

Bamfield Development Plan

A Review of Land Capacity and Infrastructure for Bamfield

MARCH 2025



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COLUMBIA

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Prepared by:

Urban Systems Ltd.
550B Comox Road
Courtenay, BC V9N 3P6

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1.0 PLAN PURPOSE

Bamfield is a small community in Electoral Area 'A' of the Alberni-Clayoquot Regional District (ACRD), located on the west coast of Vancouver Island (see **Figure 1**). Primary access to Bamfield is via Bamfield Road from Port Alberni. This road underwent significant upgrades in 2023 to make access to Bamfield and the Huu-ay-aht First Nations (HFN) communities more accessible. Increased access to the community will likely affect tourism interests.

The ACRD retained Urban Systems in March 2024 to create a Development Plan for the Bamfield community with targeted completion of Fall 2024. The intent of this project is to:

- Understand the existing constraints to development in the Bamfield Official Community Plan (OCP) area;
- Engage in conversation with community members and partners about how growth may occur in Bamfield in a thoughtful manner;
- Project how the Bamfield population may grow in the short-, medium-, and long-term, and what the resulting housing needs for the community may be in terms of unit counts; and
- Identify what the potential for development could be in Bamfield, and how this is influenced by existing constraints to development, including sanitary sewer servicing. This information will provide direction for the upcoming update to the Electoral Area 'A' – Bamfield OCP which outlines how the community wishes to grow. It is anticipated that this process will occur in 2025 or 2026.

2.0 COMMUNITY CONTEXT

2.1 EXISTING

2.1.1 GENERAL

According to the 2021 Census, Bamfield has a full-time population of 201. The community of Bamfield, divided by the Bamfield Inlet, is split in two - East Bamfield and West Bamfield, as shown in Figure 1, with West Bamfield only accessible by boat. The Bamfield Boardwalk connects most of the homes, businesses, and docks on the west side. East Bamfield contains most of the commercial businesses and community amenities, including the Bamfield Community School (BCS), Bamfield Volunteer Fire Department, Bamfield Health Centre (the Health Centre), and the Bamfield Marine Sciences Centre (BMSC). East Bamfield also includes the area known as Port Désiré, located northeast of the main commercial area, and situated on the Grappler Inlet.

The area surrounding Bamfield comprises of HFN Treaty lands along with large tracts of Crown forested lands that are managed by the Bamfield Huu-ay-aht Community Forest Society.

Educational services, public administration, and sales and service are the primary industries in Bamfield, with the former likely linked to the BMSC and the latter to tourism. Pacific Rim National Park, the West Coast Trail, and Pachena Bay Campground are a large draw for visitors to the region. Bamfield has seen significant change over the past decades, as tourism has replaced the natural-resource sector as the community's primary economic driver. This shift has resulted in changing demographics and needs in Bamfield.

2.1.2 LAND USES

Overview

The majority of Bamfield's land base is designated as Community Forest or Sensitive Area in the existing OCP. Residential uses are the next most common land use, comprising approximately 157 ha of the land base currently throughout the community. The Commercial land uses, which make up a small portion of the land (11.09 ha), are primarily concentrated around Grappler Road and the harbour.

Table 1 provides a full breakdown of the existing land uses in the community per the OCP designations. A land use map is provided in Figure 2 provide a visual representation of where all land uses exist in the community. Some OCP designations (e.g., Sensitive Area) are not represented on the OCP Map or do not have an objective definition (e.g., Mobile Home Park), making it difficult to understand where these designations apply and the intent of the land use.

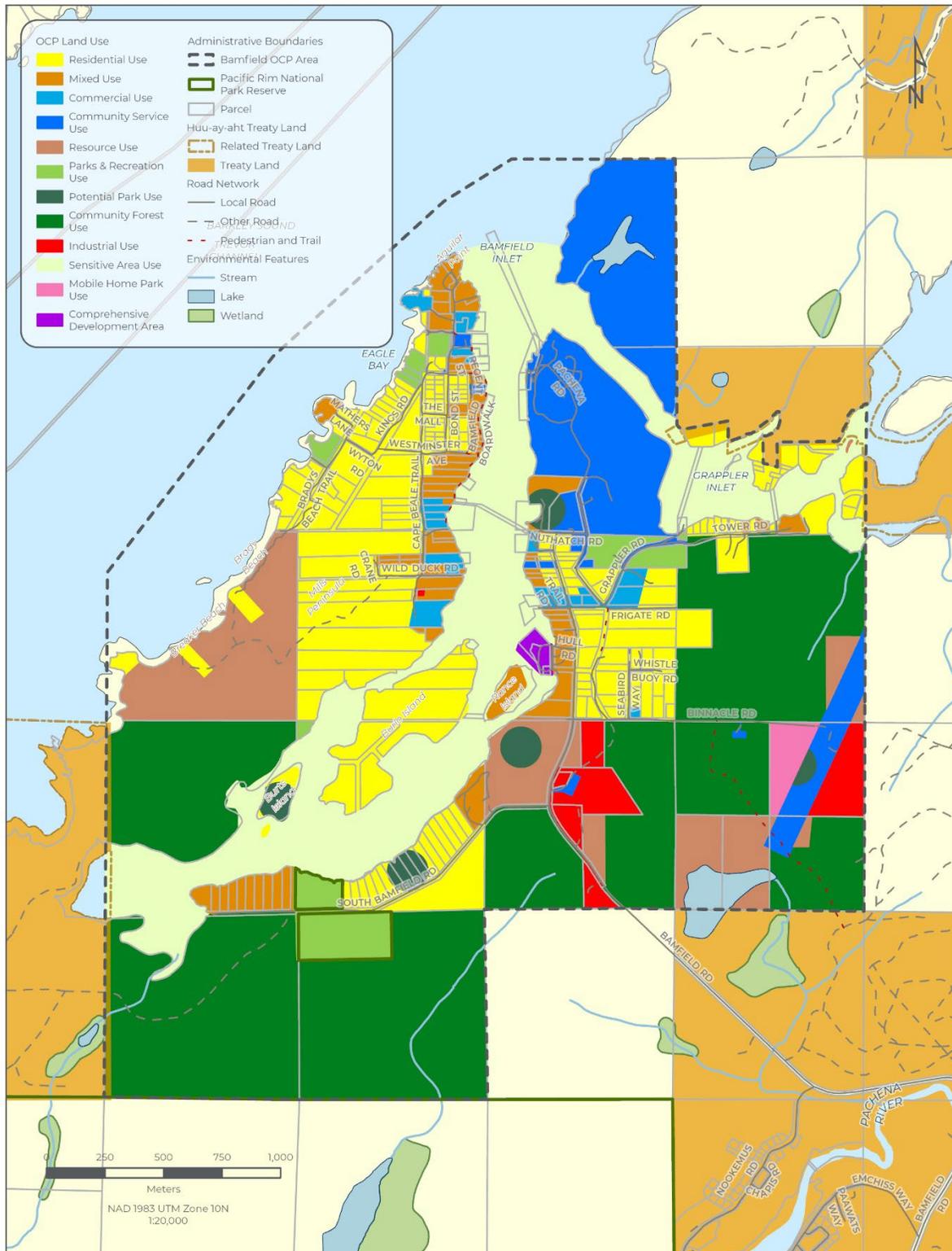


Figure 2: OCP Land Uses

Table 1: Land Uses in Bamfield

Land Use	Area (ha)	Percentage of Land Base
Commercial	11.09 ha	1.18%
Community Forest	272.32 ha	28.87%
Community Service	93.26 ha	9.89%
Comprehensive Development Area	1.95 ha	0.21%
Industrial	17.08 ha	1.81%
Mobile Home Park **	37.75 ha	4.00%
Mixed Use	4.96 ha	0.53%
Parks & Recreation	16.33 ha	1.73%
Residential	156.87 ha	16.63%
Resource Use **	67.26 ha	7.13%
Sensitive Area	157.76 ha	16.73%
Water ***	106.64 ha	11.31%
Total Land Base	943.26 ha	

* Potential Park Use, while included in the OCP, is not included in the table as it overlaps current land uses.

** Mobile Home Park and Resource Use, while included on the OCP's Land Use Map, are not designated land uses within the OCP.

*** For reference only; Water is not a designated land use within the OCP.

Residential Land Uses

Zoning Bylaw No. 15 demonstrates that single-family residential development has been favoured historically in Bamfield, along with other communities in the ACRD, based on the residential zones that currently exist in the community. Changes made to provincial legislation in late 2023 triggered amendments to the bylaw that now allow for the provision of secondary suites and/or carriage houses (referred to as accessory dwelling units in the bylaw) on most residential lots.

Non-Residential Development

Non-residential development in Bamfield is encouraged in the Zoning Bylaw if these uses do not conflict with the natural environment or existing residential uses.

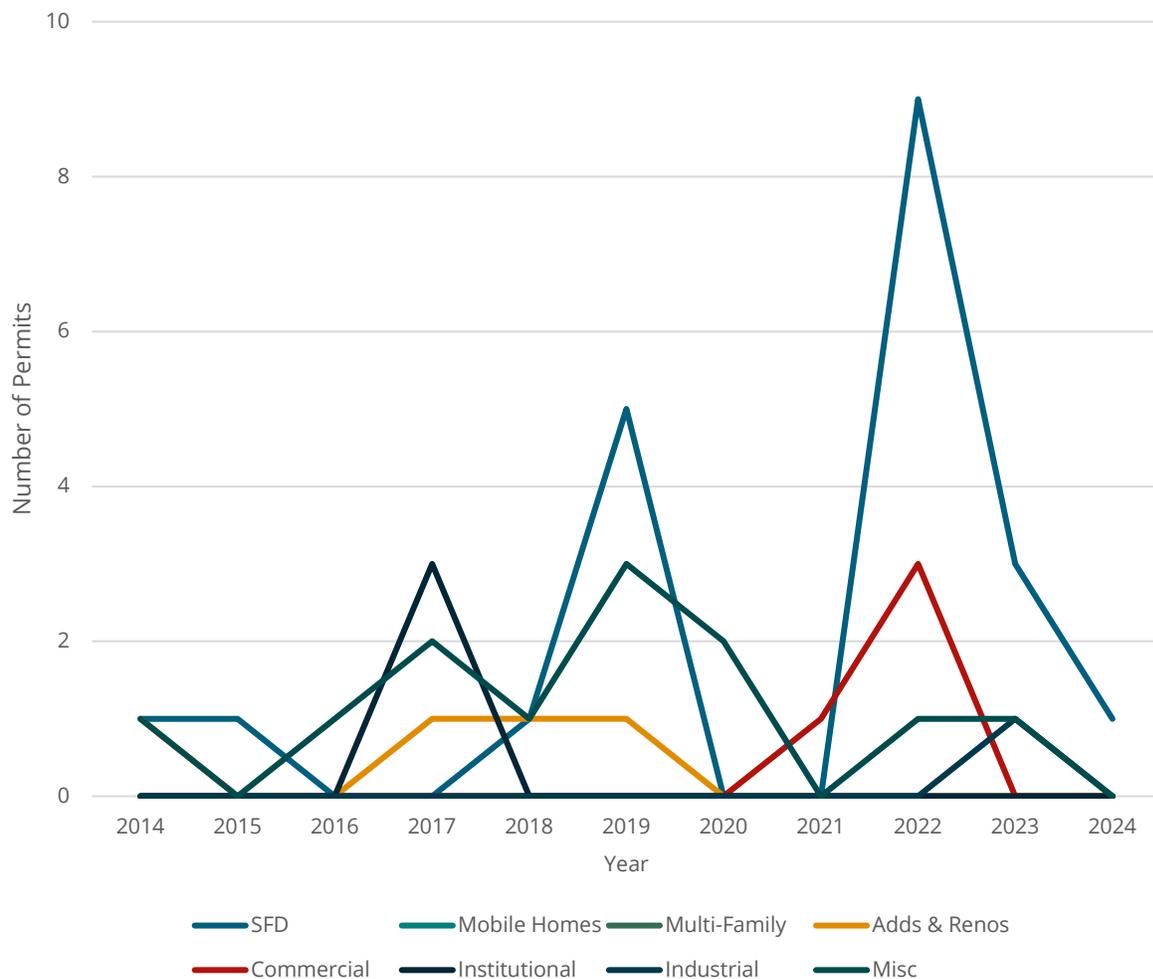
Rural zones account for the majority of Bamfield's land base, comprising lands intended for intensive agriculture, hobby farms, recreation activities, conservation of agricultural and non-urban land in large parcels, retention of forest and wildland, and natural resource development and extraction, as well as some ancillary commercial uses.

Few parcels are used for commercial or industrial purposes, however parcels with such zoning do permit a range of businesses and industries.

