# SMARTPLAN



Adopted: April 19th, 2005

#### Consolidated for convenience November 2012

This version of this bylaw is a consolidation of amendments to the original bylaw as of the date specified. This consolidation is done for the convenience of users and accurately reflects the status of the bylaw as of the specified date but must not be construed as the original bylaw and is not admissible in Court unless specifically certified by the Corporate Officer for the Town of Gibsons. Persons interested in the definitive wording of this bylaw and its amendments should view the original sealed bylaws at the Town of Gibsons.

# AMENDMENTS TO THE OFFICIAL COMMUNITY PLAN

NO.	BYLAW NO.	DATE	AMENDMENT
1	985-1	August 1st, 2006	Schedule "A" Land Use Plan of Schedule "A" amended by changing Gospel Rock Neighbourhood Plan Area by adding that portion of Block 7 south of Gower Point Road between Gower Point Road and the high water mark as shown on Schedule "1".
2	985-2	December 19th, 2006	Schedule "A" Smart Plan Official Community Plan is amended by adding the Upper Gibsons Neighbourhood and Strategic Servicing Plan.
			Table 3 Description of Land Use Designations of Schedule "A" Smart Plan Official Community Plan is amended by adding the following land use designation and purpose: Upper Gibsons Neighbourhood Plan Area;
			Schedule "A" Land Use Plan of Schedule "A" Smart Plan Official Community Plan is deleted in its entirety and replaced with the new Schedule "A" Land Use Plan as shown on Schedule "2".
			Map 2 Parks and Civic Lands of Schedule "A" Smart Plan Official Community Plan is deleted in its entirety and replaced with the new Map 2 Parks and Civic Lands as shown on Schedule "3".
			Map 3A Trail and Bicycle Network Master Plan of Schedule "A" Smart Plan Official Community Plan is deleted in is entirety and replaced with the new Map 3A Trail and Bicycle Network Master Plan as shown on Schedule "4".
			Subsection 7.6 Future Neighbourhoods is amended by deleting the second sentence of the third paragraph as follows:
			"This land is part of the Upper Gibsons Neighbourhood Plan Area".
			The subsection entitled Upper Gibsons Neighbourhood Plan Area of Subsection 7.6 Future Neighbourhoods is amended by deleting in its entirety and replacing with new subsection entitled "Upper Gibsons Neighbourhood Plan Area".
			The subsection entitled Council's Policies of subsection 7.6 Future Neighbourhoods is amended by deleting policy 6 in its entirety and

renumbering the existing policies.

NO.	BYLAW NO.	DATE	AMENDMENT					
3	985-3	May 15th, 2007	Schedule "A" Land Use Plan of Schedule "A" Smart Plan Official Community Plan amended by changing land use designation for Lot M, District Lot 688, Plan BCP14019 (PID 026-085-534 and Lot 24 of Lot 1, Block 7, DL 688, Plan 7392 (PID 010-640-835) from Medium Density Multi-Family Residential 2 and Low Density Infill to Low Density Multi-Family Residential 1.					
			Upper Gibsons Neighbourhood and Strategic Servicing Plan is amended by deleting Map 3A Land Use and Water Demand and replacing with new Map 3A as shown on Schedule "2".					
4	985-4	September 2nd, 2008	Amends "Single Lot" in Section 8.1, Housing, of Appendix V, Upper Gibsons Neighbourhood and Strategic Servicing Plan, of Schedule A, Smart Plan Official Community Plan.					
			Amends "Typical Lots Size" and "Single Lot" in Table 14.2, Desired Lot Sizes, of Appendix V, Upper Gibsons Neighbourhood and Strategic Servicing Plan, of Schedule A, Smart Plan Official Community Plan.					
			Amends Development Permit Areas, of Upper Gibsons Neighbourhood and Strategic Servicing Plan, by deleting and replacing Development Permit Areas No. 7 & 9.					
5	1148, 2011	August 5th, 2011	Amend Schedule "A: Land Use designation for Lot 4, Plan 20977, District Lot 1328, Group 1, New Westminster Land District from "Low Density Infill" to "Low Density Multi-Family Residential"					
6	1149, 2011	August 2nd, 2011	Amend 14.0 Development Permits by addition of Section 14.8 "Temporary Use Permits"					
7	985-7, 2011	March 6th, 2012	Addition of Harbour Area Plan					
8	985-8, 2012	November 20th, 2012	Addition of Gospel Rock Neighbourhood Plan, Revision to Development Permit Area No. 2					

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# PART A BACKGROUND TO A SMART PLAN

## 1.0 INTRODUCTION

The Town of Gibsons' last Official Community Plan (OCP) was adopted in 1993 by Bylaw 655 following a thorough review process, including consultation with residents. The 1993 Plan replaced the previous Plan, adopted in 1988. A consolidation of subsequent OCP amendments was completed in 1996. Since it has been a decade since the last thorough review of the OCP and given the socio-economic changes that have taken place and the issues facing Gibsons today, it is timely to review the Town's OCP and prepare a new Plan that will provide a guide for Gibsons in the 21st Century. This new plan is built on the excellent foundation provided by the 1993 document.

#### 1.1 Purpose of an Official Community Plan

The OCP (sometimes referred to simply as the Plan) is a long-range policy guide for land use planning. It is one of the most important documents adopted by Town Council. The intent of an OCP is to guide Council decisions in relation to residential and commercial development, industrial activity, transportation infrastructure, and environmental considerations. An OCP also identifies where future development should occur, including utility servicing.

The purpose and content of an OCP is formally outlined in the Local Government Act of British Columbia, Chapter 323. Section 875(1) of the Act defines a community plan as:

"...a statement of objectives and policies to guide decisions on planning and land use management, within the area covered by the plan, respecting the purposes of local government."

The Local Government Act also requires local governments to provide consultation, in addition to a public hearing, and outlines the adoption procedure for an OCP.

Once an OCP is adopted as a bylaw, the Community Plan becomes "official", and all future land use decisions made by Council must be consistent with the objectives and policies outlined in the Plan. It is important to note that an OCP is strictly a policy document. In order for an OCP to be effective, several tools are required to implement a Plan's policies and objectives. This includes the use of regulations or guidelines such as those contained in the zoning bylaw, development permits, capital expenditures planning, development cost charges and subdivision control. These bylaws and regulations must be consistent with the Plan.

An OCP is not intended to be a static document. The OCP is a living document and should adapt to new trends within society and respond to changing circumstances within Town boundaries. As such, following careful consideration by Council, policies and land use designations in an OCP may be revised through adoption of an amending bylaw following the provisions outlined within the Local Government Act. Community plans are typically reviewed at least once every 5 years to assess whether the goals and objectives and subsequent policy directions remain valid.

#### 1.2 The Community Charter

On January 1, 2004 the Community Charter was adopted which replaces sections of the Local Government Act. The intent of the Community Charter is to replace the tradition of prescriptive legislation for municipalities in favour of enabling legislation that allows municipalities to be innovative in meeting the needs of their communities. In particular, the Community Charter addresses broad municipal powers, public participation and accountability, municipal bylaws and procedures, financial management and municipal revenue, bylaw enforcement and governmental relations. Despite this, the Local Government Act will remain as the primary legislation for certain municipal provisions not covered by the Community Charter, including land use planning.

#### 1.3 The Planning Process

The consulting firm of UMA was retained in 2002 to assist the Town to review and update the OCP. Following requests for participation, an OCP Select Committee made up of local residents, Town Council and the Municipal Planner, was appointed by Council to act as an advisory body to the consultant team. Each member of the Select Committee represented various interest groups, stakeholders, or perspectives but all were committed to recognizing the uniqueness of Gibsons.

At the beginning of the planning process, meetings were held with the Select Committee to identify planning issues and review technical background information including Gibsons' demographic trends and economic characteristics. In addition, a number of Select Committee members formed an ad-hoc Committee and met on a regular basis in order to critique and analyze the 1996 OCP. The background information and issues identified from the meetings provided the focus for a workshop with the Select Committee and the first public open house, which was held in late 2002. The open house provided an opportunity for the planning team and members of the Select Committee to learn first hand about the public's ideas and issues for consideration in the new OCP. A Newsletter, with a questionnaire, was distributed to all Gibsons residents prior to the open house. The Newsletter explained the planning process and outlined some of the background information whereas the questionnaire asked residents their opinion on a number of contentious issues.

A number of external agencies were contacted to provide their input into the planning process. These agencies are largely government bodies with either interests in Gibsons or whose plans or actions may impact decisions made in the Town. These agencies included:

- o Department of Fisheries and Oceans
- o Ministry of Transportation
- o Sunshine Coast School District No. 46
- o District of Sechelt

- o Squamish Nation
- Coast Garibaldi Health/Coastal Health Authority
- o Fire Commissioner

In February 2003, an internal working draft of the new OCP was presented to the Select Committee for their review. A number of editorial changes were made in order to prepare the first public draft of the OCP. A Public Open House was held in late April 2003. The draft OCP was reviewed by the Sunshine Coast Regional District and their input was reflected in a subsequent draft. Following external input and review by the Select Committee, a second public OCP draft was prepared during the summer of 2003 and presented at a Public Open House in November, 2003. A third newsletter and questionnaire was also prepared and distributed to Gibsons residents. A comprehensive list of the Committee meetings, open houses, workshops, public presentation, questionnaires and newsletters as part of the planning process is included in the Appendices. In addition, see the Appendices to view the questionnaire results from the three questionnaires.

#### 1.4 Planning Issues and Interests

Several issues, common themes and interests have been identified throughout the planning process with the Select Committee and Town staff. In addition, a review of past documents commissioned by the Town, since adoption of the last OCP, has indicated similar themes and issues. The majority of OCP-related issues centre around a theme of maintaining the small town atmosphere of Gibsons and enhancing the quality of life. It is a theme that recognizes the need to encourage local opportunities for employment, housing, and the community's social fabric and balance growth with environmentally sound decision-making. This theme focuses on the principles of community sustainability and its three cornerstones: the natural environment, the economy, and the social well-being of the community. Below is an initial summary of issues as consolidated under these three cornerstones of sustainability.

#### The Natural Environment

- o preserve environmentally sensitive areas
- o protect natural resources, including streams
- o accommodate growth, but not at the expense of straining resources
- o enhance outdoor recreational opportunities

- o promote alternative infrastructure systems
- o clean up and protect the harbour
- o encourage alternative modes of transportation (eg. pedestrian, bicycle systems)
- o efficient use and protection of the aquifer

#### **Economic Development**

- o enhance the image of Upper Gibsons
- o encourage the tourism industry
- o make Gibsons an attractive place to live and work
- o support home based businesses
- o need to promote economic development
- o consider how we are going to finance improvements

#### Social Well-Being

- o provide more senior's housing and care facilities
- o allow for more low income housing
- o provide for a mix of age groups and integration of multiple age groups
- o enhance the arts and cultural life in Gibsons
- o provide for on-going resident involvement once the Plan is complete
- o maintain the small town atmosphere
- o balance tourism with quality of life
- o protect heritage buildings and sites
- o enhance community involvement by providing space for public interaction

#### 1.5 Review of Key Policy Documents

Since 1993, Council has approved several OCP amendments and policy initiatives, in addition to commissioning background studies in order to update the Town's information base. Key studies undertaken which have an impact on future planning in Gibsons include:

- o The Harbour Master Plan (2001)
- o The Trail and Bicycle Network Master Plan (2001)
- o Gibsons Naturally The Strategic Plan (2000)
- o Fresh Eyes on Gibsons (2000)

These studies, as well as, updated information from other sources have been incorporated into the OCP for the Town, as appropriate. Only the Trail and Bicycle Network Master Plan has been adopted by Council, however, elements of the other documents have been brought forward for consideration in the planning process and have been integrated with OCP policies. Also, during the OCP planning process, there were a couple of studies that were ongoing including the Upper Gibsons Revitalization Project and a potential Neighbourhood Plan for the former ALR lands.

#### 1.6 Organization of Smart Plan

The Plan for the Town of Gibsons contained in this document is not a significant departure from the policy direction established in the 1993 Plan. This is based on a review of the 1993 Plan, together with input from the Select Committee and residents at the Public Open

House which suggested that fundamentally many of the specific land use policies contained in the 1993 Plan remain relevant today. For example, this Plan, like the 1993 Plan, maintains the importance of:

- o The neighbourhood as a basis of the community
- o Gibsons Landing as a focal point for commerce
- o Efforts to revitalize Upper Gibsons
- o Protecting and enhancing the natural environment

Where this Plan departs from the 1993 Plan is the emphasis placed on the following issues or level of detail:

- o The embodiment of Smart Growth principles
- o The incorporation of significant elements contained in the Harbour Front Master Plan, the Trails and Cycle Master Plan, and Fresh Eyes on Gibsons
- o The establishment of two Neighbourhood Plan Areas in Upper Gibsons and in Southwest Gibsons
- o The inclusion of updated legislation allowing municipalities to deal more effectively with such issues as environmentally sensitive areas and residential infill development
- o The potential for development in South West Gibsons and the preservation of significant open space
- o Low impact road standards
- o More sustainable services (e.g. water, sewer, drainage, garbage and recycling services)

The Official Community Plan consists of six main parts, which includes:

Part A	0	defines an OCP
Introduction to a Smart Plan	0	outlines the planning process
	0	sets out the philosophy of growth management for the Town
Part B	0	comprises the main policy section of the Plan
Policies of a Smart Plan	0	introduces and outlines the various land use designations
Part C	0	outlines the objectives and guidelines of Development Permit Areas
Implementing a Smart Plan	0	considers the planning tools required to implement the policies of the Plan
	0	summarizes future studies
Part D  Upper Gibsons Neighbourhood Plan	0	Outlines specific goals, objectives and policies for the Upper Gibsons Planning Area
opper dibsons Neighbourhood Plan	0	incorporated into the OCP in 2006
Part E	0	outlines specific goals, objectives and
Harbour Area Plan	0	policies for the Harbour Area
	0	incorporated into the OCP in 2012
<b>Part F</b> Gospel Rock Neighbourhood Plan		outlines specific goals, objectives and policies for the Gospel Rock Neighbourhood Area
		incorporated into the OCP in 2012

Many of the background sections and policies include illustrative maps and diagrams. These are intended to form explanatory guides and supplementary direction. The land use designations are included in Schedule A – the Land Use Plan, which can be found at the end of Part A. The Appendices include:

- o Summary of Issues;
- o Results of Questionnaires and List of OCP Meetings;
- o Work cited; and
- o Riparian Area Regulations.

# 2.0 THE COMMUNITY OF GIBSONS

Incorporated in 1929, the Town of Gibsons has a total area of 507 hectares (ha), which is small in size when compared to other municipalities within British Columbia. This stresses the need to carefully plan for a limited land base. The community of Gibsons is bound by Howe Sound and Shoal Channel, which feeds into the Straight of Georgia, to the south and east, and lies at the foot of Mount Elphinstone, part of the Coast Mountain Range. The Town of Gibsons, which is part of the Sunshine Coast Regional District, is situated 25 kilometres west of Vancouver and 23 kilometres southeast of Sechelt (Map 1).

#### 2.1 History of Gibsons

The earliest records of settlement indicate that there was First Nations habitation along the sunshine coast. These fishing villages were used for food gathering and as a meeting place. Coastal Indians traditionally lived in communal lodges with some lodges holding several related families.

In 1886, George Gibson, who was a new resident of Vancouver, was one of the first Europeans to settle in the region. George Gibson and his family soon encouraged others to settle in this heavily wooded area known as Gibson's Landing. The Gibson family was instrumental in the development of the community. Shortly after their arrival, the family began producing vegetables, building roads, and even started a postal service. In order to access the lucrative Vancouver market, George Gibson built a dock for passengers and general freight ships to travel. By 1946, the first ferry service was established to run across Howe Sound.

The area known as Gibsons Landing is the original harbourfront and commercial core. Subdivision of shoreland from 1910 onward led to development clustered north and south of the Government wharf, along Marine Drive and Gower Point Road, and up the adjacent hillside. The commercial development in Upper Gibsons began in the 1950s largely due to the temporary economic stagnation of the Gibsons Landing area. The area is being dramatically reversed by the development of the Gibsons Marina and by the Town's ongoing program of revitalization, ensuring that Gibson's Landing will continue to be the magnet for local tourism.

The community of Gibsons has traditionally relied on fishing and forestry. Early logging also opened up land for agricultural uses. The population of Gibsons began to rise, which led to an increase in the demand for professional services. In recent times, the economic profile of Gibson's has changed as tourism, real estate and manufacturing have played a more prominent role. There are also significant arts and culture and retirement communities in Gibsons, drawn by the Town's natural beauty and lifestyle.

#### 2.2 Growth Projections and Trends

The population of Gibsons has increased steadily over the past century. Growth was particularly high between 1986 and 1996, as the population increased by almost 40% (2,675 to 3,732 residents). This was largely due to an influx of families who wished to experience a lifestyle more conducive to raising children, despite the fact that working-aged adults were largely commuting to the Lower Mainland. In addition, the senior population has been attracted to the lifestyle choices on the sunshine coast. Since 1996, growth has slowed down to approximately 1.4% per year. According to the latest census-count in 2001, the population of the Town of Gibsons was 3,906.

To gain some understanding of potential population growth, a low, medium and high rate of growth has been calculated based on historic growth rates between the 1981 and 2001 census years in order to estimate the population by 2026. The low growth rate of 1% per year, projects the population to increase to a total of 5,000 by 2026. The medium growth rate of 2.5% per year, projects the population to increase to 7,200 by 2026. The high growth rate of 4% per year projects the population to more than double to 10,400 in less than 25 years.

Figure 1 displays the observed population of the Town between 1981 and 2001, and indicates the low, medium, and high estimates to the year 2026. Actual growth is difficult to predict and will fluctuate largely in response to economic conditions. Figure 1 provides a "what if" scenario reflecting the different growth rate assumptions.

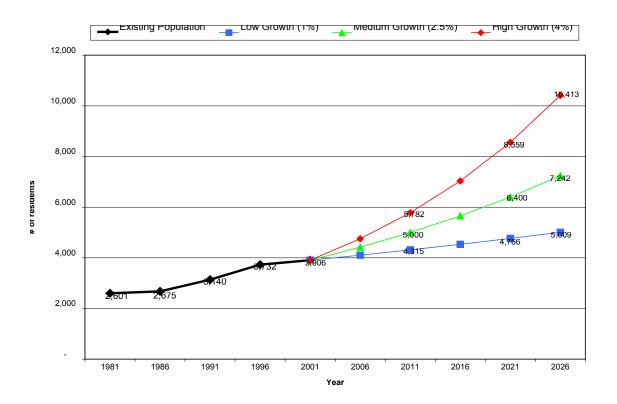


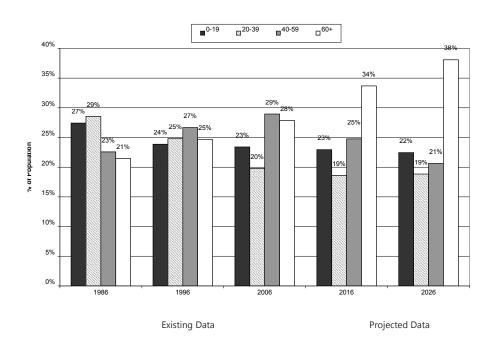
Figure 1 - Observed and Projected Population Counts

Data Source: Statistics Canada Projections: UMA

In addition to general growth trends, the increase or decrease of various age groups can be analyzed. As Figure 2 indicates:

- o the 60+ age group is projected to increase from 25% of the total population in 1996 to almost 40% by 2026. That is a substantial increase compared to other age cohorts, and this will have an impact on housing type demand, social services, health care, and general retail trends in the local area.
- o the 40-59 age group is projected to increase in proportion to 29% of the total population by 2006, but is predicted to decline slightly. This is not surprising as this age cohort, which represents the baby-boom generation, will be entering the 60+ grouping over the next 20 years.
- o the 20-39 age group, on the other hand, is projected to decrease proportionally. This is largely due to the fact that unemployment in Gibsons has been generally higher than the national average for young adults combined with the lack of post-second-ary institutions locally will force people in this age group to move away from Gibsons to seek employment and educational opportunities elsewhere. Significant investments will have to be made in order to try and reverse this trend.
- o the 0-19 age cohort is predicted to plateau at approximately 23% of the total population. Although the absolute number of families, with children, will increase, it will be offset proportionally to the growing senior (60+) population segment.

Figure 2 – Proportion of Population by Age Groups, 1986-2026



Data Source: Statistics Canada
Projections: UMA

#### 2.3 Economic Overview

Gibsons was founded as a fishing and forestry community. While these two industries continue to play a role in the economic profile of Gibsons, trends in tourism, real estate and manufacturing have significantly altered the economic landscape of the community. The three industries employing the most people in 1996 were manufacturing, retail trade and accommodation, food and beverage. The 2001 census data indicates that this is still the case. Table 1 indicates the percentage breakdown of the local labour force by industry comparing Gibsons with the province of British Columbia.

Table 1 - Percentage of Labour Force by Industry, Gibsons and British Columbia

Industry	Gibsons	British Columbia
Primary	6.7%	5.2%
Manufacturing & Construction	20.8%	15.5%
Transportation and communications, government services, and accommodation (food & beverage)	19.6%	21.1%
Wholesale and retail trade	12.9%	15.6%
Finance, insurance & real estate	9.34%	6.1%
Business service	16.4%	19.6%
Educational, health & social service Source: Statistics Canada, 2001	14.3%	16.9%

Gibsons' major employer continues to be the nearby Howe Sound Pulp and Paper mill at Port Melon. Manufacturing and construction plays a larger role in Gibson's labour force activity than it does in nearby Sechelt and at 20.8% of the workforce, it is greater than the provincial average of 15.5%. Retail trade, on the other hand, is a major employer for Gibson's residents, utilizing almost 13% of the la-

bour force. The Town acts as a retail centre for the regional population of Gibsons. The increase in the retail industry has had a dramatic impact on Upper Gibsons where a number of commercial franchises have located over the past ten years. Tourism is also a significant contributor to the local economy, and growth in this sector is evident. Between 1991-1996 the number of Gibsons workers employed in the accommodation, food and beverage industries grew by 60%. There is also a significant number of self-employed, operating at home based businesses, as well as those that commute regularly to Vancouver for employment.

There is approximately 23,000 m2 (246,000 ft2) of retail and service commercial floorspace within the Town, and this is projected to increase to over 47,000 m2 (510,000 ft2) by 2026.1 Commercial development is separated into two main commercial areas: Upper Gibsons and Gibsons Landing. To accommodate future retail and service commercial demand, additional commercial land has been designated (in addition to land currently zoned commercial) – about 5.8 hectares – primarily along and adjacent to Gibsons Way in Upper Gibsons. At 60% coverage this will accommodate 34,800 m2 in commercial floor space. In addition, land currently zoned residential in Gibsons Landing has been designated for mixed commercial/residential use in the OCP.

Although School Road connects Upper Gibsons and Gibsons Landing, a significant slope separates them, thus giving each area a distinct focus. Upper Gibsons has a number of shopping malls, restaurants, services and a light industrial area, and largely serves local and regional residents. Gibsons Landing, on the other hand, is characterized as a quaint fishing village with bakeries, cafes, and shops that surround a bustling fishing wharf. The Gibsons Landing Business Association (GLBA) has been actively marketing Gibsons Landing to visitors and residents alike since 2000 promoting the image "Scenic Seaside Village – a favourite place to relax, stroll, shop, and enjoy a meal" to change tourism from seasonal to year round visitation.

