SEAVIEW CEMETERY EXPANSION

ENVIRONMENTAL OVERVIEW ASSESSMENT

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LIST OF ACRONYMS

BC	British Columbia
CDC	Conservation Data Centre
DPA	Development Permit Area
EMP	Environmental Management Plan
CWHdm	Coastal Western Hemlock Dry Maritime
CWHxm1	Coastal Western Hemlock Very Dry Maritime Eastern Variant
EOA	Environmental Overview Assessment
QEP	Qualified Environmental Professional
SARA	*Species at Risk Act*
SCRD	Sunshine Coast Regional District

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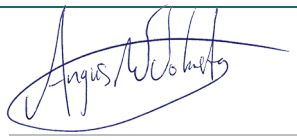
AMENDMENT RECORD

This report has been issued and amended as follows:

Issue	Description	Date	Approved by	
1	First version of Seaview Cemetery Expansion Project - Environmental Overview Assessment	20240830		
			Angus Johnston Project Director	Lianne Leblond Project Manager

1.0 INTRODUCTION

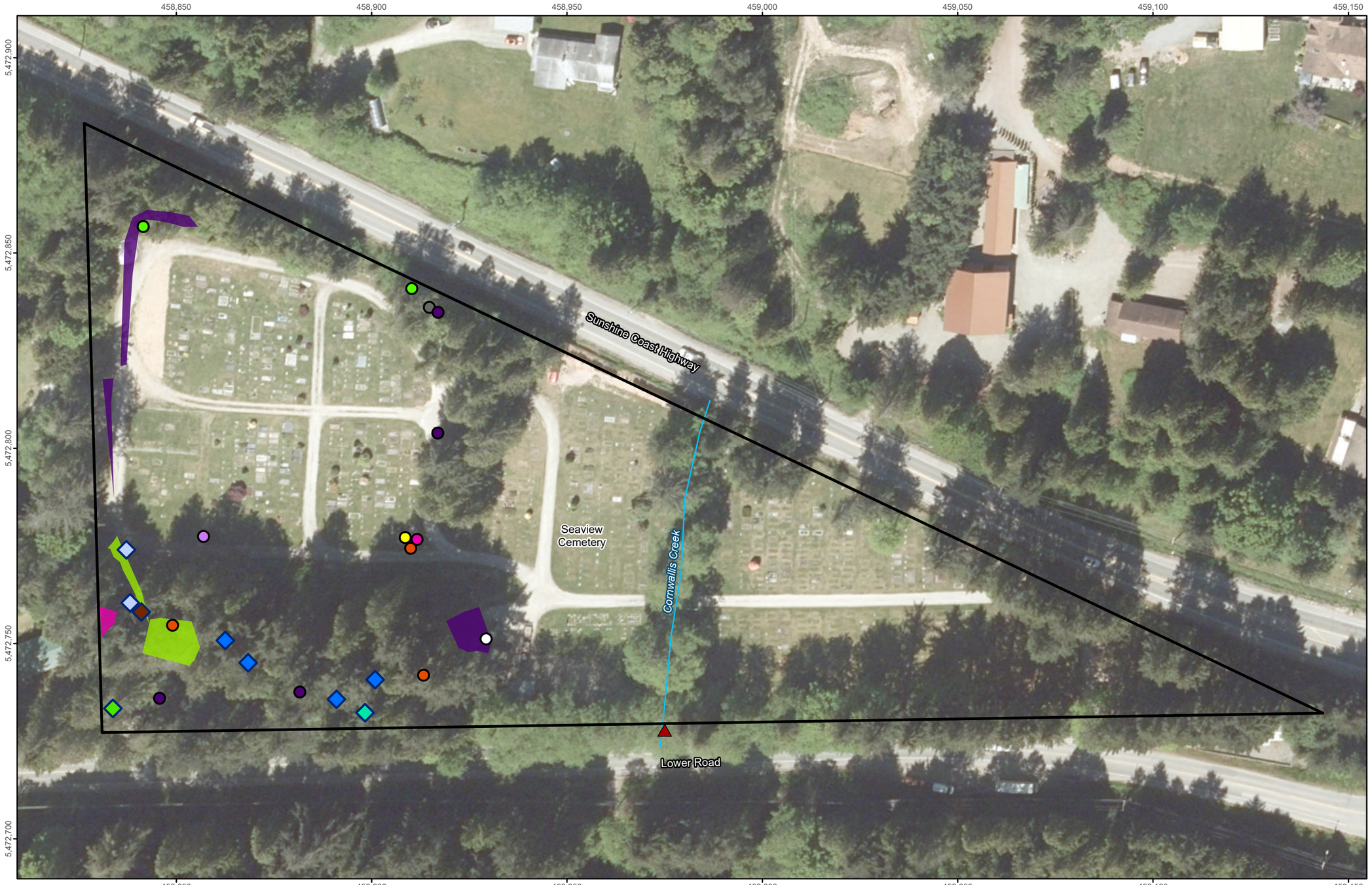
The Sunshine Coast Regional District (SCRD) intends to extend the operational life of the Seaview Cemetery (the Cemetery) located within the community of Roberts Creek, British Columbia (BC). The Cemetery is situated between the Sunshine Coast Highway and Lower Road with forest and suburban development in the surrounding area. The Cemetery is 2.3 hectares in size and contains casket burials, in-ground cremations, and above-ground columbarium niches. Extension of the operational life of the Cemetery would involve redeveloping existing areas and establishing a new section on the undeveloped forest lands in the southwest of the property (the Project).

