedrock mapping shows that CMNR, and the rest of Gabriola Island, is underlain by an Upper Cretaceous Nanaimo Group stratigraphic unit comprising of undivided sedimentary rocks[10]. The majority of CMNR is directly on bedrock, due to the quarrying activities conducted in its past. Shallow soils overlain on the bedrock are observed, and large rocky outcrops and cliffs occur due to material extraction and millstone drilling. Only one geological fault line is present on the eastern end of Gabriola Island, approximately 10 km southeast of CMNR, and therefore, is not a management concern.

3.4 Hydrology

CMNR is located on bedrock Aquifer 709[11], which is characterized with high vulnerability and low productivity. The geometric mean static water level is 5.6 m. The direction of groundwater flow has not been determined but is likely linear along fractures flowing towards Descanso Bay. It is possible that subsurface flows in the aquifer are connected to the millstone holes through linear bedrock fractures providing groundwater recharge.

Surface flows on CMNR drain to the northwest, ultimately discharging into Descanso Bay. The round millstone holes are filled with water and have been described as showing little evidence of flow in previous management plan reports (ITC 2004). This was consistent with observations made in this recent site evaluation. The millstones are also receptors of surface flows from upslope properties, above the eastern cliff face.

3.5 Soils

Two soil types are located on the Coats Millstone Nature Reserve, Galiano and Saturna. Galiano soils are located on the steep slopes that occur on the upper parts of the property, and the lower portion of the property has the Saturna soil type. Both soil types are shallow (<50 cm to bedrock) with a coarse fragment content greater than 50%. Saturna soils are sandy loams, or loamy sand, which have developed on colluvial and glacial drift materials over sandstone bedrock. Cliffy areas have exposed bedrock with no appreciable soil.

With generally loamy soil textures, both soil types are well-drained and retain moisture with adequate rainfall, but upon saturation (during the winter months) there will be subsurface flows. Soils in the lowest portions of the property have a higher silt and clay content, which increases moisture holding capacity. During the summer droughts, soils on CMNR are dry with

[10] https://maps.gov.bc.ca/ess/hm/imap4m/ [Accessed January 6, 2020]
[11] https://s3.ca-central-1.amazonaws.com/aquifer-docs/00700/AQ_00709_Aquifer_Mapping_Report.pdf [Accessed January 6, 2020]

no subsurface flow. These soils are in the Brunisolic soil order. In spite of less-than-ideal conditions, there are soils deep enough on the property to support forests. Trees are also good at exploiting cracks in the bedrock. The steep slopes observed on the property and generally rocky soil may create challenges for trail-building.

3.6 Ecological Classifications

CMNR is within the Eastern Vancouver Island Ecoregion of the Georgia Depression Ecoprovince. This Ecoprovince is characterized by heavy fall and winter rains that reach extreme levels from October to February. These are from either warm subtropical systems from the southwest, or temperate systems from the northeast Pacific via the Strait of Juan de Fuca (Demarchi 2011).

The entire CMNR is within the Coastal Douglas Fir moist mild (CDFmm) Biogeoclimatic Zone – which covers the Gulf Islands and occurs below 200 m in elevation on the east side of Vancouver Island. This zone is considered to have the mildest climate in Canada, with warm, dry summers and mild, wet winters (Green and Klinka 1994).

3.7 Ecological Communities and Site Series

The Coats Millstone Nature Reserve was visited on March 2, 2021. The objectives of the site visit were to describe and collect data on the representative ecosystems and associated vegetation that occurs on CMNR. Ecosystem sampling followed the provincial Land Management Handbook 25 – Field Manual for Describing Terrestrial Ecosystems (BC MoFR and BC MoE 2010). Data was recorded on the provincial Site Visit Form (FS1333). Tree heights were estimated visually. Additional notes on management recommendations and to inform mapping were recorded on paper or on an iPad. Sampling locations were chosen in representative areas (away from edges) of three micro-regions:

- The upper, rocky area that includes the millstone pools,
- Mid-slope areas that are quite steep, and include areas of rejected quarry material, but have deeper soil, and
- The lower portion of the property where there is an ephemeral stream.

Due to the small size of CMNR, only one small cohesive polygon was mapped, and representative species were observed and noted accordingly. The ecological characteristics of these three micro-regions are described in Tables 2 and 3, below.

Table 2. Ecological Summary for the Coats Millstone Nature Reserve.

Polygon ID	1 (size of property is 0.25 hectares)
Madrone Plot #	1
General Property Description	The property is an old sandstone quarry, with benches and cliffs. There are about 30 millstone pools on the rocky shelves. The property is sloping to the north-west. The property is in the CDFmm biogeoclimatic zone. The upper and mid portions of the property are steep and dry (except the millstone pools), while the lower portion of the property has deeper, moist soils.
Dominant Ecological Community	Douglas-fir – Lodgepole Pine – Arbutus (on driest portion of the property) Douglas-fir – Salal (mid-slope areas); Cedar- Grand fir – Foamflower (in lowest areas near ephemeral stream)
Ecosystem Classification	CDFmm/02; CDFmm/01; CDFmm/06
Structural Stage (SS)	5- 6 – mature, uneven-aged forest
Status (BC List)	N/A
Photopoint(s)	P1-P8
Ecological Community Description	Due to past disturbances the current forest is an uneven-aged mixed forest with Douglas-fir, Western red cedar, big leaf maple, arbutus, and red alder. Several mature Douglas-fir trees occur along the western edge. Other tree species present are big-leaf maple, western hemlock, and red alder
Disturbance Notes	Disturbances include the historical quarrying, as well as some tree removal (logging). Deer browse is quite high in areas, impacting herbs, wildflowers, and young trees. Walking trails occur on the property. Scotch broom is also common in open areas.
Anticipated Change/Succession	If left undisturbed, the existing trees will eventually create a closed canopy, which will help shade out and discourage the Scotch broom.
Wildlife observations	Cavities observed on Wildlife Trees, potentially from a Downy or Hairy Woodpecker (*Dryobates pubescens; Dryobates villosus*), or Northern Flicker (*Colaptes auratus*). Black-tailed deer (*Odocoileus hemionus*) browse observed on shrubs.

Table 3. Species composition and percent cover for the Coats Millstone Nature Reserve.

Common name	**Scientific name**	**Main Canopy**	**Secondary Canopy**	**Shrub layer**	**Herb layer**	**Moss and Lichens**	**Non-Native**	**Notes**
Douglas-fir	*Pseudotsuga menziesii*	15	10					
big leaf maple	*Acer macrophyllum*		8					

red alder	*Alnus rubra*		10					
western redcedar	*Thuja plicata*		15					
arbutus	*Arbutus menziesii*		5					
hairy honeysuckle	*Lonicera hispidula*			3				
Scouler's willow	*Salix scouleriana*			2				next to millstone pools
red huckleberry	*Vaccinium parvifolium*			2				growing on wood
salmonberry	*Rubus spectabilis*			1				moist areas
evergreen huckleberry	*Vaccinium ovatum*			2				
salal	*Gaultheria shallon*			6				
ocean spray	*Holodiscus discolor*			4				
dull Oregon grape	*Mahonia nervosa*			4				aka *Berberis nervosa*
tall Oregon grape	*Mahonia aquifolium*				2			deer browse present on all herbs
Scotch broom	*Cytisus scoparius*						4	
trailing blackberry	*Rubus ursinus*				3			
sword fern	*Polystichum munitum*				10			
yerba buena	*Bromus vulgaris*				2			open areas
sweet-scented bedstraw	*Galium triflorum*				2			
Pacific sanicle	*Sanicula crassicaulis*				2			
wall lettuce	*Lactuca muralis*				1			
licorice fern	*Polypodium glycyrrhiza*					2		On moist rock faces
Oregon beaked moss	*Kindbergia oregana*					15		aka *Eurhynchium oreganum*
Electrified cat's tail moss	*Rhytidiadelphus triquetrus*					5		Growing on wood

Tree moss	*Climacium dendroides*					1		
TOTALS		15	48	24	22	23	4	

3.8 Wildlife Species

The assessment of wildlife species was conducted under the lens of critical breeding habitat. Protecting critical breeding habitat is an effective way to support conservation of wildlife species, as it directly impacts the reproductive success of the targeted species. Due to its size, CMNR does not have the capacity to provide breeding habitat for an extensive amount of wildlife species. At this point, it largely consists of foraging habitat (e.g., deer browsing, insectivores). CMNR is currently progressing into a young-to-mature forest stage with a large portion covered by historically disturbed areas (i.e., millstone pools and tailings). As ecological succession occurs over future decades, critical breeding habitat will develop for a more diverse array of species.

A comprehensive species inventory involving the necessary field surveys to confirm presence/absence in CMNR is not part of the scope of this management plan. Additionally, the time of year in which this management plan was created was also not during a period when these assessments could be conducted. Instead, an assessment on the occurrence of potential breeding habitat for provincially listed species of conservation concern was conducted. A selection of species to assess was compiled through a search of the BC Species and Ecosystem Explorer tool[12]; provided by the BC Conservation Data Centre (CDC). A query for potential species was made by selecting the CMNR area as the Area of Interest (AOI) on the query map. The output was then reviewed by a qualified environmental professional (QEP) and further reduced based on critical breeding habitat requirements and known ecological features in CMNR. This resulted in a Focal Species List that could be brought in the field, where Wildlife Habitat Assessments (WHA) would occur for each selected species at locations that would encompass the variety of habitats in CMNR. The Focal Species List is shown in Table 4.