2.1.3 DEVELOPMENT

Based on ACRD building permit trends between 2014 and spring 2024, the most common type of new construction in Bamfield has been single family dwellings (SFD) (see **Figure 3**). Over the last ten years, no permits were issued for other housing types such as mobile homes or multi-family buildings. 2022 saw the highest overall number of building permits issued in the previous 10 years, with single family homes making up the largest percentage at 69% (13 new homes). This increase in building permits is linked to a subdivision the previous year that created sixteen new residential lots.

According to the 2021 Bamfield Housing Needs Report (HNR)¹, it was projected that 16 new dwellings would need to be built by 2026 to accommodate the projected population increase, if the average household size stays at 1.6 persons. Since the HNR report was published, there have been thirteen building permits issued for SFDs. The data doesn't specify if secondary suites were included in any of these builds so the actual number of dwelling units may be higher. This indicates that the rate of dwelling unit construction has thus far been aligned with the community's population projections.



¹ At the time of writing this plan, an Interim Housing Needs Assessment was underway for the ACRD, including Bamfield. In the absence of this information being available, the most recently completed Housing Needs Report was referenced.

Figure 3: Number of Building Permits Issued in Bamfield (2014 - 2024)

2.2 PROJECTED

2.2.1 POPULATION

Using population statistics from BC Stats, three growth scenarios were prepared to determine Bamfield’s anticipated population growth over the next 50 years, from 2021 to 2071. The total projected population yielded from each growth scenario is summarized in **Table 2** below.

Table 2: Population Projections: Low, Medium, and High Population Growth Scenarios

Year	Projected Population: Low Growth Scenario (0.3% Annual Growth Rate)	Projected Population: Medium Growth Scenario (2.49% Annual Growth Rate)	Projected Population: High Growth Scenario (4.0% Annual Growth Rate)
2021	201	201	201
2031	207	257	298
2041	213	329	440
2051	220	420	652
2061	227	537	965
2071	233	687	1,428

Low Growth Scenario

The low growth scenario, which uses an annual growth rate of 0.3%, projects that Bamfield’s total population will grow by just 32 additional residents by 2071, yielding an overall population of 233. This population estimate, while conservative, aligns with BC Statistics projected annual growth rate of 0.3% over the current 5-year time horizon (2021 to 2026) for Electoral Area ‘A’, where Bamfield is located. The low growth scenario also accounts for negative population growth experienced by the community in recent years, which was notably -38.25% between 2006 and 2011. As well, this scenario acknowledges that population growth may be slowed by other limiting factors such as housing affordability, lack of employment opportunities, and/or the overall accessibility of the community.

Medium Growth Scenario

The medium growth scenario uses an annual growth rate of 2.49%. Under this scenario, Bamfield’s total population is anticipated to grow by an additional 486 individuals, totalling 687 residents by 2071. While this scenario projects a substantially higher population estimate than the low growth scenario, the annual growth rate is informed by the annual growth rates estimated for Bamfield for the periods of 2011 to 2021 and 2016 to 2021 (2.63% and 2.35%, respectively). The medium growth scenario also accounts for rising development interest within the community, as well as increasing rates of tourism activity since the road connecting Bamfield to Port Alberni received chip-seal surfacing in 2023. Additionally, this scenario anticipates future population growth associated with developments planned by Huu-ay-aht First Nations and the BMSC in the area. It is notable that the

medium growth scenario's annual growth rate of 2.49% is 0.51% lower than the 3.0% annual growth rate experienced by the nearby community of Tofino from 2001 to 2019²; a community that has been experiencing increased levels of tourism activity and residential interest as the accessibility of Vancouver Island's west coast continues to improve.

High Growth Scenario

Under the high growth scenario, which uses an annual growth rate of 4.0%, Bamfield's total population is projected to grow by an additional 1,227 residents, resulting in an overall population of 1,428 by 2071. This scenario, while aggressive when compared to the low growth scenario's population estimate, accounts for factors which may stimulate higher rates of population growth in Bamfield. Such factors include the 5.4% enrollment growth anticipated by School District 70 – Pacific Rim for the BCS for the 2024 to 2038 period, as well as high rates of growth experienced by nearby communities such as Tofino and Port Alberni between the years 2016 and 2021, where the Census reported growth rates of 27.9% and 3.3%, respectively.

2.2.2 HOUSING NEEDS

To determine Bamfield's projected housing needs over a 50-year time horizon (2021-2071), the low, medium, and high growth scenarios described above were compared to Bamfield's average household size and existing housing stock. Informed by Census data from Statistics Canada, this calculation assumed an average household size of two persons per household, and an existing housing supply of approximately 198 occupied residences. The number of additional housing units required by 2071 under each growth scenario is shown in **Table 3** on the following page.

² District of Tofino Official Community Plan Bylaw No. 1290, 2021

Table 3: Number of Housing Units Required by 2071: Low, Medium, and High Population Growth Scenarios

Year	No. of Required Housing Units: Low Growth Scenario (0.3% Annual Growth Rate x Average Household Size of 2)	No. of Required Housing Units: Medium Growth Scenario (2.49% Annual Growth Rate x Average Household Size of 2)	No. of Required Housing Units: High Growth Scenario (4.0% Annual Growth Rate x Average Household Size of 2)
2021	-97.5	-97.5	-97.5
2031	-94.5	-69.5	-49
2041	-91.5	-33.5	22
2051	-88	12	128
2061	-84.5	70.5	284.5
2071	-81.5	145.5	516

In the low growth scenario, Bamfield’s existing housing supply will both accommodate and exceed the needs of the projected population. Moreover, the current housing supply is anticipated to exceed the community’s housing needs under the medium and high growth scenarios beyond 2041 and 2031, respectively.

While these unit projections indicate that the current rate of housing development in Bamfield is providing sufficient housing units to accommodate the community’s population growth, they are purely focused on housing supply counts, and do not consider other barriers to housing attainability, such as affordability or appropriateness. The ACRD acknowledges that the data is skewed because it does not accurately reflect housing availability in Bamfield, particularly for rental housing, as the community has a low vacancy rate. The data indicate that a high proportion of non-resident property owners may own vacation or second homes that are not available for long-term housing stock. Such barriers will be addressed and discussed in the community’s Housing Needs Assessment that will be undertaken in 2025.

3.0 DEVELOPMENT & FUTURE GROWTH POTENTIAL

3.1 OVERVIEW

As discussed in section 2.2, it is anticipated that minimal levels of development may be necessary for the community to accommodate projected future population growth, with the exception that there may be gaps in Bamfield's existing housing supply related to overall affordability and suitability for different household needs. In addition, development in Bamfield is limited by a number of factors, including those related to environmental features, access, policy and regulations, utilities, road conditions, parking, and community infrastructure services. These constraints greatly influence how future development may occur in Bamfield and were considered in determining the level of growth that may be possible. **Appendix 1** discusses the development constraints in further detail.

Despite these known constraints, Bamfield may be viewed as having significant potential for change for a variety of reasons, such as:

- Its location on the West Coast of Vancouver Island, and proximity to growing nearby Port Alberni;
- An increased societal interest in rural lifestyles (urban to rural living shift);
- Access to beaches and recreational opportunities, including hiking, fishing, and camping amongst others;
- Recent improvements to high-speed internet access in the community;
- Proximity to the natural environment and ocean;
- Opportunity for HFN members to return home to the community;
- Existing and future employment opportunities at the BMSC, particularly as they proceed with plans for expansion;
- Increased access to the community resulting from the recent road improvements to Bamfield Rd; and
- Increasing interest in tourism and the resulting prospect for tourism commercial entrepreneurial ventures.

Assessing what could happen in Bamfield as it relates to future development is therefore important for directing how the community would like to grow. This section aims to outline the possibilities for future development which will inform the land use map to be created by the community in the OCP update process.

3.2 SEWER COLLECTION SYSTEM SERVICE REFERENDUM

On November 16th, 2024, the ACRD conducted two referendums, one in East Bamfield and one in West Bamfield, to determine the level of support for introducing a regional sewer collection system service. On November 20th, 2024, a declaration of the official voting results showed that at the time,

the majority of Bamfield residents did not wish to proceed with the presented options for sewer service.

The results of this referendum will likely impact all types of development in both East and West Bamfield due to the costs associated with on-site servicing options.

3.3 METHODOLOGY

3.3.1 CONSIDERATIONS

The development potential of parcels in Bamfield was determined through consideration of the following:

- The findings of a detailed analysis of existing infrastructure servicing methods for water and sewer to understand how future development in Bamfield may be influenced by different levels of service, particularly if sanitary sewer services were provided by the ACRD to the community. The findings of this analysis are included in **Appendix 2**.
- Existing OCP land use designation policies and zoning regulations, particularly those related to permitted densities.
- In-stream applications for development with the ACRD.
- Known future development projects on HFN-owned parcels.
- Discussions with HFN and the BMSC about their plans for the community.
- Environmental and/or hazardous features, Crown lands, resource uses, and other site constraints that prevent development.
- The results of the Sewer Collection System Service referendum.

3.3.2 ASSUMPTIONS

Parcels Without Development Potential

Parcels or portions thereof within the Bamfield OCP Area that were identified as having any of the characteristics noted below were deemed to **not** have development potential; however, it should be noted that many factors which cannot be predicted may influence a parcel's future development potential. Such factors may include those related to economic viability, political climate, and environmental events, amongst others.

Where the following characteristics were present, a parcel was not identified as having future development potential:

- Community Forest OCP land use designation
- Crown lands and/or lands with the Resource Use OCP land use designation

- Lands with the Community Service OCP land use designation, including key community uses such as:
 - Bamfield Community School
 - Bamfield Community Hall
 - The Health Clinic
 - Fire Hall
- Lands with the Sensitive Area OCP land use designation
- ACRD parkland
- Pacific Rim National Park Reserve
- Federal uses, e.g. Coast Guard station
- Further discussion with HFN is required to determine the suitability for development

These lands are not identified in **Figure 4**, which classifies those lands as having development potential into a series of categories, discussed further in the following sub-section and section 3.3.

Parcels *With Development Potential*

All other parcels within the Bamfield OCP Area were therefore identified as having development potential for one or a combination of the following reasons:

- A Residential, Mixed Use, Commercial, or Industrial land use designation applies
- An in-stream development application with the ACRD exists
- HFN or the BMSC has identified existing or future plans for the lands
- The airport may expand to include industrial uses
- Amendments to the Zoning Bylaw for compliance with small-scale multi-unit housing (SSMUH) legislation allow for 2 units per parcel in the R1, R2, RA1, RA2, and RA3 zones

Lands aligning with one or more of these characteristics are categorized as follows on **Figure 4**:

- Parcels owned by HFN
- Non-HFN parcels connected to the HFN sewer system (BMSC)
- Parcels with an Industrial OCP land use designation
- Parcels where a development application is in-stream
- Parcels with a Commercial or Mixed Use OCP land use designation
- Non SSMUH residential zones
- Parcels subject to SSMUH zoning permissions
- Parcels with a Residential OCP land use designation but non-residential zoning

The existing permitted densities outlined in the zoning for these parcels was reviewed against OCP policy to identify what type of development and to what extent could happen under the ACRD's current policy framework within the context of the community's existing constraints to development. How this could change if the ACRD were to provide community sewer services in the future was also considered. The findings of this analysis are discussed further in the next section.