The proposed Project will be implemented in three parts (see Reference Concept Plan in Appendix A1):

- **Part One – Full Burial Plot (Area 1):** will include infilling of the Cemetery roadways and paths to accommodate additional traditional full burial plots.
- **Part Two – Cremation (Area 2):** will be expanded to include columbaria and a scattering garden.
- **Part Three – Expansion (Area 3):** will be developed to accommodate additional burial areas, the operations yard, and a public washroom.

Lees & Associates, the Design and Construction Administrator for the Project, has retained Hatfield Consultants (Hatfield) to prepare this Environmental Overview Assessment (EOA) to describe existing environmental values of the Cemetery, provide regulatory context for the Project, and recommend mitigation measures to avoid or reduce the potential for adverse effects of the planned works.

Figure 1 Seaview Cemetery Expansion Project location and environmental values.



Legend

- Cemetery Boundary
- Watercourse
- Barrier to Fish Passage

Wildlife Features

- Potential Denning Site
- Prey Remains
- Squirrel Midden
- Subterranean Tunnel Opening
- Woodpecker Use

Non-native Species

- Cherry Laurel
- Common Foxglove
- English Holly
- Field Bindweed
- Himalayan Blackberry
- Periwinkle Species
- Scotch Broom
- Yellow Archangel
- English Ivy
- Himalayan Blackberry
- Periwinkle Species

0 5 10 20 30 m

N

Scale: 1:1,000

Projection: NAD 1983 UTM Zone 10N

Data Sources:

a) Wildlife features, non-native species, and barrier to fish passage, Hatfield 2024.
b) Cemetery boundary, Sunshine Coast Regional District 2021.
c) Watercourse digitized based on background imagery (see Data Source C), Hatfield 2024.
d) Background, 10 cm image, 11 May 2021, Esri Online Service.

Hatfield
CELEBRATING 50 YEARS

Seaview Cemetery Expansion Project

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2.0 DESKTOP ASSESSMENT

2.1 METHODS

A comprehensive review of online information sources was conducted to identify existing and potential environmental values within the Cemetery and within a 500 m radius of the Cemetery (the Study Area). This assessment of the Study Area aimed to contextualize the Cemetery within the broader landscape, including its connectivity to protected areas, and to identify nearby environmental values that might extend into the Cemetery but are not reflected in online databases. Environmental values of interest encompassed plant species, wildlife and wildlife habitats, species at risk, as well as fish and fish habitats. Data sources evaluated as part of the desktop assessment included:

- BC Conservation Data Centre (CDC) iMap, a provincially maintained database which includes species occurrences and mapped habitat values, including critical habitat (BC CDC 2024a);
- BC Species and Ecosystem Explorer, a provincially maintained database which includes species at risk listings and occurrences (BC CDC 2024b);
- InvasivesBC, a provincially maintained database for invasive species occurrences (MOF 2024);
- Community Mapping Network, a public database which maps environmental values:
    - BC Great Blue Herons Atlas, with known great blue heron (*Ardea herodias fannini*) nest locations (CMN 2018a);
    - Wildlife Tree Stewardship Atlas, with known bald eagle (*Haliaeetus leucocephalus*) and osprey (*Pandion haliaetus*) nest locations (CMN 2018b); and
- Global Biodiversity Information Facility (GBIF 2024) which retrieved data from citizen science sites eBird, Pl@ntNet, and research-grade observations from iNaturalist.

The list obtained from the BC Species and Ecosystem Explorer was refined to include only those species that are provincially Red- or Blue-listed or federally listed as Threatened or Endangered under Schedule 1 of the *Species at Risk Act*, SC 2002, c 29 (*SARA*) and known to or believed to potentially occur within the Study Area based on existing, local habitat conditions.

2.2 VEGETATION

The Study Area is primarily in the eastern variant of the Coastal Western Hemlock Very Dry Maritime (CWHxm1) with a small portion in the Coastal Western Hemlock Dry Maritime (CWHdm) biogeoclimatic zones (BC CDC 2024a).

The CWHxm and CWHdm are low-elevation subzones with warm, dry summers and moist, mild winters (Green and Klinka 1994). Zonal forests are similar between the two subzones (Green and Klinka 1994). The CWHxm is Douglas-fir (*Pseudotsuga menziesii*) and western hemlock (*Tsuga heterophylla*) dominant with minor amounts of western redcedar (*Thuja plicata*) and an understory of salal (*Gaultheria shallon*), dull Oregon-grape (*Mahonia nervosa*), and red huckleberry *(Vaccinium parvifolium*; Green and Klinka 1994).

The CWHdm is dominated by Douglas-fir, western redcedar, and western hemlock and the understory is salal and red huckleberry (Green and Klinka 1994).