[12] B.C. Conservation Data Centre. 2021. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: https://a100.gov.bc.ca/pub/eswp/ [accessed Jan 8, 2021]

Table 4. Focal Species List.
Provincially listed vertebrates with potential to use Coats Millstone Nature Reserve for breeding habitat; based on a reviewed output from the CDC database.

Species Name		Status				
Common Name	**Latin Name**	**Provincial Status**	**BC List**	**COSEWIC**	**SARA**	**Global**
Northern Red-legged Frog	*Rana aurora*	S3 (2016)	Blue	Special Concern	Special Concern (2005)	G4 (2015)
Western Toad	*Anaxyrus boreas*	S4 (2016)	Yellow	Special Concern	Special Concern (2018)	G4 (2008)
Band-tailed Pigeon	*Patagioenas fasciata*	S3S4 (2015)	Blue	Special Concern	Special Concern (2011)	G4 (2016)
Barn Swallow	*Hirundo rustica*	S3S4B (2015)	Blue	Special Concern	Threatened (2017)	G5 (2016)
Black Swift	*Cypseloides niger*	S2S3B (2015)	Blue	Endangered	Endangered (2019)	G4 (2016)
Common Nighthawk	*Chordeiles minor*	S4B (2015)	Yellow	Special Concern	Threatened (2010)	G5 (2016)
Evening Grosbeak	*Coccothraustes vespertinus*	S5 (2015)	Yellow	Special Concern	Special Concern (2019)	G5 (2016)
Great Blue Heron, *fannini* subspecies	*Ardea erodias fannini*	S2S3B, S4N (2018)	Blue	Special Concern	Special Concern (2010)	G5T4 (2016)
Green Heron	*Butorides virescens*	S3S4B (2015)	Blue	No Status	No Status	G5 (2016)
Marbled Murrelet	*Brachyramphus marmoratus*	S3B, S3N (2015)	Blue	Threatened	Threatened (2003)	G3 (2016)
Northern Pygmy-owl, *swarthi* subspecies	*Glaucidium gnoma swarthi*	S3S4 (2018)	Blue	No Status	No Status	G4G5T3T4Q (2019)
Olive-sided Flycatcher	*Contopus cooperi*	S3S4B (2015)	Blue	Special Concern	Threatened (2010)	G4 (2016)
Peregrine Falcon	*Falco peregrinus*	S3 (2015)	No Status	Special Concern	Special Concern	G4 (2016)
Peregrine Falcon, *anatum* subspecies	*Falco peregrinus anatum*	S2? (2011)	Red	Not At Risk	Special Concern (2012)	G4T4 (2016)
Townsend's Big-eared Bat	*Corynorhinus townsendii*	S3S4 (2015)	Blue	N/A	N/A	G4 (2016)

To determine the potential wildlife habitat quality within CMNR for each focal species, methodologies under Section 5, Wildlife Habitat Assessment of the *Describing Ecosystems in the Field* (*DEIF*), also known as BC Land Management Handbook #25 (LMH 25) (BCMFR and BCMOE 2010), were utilized. Each plot was assessed for suitability of critical breeding habitat for the species of consideration. Using the *DEIF*, we provided a class quality for each focal species to establish a suitability rating for the various ecological communities in CMNR. Rating Schema according to the *DEIF* is shown in Table 5. Plot locations for wildlife habitat

assessments are depicted in Figure 5, and the results for each plot are shown Table 6.

Table 5. Relative quality classes for assessing the plot type quality relative to the best in British Columbia.
(Adapted from Land Management Handbook 25: Field Manual for Describing Terrestrial Ecosystems, 2010).

Class Quality	Suitability/Capability	Lower Limit (%)	Upper Limit (%)	
1	High	>75	≤100	Equivalent
2	Mod. high	>50	≤75	Slightly less
3	Moderate	>25	≤50	Moderately less
4	Low	>5	≤50	Substantially less
5	Very low	>0	≤5	Much less
6	Nil	0	0	Habitat or attribute is absent

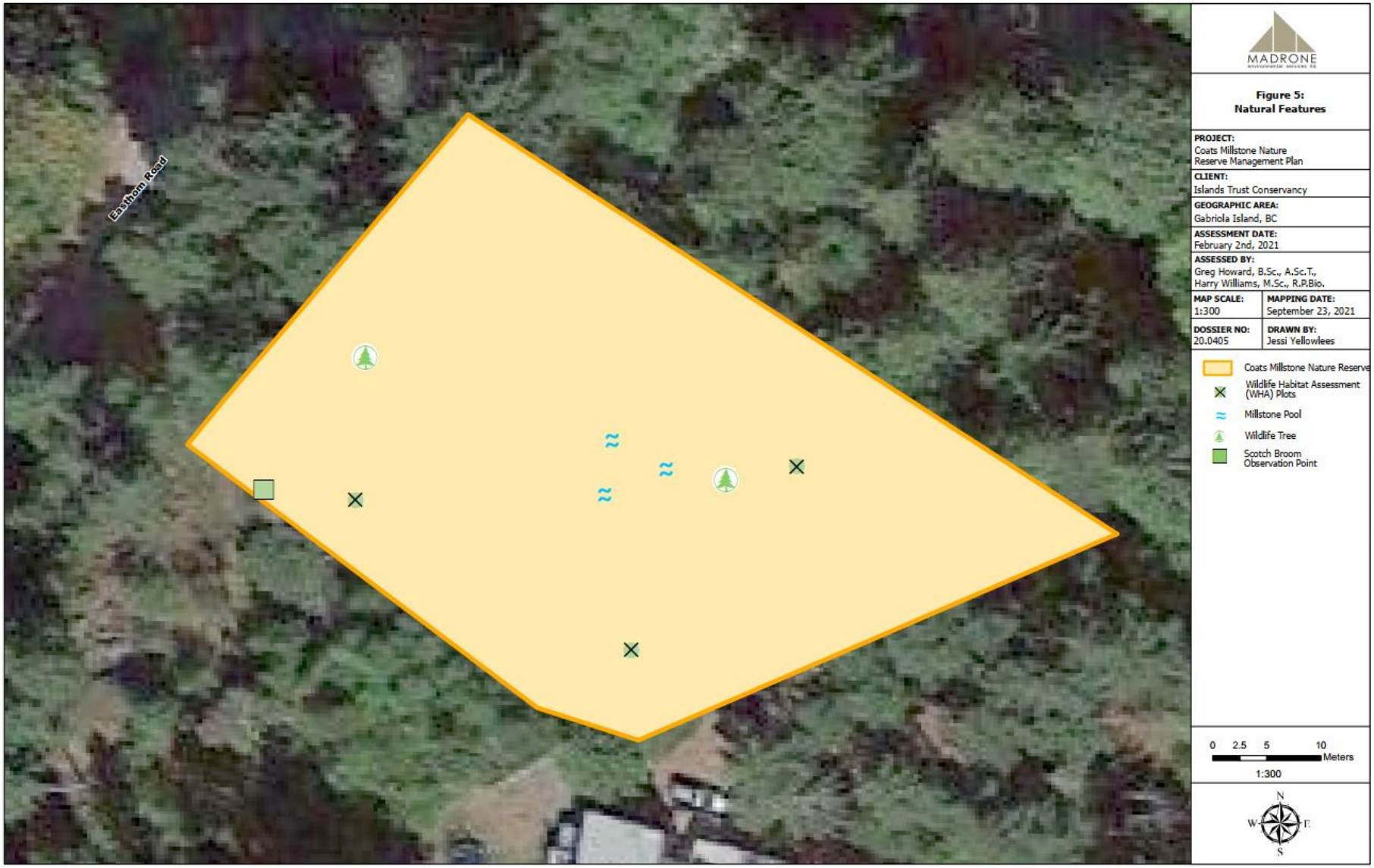

Figure 5. Natural Features.

Table 6. Summary of Wildlife Habitat Assessment Ratings for Coats Millstone Nature Reserve.