#### 2.4 The Social Environment

The people of Gibsons are actively involved in their community through a number of organizations and interest groups. There is a wide variety of festivals and events throughout the year, including the Sea Cavalcade festival, annual Fall Fair, Maritime Weekend, and the Gibsons Landing Sunday Market, to name a few. Gibsons is also home to a theatre for the performing arts. With respect to recreational opportunities, there are a number of trails and parks throughout the community, in addition to an Aquatic Centre, Curling Rink and a Teen Centre. However, there is some concern over inadequate facilities and the lack of a community centre. The natural setting and mild year round climate provide plenty of outdoor activities for people of all ages.

There are a variety of community facilities, including a firehall, RCMP station, ambulance hall, a library, the Kiwanis Care Home, and medical clinics. With respect to educational facilities, there is a pre-school, two elementary schools (including a ChristianSchool), a secondary school, and an alternate program school. Many of these facilities serve the greater Gibsons community.

#### 2.5 The Regional Setting

The growth rates and future development in the adjacent electoral areas of the Sunshine Coast Regional District have a significant impact on the demand for housing, commercial lands, and for community uses such as schools, libraries, recreation and other services. Table 2 indicates the population of Gibsons and its surrounding Electoral Areas for 1991 and 2001. Together, the two electoral areas and the Town comprise a sub-regional population or market area that is getting close to 10,000 residents.

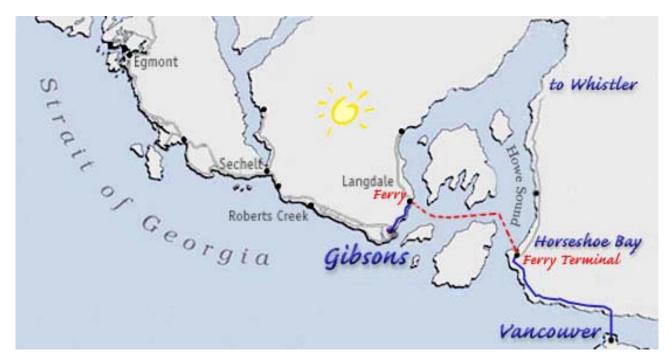
Table 2 - Growth Rates for the Town of Gibsons and surrounding Electoral Areas

Region	1991	2001	% change
Town of Gibsons	3,140	3,906	24.4%
Electoral Area E – Elphinstone	3,007	3,311	10.1%
Electoral Area F – West Howe Sound	1,383	1,971	42.5%
Sunshine Coast Regional District	20,785	25,599	23.2%

Source: Statistics Canada

Rural Area E – Elphinstone is slated to review its Official Community Plan in 2003.

Map 1 - Location Map



Source: Town of Gibson's website, 2003

### 3.0 SMART PLAN PHILOSOPHY

A community plan is defined, by the community it serves. This focus is provided through examining the physical, social and economic environment together with the goals of the community, ultimately resulting in a policy document. There was a strong desire from the community to have a plan that encourages a kinder and gentler way to growth that fits with the natural environment, and encourages development that considers alternatives to infrastructure and design rather than assuming the status quo. The Gibsons community recognizes there are natural limits to growth such as land base and water supply that may require limitations on growth at some time in the future.

#### 3.1 What is Smart Growth?

There is a growing concern among Gibsons residents that current development patterns are dominated by what some would call "urban sprawl". Throughout North America, it has been argued that urban sprawl has contributed to the over consumption of agricultural land, rising pollution and congestion problems, increasing costs of public services and amenities, and in some cases, weakening the economic and social vitality of town centres. Due to these negative effects of urban sprawl, many communities have adopted Smart Growth policies that adhere to the principles of sustainability in order to manage growth.

Smart growth can be defined as "...land use and development practices that enhance the quality of life in communities, preserve the natural environment, and save money over time" (SmartGrowth BC). It employs strategies that reduce the impact of urban growth on the natural environment, the comprehensive use of alternative development standards and the integration of infrastructure that are compatible with ecological and natural drainage systems. The overall goal is to create more livable communities that increase the quality of life for everyone. Smart growth incorporates and integrates the three pillars of sustainability:

- o Ecological sustainability: environmental protection
- o Social Sustainability: social justice and equity
- o Economic Sustainability: economic stability and efficiency

Sustainable development, as coined by the Brundtland Report, can be defined as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Sustainable development considers the means to a desirable end, and can be characterized as future-oriented. Since the Brundtland Report, sustainable development, as a policy instrument, has migrated globally to the local level. This has prompted the need to define sustainable development in the context of the community.

The smart growth movement is a way of defining sustainability at the local level. Smart growth aims to promote the linkages between the three pillars of sustainability and attempts to find a balance. There are a number of common principles to smart growth that are local in nature, which can be applied to Gibsons, including:

- o creating a range of housing opportunities and choices
- o creating walkable neighbourhoods
- o encouraging community and stakeholder collaboration
- o fostering distinctive, attractive places with a strong sense of place
- o making development decisions predictable, fair and cost effective
- o mixing land uses
- o preserving open space, farmland, and critical environmental areas
- o providing a variety of transportation choices
- o strengthening and directing development towards existing communities

o taking advantage of compact building design

Using these Smart Growth principles and the overall philosophy of sustainable development, the policies of the Plan will ensure that:

- o the long-term integrity of the local ecosystem is protected through practices that minimize damage to the natural environment;
- o the community of Gibsons is a safe, healthy and viable setting for human interaction, education, recreation, and cultural development; and
- o the production and distribution of wealth is done in a manner that provides access to the goods and services necessary for a good quality of life for both present and future generations.

#### 3.2 The Goals of a Smart Plan

The overall philosophy of sustainable development and the principles of Smart Growth can be used to define specific goals and objectives for the Town of Gibsons. The community has been involved in a number of visioning exercises, including the Gibsons – Naturally strategic plan exercise (2001). The Gibsons – Naturally report established a vision statement that focused on retaining the natural attractiveness and creating safe and welcoming neighbourhoods. Not all of the goals within the report apply to an OCP, but it provides a foundation to some of the goals and objectives in this Plan.

Listed below are some general goals that have been identified from the community. More specific objectives are provided within each policy chapter. The goals and objectives of the OCP are derived from the issues identified during the planning process, and are used to formulate the policies of the Plan.

#### **Environmental Sustainability**

- o Grow in harmony with the natural surroundings and ecosystems.
- o Preserve all important and unique natural features, including watercourses, landforms and habitats.
- Respect the natural drainage of the overall area by ensuring that future development does not negatively alter existing drainage patterns or water quality of receiving water courses.
- o Ensure that uses on the waterfront and harbour area do not negatively affect the marine ecosystem and are compatible with upland uses.
- o Promote the use of alternative modes of transportation including walking, biking, and transit.
- o Protect the Town's water quality and ensure long term, efficient use of the aquifer, including the need for water conservation measures.
- o Acknowledge the value of forested lands for their benefits to the community for improvements to air quality, natural drainage and opportunities for recreation.

#### Social Sustainability

- o Design and plan for a changing population base and age groups through provision of a wide range of housing types and community services to meet the needs of a growing population.
- o Ensure that all residents live in a safe community, and have access to affordable housing, educational opportunities and recreational facilities.
- o Recognize and support community diversity, arts and culture, and consider the needs of all ages and socio-economic backgrounds.
- o Provide a system of parks, trails and beach access points, and community recreation facilities related to the natural amenities and changing demands of community residents.

#### **Economic Sustainability**

o Create a diverse, flexible and vibrant local economy that provides sustainable employment.

- Create a strong and vibrant commercial sector, with distinct functions and appearances in the Gibsons Landing and Upper Gibsons areas.
- o Maintain and foster the ambience and "small-town" atmosphere of a Village, while providing for change to take place.
- o Encourage innovative and high quality design, which enhance the unique character of Gibsons. Respect the special character of existing neighbourhoods and ensure that the scale and appearance of future development is compatible with existing uses.
- o Recognize the costs associated with growth and ensure that future amenities and improvements are within the financial capability of the Town and its residents.

#### 3.3 Land Use Designations

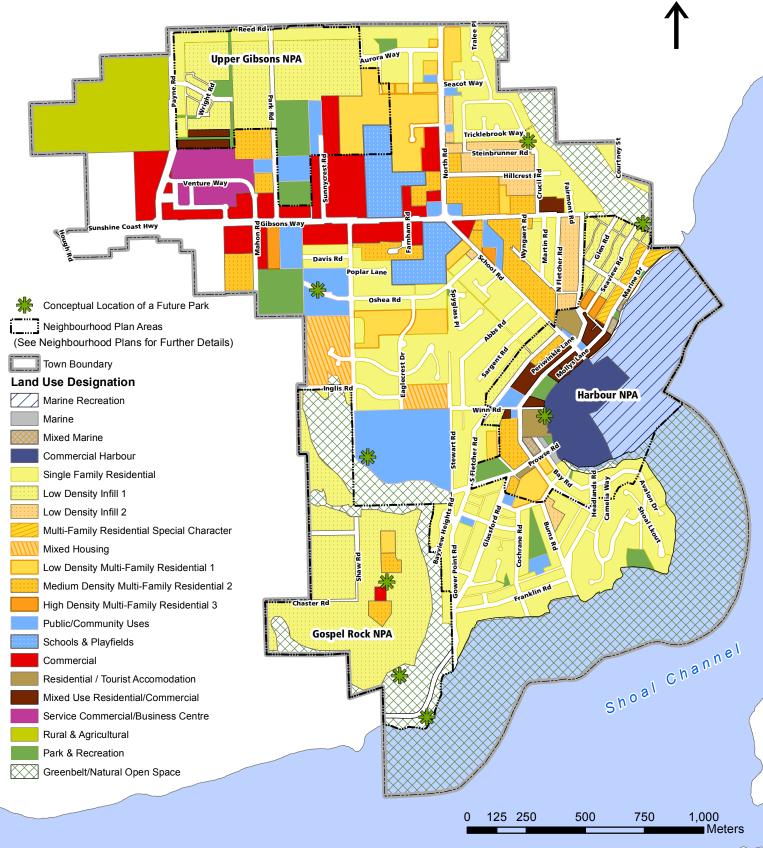
The OCP establishes a broad strategic framework for the physical shape of the town. As part of this Plan, the Town of Gibsons has been divided into several land use designations, as defined in Schedule A. Several policies complement the land use designations in the Plan. However, the OCP is not a zoning bylaw. Land use designations are used to provide a guide to the type of activities that would be permitted in such a location. Zoning is used to establish a more detailed regulatory framework that can include building height, setbacks, and parking standards. The land use designations in this Plan, along with a brief description, are listed in Table 3:

Table 3 - Description of Land Use Designations

Land Use Designation	Purpose
Single Family Residential	To permit single-family housing with a maximum density of 10 - 20 units per hectare. (Typical floor space ratio of 0.5)
Low Density Infill 1	To permit single-family, small lot single-family, two-family housing, and laneway housing or some combination of these with a maximum density of 20 - 25 units per hectare (typical floor space ratio of 0.6).
Low Density Infill 2	To permit small lot single-family, two-family housing, cluster housing, townhousing, or multi-family in a single-family form with a maximum density of 20 - 25 units per hectare. (Typical floor space ratio of 0.6)
Multi-family Residential – Special Character	To permit single family and multiple family residential in a single family form. (Typical floor space ratio of $0.5-0.75$ )
Mixed Housing	To permit single family, townhouse or apartment mix with a density range of 20 – 25 units per hectare. (Typical floor space ratio of 0.65)
Multi-family Residential 1 – Low Density	To permit small parcelled single-family housing, ground-oriented duplexes, and ground-oriented townhouses with a density range between 25-40 units per hectare. (Typical floor space ratio of $0.6 - 0.75$ )
Multi-family Residential 2 – Medium Density	To permit stacked townhouses and 2 to 4 storey apartments with a density range between 40-75 units per hectare. (Typical floor space ratio of $0.7 - 1.0$ )
Multi-family Residential 3 – High Density	To permit apartments and condominiums greater than 3 storeys with a density range between 60-110 units per hectare. (Typical floor space ratio of $1.2 - 1.4$ )
Multi-Family Residential Special Character	Areas designated 'Multi-Family Residential Special Character" were established to permit single family and multiple family residential in a single family form, with typical floor space ratios of $0.5 - 0.75$ .
Public / Community Uses	To provide for uses and services to the community at large, including schools, places of assembly, recreation facilities, government offices, public care facilities, and utility services. This includes museums and botanical gardens.
Mixed Use –Residential / Commercial	To allow a mix of multi-family residential and commercial based activities in a small scale environment and includes visitor accommodations. The mixed use designation for the west side of Gower Point Road (south of Winn Road) and south of commercial lots on Gibsons Way may be developed as residential only.

Land Use Designation	Purpose
Commercial	To allow for a wide range of retail and office use, restaurants, visitor accommodations, service stations, entertainment facilities, and public open space.
Service Commercial / Business Centre	To encourage a mix of service commercial and service industrial activities, including such uses as distribution and warehouse uses, light industrial and manufacturing, automotive products and services, large-site retail uses (such as building supplies and offices associated with these uses).
Park and Recreation	To protect areas of recreational significance, and to allow outdoor recreation activities.
Greenbelt / Natural Open Space	To restrict intensive development and to minimize detrimental impacts on land and water in these areas.
Rural and Agricultural	To permit a range of agricultural activities in a rural environment, subject to the Agricultural Land Commission Act.
Commercial Harbour	To support a wide range of marine uses including recreational, visitor-oriented activities such as marinas and associated upland uses, boat sales, charters and marine fuel sales, as well as marine industrial/transportation uses.
Marine Recreation Mixed Marine	To permit seasonal moorage buoys for the use of pleasure craft and seasonal floats.  Areas designated 'Mixed Marine' were established to permit low density multi-family residential development as defined elsewhere in the Smart Plan, either singly or in combination with compatible marine uses as defined in Marine land use.
Marine	Areas designated 'Marine' were established to permit a range of marine-related, environ-mentally benign uses that relate to the historical idea of the "working harbour" including such uses as: boat repair; boat sales; ship chandlery; boat charter; marina auxiliary uses; and boat building.
Residential / Tourist Accommodation	Areas designated "Residential / Tourist Accommodation" were established to permit high density multi-family residential development as defined elsewhere in the Smart Plan, or Tourist Accommodation such as a hotel or inn together with meeting and/or food and beverage facilities customarily associated with such uses, or some combination of these uses.
Upper Gibsons Neighbour- hood Plan Area	See Part D
Harbour Neighbourhood Plan Area	See Part E
Gospel Rock Neighbour- hood Plan Area	See Part F

Schedule A, the Land Use Plan is found on the next page and is an integral part of the OCP document. See also Part C, Table 8.3 for land uses in the Upper Gibsons Neighbourhood Plan



Disclaimer:

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This information has been compiled by the Town of Gibsons using data derived from a number of sources with varying levels of accuracy. The Town disclaims all responsibility for the accuracy of this information.

Note: This map forms part of and is integral to the Official Community Plan.

## Land Use Plan (Schedule A)

File No.: STD0005 Date: October 2012



# PART B POLICIES

## **4.0 THE NATURAL ENVIRONMENT**

#### Council's Objectives

- o Protect the quality of the natural environment, including the presence of valued wildlife and greenspace in the Town's wooded and natural areas.
- o acquire through purchase or by dedication as park or by other creative arrangement, environmentally valuable land, riparian areas, sensitive marine backshore areas, including streams and watercourses and establish a network of natural trails and viewpoints throughout the Town.
- o maintain and improve on the natural features of the Town of Gibsons, by both identifying and preserving the natural amenities which play a significant role in the definition of the Town's "sense of place".
- o ensure future development is compatible with the physical characteristics of the site and surrounding area and the overall carrying capacity of the Town.
- minimize risks to life and property from natural hazards and disasters such as floods, erosion and slides.
- o Improve the local air and water quality.
- o Maintain public access to natural areas, the shoreline, and the characteristic viewscapes of the Town.

#### 4.1 Geotechnical Hazards

There are a number of areas with challenging terrain within the Town of Gibsons. This includes the comparatively steep slopes from the lowland to the plateau, the bedrock hills south of the Town (including the bluff and Gospel Rock), and the steep ravines of Gibsons and Charman Creek. In order to reduce the risk to life and property from geotechnical hazards, a number of measures are required. The study conducted by Thurber Engineering Ltd. (1991) identified hazardous areas and these are represented in Development Permit Area 1 (DPA1).

#### Council's Policies

4.1.1 Require a geotechnical report, prepared by a professional engineer, for areas that have steep slopes or are a geotechnical hazard to determine the conditions and requirements of the area for development. This will certify that the land may be used safely for the use intended. See Schedule B – DPA No. 1 for areas that are subject to a development permit in order to protect development from geotechnical hazards. The conditions and requirements for development recommended in the geotechnical report are encouraged to consider bio-engineering solutions, whenever possible.

#### 4.2 Environmental Protection

The spectacular natural setting is one of Gibsons' greatest assets, which includes miles of ocean shoreline, several fish bearing streams, forested areas, steep hillsides and magnificent viewscapes. There is a strong desire by the community to not only preserve and protect these assets, but to sustain and improve the natural environment. As a means of environmental protection, it is equally important to emphasize the efficient use of urban land and alternative modes of transportation such as walking and cycling. These are described in other chapters.

A study by Thurber Engineering Ltd. (1991) identified areas that are environmentally sensitive. These areas are largely found in the Greenbelt designation and/or Development Permit Area 2 (DPA2). The Greenbelt designation largely prohibits most types of land alterations whereas DPA2 provides guidelines to ensure that future development is sensitive to the environment. For areas that require a development permit, the Town can specify the exact siting of buildings or require that certain areas remain in their natural state. Schedule C indicates areas that are subject to DPA2, and their respective guidelines can be found in Section 14. Other ways to protect

the natural environment include public awareness programs, environmental programs at other levels of government, and continued dialogue between residents, government and environmental agencies.

#### Council's Policies

- 4.2.1 Protect environmentally sensitive areas, riparian areas and marine habitat, including creeks, wetlands, forested and critical habitat areas from unsustainable development and land alterations other than as part of normal farm practices. The Town shall work closely with property owners adjacent to environmentally sensitive areas and shall require a detailed environmental review prior to any development approvals. See Schedule C DPA2, for areas that are subject to a development permit in order to protect the natural environment, its ecosystems and biological diversity.
- 4.2.2 Conduct a thorough field survey and mapping exercise to determine which additional lands and shorelines are environmentally sensitive and should be protected through a Development Permit. This may include the ocean shoreline, the ravines of Charman and Gibson Creek, vegetative communities, watershed areas, eagle nesting areas, alligator lizard habitat areas, and other areas that have high scenic and cultural values.
- 4.2.3 Ensure that environmentally sensitive areas play an important role in the open space and trail system network. To achieve these trail links, it is preferable that undevelopable lands be dedicated to the Town wherever possible. However, lands acquired through environmental protection provisions shall not replace the need for park dedications within neighbourhoods.
- 4.2.4 Work with the Ministry of Land, Water and Air Protection, Department of Fisheries and Oceans, and other relevant environmental and government agencies to identify other areas that require environmental protection. This information may be used to update the 1991 study by Thurber Engineering Ltd. on geotechnical hazards and the biophysical environment.
- 4.2.5 Ensure that land designated as Greenbelt is used to direct community development away from lands that have unstable slopes, poor soil permeability, subject to flooding, or areas with significant flora and fauna. These areas may be used for trail access or public utility corridors, subject to all pertinent regulations and bylaws. See Schedule A, for lands that are designated as Greenbelt.
- 4.2.6 Ensure that deleterious substances (including sewage and other toxic materials) are not deposited into freshwater or marine aquatic environments.
- 4.2.7 Following an appropriate public involvement program and a review of practices and costs experienced in other municipalities, consider the establishment of a Tree Protection Bylaw. Trees that may be protected include trees that provide critical habitat or erosion control or are deemed to be significant for historical purposes. Trees may be required to be removed because they are deemed to be hazardous. Council may also consider a Tree Protection Bylaw that regulates tree cutting and removal, for the purposes of protecting view corridors.
- 4.2.8 Remediate contaminated sites and brownfields.
- 4.2.9 Work with industry, environmental groups, and government agencies in order to improve air quality and assist in the reduction of harmful emissions. This may also include a ban or further restrictions on open burning of garden refuse.

#### 4.3 Streamside Setbacks

In March, 2005, the Province enacted the Riparian Area Regulations (see Appendices) requiring local governments to establish stream-side setbacks. Local governments can implement the regulations through zoning, development permit areas or separate watercourse protection bylaws. The Riparian Area Regulations apply to residential, commercial and industrial zoned lands and state the requirements for protection including the width of protection areas and implementation. There is an increasing interest in stewardship at the local level and this combined with changing legislation now provides more incentives for local governments to act upon this authority.

#### Council's Policies

- 4.3.1 Require an appropriate setback for new development along both sides of all rivers, streams, and wetlands, as outlined in the Riparian Area Regulations.
- 4.3.2 Consider increasing the riparian setback for areas identified in conservation studies as having high capability for wild-life or marine habitat.

#### Smart Plan Goal:

Preserve all important and unique natural features, including watercourses, landforms and habitats.

#### Smart Plan Goal:

Ensure that uses on the waterfront and harbour area do not negatively affect the marine ecosystem and is compatible with upland uses.

- 4.3.3 Permit already established home sites and other previously approved uses in this riparian setback to continue. However, any significant expansion of these non-conforming uses shall be discouraged.
- 4.3.4 Work with the appropriate jurisdictions and obtain the necessary approvals to assist in the clean up of contaminated or degraded watercourses. Partnerships with local residents and environmental organizations are strongly encouraged.
- 4.3.5 Do not permit watercourse alterations or crossings for trails without an environmental assessment and applicable regulatory approvals.
- 4.2.6 Prepare detailed Development Permit guidelines for the protection of watercourses and rivers from development. Input from local environmental groups, developers, property owners, and government agencies would be encouraged during the preparation of these guidelines. These guidelines may be incorporated into the existing Development Permit guidelines.
- 4.3.7 Consider daylighting the culverted sections of Charman and Goosebird Creeks in the Gibsons Landing area, as well as other enclosed watercourses, wherever possible. This will require the cooperation of affected landowners.

#### 4.4 The Marine Environment

Much of the waterfront in Gibsons consists of moderate to steep embankments adjacent to the water, with the exception of parts of the inner bay area, which are relatively flat. South of the developed harbour, the upland consists of extensive rock outcroppings and use of the foreshore is very limited with some small "pocket" beaches located between rocky bluffs. In general, intertidal or "beach" areas in Gibsons are very limited, as most of the foreshore is submerged at high tide. Development of a seawalk will help to make the waterfront more accessible at all tides, although the natural "edge" to the shoreline has been altered.

The Gibsons Landing Harbour Authority (GLHA) is a Federal Corporation operating within Gibsons harbour. Other operations within the harbour include: Gibsons Marina, Hyack Marine, Smitty's Marina and Kayak Adventures. GLHA works in partnership with the Department of Fisheries (DFO), the British Columbia commercial fishing fleet and provincial, national and international tourism. Under the lease terms between DFO and the GLHA, an environmental management program has been created and is contained in a report entitled "Gibsons Landing Environmental Management Program". The report provides working solutions to harbour issues of pollution, conservation and environmental stewardship. This report should be considered a reference for harbour related issues and a supplement to the policies contained in the Town of Gibsons' Official Community Plan with respect to Gibsons harbour policies. See Section 9.5 for additional policies on marine and shoreline uses.