Species at Risk

Results of the desktop assessment include one occurrence of the provincially Blue-listed redwood sorrel (*Oxalis oregana*) within the Study Area, approximately 300 m southeast of the Cemetery (GBIF 2024).

Non-Native Species

Non-native species are those that have been moved beyond their natural range because of human activity (BC CDC 2024a). Invasive species are non-native species that negatively impact BC's environment, people and/or economy. Noxious species are invasive species that must be controlled under the *Weed Control Act,* RSBC 1996, c 487, and are listed under Schedule A of the Weed Control Regulation BC Reg 66/85. Eight non-native species including one Provincially Noxious species, and three Invasive Plant of Concern were previously recorded in the Study Area (Table 1).

Table 1 Non-native vegetation documented within the Study Area (GBIF 2024 and MOF 2024).

Common Name	Scientific Name	Classification[1]
Japanese knotweed	*Reynoutria japonica* var. *japonica*	Provincially Noxious
Himalayan blackberry	*Rubus armeniacus*	Invasive Plant of Concern
Orange-red king devil (orange hawkweed)	*Pilosella aurantiaca/ Hieracium aurantiacum*	Non-native
St. John's-wort	*Hypericum perforatum*	Invasive Plant of Concern
Hairy cat's ear	*Hypochaeris radicata*	Non-native
Scotch broom	*Cytisus scoparius*	Invasive Plant of Concern
horse chestnut	*Aesculus hippocastanum*	Non-native
Common foxglove	*Digitalis purpurea ssp. purpurea*	Non-native

[1] Noxious species are those listed under Schedule A of the Weed Control Regulation. Invasive Plants of Concern as listed by the Invasive Species Council of BC and the Inter-Ministry Invasive Species Working Group (ISCBC and IMISWG 2023)

2.3 WILDLIFE AND WILDLIFE HABITAT

No mapped great blue heron colonies (CMN 2018a), bald eagle nests, or osprey nests (CMN2018b) overlap with the Study Area.

Species at Risk

No critical habitat for federal species at risk overlaps with the Study Area (BC CDC 2024a), however, there is potential for nine species at risk to occur in the Study Area (Table 2).

Table 2 Wildlife species at risk with the potential to occur in the Study Area (BC CDC 2024b).

Common Name	Scientific Name	BC List[1]	SARA Status[2]
Avian			
Band-tailed pigeon	*Patagioenas fasciata*	Blue	Special Concern
Barn owl	*Tyto alba*	Blue	Threatened
Common nighthawk	*Chordeiles minor*	Blue	Special concern
Great blue heron, *fannini* subspecies	*Ardea herodias fannini*	Blue	Special Concern
Mammalian			
Hoary bat	*Lasiurus cinereus*	Blue	-
Little brown myotis	*Myotis lucifugus*	Blue	Endangered
Townsend's big-eared bat	*Corynorhinus townsendii*	Blue	-
Yuma myotis	*Myotis yumanensis*	Blue	-
Amphibian			
Northern red-legged frog	*Rana aurora*	Blue	Special Concern

[1] BC CDC 2024a; Red = Extirpated, Endangered, or Threatened; Blue= Special Concern, Yellow = Not at Risk.

[2] ECCC 2014; Endangered = wildlife species that is facing imminent extirpation or extinction; Threatened = a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction; Special Concern = a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

Band-tailed Pigeon

Band-tailed pigeon (*Patagioenas fasciata*) is provincially Blue-listed and federally listed as a species of Special Concern. This species nests in temperate conifer forests with fruiting shrubs (Keppie and Braun 2020) but can also nest in habitats associated with humans such as forest edges, city parks, wooded groves, open bushland, golf courses, and orchards (Campbell et al. 1990).

Barn Owl

Barn owl (*Tyto alba*) is provincially Blue-listed and federally listed as threatened (BC CDC 2024a). Barn owl feeds on small mammals, particularly voles, and require open habitats including grasslands, meadows, agricultural land, and grassy marshes that will support a healthy small mammal population (BC CDC 1995; BC MOE 2013; BC MOE 2014). Barn owl is heavily associated with agricultural lands and predominantly nests in anthropogenic (human-made) structures like barns, silos, hangars, and water towers (BC CDC 1995; BC MOE 2013; BC MOE 2014).

Common Nighthawk

Common nighthawk (*Chordeiles minor*) is a provincially Blue-listed (BC CDC 2024a) migrant species that breed in BC (BC CDC 2022). Within their breeding range, they require open ground for nesting (e.g., sandy areas, open forests, grasslands, gravelly/rocky outcrops, and cultivated landscapes; Environment Canada 2016). They also require open habitats to forage on flying insects and favour open water and artificial lighting (Environment Canada 2016).

Great Blue Heron

The great blue heron, *fannini* subspecies is a provincially Blue-listed species which has been observed in the Study Area (GBIF 2024). They are a colony nesting species that typically nest in trees near their primary foraging sites which include waterbodies of all sizes (Vennesland and Butler 2020). They tend to avoid areas with anthropogenic disturbance but have been known to succeed in areas with high human use (Vennesland and Butler 2020).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is a provincially Blue-listed (BC CDC 2024a) solitary species associated with forested and grassland habitats (Lausen et al. 2022). This species selects sites with canopy cover and open flight space below (COSEWIC 2023). They roost in the foliage of coniferous and deciduous trees (Lausen et al. 2022) that have a large diameter and height compared to trees in the rest of the stand (COSEWIC 2023). Foraging occurs at or above the tree canopy or in forest clearings and fields (COSEWIC 2023).