Common Name			Observed Habitat Attributes	
	WHA1	**WHA2**	**WHA3**	
Northern Red-legged Frog	4	3	6	Perennial wetland habitat in millstone pool area that will obtain higher ratings as regeneration occurs over time.
Western Toad	4	3	6	Perennial wetland habitat in millstone pool area that will obtain higher ratings as regeneration occurs over time.
Band-tailed Pigeon	3	4	3	Trees of sufficient size/structure for support of stick nests. Western redcedar stands with fruiting shrubs in understory.
Barn Swallow	5	4	4	No critical habitat present for breeding
Black Swift	5	4	4	Some small cliff areas where sandstone excavation occurred in the early 20th century.
Common Nighthawk	5	5	4	No critical habitat present for breeding
Evening Grosbeak	4	4	3	Trees of sufficient size/structure for support of stick nests. Fruiting shrub understory
Great Blue Heron, *fannini* subspecies	4	5	4	No critical habitat present for breeding
Green Heron	5	4	4	No critical habitat present for breeding
Marbled Murrelet	5	5	4	No critical habitat present for breeding
Northern Goshawk, *laingi* subspecies	5	4	4	No critical habitat present for breeding.
Northern Pygmy-owl, *swarthi* subspecies	3	3	4	One wildlife tree present on the property.
Olive-sided Flycatcher	4	4	4	No critical habitat present for breeding
Peregrine Falcon	5	4	5	No critical habitat present for breeding
Townsend's Big-eared Bat	4	4	4	No critical habitat present for breeding

Species with potential critical breeding habitat in CMNR include the Northern Pygmy-owl, Band-tailed Pigeon, Evening Grosbeak, Red-legged Frog, and the Western Toad. The Northern Pygmy-owl may use the wildlife tree on the western side of CMNR. This tree is of adequate size for cavity nesting species to create large enough holes for a Northern Pygmy-owl to nest in. There are also a variety of micro habitats in CMNR that owl prey species (i.e., small mammals and birds) likely occur in. Habitat suitability of the Evening Grosbeak and Band-tailed Pigeon was assessed with a consideration of future ecological succession. Both birds may use the area for nesting due to a presence of trees with suitable nesting platforms, and in future decades, a dense understorey of fruiting shrubs to provide food. The Western toad and

Northern Red-legged frog were also assessed with a consideration of future ecological succession, as the millstone pools will eventually progress into high-quality critical breeding habitat. As the forest canopy increases, the area will become progressively more shaded which will prevent evaporation of water in the millstone pools and provide temperature regulation. Increased insect drop and woody debris litter fall from a larger canopy will also contribute to a high-quality amphibian breeding habitat, and therefore, the millstone pools were recognized as a moderately high-potential area for breeding of the two focal amphibian species.

Other species that may occur throughout the site are shown in Table 7, below. This is not an exhaustive list but provides a sample of those that may transiently occur.

Table 7. Sample list of other terrestrial species with potential to occur in Coats Millstone Nature Reserve.

Common Name	**Latin Name**
American Robin	*Turdus migratorius*
Bald Eagle	*Haliaeetus leucocephalus*
Belted Kingfisher	*Megaceryle alcyon*
Black-tailed Deer	*Odocoileus hemionus*
Brown Creeper	*Certhia americana*
Bushtit	*Psaltriparus minimus*
Chestnut-Backed Chickadee	*Poecile rufescens*
Common Raven	*Corvus corax*
Cormorant sp.	*Phalacrocoracidae sp.*
Cougar	*Puma concolor*
Dark-eyed Junco	*Junco hyemalis*
Deer mouse	*Peromyscus maniculatus*
Northern Flicker	*Colaptes auratus*
Northwestern Crow	*Corvus caurinus*
Northwestern Salamander	*Ambystoma gracile*
Pacific Chorus Frog	*Pseudacris regilla*
Pacific Wren	*Troglodytes pacificus*
Pacific-slope Flycatcher	*Empidonax difficilis*
Pigeon Guillemot	*Cepphus columba*
Pileated Woodpecker	*Dryocopus pileatus*
Raccoon	*Procyon lotor*
Red Crossbill	*Loxia curvirostra*
Red-breasted Nuthatch	*Sitta canadensis*
Red-breasted Sapsucker	*Sphyrapicus ruber*
Rock Pigeon	*Columba livia*
Rufous Hummingbird*	*Selasphorus rufus*
Song Sparrow	*Melospiza melodia*
Spotted Towhee	*Pipilo maculatus*
Steller's Jay	*Cyanocitta stelleri*
Swainson's Thrush	*Catharus ustulatus*
Turkey Vulture	*Cathartes aura*

3.9 Expected Change Over Time

As ecological succession continues, the millstone pools will increase in biodiversity as surrounding trees grow and shade the area. Shading will keep the water in the millstone pools from evaporating, and at an adequate temperature for amphibian breeding habitat. Increased forest canopy also allows for increased invertebrate density, creating a larger food supply for

amphibians and other species reliant on insect drop for nutrients. Woody debris will also accumulate in the millstone pools, creating a more complex, naturalized habitat with organic bed-substrates. The increased canopy cover throughout CMNR will also shade out other more exposed areas on CMNR, protecting flora from increased evapotranspiration and creating microsites suitable for more drought-intolerant species.

Growth of mature trees will continue, but at a slower rate than that of trees in an area with less exposed rock, subdued gradients, and richer soils. As trees mature and a select few perish, more Wildlife Trees will become established for cavity nesters to exploit as shelter. As the younger trees continue to grow and reach the mature life stages, exposed areas will be progressively shaded out and prevent the continued growth of Scotch Broom.

4 Threats

Table 8. Summary of threats to Coats Millstone Nature Reserve.

Threats	Coastal Douglas-fir Forest*	Millstone Amphibian Habitat	Overall Threat Rank
Recreational Activities: CMNR is relatively small in size (0.25 ha); therefore, hiking is the most likely activity as opposed to mountain biking. Consistent disturbance throughout CMNR will stifle the proliferation of native shrub and herb species. Unlimited use of the area (i.e., not reduced to designated trails) will result in a lack of growth and natural succession throughout the property.	Medium	High	Medium
Public Danger: The most prevalent threat to CMNR is not necessarily ecological, rather it involves a threat to humans who are using the area. There are several steep cliffs with no barriers along with deep millstone pools with slippery paths circumnavigating them. Should members of the public encounter frequent injury, it may become a requirement to alter the topography of the site, and therefore, negatively impacting the ecological succession of the area.	High	High	High
Invasive Non-Native Species: Scotch Broom (*Cystius scoparius*) was observed on the southern boundary of the site. Scotch broom will continue to establish and spread throughout any areas consistently exposed to direct sunlight. Without removal, native species will not be able to establish and proliferate throughout these areas, eventually shading out Scotch Broom.	Medium	Medium	Medium
Deer Browsing: Browsing by deer was observed throughout CMNR during the site visit. This can stifle the proliferation of native plant and herb species, and ultimately alter the understory vegetation composition.	Medium	High	Medium
Overall Threat Status for Protected Area	**Medium**	**High**	**Medium**

Very High: The threat is likely to destroy or eliminate the biodiversity target.
High: The threat is likely to seriously degrade the biodiversity target.
Medium: The threat is likely to moderately degrade the biodiversity target.
Low: The threat is likely to only slightly impair the biodiversity target

4.1 Expected Change to Threats Over Time

With appropriate management, changes to these threats will gradually be reduced in risk. The degree of future public use to be allowed in CMNR is under review by all stakeholders and will be addressed in a manner consistent with the objectives of this management plan and the conservation covenant. Resolutions of this review will ultimately determine expected changes to levels of threat in the Recreational Activities, and Public Danger categories. The threat of recreational activities could potentially be reduced to 'low' for both habitat areas if CMNR is managed to control human interaction with the flora (e.g., use of signage). There is potential for the Public Danger risk to be reduced to low in both habitat areas depending on future management decisions discussed amongst stakeholders regarding access to high-hazard areas.

Invasive non-native species can be immediately addressed, with execution of removal procedures, which would reduce the risk to low in both habitat areas. Removal of Scotch Broom from the open areas in CMNR will provide opportunities for native species to become established as more mature vegetation begins to shade out these areas. Deer browsing will likely be the only threat to the ecological succession of CMNR that cannot be easily managed. Browsing is a not a foreign concept to naturalized areas, but it should be monitored on whether its impacts become more significant in the future. It will be a matter of ensuring that browsing threats remain at medium, and do not increase to high over the next number of decades.

5 Community Engagement[13]

The Islands Trust Conservancy undertook a limited public consultation process as part of the development of this management plan. A dedicated page on the ITC website provided a brief summary of CMNR and provided a link to an online survey questionnaire (Appendix B). Responses for the survey were collected by the ITC until March 15, 2021. All information gathered through the survey was considered as part of this management plan. The webpage also provided information regarding registration for a public webinar hosted by the ITC on February 22, 2021. During the webinar, the preliminary results of the field assessments and proposed management recommendations were presented to the public. A member of the Gabriola Historical and Museum Society also presented some historical information about the Coats Millstone site as well as some suggested future uses for the site. The webinar format allowed for members of the public to ask questions specific to CMNR, which were answered during the webinar.

5.1 Adjacent Landholders

Adjacent landowners were mailed a letter (Appendix C) to inform them that a management plan was in development for CMNR and to ask them to complete the questionnaire so that they could share their thoughts on the broad-scale management concerns of CMNR.

5.2 First Nations

Elder Geraldine Manson gave a welcome for the virtual Zoom open house that took place on February 22, 2021. The Lands Clerk of the Snuneymuxw First Nation (SFN) was contacted

[13] ITC staff usually contribute to Section 5 by providing contact details, questionnaires, letter to neighbours etc.

multiple times throughout the development of this report in 2021. A letter was also sent to the Chief and Council of the SFN (Appendix D). A shelter-in-place order was in effect for the SFN due to the global COVID-19 pandemic and outbreaks within the SFN community. This prevented a formal response on input for this recent management plan to be provided, though the SFN have expressed interest in reviewing the management plan upon its completion.

5.3 Conservation Partners and Community Members

The Covenant holders were invited to participate in the webinar and provide feedback to be considered for the management plan. Other community members had the opportunity to participate and voice any concerns about CMNR during the public webinar by submitting questions or concerns in the chat section, or through the online survey.

5.4 Engagement Results

39 individuals participated in the publicly available online survey. The results from the multiple-choice questions are shown below in Figures 6, 7, 8 and 9.