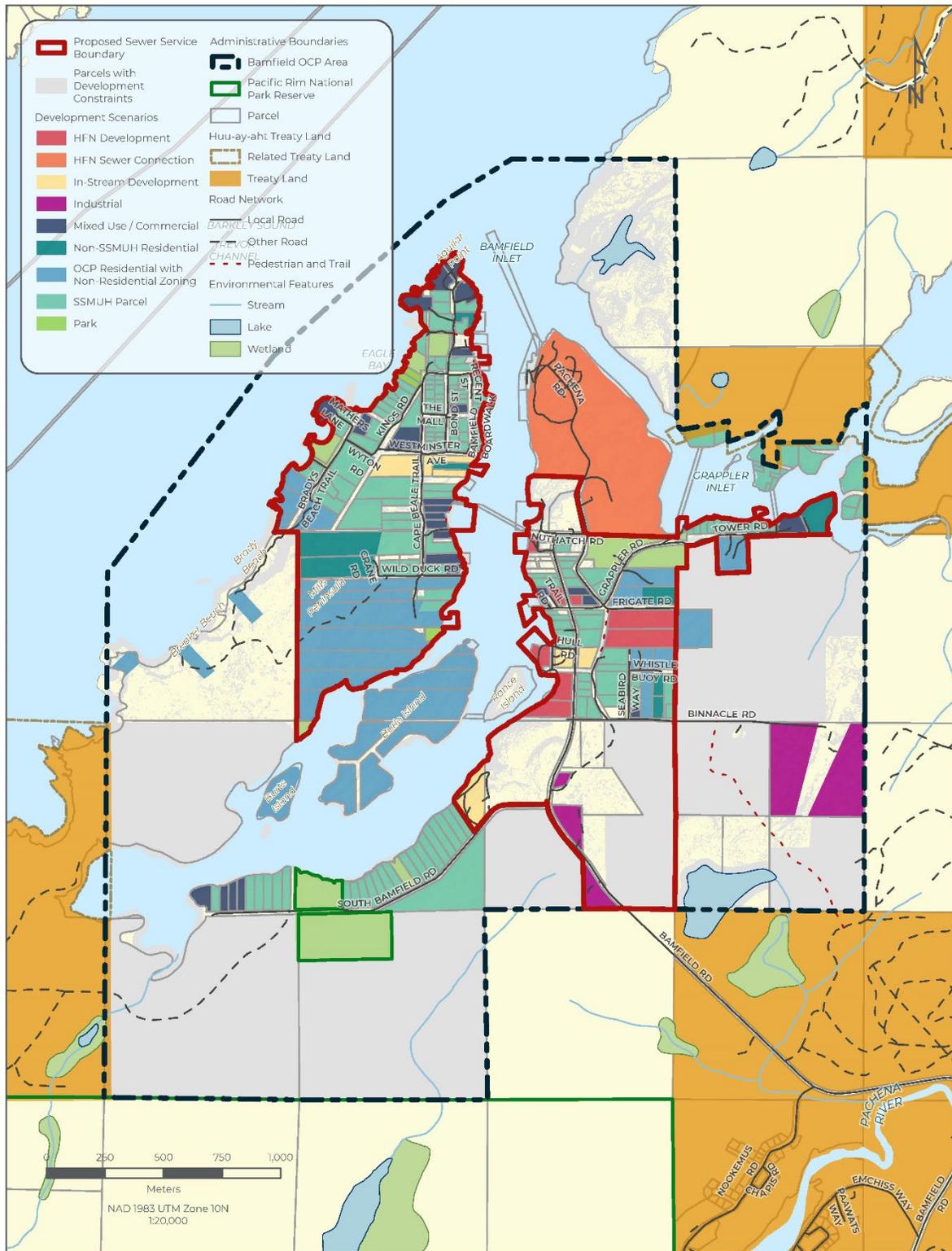


Figure 4: Development Potential

3.4 KEY FINDINGS

3.4.1 OVERVIEW

Development potential in Bamfield was assessed on a parcel-by-parcel basis using the categories discussed in the previous section and as shown in **Figure 4**. To acknowledge the differences that exist between East and West Bamfield, particularly as it relates to development constraints, the overall potential of lands in each area is reported on separately in this section. Despite some differences in development potential existing between the two areas of the community, it is important to note that two factors influencing development potential apply to the community, with these being the SSMUH zoning permissions that were added to the bylaw for legislative compliance in 2024 and existing OCP policy on subdivision.

SSMUH Zoning

Prior to alignment with the SSMUH legislation, the affected zones (R1, R2, RA1, RA2, and RA3) only permitted secondary suites on lots .04 ha (1 acre) or larger. Since compliance, the affected zones now permit one secondary suite within or attached to the principal dwelling unit (not detached Accessory Dwelling Units (ADUs) or suites within an accessory building) on all lots less than 0.4 ha (1 acre) zoned for only single-family residential use. ADUs are permitted (as detached units or within accessory buildings) on lots that are larger than 0.4 ha (1 acre), to a maximum of two dwellings per lot.

It is important to highlight that the purpose of the SSMUH legislation is to encourage the construction of housing units for long-term occupancy. As such, either the principal dwelling unit and/or the ADU or secondary suite must be occupied as a principal residence. In 2023, 60% of dwelling units in Bamfield were unoccupied for much of the year. Property owners outside of Bamfield may be less likely to invest in additional dwelling units if they are required to be occupied by a long-term tenant.

Residential Subdivision

The existing OCP discusses how residential densities may be increased on lots with a Residential land use designation via subdivision if sufficient on-site servicing infrastructure is provided. Section 3.3.5 allows for small lot subdivisions on parcels with communal or community septic and/or water systems. A communal water or sewer system refers to a privately owned system with a minimum of two connections, whereas a community water or sewer system refers to a publicly owned system with a minimum of two connections.

As outlined in **Table 4** below, where communal/community water or sewer is provided, the minimum parcel size can be 0.24 hectares (0.6 acres) which allows for increased residential density through smaller lot subdivisions. Where no communal/community water or sewer is provided, the minimum parcel size is 1 hectare (2.47 acres). This policy applies to all lands with a Residential OCP land use designation.

Table 4: Minimum Lot Sizes Permitted per Level of Service Provided

Required Servicing	Minimum Lot Size Permitted
Communal/Community water AND sewer	<0.24 ha (0.6 acres)
Communal/Community water OR sewer	0.24 ha (0.6 acres)
Neither service provided	1 ha (2.47 acres)

3.4.2 WEST BAMFIELD

Development in West Bamfield is largely constrained by environmental features, few modes of access, availability of utilities and community infrastructure services, and economic viability, amongst others. Current residential and commercial development is largely focused along the Boardwalk where docks are located for boat access to this part of the community.

This section discusses what level of development may be possible for the parcels in West Bamfield identified on **Figure 4** as having development potential.

Parcels with an Industrial OCP Designation

West Bamfield has one parcel designated as Industrial in the OCP which is split-zoned into M3, RA2, and A2. Further industrial development would require a rezoning and potentially an OCP amendment. In addition, there are 3 parcels zoned Waterfront Industrial District (W5) which provide for the accommodation of marine fuelling, mooring, repair and maintenance shops, warehouses and fish product industries. These parcels do not have an Industrial OCP designation. The OCP does not specifically comment on waterfront industrial lands but generally speaks to implementing a DPA that regulates the form, character and impact of industrial activities in environmentally sensitive areas, such as the shoreline. It's likely that with the evolution from a resource-based economy to a tourism-based economy and further environmental regulation, new industrial development in West Bamfield will be limited.

Parcels with an In-Stream Development Application

At the time of writing this plan, West Bamfield had two in-stream development applications with the ACRD. These applications comprise:

- a rezoning from A2 to RA2 for a two-lot residential subdivision and;
- a rezoning from RA2 and A2 to RA3 for a residential subdivision of up to twenty lots.

Both proposed applications may take advantage of SSMUH zoning permissions to permit an ADU or secondary suite on each lot, therefore potentially yielding up to 42 dwelling units in the future if each property owner decided to construct two dwelling units (one primary and one accessory/secondary) on their property.

The viability of construction on these lots is dependent on multiple factors largely related to market conditions; however, the provision of sewer servicing may also increase appeal, as the installation of on-site septic fields or communal systems can be physically or financially restrictive.

Parcels with a Commercial or Mixed-Use Designation

Parcels housing the Bamfield Boardwalk, and those four parcels immediately north have OCP designations of Mixed Use and Commercial and have a mix of commercial, institutional, and residential zoning. The Boardwalk area is an existing tourist draw, lending itself well to further commercial and/or mixed-use development the future, and likely making this one of the most viable areas for new development in West Bamfield. Existing zoning would allow for the development of:

- Tourism accommodations
- Retail
- Grocery stores
- Restaurants and pubs
- Infrastructure for transportation (e.g. water taxis, float planes)
- Warehousing
- Marine services & fuelling
- Professional offices
- Personal services (e.g. hair salon)
- Health services

It is anticipated that the provision of sewer servicing will further increase the viability of the above listed uses, especially new tourist commercial uses along the Boardwalk, and potentially in other areas of West Bamfield where tourism commercial zoning exists. Additionally, there are multiple parcels with tourism-oriented zoning (RC, RC1, BRC, GH and C6) throughout West Bamfield that host visitors year-round. With a sewer service, these zones could support higher density accommodation uses such as additional cottages or motels as permitted by the respective zoning.

Parcels with Non-SSMUH Residential Zoning

4 parcels with non-SSMUH residential zoning exist in West Bamfield. These parcels are in zones that limit density to one SFD per lot unless the parcel is over 0.4 ha (1 acre) in size, in which case they would also be permitted an ADU or secondary suite. Some of these lots are above the permitted minimum lot size and as such, have potential for subdivision (this would need to be verified by a surveyor). See **Table 5** on the following page.

Table 5: Parcels with Non-SSMUH Residential Zoning

Parcel	Est. Parcel Size	Zoning	Minimum Lot size for Subdivision	Potential # of New Lots
1	7 acres	RA2	1 acre	6
2	15 acres	RA2/A2	1 acre/5 acres	Split-zone - unsure
3	1 acre	RA2/R2	1 acre	0
4	1.2 acres	RA2/C2/W5	-	-

Parcels with SSMUH Zoning

West Bamfield has fifty-nine SSMUH applicable lots. With a full uptake of SSMUH, this could result in an additional fifty-nine housing units (this is not likely, but technically possible). Uptake of SSMUH development is likely to be slow due to the constraints mentioned previously. Providing a community or communal sewer service could make SSMUH development more feasible and potentially increase the number of lots if owners utilise the smaller lot sizes allowed as discussed in Section 3.3.1 – Residential Subdivision.

Parcels with a Residential OCP Designation and Non-Residential Zoning

Most of the south portion of West Bamfield, including Burlo Island and Burts Island are designated Residential in the OCP but are primarily zoned as Rural District. These properties are largely undeveloped and are accessed via boat only. Residential growth in this area should be reviewed by the community as part of the future OCP review and update process.

3.4.3 EAST BAMFIELD

East Bamfield is the hub of the community, comprising key amenities and businesses, such as the BCS, Bamfield Volunteer Fire Department, Health Centre, and the BMSC. In addition, some parcels in East Bamfield are connected to HFN’s sanitary system (see **Appendix 1, Figure 6**). This part of the community is more likely to experience development regardless of community sewer service provision because it has fewer development constraints. Furthermore, housing development to support BMSC, BCS, the Health Centre, and other facilities and businesses are expected.

Parcels Owned by HFN

HFN owns a variety of properties in East Bamfield, including culturally significant Rance Island. Some of these lots are currently developed while others are still in discussion for potential future use. All of these properties are either already connected to the HFN sanitary system or will be once developed. HFN and the Huu-ay-aht Group of Businesses (HGB) are highly involved in the community and seek to create employment and economic sustainability for their community members. Future development plans include housing, industrial, and commercial ventures.

Non-HFN Parcels Connected to the HFN Sewer System (BMSC)

The only property currently connected to HFN's sewer system that was flagged as having development potential is the BMSC lands. At the time of writing this plan, the BMSC was working on a new strategic plan that envisions the centre evolving from having a regional reach to more of an international focus on educational programming and research. This change would result in an increase of students, staff, and visitors to the centre, and as a result, an increased need for long-term housing options in Bamfield, particularly East Bamfield. It is important to note HFN has indicated that additional connections to their existing sewer system will not be considered for non-HFN parcels.

Parcels with an Industrial OCP Designation

As discussed in section 2.1.2, Bamfield has a limited industrial land base, almost all of which is located in East Bamfield. Section 10.2.1 of the OCP seeks to designate lands as Industrial in recognition of existing uses or to support future industrial development.

There are two waterfront industrial sites, both zoned Waterfront Industrial District (W5), in East Bamfield. One is located at the Ostrom's property and another near the Health Centre. The zoning bylaw does not provide information on lot size or site coverage for the W5 zone. As discussed in section 3.2.2, new waterfront industrial development in East Bamfield will likely be limited.

The remaining industrial sites are all land-based. The airstrip property on Service Road is split-zoned into RA2, M1, and A2. Rezoning of the RA2 and A2 zones would be required before any additional industrial development could occur. Additionally, a portion of these lands have a Mobile Home Park OCP designation which would require an OCP amendment if future industrial development were to occur.

The remaining industrial lands in East Bamfield are located along Bamfield Road, south of Binnacle Road. These parcels are all zoned Heavy Industrial District (M3). As discussed in the section below, one of these parcels is currently in the subdivision process. HFN's Framework Plan has identified this area of Bamfield as a future gateway/corridor between the Bamfield and Anacla communities. This future vision along with the provision of sewer servicing to the community would both be positive factors influencing the viability of additional industrial development on these parcels. The M3 zoning would allow for:

- Light industrial uses e.g. wholesale lumber and building material sales, storage, etc.
- Manufacturing industries e.g. fish products, wood and paper industry, etc.
- Wholesale scrap and waste material e.g. auto wreckers

Parcels with an In-Stream Development Application

At the time of writing this plan, East Bamfield has three in-stream development applications:

- A rezoning from RA2 to RA3 to allow a three-lot subdivision (SSMUH applicable).

- A single-family building permit; and
- An industrial zoned (M3) two-lot subdivision.