#### Council's Policies

4.4.1 A significant portion of the overall marine shoreline is designated as Greenbelt as indicated in Schedule A. This designation is intended to remain undeveloped, and provide for boating, fishing, swimming and other outdoor recreation uses.

- 4.4.2 Restrict any new foreshore structures that are proposed to be used for commercial uses within the Greenbelt designation.
- 4.4.3 Restrict new pier, float or private wharf facilities associated with a single residential upland use within the Town's foreshore lease boundary.
- 4.4.4 Improve and develop beach facilities in areas such as Armour's Beach, Pebbles Beach and Georgia Beach, which are within walking distance of the Gibsons Landing area, and other areas which provide for neighbourhood beach access.
- 4.4.5 Complete and extend the seawalk from the breakwater at the bluff to the northern boundary of the Town past Armour's beach without interruption, including the breakwater itself.
- 4.4.6 Discourage the purchase of Crown fill areas located between the seawalk and the adjacent upland properties by the upland owners, as these areas may have value for increased public use along the seawalk, for benches, rest areas or other uses.
- 4.4.7 Ensure that any new developments along the Gibsons Landing waterfront enhance public access or views of the water through public pathways, viewing decks or other features.
- 4.4.8 Protect and enhance the shoreline and aquatic life in the Gibsons harbour area by following the guidelines contained in the Gibsons Landing Environmental Management Program.

## **5.0 PARKS & OUTDOOR RECREATION**

### Council's Objectives

- o Ensure that residents and visitors of all ages and abilities have access to a variety of park lands and open spaces including forested lands.
- O Designate sufficient park and open space areas to meet the long-term requirements of the community as it grows and changes.
- o Create a system of linked parks and trails to provide opportunities for both active and passive outdoor uses.
- Encourage and support joint planning with the Sunshine Coast Regional District and School District No. 46 on the shared use and development of park and recreation facilities on Regional, Town and School Board owned facilities.

### **5.1 Park Standards**

Gibsons has numerous natural assets, including the sea, mountains and beautiful scenery, and as such, provides opportunities for a wide variety of outdoor activities. Plan policies are aimed at achieving a system of parks, trails and recreation facilities where residents and visitors alike can enjoy the Town's natural setting to the fullest, including both natural, unstructured spaces as well as active parklands. Parks in Gibsons can be broken down to include community parks, neighbourhood parks and bicycle and pedestrian corridors, each providing a different purpose.

In terms of total acreage dedicated to parks, Gibsons has a relatively large amount of parkland compared to communities of its size, although much of it remains undeveloped at present. Overall, the Town has about 19.7 hectares (ha) of park, excluding school sites, or 5.1 ha per 1000 residents. This exceeds the overall parkland standard of 2.2 ha per 1000 residents that was recommended in the "SunshineCoastParks and Recreation Action Plan" (1990/91). Using this parkland standard, Gibsons has enough park space for up to 9,000 residents, more than double the present population.

- 5.1.1 Concentrate the development and programming of both community and neighbourhood parks in areas designated as Park & Recreation on Schedule A. The Plan supports park space developed for active play as well as parks which remain as natural space. The Plan also recognizes smaller, informal parks, in other designated areas, and encourages the community to maintain these types of parks.
- 5.1.2 Maintain an overall parkland standard that provides, at a minimum, a rate of 2.2 hectares of parkland per 1000 residents. A parkland standard may be established for each neighbourhood in order to ensure an even distribution of park space.
- 5.1.3 Provide parks, trails and open space areas to serve the needs of a growing population by developing the park system as shown on Map 2. Future park sites are shown schematically and actual size and location will be determined at the time of development in the area.
- 5.1.4 Acquire park dedications as part of new subdivision developments according to the following guidelines:
- 5.1.5 Park and trail locations shall generally be in accordance with the site indicated on Map 2 with specific locations to be determined by the Approving Officer at the time of subdivision;
- 5.1.6 Where appropriate, park dedications from two or more properties may be consolidated to form a larger park area;

- 5.1.7 Lands which are undevelopable due to steep slopes, bluffs, ravines or other environmental constraints are not considered to be part of the required park dedication. At the Town's discretion, however, such lands may be conveyed to the Town and maintained as Greenbelt:
- 5.1.8 Small parks, generally less than 0.4 ha (1 acre) serve a very limited purpose, have high maintenance costs, and are generally not supported as park acquisitions, except where a small park involves a special feature such as a viewpoint or a strategic play area desired by area residents;
- 5.1.9 Where the proposed development involves increased density, Council may encourage the dedication of additional park area(s);
- 5.1.10 Parks are to be located in prominent visible locations as features of the neighbourhood; and
- 5.1.11 In areas where the dedication of parkland is not required within the proposed subdivision or neighbourhood area, Council will accept payment of cash in lieu of parkland.
- 5.1.12 Consider preparing a Development Cost Charge Bylaw for the acquisition and development of parkland. This will help to ensure that the Town meets the overall parkland standard and that the development of parkland is properly financed. Development of parkland includes fencing, landscaping, drainage and irrigation, trails, restrooms and changing rooms, playground and playing field equipment on parkland owned by the Town.

### **5.2 Community Parks**

Community parks are generally larger than other parks and provide for a greater amount of organized sports. They may have washroom facilities, separate sport fields for various uses, spectator facilities, etc. Community parks should be accessible via major traffic routes, and serve the community at large with multi-purpose facilities. In Gibsons, Brothers Park and White Towers Park function as community parks and occupy almost 10 ha of land. No additional community park areas are recommended during the life of this Plan, as existing lands are deemed sufficient for this type of park use. Improvements to these parks will be required, however, in the long run, to make use of their full potential. See Section 9.4 for additional policies on parks and community uses.

### Council's Policies

- 5.2.1 Maintain a community parkland standard that provides, at a minimum, a rate of 1.0 hectare of parkland per 1000 residents.
- 5.2.2 Set land aside for a future park in the lower Shaw Road/Chaster Road area.

### 5.3 Neighbourhood Parks

### Smart Plan Goal:

Provide a system of parks, trails and beach access points, and community recreation facilities related to the natural amenities and changing demands of community residents.

Neighbourhood parks play a visible and prominent role within the community. They tend to be the focus of a neighbourhood, provide for a nearby "gathering" place, and a safe, active, play area. They are generally developed for a variety of active recreation uses (i.e. tennis courts, play fields, playgrounds) providing for informal sports for all age groups and organized junior level sports. This type of park also becomes increasingly important where higher density housing is located. Dougall Park is an example of an active neighbourhood park in Lower Gibsons.

### Council's Policies

5.3.1 Maintain a neighbourhood parkland standard that provides, at a minimum, a rate of 1.2 hectares per 1000 residents, with a general catchment area radius of approximately 300-500 metres, in the approximate locations shown on Map 2.

- 5.3.2 Where possible, establish neighbourhood parks with a minimum size of at least 1 ha, with the majority of the site being relatively flat, preferably in the range of 1.5 ha to 2.0 ha. Where residential densities are increased, larger park sites or additional neighbourhood parks may be warranted.
- 5.3.3 Locate neighbourhood parks in visible locations, with frontage on at least one roadway, to provide an active and accessible focal point in each neighbourhood.
- 5.3.4 Support development of parks in conjunction with school sites, provided the park is available and accessible to residents throughout the day.
- 5.3.5 Support the use of unused road allowances or rights-of-way as small neighbourhood parks or community gardens where deemed desirable by the area residents. For example, the east end of Gibsons Way near Marine Drive, adjacent to Gibsons Creek, may be suitable as a passive parkland area.
- 5.3.6 Where possible, neighbourhood parks shall be readily accessible without a vehicle (i.e. walking or cycling), accessible without crossing a major roadway, and linked by pathways to other parks or school sites.

### 5.4 Bicycle and Pedestrian Corridors

An inventory and analysis of existing physical and planning information on trail corridors was undertaken in 2000/2001, which led to a preferred Trail & Cycle Network Master Plan. The final concept indicated routing for both pedestrian and cycling trails. Pedestrian routes were categorized by urban standards (footpaths, sidewalks and harbour promenade) and rural standards (hiking, multi-purpose and road edge). Cycling routes were divided into three categories: off road, designated lined bike lanes, and shared road right-of-ways. Design standards were provided for each category. The proposed trail and bicycle network include a range of recreational opportunities, including nature trails, cycle paths and neighbourhood footpaths. Detailed planning and design of individual trail sections, for construction purposes, will follow as a separate initiative. The Trail and Cycle Network Master Plan (2001) was formally adopted by Town Council. Policies outlined below endorse the Network Plan; details of the Plan have not been repeated in the Community Plan except for primary cycling and pedestrian routes.

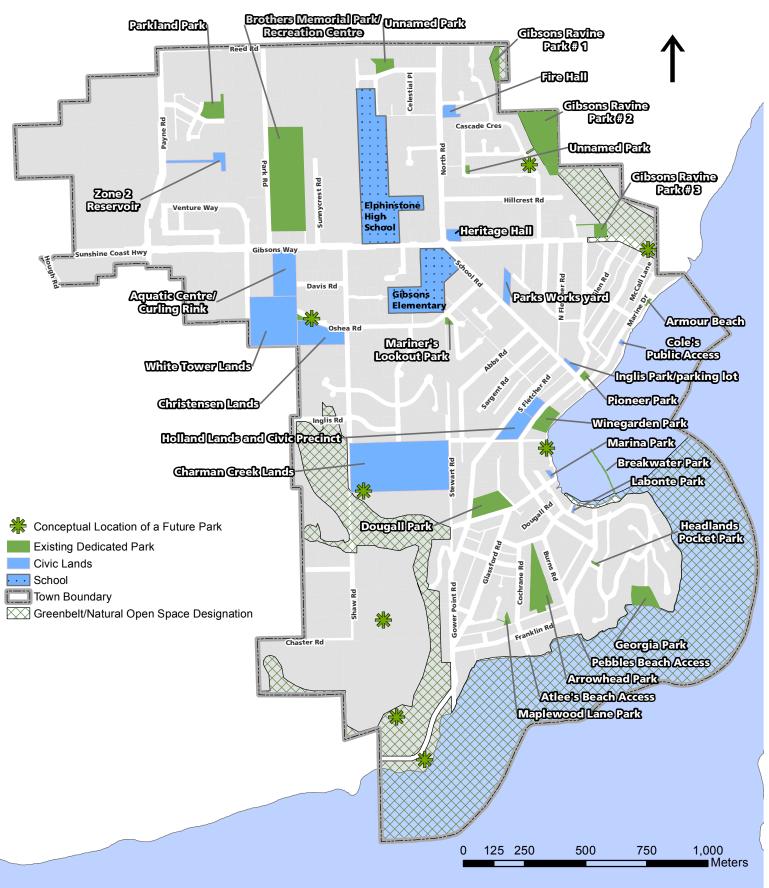
There is potential to expand the existing trail system to provide pedestrian and cycling linkages between neighbourhoods. The trail corridors will also be the primary connectors linking parkland in Upper Gibsons with the waterfront walkway, laneways and the green spaces in and around Gibsons Landing. To ensure the integrity of this trail system, acquisition of additional trail or walkway dedications will be required during future subdivision and upgrading of several trail links, including the existing Inglis Trail. See Section 9.6 for additional policies on roads, transportation and parking in the Gibsons Landing Area.

- 5.4.1 The Trail and Cycle Network Master Plan is endorsed as an integral part of the Official Community Plan. Map 3A of the Network Master Plan is the basis of the overall plan for trail and bike routes within the Town.
- 5.4.2 Establish a primary network of trails and cycle paths as outlined in Map 3A linking open space areas and providing linkage throughout the community. This will act as a guide to developing a pedestrian and cycling network around Gibsons that is consistent with the Trail & Cycle Network Master Plan (2001). Pedestrian and cycle routes indicated on Map 3A are conceptual and the preferred alignment shall be subject to further detailed design study and negotiations.
- 5.4.3 Ensure that pedestrian routes are located on off-road paths, sidewalks and road shoulders. Cycle routes, on the other hand, shall be located on off-road multi-use paths, designated edge-of-road bike lanes and within road allowances.
- 5.4.4 Utilize the Design Criteria Standards as outlined in the Trail & Cycle Network Master Plan (2001) as a guide for trail surfaces and design standards. Any pedestrian and cycling routes that are within the Greenbelt designation or in a DPA1 or DPA2 designation may be required to meet provincial standards in order to protect riparian zones.

- 5.4.5 To help validate trail section selection and prioritization, the following key objectives shall act as guiding principles to trail and cycle network development:
  - a. Connections the overall trail network shall include pathways, sidewalks, trails and bike routes that efficiently connect neighbourhoods with each other, in addition to community and regional amenities and services;
  - Multi-Use the network of pedestrian and cycle routes shall be usable by all members of the community, wherever
    physically possible, throughout the year. Appropriate staging areas and rest stops should be located within the trail
    network;
  - c. Loops the network shall be designed to include a series of smaller loops that emphasize community attractions and amenities;
  - d. Safety the pedestrian and cycle plan shall emphasize safety through appropriate routing, construction materials, signage, lighting and public education. Special attention should be afforded to common routes used by children when travelling to school;
  - e. Affordable the overall trail network shall be achieved in a cost effective manner through a phased implementation approach, creative funding strategy and use of community partnership initiatives;
  - f. Economic Benefits the trail network shall be promoted through the community and region to highlight recreational opportunities that will have a positive effect on the local economy; and
  - g. Community Benefits a public awareness and education campaign shall be initiated to introduce the Trail and Cycle Plan to explain the resultant health and community benefits of using the system.
- 5.4.6 Ensure that Arrowhead Park is used as a bird sanctuary/passive park, complete with walking trails to Harmony Hall and Pebbles and Cochrane beaches.
- 5.4.7 Develop a comprehensive signage system to make the park and trail system accessible to visitors and residents.

#### Smart Plan Goal:

Recognize and support community diversity, arts and culture, and consider the needs of all ages and socio-economic backgrounds.



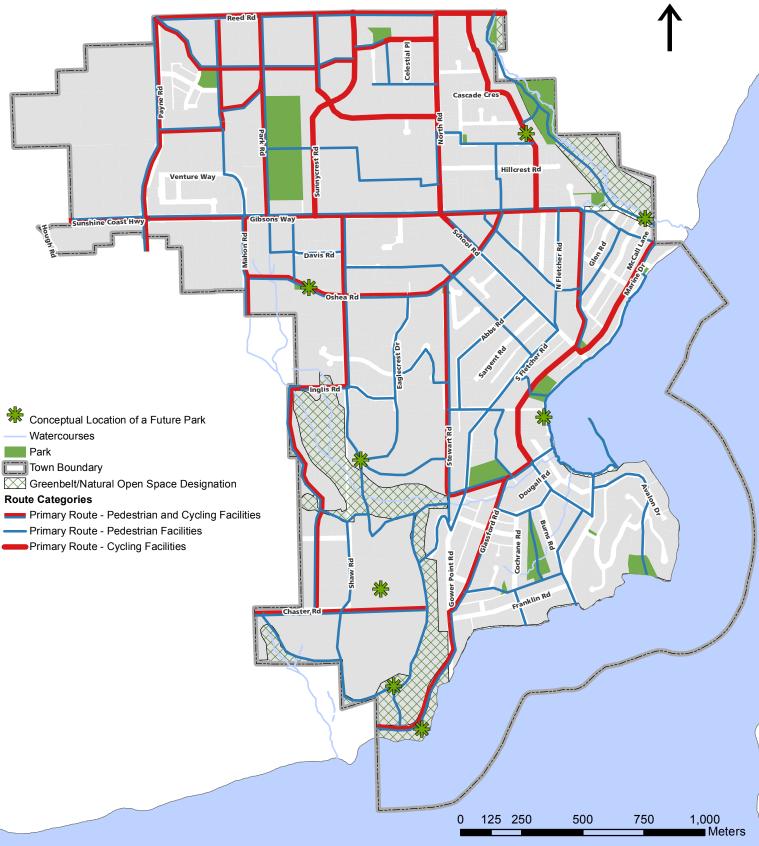
Disclaimer:
This information has been compiled by the Town of Gibsons using data derived from a number of sources with varying levels of accuracy. The Town disclaims all responsibility for the accuracy of this information.

Note:
This map forms part of and is integral to the Official Community Plan.
For pedestrian and cycling routes, refer to Map 3a and to policies
in Neighbourhood Plans (Parts D, E, F of the Plan).

## Map 2 - Parks and Civic Lands

File No.: STD0001 Date: October 2012





Disclaimer:
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This map forms part of the Official Community Plan.

Map 3a - Trail and Cycle Network



## 6.0 COMMUNITY & SOCIAL ISSUES

### Council's Objectives

- maintain and build upon the sense of community which exists in Gibsons by encouraging and supporting volunteer "not for profit" social, recreational, cultural and civic groups.
- o provide park, recreational and cultural facilities and services for the use and enjoyment of citizens of all age groups appropriate for the size of the Town and within its funding means.
- o work towards providing a safer community based on mutual respect, acceptance and valuing of everyone.
- o Recognize significant historical sites and encourage the efforts of property owners to preserve these sites.

### **6.1 Recreational & Community Facilities**

Gibsons has a system of community services and public facilities which meets many of the present needs in the community for civic, cultural, recreational and administrative uses. However, it is recognized that there will be deficiencies in many of these facilities and services, as well as changing expectations in the community as the population grows. In addition, as the community evolves to incorporate a greater proportion of older residents, specialized facilities become an important aspect of services, particularly for health care. Map 2 indicates the location and use of all lands that are park or civic lands.

Improved recreation and community facilities have been identified by many residents of Gibsons as a high priority. With respect to recreational facilities, the Plan supports a regional approach to providing recreation facilities such as ice arenas and pools. While Plan policies provide for recreation uses on municipal lands, it should be noted that it is unlikely that Gibsons would be able to financially develop and maintain such facilities on its own. Any such development will require cooperation with adjacent regional areas to be viable.

With respect to community uses, the Town has a number of community and civic uses, including health care units, a library, municipal hall, and protective services. Many of these uses, including places of worship, fulfill multiple roles in the community, providing for activities such as daycare, fitness classes, and general community meeting rooms. These facilities contribute to creating a high

standard of livability and Plan policies support the initiatives of the many community agencies which provide services to the Town residents.

- 6.1.1 Support community and public facilities on land designated for Public/Community Uses on Schedule A. This may include municipal services, libraries, schools, places of worship, community halls, and medical/care facilities, combined with appropriate accessory uses.
- 6.1.2 Assist the initiatives of senior government, the Regional Board, School District No. 46, and other community agencies in the planning and development of facilities and services needed by the community. This may include the establishment of education and training organizations such as the British Columbia Institute of Technology (BCIT), a sailing school, wood value added centre, marine environmental research centre, etc.
- 6.1.3 Determine the feasibility of creating a multi-purpose recreation facility, either as a municipal facility, or as a joint facility with regional or private enterprise support. A multi-use design philosophy, rather than single purpose, is strongly encouraged. Such a facility may include meeting rooms, fitness centre, and/or activity areas for people of all ages and abilities.
- 6.1.4 In consultation with the public, determine the best location for a multi-purpose facility on Town owned lands. The Town shall review the sites capabilities and develop a concept plan to optimize the future use of these lands for a multi-purpose facility as outlined in Policy 3 combined with park space.

- 6.1.5 Support the use of Town-owned lands for the provision of needed public and civic uses, including such uses as police, library, health care, recreation facilities and non-profit extended care facilities. This may include the development of community gardens on Town-owned land.
- 6.1.6 Review the potential community uses of municipal lands north of Charman Creek, and develop an appropriate concept plan which may incorporate public uses, park and recreation facilities, as well as the potential sale of land for housing to assist in cost-recovery for public uses.
- 6.1.7 Encourage the provision of appropriate health care facilities and services ranging from preventive health services to acute care facilities and to coordinate planning for these facilities and services with Sunshine Coast health care providers.
- 6.1.8 Support provision of affordable childcare services throughout the community.

### 6.2 Schools

The Town is home to two public schools, Gibsons Elementary School and Elphinstone High School, both located near Gibsons Way and School Road and one private school. The public school sites offer indoor and outdoor recreational opportunities for local residents and, as such, school sites are considered an integral part of the park and recreation land uses. According to School District No. 46, enrolment for both public schools is expected to decline over the next decade largely due to the increase of "empty nesters" and seniors moving to Gibsons compared to families with children. As a result, existing schools are expected to remain, and new school sites or major facility improvements requiring additional lands around existing schools are not anticipated. However, if there is significant new residential development, such as the development of the former Agricultural Land Reserve (ALR) lands in Upper Gibsons, consideration of school facilities within these new neighbourhoods will be required.

### Council's Policies

- 6.2.1 If necessary, support a new elementary school in the former ALR lands adjacent to Upper Gibsons, with the exact location to be determined when a Neighbourhood Plan for this area is complete. This may include a land swap with School District No. 46, which would include transferring the School District's surplus land adjacent to Elphinstone High School to a more appropriate location within the former ALR lands.
- 6.2.2 Encourage any future school sites to be located on lands designated as Neighbourhood Plan Area or Public/Community Use. School sites should have a minimum parcel size of 3.0 ha or larger.
- 6.2.3 Support the continued use of school facilities as park and recreational sites for local residents. This may be supported through joint use agreements between School District No. 46 and the Town.

### 6.3 Arts and Culture

Gibsons has a thriving arts community, which enhances the region as an attractive place to operate a business and to visit. Some of the more well known arts and cultural facilities in Gibsons include a public library, Women's Institute Hall (Heritage Playhouse Theatre), and the Sunshine Coast Museum and Archive Society, among others. Residents have expressed a need to expand the arts community in the Gibsons Landing area by encouraging outdoor displays, interactive art and interpretive opportunities. There is also a desire by some members of the community to have an arts centre and/or arts school in the region to further promote the arts community.

### Council's Policies

6.3.1 Recognize the outstanding efforts of the various cultural service organizations in Gibsons in helping to enrich the lives of residents and visitors alike by creating a more complete and healthy community in which to live and visit. The Town shall continue to provide grants to community organizations that aim to enhance the quality of life for Gibsons' residents within annual budget provisions.

- 6.3.2 Give consideration to creating or promoting a seasonal, or temporary cultural district. This would effectively concentrate artisans and other local entrepreneurs to create a critical mass of activity in an area open to the enjoyment for residents and visitors. Such a cultural district shall be encouraged to locate within the Gibsons Landing area, or along the waterfront.
- 6.3.3 Encourage the installation of public art on or within public buildings and property, including the waterfront. Public art may include permanent and temporary installations of statuary, murals and other visual art displays.
- 6.3.4 Consider an arts centre and/or an arts school that would service the entire Sunshine Coast region and beyond in order to showcase and teach artisans. The Town may consider locating such a facility within Gibsons Landing if land is available, or on municipally owned land elsewhere in the Town.

### **6.4 Heritage Protection**

The following Vision Statement of the Town of Gibsons emphasizes the importance of heritage:

"To reveal the authentic cultural and natural heritage of Gibsons and to advocate its conservation."

The Gibsons Landing Heritage Society has played an important role in pursuit of the preservation of existing historical resources for the benefit of future residents. Two historical sites have been designated in Gibsons – The Women's Institute Hall and Gibsons Elementary School - School District Resource Centre. One archaeologically significant site – a Coast Salish "shell midden" is located on the waterfront in Gibsons Landing. (Recorded by the Heritage Conservation Branch as Site DiRV-I).