Q1: Are you a resident of Gabiola Island?

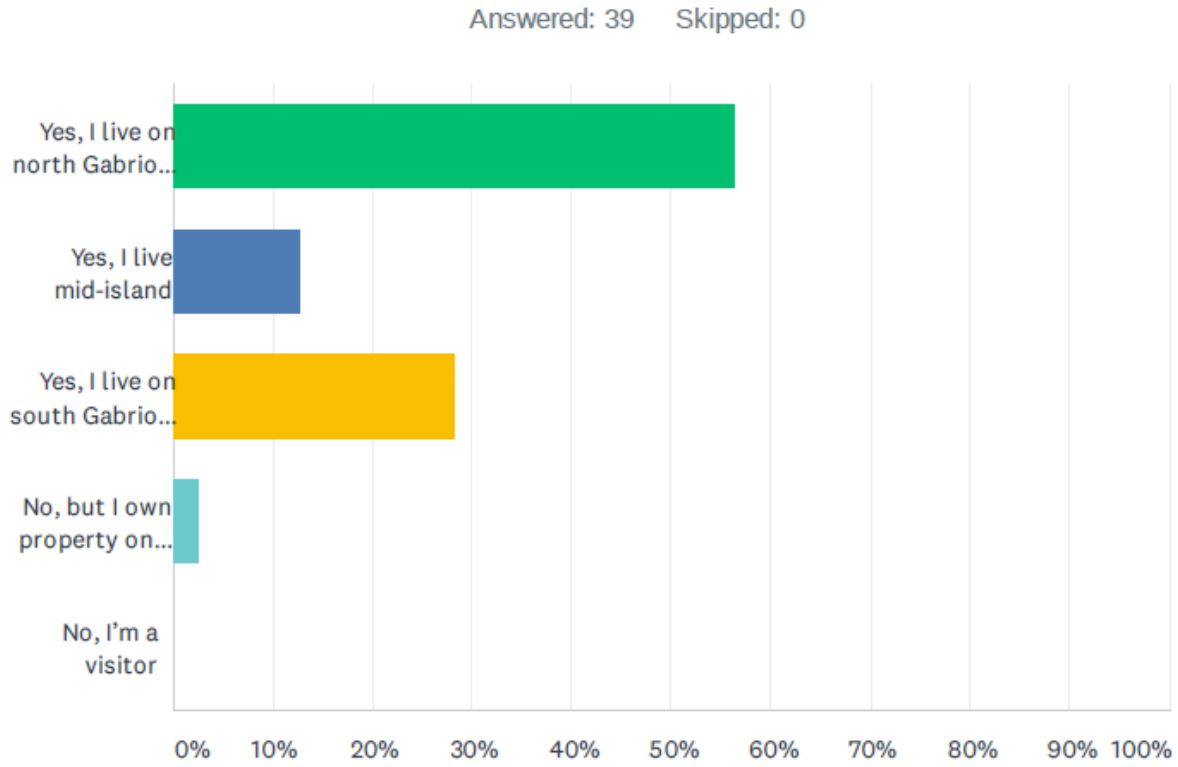

Figure 6. Survey results for Q1 of the public questionnaire

Q2: Have you ever visited the Coats Millstone Nature Reserve? If so, how often?

Answered: 39 Skipped: 0

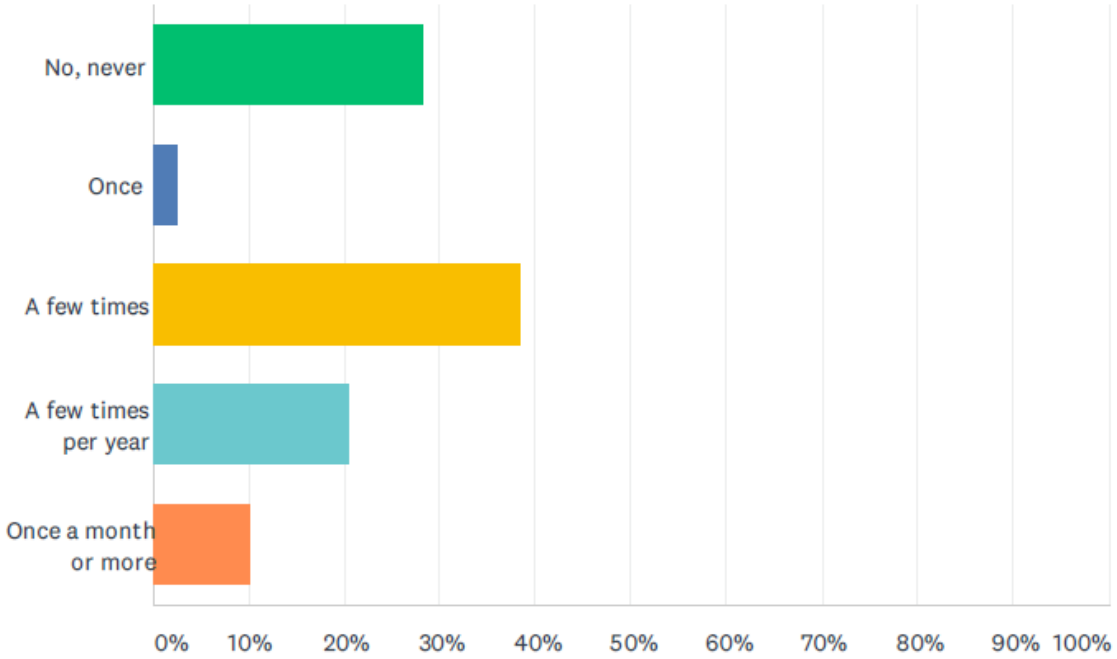

Figure 7. Survey results for Q2 of the public questionnaire

Q3: If you have visited Coats Millstone Nature Reserve before, what did you do there?

Answered: 29 Skipped: 10

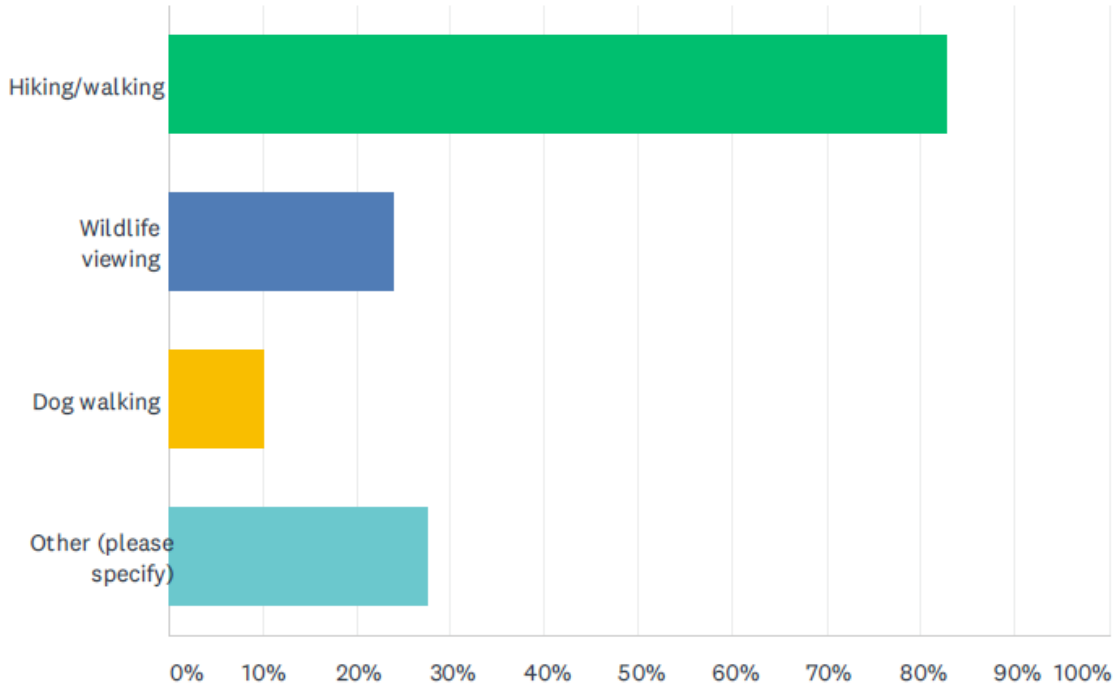

Figure 8. Survey results for Q3 of the public questionnaire

Q5: What do you believe to be the most important values of nature reserves? (choose three)