The rezoning and building permit applications will result in increased residential densities, with the subdivision yielding six housing units if rezoning is successful. In addition, if the building permit for a new SFD is on a lot with SSMUH zoning, there could be two new units created, resulting in a total of eight new housing units.

The industrial subdivision will allow for a second light industrial or heavy industrial business. The minimum lot size in the M3 zone is 2.3 acres and allows for 60% site coverage.

Parcels with a Commercial or Mixed Use OCP Designation

As previously mentioned, East Bamfield contains the majority of the community's commercial uses which are primarily located along the waterfront and the existing village area surrounding the intersection of Frigate Road and Bamfield Road. As with West Bamfield, lots with zoning allowing for tourism-oriented uses (RC, BRC, GH and C6) are located throughout the area to host visitors to the region year-round.

At the time of writing this plan, HFN shared a draft of their Framework Plan that will guide development in the community for the next 20-30 years. The Plan aims to encourage the development of a diverse range of businesses and economies within Treaty Settlement Lands and the Bamfield area. Key themes of the Plan include, but are not limited to:

- Prioritization of cultural and eco-tourism
- Support for sustainable and Indigenous-owned businesses
- Plan for a diversity of housing types, tenure, and affordability levels

HFN owns multiple commercial, residential and mixed-use OCP designated properties in East Bamfield, particularly in and around the existing village area. The Framework Plan seeks to develop these properties into prosperous economic enterprises with residential units to bolster the success of these ventures. HFN properties will be linked to the Nation's existing sewer system, enabling higher density allowed by their respective zones, or greater potential to rezone to suit the development plans. It is important to note HFN has indicated that additional connections to their existing sewer system will not be considered for non-HFN parcels.

If the community were to be connected to the ACRD sewer service, there would likely be an increase in all types of development in this area, particularly tourism-commercial and/or accommodation uses. Pre-servicing lots to their full potential acts as a financial incentive to attract new development as they do not have to fund offsite upgrades.

Parcels with Non-SSMUH Residential Zoning

East Bamfield has only four residential parcels with non-SSMUH zoning. Like West Bamfield, these parcels are limited to one SFD per lot unless the lot is over 0.4 ha (1 acre) in size, in which case they would also be permitted an ADU or secondary suite.

Per **Table 6** below, two parcels have A2 zoning and the other two are zoned RM1. Those lots with RM1 zoning could be subdivided into a maximum of 3 lots, potentially yielding an additional 3 dwelling units (this would need to be verified by a surveyor).

Table 6: Subdivision Potential for Residential Parcels with Non-SSMUH Zoning

Parcel	Est. Parcel Size	Zoning	Minimum Lot size for Subdivision	Potential # of New Lots
1	4.8 acres	A2	5 acres	0
2	5.3 acres	A2	5 acres	0
3	1.1 acres	RM1	12,000 sq ft (0.3 acres)	3
4	1.1 acres	RM1	12,000 sq ft (0.3 acres)	3

Parcels with SSMUH Zoning

East Bamfield has approximately eighty-three SSMUH applicable parcels. If all properties were to build to the maximum permitted density of two units, an additional eighty-three housing units could be provided (this is not likely but technically possible). Uptake of SSMUH development may be quicker in East than West Bamfield due to the shortage of dwelling units to support the BMSC and other key employers located in this area of the community. The impacts of tourism have played a key role in limiting access to affordable housing options for long-term residents and created housing shortages for seasonal workers. A sewer service would allow for the ACRD to amend the zoning bylaw to permit SSMUH properties to have a secondary suite and an ADU.

Density increases on SSMUH parcels on Grappler Inlet that do not have road access are likely to take longer to develop, if at all. These properties are more likely to be developed for tourism commercial purposes, rather than residential.



Parcels with a Residential OCP Designation and Non-Residential Zoning

8 parcels in East Bamfield have an OCP Residential designation but currently have a variety of non-residential zoning. These properties could be rezoned to residential to match the OCP, or the community may wish to review and change the residential designation during the upcoming OCP review. The current zones are:

- Small Holdings District (A1)
- Rural District (A2)
- Park and Public Use District (P2)
- Cottage Residential District (RC)
- Mixed Storage District (SW-2)

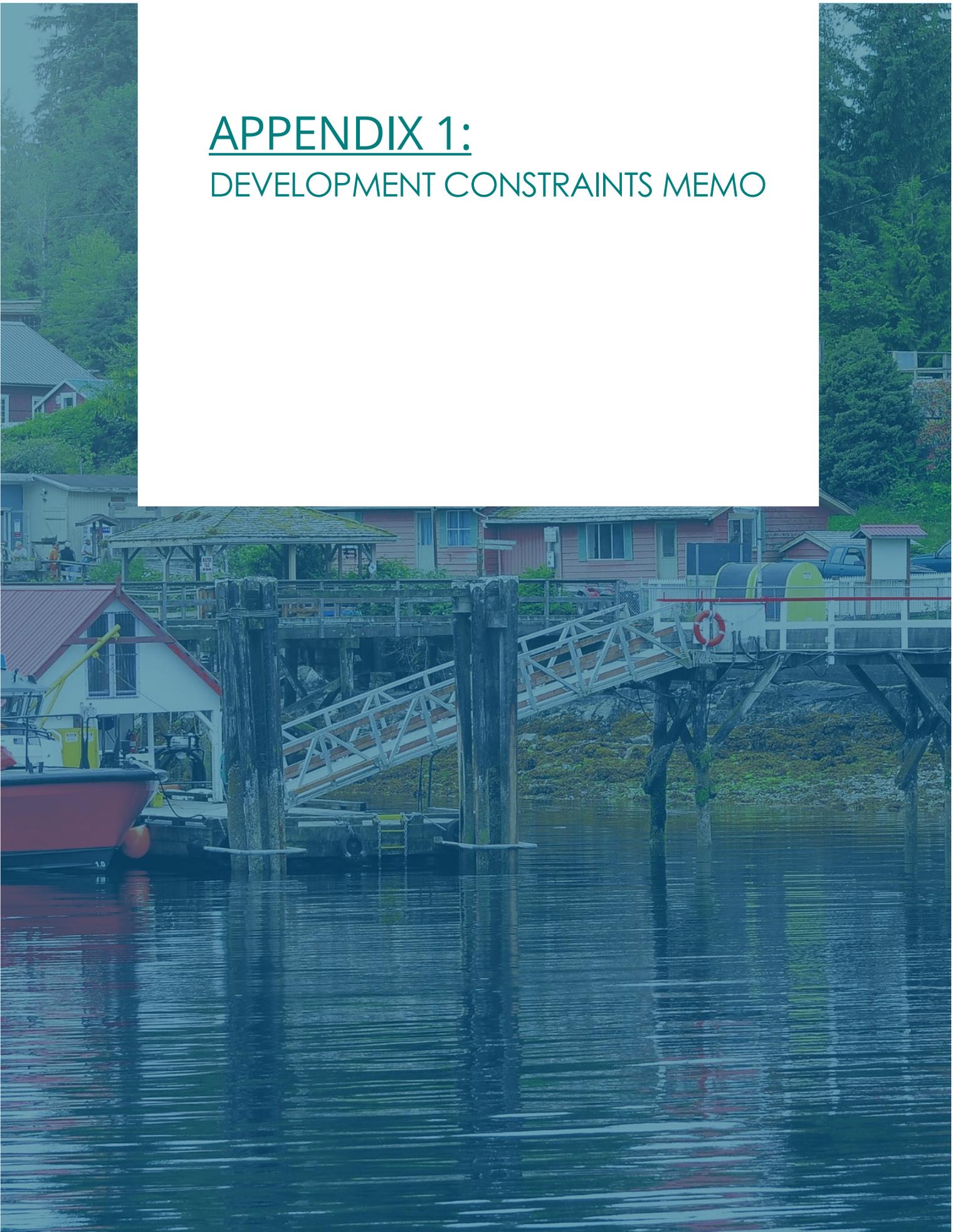
3.5 CONSIDERATIONS FOR POLICY & REGULATIONS

This plan aims to identify what the potential for development could be in Bamfield, and how this is influenced by existing constraints to development, including sanitary sewer servicing. This assessment has provided information that will provide direction for the upcoming update to the Electoral Area 'A' – Bamfield OCP which will outline how the community envisions growth to grow.

The ACRD may wish to consider the following recommendations as they relate to future land use planning exercises in Bamfield:

1. Undertake a land economics study of the community to better understand what types of development would be most viable based on current and projected conditions.
2. Address the following as part of the OCP Update process:
 - a. Draft policy that promotes diversification of housing supply through exploration of how to encourage more missing middle housing forms (duplexes, triplexes, row housing/townhomes, and potentially low-rise apartments).
 - b. Explore with the community and employers' potential options for staff housing.
 - c. Assess opportunities for increasing the affordability of long-term housing supply in Bamfield.
 - d. Encourage the development of a designated 'town centre' within and around the existing village area (intersection of Frigate Road and Bamfield Road)
 - e. Consider redesignating the property between south Bamfield and Rance Island (PID: 012-157-481) from Resource Use to a use more suitable to its proximity to residential areas and the town centre. This would be subject to a Crown Land transfer process.
 - f. Consider redesignating the airstrip from Mobile Home Park to Industrial to support the local economy and increase the possibility of moving "in-town" industrial to more suitable lands.
 - g. Review large A2 zoned lots with a Residential designation that extend into the Community Forest Designation to determine if another land use may be appropriate.
3. Consider the following updates to the Zoning Bylaw, after the OCP update is complete:
 - a. Review the existing tourism commercial zones to consolidate, where possible.
 - b. Reduce minimum lot sizes and increase density to support housing affordability initiatives.

APPENDIX 1: DEVELOPMENT CONSTRAINTS MEMO



MEMORANDUM



DATE	May 6, 2024	FROM	Brittany Tuttle, MCIP, RPP Eric Sears, P.Eng
TO	Mike Irg, Alberni-Clayoquot Regional District	FILE	1111.0007.01
CC	Nolan deWitt, EIT Meleana Searle, Community Planner Kara Gross, Community Planner	SUBJECT	Bamfield Development Plan - Development Constraints Memo

1.0 OVERVIEW

1.1 PROJECT PURPOSE

Bamfield is a small community in Electoral Area 'A' of the Alberni-Clayoquot Regional District (ACRD), located on the west coast of Vancouver Island. Primary access to Bamfield is via Bamfield Road from Port Alberni. This road has recently undergone significant upgrades to make access to Bamfield and the Huu-ay-aht First Nations communities more accessible. In addition, the ACRD is currently in conversation with the community about the potential provision of a sanitary sewer service. These two items combined, in addition to Bamfield's existing tourism industry, spark further potential for the community to grow and develop.

The ACRD retained Urban Systems in March 2024 to create a Development Plan for the Bamfield community. It is anticipated that this work will be completed by Fall 2024. The intent of this project is to:

- Understand the existing constraints to development in the Bamfield Official Community Plan area;
- Engage in conversation with community members and partners about how growth may occur in Bamfield in a thoughtful manner;
- Project how Bamfield may grow in the short-, medium-, and long-term, and what the potential for growth may be subject to the provision of a sanitary sewer service, or if the community were to remain without sanitary sewer servicing; and
- Provide direction for the future Electoral Area 'A' – Bamfield Official Community Plan (OCP) Update in regards to future land uses for Bamfield. It is anticipated that the Bamfield OCP process will occur in 2025.

This memo summarizes our findings of existing constraints to development in Bamfield. Understanding these constraints, along with opportunities for development, will inform scenarios that will project what future development in Bamfield could look like. These scenarios will guide the direction that is outlined in the final deliverable for this project, which is a Development Plan that will discuss potential future land uses for the community.

1.2 AREA CONTEXT

According to the 2021 Census, Bamfield has a full-time population of 201. The community, divided by the Bamfield Inlet, is split in two as shown in Figure 1 - East Bamfield and West Bamfield, with West Bamfield only accessible by boat. The Bamfield Boardwalk connects most of the homes, businesses, and docks on the west side. East Bamfield contains most of the commercial businesses and community amenities, including the Bamfield Community School (BCS), Bamfield Volunteer Fire Department, Bamfield Health Centre, and the Bamfield Marine Sciences Centre (BMSC). East Bamfield also includes the area known as Port Désiré, located directly east of the main commercial area, and situated on the Grappler Inlet.