Little Brown Bat

The little brown bat (*Myotis lucifugus*) is a provincially Blue-listed and federally endangered species (BC CDC 2024a). Summer roosts for this species include dead trees, cliffs, rock crevices, mines, and bridges, but are often associated with buildings for summer roosting and often seek out warmer sites for maternity roosts (i.e., a non-winter roost used by females capable of reproduction; BC MOE 2016, Lausen et al. 2022). Forage sites are often associated with forest and forest edge habitats near water where they can both drink and feed (Lausen et al. 2022).

Townsend's Big-eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is provincially Blue-listed (BC CDC 2024a). Their summer roosts include large tree hollows, caves, rock crevices, abandoned mines and buildings (BC MOE 2016, Lausen et al. 2022). Maternity roosts are often in cooler structures like abandoned buildings with access to ceilings and cellars. Townsend's big-eared bat use riparian and other open habitats (e.g., pastures, fields, and road corridors) to forage (Lausen et al. 2022).

Yuma Myotis

The yuma myotis (*Myotis yumanensis*) is a provincially Blue-listed bat species (BC CDC 2024a). Their summer roost sites include dead trees, rock crevices, mines, bridges, and often use buildings close to water (BC MOE 2016, Lausen et al. 2022). Foraging is associated with lakes and rivers and this species will travel away from their roosts to access these foraging sites (Lausen et al. 2022).

Northern Red-legged Frog

The northern red-legged frog (*Rana aurora*) is provincially Blue-listed (BC CDC 2024a). Breeding habitats for the northern red-legged frog are wetlands with abundant emergent vegetation and forest cover (BC MOE 2015). Adults do not stay at breeding sites and use moist terrestrial habitats with canopy closure, loose soils, coarse woody debris, and leaf litter (BC MOE 2015).

2.4 FISH AND FISH HABITAT

One watercourse was identified within the Study Area: Cornwallis Creek. Cornwallis Creek flows through the Cemetery, from north to south (see Figure 1 and Appendix A1). The Strait of Georgia is approximately 600 m south of the Cemetery, and separated by residential properties and treed areas. Two other creeks occur within 1 km of the Study Area; one small un-named creek with headwaters on southeast of the Cemetery, and Smales Creek, approximately 1 km east of the Cemetery (SCRD 2023). Cornwallis Creek is perennial and discharges into the Strait of Georgia, with its headwaters on Mt. Elphinstone (SCRD 2023).

No known fish occurrences, including fish species at risk, or fish habitat values are recorded in the Study Area (BC CDC 2024a). No information was available on fish species with potential to occur in Cornwallis Creek.

3.0 FIELD ASSESSMENT

3.1 METHODS

A field assessment was carried out within the Cemetery, specifically focusing on areas where project activities may affect environmental values, while considering the context of the Study Area as established by the desktop assessment. The field assessment was performed by a Hatfield biologist on August 9, 2024. During the assessment, observations and documentation were made regarding vegetation, wildlife, wildlife habitats, fish, and fish habitat. These findings have been summarized below.

3.2 VEGETATION

Vegetation within the Cemetery varies among the three areas (refer to Section 1.0) and contains a mix of native and non-native species (Table 3). No noxious plants were observed in the Cemetery.

Table 3 Vegetation species observed at the Cemetery (August 9, 2024).

Common Name	Scientific Name	Status[1]	Area
Bigleaf maple	*Acer macrophyllum*	Native	2, 3
Black gooseberry	*Ribes lacustre*	Native	3
Bracken fern	*Pteridium aquilinum*	Native	1, 2, 3
Broad-leaved starflower	*Lysimachia latifolia*	Native	2, 3
Cherry laurel	*Prunus laurocerasus*	Non-native	2
Cherry species	*Prunus* sp.	-	1
Cleaver species	*Galium* sp.	-	3
Coast Douglas-fir	*Pseudotsuga menziesii* var. *menziesii*	Native	1, 2, 3
Coastal red elderberry	*Sambucus racemosa* var. *arborescens*	Native	3
Common foxglove	*Digitalis purpurea* ssp. *purpurea*	Native	3
Cutleaf evergreen blackberry	*Rubus laciniatus*	Non-native	1
English holly	*Ilex aquifolium*	Non-native	3
English ivy	*Hedera helix*	Non-native	3
FIELD BINDWEED	*Convolvulus arvensis*	Non-native	3
GRAND FIR	*Abies grandis*	Native	3
Himalayan blackberry	*Rubus armeniacus*	Non-native	1, 3
Lady fern	*Athyrium filix-femina* var. *cyclosorum*	Native	3
Mint species	*Mentha* sp.	-	1
Mountain ash species	*Sorbus* sp.	-	2
Pacific bleeding heart	*Dicentra formosa* ssp. *Formosa*	Native	3
Pearly everlasting	*Anaphalis margaritacea*	Native	2
Periwinkle species	*Vinca* sp.	Non-native	3

[1] Non-native = species that have been moved beyond their natural range as a result of human activity.