The Town's Advisory Heritage Commission has identified and researched 20 buildings, places and trees for a Heritage Inventory. The Town has limited resources to purchase properties for heritage preservation, and instead will depend on provisions in the Local Government Act to encourage property owners to designate their properties for heritage preservation.

- 6.4.1 Support completion of a Heritage Strategy and Heritage Management Plan to provide more detailed guidance for heritage preservation.
- 6.4.2 Encourage the development of an inventory of historic sites including buildings, plantings and structures within the Town. Every effort shall be made to recognize these historical features by protecting the significance of the building's character and retaining the scale, spatial relationship, plantings and green space and, where possible, the fabric and line of the existing building.
- 6.4.3 Encourage private owners to preserve heritage characteristics of their property rather than the Town initiating the purchase of heritage buildings or sites. Through the consent and involvement of private property owners, this may include the establishment of a community heritage inventory, designation of a heritage conservation area, and/or adoption of a heritage protection bylaw. Furthermore, the Town shall endeavour to make full use of relevant provisions of the British Columbia Heritage Legislation in order to benefit from programs and funding which may become available.
- 6.4.4 Ensure that where buildings, sites, plantings, or structures of historic significance are located on land to be redeveloped that the preservation of such sites, buildings or structures shall be considered as part of the development approval process.
- 6.4.5 Recognize existing sites, buildings, plantings, and structures of historical value in Gibsons with appropriate explanatory plaques.
- 6.4.6 Encourage new development in Gibsons Landing to reflect the historic design characteristics as outlined in Gibsons Landing Development Permit Area No. 5.
- 6.4.7 Continue to support the location of the Sunshine Coast Museum and Archive Society in Gibsons Landing as a repository of important historic documents and materials.

6.4.8 Consult with the Heritage Conservation Branch to identify sites of archaeological significance within the Town. Any applicant for development on or near a known archaeological site should have an impact assessment prepared according to the B.C. Archaeological Impact Assessment Guidelines.

### 6.5 Health and Safety

#### **Smart Plan Goal:**

Ensure that all residents live in a safe community, and have access to affordable housing, educational opportunities and recreational facilities.

A high quality of life has always been a priority for Gibsons' residents. This includes qualities such as the general health of the community, and access to affordable housing, social, recreational and educational services. More importantly, residents need to feel safe in their community. This may be accomplished through a number of means including a community safety audit, improved design and lighting of public places, and developing partnerships with the Royal Canadian Mounted Police (RCMP) to improve community safety.

#### Council's Policies

- 6.5.1 Cooperate with the RCMP to become more informed about how crime can be prevented through building and landscaping design, and encourage crime prevention through design techniques. This may be accomplished through a public awareness campaign and/or through the establishment of an advisory design panel to review development applications.
- 6.5.2 Work with the RCMP to improve personal safety by encouraging residents and neighbourhoods to participate in crime prevention programs such as Block Parents, Neighbourhood Watch, Citizens on Patrol, and/or Crime Stoppers.
- 6.5.3 Continue to liaise with private and public agencies to provide for the needs of people with disabilities. Buildings that provide a public service shall be made fully accessible for people that have a physical or mental disability.
- 6.5.4 Consider the preparation of data and indicators on the quality of life of its residents. Collaboration between municipal departments and other agencies involved in social planning initiatives shall be encouraged. This may include a community safety audit.
- 6.5.5 Continue to work with the multicultural community to promote harmonious intercultural relations.

## **6.6 Regional Context of Gibsons**

The Town of Gibsons must consider managing growth from a regional scale. The Sunshine Coast Regional District has recently embarked on a restructure study that would consider amalgamating the surrounding Electoral Areas with the Town of Gibsons, namely Electoral Area E – Elphinstone and Electoral Area F – West Howe Sound. Phase one of the Restructure Study has been completed, which identified questions and concerns from the public regarding the provision of services. Work on Phase 2 of the Restructure Study is awaiting provincial funding. If Gibsons' municipal boundaries change due to restructuring, the population of the Town will more than double.

- 6.6.1 Work with the Sunshine Coast Regional District to ensure that growth adjacent to the municipal boundaries are managed in a consistent manner. The Town encourages the Sunshine Coast Regional District to forward development applications for comment for properties within a reasonable distance from the municipal boundaries. This will help to promote complimentary growth.
- 6.6.2 Recognize that if restructuring of the municipal boundaries occur, a review and update of relevant sections of the various OCPs affected may be required.

## 7.0 RESIDENTIAL

### Council's Objectives

- o Recognize the varied housing needs and preferences within the community, and allow for a mix of housing types suitable for the changing population.
- o Require a high standard of design and landscaping for all residential development, and incorporate Smart Growth principles into the overall site design.
- Retain and protect the character of existing residential neighbourhoods, while allowing for appropriate infill and redevelopment.
- o Ensure the most effective use of Gibsons' limited land base by supporting higher densities in appropriate locations.
- o Integrate a diversity of housing types within new neighbourhoods.

### 7.1 Existing Neighbourhoods

### Smart Plan Goal:

Encourage innovative and high quality design, which enhance the unique character of Gibsons. Respect the special character of existing neighbourhoods and ensure that the scale and appearance of future development is compatible with existing uses

According to the 2001 census, there are approximately 1,800 dwelling units within the Town of Gibsons, an increase from 1,670 units in 1996. The majority of these dwelling units consist of single family and semi-detached houses with the remainder multi-family housing units such as townhouses and apartments. This split between single family and multi-family housing types has changed over the years from a 77%/23% split in 1986 to a 65%/35% split in 2001.

Gibsons has evolved into a community that has a number of separate and distinct neighbourhoods. The neighbourhoods consist of older established areas, neighbourhoods undergoing transition and new emerging neighbourhoods. Neighbourhoods areas are outlined on Map 3. See Section 9.3 for additional policies on residential uses in Gibsons Landing.

#### Council's Policies

7.1.1 Creekside/Hillcrest – This neighbourhood is to remain predominantly single family, bordered by the large greenbelt area of Gibsons Creek. The "outer edges" of the neighbourhood along Gibsons Way and North Road include some existing commercial develop-

ment, and will also include additional multi-family development in the future. Provision of an active neighbourhood park area is needed in the long term, particularly as population densities increase.

- 7.1.2 Heritage Hills This established older neighbourhood consists mainly of smaller homes on smaller lots. Due to the views and proximity to Gibsons Landing, the Plan anticipates some demand for redevelopment and low density multi-family housing. These uses are to be focused on the perimeter of the neighbourhood along Marine Drive and Jack's lane. The reuse of existing single family homes to provide additional dwelling units, for example as suites, is encouraged in order to maintain single family character while increasing density. New single family houses and multiple family units are encouraged to fit with the character of the surrounding neighbourhood. Small pocket park(s) may be provided on unused road allowances to provide neighbourhood open space.
- 7.1.3 North Fletcher This is also an established, older neighbourhood, bounded by three major arterial roads. Redevelopment of the block between Gibsons Way and North Fletcher Road to low density multi-family housing is supported. Multi-family housing is also supported along School Road, much of which is already developed for this purpose. Additional commercial development is not supported.

- 7.1.4 Gibsons Landing This neighbourhood is characterized by a mix of commercial and residential uses toward the Gibsons Landing waterfront, with primarily residential development uphill on Sargent and Abbs roads. OCP policies attempt to delineate the residential areas from those which will redevelop more intensively with mixed commercial/multi-family uses. See Section 9.0, Gibsons Harbour Area Plan, for additional policies on residential uses in Gibsons Landing.
- 7.1.5 Bay Area/Georgia View This neighbourhood is an established residential area with very limited future development opportunity. Low density multi-family use is supported in some locations, nearer to the core area, but the neighbourhood will remain primarily single family. See Section 7.6 for additional policies for new neighbourhoods.
- 7.1.6 North Road/Park Road This large area consists mainly of multi-family housing and the Kiwanis Village on the west side of North Road. This neighbourhood also contains major public uses such as Elphinstone High School, Brothers Park, and is adjacent to the major shopping centres. Future development of the former Agricultural Land Reserve (ALR) lands will consist of a mix of single family and multi-family housing, and is to be a model community that will incorporate the concepts and principles of smart growth.
- 7.1.7 O'Shea/Oceanmount This area of Upper Gibsons consists of new subdivision and multi-family housing, as well as established neighbourhoods on Poplar and Davis roads. Future land use will consist of similar mixed residential uses, with White Tower Park and future community uses on adjacent Town-owned land providing a focal point. The forest backdrop along the hillcrest from approximately Oceanmount Boulevard south to Gospel Rock should be maintained as much as possible. See Section 7.6 for additional policies for new neighbourhoods.
- 7.1.8 Shaw Road South/Gospel Rock This area is currently undeveloped. The large sites in this neighbourhood have some development constraints due to topography and ravine areas, but also offer a good opportunity for comprehensive site design. A Neighbourhood Plan, adopted in 2012 and included in Part F of this document, outlines future residential uses, locations of future trail connections and significant environmentally sensitive areas. The Neighbourhood Plan promotes a range of housing forms at varying densities and seeks to design a neighbourhood in harmony with the area's topography and environmental constraints. Development may be long-term, as servicing is not yet available to this area and the Town wishes to prioritize development in closer proximity to existing infrastructure and commercial development, particularly in the Upper Gibsons Commercial Area and Gibsons Landing Area.
- 7.1.9 Upper Gibsons Commercial Area This is the primary commercial area of the Town consisting of retail and service commercial uses for the Gibsons region. This area is intended to expand in land area to the north in the long term. It is also a major goal of the OCP to improve the appearance of this area by incorporating a "west coast maritime" theme for commercial areas, developing a stronger pedestrian and cycling orientation and encourage higher density residential uses, which includes additional housing and community amenities in adjacent area. Improvements to Gibsons Way to include full sidewalks, trees and landscaping, limited driveway access points and development of a future "ring road" are important aspects of upgrading. See Section 8.0 of Part D for more policies on Upper Gibsons.

## 7.2 Single Family Housing

The Plan recognizes that single family housing is the predominant form of housing in Gibsons. Many residents indicated that they would like to retain the low density characteristics of existing single family neighbourhoods. Infill development that is adjacent to existing neighbourhoods should be sensitive to the scale, density, and form and character of the dwelling units.

The proportion of single family housing has declined from 77% of the total in 1986 to 65% in 2001. This indicates that there is a change in the housing mix due to the limited supply of vacant land and an increase in demand for multi-family housing. Although residents tend to support a mix of housing types in order to use land more efficiently, it is anticipated that there will continue to be a strong demand for single family housing due to its affordability compared to the Greater Vancouver region.

Another issue related to single-family homes is the presence of secondary suites. Secondary suites can be defined as separate and self-contained living quarters with their own meal preparation and sanitary facilities, located within a single-family dwelling. While secondary suites are known to exist in Gibsons, the municipality has not officially recognized them. The advantage to recognizing secondary suites is the ability to ensure the suites meet Building Code regulations. However, there have been some concerns brought forward such as the disruption to existing neighbourhoods and the need to provide additional parking.

### Council's Policies

- 7.2.1 Retain as Single Family Residential areas shown on Schedule A for single-family detached homes and accessory buildings. Also, where appropriate and implemented through zoning, semi-public uses such as places of worship, day-care facilities, and community meetings halls may be considered.
- 7.2.2 Encourage redeveloped or new single family homes to be in scale with surrounding buildings in order to preserve the intimacy and character of these existing neighbourhoods. This may require amending the Town's Zoning Bylaw to reduce the maximum building size and lot coverage.
- 7.2.3 Consider permitting secondary suites within the Single Family Residential designation subject to owner occupation of the principal residence. This shall be subject to consultation with the surrounding neighbourhood and will require an update of the Town's Zoning Bylaw. Additional parking provisions will be required for homes that have a secondary suite. The Town may also consider additional water, sewer and garbage rates for homes with secondary suites.
- 7.2.4 Ensure that all property owners developing a secondary suite in their single family home meet all Building Code regulations for the health and safety of the residents. Property owners of existing secondary suites that do not meet the Building Code should be encouraged through an incentive program to upgrade. This may include public awareness programs and grants-in-aid through governmental and non-government agencies.
- 7.2.5 Consider permitting temporary secondary dwellings (sometimes known as garden or granny suites) in properties designated as Single Family Residential to accommodate aging relatives on a time-limited basis. Strict measures will need to be put in place in order to ensure that these garden suites are not used for rental accommodation. This may include a housing agreement between the Town and the property owner/agency for a limited time period and/or garden suites may be regulated through zoning.

## 7.3 Low Density Infill

#### Smart Plan Goal:

Design and plan for a changing population base and age groups through provision of a wide range of housing types and community services to meet the needs of a growing population.

Given the predominance of single family dwellings, there are limited opportunities for more intensive housing development. However, there is a need to provide a range of housing choices through infill. Infill housing development can be defined as a reduction in the minimum lot size for a single family home, or development of vacant land, adjacent to existing neighbourhoods. Small lot single family, cluster single family, townhouses, multi-family development in a single family form, granny cottages and suites over garages may provide a more compatible form of infill in older neighbourhoods.

#### Council's Policies

7.3.1 Encourage infill housing development to occur in areas designated as Low Density Infill on Schedule A. A residential development may include a small lot single-family house, cluster housing, townhouses, multi-family development in a single family form, granny cottages and suites over garages.

- 7.3.2 Encourage two-family dwelling units within the residential areas east of School Road and North Road, where minimum lot sizes of the zoning bylaw are met. The Town may consider requiring specific zoning for all future duplex lots.
- 7.3.3 Ensure that a maximum of one duplex is permitted per parcel, except where part of a comprehensively designed multi-family development.
- 7.3.4 Support small-scale residential infill or redevelopment in the form of single-family and two-family homes, subject to the following guidelines:
  - a. overall building height requirements and/or site coverage requirements of the zoning bylaw may be reduced to lessen impacts on surrounding uses; and
  - b. current minimum lot size requirements for duplexes may be reduced to allow for infill with smaller-scale homes on smaller properties.
- 7.3.5 Consider preparing development permit guidelines for land designated as Low Density Infill to regulate building siting, parking, landscaping and other design concerns.
- 7.3.6 Allow for public involvement prior to any residential infill development since additional housing may directly affect an existing neighbourhood. The Town, in cooperation with nearby residents, shall act as the lead agency in any neighbourhood planning, zoning and subdivision approvals.

### 7.4 Multi-Family Housing

Multi-family housing is no longer necessarily a lower-cost housing choice or a form of rental housing. Increasingly, town-homes are a preferred type of home ownership for various age groups including young families, "empty nesters" and seniors. Given these trends, the siting requirements for multi-family housing are changing. Where higher density uses had generally been separated from single family areas in the past, or placed in less desirable locations, the Plan now provides for greater integration of housing types. The siting requirements for multi-family developments, particularly townhomes, is similar to that for single family residences. Safe and quiet locations with views, treed buffers, and access to major roadways are important considerations.

Higher density multi-family housing (i.e. apartments) is also supported for specific locations in the community. In some cases, sites are recommended near shopping and community facility areas, where increased density will help to make these areas more active and viable. This approach is aimed at creating more compact and potentially more pedestrian-oriented neighbourhoods, with shopping, working and living areas in close proximity. In other cases, where steep slopes or protection of open space is a concern, multi-family development may allow for better site design, with less disruption of natural features. Multi-family development can result in less road development, and the retention of larger blocks of treed land.

Some of the undeveloped residential land is designated in the Plan for Mixed Housing. Within the Mixed Housing areas, an integrated mix of single family, townhouse and apartment development is supported, subject to the guidelines established in the plan policies. The intent of this designation is to allow design flexibility within an overall density limit. A comprehensive site design and development plan will be required prior to rezoning any of these lands.

The Multi-family Special Character designation is intended to maintain the single-family nature of the north end of Gibsons while at the same time providing the added density desired next to the Gibsons Landing commercial area. Development in this designation is intended to be in the form of a single-family dwelling that can be broken into apartments. Development should try and maintain the character of Gibsons Landing.

### Council's Policies

- 7.4.1 Support multi-family housing in areas designated as Multiple Family Residential on Schedule A, which may be accompanied by accessory buildings. The following density breakdown shall be used to determine the appropriate designation:
- 7.4.2 Small parceled single-family housing, ground-oriented duplexes, and ground-oriented townhouses shall be designated for Low Density Multi-Family Housing. Densities shall range between 25-40 units per hectare (1016 units/acre);
- 7.4.3 Stacked townhouses and 2 to 4 storey apartments shall be designated for Medium Density Multi-Family Housing. Densities shall range between 40-75 units per hectare (16-30 units/acre); and
- 7.4.4 Apartments greater than 3 storeys shall be designated for High Density Multi-Family Housing. Densities shall range between 60-110 units per hectare (25-45 units/acre).
- 7.4.5 Foster a high standard of building and site design, ensure there is proper integration with surrounding uses, provide for landscaping and improve the general visual appearance through Development Permit Area designation and supporting guidelines for all multi-family housing.
- 7.4.6 Consider sites for higher density residential in the Upper Gibsons area that are in proximity to commercial centres or major community facilities. These sites should be compatible with adjacent land uses and have adequate access for the increased population and traffic levels.
- 7.4.7 Direct the following types of special needs housing to a Multi-Family Residential designation:
  - a. group homes;
  - b. extended care facilities:
  - c. retirement homes providing intermediate or extended care services;
  - d. community or congregate care housing; and
  - e. seniors and special needs housing.
- 7.4.8 Consider designating new areas to Multi-Family Residential based on the following criteria:
  - a. where the proposed development will be compatible in character and scale with adjoining uses;
  - b. where separation can be achieved through adequate setback distances and landscaped buffers on a site-specific basis from existing or planned lower density housing;
  - within 1.0 km of parks, recreational areas and facilities, commercial and employment areas or public/institutional facilities:
  - d. on sites that afford direct and convenient vehicular access so as to avoid generating excessive traffic on local streets; and
  - e. on sites where adequate community sewer and water services are available or can be provided by the developer.

### Mixed Housing Areas

- 7.4.9 Support a mix of single family and multi-family housing in the areas designated as Mixed Housing within the following guidelines:
  - a. overall site density shall not exceed a maximum of 20-25 units/ha (8-10/acre);
  - b. single family housing shall generally comprise at least 50% of the total site area;
  - c. other housing may consist of a combination of duplexes, townhouses or apartments within the overall density requirements;

- d. for sites 2.0 ha or larger, a minimum of 20% of the site area shall consist of low to medium density multi-family housing;
- e. a comprehensive site plan must be prepared indicating housing forms, densities and open space provisions;
- f. actual density and housing yield will be determined by site factors including slope and natural features, access to the site and impact on adjacent areas; and
- q. undevelopable environmentally sensitive land shall not be included as part of the overall density calculation.

### Multi-family Special Character

- 7.4.10 Support multi-family residential infill development in a single family form, subject to the following guidelines:
  - a. building siting and massing must retain the scale and character of a one or two family dwelling; and
  - b. parking requirements may be reduced to lessen the impact of the automobile on the design of the site.

### 7.5 Affordable & Alternative Housing

Affordable housing can be defined as housing where the cost is less than 30% of the total gross household income. Often affordable housing is defined as a type of housing form creating housing choice beyond the traditional single family form. These forms of affordable housing may include secondary suites, multiple family units and small lot housing.

A mixture of different age groups is important to sustain the Town's vitality and character, and is one of the attractions of Gibsons as a community. Housing needs for both families and seniors encompass many housing forms. For seniors this includes independent living to a range of care facilities (i.e. self-care, limited care, extended care).

For the most part, many seniors housing needs will be addressed as the community develops new townhomes and apartments. The Plan does not support extensive development targeted only toward seniors or a retirement population; the emphasis instead is communities that incorporate housing for people of all ages and incomes. A concerted effort will need to be made to encourage new residents that are not within the senior demographic. However, in the community, the Plan recognizes that there are specific needs for seniors and other groups that may not necessarily be met by market housing – needs for low income housing and extended care facilities which may require use of public lands or other forms of assistance. The Plan acknowledges the need for these facilities, and considers the use of municipal properties for these purposes.

- 7.5.1 Support multi-family and seniors housing developments which are an integral part of the community, with site designs which balances the need for privacy and security with the need to retain an attractive streetscape and sense of "fit" in the neighbourhood.
- 7.5.2 Facilitate the development of a full range of special needs housing for seniors and disabled persons and consider land designated as Multi-Family for these uses. Homes that require continual medical care 24-hours a day should be directed to land designated as Public/Community Use.
- 7.5.3 Support the provision of seniors housing and related services, which encourages independent living in a support setting, such as congregate housing development. Housing units for seniors should be adequately designed for special needs and include a variety of affordable units that are based on the "aging in place" concept.
- 7.5.4 Support initiatives which help provide affordable housing in the community, including:
  - a. provision for housing mixed with commercial development which can create some lower-cost apartments;
  - b. consideration of future small-house/small-lot developments through amendments to the zoning bylaw;
  - c. recognition of secondary suites;

- d. density bonusing for social and affordable housing and amenities through amendments to the zoning bylaw; and
- e. investigate the ability of the Town to require new development to incorporate a specific number of non-profit and affordable housing units within proposed developments.
- 7.5.5 Ensure that affordable housing units or complexes are integrated in the community and not segregated or concentrated in specific areas.
- 7.5.6 Review and update the current Zoning Bylaw to reflect new housing trends, a wider range of densities, and improved site design requirements.
- 7.5.7 Recognize that seniors housing may be accommodated within single family areas as "granny cottages" or secondary suites, subject to provisions of the zoning bylaw.

### 7.6 Future Neighbourhoods

Smart Plan Goal:

Grow in harmony with the natural surroundings and ecosystems. As outlined in Section 2.2, the population may double in the next 25 years. Population growth will have a direct impact on the number of housing units required. As of 2001, there were approximately 1,800 dwellings units within the municipal limits, with an average of 2.17 people per household. Between 1996 and 2001, building permit information indicated there was an average of 15 new homes constructed per year. Based on the low, medium, and high growth rates used to calculate projected growth, the following housing predictions can be made.

Table 4 - Housing Prediction

Growth Rate	Total Number of Dwelling Units	New Dwelling Units per Year
	by 2026	(average)
Low (1.0% per year)	2,239	20
Medium (2.5% per year)	3,237	60
High (4.0% per year)	4,655	116

Projections: UMA

At an average annual growth rate of 2.5%, it is estimated that an additional 1,400 dwelling units will be required over the next 25 years. However, there are a number of limitations to future growth including a limited land base, a desire to preserve the existing quality of life, and an existing sanitary sewer and water system that is at capacity, and freshwater constraints. An upgrade of the Town's sanitary sewer treatment plant is essential prior to any future development, and this is discussed in Chapter 12.

With respect to the limited land base, the Agricultural Land Reserve Commission has released 34 ha of land in the Upper Gibsons area. This land is part of the Upper Gibsons Neighbourhood Plan Area. As areas within the developed portion of Gibsons fill in, this area is expected to be the primary residential growth area for the Town over the next 20 years. Other areas that will be considered future residential development include infill development throughout the community, and limited areas north and south of Charman Creek as well as, in the longer term, the Gospel Rock Neighbourhood Plan Area.