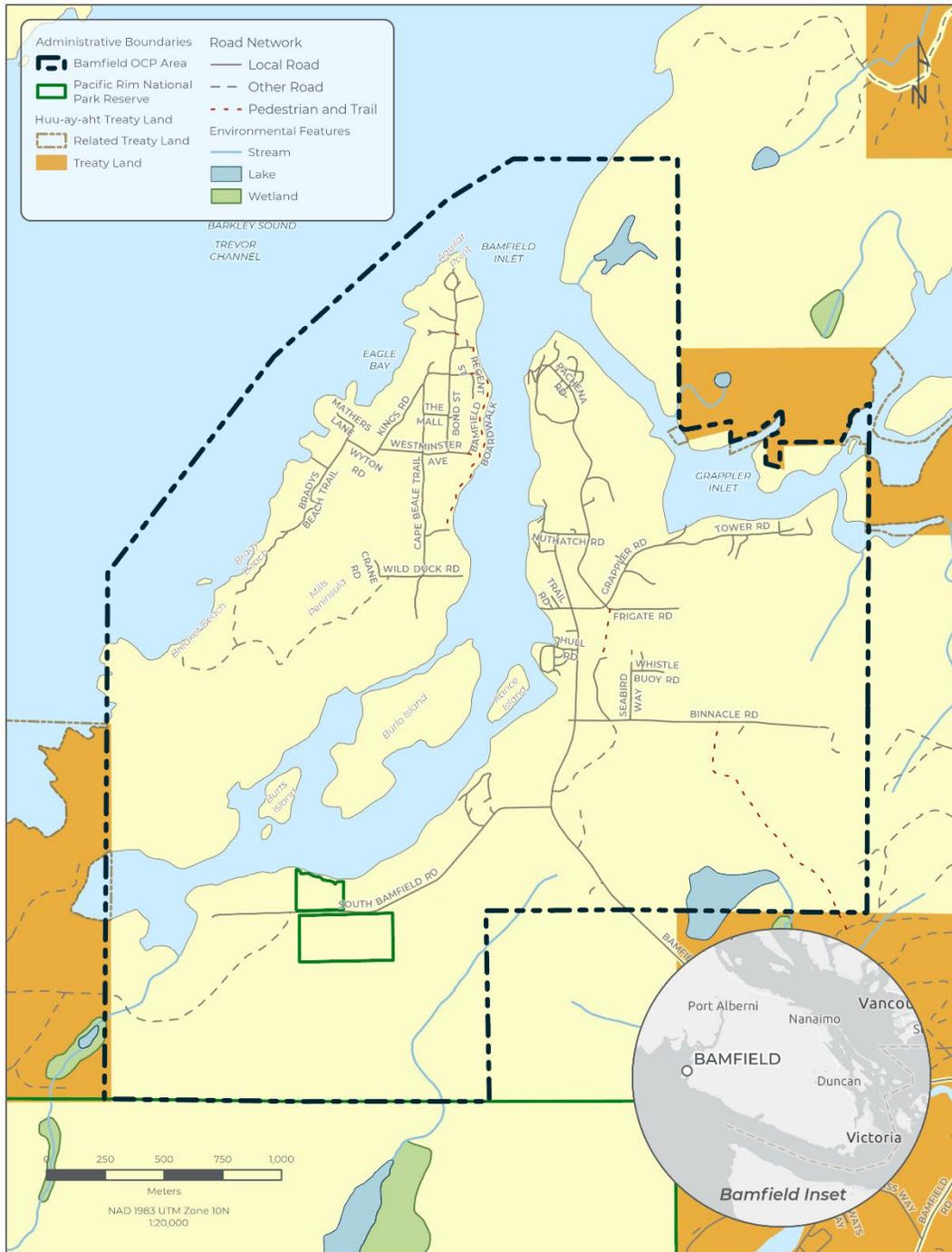


Figure 1. Bamfield Community.

The area surrounding Bamfield comprises of Huu-ay-aht First Nations Treaty lands along with large tracts of Crown forested lands that are managed by the Bamfield Huu-ay-aht Community Forest Society.

Educational services, public administration, and sales and service are the primary industries in Bamfield, with the former likely linked to the BMSC and the latter to tourism. Pacific Rim National Park, the West Coast Trail, and Pachena Bay Campground are a large draw for visitors to the region. Bamfield has seen significant change over the past decades, as tourism has replaced the natural-resource sector as the community's primary economic driver. This shift has resulted in changing demographics and needs in Bamfield.

1.3 EXISTING DEVELOPMENT CONTEXT

Building Permits

Based on ACRD building permit trends between 2014 and 2024, the most common type of new construction in Bamfield has been single family dwellings (see Figure 2). Over the last ten years, no permits were issued for other housing types such as mobile homes or multi-family buildings. 2022 saw the highest overall number of building permits issued in the previous 10 years, with single family homes making up the largest percentage at 69% (13 new homes). This increase in building permits is linked to a subdivision the previous year that created sixteen new residential lots.

According to the 2021 Bamfield Housing Needs Report (HNR), it was projected that 16 new dwellings would need to be built by 2026 to accommodate the projected population increase, if the average household size stays at 1.6 persons. Since the HNR report was published, there have been thirteen building permits issued for single family dwellings. The data doesn't specify if secondary suites were included in any of these builds so the actual number of dwelling units may be higher. This indicates that the rate of construction for dwelling units is in line with the population projections.

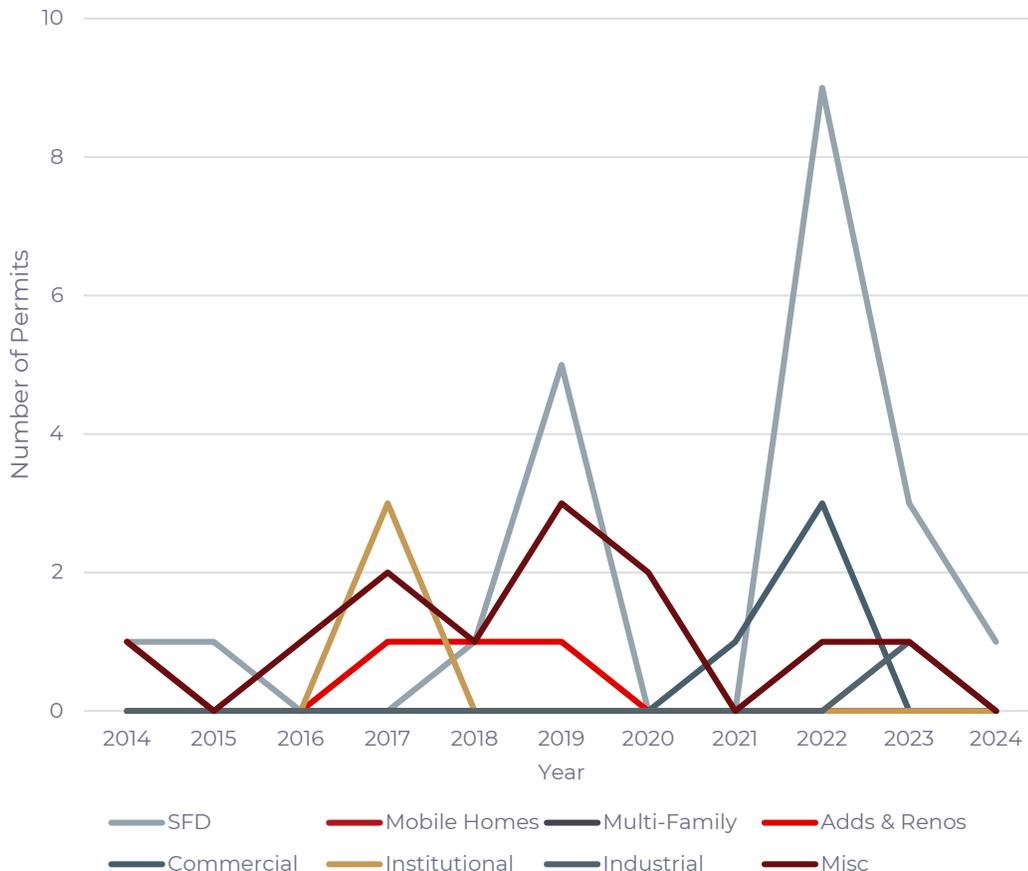


Figure 2. Building Permits in Bamfield (2014 - 2024 to date)

2.0 KEY FINDINGS AND CONSTRAINTS

The following section highlights the key constraints to development in Bamfield, as discovered through a review of existing plans, policies, and studies, as well as conversations with the community.

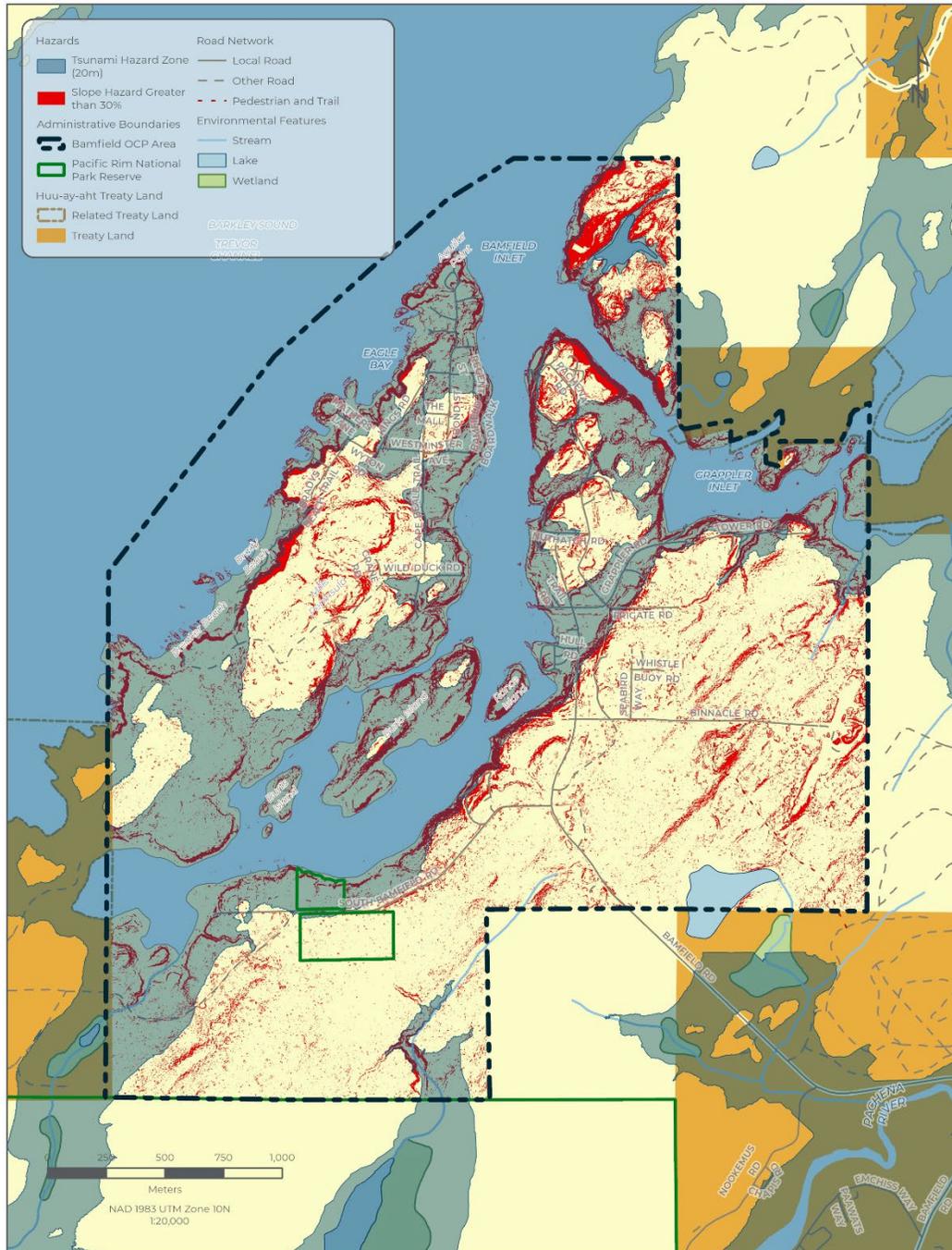


Figure 3. Bamfield Hazard Areas.

2.1 PHYSICAL LAND CONSTRAINTS

As discussed thoroughly in the current OCP, a notable portion of Bamfield's land base comprises of sensitive or hazardous land areas, including steep slopes, tsunami inundation zones, and environmentally sensitive areas (see Figures 3 and 4). These sensitive and hazardous areas are largely designated as Development Permits Areas (DPAs) in the OCP to restrict the level of development that may occur, as well as ensure that any development is undertaken in a manner that minimizes risk to public safety and impacts to the land itself.

In addition, a significant portion of land within the Bamfield OCP area comprises Crown lands used for forestry purposes that are managed by the Bamfield Huu-ay-aht Community Forest Society, as shown on Figure 5. While the DPAs are discussed further in s. 2.5.1 of this memo, it is important to consider the interrelationship between physical land features and characteristics, and the other constraints to development in Bamfield noted in this section.