Table 3 (Cont'd)

Common Name	Scientific Name	Status[1]	Area
Red alder	*Alnus rubra*	Native	2
Red clover	*Trifolium pratense*	Non-native	1
Robert's geranium	*Geranium robertianum*	Non-native	3
Salal	*Gaultheria shallon*	Native	2, 3
Scotch broom	*Cytisus scoparius*	Non-native	1, 2
Sword fern	*Polystichum munitum*	Native	2, 3
Tall Oregon-grape	*Mahonia aquifolium*	Native	3
Thimbleberry	*Rubus parviflorus*	Native	1, 3
Trailing blackberry	*Rubus ursinus*	Native	1, 2, 3
Western hemlock	*Tsuga heterophylla*	Native	2
Western redcedar	*Thuja plicata*	Native	1, 2, 3
Yarrow	*Achillea millefolium*	Non-native	1, 3
Yellow archangel	*Lamium galeobdolon*	Non-native	3

[1] Non-native = species that have been moved beyond their natural range as a result of human activity.

Area 1: Full Burial Plots

Area 1 includes Infill Area A, B, and C (see Appendix A1). Infill Area A is bordered by young mixed forest to the south (see Photo 1) and Cornwallis Creek to the east (see Photo 2). Riparian vegetation along this portion of the creek was minimal but contained some trees and ground cover (see Photo 2). Infill Area B was an unvegetated gravel road between the current burial plots. Infill Area C was maintained grass and gravel road (see Photo 3). To the north and west of Infill Area C was a young, dense western redcedar and coast Douglas-fir forest with primarily red alder (*Alnus rubra)* saplings and non-native species in the understory.

Photo 1 **Forest adjacent to Infill Area A as seen from Lower Road.**

Photo 2 **Cornwallis Creek observed flowing north to south through the Cemetery.**

Photo 3 Overview of Infill Area C.

Area 2: Cremation

Area 2 contained a small, young forest, maintained grasses, and gravel roads (see Photo 4 and Photo 5). The forest was primarily western redcedar with an understory of salal, red huckleberry, bracken fern (*Pteridium aquilinum*), and trailing blackberry (*Rubus ursinus*). Branches were scattered on the forest floor, but there was no coarse woody debris (CWD) present. Non-natives were present (Figure 1), but not in highly dense patches.

Photo 4 Forest structure observed in Area 2.

Photo 5 Forest, maintained grasses, and gravel road observed in Area 2.

Area 3: Expansion

Area 3 was a coniferous forest dominated by large (i.e., approximately 60 cm diameter at breast height [DBH]) western redcedar and coast Douglas-fir (*P. menziesii* var. *menziesii*) trees with a relatively open and diverse understory (see Photo 6; Table 3). Salmonberry (*Rubus spectabilis*) and red huckleberry were dominant in the shrub layer and sword fern (*Polystichum munitum*), trailing blackberry, and broad-leaved starflower (*Lysimachia latifolia*) were dominant herbaceous species. The understory in the northwestern portion was denser (see Photo 7) and contained more non-native species, including English ivy (Hedera

helix), periwinkle (*Vinca* sp.), and Himalayan blackberry (*Rubus armeniacus*; see Photo 8 and Photo 9; Figure 1). There was a lack of CWD and snags in Area 3.

Photo 6 **Typical forest structure observed in Area 3.**

Photo 7 **Denser understory observed in the northwestern portion of Area 3.**

Photo 8 **English ivy observed established in the northwestern portion of Area 3.**

Photo 9 **Himalayan blackberry observed along the eastern edge of Area 3.**

3.3 WILDLIFE AND WILDLIFE HABITAT

Area 1: Full Burial Plots

Area 1 contained minimal habitat for wildlife use, but vegetated portions could provide connectivity to the surrounding landscapes. No wildlife or wildlife signs, including nests with year-round protection[1], were observed in Area 1. Avian species may nest in vegetated areas along the perimeters and in open grassy and gravel areas; however, regular maintenance (i.e., mowing) and foot and vehicle traffic on paths may deter nesting.

[1] Year-round protection awarded to select species under the Migratory Bird Regulations, 2022, SOR/2022-105 and/or the *Wildlife Act*, RSBC 1996, c488.

Area 2: Cremation

Area 2 is small but may provide connectivity for wildlife to other vegetated areas surrounding the Cemetery. Trees, shrubs, and berry- and seed-producing plants can provide nesting and foraging opportunities for avian species. No nests with year-round protection[1] were observed, but larger trees (i.e., greater than 40 cm DBH) could provide potential nesting opportunities for pileated woodpeckers (*Dryocopus pileatus*) and evidence of feeding was observed on a snag (see Photo 10). As with Area 1, avian species may use open grassy and gravel areas for nesting, but regular maintenance and foot and vehicle traffic on paths may deter nesting. Dense ground cover and berry- and seed-producing plants could provide foraging and security cover for small mammals, but no signs of small mammals (e.g., scat or subterranean tunnel openings) were observed.