## **Neighbourhood Plan Area**

The intention of the Neighbourhood Plan Area Designation is to ensure that the undeveloped lands in Gibsons are developed in a phased and sustainable manner, and that the Town of Gibsons and its residents are included in the future planning of the area. The objective of the designation is to ensure a sustainable neighbourhood plan is developed in conjunction with the Town and its residents prior to any subdivision or development. It is also important that the planning and design of the neighbourhood fit the existing form

and character of the Town and surrounding environment. Rezonings within Neighbourhood Plan Areas will be generally consistent with the Neighbourhood Concept Design maps contained within each Neighbourhood Plan, and with the Land Use Plan designations shown in Schedule A. Development applications within the Upper Gibsons Neighbourhood Plan Area and Harbour Plan Area will be prioritized for short to medium term development, with the Gospel Rock Neighbourhood Area contemplated to accommodate medium to long term development. A sustainable neighbourhood can be described as: "a neighbourhood that has been planned and developed in such a way that the fiscal, social and environmental activities that take place within it are capable of being sustained far into the future". See Part E for details of the Harbour Area Plan.

### **Upper Gibsons Neighbourhood Plan Area**

o See Part D for details of the Upper Gibsons Neighbourhood and Strategic Servicing Plan.

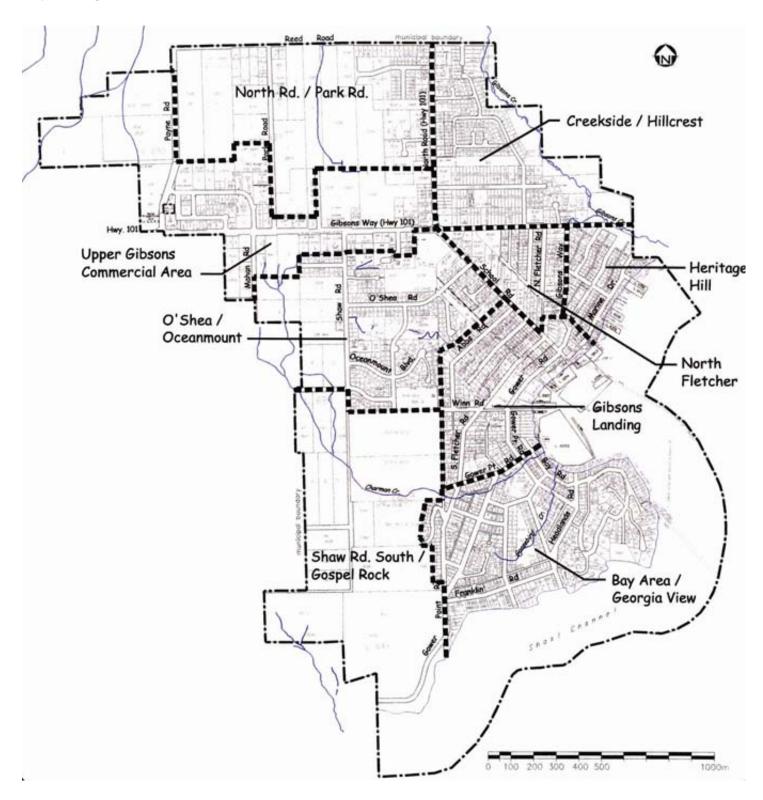
### **Gospel Rock's Neighbourhood Plan Area**

o See Part F for details of the Gospel Rock Neighbourhood Plan Area.

- 7.6.1 For land that is designated as Neighbourhood Plan Area on Schedule A:
  - a. encourage efficient use, conservation and alternative forms of energy use (e.g. energy efficient homes and siting homes to maximize solar gain);
  - b. reduce the need for residents to consume and waste resource (e.g. native plantings to reduce water use, low flush toilets, using recycled building materials); and
  - c. encourage a compact mix of land uses with an emphasis on residential uses.
- 7.6.2 Incorporate the following goals and objectives for land designated as Neighbourhood Plan Area:
  - enable people to walk or bike to services, amenities and employment centres (minimize automobile use);
  - b. provide a more diverse and sizable population and wider commercial base to support public transit;
  - c. enhance the vitality and security of an area by increasing the numbers of people on the street;
  - d. minimize auto dependency that pollutes the air and requires more roads and more parking, thus increasing the amount of impervious surfaces in the neighbourhood causing more storm water runoff to enter the creeks;
  - e. encourage the development of public spaces and retail stores that gives the neighbourhood a focal point for community interaction;
  - f. ensure the focal point has recognizable boundaries and entrances that give the neighbourhood a distinct identity;
  - g. incorporate community garden sites to acknowledge the history of the neighbourhood and act as another neighbourhood meeting place and enable the local residents to grow their own food;
  - h. provide housing that is accessible to a cross-section of society and adaptable to the Town's changing demographics and lifestyles;
  - reduce the Town's costs of accommodating growth by planning for a compact urban form that makes more efficient
    use of the land and reduces the cost of developing and maintaining infrastructure so that it will not become a burden
    on future generations;
  - j. provide protected natural areas and a variety of connected open spaces offering a choice of activities, linked where possible to a regional open space system;
  - k. ensure the neighbourhood plan addresses the form and character of the surrounding community by using local building materials, architectural styles, and native plant species; and
  - I. encourage a range of housing types and forms, including affordable housing.

- 7.6.3 Ensure that all multi-family, commercial or industrial development proposed in the Neighbourhood Plan designation is subject to a development permit with respect to the form and character of the buildings and site design.
- 7.6.5 Amend the OCP once a Neighbourhood Plan has been adopted by Council. The amendment shall reflect the policies and initiatives of the Neighbourhood Plan and the most appropriate land use designations.
- 7.6.7 In the Gospel Rock Neighbourhood Plan Area, support the acquisition of land for a park through the subdivision process and if desired, through the establishment of a Parkland Development Cost Charge Bylaw in order to acquire additional park land. Where possible, the Town shall provide assistance to community organizations and citizens-at-large in raising funds to purchase land in the Gospel Rock area in order to create park space.
- 7.6.8 In the Gospel Rock Neighbourhood Plan area, all multi-family, commercial and/or industrial development is subject to a development permit with respect to the form and character of the buildings and site design.

Map 3 - Neighbourhoods of Gibsons



## **8.0 UPPER GIBSONS**

### Council's Objectives

- o support the development of Upper Gibsons as one of the primary commercial centre for the residents of Gibsons and surrounding area.
- o support higher density housing as an important component of land use in Upper Gibsons.
- o adhere to the principles of Smart Growth in order to revitalize the Upper Gibsons corridor to a more pedestrian oriented commercial area.
- o support the redevelopment of automotive and industrial uses on Gibsons Way to more compatible commercial and retail uses.
- o upgrade the safety and appearance of Gibsons Way through the provision of sidewalks, cycling paths, and landscaping, and the reduction of direct access in favour of planned development with access through controlled intersections.

### 8.1 Revitalization of Upper Gibsons

**Smart Plan Goal:** 

Create a strong and vibrant commercial sector, with distinct functions and appearances in the Gibsons Landing and Upper Gibsons areas.

The Upper Gibsons area, centred on Gibsons Way (Gibsons Way), is presently, and will continue to be, the major commercial and service centre serving both the Gibsons community and its surrounding trading area. The area extending from North / School Road intersection, west to Gibsons Park Plaza, immediately outside of the municipal limits, is developing as the focal point of commercial activity. Over time, it is anticipated that this area will redevelop with a stronger retail orientation, with less emphasis on service and automotive uses.

Although Upper Gibsons is a separate geographic entity from the waterfront atmosphere of Gibsons Landing, it is crucial that the uptown area provide an image which is equally desirable. The real challenge for Upper Gibsons is to create a vibrant centre that is visually attractive as well as functional with a strong mix of housing, commercial activities and community uses.

With increased emphasis on design, land uses and traffic flow, it is possible to move away from the

image of "strip development" toward an attractive, more pedestrian oriented, town centre. At the time of drafting the Plan, a revitalization initiative between the Town and the business association was underway, which may be incorporated into the Plan at a later date.

- 8.1.1 Create an Upper Gibsons "town centre" focused on the area between School/North roads and Payne / Pratt roads with the following guidelines:
  - a. emphasis on commercial uses including retail stores, banks, restaurants, office uses, visitor accommodation, entertainment facilities and personal services;
  - b. inclusion of public uses, including churches, schools, and amenities such as White Tower Park, the Pool complex and Brothers Park as essential components of this town centre;
  - c. a greater pedestrian orientation than currently exists, with improvements to sidewalks and landscaping emphasized with future developments; and
  - d. incorporation of multi-family housing adjacent to the commercial areas as outlined in Chapter 7 on Residential Neighbourhoods, including both medium and density housing.
- 8.1.2 Continue to work in cooperation with the Sunshine Coast Regional District, Ministry of Transportation, and any other relevant agencies to develop a comprehensive approach to overall future commercial land use, traffic flow and landscaping in the commercial area along Gibsons Way/Gibsons Way.

- 8.1.3 Prevent the dispersal of commercial activity along North Road and the section of Gibsons Way east of School Road by limiting commercial development to the areas designated as Commercial on North Road and to the existing neighbourhood commercial centre (Seaview Plaza area) on Gibsons Way. The Town supports the SCRD's current policies to limit commercial to existing activity zoned properties within the SCRD.
- 8.1.4 Support the redevelopment of existing commercially-zoned properties within the North Road and Gibsons Way areas to multi-family housing, but consider supporting limited types of commercial uses which provide small-scale shops or services clearly of benefit to the surrounding residential neighbourhood.
- 8.1.5 Encourage quality commercial and multi-family development in Upper Gibsons by requiring Development Permits for all new developments according to the guidelines for Development Permit Area 3 (DPA3). Retail or commercial operations shall be at the ground level with residential located above.
- 8.1.6 Continue to support development of a detailed Revitalization Concept Plan for the Upper Gibsons area. Once this is complete, consideration may be made to incorporate design concepts and land use proposal into the Plan. This may also include amending the guidelines within DPA3.
- 8.1.7 Incorporate design guidelines for Gibsons Way such as the need for street trees and landscaping within the Revitalization Concept Plan and initiate Town-sponsored provision for landscaping.
- 8.1.8 Require buffering and screening between any commercial or light industrial uses in Upper Gibsons and residential developments.
- 8.1.9 Support improvements to Gibsons Way to reduce commercial access points, increase pedestrian safety and improve traffic circulation, with loops to the north and south of the highway.

### 8.2 Commercial Development

Upper Gibsons will continue to act as a regional commercial centre for the residents of Gibsons and the greater area. Unfortunately, over the past decade or so, the area has been permitted to expand without much consideration over design, traffic flow, and mix of land uses. In other words, it has not adhered to the principles of smart growth. The area is not fully developed and there is an opportunity to consider alternatives to form of development. The proposed residential neighbourhood adjacent to Upper Gibsons and the possible development of the Christensen lands will have a direct impact. Through this development and redevelopment of Upper Gibsons, buildings can become more compact, pedestrian and bikeways can be introduced, and improvements to the west coast marine design can be considered. There is consensus in the community to refocus and improve Upper Gibsons as a bustling "town centre".

#### Council's Policies

- 8.2.1 Encourage commercial uses to concentrate on areas that are designated as Commercial in Schedule A. Although expansion of Commercial designated property in the Upper Gibsons area is not encouraged, the addition of mixed residential/commercial uses along Gibsons Way may be considered.
- 8.2.2 Limit new commercial development to be no more than 2500 m2 (26,910 ft2) of gross floor area per business.

## 8.3 Industrial Development

Plan policies support the redevelopment and upgrading of the existing light industrial area around Venture Way/Seamount Way. The properties fronting the north side of Gibsons Way are now designated for commercial uses, to assist in creating a more retail-oriented area between the two shopping malls. The lands further to the north are recommended for a range of service and light industrial uses, but with improved landscaping and design standards to improve the appearance of the area. Heavier industrial uses will not be accommodated in this area in the long term, but warehousing, distribution, automotive, construction businesses, and enclosed service and light industrial uses are supported.

### Council's Policies

- 8.3.1 Encourage automobile-oriented service commercial uses to relocate to secondary locations in the Seamount/Venture Way area designated as Service Commercial/Business Centre, and to limit development of new automotive uses along Gibsons Way.
- 8.3.2 Support a transition from heavy industrial use in the current zoned industrial area toward service and light industrial uses including offices associated with these businesses.
- 8.3.3 Support consolidation of properties.

### 8.4 Residential & Mixed Use Development

The addition of new housing areas surrounding the commercial lands of Upper Gibsons centre will also assist in revitalization, adding greater population density and a pedestrian orientation to an area previously oriented mainly to automobile access. Plan policies provide for medium and higher density housing, in the long term, for lands both to the north and south of the commercial centre. See Chapter 7 on Housing for policies on residential development, including the former Agricultural Land Reserve (ALR) lands.

#### Council's Policies

8.4.1 Encourage a variety of residential uses throughout the Upper Gibsons area, and an emphasis on mixed residential/commercial development along Gibsons Way.

## 8.5 Rural and Agricultural Lands

Historically, agriculture has not played a significant role in terms of the land use, social fabric or economy of Gibsons. Generally, agricultural activity has been limited by poorer soil quality and unfavourable market and labour conditions. Presently, only a small portion (approximately 20 ha) of the overall land base of the Town is within the ALR under the Agricultural Land Commission (ALC) Act. The ALC Act is provincial legislation aimed at preserving and protecting the agricultural land base of British Columbia. The Act, and associated regulations and Commission resolutions, take precedence over all municipal land use bylaws, including Official Community Plans. Applications to exclude and include lands within the ALR, as well as to operate non-farms uses are subject to approval by the Agricultural Land Commission.

In 2002, the Town was successful in achieving an exclusion from the ALC that included seven small parcels of land, generally located at the junction of Reed and Park Roads within the Upper Gibsons area. The entire 34 hectares are now part of a Residential Reserve designation, which requires a Neighbourhood Plan, and are discussed further in Section 7.6.

- 8.5.1 Encourage farming operations to continue on land that is designated as Rural and Agricultural and within the Agricultural Land Reserve, west of Payne Road, as shown on Schedule A. Land designated as Rural and Agricultural shall be used for the farming of land, plants and animals and similar activities as provided by the Agricultural Land Commission Act. This includes compatible uses such as boarding stables, turf farms, and greenhouses.
- 8.5.2 Recognize that all uses, including the subdivision of property, for property designated as Rural and Agricultural are subject to the Agricultural Land Commission (ALC) Act, its regulations and orders of the Provincial Agricultural Land Commission.
- 8.5.3 Work with the Agricultural Land Commission to develop land known as White Tower Park, east of Mahon Road and designated as Park and Recreation on Schedule A. This land is within the ALR and was dedicated to the Town with the understanding that it would be developed as a future community park. By resolution of the Commission, this ALR land

- is approved for a specific non-farm use as a series of storm water detention ponds in compliance with the Town's Storm Water Management Plan. The Park also provides pedestrian access linking Shaw and Mahon Roads.
- 8.5.4 Minimize urban-rural conflicts with existing or potential future agricultural operations along boundaries where non-agricultural lands within municipal boundaries adjoin lands within the ALR. Efforts to minimize urban-rural conflicts include:
  - a. the designation of non-farm lands with land uses that are compatible with farm use such as Greenbelt (e.g. designation along Gibsons Creek);
  - b. the physical separation by a road or similar barrier between farm and non-farm uses (e.g. Reed Road, Payne Road); or
  - c. suitable setback or buffering within non-farm areas (e.g. along the western municipal boundary north and south of Charman Creek) including ALR lands in the SCRD

# 9.0 GIBSONS LANDING

Goals, objectives and policies for the Harbour Area are included in the Neighbourhood Plan entitled "Gibsons Harbour Area Plan.

## 10.0 ECONOMIC DEVELOPMENT

### Council's Objectives

- o Attract clean light industrial and commercial uses, shops and offices in order to provide jobs and services for residents, and to improve the Town's tax base.
- Encourage and facilitate tourism by providing a variety of good quality accommodation and attractions.
- o Promote Gibsons as a location of choice for new residents.
- o Preserve the identity of Gibsons as the historical, cultural, and commercial center for the "lower" Sunshine Coast.
- Ensure an adequate supply of serviceable land to meet demands for business and residential development.
- o Have a sound financial position based on a strong tax base with the needs of the citizens prioritized and provided for.
- o Encourage the establishment of an arts centre / college / school to promote year round economic benefits by drawing people to Gibsons.

### 10.1 Economic Initiatives

### **Smart Plan Goal:**

Create a diverse, flexible and vibrant local economy that provides sustainable employment.

While some economic initiatives can be translated into specific land use policies, there are a number of items of broader application. They stress the supportive environment the Town wishes to retain for economic opportunities that aid in achieving prosperity for the community. Many economic actions cannot be undertake by the Town alone, but require collaborative efforts with the Regional District and a number of special agencies. The Plan emphasizes the Town's on-going support for appropriate economic development.

There have been some discussions that Gibsons Harbour, Langdale, or some other docking point along the coast could become a stopping point for cruise ships. This has the potential to spur tourism on certain days of the year, however, at the same time, could jeopardize the quaint small town atmosphere of Gibsons Landing. Other on-going economic development initiatives include the increasing demand of the filming industry in the Gibsons area. Once again, this has the potential to be both disruptive to the existing community, yet profitable for some. These and other initiatives need to be considered.

- 10.1.1 Consider the need for sustained and long-term economic growth in the Town when reviewing any major development proposal.
- 10.1.2 Cooperate with groups and agencies in the tourism, arts and recreation sectors to encourage and strengthen economic development and to support the Town's role as a gateway to visitor trips in other areas of the Sunshine Coast.
- 10.1.3 Encourage further development of Gibsons based tourism services, including overnight accommodations, tour operators, food and beverage establishments, as well as cultural and historic interpretation of the region. The Town may assist in such endeavours by establishing a favourable climate for seasonal fairs, booths, and displays along the waterfront area.
- 10.1.4 Explore how the Town can become business friendly for the benefit of existing and new business without detracting from the values of the community.

- 10.1.5 Consider an Economic Development Plan for the Town in order to offer additional guidance with respect to economic and development initiatives. This Economic Development Plan should be revised periodically. The Plan may address issues such:
  - a. the impact of the cruise ship industry;
  - b. the impact of the film industry;
  - c. promoting a large hotel versus the promotion of smaller inns or pensions;
  - d. the ability to attract clean, high tech business in order to create a light industrial business centre near Gibsons Way and Payne Road;
  - e. defining the economic role of Gibsons Landing and Upper Gibsons; and
  - f. attracting a variety of demographics to Gibsons.

### **10.2 Private-Public Partnerships**

### Smart Plan Goal:

Recognize the costs associated with growth and ensure that future amenities and improvements are within the financial capability of the Town and its residents.

The annual budget for the Town of Gibsons is approximately \$5 million with only a small portion coming from property taxes. This limited budget presents a challenge for undertaking development projects. In recent years, the Town of Gibsons has relied on private-public partnerships cooperation to fund projects such as the restoration of heritage buildings and the wharf renewal project. There is a trend towards projects being undertaken as community partnerships which are financed in part by other businesses and organizations.

### **Council Policies**

10.2.1In order to finance community infrastructure projects, explore funding alternatives from a variety of sources including provincial and federal grants, property taxes, donations in kind or dollars from local businesses, and volunteer hours from community members. This may results in establishing private-public partnerships.

- 10.2.2 Work with the Gibsons Economic Development Partnerships, the coast-wide Economic Development Partnership, and any other partnership strategies that aim to diversify and maintain a local economy that is sustainable in the long term. Areas that should be focused on include tourism, value-added manufacturing of wood products, education, high-tech business, and arts and culture.
- 10.2.3 Recognize that transportation improvements and effective marketing are fundamental to the opportunities for economic growth and prosperity.

### 10.3 Home Based Businesses

The number of home-based businesses have been growing in the Gibsons area with over 10% of employed residents indicating that they work from home in the 2001 census. Home base businesses tend to range from the production and selling of artisan crafts to business and professional offices. This type of economic development is encouraged as long as the regulations in the Town's zoning bylaw are followed.

Another form of home-based business is the provision of short-term rental housing. Short-term rental housing can be defined as housing used for commercial purposes, which may include vacationers or out-of-town film crews that rent a house for less than 30 days. The owner of the house tends to reside elsewhere. Although this adds to the tourism economy, this has been known to disrupt existing neighbourhoods. A majority of residents indicated during the planning process that they would support the provision of short-term rental housing through a permit system, subject to consultation with neighbouring residents.

### Council's Policies

- 10.3.1 Support home based businesses provided that the business does not detract from the existing residential character of the area, create undue noise or be unsightly, and are clearly incidental in size and use to the dwelling unit, and meet all appropriate regulations. This may be further controlled through the zoning bylaw.
- 10.3.2 Consider bed and breakfast operations as a home based business provided that the owner or operator is a resident onsite.

### 10.4 Sand and Gravel Deposits

As outlined in Section 877 of the Local Government Act, an OCP is required to include statements and map designations respecting the approximate location and area of sand and gravel deposits that are suitable for future sand and gravel extraction. As the Town of Gibsons is comparatively small in area, and largely developed, it is not feasible for the Town to designate any land for sand and gravel deposits. The Town recognizes the value of sand and gravel resources and will continue to rely on the Sunshine Coast Regional District and private enterprises for sand and gravel.

### Council's Policies

10.4.1 Not designate sand and gravel deposits on the Land Use Map as none are located within the Town boundaries.

## 11.0 TRANSPORTATION

### Council's Objectives

- o Ensure that the Town's transportation system emphasizes the creation of a safe environment for pedestrians, bicycles and vehicles.
- o Reduce the impact of traffic on local residential areas through suitable road and subdivision design.
- o Propose the development of a continuous, integrated bicycle network in order to promote bicycle use for both recreation and transportation purposes.
- Provide a high standard of public roads which meet the vehicular movement requirements of the Town's residents and visitors.
- Encourage the development of environmentally low impact roads.

### 11.1 Roads

The historic development pattern and the topography of the SunshineCoast and the Town of Gibsons is the origin of many of the difficulties facing the community today with respect to transportation. Existing problems with traffic congestion, parking, conflict between local traffic and through ferry traffic, and the division of the community by Gibsons Way are related to historical development patterns.

An update and revision of the Town's road network was conducted in the mid-1990s through the Road Network Plan Study (1996). It provided a number of specific recommendations to improve the traffic network. Another issue that has become prevalent in certain neighbourhoods is the issue of traffic calming. The objectives of traffic calming on local or collector streets are to reduce vehicular speeds, discourage through traffic, minimize conflicts between street users and improve the neighbourhood environment. Traffic calming measures have been shown to reduce collision potential and increase safety in neighbourhoods. Traffic calming measures are intended to be self-enforcing as opposed to regulatory traffic control devices that require ongoing enforcement. Encourage low impact road standards that will be more environmentally, socially and financially sustainable. See Section 9.6 for additional policies on roads, transportation and parking in Gibsons Landing.