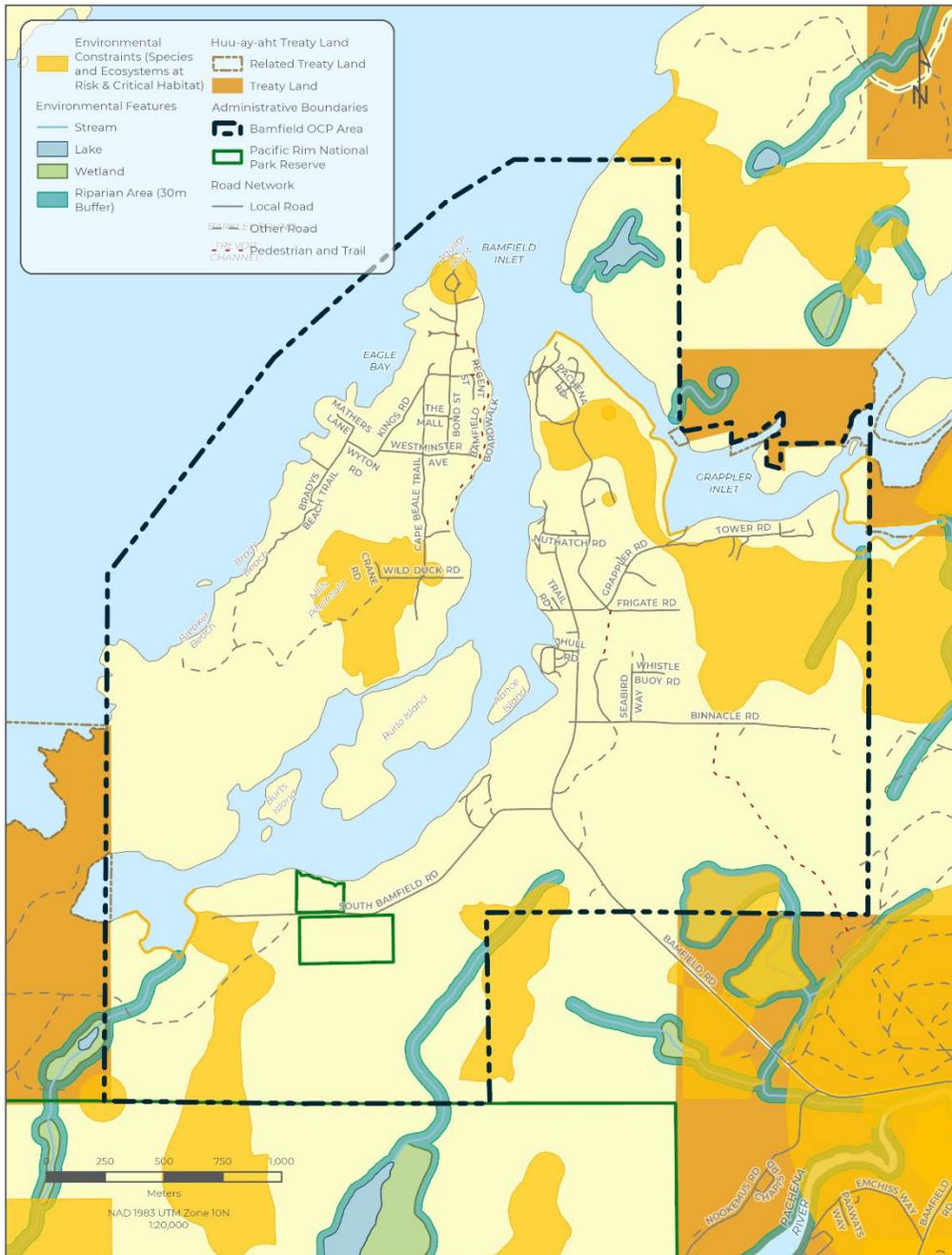


Figure 4. Bamfield Environmentally Sensitive Areas.

2.2 SERVICING

Infrastructure services for the Bamfield community discussed in this section are denoted on Figure 6.

2.2.1 SANITARY SERVICE

Bamfield does not currently have a community sanitary sewer system, and sewage is managed through onsite septic systems for individual lots with several direct connections to the ocean. This method of management limits the growth of the community compared to a community collection and treatment system due to limitations of suitable septic field locations, minimum lot sizes, and environmental regulations. This is particularly sensitive in areas immediately adjacent to the Bamfield Inlet, as it has been reported that wastewater has been entering the inlet without sufficient treatment.

Without a community sanitary sewer system, future development and increased density will be limited by the suitability of sites for new septic fields, as well as lot sizes and setbacks to accommodate new septic fields.

The ACRD is currently exploring options for a community sewer system supported by a new sewage treatment plant that has been built by the Huu-ay-aht First Nations and is currently reviewing community interest in the implementation of a collection systems that would be connected to the new plant for both the east and west Bamfield areas. Future growth scenarios may need to be flexible in looking at growth with and without a sewer collection system in the region.

2.2.2 WATER SERVICE

The Bamfield water system was originally constructed between 1979 and 1980 and is supplied by Sugsaw Lake, located northeast of the community. As of 2021, the system supplies 207 service connections throughout Bamfield as stated in the Bamfield Water System Infrastructure Renewal & Long-Range Plan by Koers and Associates Engineering Ltd. The system consists of 18km of water supply and distribution mains and 5km of submarine piping. The 2018 newly assembled treatment plant located at 345 Grappler Road provides treatment prior to being pumped into two reservoirs for distribution.

Water Demands

The water demands within Bamfield have seen significant increase over the past ten years. The average daily water consumption increased by 50% between 2014 to 2019, from 137 m³/day to 209 m³/day. This increase is believed to stem from multiple factors, including:

- increased levels of tourism;
- increased activity at the Bamfield Marine Sciences Centre; and
- an increase in the number of watermain leaks.

Future 2053 demands for Bamfield were projected by the ACRD in the 2013 Water Master Plan. These projected water demands are as follows:

- Average Daily Demand: 187 m³ / day, 2.2 L/s
- Maximum Daily Demand: 682 m³ / day, 7.9 L/s

The projected daily demands have been surpassed in recent years, reaching a maximum average day demand of 209 m³/day in 2019. The current system capacity is limited by the water treatment capacity of 626 m³/day, which provides room for substantial development.

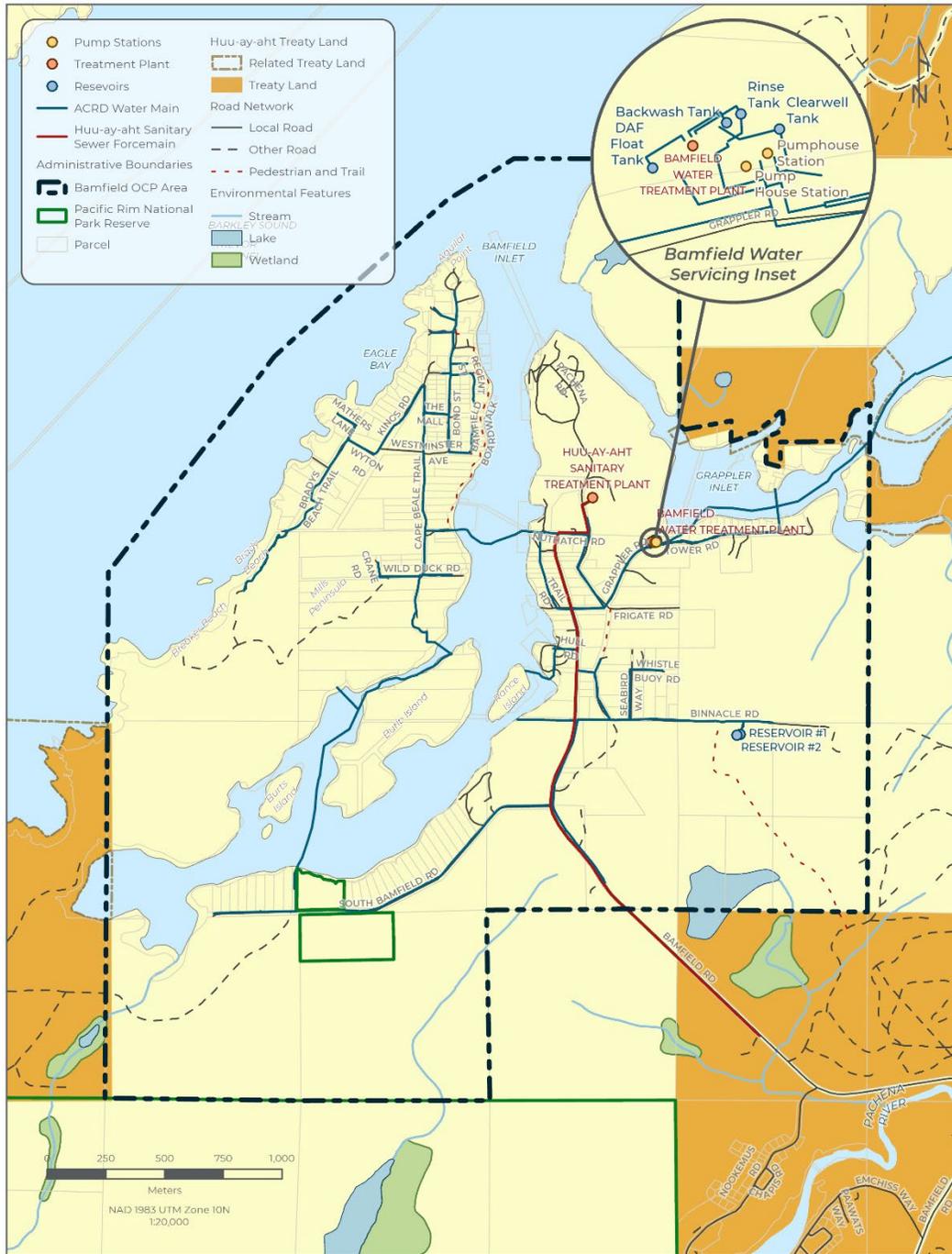


Figure 6. Existing Infrastructure Services in Bamfield.

Fire Flow Constraints

The 2013 Water Master Plan utilizes the Fire Underwriters Society (FUS) design standards which required a flow of 33 L/s for residential areas and a varying required fire flow for commercial buildings. Based off these standards, the current water system has the capacity to meet the current average and maximum daily demands with space to accommodate growth.

Due to increased levels of growth and development in the community in more recent years, the 2021 Bamfield Water System Infrastructure Renewal & Long Range Plan revised the required fire flow requirements using MMCD Design Guidelines in addition to FUS. The revised minimum fire flow for buildings without sprinklers has increased to:

- Residential uses - 60 L/s for a minimum duration of 1.4 hours
- Commercial uses - 150 L/s for a minimum duration of 2 hours

To meet these revised fire flow requirements, significant water system upgrades will be necessary. A summarized list of improvements to ensure adequate fire flow is as follows:

- Upsize and replace 10 km of current watermains
- Eliminate dead-ended mains, where possible
- Replace smaller reservoir with 1,218 m³ storage (keeping 345 m³ reservoir)
- Add 50 hydrants (200 m spacing)
- Replace supply main from 150 mm to 250 mm to provide capacity (1,760 m³/day (20.3 L/s))
- Renew water license to 1,760 m³/day to accommodate fire flow scenario

Without upgrades, development in areas with lower fire flows should be limited. This includes West Bamfield, as the entire area primarily has less than 20 L/s available fire flow. Unoccupied land east of the water treatment plant and the area surrounding the Bamfield Marine Sciences Centre also sustains less than 20 L/s in available fire flow. Development in these areas should be limited until upgrades have been completed and an increase in available fire flow is obtained.

Pressure Constraints

The current water system meets the design standard pressure requirement of 275kPa (40psi) at each residential property line. For future development, the minimum pressure requirement would be met throughout all West Bamfield and most of East Bamfield. The unoccupied land east of the reservoirs at the end of Binnacle Road is less than the required pressure levels. For future developments to occur in this area, a pump station would need to be installed to provide adequate pressure.

High pressure of concern (greater than 120psi) was only identified in the submarine piping crossing the Bamfield Inlet. This should be considered prior to upsizing distribution pipes.

2.2.3 STORMWATER MANAGEMENT

The stormwater management system in Bamfield is managed by the Ministry of Transportation and Infrastructure (MOTI) and consists of a series of ditches and culverts. It has been identified by a MOTI representative that the majority of the existing culverts are undersized for the flows being received based off

current design standards. Future development and densification in Bamfield would likely necessitate localized upgrades to culverts and ditches to accommodate increased flows.