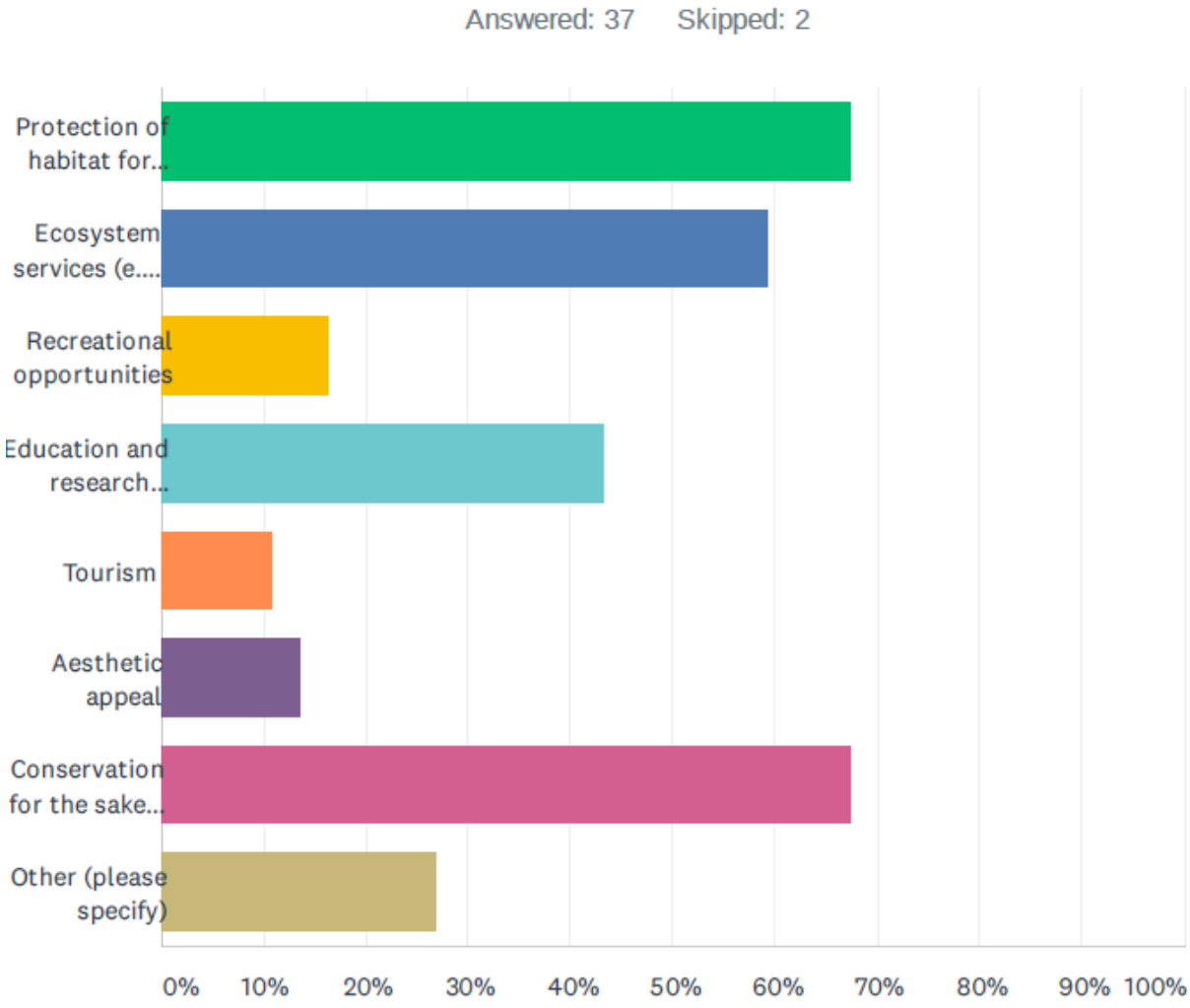

Figure 9. Survey results for Q5 of the public questionnaire

Based on the public input provided, it is apparent that the majority of visitors are residents of Gabriola Island. Several of the respondents have visited CMNR more than once or more frequently (up to several times per year), though some have never visited. The purpose of the visits to CMNR is for recreational activities with hiking/walking being the most popular one. The top three items selected as 'most important values for CMNR' were: Protection of habitat for at-risk species, ecosystem services, and conservation for the sake of the intrinsic value of nature. A close fourth in this selection was Education and Research Opportunities based on the historical value CMNR holds.

Results from both the written survey questionnaire responses and the community engagement seminar were reviewed. The community engagement process demonstrated public concern for the following management issues:

- Off-leash dog walking and cleaning up after dogs
- Public access due to safety concerns

- Wildlife (e.g., deer) becoming trapped in the millstone pools
- Avoidance of future resource extraction
- Increasing signage for either safety or public education
- Protection of amphibian habitat in the millstone pools
- Motorized vehicle use
- Ensuring nearby developments do not encroach into CMNR
- Invasive plant species compromising the health of native ecosystems
- Camping
- Fire hazards – natural and anthropogenic (drought, smoking, campfires)
- Vandalism/dumping

6 Management Recommendations

The objectives of this management plan are to preserve and protect the historical, natural and scenic value of CMNR; to allow for natural ecological succession; and to protect the site as per general ITC objectives. While CMNR does have significant ecological values, it possesses very high historical value. Management of public safety is the number one priority for this site, and therefore, cannot be compromised at the expense of preserving historic or ecological value. Reviews on management actions toward addressing issues with public safety on this site are currently under way. This document provides a review on the current state of CMNR, and some potential options to be considered by all stakeholders.

6.1 Management Roles

Partner	Role
Island Trust Conservancy (ITC)	Landholder
Nanaimo & Areas Land Trust (NALT)	Co-covenant Holder
Gabriola Historical & Museum Society (GHMS)	Co-covenant Holder

6.2 Permitted and Prohibited Uses

Currently, CMNR is closed to the public for any activities due to safety issues. All activities must be approved by all covenant holders (NALT and GHMS) and ITC. Restrictions as specified in the conservation covenant are described as follows:

- ITC (the owner) covenants and agrees that it will not occupy or use the Land or allow the Land to be occupied or used in such a manner that will impair or interfere with the natural state of the Land or the Amenities. The Land will be allowed to be used only as a nature reserve.
- ITC will not conduct the following activities without written approval of the covenant holders, which may be withheld in the covenant holders unrestricted discretion:
    - Use the Land or permit use for activities which:
        - causes or allows silts, leachates, fills or other deleterious substances to be released into any watercourse;
        - causes erosion, or loss of soil;
        - causes or allows pesticides, including but not limited to herbicides, insecticides or fungicides to be applied to or introduced onto the Land;

- alters or interferes with the hydrology of the Land, including by the diversion of natural drainage or flow of water in, on or through the Land in a manner which may impact the Land;
- causes or allows fill, rubbish, ashes, garbage, waste or other material foreign to the Land to be deposited;
- causes or allows any component of the Land, including soil, gravel or rock, to be disturbed, moved, removed from or deposited in or on the Land; or
- causes or allows any indigenous flora on the Land to be cut down, removed, defoliated or in any way tampered with.

- Use the Land or allow the use of the Land for hunting, fishing, gathering or grazing of domestic animals;
- Construct, build, affix or place on the Land any buildings, structures, fixtures or improvements of any kind; or
- Lease or license the Land or any part thereof unless the lease or license is expressly made subject to the provisions of this Agreement and expressly entitles the Owner to terminate the lease or license if the tenant or licensee breaches any of the provisions of this Agreement.

6.3 Proposed Monitoring Program

The main risk to the site requiring active monitoring is the presence of invasive plant species (*i.e.*, Scotch Broom). One location of Scotch Broom was observed on the site along the southern boundary, and observations of others (e.g., English Holly, Spurge-laurel) have been made in the past. No specified monitoring route is recommended for this site, due to its size. Three monitoring locations, however, are recommended. These include:

1) The Scotch Broom patch along the southern boundary of the site, to:
    a. Monitor implemented measures for addressing this invasive species.
    b. Ensure the species is not spreading into areas of CMNR adjacent to this patch.
2) The millstone pools, to:
    a. Assess the levels of public access and use (*i.e.,* littering, disturbed moss and vegetation).
    b. Document progress of ecological succession towards an amphibian breeding habitat.
3) The access trail off Easthom Road, to:
    a. Assess the levels of public use and whether access is limited to the trail and not encroaching into surrounding vegetation.
    b. Document disturbance of the ephemeral stream crossing during high precipitation events and monitor degradation of the trail.

6.4 Public Access

Currently access to CMNR by the public is prohibited. Measures to increase the safe access to the millstones pools would involve building infrastructure and disturbance to the area that is unusual for an ITC nature reserve where management policies and conservation covenants are in place to keep the land in a natural state. Discussions between partners is ongoing, management options would be considered depending on the resulting disturbance they would cause to the site and the impacts they would have on the species present. Covenant

restrictions may have to be waived for structures to be built etc. before any activities can go forward and if funding allows.

1) Increase signage throughout CMNR to inform public safety of hazards present.
2) Determine feasibility of filling or covering millstone pools to reduce the risk of people or mammals falling into the pools, resulting in either injury or drowning.
    - Should this management action be implemented, description of the millstone geology and geometry should be documented by a Qualified Professional. It is recommended that the millstone pools are mechanically pumped dry prior to these assessments for proper photo documentation.
    - Any imported fill must be washed prior to use to ensure no invasive seeds and/or spores are introduced to the site.
    - Gravel must be coarse (<1" diameter) to ensure hydrology is not altered.
    - Gravel material may only fill the holes up to 60 cm below surface, and at least 30 cm of organic debris must be placed on gravels.
3) Construct a boardwalk across the ephemeral stream crossing the north end of the access trail off Easthom Road.

6.5 Signage

Signage can increase awareness of the safety concerns on CMNR and inform visitors who are unfamiliar with the site. Currently, there is signage at the lower lookout before the cliff face, denoting the approaching edge and cautioning public from coming too close. There is also signage at the corners of the property boundary to discourage the public from trespassing on adjacent private land. Additional signage for CMNR is recommended as follows:

1) Signage at the beginning of the unstructured path leading up to the millstone pools, cautioning the public about the danger of accessing this area. It is worth noting that this signage may have an opposite effect and encourage public access to a generally hidden area by making its location more obvious. Stakeholder discussion on signage of this area will resolve whether this type of signage should be implemented on CMNR.
2) If safety measures are addressed and CMNR is opened to the public, educational signage is recommended in appropriate areas to inform visitors of the unique historical values of the site.