Photo 10 Evidence of woodpecker feeding observed in Area 2.

Area 3: Expansion

Area 3 contained a range of wildlife habitat features that could support various species (Table 4). Area 3 had nesting and foraging habitat for avian species, including mature trees, shrubs, and berry- and seed-producing plants. A few bird species were identified (Table 4) and evidence of use by sapsuckers was observed on trees along the southern portion of Area 3 (see Photo 11; Figure 1). No nests with year-round protection[1] were observed, but larger trees (i.e., greater than 40 cm DBH) could provide potential nesting opportunities for pileated woodpeckers.

There was limited CWD to support small- and medium-sized mammals, however, herbaceous ground cover and berry- and seed-producing plants could provide foraging, thermal, and security cover. Numerous potential denning sites were observed, but did not have evidence of recent use (e.g., fur, disturbed substrate, claw marks, vegetation, prey remains, or scat) and all had cobwebs across the entrances (see Photo 12; Figure 1). Two squirrel middens (i.e., discarded cone scales) were present (Figure 1), but no dreys (nest sites) were observed. A mule deer (*Odocoileus hemionus*) doe and fawn were observed passing through the area (see Photo 14). The doe opportunistically browsed vegetation as she travelled but neither stopped to feed as they passed through the area.

Table 4 Wildlife species observed in Area 3 of the Cemetery (August 9, 2024).

Common Name	Scientific Name	BC List[1]	SARA Status[2]
Avian			
Black-capped chickadee	*Poecile atricapillus*	Yellow	-
Brown creeper	*Certhia americana*	Yellow	-
Cedar waxwing	*Bombycilla cedrorum*	Yellow	-
Common raven	*Corvus corax*	Yellow	-
Red crossbill	*Loxia curvirostra*	Yellow	-
Red-breasted nuthatch	*Sitta canadensis*	Yellow	-
Red-breasted sapsucker[4]	*Sphyrapicus ruber*	Yellow	-
Mammalian			
Douglas's squirrel[3]	*Tamiasciurus douglasii*	Yellow	-
Mule deer	*Odocoileus hemionus*	Yellow	-
Gastropod			
Lancetooth species[3]	*Ancotrema/ Haplotrema* sp.	Yellow	-

[1] As listed by the British Columbia Conservation Data Centre. Yellow = species or ecological communities that are apparently secure and not at risk of extinction (BC CDCa 2024).

[2] As listed in Schedule 1 of *SARA*.

[3] Identified by sign.

Photo 11 Red-breasted sapsucker drill holes observed in Area 3.

Photo 12 Potential burrow/denning site (circled in red) observed at the base of a tree in Area 3.

Photo 13 Squirrel midden observed at the base of a tree in Area 3.

Photo 14 Doe and fawn observed in Area 3.

Species at Risk

Of the nine species at risk identified as having the potential to occur in the Study Area, potential suitable habitat within the Cemetery was available for band-tailed pigeon, hoary bat, great blue heron, and common nighthawk. Open areas in Areas 1 and 2 of the Cemetery could provide nesting opportunities for common nighthawk, however, regular mowing and vehicle/foot traffic likely reduce the suitability. Large trees in Area 3 could provide nesting habitat for band-tailed pigeons and great blue herons, as well as roosting habitat for hoary bats. No evidence of species at risk presence (e.g., observation of individuals, nests, or scat) was observed in the Cemetery.

The Cemetery lacks nesting habitat suitable for barn owls, and grasses are likely too maintained to support a small mammal population for hunting. There are no perennial or ephemeral wetlands or moist upland habitat that could support northern red-legged frog. The primary sites used by little brown bat, Townsend's big-eared bat, and Yuma myotis for roosting were not observed in the Cemetery.

3.4 FISH AND FISH HABITAT

Cornwallis Creek runs north to south along the eastern side of Area 1 and into a ditch along the north side of Lower Road. Minimal flow was observed at the time of the field assessment. The creek is narrow, with short steep and eroded banks and a limited riparian areas (see Photo 15, Photo 16, and Photo 17, and Figure 1). A small bridge along the processional route crosses the creek within the Cemetery, which was observed with two culverts beneath (see Photo 18 and Photo 19). The outlet of the creek from the Cemetery was observed with a steep drop of approximately 1.5 m (see Photo 20; Figure 1) immediately downstream of which was a small debris jam where the creek flows subsurface (see Photo 21). The ditch flows west along the north side of Lower Road into a perched culvert running under the Cemetery's driveway (see Photo 22). Field observations indicated that Cornwallis Creek is non-fish bearing due to the steep drop at the confluence of the creek and the roadside ditch, a section with subsurface flows, and the perched culvert under the Cemetery's exit which would prohibit fish passage (i.e., fish cannot access Cornwallis Creek upstream of the roadside ditch). Fish habitat provisions (e.g. food, water and nutrient inputs) associated with Cornwallis Creek are considered insignificant. There were no fish and fish habitat features in Areas 2 or 3.

Photo 15 Cornwallis Creek upstream of the bridge in Area 1.