- 11.1.1 Develop a road network in accordance with the locations as shown on Map 4, and work with the Sunshine Coast Regional District and the Ministry of Transportation to have a coordinated Transportation Plan for the greater Gibsons area.
- 11.1.2 Within the limitation posed by existing established roadways, develop a road network with the following major functions and characteristics:
  - a. Major Network Roads (Arterials)
    - o to provide for high mobility but low access to adjacent properties
    - o to accommodate major traffic movement from collectors and minor arterials
    - o minimum right-of-way width of 25-30 metres
    - o full sidewalk development on both sides
    - o bicycle facilities shall be provided in the form of designated lined bike lanes
    - o with the exception of Gower Point Road (Gibsons Landing), on-street parking be restricted
    - o typical traffic volumes range in the order of 10,000 to 30,000 vehicles per day
  - b. Minor Arterials
    - o are similar to major network roads (arterials) but provide for slightly less mobility and more access
    - o permit travellers to move conveniently from one part of Town to another

- o minimum right-of-way width of 20-25 metres
- o full sidewalk development on both sides
- o bicycle facilities shall share the road through the use of wide curb lanes
- o on-street parking may be restricted during peak traffic periods
- o typical traffic volumes range in the order of 5,000 to 20,000 vehicles per day

#### c. Collector Roads

- o provide a balance of access and mobility
- o collect traffic from local roads and flow into arterials
- o are located to serve all neighbourhoods of the Town and reduce through traffic on local streets
- o minimum right-of-way width of 20-25 metres
- o sidewalk development on both sides of new roads, and at least one side of existing roads
- o untravelled portion of right-of-way suitable for bike lanes
- o motorists and cyclists to share low volume roads with no special provisions for cyclists
- o to accommodate on-street parking
- o typical traffic volumes range in the order of < 8,000 vehicles per day for residential areas and 1,000 to 12,000 vehicles per day for industrial / commercial areas

#### d. Local Roads

- o provide high access and low mobility
- o accommodate traffic from individual properties and flow on to collectors
- o accommodate pedestrians and other non-vehicle uses on the roadway; sidewalks to be developed for new subdivisions
- o parking and pedestrian amenities to be determined on the basis of localized need and neighbourhood consultation
- o typical traffic volumes for local roads servicing residential areas are < 1,000 vehicles per day and for those servicing industrial / commercial areas are < 3,000 vehicles per day
- 11.1.3 Minimize through traffic in residential areas by designating and improving appropriate collector and arterial roads as shown on Map 4.
- 11.1.4 Where possible in future subdivisions, avoid direct access from residential lots to arterials roads and provide property access via local roads.
- 11.1.5 Consider simplifying the Gower Point, Marine Drive, Gibsons Way intersection by closing School Road between Gower Point Road and the lane behind to automobile traffic. Limit access to shuttle buses, trams, and pedestrians. School Road should remain open between the lane uphill of Gower Point and North Road, but is to be de-emphasized as a through route by incorporating appropriate intersection treatments that route the main flows between Upper and Lower Gibsons along Gibsons Way. Access to Periwinkle Lane for local traffic is to be maintained.
- 11.1.6 Wherever possible with future development in the Upper Gibsons area, provide opportunities for "looping" of traffic flow to improve traffic circulation and access to commercial areas.
- 11.1.7 Carefully control commercial development and work toward roadway improvements along Gibsons Way to achieve:
  - a. appropriate location and design of intersections;
  - b. limited points of access and egress to individual businesses;

- c. left turns at intersections only;
- d. provision for landscaping subject to Ministry of Transportation approval; and
- e. potential provision of landscape islands to separate the traffic directions.
- 11.1.8 Consider streetscapes improvements such as decorative sidewalks, complementary signage, planting and crosswalks within the major road rights-of-way in the Upper Gibsons commercial area and in Gibsons Landing. Crosswalks should be at intersections, wherever possible, as mid-block crosswalks are discouraged.
- 11.1.9 Consider establishing distinct development standards to allow for upgrading of Gower Point Road from Franklin Road South for traffic and pedestrian safety, while also retaining the rural, winding and natural features of this route.
- 11.1.10 In consultation with the local community, introduce traffic calming measures to discourage traffic from taking shortcuts through neighbourhoods such as the Beach Road/Seaview Road area. Measures might include localized narrowing to a single lane to create "pinch points", mid-block mini-roundabouts to slow traffic down, signage or supervised use of the street for community purposes (e.g. pavement art, volley-ball tournaments, block barbecues, etc.)
- 11.1.11 Incorporate low impact road standards in consultation with the public such as narrower streets, permeable road surfaces and sidewalks, and infiltrating drainage systems.
- 11.1.12 Amend the Subdivision and Development Bylaw to incorporate low impact road and sidewalk standards.
- 11.1.13 Require traffic impact studies for developments that are expected to create operational problems associated with the safe and efficient movement of traffic, pedestrians, bicycles and transit vehicles. Improvements identified as a result of the study will be the responsibility of the developer and implemented as a condition of site plan approval.

### 11.2 Transit

#### Smart Plan Goal:

Promote the use of alternative modes of transportation including walking, biking, and transit

The Sunshine Coast Transit System, operated by the SCRD, provides bus service to the Sunshine Coast Regional District from Langdale Ferry terminal to Sechelt, offering passengers routes to major destination points such as Gibsons and RobertsCreek.

- 11.2.1 Provide public and private transit in cooperation with the Provincial and Regional Governments, which permits the safe and efficient travel of local residents throughout the Town and to other parts of the region.
- 11.2.2 Support development of all initiatives which reduce the community's dependence on automobile travel, including public transit, development of comprehensive bike routes, passenger ferry services, and park and ride facilities. An important part of this strategy are land use decisions which increase local employment and business opportunities, provide for higher density housing, and for pedestrian oriented commercial areas.
- 11.2.3 Encourage a tram or shuttle bus service as an appropriate transit service to connect Upper Gibsons and the Lower Gibsons waterfront.
- 11.2.4 Support the planning and provision of transit facilities such as transit shelters and bike racks on buses to facilitate intermodal access by all users.

### 11.3 Parking

There is not an immediate parking problem in Gibsons. There is a perceived shortage of parking in Lower Gibsons during the visitor seasons, but there may be opportunities to manage the existing parking stalls first before any drastic changes to the supply. See Section 9.6 for additional policies on roads, transportation and parking in Gibsons Landing.

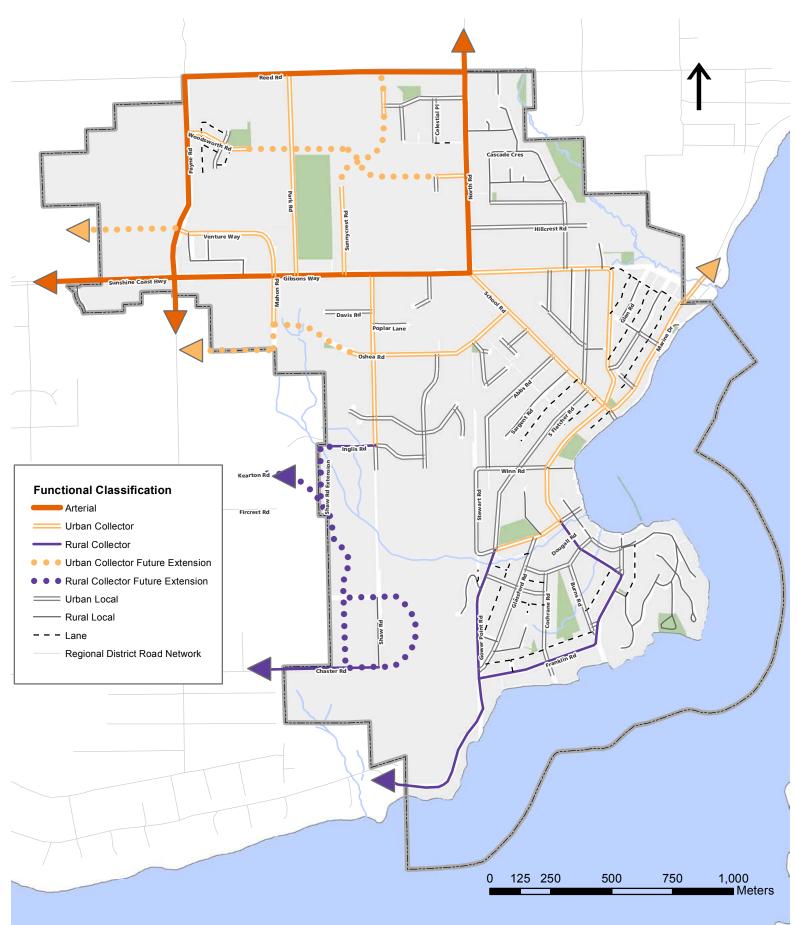
#### Council's Policies

- 11.3.1 Review the available parking areas, zoning bylaw requirements, public parking areas and future traffic patterns as key issues in the Revitalization Concept Plans for Gibsons Landing. Following this analysis, Council may implement changes to the road system and parking requirements.
- 11.3.2 Require that access to off-street parking areas are provided from lanes and secondary streets wherever possible.
- 11.3.3 Continue to develop public parking areas in Gibsons Landing for commercial uses, which cannot provide sufficient on-site parking for reasons of difficult terrain, access, or limitations due to the existing parcel size. Monies raised through the Parking Reserve Fund shall be used by the Town to fund this public parking.
- 11.3.4 Review the adequacy of the existing cash payment amount to the Parking Reserve Fund relative to the costs of land acquisition and parking structure construction in the commercial area.
- 11.3.5 Plan for parking areas to be more pedestrian friendly and environmentally responsive by adding landscaping, medians, trees, permeable materials and oil water separators.

### 11.4 Sidewalks

The pedestrian and bicycle network is as important to the movement through the community as the road network. Residents no longer walk or cycle for recreational purposes only, but are considering these modes of transportation for commuting purposes. As a result, an effective network needs to be provided. This is covered in more detail in Section 5.4 – Bicycle and Pedestrian Corridors. This section deals with sidewalks only. See Section 5.4 for additional policies on bicycle and pedestrian corridors.

- 11.4.1 Create a safe, linked and convenient system of pedestrian sidewalks and pathways in the Town. Emphasis shall be placed on sidewalk development in the Gibsons Landing and Upper Gibsons core areas, where provision of sidewalks shall be a requirement for any new development. Sidewalks and pathways may be permeable and shall be accessible.
- 11.4.2 Support construction of sidewalks in existing developed areas if they fit the character of the area and are supported and paid for by neighbourhood residents through local improvements programs.
- 11.4.3 Ensure that utility companies properly shelter and landscape their respective sub-stations and/or plants and do not block or visually intrude public walkways.
- 11.4.4 Improve pedestrian movement along Gibsons Way by ensuring there is a sidewalk on both sides of the highway in the Upper Gibsons Area.



Disclaimer:
This information has been compiled by the Town of Gibsons using data derived from a number of sources with varying levels of accuracy. The Town disclaims all responsibility for the accuracy of this information.

Future extensions are conceptual only and require detailed review to confirm feasibility and actual location(s).

# Map 4 - Future Road Network

File No.: STD0027 Date: April 2012



## 12.0 SERVICING

### Council's Objectives

- o Provide for the replacement of infrastructure assets by the use of reserve funds set aside annually from operating revenues during the life-cycle of the asset.
- o Construct, upgrade or replace public works assets roads, sidewalks, water, sewer and drainage to meet recognized engineering, environmental and safety standards.
- o Maintain public works a) to satisfy public health and safety concerns; b) to a high standard of service; c) on a regularly scheduled basis; and d) in a cost-beneficial manner.

### 12.1 Growth Management and the Provision of Services

Most of the Town's developed areas are serviced by a municipal water and sewer system. Rural, unserviced areas, including Gospel Rock, are not encouraged to utilize on-site servicing, and must connect to a municipal water and sewer system if land owners wish to develop. Over the past several years, the Town of Gibsons has completed a number of sewer, water, and drainage studies providing detailed recommendations for upgrading and new works.

There is a desire from the community to consider alternative development standards rather than conventional methods. Alternative development standards (ADS) can save money for both private and public interests, create less waste, enhance sensitive ecological systems, and improve neighbourhoods. ADS also refers to encouraging alternative modes of transportation, protecting the natural environment, different park standards, and different housing standards. These all relate to Smart Growth and have been considered in other policy chapters. This chapter will focus in on engineering standards and infrastructure servicing.

- 12.1.1 Require the land owner or developer in any development to provide the following minimum level of services:
  - a. connection to the municipal water supply system;
  - b. connection to the municipal sanitary sewage collection and treatment system;
  - c. bicycle paths and trails [as required in Trail and Bicycle Network Master Plan (see Map 3A);
  - d. underground wiring;
  - e. street lighting; and
  - f. road works, if not already existing, to access the site.
- 12.1.2 Encourage the upgrading of existing residential, commercial, and industrial areas of Town to the standard set for new development in 12.1.1 above through Local Improvement Areas and Specified Areas and the local area residents to support the upgrading.
- 12.1.3 Ensure that any services extended are at the expense of the developer.
- 12.1.4 Allow property owners to develop outside of currently serviced areas shown on Maps 5 and 6 provided they bear all costs and install services to the standards specified in the Subdivision Servicing Bylaw.
- 12.1.5 Consider updating the Subdivision Servicing Bylaw to incorporate alternative development standards for water consumption, sanitary sewage and stormwater collection and, disposal and drainage.

### 12.2 Water Distribution

The Town receives most of its potable drinking water from a system of wells situated off of School Road in Lower Gibsons. The wells have tapped into an underground aquifer that has limited excess water. The estimated extent of well capture zones is shown on Map 5B. There are a number of maintenance issues with respect to the water pressure zones. An upgraded pumpstation is required to maintain capacity to zones 1 and 2 whereas the zone 3 reservoir needs additional capacity to meet fire flow requirements. In addition, a new main is required along Payne Road from Gibsons Way to Reed Road to facilitate the separation of the Town and SCRD water supply system.

The Town augments its well supply with water from the Sunshine Coast Regional District (SCRD). The SCRD has recently completed a new water treatment plans in 2004 that has significantly improved their water quality. It will not address the water separation and chlorine residual issues with the Town's groundwater interconnection. The Town is embarking on developing a long range water supply strategy, based on the premise that zones 1 and 2 land will be serviced by ground water services and zone 3 will be provided by the SCRD's water system.

### Council's Policies

- 12.2.1 Plan, over the long term, to ultimately supply clean potable water to 10,000 people.
- 12.2.2 Pursue a program of water distribution system upgrading and expansion as shown on the Water System Map (Map 5).
- 12.2.3 Conduct a study on the Town's underground aquifer with respect to the quality and quantity of potable water including a quantification of long term water supply to assist in determining future growth potential of the Town.
- 12.2.4 Continue the relationship with the Sunshine Coast Regional District with respect to the water supply to meet current and future needs.
- 12.2.5 a. Carry out the water separation plan to physically separate the SCRD surface water and Gibsons ground water supplies and provide additional controls to manage the system interaction; and
  - b. Construct a new reservoir, pressure reducing stations, water main and pump station to improve fire flow capacity.
- 12.2.6 Implement and maintain proactive water distribution operation and maintenance programs to optimize water quality and minimize risk of contamination.
- 12.2.7 Ensure that the Town's water supply and distribution system meets or exceeds the Drinking Water Protection Act requirements.
- 12.2.8 Preserve an unchlorinated ground water supply system in zones 1 and 2.
- 12.2.9 Continuously work to reduce water consumption rates through education, water restrictions, requirement for low flush toilets, water conservation incentives, metering, etc.

### 12.3 Sanitary Sewer

The Town owns and operates a wastewater treatment plant on Stewart Road, adjacent to Charman Creek, which discharges the treated effluent to Shoal Channel near Gospel Rock. The plant received a major upgrade in 1992 in order to prolong the sewage treatment capacity. Today, the sewage treatment plant is at its design capacity and has grant funding approved from the provincial and federal governments to assist in the costs of a new sewage treatment plant. Construction of a new plant should be completed by the end of 2005, which will have a interim design capacity of 7,200 residents with potential to upgrade to 10,000 residents. This meets our 2.5% growth projected to 2025.

#### Council's Policies

- 12.3.1 Pursue a program of sewage collection system upgrades and expansions as set out in the Sewer System Map (Map 6).
- 12.3.2 Upgrade the existing sewage treatment plant to have an ultimate design capacity to accommodate 10,000 people.
- 12.3.4 Upgrade the treated effluent sewage outfall and the outfall facilities to meet ultimate design capacity.
- 12.3.5 Require existing development to connect to the Town's Sanitary Sewer System when the sewer services are extended adjacent to the existing development, unless a previous agreement exists.
- 12.3.6 Consider exempting a single-family dwelling from the requirement to connect to the Town's sanitary sewer system where the parcel size is 1.6 ha (4 acres) in size or greater.
- 12.3.7 Minimize the quantity of infiltration and inflow to the sanitary collection system in order to decrease the volume of clean water conveyed to the wastewater treatment plant.

# 12.4 Stormwater Drainage

#### Smart Plan Goal:

Respect the natural drainage of the overall area by ensuring that future development does not negatively alter existing drainage patterns.

The Town of Gibsons and its environs is situated within three local watersheds: Chaster Creek, Charman Creek and Gibsons Creek. Over the past 100 years, the drainage pattern of Gibsons has been significantly altered. Land development and roads tend to create a large amount of impervious surfaces, and the drainage of stormwater tends to rely on a system of drains, pipes, ditches and retention ponds to move stormwater to the ocean. In some cases, water is redirected into other watersheds and this has affected stream hydrology, morphology, water quality and stream ecology.

Conventional approaches to stormwater management have focused on the removal of stormwater as quickly as possible from roadways. Alternative drainage systems, on the other hand, tend to focus on infiltration and treat stormwater as part of the hydrologic cycle, thereby enhancing aquatic and terrestrial habitats. Natural processes are incorporated into larger urban open-space structures as best management practices are chosen for their specific function and

suitability to a particular site.

Currently, Charman Creek has significant capacity related problems that will be affected by any development in Upper Gibsons, including the former ALR lands. This has been identified in the Charman Creek Master Drainage Plan (1998). Improvements such as detention ponds have not yet been made as the Town is awaiting the completion of hydraulic modelling.

#### **Council Policies**

- 12.4.1 Update the 1992 Drainage Study, and prepare an overall drainage master plan that considers alternative methods to stormwater drainage. The update should incorporate Smart Growth principles.
- 12.4.2 Require that developers provide an overall drainage study and drainage plan of the area proposed for development which maximizes on-site drainage control, limits impervious areas, manages a wide range of runoff events and reduces runoff through infiltration.
- 12.4.3 Consider the implementation of a Drainage Control Bylaw to set maximum percentages or areas that can be covered by impermeable material and to make requirements for ongoing drainage management.

#### 12.5 Other Utilities

The developed portions of the Town have electrical, gas, cable and telephone service. In many areas, these utility corridors are above ground. There is a strong desire by the Town and local residents to implement a program to remove all overhead wiring and relocate them underground.

#### Council's Policies

- 12.5.1 Remove all overhead wiring and relocate underground. For new development, this should be done at the time of subdivision or building permit. With respect to older areas of the community, or areas that are being redeveloped, a program should be implemented to systematically place utility wiring, where feasible, underground.
- 12.5.2 To avoid multiple utility corridors that comprise the environment, utilities should share corridors, wherever possible.

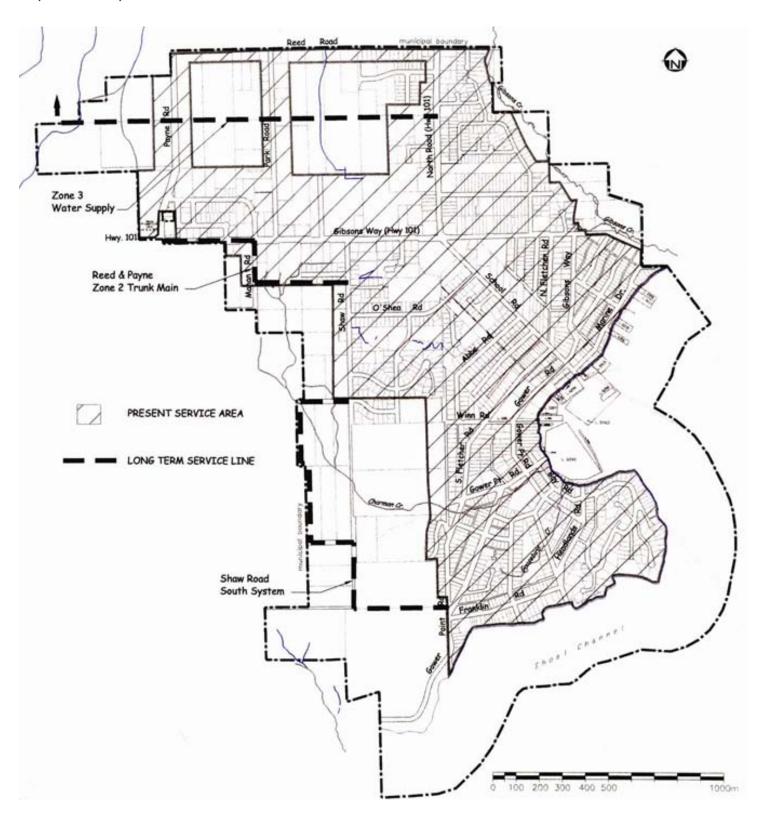
# 12.6 Solid Waste Management

The Town manages the collection of solid waste, including regular household garbage. Household garbage is collected by an independent contractor and taken to a landfill site within the SCRD. The SCRD is responsible for regional solid waste management and planning. The SCRD manages the regional recycling program and contracts with independent contractors who deliver the service. There is no regular collection of recycled materials in Gibsons; however, the Town does carry out an annual "Spring Clean-up" which involves a recycling component. Curbside collection is available through private contractors. The Town provides a curbside Fall and Spring yard waste pick up service and has developed a green yard waste transfer station at the Henry Road public works yard.

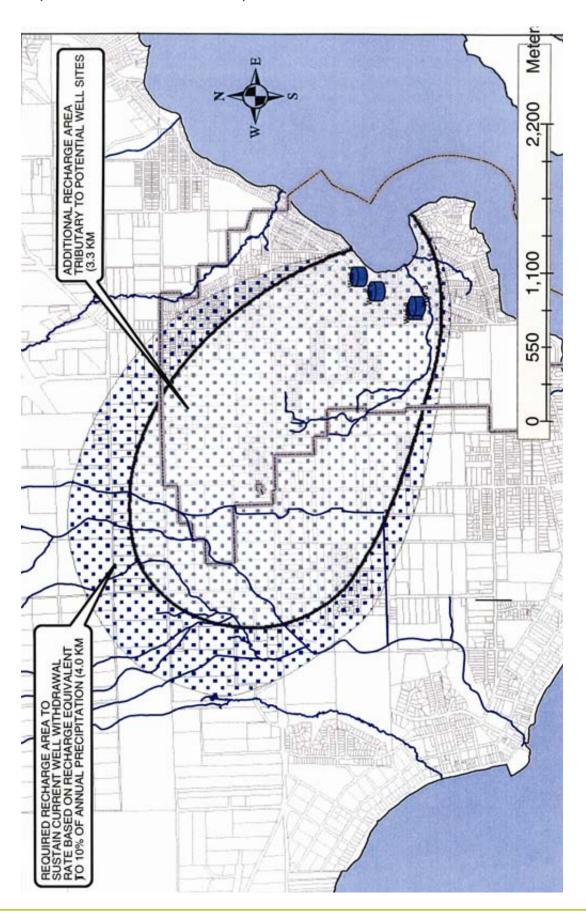
#### Council's Policies

- 12.6.1 Actively support the Sunshine Coast Regional District's Solid Waste Management Plan and their initiatives to reduce, reuse, and recycle.
- 12.6.2 Work towards waste diversion programs and actively support initiatives of the SCRD for the reduction of solid waste including initiatives of other levels of governments or organizations.
- 12.6.3 Support and encourage businesses and institutions to set-up and maintain a waste diversion program.
- 12.6.4 Consider a Town-sponsored program for curbside recycling subject to a cost/benefit analysis which may involve a "fee for service".
- 12.6.5 Consider implementing an educational program to encourage both Town residents and businesses to reduce production of solid waste in conjunction with the SCRD Solid Waste Management Plan.
- 12.6.6 Encourage the provision of central recycling areas for residents of multi-family housing developments.
- 12.6.7 Consider, as part of the SCRD's Solid Waste Management Plan, allowing staffed, properly screened and well designed, recycling depots within residential neighbourhood.