6.6 Trail Use, Maintenance and Development

Current recommendations are subject to ongoing discussions between stakeholders on permitting public access. There is one main trail off Easthom Road allowing access to an area looking out over Descanso Bay. Should public access be eventually permitted in CMNR, it is recommended that a boardwalk be constructed where an ephemeral stream crosses the north end of the Easthom Road access trail. In the winter high flows, the area becomes increasingly muddy and will only deteriorate over years of public use.

6.7 Protection Initiatives for Sensitive Ecosystems and Species and Ecosystems at Risk

During the site visit for this management plan, no sensitive ecosystems and/or species at risk were observed. As mentioned in section 3.8, there is potential for five species of conservation of concern to use CMNR for critical breeding habitat: Northern Pygmy-owl, Band-tailed Pigeon, Evening Grosbeak, Northern Red-legged Frog, and the Western Toad.

Recommended protection initiatives for all of these species are one in the same – prevent disturbance of areas that are already ecologically progressing. Where disturbance must occur for the safety of the public, it must be done in a manner where disturbance (i.e., vegetation removal, public encroachment) is reasonably minimized as much as possible.

6.8 Ecological Restoration Options

The only recommended restoration activities to be conducted in CMNR are those addressing the Scotch Broom in the exposed area along the southern border. This is discussed further in Section 6.10.

6.9 Scientific Research/Education Opportunities

CMNR is a historical site with the potential for educational demonstration of Gabriola Island's industrial progression through the 20th century. The millstone pools and sandstone cliffs on the property are unique features that can be excellent visual aids if safety concerns can be adequately addressed. Observation of ecological succession of the millstone pools can aid research on natural functions and processes. The millstone pools will gradually become more densely vegetated, with increased quantities of organic substrate and moss cover. This will ultimately lead to more biodiversity, which can be noted over the years with signage as they become established.

6.10 Exotic and Invasive Species Management

There have been past observations of English Holly (*Ilex aquifolium*) and Spurge-laurel (Daphne *laureola*) on the property. Continuous monitoring of CMNR for these species is recommended, along with immediate removal upon observation. The main invasive species of concern, however, is Scotch Broom. Discussions will be required with the neighbouring landowner on activities to remove Scotch Broom, as the plants extend beyond the property boundary. Removal of Scotch broom is prescribed for two stages of the plant:

- Stems less than the diameter of a pencil should be pulled by hand from the base of the stem, and
- Stems larger than the diameter of a pencil should be cut at the base of the stem, approximately 1 inch below the surface, to avoid disturbance of soils.

Removal is recommended in the early spring, when the plants are in peak flower and their resources are allocated to above-ground structures as opposed to the roots. Following removal, annual removal of seedlings will be required until vegetation currently present grows to a height that will shade the area, or once planted native species have become established. Recommended native species in this area are grand fir (*Abies grandis*) and bigleaf maple (*Acer macrophyllum*). Plugs are not recommended in this area, as deer browsing will likely prevent establishment. Installment of 5-gallon pots is recommended, spaced approximately 3 m apart. Deer browsing fence around the planted trees is recommended for the first 2 years following planting.

6.11 Wildfire Risk Management (if applicable)

No threats due to wildfire were noted for consideration.

6.12 Climate Change Impacts and Management

Climate change is a management consideration that is becoming increasingly prevalent with regards to ecological conservation. The impacts of climate change include altering averages and extremes in temperature, wind, and precipitation events. Historical climate data show that from 1900-2013, the average annual temperature in the coastal regions of B.C. warmed by 0.6˚C to 0.8˚C, and it is projected that by the 2080s this will increase by an estimated 1.7˚C to 4.5˚C (BC MOE 2016). Although these may seem like minute differences at a glance, an increase of 5˚C was enough to melt the ice sheets covering earth in its latest glacial event 10,000 years ago. Temperature changes are intrinsically connected to precipitation and wind events, and therefore, can alter representative ecological communities in a given landscape. As changes in these variables occur, so will the ecological processes, and species assemblages that are encompassed by them.

Gabriola Island is entirely within the Coastal Douglas-fir moist maritime (CDFmm) biogeoclimatic zone. The effects of changing temperature and precipitation averages will vary across the region and over time, but CMNR will likely not experience any impacts that would warrant management considerations for a few decades. These impacts will likely be observed with changes in moisture regimes, and ultimately changes in the shape, and size of the polygons delineated in the ecosystem classification assessment. Signs of drought should be monitored for on a decadal basis in mature trees on SXNR, and if warranted, different or additional management actions may be implemented to address climate change impactts. No recommendations with regards to climate change are made at this time.

7 Action Items

7.1 Immediate Actions (1-2 years):

1. Support all partners, contractors and volunteers to complete cultural competency training in regard to reconciliation, knowledge and history of Coast Salish and Indigenous Peoples.
2. Engage with First Nations to ensure that the management plan is reflective of treaty, inherent rights, and the territories of each Nation.
3. Work in collaboration towards a Management Plan for Areas of Cultural Heritage, gathering and harvesting, and Sacred Significance with First Nations.
4. Conduct annual monitoring of CMNR to ensure covenant compliance and evaluate management considerations.
5. Develop and implement an invasive species management work plan to ensure establishment of Scotch Broom is appropriately addressed.

7.2 Short term Actions (3-5 years):

1. Continue discussion on public safety of the site with partners and possible ways forward.
2. Continue the implement an invasive species management work plan with planting of native species if funding allows.

7.3 Long term Actions (5+ years)

1. Implement any public safety measures decided with partners.

7.4 Ongoing or Annual Action Items

As recommendations for the property are to promote ecological succession, minimal maintenance items are required at this point. Ongoing action items include:

1. Monitoring for presence of invasive plants, and prompt removal.
2. Monitoring for public use and negligence (i.e., littering, encroaching beyond trails)

8 Conclusion

The Coats Millstone Nature Reserve is a site of unique historical value, with potential to provide high ecological values to a multitude of species including those currently of conservation concern. Ecological succession over the next number of decades will move this area into a designation of high-quality habitat for species that this report has documented to potentially use the area for breeding. Forest cover shading out areas in CMNR and creating opportunities for a more developed understorey to flourish will result in increased biodiversity due to the introduction of new microhabitats.

The prominent issue of the site is public safety, which resulted in its closure to public access in 2004. The exposed cliff edges and the deep millstone pools are currently a danger to the public with a high hazard for injury as a result of slipping and falling. Another issue of concern is the present of invasive plant species, of which management recommendations have been outlined in this report to appropriately address their presence to eradicate them from CMNR.

There are a number of management options (short- and long-term) that will be considered by the ITC, and other stakeholders, with regards to resolutions on public safety and ecological conservation.

9 References

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9.1 Appendix A –Photographic Documentation