Photo 16 Steep eroding banks of Cornwallis Creek in Area 1.

Photo 17 Cornwallis Creek downstream of the bridge in Area 1.

Photo 18 Upstream view of culverts running under the bridge in Area 1.

Photo 19 Downstream view of culverts running under the bridge in Area 1.

Photo 20 Large drop at the confluence of Cornwallis Creek and the Lower Road ditch in Area 1.

Photo 21 Small debris jam causing water in the Lower Road ditch to go subsurface in Area 1.

Photo 22 Perched culvert under the Cemetery's driveway along Lower Road in Area 1.

4.0 REGULATORY CONTEXT

Federal, provincial, and municipal environmental legislation anticipated to apply to the Project is summarized in Table 5.

The Cemetery is not within a SCRD Tree Cutting Permit Area (SCRD 2024), therefore no permits are required for tree removal.

Table 5 Summary of anticipated applicable legislation.

Legislation	Agency	Area of Regulation	Possible Permits/ Recommended Actions
Federal			
Migratory Birds Convention Act	Ministry of Environment and Climate Change Canada	Prohibits injury, molestations, and destruction of migratory birds and their nests.	Bird nesting surveys and measures to protect active nests are recommended for vegetation removal during the general nesting period (March 1 – August 31).
Migratory Bird Regulations, 2022	Ministry of Environment and Climate Change Canada	Provides year-round protection for 18 species listed in Schedule 1 until nest sites can be deemed unoccupied.	If a nest of a species listed in Schedule 1 of the regulations is unoccupied, and there is need to damage, destroy, disturb, or remove the nest, it must be reported to the Registry for Abandoned Nests and remain unoccupied for the listed waiting period (12, 24, or 36 months depending on the species) starting from when ECCC receives the notification.
Species at Risk Act	Ministry of Environment and Climate Change Canada	Identifies and protects the critical habitat of Canada's species at risk. Prohibits the: ▪ Killing, harming, harassing or capturing of an individual; ▪ Possession, collection, buying, selling, or trading of an individual or any part or derivative of an individual; and ▪ The damaging or destruction of the residence of one or more individuals.	Bird nesting surveys and measures to protect active avian nests are recommended for vegetation removal during the general nesting period (March 1 – August 31). Critical habitat does not overlap with the Site so permits to destroy critical habitat are not required.
Provincial			
Wildlife Act	Ministry of Water, Land and Resource Stewardship	Provides for the conservation and management of wildlife populations and habitat.	Bald eagle, osprey, and heron nest protection (whether active or not) – permit and mitigation plan required if nest tree proposed for removal. If activities occur during the active breeding season, buffers are to be implemented. Migratory bird nesting surveys and measures to protect active nests are recommended for vegetation removal during the general nesting period (March 1 – August 31). Tree removal should occur outside of the sensitive period for summer roosting bats (May 1 – August 31).

Table 5 (Cont'd.)

Legislation	Agency	Area of Regulation	Possible Permits/ Recommended Actions
Weed Control Act	Ministry of Forests	Regulates the spread of invasive plants.	Requires all land occupiers to control the spread of provincial and/or regional noxious weeds on their land and premises.
Municipal			
SCRD Bylaw No. 641, 2012	Sunshine Coast Regional District	The bylaw includes Development Permits which identifies sensitive locations and protect them from negative impacts of development and to protect development from hazards.	A Development Permit is required when one is planning to alter land, subdivide land, or construct buildings and structures in a DPA or within 30 m of any wetland, stream, or ditch.
SCRD Bylaw No. 597, 2008	Sunshine Coast Regional District	The bylaw regulates or prohibits the making or causing of noise or sounds.	Construction hours shall be 7:00 am to 9:00 pm on any day other than a holiday, and 9:00 am and 6:00 pm on any holiday.

5.0 MITIGATION MEASURES

An Environmental Management Plan (EMP) is recommended prior to construction. The EMP would detail the management of vegetation, wildlife, and invasive species and would incorporate the following mitigation measures and best management practices:

- Vegetation clearing should occur outside of the general nesting window for birds (March 1 to August 31). A Qualified Environmental Professional (QEP) should refine the general nesting window using the Canadian Nesting Zones (Government of Canada 2024) and the Birds Canada Nesting Query Tool (Birds Canada 2024) to account for species- and site-specific conditions.
    - A QEP should be consulted to confirm any variation in the nesting season or target species surveys prior to commencement of construction.
    - If works occur during the breeding bird window, pre-clearing nest sweeps and subsequent monitoring will be required.
    - If species at risk (e.g., band-tailed pigeon, great blue heron, and common nighthawk) are observed during works, the QEP should be notified and consulted on mitigation measures.
- Clearing of trees should be done outside of the sensitive roosting period for bats (May 1 to August 31).
    - If tree removal is required during the sensitive roosting period for bats, trees should be inspected for use prior to removal.
- Potential burrows/dens identified in this EOA should be checked for signs of use before vegetation clearing and grubbing and a QEP consulted if use is evident.