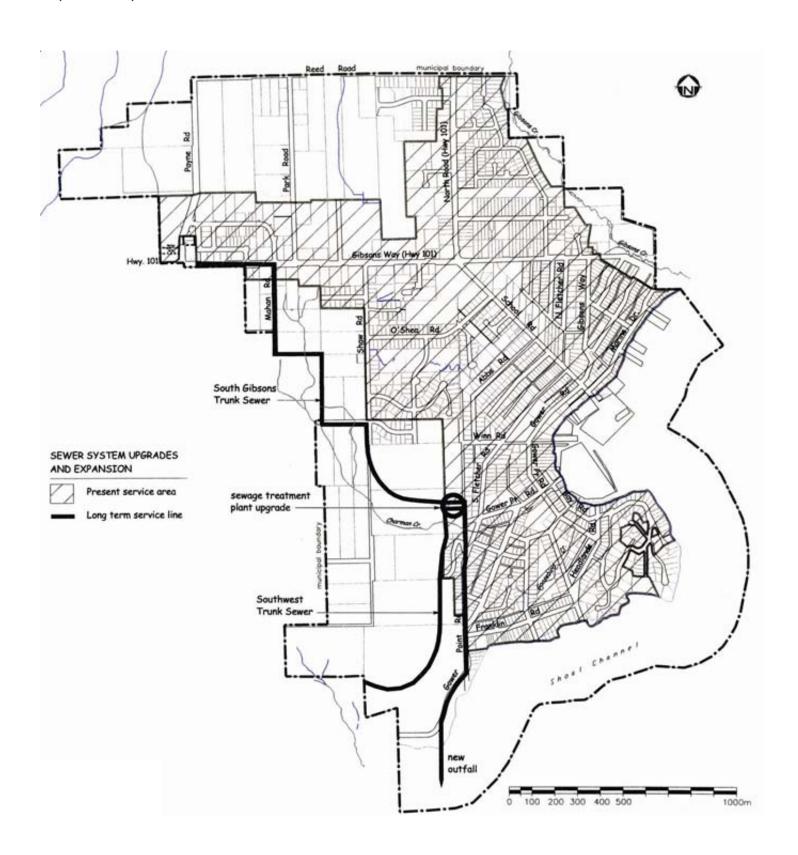
Map 5 - Water System



Map 5B Estimated Extent of Well capture Zones



Map 6 Sewer System



# PART C IMPLEMENTATION

# 13.0 BYLAWS AND REGULATIONS

The OCP is a broad statement of goals, directions and policies guiding change as it occurs in the Town. It will be implemented in a number of ways, through a hierarchy of legal and policy tools, and by the commitment of Town Council and the residents of Gibsons to ensure that the vision remains alive and relevant. Town Council will use the OCP as a general reference in its annual budgetary process, its decisions about programs and capital expenditures, and its support for proposed land developments.

As a broad statement of direction, the OCP provides the statutory authority for the more detailed and site specific zoning and subdivision bylaws, development permit system, and other policy instruments designed to ensure that development is appropriate and meets public expectations. These tools provide guidance on siting, building massing, permitted land uses and activities, the character and form of development, and a myriad of other details, which ensure the highest quality of development.

Listed below is a series of implementation strategies that should be adhered to in order to achieve the goals, objectives and policies stated in this Plan.

# Implementation Strategies

- 13.1 Consider innovative changes to zoning when improvements to the liveability of the community are demonstrated. This may include zoning amendments, which entail prezoning lands to a higher density, introducing policies that anticipate rezonings under certain conditions, reviewing rezonings on a case by case basis, or a mix of these approaches as determined by Council. Zones that permit residential land uses should be updated to promote affordable housing suitable for families and seniors.
- 13.2 Regularly monitor the implementation of the Official Community Plan. In order to gauge the success of the Official Community Plan, a regular evaluation process shall be undertaken. This may include establishing a list of measurable indicators, for consideration by Council, upon which OCP goals and objectives will be reviewed. Based on the level of success in meeting OCP goals and objectives, Council may wish to amend policies, consider new implementation strategies and, when needed, conduct a comprehensive OCP review.
- 13.3 Conduct a review of all Town bylaws to determine consistency with the Official Community Plan.

In addition to regulations and bylaws to implement the OCP, a number of policies offer specific recommendations for future actions. Several of these relate to added work that may need to be undertaken by the Town, other governments or private/public agencies to further define the scope of actions pertaining to specific geographic areas of the Town. Other recommendations reinforce the need for further study to provide background and data to allow for more targeted implementation actions.

Listed below is an overview of the supplemental actions necessary to achieve implementation of the OCP. Once completed, these studies, plans and bylaws will form the basis for policies that Council will consider for future inclusion in the OCP. This list should be envisaged as an overview of the more significant implementation actions, and is not intended as an exhaustive reference to all actions required.

- Update Zoning Bylaw: Complete a thorough review of the current Zoning Bylaw to ensure that policy actions and recommendations can be achieved.
- o Review Subdivision and Development Bylaw to incorporate alternative road and drainage design standards.
- Study of Environmentally Sensitive Areas, including streamside protection guidelines: Conduct a thorough field survey and mapping exercise to determine which lands and shorelines are environmentally sensitive and should be protected through a Development Permit.
- o Tree Protection Bylaw: Following an appropriate public involvement program and a review of practices and costs experienced in other municipalities, consider the establishment of a Tree Protection Bylaw for publicly-held land.
- Development Cost Charge for Parkland: Consider preparing a Development Cost Charge Bylaw for the acquisition and development of land.

- o Multi-purpose Recreation Facility Feasibility Study: Determine the feasibility of creating a multi-purpose recreation facility, either as a municipal facility, or as a joint facility with regional or private enterprise support.
- Heritage Management Plan: Support completion of a Heritage Strategy and Heritage Management Plan to provide more detailed guidance for heritage protection.
- o Quality of Life Indicators: Consider the preparation of data and indicators on the quality of life of its residents.
- o Develop a water supply long range plan to identify water quantity and quality objectives and to address the need for water conservation which may include such items as: provision for water incentives, metering, low flush toilets, etc.
- o Infill Housing: Consider a program of promoting infill housing in suitable areas to be phased-in over a long-term period. Public involvement and support will be necessary for such a program to be successful.
- o Neighbourhood Plans: In consultation with landowners and developers, review the preparation of neighbourhood plans for the former ALR lands in Upper Gibsons and for Gospel Rock.
- o Upper Gibsons Revitalization Concept Plan: Continue to support development of a detailed Revitalization Concept Plan for the Upper Gibsons area and incorporate these concepts into the Upper Gibsons Development Permit Area.
- o Economic Development Plan: Consider an economic development plan for the Town in order to offer additional guidance with respect to economic and development initiatives.
- o Official Community Plan Review: An Official Community Plan review committee may be established to regularly review and monitor the Plan to ensure relevancy, and to reflect changing times. In addition, regular liaison with the residents of Gibsons is essential during an Official Community Plan review. Additional public consultation shall be required during a community plan review, augmenting Public Hearing requirements outlined in the Local Government Act.
- o Advisory Design Panel: Consider the formation of an Advisory Design Panel to review the design aspects of all new development in Town.

# 14.0 DEVELOPMENT PERMITS

# 14.1 Development Permit Areas

The Town of Gibsons has established Development Permit guidelines to regulate development in the areas designated as Development Permit Areas (DPA) on Map Schedules B, C and D. The areas where Development Permits are required are:

Development	Name
Permit Area	
No. 1	Geotechnical Hazard Areas
No. 2	Environmentally Sensitive Areas
No. 3	Upper Gibsons Commercial Area
No. 4	Multi-family Land Uses
No. 5	Gibsons Landing – commercial and multi-family residential development
No. 6	Light Industrial / Service Commercial
Part D – See Figure C1	
No. 7	Upper Gibsons Live/Work
No. 8	Upper Gibsons Small Lot Cluster Residential
No. 9	Upper Gibsons Cottage Residential
No. 10	Gospel Rock Small Lot
No. 11	Gospel Rock Cluster Housing

Some properties are located in two or more Development Permit Areas (i.e. a multi-family site may also be in a Geotechnical Hazard Area); in such cases, the guidelines for both Development Permit Areas shall apply.

# Conditions Where Development Permits Are Not Required

Development Permits are not required within the specified Development Permit Areas under the following conditions:

- o for minor internal alteration which does not affect the outer appearance of the building;
- o for minor upgrading or repair of the external covering of existing buildings (i.e. roofing or siding) with similar materials.

An Environmental Development Permit is not required for the following activities:

- 1) Ecological restoration and enhancement projects or other projects undertaken or approved by the Town of Gibsons, Ministry of Environment, or Fisheries and Oceans Canada.
- 2) Construction, maintenance or operation of municipal works and services undertaken or authorized by the Town of Gibsons.
- 3) Emergency responses or works required by the Provincial Emergency Program or the Town of Gibsons to prevent or control forest fire, flooding, or erosion emergencies.
- 4) Slope stabilization work that is prescribed by a Professional Engineer or Geoscientist, or other appropriate professional approved by the Town of Gibsons, where no long-term damage to natural features is predicted as a result of the work and approved by the Fisheries and Oceans Canada.
- 5) Removal of non-native invasive vegetation or the planting of native vegetation.

- 6) Hazardous tree cutting or modifications approved by Town of Gibsons staff when the tree is not a wildlife tree, not within a Streamside Protection and Enhancement Area and any removed trees are replaced. An independent arborist report may be required.
- 7) Maintenance of existing gardens, landscaping, and agriculture.
- 8) The placement of impermanent structures such as benches, tables, and ornaments.
- 9) Paths (which are less than 1 m in width) and fencing which do not result in the removal of native vegetation or disruption of wildlife and are not within 10 metres of a stream.

# 14.2 Geotechnical Hazard Development Permit Area No. 1

#### **Purpose**

The Geotechnical Hazard Development Permit Area is designated under Section 919.1(1)(b) of the Local Government Act for protection of development from hazardous conditions.

#### Area

The Geotechnical Hazard Development Permit Area is shown as Development Permit Area No. 1 on Schedule B. The Development Permit Area guidelines apply to all parcels either partially or entirely within the Development Permit Area No. 1. The hazard area designations should not be interpreted as prohibitions on all development activity, but as an identification of areas where professional geotechnical assessment and specific development standards are required.

# Justification

The objective of this Development Permit Area is to protect development from geotechnical hazards. Research and analysis supporting the identification of the Geotechnical Hazard Development Permit Area as a hazardous area was conducted by Thurber Engineering Ltd. in the report entitled: Town of Gibsons Official Community Plan Reconnaissance Study of Geotechnical Hazards and Biophysical Environment (1991).

Geotechnical hazards identified in that report include soil landsliding and wave erosion along beachfront slopes, potential soil landslides and adverse stream erosion and deposition on steep ravine slopes and potential rock fall.

# Significant Hazard Areas

The most significant geotechnical hazards are those with relatively high estimated probabilities of occurrence (i.e. 1:25 to about 1:100 annually). These are indicated on Schedule B and include the significant soil landslide and related stream-flood and debris-flood hazards in the ravines of Charman and Gibson Creeks. The flood hazards extend through the community along Charman Creek below Stewart Road. There is also a relatively high probability of soil landslides along the Shoal Channel shoreline south of Franklin Road and adjacent Gower Point Road. These areas have the highest risks of property damage, injury or worse due to natural phenomena or incautious building practice. For these reasons, the Town will require geotechnical or other engineering approval for works in these high-risk areas.

#### Moderate Hazard Areas

Other areas have relatively lower estimated probabilities of hazard occurrence (i.e. 1:100 to about 1:500 annually). These include the recommended setback areas from crests of ravine slopes, shoreline landslides areas and the ocean shore (measured from the "natural boundary" or mean high tide line). The low medium hazard areas are indicated on Schedule B. Steep bedrock with potential rockfall and conditional construction hazards, several headwater stream areas and areas of existing development on shoreline slopes are included as areas of geotechnical caution which also require engineering review and approval before development.

#### **Guidelines**

Development permits issues in these areas for hazardous conditions shall be in accordance with the following guidelines:

#### **Geotechnical Report Requirements**

Development or alteration of land within the hazard areas defined on Schedule B shall require a geotechnical report, prepared by a professional engineer with experience in geotechnical engineering and preferably also with experience in hydraulic engineering.

The geotechnical report will determine the conditions and requirements of the Development Permit, and shall certify that the land may be used safely for the use intended.

The report shall include field definition of land located in the following areas:

- o 15 horizontal metres back from the crest of ravine slopes; of Gibson Creek, Charman Creek, and the two small ravines at the south-western boundary of the Town as shown on Schedule B.
- o The area within 1.5 metres elevation of 15 metres horizontal distance of headwater streams shown on Schedule B.
- o 15 horizontal metres back from the ocean shoreline.
- o Both 15 horizontal metres and 30 horizontal metres back from the crest of the shoreline slope.
- o The existing lower Charman Creek stream channel and possible over flow areas, as well as the area within 15 horizontal metres of the stream channel and overflow areas.
- o Any other water courses, tributaries, steep slopes and ravines with the Development Permit Areas.
- o The crest of the slope should be determined with conservative field criteria such as the perceived location of ground fractures, and other suspect features which may indicate an imminent landslip.
- The signature and seal of a B.C. registered professional engineer with experience in geotechnical engineering.

#### **Geotechnical Report Recommendations**

The items required in the report should be in sufficient detail and clarity to permit their inclusion in a Section 215 Covenant as required by the Land Title Act. At a minimum, the report should include the following types of analysis and information:

- o A topographic and geomorphic description of the site and a statement as to which type of natural hazards may affect it.
- o A review of previous geotechnical studies affecting the site and/or engineering work in the vicinity.
- o An assessment of the nature, extent, frequency (probability) and potential effect of the hazard including a description of the scientific methodology used to define these parameters. The methodology should be described in sufficient detail to facilitate a professional review of the study of necessary.
- Proposal mitigative works (if any, including construction and maintenance programs for such works) and/or actions designed to prevent hazardous occurrences. Certificates of approval are required on all constructed works for which the engineer is responsible.
- o An assessment of the effect of the mitigative work in terms of its ability to reduce the potential impact of the hazard.
- o Any other recommendations which the engineer believes appropriate.

#### Location of Dwellings or Structures

Unless recommended otherwise by a professional engineer with experience in geotechnical engineering, no dwellings, structures or other use of land shall be permitted within the areas defined on Schedule B as high geotechnical hazard area.

#### Ocean Shoreline

The ocean shoreline is a very active geomorphic boundary, which may be affected by storm wave erosion and deposition, tidal change and possible future sea-level change. The Thurber Report generally recommends a precautionary, minimum 15m horizontal setback from the mean high tide line along all marine shorelines.

There is active soil landsliding in the Franklin Road and adjacent Gower Point Road areas. Developed ground above the bedrock enclosed pocket beaches east of Gower Point Road is retreating northward. The local silty-sandy glaciomarine soil is highly susceptible to erosion, and groundwater seepage and rain may especially promote the movement of fill area.

The following recommendations apply:

- o Horizontal setbacks of 30 m apply from the top of the shoreline slopes southward on bedrock-controlled shoreline Franklin Road and Gower Point as outlined on Schedule B.
- o Precautionary setbacks of 15m apply to other shoreline areas. At the north end of the Town, the limit of the Development Permit Area is 15 m back from the tope of the local slope. At the south end of the Town, it follows west (up-slope) rights-of-way. In beach areas at the south end of Town, the relatively high risk zone extends 15 m horizontally from the crest of the shoreline slope. This setback also applies to the developed shoreline north to Seaview Road, where slopes have generally unknown geotechnical conditions directly above the shoreline.

#### Charman Creek and Gibsons Creek Ravines

These ravines have steep to very steep forested slopes eroded in glacial drift, which are susceptible to shallow soil landslides and erosion. The slopes average about 320 from the horizontal, but much steeper slopes along narrow upper stream channels indicate comparatively recent erosion. There are many areas of groundwater seepage, with widespread soil creep and slow downslope movement of the shallow soil mantle. This mantle is very susceptible to rapid landslide movement. Small slides may run out on the valley flows and form debris dams, resulting in water flows, mud flows or debris flood with severe downstream effects. The highly developed course of lower Charman Creek is particularly susceptible to damaging water or debris floods. The ravine slopes are very sensitive to incautious soil disturbance including excavation and filling.

The following guidelines apply:

- o The ravines identified on Schedule B are to be preserved as underdeveloped, natural landscape corridors to preserve and enhance the natural water courses.
- o In these ravines; a 15 m hazard area setback applies from the top of the ravine slope. No site clearing or development activity shall occur within this setback unless otherwise recommended by a geotechnical engineer.
- Vegetation should be retained and, if deemed necessary through geotechnical study or recommendations of the Ministry of Land, Water and Air Protection, replanted in order to control erosion and to protect banks and the streamside habitats.
- o No dumping of debris, including soil or vegetation is permitted.

#### Headwater Stream

Hazard zones along headwater streams are outlined on Schedule B, and are subject to a 15 m horizontal setback distance and a 1.5 m minimum elevation requirement.

#### Flooding and Lower Stream Hazards

Schedule B outlines the estimated extent of the high hazard (1:100 flood) and moderate hazard (1:150) areas subject to possible effects of ravine landslides, water floods and possible debris flows. The highest hazard area along lower Charman Creek is defined by the existing stream channel and consideration of possible overflow areas. The area is heavily developed and the natural boundary of the creek is mostly obscured. There are several dwellings in this high risk area. Note also that the definition of the high hazard zones along lower Charman Creek assumes blockage of the undersized culverts. As culvert improvements occur, risks may be alleviated or reduced.

The following guidelines apply:

- o Any development in this area must meet the requirements of the Ministry of Land, Water and Air Protection with respect to building elevations, setbacks and stream bank vegetation.
- o To manage and mitigate the possible impacts of upland development on downstream areas, Development Permit area designations have been applied to upper stream courses to minimize discharge which may increase the erosive power of Gibsons and Charman Creeks. Developments in these areas are to provide a storm water management plan as condition of subdivision or other development.
- o A 15m horizontal setback applies from the crest of the ravine slopes of Gibsons and Charman Creeks.

#### **Gospel Rock Area**

Gospel Rock is an area with steep to very steep east-facing and shoreline rock and includes many areas of loose rock as well as steep slopes. These factors are geotechnical concerns which may be overcome with careful subdivision design and construction.

The following guidelines apply to the Gospel Rock area identified on Schedule B:

- o A detailed geotechnical assessment and development management plan shall be prepared as part of any future development application to determine rock slope design, scaling of loose rock, road and driveway design to reduce potential hazards.
- The generalized limits of the recommended Development Permit Area are the top of slopes greater than 2H:1V, a variable rockfall "shadow zone: at the base of these slopes and areas of loose rocks as indicated on Schedule B. These areas merge with a shoreline setback along the ocean below Gower Point Road.

# 14.3 Environmentally Sensitive Development Permit Area No. 2

#### **Purpose**

The Environmentally Sensitive Development Permit Areas are designated under Section 919.1 (1)(a) of the Local Government Act for protection of the natural environment.

#### Area

The Environmentally Sensitive Development Permit Areas are shown as Development Permit Area No. 2 on Schedule C.

#### **Justification**

The objective of this Development Permit Area designation is to protect environmentally sensitive areas from development.

Four general areas of environmental concern are identified:

- Environmentally sensitive lands in the Gospel Rock area, including forested lands, wildlife corridors and wetlands.
- o Sites of possible petroleum contamination on the shoreline
- o Environmentally sensitive lands related to riparian areas by creeks
- o Environmentally sensitive marine shore areas

Research and analysis supporting the identification environmentally sensitive and contaminated areas was initially conducted by Thurber Engineering Ltd. in a report entitled "Town of Gibsons Official Community Plan Reconnaissance Study of Geotechnical Hazards and Biophysical Environment" (1991). Further supporting information with regard to the sensitivity the Gospel Rock Area is presented in a report entitled "Gospel Rock Neighbourhood Plan Area: Ecosystem and Wildlife Area Use Classification, prepared by Paul van Poppelen (2009). Analysis supporting the designation of water bodies and creeks was conducted in a background report entitled "Town of Gibsons Watercourse Classification," prepared by Whitehead Environmental Consultants Ltd. (2005).

# Douglas Fir - Arbutus Coastal Dryland Forest

This environmentally sensitive area is designated due to the unique forest type and habitat values in the area. The natural coastal dryland forest found in steep, exposed areas with poor, rocky soils comprises only 0.3 percent of the land area of British Columbia.

As detailed in the Thurber report, less than five percent of mature dryland forest remains undisturbed on the Sunshine Coast due to extreme development pressure. It is therefore recommended that the steeply sloped dryland forest in the Gospel Rock area be protected, and that residential development be confined to the mixed coniferous-deciduous forest landward of the approximate limit of the Douglas Fir-Arbutus Costal Dryland Forest that has been logged. This Development Permit Area aims to protect the remaining forest.

#### **Habitat Areas**

The Thurber report notes that the Gospel Rock area contains an eagle nesting area, may provide alligator lizard habitat (although further studies are required to establish local abundance and distribution), and has specific scenic and cultural values. These habitats should be protected with any future development and connectivity should be maintained between these habitat areas and the Charman Creek ravine to the north.

#### **Possible Contaminated Sites**

Three sites along the Gibsons Harbour shorelines are identified on Schedule C where the Thurber Report or the Ministry of Land, Water and Air Protection have noted evidence of possible petroleum hydrocarbon contamination of soil and the marine environment. One site is the Shell Canada storage facility where there is potential of soil and groundwater contamination and/or leaching into the foreshore. The second site is the Hyak Marine Services (Esso) facility where there is apparent petroleum product discharge into the marine tidal zone. The third site is the marine repair facility upland of water lot L.6030, where there is evidence of metal contamination. These areas of environmental concern require detailed review prior to any future re-development.

# Riparian Areas along Creeks

The riparian area associated with creeks is designated as environmentally sensitive as the area which provides essential habitat and corridors for fish, birds, and other wildlife. The riparian areas of creeks also serve a role in natural drainage, storage and purification. Their existence in a relatively undisturbed state holds the balance of maintaining a healthy, sustainable waterway. Disturbance of the riparian area may jeopardize a very delicate ecosystem and, in addition, may lead to potential land erosion, slope instability, and flood risk. This Development Permit Area aims to restrict activities within the riparian area for the purposes of habitat protection and the maintaining the long term health of the waterway. This Development Permit Area is supported by information contained in the Sunshine Coast Habitat Atlas and within the Town of Gibsons Watercourse Classification.

#### Marine Shore Areas

The marine shore area is considered an integral component of the marine environment and essential fish habitat. The marine shore area includes the nearshore subtidal seabed, intertidal foreshore, and adjacent backshore areas (as well as upland vegetation on the backshore). These areas are designated as Development Permit Areas for the protection of significant fish habitat. Disturbance and alteration of foreshore, nearshore areas or adjacent backshore upland (including removal of upland vegetation) can result in significant adverse environmental effects. To protect these areas and the associated fish habitat from the potential adverse effects of development, an appropriate setback/leave strip along the shore is supported. The primary objective of the setback/leave strip is the conservation and protection of the environmental values of the marine environment, including adjacent backshore upland vegetation. Accordingly, setback/leave strips should be left undisturbed and naturally vegetated and should be maintained in perpetuity.