Photo Location Map

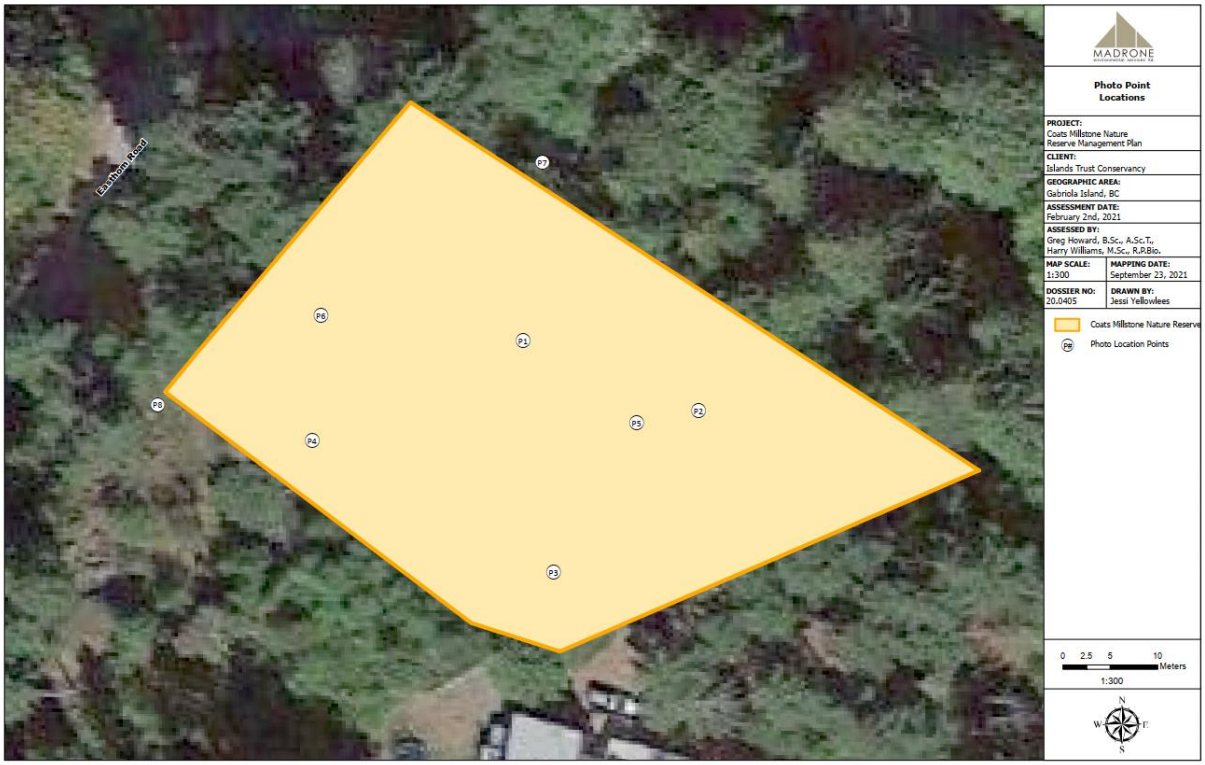

PHOTO STATION	LOCATION (UTM Coordinates [Zone, easting northing])	DIRECTION	PHOTO-GRAPHER	DATE YYYY-MM-DD	DESCRIPTION
P1a	10U 437363 5447358	N	GH*	2021-02-02	Millstone pools
P1b	10U 437363 5447358	W	GH	2021-02-02	Looking downslope from the top of the upper cliff edge where the millstone pools are.
P1c	10U 437363 5447358	E	GH	2021-02-02	Looking upslope at the congregation of millstone pools above the upper cliff edge
P2a	10U 437385 5447351	E	GH	2021-02-02	Wildlife Habitat Assessment #1
P2b	10U 437385 5447351	N	GH	2021-02-02	Wildlife Habitat Assessment #1
P2c	10U 437385 5447351	S	GH	2021-02-02	Wildlife Habitat Assessment #1

P2d	10U 437385 5447351	W	GH	2021-02-02	Wildlife Habitat Assessment #1
P3	10U 437370 5447334	SE	GH	2021-02-02	Wildlife Habitat Assessment #2 – looking at potentially future high-rated amphibian breeding habitat. Millstone pools are also located where water is observed.
P4a	10U 437341 5447349	E	GH	2021-02-02	Wildlife Habitat Assessment #3 – millstone tailings observed here.
P4b	10U 437341 5447349	N	GH	2021-02-02	Wildlife Habitat Assessment #3 - millstone tailings observed here.
P4c	10U 437341 5447349	S	GH	2021-02-02	Wildlife Habitat Assessment #3 – millstone tailings and Scotch broom observed here.
P4d	10U 437341 5447349	W	GH	2021-02-02	Wildlife Habitat Assessment #3 – Scotch Broom and cliff lookout in view.
P5	10U 437377 5447350	NE	GH	2021-02-02	Wildlife snag, potential to have future cavities for nesters.
P6	10U 437341 5447362	NE	GH	2021-02-02	Wildlife tree, currently has cavities that would suit smaller owls
P7	10U 437363 5447377	N	GH	2021-02-02	Ephemeral watercourse crossing access trail
P8	10U 437326 5447352	W	GH	2021-02-02	Looking towards Descanso Bay from the lower cliff edge

9.2 Appendix B – Community Engagement Survey Documentation

ISLANDS TRUST CONSERVANCY

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Community Engagement - Gabriola Island Management Plans

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We would like to hear your ideas and concerns regarding the long-term management of these special places...

S'ul-hween X'pey/Elder Cedar and Coats Millstone nature reserves

Islands Trust Conservancy acknowledges and respects that Gabriola Island is within the territory of the Coast Salish Peoples including Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, SEMYOME (Semiahmoo) First Nation, Snuneymuxw First Nation, Stz'uminus (Chemainus) First Nation, Ts'uubaa-asatx (Lake Cowichan) First Nation.

The S'ul-hween X'pey/Elder Cedar Nature Reserve (ECNR) is a 65-hectare protected area which holds some of the last remaining mature forest on Gabriola Island. Rocky outcrops, several interconnecting streams, and wetland complexes travel through the property. The diversity of landscapes provide habitat to a wide array of species, including those provincially designated as a 'species at risk'. Of the provincially designated species that have potential habitat on the property, presence of the following have been confirmed through surveys: the Red-legged Frog, Western Screech-Owl, Band-Tailed Pigeon, and Townsend's Big-eared Bat.

The Coats Millstone Nature Reserve (CMNR) is a 0.25-hectare protected area encompassing part of a ridge rising above Descanso Bay. The reserve is an old sandstone quarry. The different tiers of the ridge offer very different habitats for plants on the reserve. The young forest and water-filled millstone holes provide habitat for various birds and animals. The steep cliffs and deep millstone holes make this site very dangerous. The millstones occupy much of the upper ledge on the site and the moss-covered ground is slippery, leaving little space for walking, therefore CMNR has been closed to the public.

Islands Trust Conservancy's primary goal is to protect and nurture the sensitive ecosystems and natural values on this land. The information and actions required to achieve this goal and guide the management of the property are set out in a management plan that is updated every 10 years. We welcome community input and ask you to share your thoughts on the protection and long-term management of the S'ul-hween X'pey/Elder Cedar and Coats Millstone nature reserves.

Questionnaires can be completed online at https://www.surveymonkey.com/r/CoatsMillstone and https://www.surveymonkey.com/r/ECNR

The deadline to complete each survey is March 15, 2021.

There will be a webinar with information about the Coats Millstone Nature Reserve and the S'ul-hween X'pey/Elder Cedar Nature Reserve on February 22, 2021 at 2 p.m.

Register in advance for this webinar:

https://islandstrust.zoom.us/webinar/register/WN_08iJOhRaTe-sCgy8iYZSvg

After registering, you will receive a confirmation email containing information about joining the webinar.

Islands Trust Conservancy is committed to honouring the rich history of Indigenous stewardship in the lands and waters of the Islands Trust Area and to building mutually respectful relationships between Indigenous and non-Indigenous partners in conservation. In 2019, Islands Trust Conservancy passed a Reconciliation Declaration committing to building relationships to work to protect and manage the area and any cultural heritage sites in these nature reserves in a way that is reflective of treaty, inherent rights, and the territorial lands.

Page last updated: 18/02/21

News

- News Releases
- The Heron Newsletter
- Conservation Success Stories
- Press Room
  - Community Engagement - Salt Spring & Thetis Island Management Plans
  - Community Engagement - Gabriola Island Management Plans

Conservation Success Stories: The Kikuchis and Frog Song Forest

Arthur Kikuchi honoured his parents and his family's future generations by using his inheritance to purchase and protect a wetland and forest on North Pender Island.

read more

9.3 Public information provided on the ITC website – (February/March 2021)

ISLANDS TRUST CONSERVANCY

Coats Millstone Nature Reserve Management Plan Questionnaire

CMNR Questionnaire Open until March 15, 2021

Islands Trust Conservancy acknowledges and respects that Gabriola Island is within the territory of the Coast Salish Peoples including Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, SEMYOME (Semiahmoo) First Nation, Snuneymuxw First Nation, Stz'uminus (Chemainus) First Nation, Ts'uubaa-asatx (Lake Cowichan) First Nation.

The Coats Millstone Nature Reserve (CMNR) is a 0.25 hectare protected area encompassing part of a ridge rising above Descanso Bay. The reserve is an old sandstone quarry. The different tiers of the ridge offer very different habitats for plants on the reserve. The young forest and water-filled millstone holes provide habitat for various birds and animals. The steep cliffs and deep millstone holes make this site very dangerous. The millstones occupy much of the upper ledge on the site and the moss-covered ground is slippery, leaving little space for walking, therefore CMNR has been closed to the public.

The Islands Trust Conservancy's primary goal is to protect and nurture the sensitive ecosystems and natural values on this land. The information and actions required to achieve this goal and guide the management of the property are set out in a management plan that is updated every 10 years. We welcome community input and ask you to share your thoughts on the protection and long-term management of the Coats Millstone Nature Reserve.

1. Are you a resident of Gabriola Island?

- ◯ Yes, I live on north Gabriola Island
- ◯ Yes, I live mid-island
- ◯ Yes, I live on south Gabriola Island
- ◯ No, but I own property on Gabriola Island
- ◯ No, I'm a visitor

2. Have you ever visited the Coats Millstone Nature Reserve? If so, how often?

- ○ No, never
- ○ Once
- ○ A few times
- ○ A few times per year
- ○ Once a month or more

3. If you have visited Coats Millstone Nature Reserve before, what did you do there?

- ☐ Hiking/walking
- ☐ Wildlife viewing
- ☐ Dog walking
- ☐ Other (please specify)

4. Please list any wildlife and unique plant species you have seen in or near Coats Millstone Nature Reserve:

5. What do you believe to be the most important values of nature reserves? (choose three)

- ☐ Protection of habitat for at-risk species
- ☐ Ecosystem services (e.g. clean water and air, erosion control, groundwater recharge, etc.)
- ☐ Recreational opportunities
- ☐ Education and research opportunities
- ☐ Tourism
- ☐ Aesthetic appeal
- ☐ Conservation for the sake of the intrinsic value of nature
- ☐ Other (please specify)

6. What activities do you believe are incompatible with the protection of natural features, and should not be allowed within Coats Millstone Nature Reserve?

7. What do you feel could be the greatest threat to the health of this nature reserve, and should be the highest management priority for the Islands Trust Conservancy?