2.2.4 SOLID WASTE MANAGEMENT

The Bamfield Transfer Station, located on the east side of Bamfield, is administered by the ACRD in partnership with RecycleBC, and is operated via private contractor. The Transfer Station receives solid household waste and recyclables directly from East Bamfield residents, while West Bamfield residents divert their household waste and recycling into a series of receptacles located at the West Bamfield wharf which are regularly transferred to the east side for proper disposal.

Bamfield does not currently have an organic waste diversion program. As well, the Bamfield Transfer Station is not designed for commercial waste diversion nor is there a service for the removal of large and/or bulky items, which contributes to open burning of waste and illegal dumping on public roadways and remote sites.

We understand that further growth and development in the community may strain Bamfield's existing solid waste management service. The draft Development Plan will therefore consider how future solid waste volumes will be managed throughout the community.

2.3 ACCESS

2.3.1 ROADS

The main access road, Bamfield Road, underwent a resurfacing project in Summer of 2023. This project resulted in the road being chip sealed, which improved safe access to the community. With an increase in accessibility, it is anticipated that an increased housing demand and tourism will follow, which is further iterated in the 2021 Housing Needs Report. The increased popularity will consequently lead to an increase in traffic and parking issues within East Bamfield in which road safety implementations will need to be considered. Based on the level of development taking place, roads in East Bamfield may need to be upgraded to accommodate increased traffic and associated safety considerations.

West Bamfield is accessible only by boat, however there is an existing road network that is utilized by vehicular traffic. Roads in West Bamfield have not all been constructed to the MOTI local road standards. As residential development in West Bamfield has expanded, increased vehicular traffic (both local and construction) has caused existing roadways to deteriorate – meaning MOTI has had to expend significant resources for road maintenance. As such, MOTI recommends significant improvements to West Bamfield roadways if more vehicle traffic is expected.

2.3.2 PARKING

Through discussions with the ACRD, a shortage of vehicle parking in downtown East Bamfield was identified. The cause of parking limitations is primarily due to the lack of vehicle access to West Bamfield resulting in residents leaving their vehicles in East Bamfield to travel to the west side via boat.

In 2017, Koers Engineering created a gravel parking expansion plan for MOTI. The project was phased to manage financial costs and overall feasibility. This project resulted in shoulder widening creating three new parking areas along Frigate Rd. Two additional parking areas were identified in the Koers project that have not been completed.

It is expected that an increase in development will generate further demand for parking and additional parking solutions will be required to manage visitors, along with seasonal and full-time residents.

2.3.3 ALTERNATE ACCESS

Moorage

Through their participation in the ACRD's Fall 2023 engagement survey and workshop, residents identified that Bamfield's existing moorage facilities are insufficient to meet community demand. It is anticipated that future growth and development within the community, particularly in West Bamfield, will further constrain moorage availability.

Future development planning may need to include additional public moorage facilities to accommodate increased boat traffic between East and West Bamfield.

Floatplane

Bamfield can be accessed from various locations on Vancouver Island and surrounding areas via scheduled or privately chartered float plane. Float plane arrivals disembark at Bamfield's west dock, meaning individuals travelling to East Bamfield must also use a boat to reach their destination.

As Bamfield's existing moorage facilities are already heavily utilized by the community, additional floatplane traffic resulting from future development – whether new permanent residents or seasonal visitors – may cause existing moorage to reach capacity.

Binnacle Road Air Strip

Bamfield has a midsized airstrip located on a 40-acre parcel at the east end of Binnacle Road. The property was purchased by Huu-ay-aht First Nations in 2016 and the airstrip is currently not in use.

2.4 UTILITIES

2.4.1 ELECTRICITY/POWER

Following communication with BC Hydro, a broad understanding of the current hydroelectricity capabilities was established. The power in Bamfield is fed from the Port Alberni substation and circuit PAL 2572. The overall available capacity of Bamfield is approximately 2.9 MW from the circuit.

The number of dwellings that 2.9 MW can supply is highly dependent on the energy consumption in each household. The average Vancouver Island usage 1 MW should be able to power between 200 – 500 single-family homes. Therefore, with the 2.9 MW capacity an additional 500 – 1,500 single-family homes could be constructed without major concern.

The only visible constraints that would arise with additional development are the feeder rated conductors on South Bamfield Rd. These conductors would require upgrades to create service connections if development were to occur in South Bamfield.

2.4.2 COMMUNICATIONS

Residents of Bamfield currently have the option to be connected to a landline. Cell phone networks are available, but service is unreliable.

Bamfield is currently serviced by a fibre optic network, however the network will be extended with the Connected Coast Project. The Project, once completed, will see the placement of subsea fibre-optic cable, stretching from Prince Rupert south to Vancouver, then around Vancouver Island. Bamfield is not yet connected but as of spring 2023, the final section of the project has been submitted to the Province for permits. The next stage of the project will be construction with landing sites for the network in Bamfield and HUU-ay-aht. Reliable high-speed internet will allow for residents to work remotely and may lead to an increase in the year-round population.

2.5 EXISTING LAND USE PLANS AND BYLAWS

2.5.1 OFFICIAL COMMUNITY PLAN

The Bamfield OCP is a comprehensive, long-range framework intended to guide the ACRD, private citizens, businesses, and public agencies on all matters concerning future development within the community planning area.

Existing Land Uses and Development Permit Areas

A significant portion of Bamfield's OCP area, is covered by water (Pacific Ocean, Bamfield Inlet, Grappler Inlet/Port Désiré) and is largely designated as Sensitive Area. The remaining land base is flanked by provincially owned forest lands, HUU-ay-aht Traditional Territory/Reserve lands, and a national park. These features limit the extent to which growth can occur in Bamfield and elicits the need for a thoughtful approach to future development.

The land area associated with each of the OCP's land use designations is outlined in Table 1 and referenced in Map 2 of the Bamfield OCP. The majority of Bamfield's land base is designated as Community Forest, Parks and Recreation and Resource Use in the OCP. Residential uses make up 156.87 ha of the land base and are located throughout the community. The Commercial land uses, which make up a small portion of the land (11.09 ha), are primarily concentrated around Grappler Road and the harbour.

Some of the OCP designations are not represented on the OCP Map (Sensitive Area) or do not have an objective definition (Mobile Home Park), making it difficult to understand where these designations apply and the intent of the land use.

Table 1 – Land Use Designations in Bamfield.

Land Use	Area (ha)	% of Land Base
Commercial	11.09 ha	1.18%
Community Forest	272.32 ha	28.87%
Community Service	93.26 ha	9.89%
Comprehensive Development Area	1.95 ha	0.21%
Industrial	17.08 ha	1.81%
Mobile Home Park *Not designated as a land use designation in OCP– only on map	37.75 ha	4.00%

Mixed Use	4.96 ha	0.53%
Parks & Recreation	16.33 ha	1.73%
Residential	156.87 ha	16.63%
Resource Use *Not designated as a land use designation in OCP – only on map	67.26 ha	7.13%
Sensitive Area	157.76 ha	16.73%
Water (not an OCP designation – for reference)	106.64 ha	11.31%
Total Land Base	943.26 ha	

*Potential Park Use is not included in the table as it overlaps current land uses.

Development Permit Areas (DPAs)

Bamfield has four DPAs:

- DPA I Riparian Areas Protection – to ensure that the ecological values of sensitive riparian and wetland habitats have been considered prior to development, and that measures will be taken to limit or avoid damage to these ecosystems;
- DPA II Natural Hazard Areas Protection – to mitigate impacts from flooding events (sea level rise, tsunamis, etc., steep slopes (erosion or sloughing));
- DPA III Form and Character – to protect the visual landscape of aesthetic of the area; and
- DPA IV Coastal Protection – to protect shoreline waters, natural fish, plant, and wildlife habitat. Mitigate hazards from shoreline areas and beaches.

These DPAs identify and designate areas where proposed development is subject to additional restrictions for the purpose of protecting the natural environment, mitigating risks to public safety, or ensuring that a certain aesthetic for the community is achieved. Development proposed within a DPA requires additional approval from the ACRD in the form of a Development Permit, subject to the DPA-specific guidelines outlined within the OCP.

Generally, proposals for development within a DPA require a greater level of detail and analysis; proponents may be required to provide additional information/documentation related to siting, environmental impact(s) including an assessment of watercourses, buffer zones, and vegetation, formal risk assessments (tsunamis, riparian area flooding, slope stability, etc.), and design schemes.

These DPA-specific application requirements can constrain development, as they incur additional costs to the property owner and/or developer. As well, development permits may be withheld should a qualified professional identify that a proposed development does not satisfy the requirements outlined in the development guidelines – effectively prohibiting development. As well, discussions with ACRD staff revealed that the development

guidelines related to tsunami risk do not reflect current engineering best practice, meaning adherence to the design guidelines does not currently constitute an approval.

Policy Direction

Future Growth

The vision, values, and goals of the current OCP (Sections 2.0, 3.1 and 3.2) highlight the community's desire to preserve and protect the unique characteristics that make Bamfield unique. Future growth will need to consider this general community sentiment to be successful. Promoting growth within already developed areas is encouraged as is growth that does not compromise the ecological integrity or rural character of the area.

Infrastructure

The current OCP identifies objectives for hard infrastructure in the community. Infill development in areas with existing servicing is encouraged (Objective 7.1.1 and Policy 7.2.1), as is green infrastructure (Policy 5.2.16). As mentioned above, without a community sanitary sewer system, future development and increased density will be limited by the suitability of sites for new septic fields, as well as lot sizes and setbacks to accommodate new septic fields (Policies 13.2.1 and 13.2.2). Without upgrades, development in areas with lower fire flows should be limited.

The OCP also establishes objectives and policies related to existing moorage facilities in Bamfield, emphasizing the importance of working alongside other government agencies to manage environmental impacts while reducing negative economic impacts for existing businesses and services who rely on public docks to serve their customer base (Policy 6.2.7). While the OCP speaks to prioritizing the construction of public and community docks over individual or private docks (Policies 7.1.7 and 13.2.7), it is also recognized that the development of additional moorage facilities is restricted by DPAs I (Riparian Areas Protection) and IV (Coastal Protection), as well as the Zoning Bylaw and other provincial requirements (Policy 6.4.6).

ZONING

Zoning in the ACRD is currently regulated by Zoning Bylaw No. 15, which was first adopted in 1973 and applies to all six electoral areas within the ACRD.

Residential Development

Review of Bamfield's residential zones shows that single-family residential development has been favoured historically. Secondary suites and carriage houses, referred to as accessory dwelling units (ADUs) in the bylaw, are permitted; however, the regulations are quite exclusionary. For example, ADUs are only permitted on lots over 4,040 m² in size where the principal use of the lot is for single-detached dwellings and the registered owner must occupy one of the units as their principal residence.

Lot coverage in the residential zones may pose restrictive for new development, as development on lots within the single-family residential zone (R1 and R2) cannot occupy more than 33% of a site. Acreage residential zones (RA 1, RA 2, and RA 3) are even more restrictive with a maximum lot coverage of 25%. The coverage amounts for the multi-family residential zone (RM 1) may also be restrictive, with the maximum coverage of 40%.

As indicated in the HNR, one of the primary issues with housing supply in the ACRD is the lack of housing options. The housing stock of Bamfield is mostly comprised of single detached dwellings (66%), which is very common in

rural areas. Movable dwellings (mobile/manufactured homes) are the next most popular dwelling type (21%). Higher density and a diversity of housing types are currently permitted in the RM 1 and RM 2 – Multiple Family Residential Districts however these types of housing have never been built, which could be for a variety of reasons such as the current character of the community being largely single-detached residential, the servicing, and physical constraints discussed in sections 2.1 and 2.2.

On November 30, 2023, the Province adopted new legislation to facilitate the delivery of more housing. This will affect Bamfield by requiring that the R 1, R 2, RC, RC 1, RA, RA 2, and RA 3 zones be updated to permit additional density in the form of secondary suites and/or accessory dwelling units. As Bamfield is not currently connected to a community sanitary system, only secondary suites, not accessory dwelling units, should be permitted on properties less than one hectare in size. We know that the sanitary system is currently being reviewed – should Bamfield decide to not move towards a community sanitary system, housing density will be limited.

Non-Residential Development

Non-residential development in Bamfield is encouraged in the Zoning Bylaw if these uses do not conflict with the natural environment or existing residential uses.

Rural zones account for the majority of Bamfield's land base, including lands intended for intensive agriculture, hobby farms, recreation activities, conservation of agricultural and non-urban land in large parcels, retention of forest and wildland, and natural resource development and extraction, as well as some ancillary commercial uses. Permitted uses in rural zones generally are only limited by minimum lot areas.

Commercial zones within Bamfield allow for a range of businesses and industries, and include intensive pedestrian-oriented districts, low-density vehicular-oriented districts, and commercial enterprises (including seasonal tourism-oriented businesses) that are meant to primarily serve water users and water traffic. General Commercial and Highway Commercial zones, C 2 and C 4, are subject to maximum lot coverages of 90% and 40%, respectively, while tourism/waterfront zones are not subject to lot coverage maximums. All commercial zoned parcels include use-specific conditions, including siting restrictions and/or off-street parking requirements.