6.0 CLOSURE

This EOA has been undertaken to identify existing and potential environmental values within the Study Area and ground truth the results of the desktop assessment at the Seaview Cemetery in advance of Project construction works. No species at risk or significant wildlife features were identified. To protect vegetation and wildlife, an EMP shall be created and followed during construction which would outline mitigation measures and best management practices. Hatfield shall prepare the EMP ahead of Project construction.

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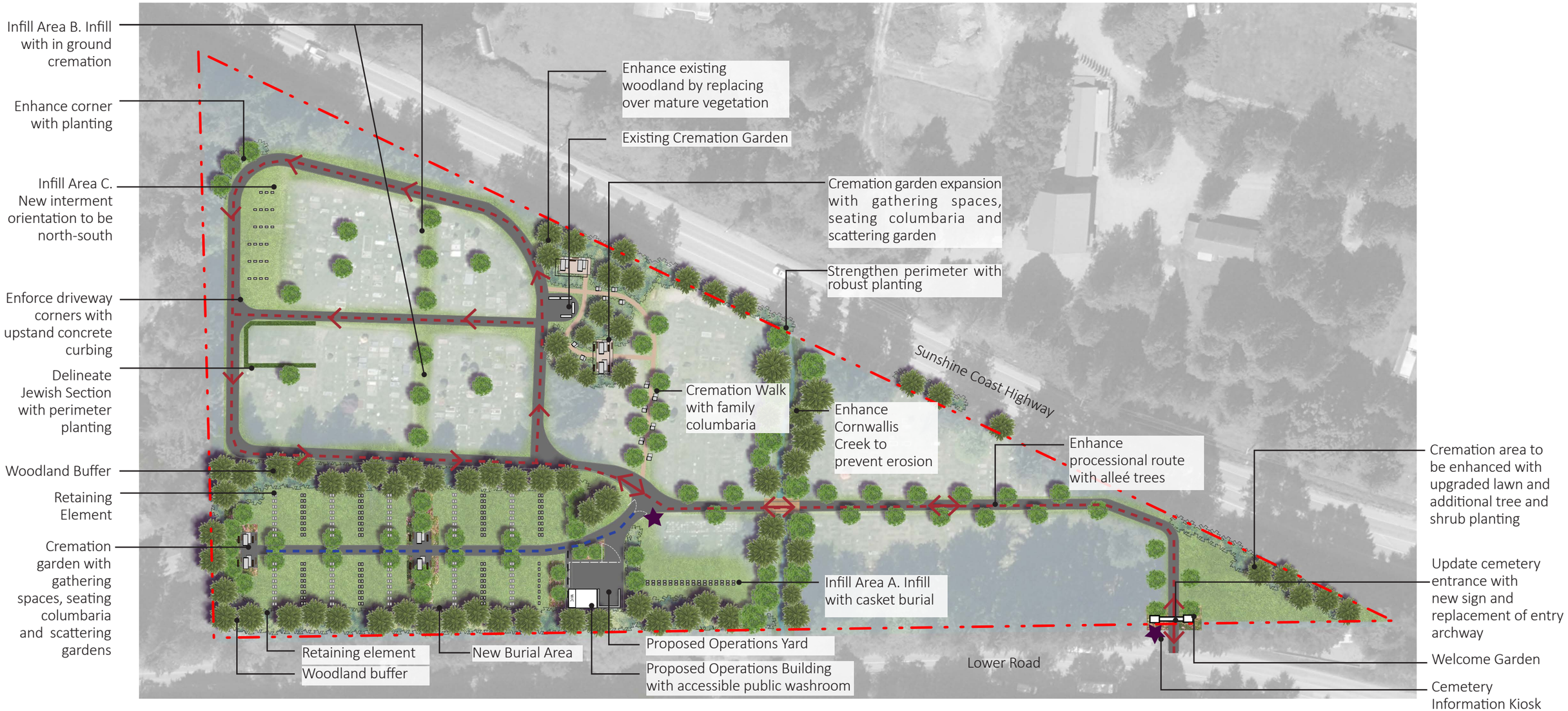
Appendix A1

Seaview Cemetery Concept Plan and Interment and Memorialization Diagram

Seaview Cemetery Concept Plan



Legend

Existing

- Cemetery Land Extents
- Cemetery Driveway

Proposed

- Cemetery Driveway -Limited Access
- Pedestrian Only Path
- Cemetery Information Kiosk
- Gathering Space
- New and Enhanced Woodland Planting
- Specimen Tree

Seaview Cemetery Interment and Memorialization Diagram

This interment and memorialization diagram describes the spatial organization and mix of interment and memorialization options proposed as part of the Seaview Cemetery Concept Plan.

Legend

Existing
- Cemetery Land Extents

Proposed
- Cremation Garden
- In-ground Cremation Lot
- Casket Lot with upright marker
- Casket Lot with flat marker

Estimate Interment Capacity

New Burial Area
- Casket Lots: 10-15 years
- In-ground Cremation lots: 10-15 years
- Columbaria Niches: 35-40 years

Infill Area A
- Casket Lots: 1-2 years

Infill Area B
- In-ground Cremation lots: 10 years

Infill Area C
- Casket Lots: 1 year

Cremation Garden and Cremation Walk
- Columbaria: 50+ years
- In-ground Cremation lots: 10+ years