8. Due to the steep cliffs and slippery terrain with deep, water filled millstone holes there are no public trails apart from the pre-existing trail to the view point. Do you have any thoughts on public access?

9. Please provide any other relevant information that will help us make the best management decisions for Coats Millstone Nature Reserve.

10. Please share with us any history you know about this property or any knowledge you have about unique cultural or other special features on the property.

11. If you would like to receive periodic updates from the Islands Trust Conservancy on this and other conservation projects on the islands, please provide your name and email address:

9.4 Appendix C – Engagement Letter to Adjacent Landholders

ISLANDS TRUST CONSERVANCY
Protecting Islands in the Salish Sea

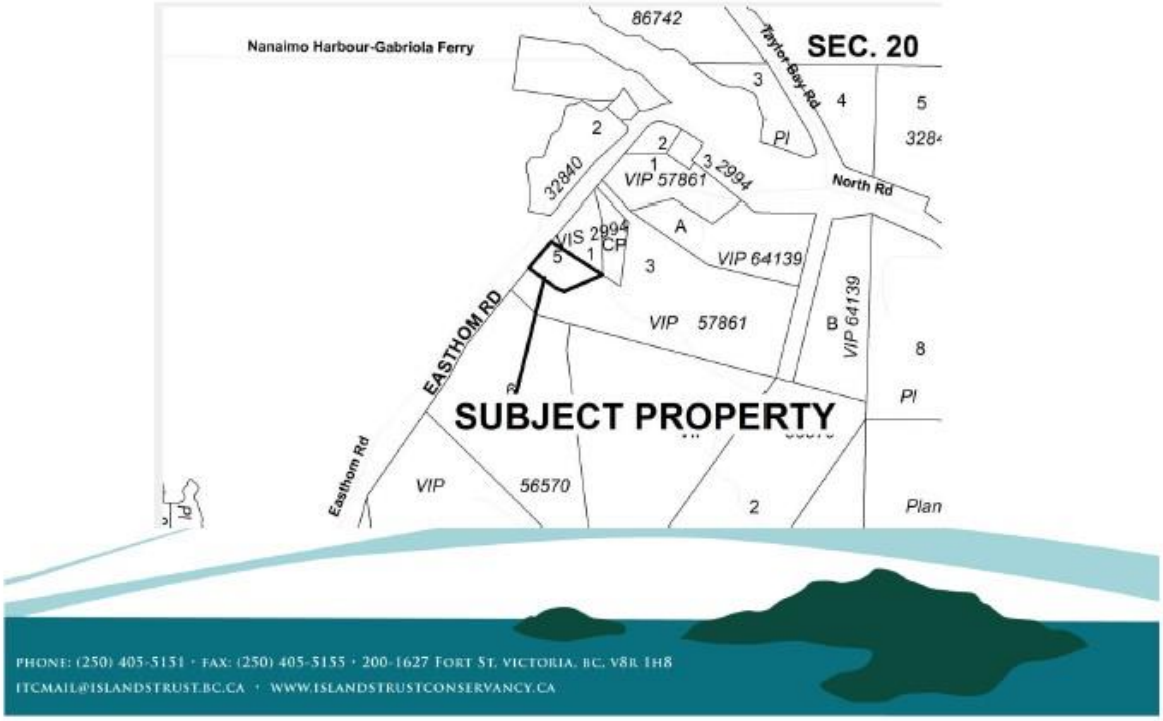
February 5, 2021

Dear Neighbour,

The Islands Trust Conservancy is updating the management plan to guide management of the Coats Millstone Nature Reserve (CMNR) for the next 10 years and we are interested in hearing from you.

Islands Trust Conservancy acknowledges and respects that Gabriola Island is within the territory of the Coast Salish Peoples including Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, SEMYOME (Semiahmoo) First Nation, Snuneymuxw First Nation, Stz'uminus (Chemainus) First Nation, Ts'uubaa-asatx (Lake Cowichan) First Nation.

The Coats Millstone Nature Reserve (PID: 018-560-601, Lot 5, Section 20, Gabriola Island, Nanaimo District, Plan VIP57861) is a 0.25 hectare encompassing part of a ridge rising above Descanso Bay. CMNR is an old sandstone quarry with steep tiers on a cliff. The young forest and water-filled millstone holes provide habitat for various birds and animals, but the steep cliffs and deep millstone holes make this site very dangerous and CMNR has been closed to the public.



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The Islands Trust Conservancy will work in partnership with the Gabriola Historical & Museum Society and Nanaimo Area Land Trust who hold a conservation covenant on the Nature Reserve. There are restrictions on the use of the property, outlined in the covenant, that have been put in place to protect the native plants and animals within the reserve.

Your input is requested for the development of the next Coats Millstone Nature Reserve Management Plan. As a neighbour of the reserve, we would like to hear your ideas and concerns regarding the long-term management of this special place.

The enclosed questionnaire can be:

- completed online at https://www.surveymonkey.com/r/CoatsMillstone or through our website: http://www.islandstrustconservancy.ca;
- returned by mail to the Victoria office at 200 – 1627 Fort Street, Victoria, BC V8R 1H8; or,
- dropped off in person at the Islands Trust office on Gabriola Island at 700 North Road.

The deadline to complete the survey is March 15, 2021.

There will be a webinar with information about the Coats Millstone Nature Reserve and the S'ul-hween X'pey/ Elder Cedar Nature Reserve on February 22, 2021 at 2pm.

Register in advance for this webinar:
https://islandstrust.zoom.us/webinar/register/WN_08iJOhRaTe-sCgy8iYZSvg
After registering, you will receive a confirmation email containing information about joining the webinar.

Thank you for taking the time to share your ideas regarding management of the Coats Millstone Nature Reserve. For more information, please contact me at the phone number or email listed below.

Sincerely,

Nuala Murphy
Property Management Specialist, Islands Trust Conservancy
250-405-5193
nmurphy@islandstrust.bc.ca

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9.5 Appendix D – First Nations Engagement Letter

February 11, 2021

Dear Chief and Council,

Re: Coats Millstone and S'ul-hween X'pey/ Elder Cedar Nature Reserve Management Plan

The Islands Trust Conservancy, through its work as a land trust, is drafting a management plan for the Coats Millstone and S'ul-hween X'pey/ Elder Cedar Nature Reserves on Gabriola Island.

The nature reserves are within your First Nations treaty and/or territorial lands and waters and we want to ensure that the direction of the management plans is reflective of both reconciliation and conservation goals. At this time, ITC would like to work with you to understand the cultural significance and use of the area so that these values can also be preserved and protected—now and into the future. We understand that the cultural significance of this land may be confidential and we would work with you to ensure that the management plan reflects this significance appropriately. Acknowledging the importance of naming and recognition, if there is signage, names, or place names that should be used for these areas please let us know.

Coats Millstone Nature Reserve (PID: 018-560-601, Lot 5, Section 20, Gabriola Island, Nanaimo District, Plan VIP57861) is a 0.25 hectare encompassing part of a ridge rising above Descanso Bay. Coats Millstone Nature Reserve (CMNR) is an old sandstone quarry with steep tiers on a cliff. The young forest and water-filled millstone holes provide habitat for various birds and animals, but the steep cliffs and deep millstone holes make this site very dangerous and CMNR has been closed to the public.

S'ul-hween X'pey/Elder Cedar Nature Reserve (PID: 026-664-453, Block A, Section 16, Gabriola Island, Nanaimo District) is an 65.4-hectare (161.5-acre) protected area located in central Gabriola Island, just south of the northern shoreline. S'ul-hween X'pey Nature Reserve holds some of the last remaining mature forest on Gabriola Island. Rocky outcrops, several interconnecting streams and wetland complexes travel through the property. The diversity of landscapes provide habitat to a wide array of species, presence of the following provincially designated species designated as a 'species at risk' have been confirmed through previous surveys: the Red-legged Frog, Western Screech-Owl, Band-Tailed Pigeon and Townsend's Big-eared Bat.

Islands Trust Conservancy would like to undertake an archaeological review or traditional use study in collaboration with you. Islands Trust Conservancy passed a Reconciliation Declaration, committing to building relationships to work with your Nation to protect and manage the area and any cultural heritage sites in these nature reserves in a way that is reflective of treaty, inherent rights, and the territorial lands of your Nation.

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Thank you for considering our request to work together. Please contact me at the number or email listed below. Thank you for your kind consideration.

Sincerely,

Nuala Murphy
Property Management Specialist
Islands Trust Conservancy
250-405-5193 | nmurphy@islandstrust.bc.ca

Islands Trust Conservancy's Victoria office is located in Coast Salish territory and we acknowledge with respect the BOḰEĆEN, Cowichan Tribes, Halalt, Homalco, K'ómoks, Klahoose, Ts'uubaa-asatx, Lək̓ ʷəŋən (SXIMEŁEŁ, Songhees, T'Sou-ke), Lyackson, MÁLEXEŁ, Penelakut, Qualicum, Scia'new, səl̓ilwətaʔɬ, SEMYOME, shíshálh, Snaw-naw-as, Snuneymuxw, Sḵwx̱wú7mesh, S̱TÁUTW̱, Stz'uminus, Tla'amin, scəẃaθən məsteyəxʷ, We Wai Kai, Wei Wai Kum, W̱JOŁEŁP, W̱SIḴEM, and xʷməθkʷəy̓əm territories in which we live and work.

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