Industrial uses make up just 1.18% of Bamfield's land base, allowing for a range of activities from light manufacturing and wholesale functions to heavy industrial activities. Much of Bamfield's industrial activities are required to operate within an enclosed structure, subject to both maximum lot coverages and use-specific conditions related to public nuisance or environmental protection.

There is one parcel in Bamfield that is regulated by a Land Use Contract. Per the *Local Government Act*, the ACRD must terminate all land use contracts and update their zoning bylaw to accommodate all affected parcels by June 30, 2024, at which time this contract will no longer be in effect.

Off-Street Parking

Parking requirements in commercial areas are high compared to other comparable tourism-based communities. For example, downtown Bamfield requires one off-street parking space for every three seats for an eating establishment/restaurant, while Tofino requires one space per five seats, and Cumberland requires one space per eight seats. Parking minimums can limit commercial development as it can be challenging for business owners to accommodate the required spaces on-site. It is recognized that parking is already an issue in

Bamfield, so any changes to off-street parking requirements for non-residential uses would need to be carefully considered.

2.6 OTHER CONSIDERATIONS

In the fall of 2023, the ACRD conducted online and in-person engagement with residents from all six Electoral Areas. Bamfield resident participants identified the following barriers to development within their community:

- Shortage of affordable and/or long-term housing, which is exasperated by short-term vacation rentals ;
- Shortage of both public and private moorage space, particularly in West Bamfield;
- Shortage of off-street parking, which is exasperated by West Bamfield being accessible only by boat;
- The community lacks public amenities and services that would support and/or incentivize new permanent residents (i.e., a community hall, a boardwalk in East Bamfield, reliable public transit between Bamfield and Port Alberni, as well as a composting/organic material recycling facility).

While residents indicated they are generally supportive of growth in their community, there is an overall desire amongst locals to avoid large-scale tourism in favour of maintaining Bamfield's existing character and sense of community. This is a key sentiment that must be considered when contemplating the future growth and development of Bamfield.

3.0 CLOSING/NEXT STEPS

This memo identifies constraints to development within Bamfield based on current knowledge of existing infrastructure, land use documents, and physical land features. While some of these items, such as physical land constraints associated with steep slopes or hazardous areas, may limit the potential for development in portions of the community, others can be addressed through revisions to planning documents, infrastructure projects, or otherwise to better align development potential with the community goals for development, which will be better defined through the OCP update process.

The next steps in the Development Plan process are to develop potential growth scenarios for the community for the next 5, 10, 25, and 50 years. This will be done in conjunction with the ACRD, and with consideration of current and expected zoning and land uses, known and expected developments and subdivisions, growth potential, and expected partner initiatives with Huu-ay-aht First Nations and the Bamfield Marine Sciences Centre. Infrastructure and servicing upgrades to achieve these scenarios will be reviewed based on population and land use growth projections, and a Growth and Infrastructure Capacity Memo will be produced.

Should you have any questions or concerns pertaining to the contents of this memo, please do not hesitate to contact the undersigned.

Sincerely,

URBAN SYSTEMS LTD.

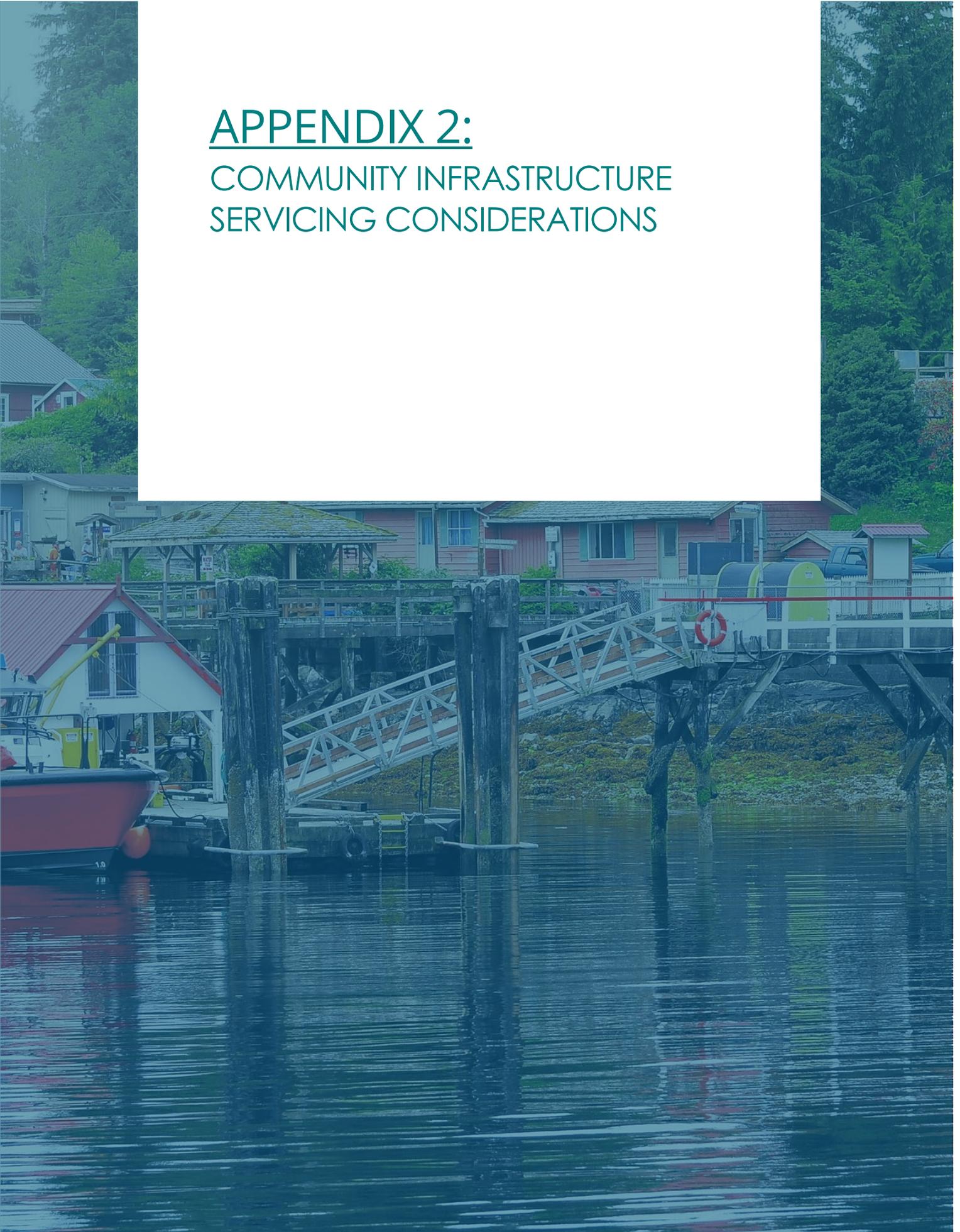


Brittany Tuttle, MCIP, RPP
Community Planner



Eric Sears, P.Eng.
Project Engineer / Principal

APPENDIX 2: COMMUNITY INFRASTRUCTURE SERVICING CONSIDERATIONS



DATE: September 17, 2024
TO: Mike Irg, Alberni-Clayoquot Regional District
CC: Brittany Tuttle, MCIP, RPP
Meleana Searle, Community Planner
FROM: Eric Sears, P.Eng.
Nolan deWitt, EIT
FILE: 1111.0007.01
SUBJECT: Bamfield Development Plan – Community Infrastructure Servicing Considerations

1.0 BACKGROUND AND OVERVIEW

The Alberni-Clayoquot Regional District (ACRD) retained Urban Systems in March 2024 to create a Development Plan for the community of Bamfield. The intent of the project is to:

- Understand the existing constraints to development in the Bamfield Official Community Plan area;
- Engage in conversation with community members and partners about how growth may occur in Bamfield in a thoughtful manner;
- Project how Bamfield may grow in the short-, medium-, and long-term, and how the potential for growth may be subject to the provision of a sanitary sewer service, or if the community were to remain without sanitary sewer servicing, and
- Provide direction on development potential in Bamfield for the future Electoral Area 'A' – Bamfield Official Community Plan (OCP) Update. It is anticipated that the OCP process will occur in 2025 or 2026.

Urban Systems has previously completed a review of development constraints, and prepared a development constraints document, which outlined geographical, planning and regulatory, and servicing constraints to development in the community. The purpose of this memo is to outline the key findings of further analysis on existing and projected servicing and infrastructure conditions, and how this may impact potential future development in Bamfield.

2.0 INFRASTRUCTURE AND SERVICING ASSESSMENT

2.1 WATER SERVICING

The Bamfield community water system was originally constructed in 1979 and 1980, and supplies water to 207 service connections throughout the east and west portions of the community (2021 Bamfield Water System Infrastructure Renewal & Long-Range Plan by Koers and Associates Engineering Ltd) The system consists of a water treatment plant, booster pump station, over 18km of distribution piping, over 5km of submarine piping, 26 fire hydrants, 22 stand pipes, and 17 air release valves. The system receives its supply from Sugsaw Lake.

The system is currently limited by the capacity of the water treatment plant, which can accommodate a maximum flow of 626 m³/day. The average daily water consumption in Bamfield (as of 2019) was 209 m³/day. This allows for substantial development within the current capacity of the system. This development is anticipated in the Water System Infrastructure Renewal & Long-Range Plan report, and reflected in the existing Development Cost Charges (DCCs) for the community. The DCCs are structured to accommodate development to full community buildout based on the existing OCP, and accounts for upgrades including watermain upgrades, treatment plant and pump station improvements, and reservoir replacement to accommodate future development.

2.2 SANITARY SEWER SERVICING

Bamfield does not currently have a community sanitary sewer system. Sewerage in the community is currently managed through individual on-site septic systems, with a number of direct connections into the ocean, which have been noted as posing both environmental and public health concerns by the Vancouver Island Health Authority.

The ACRD is currently exploring the opportunity to construct a new community sewerage system that would be supported by the new Huu-ay-aht First Nations' (HFN) sewage treatment plant. It is understood that should the community elect to move forward with the community sewerage system, the resulting environmental and public health impacts would be positive as raw sewer flows would be redirected away from the ocean. In addition, this service would positively influence development potential for many areas of the community.

The following sections outline the sewer servicing considerations in West and East Bamfield, respectively.

2.2.1 West Bamfield

It is expected that development to a full buildout condition in West Bamfield based on existing zoning could be achievable with or without connection to a community sewer system. In the scenario where Bamfield adopts a community sewer system, a new treatment plant would likely be required in West Bamfield. This plant would be sized to accommodate planned future development within this portion of the community. With a sewer system in place subdivision and increased density would be further supported beyond the existing zoning.

Without connection to sewer, it is expected that development to a full buildout condition based on existing zoning could also be feasible, provided individual or communal septic systems are provided as part of the development. However, there may be select lots that are not suitable for septic fields due to lot size and soil conditions. There would also be an increased cost to development per lot due to the installation of septic fields, in addition to the other existing costs associated with developing in this part of the community which is currently only accessible via boat. This would also likely limit the development potential for the area.

2.2.2 East Bamfield

It is expected that full buildout based on existing zoning would be achievable in East Bamfield with or without the connection of a community sanitary sewer system. Similar to West Bamfield, it is anticipated that development could be supported with new septic systems installed on individual lots, however this may be challenging on certain lots based on lot sizes and soil conditions, and lead to increased per lot development costs. There is also the potential for private lots owners to connect to the HFN system without an ACRD sewer service.

Connecting into the existing HFN sewerage treatment plant may provide some additional capacity for development, however it should be noted that there are limits to the capacity of the existing plant, and HUU-AY-AHT currently has plans to utilize much of this capacity to service their own developments.

3.0 CLOSING

This memo outlines the infrastructure servicing considerations to development within the community of Bamfield. Based off the analysis, it is expected that Bamfield has the infrastructure servicing capacity for development to full build out conditions based off the existing zoning. Should densities that exceed the current zoning be considered, further analysis would be required based on the densities proposed to identify if capacity is sufficient.

URBAN SYSTEMS MEMORANDUM

DATE: September 17, 2024

FILE: 1111.0007.01

PAGE: 3 of 3

SUBJECT: Bamfield Development Plan – Community Infrastructure Servicing Considerations

Sincerely,

URBAN SYSTEMS LTD.



Nolan deWitt, EIT
Design Engineer



Eric Sears, P.Eng.
Project Engineer / Principal

cc: Brittany Tuttle, RPP, MCIP, Community Planner
Meleana Searle, Community Planner

/Nd
Enclosure

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