#### **Guidelines**

Development Permits issued in the Environmentally Sensitive area shall be in accordance with the following guidelines:

#### **Professional Qualifications**

Professional environmental studies submitted in support of applications for Development Permits shall be prepared by a Qualified Environmental Professional. A Qualified Environmental Professional is an applied scientist or technologist, acting alone or together with another qualified environmental professional. He or she must be registered and in good standing in British Columbia with an appropriate professional organization, acting under that association's code of ethics and subject to disciplinary action by that association. The applicable professional may be a professional Biologist, Agrologist, Forester, Geoscientist, Engineer, or Technologist. To be able to certify that they are qualified to conduct the assessment methodology, the individual's area of expertise must be recognized as one that is acceptable for the purpose of providing all or part of an assessment report in respect of the particular development proposal that is being assessed. The individual is considered a Qualified Environmental Professional only for that portion of the assessment that is within their area of expertise.

# Gospel Rock Area - Arbutus Coastal Dryland Forest

No alteration of the sensitive area will be permitted unless demonstrated through professional environmental studies that it would not adversely affect the natural environment. Any residential development should be confined to the mixed coniferous-deciduous forest landward of the approximate limit of the Douglas Forest as indicated generally on Schedule C and the areas designated as cluster in the Gospel Rock Neighbourhood Concept Design. Development should be directed away from wetland areas and areas necessary to maintain wildlife connectivity between habitat areas.

No buildings, structures, or uses permitted on the land shall be sited within the following areas:

- o areas with grades steeper than 25 percent in order to protect soil cover and drainage patterns except in the waterfront areas designated as cluster in the Gospel Rock Neighbourhood Concept Design, where buildings may be permitted following a detailed site design process and a report by a Qualified Environmental Professional outlining means of minimizing disturbance to natural vegetation.
- o the area within 100 m of the eagle nest shown on Schedule C
- o the natural clearings shown on Schedule C

Any other development within the identified Gospel Rock sensitive areas shall be designed to:

- a. Avoid the removal/modification of native vegetation;
- b. Avoid the introduction of non-native invasive vegetation;
- c. Avoid impacts to the protected root zones of trees;
- d. Avoid disturbance to wildlife and habitat;
- e. Minimize the use of fill;
- f. Minimize soil disturbance;
- g. Minimize blasting;
- h. Minimize changes in hydrology; and
- i. Avoid run-off of sediments and construction-related contaminants.

The following measures may be required to prevent and mitigate any damage to the environmentally-sensitive area:

- a. Temporary or permanent fencing;
- b. Environmental monitoring during construction;
- c. Demarcation of wildlife corridors, wildlife trees, and significant trees;
- d. Restricting development activities during sensitive life-cycle times; and

e. Registration of a natural state covenant.

#### **Possible Contaminated Sites**

Prior to any new development, re-development or use of the land and foreshore areas indicated on Schedule C, detailed environmental assessments are required to specifically identify the extent and type of potential contamination and recommend actions for site remediation. The assessments are to be done by a Qualified Environmental Professional with experience in site contamination, and meet the requirements of the Ministry of Lands, Water and Air Protection, Fisheries and Oceans Canada and any other relevant agencies.

#### **Riparian Areas**

In response to the Province's Riparian Area Regulations, the Town of Gibsons has established an Environmentally Sensitive Development Permit Area for the "Riparian Assessment Areas" as defined in the Riparian Area Regulations. A 30 m setback area from the top of the creek banks has been identified on Schedule C.

No land clearing or development is permitted in a Riparian Assessment Area unless a Qualified Environmental Professional carries out an assessment and certifies in the assessment report for that proposal that he or she is qualified to carry out the assessment, that the assessment methods have been followed, and provides in the their professional opinion that the criteria listed in the Riparian Area Regulations have been fulfilled.

In addition, the following measures may be required to prevent and mitigate any damage to the riparian area:

- a. Temporary or permanent fencing;
- b. Environmental monitoring during construction;
- c. Restricting development activities during sensitive life-cycle times; and
- d. Registration of a natural state covenant.

Re-vegetation and restoration may be required as mitigation or compensation regardless of when the damage or degradation occurred.

#### Marine Shore Areas

Prior to any new development, redevelopment or use of the marine area within the Marine Shore Area as indicated in Schedule C, an environmental assessment is required. The environmental assessment shall be conducted by a Qualified Environmental Professional with experience in assessing environmental impacts on fish habitat with knowledge of Fisheries and Oceans guidelines for the protection of the marine environments. The environmental assessment shall identify:

- o the extent and type of potential impact on fish habitat
- o the circumstances and conditions under which development permits may be issued to manage development that potentially has a significant impact on the natural marine shore and fish habitat
- o the measures of remediation required to minimize the impacts

In addition, the following measures may be required to prevent and mitigate any damage to the riparian area:

- a. Temporary or permanent fencing;
- b. Environmental monitoring during construction;
- c. Restricting development activities during sensitive life-cycle times; and
- d. Registration of a natural state covenant.

Re-vegetation and restoration may be required as mitigation or compensation regardless of when the damage or degradation occurred.

# 14.4 Upper Gibsons Development Permit Area No. 3

# **Purpose**

The Upper Gibsons Development Permit is designated under Section 919.1 (1)(f) of the Local Government Act for the form and character of commercial development.

#### Area

The Upper Gibsons Development Permit Area is shown as Development Permit Area No. 3 on Schedule D. These guidelines shall also apply to any currently zoned commercial sites on Gibsons Way or North Road.

# **Justification**

A significant amount of commercial development in Gibsons is located along the highway and is highly visible to motorists. The general appearance of this commercial development is important for the economic well-being of Gibsons. Council has designated this Development Permit Area in order to ensure a high quality of development along the highway.

The main objective of the Development Permit Area designation is to improve the commercial area and enhance the appearance of private developments for the benefit of visitors, residents and businesses.

#### **Guidelines**

Development permits issues in this area shall be in accordance with the following guidelines:

# General Form and Character of Development

Development permits issued in this area shall be in accordance with the following quidelines:

- Innovative buildings design and configuration which introduces variety and detail to the buildings.
- o Siting of buildings near the front of a parcel.
- o Parking at the rear or side of buildings rather than the front.
- o Significant landscaping adjacent to public roadways and integrated within the site, use of both architectural and landscape features to provide a "gateway" or distinct entrance.

# Building Form, Scale and Massing

To encourage varied building forms and to avoid creation of a commercial strip image, the following guidelines respecting massing and scale shall apply:

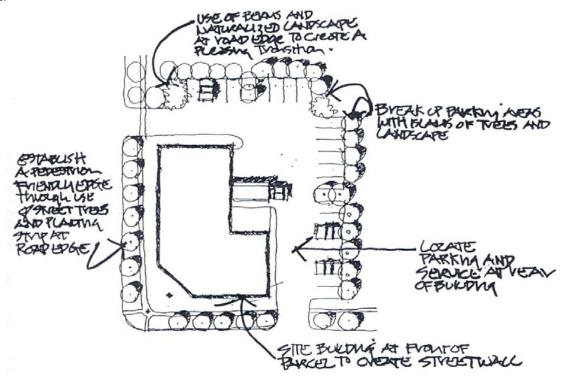
- o Varied building forms will be encouraged. Long, single story buildings should incorporate elements that add vertical definition such as sloped roofs or façade treatments such as facia or awnings.
- o Large areas of blank wall are not acceptable on a face with a pedestrian or residential area orientation.
- o Wall lines should be off-set and modulated along the building elevation to create visual interest along the building section.
- o Pitching and stepping down of rooflines should be incorporated to vary height in the roofscapes of buildings.
- o On sloped sites, building forms should step gradually down to follow the slope of the site.
- o Where commercial development incorporates a residential or multi-family use on upper floors, a graded transition in the building height is desired to ensure adjacent properties are not faced with a massive wall.
- o General modification of standardized corporate franchise building designs or features may be required in the event of conflict with these design guidelines.

 Until a specific theme is developed under the provincial Downtown Revitalization Program for the Upper Gibsons area, each new development shall be evaluated on its own design merits in terms of building design form, materials, texture and colors.

# Siting of Building and Structures

To reduce the impact of the large parking areas associated with commercial areas, and to reduce the apparent width of Gibsons Way, the following guidelines respecting siting of buildings shall apply:

- o Buildings should be sited with the entrance to the buildings facing Gibsons Way, North Road or the access road to encourage creation of an interest and access for pedestrians.
- o Parking should occur at the rear or side of buildings rather than the front and shall be buffered from view by significant land-scape islands.
- o The buildings or structures should be used to reinforce the definition of street corners.
- o Natural landscape which includes significant tree stands should be retained and incorporated into site development plans when feasible.



Siting of building / structures and parking and use of buffering with space and landscaping

#### Residential/Commercial Buffers

Transitions between commercial areas and adjacent residential properties. Effective transitions can be achieved by:

- o Fencing, combined with a broad area of landscape plantings (tree, shrubs).
- o Dense shrubbery or hedges capable of impeding travel through to adjacent properties, and which is not visually transparent to adjacent properties.
- o The transition zone complement the development, but not be less than 2.0 metres in width.
- o Careful positioning of lighting. Parking and access points to minimize impacts on adjacent properties.

#### Pedestrian Environment

The transition from Gibsons Way edge to the building or parking edge should attempt to reduce the apparent width of Gibsons Way, encourage a "pedestrian friendly" environment and create a "green area" to reduce impacts of traffic.

This can be achieved by application of the following guidelines:

- o Buildings and structures should be pedestrian- oriented at the ground level. This can be achieved by:
- o An emphasis on the fenestration (the arrangement and positioning of windows);
- o Inclusion of weather protection along outside pedestrian routes through the use of:
- o Awnings
- o Arcades
- o Canopies
- o Weather protection must be integral with the building form, and the materials and colors used should be consistent with the façade.
- o Developing pedestrian routes, including sidewalks on each side of Gibsons Way. The pedestrian routes should be well separated from the highway edge by a planting strip of not less than 1.5 metres, wherever possible.
- o A minimum 3.0 metre planted edge between the sidewalk and the building or parking edge should be established.
- o Providing pedestrian amenities within the 3.0 metre transition zone between the sidewalk and the building or parking edge such as benches, shelters, alcoves, seating, walls, trellises and arbors and pathways to the adjacent businesses.

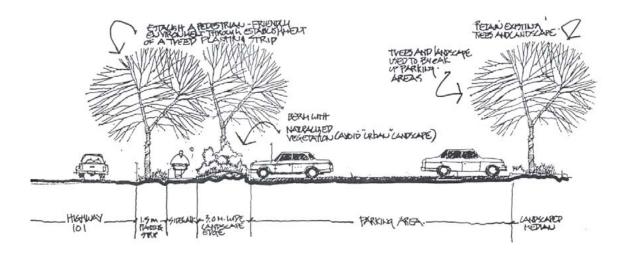
# Landscaping

Landscaping of commercial and multi- family areas in Upper Gibsons is a key to improving the image and character of this area. For all developments:

- o A detailed professional landscaping plan shall be provided.
- o Emphasis on major road edges is required through a combination of "street trees" and lower plantings.
- o Native plant materials are preferred, and shall include a mix of coniferous and deciduous species.
- o The retention of natural tree stands is encouraged.

#### **Parking**

- o Parking should not visually dominate a development. Parking areas should be integrated into such as incorporating significant landscaping, coordination of outdoor elements and linking of buildings with parking by distinctively paved walkways.
- o Parking lots should be paved and shall include landscaped areas within the lot. No more than 10 parking stalls in a row should be allowed without a landscaping break.
- o Low, dense screening of street fronting stalls is required. This can be achieved through the use of landscape materials, or, a combination of landscape features such as arbors or trellises which run the length of the parking area.
- o Support service facilities and structures such as loading bays, refuse containers, storage areas, and utility services should be located and screened with walls, fencing, hedging, planting, other screening materials or a combination of these materials to minimize visibility from public areas.



#### Use of landscaping around parking area

# Signage

Signage in the Upper Gibsons Development Permit Area shall comply with the following guidelines:

- o All signs should be architecturally coordinated with the overall design of buildings and landscaping.
- o Multi-unit buildings are encouraged to have an attractive, simple single entry sign rather than multi-tenant signs which create a clutter appearance.
- o Street oriented signs should be restricted to a maximum height of 3.0 metres above the grade.
- o Signage should display evidence of craftsmanship and commitment, and may require modification of corporate or franchise design elements.
- o Detailed signage requirements shall be developed as part of the Upper Gibsons Revitalization Strategy Plan and may modify these general guidelines in the future.
- o Changeable illuminated copy signs shall not be permitted on properties in Development Permit Area No. 3, except where such signage is clearly a requirement of the business activity (i.e. movie theatres, gas stations).

# 14.5 Multi-Family Development Permit Area No. 4

# **Purpose**

The Multi-Family Development Permit Areas are designated under Section 919.1(1)(f) of the Local Government Act to guide the form and character of multi-family development.

#### Area

The Multi-Family Development Permit Area is shown as Development Permit Area No. 4 on Schedule D. NOTE: These guidelines do not apply to single family homes.

# **Justification**

The objective of the Multi-Family Development Permit Area designation is to ensure that a high standard of design, landscaping and building form is implemented with any multi-family developments. The guidelines are aimed at ensuring that new development are

appropriate to their surroundings, and are compatible with surrounding uses or neighbourhood character. The Development Permit guidelines are also intended to ensure that the multi-family developments themselves are attractive, secure, and pleasing areas for future residents.

#### **Guidelines**

A survey of the design elements existing in Lower Gibsons becomes a starting point from which design guidelines can be developed. The following guidelines provide detailed recommendations on the form and character desired for future multi-family developments.

# Character: General Design Guidelines

Multi-family developments should reflect the following design elements which are key components which contributing to the form and character of development which "creates" the Gibsons character:

- o Street edges which are characterized by low, neighbourly fences, combined with extensive landscape materials at the private edge.
- o A strong street orientation of the residences with well-defined and welcoming entries at the street edge.
- o Common building elements which include:
- o Pitched roof lines
- o Dormers
- o Porches
- o Wood finishes (shingles, board and batten, wood siding)
- o Simple exterior detailing
- o Low building profiles, simple residences, set well back from the roadway and nestled into the landscape



#### Individual entries, characteristic roof lines

Changes in the building facades and the massing of buildings add a human scale and richness to the development. Long, unbroken building lines and rooflines are to be avoided. New developments should create visual interest by providing variations in building height and massing as follows:

- o The inclusion of elements such as bay windows, dormers, porches and cross gables help mitigate the visual impact of larger buildings.
- o Steeper roof pitches and stepping down of roof lines to vary the height and rooflines of buildings is recommended.

 Offsetting and modulating wall lines along the building elevation to allow smaller building sections to stand out. The overall building footprints on the site shall be modulated to avoid monotony and repetition and to avoid wall-like massing.

#### **Building Scale and Massing**

To retain the impression of single-family neighbourhoods and reduce impacts of building massing, the following guidelines shall apply:

- o Larger developments should be separated into smaller groups or clusters of units to promote a sense of belonging and neighbourliness and to maintain a residential scale and image.
- o Townhomes should be designed in clusters of 25 units or less based on a single entry point.
- o Apartments developments based on a single entry should have 60 units or less.
- o Very large single buildings more than 70m in length, or townhomes with more than six joined units are to be avoided.



#### Respect for the existing streetscape

#### **Building Wall Design**

The general character of the development should reflect aspects of Gibsons' semi-rural coastal setting by using natural and typical local wall materials including wood siding, wood shingles, stucco, stone and brick.

The number of materials used on the building exterior must achieve a balance between achieving visual interest and complexity without overpowering the surroundings.

# **Roof Design**

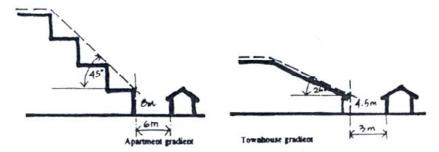
The design of the roof of multiple-family dwellings has a major influence on the overall character of the development. The "roofscape" is a key design feature, which is of critical importance to Gibsons because of its potential to be viewed from above (as a result of the varied topography of Gibsons). The following guidelines shall apply:

- o The roof form should have a sloped appearance- large areas of flat roof will not be acceptable in low or medium density multiple family residential developments;
- The roof form should be modulated and broken up with dormers, skylights and other architectural features. A continuous unbroken ridge line should be avoided;
- o Roof lines should include steep pitches typical of west coast building forms;
- o Secondary hipped or gabled roofs are preferable to flat roofs or mansard roofs, or segments of pitched roofs applied to the building's edge.

# **Integration with Surrounding Areas**

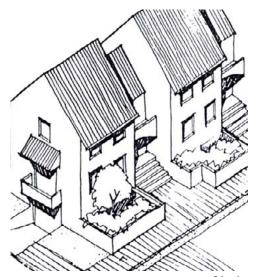
New developments will be reviewed to assess the impact on adjacent uses and to integrate the development within the neighbourhood and local context. The following guidelines shall apply:

- o New developments should reflect the character of existing housing and the prevailing residential "streetscape". This may require recessing of parking areas, creation of gabled entries or porches, and highlighting individual front door entries to be similar to those on neighbouring lots. For larger developments, this may require separating the units into smaller components.
- o New residential buildings should not in general, be larger than the surrounding buildings. A graded transition in the building height is desired to ensure adjacent properties are not confronted with a "wall". Additional setbacks may also be required to achieve this transition.
- o Roof lines should be stepped down of building ends to reduce the apparent mass of the building.
- o The end units of new developments at road edges should not be more than one to two stories in height to establish a single-family residential appearance in multi-family residences.



#### Gradual Change in Height

- o Developments on sloped properties should be terraced with the natural slope of the land, and should avoid the use of high [over 1.2 m (4 feet)] retaining walls.
- o New developments should be oriented to best utilize natural light, southern exposure, and views of adjacent natural features, and to minimize loss of views and shadows cast on adjacent uses. This may require increased setbacks or terracing of buildings.



Front entrances create a sense of belonging to the neighbourhood

# Sense of Place; Development Identity

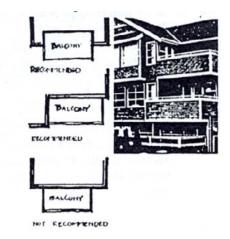
With the increased density of multi-family housing; creating a sense of "place", of neighbourhood, and of privacy within the development are importance design features. New multi-family developments will be reviewed for features which help create these qualities. The following guidelines apply to new developments:

- o The design of developments into smaller areas where residents share smaller parking areas, pathways and other common areas creates a sense of belonging within a larger development.
- o Multi-family homes should provide a street orientation through features such as major entry points to provide a sense of belonging to the neighbourhood. Street level landscaping creates privacy within the development. Parking areas should be recessed to allow the pedestrian entry to predominate.
- o Townhome projects on major arterials may have private rear yards facing the street, but should create a streetscape of entrances within the private roadway or courtyard area.

# Amenity Space; Private Areas

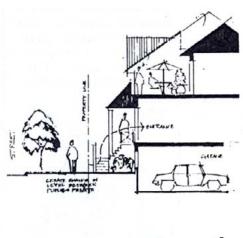
The location and size of outdoor spaces such as patios and balconies have considerable effect on the sense of privacy. New residential buildings should be designed to provide privacy for each resident; through windows, private outdoor spaces or balconies, or through changes in grade or elevation as follows:

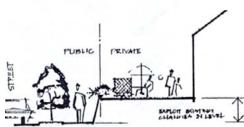
- o An outdoor living space of minimum 5 m depth for townhouses and minimum size of 37 m2 (400 square feet) is recommended.
- o Apartments should have a minimum 3 m depth terrace or balcony, sufficiently large to create a usable outdoor "room". Balconies should be at least half enclosed in order to give the occupant privacy, security and weather protection.



Balconies to create outdoor rooms

- o Dwelling units to be "clustered" in smaller groups to create more resident interaction and neighbourly surveillance.
- o Changes in grade can provide for private areas between street edges and the development units.





#### Changes in grade separate the public and private areas

Projects should provide meaningful and appropriate amenity space areas, and may consist of indoor or outdoor recreation areas, landscape features such as benches, gardens or plazas, children's play areas, social meeting rooms, or specific recreations features such as tennis, swimming or walking trails. These common areas contribute significantly to the quality of life in multi-family developments, where private yard areas are not available for these activities.

#### Landscaping

Landscaping and open space areas are an essential part of the livability of multi-family developments, and their integration into neighbourhoods. The following guidelines refer to the landscaping surrounding the development, and the common areas within the development:

- o Trees should be planted and maintained by the property owners along street frontages of new multi-family developments to create a mature treed "boulevard" type of streetscape. (Spacing will vary by species used, however, a rule of thumb for tree spacing is a minimum of 8.0 metres.) This may be supplemented by other lower ornamental plantings.
- o Native or hardy landscape species are preferred over exotic species; a mix of coniferous and deciduous species is recommended to provide effective landscaping though the seasons. Willows, bamboo and other invasive species are not recommended.
- o Trees, or a combination of landscape and architectural features shall be used to define the gateway or entrance to a development. Landscaped entrances however, should be low-level for better security at entrances.
- o Clusters of trees, ponds, or other landscape features should be used within the development to create a meaningful common area. Central areas or courtyards should be usable and inviting to residents as a meeting place, rather than random plantings of grass and shrubs. Seating areas and appropriate lighting should be provided within these common areas. Landscaping should also create a sense of enclosure and privacy for these spaces.
- Large areas of uncharacteristic materials such as bark mulch, gravel, river rock and ground cover are to be avoided, and should be combined with a variety of plant materials.
- Wherever possible, natural vegetation should be retained or enhanced as a feature of the development. This is particularly important where natural features such as streams or steep slopes are a component of the development.

- All public areas should be landscaped, including entrance driveways, areas surrounding parking spaces or structures.
- o Additional landscaping depth and use of noise barriers such as earth berms should be used where a development abuts a major roadway.
- o All Development Permit applications must provide a professional landscape plan.

#### **Fencing**

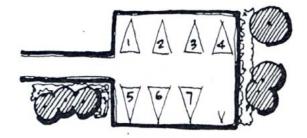
Fencing design for multi-family areas should provide privacy to the individual units or developments without creating solid walls along the street edge. The following guidelines respecting fencing and landscape shall apply:

- o Fences along streets should not provide a continuous wall or high barrier to the street, but should be lower profile and broken at intervals to provide pedestrian linkage and views to the street.
- o Any fencing located along a street edge should not exceed a length greater than 20 metres without a substantive break or job. Fencing should not exceed a height of 1.2 metres of located within 3.0 metres of the street edge.
- o Fencing along the street edge should be supplemented with landscape plantings.

# Parking Areas and Vehicle Access

Parking and driveways entrances should be designed to minimize impact on surrounding uses, the pedestrian character of the street and the internal appearance of the development, according to the following guidelines:

- o Walkways and surface parking areas should be well lit and located in an area which is observable by residents.
- o Entrances to parking garages should be located in areas visible from habitable room windows and well lit.
- Where possible, parking areas should be located in underground structures. Small groups of parking spaces throughout the development, located near to entry doors are preferable to large, central parking areas.



Small, screened parking

- o Developments should be designed to prevent parking areas, carports or garages from dominating the internal open space areas; parking should be recessed from the main building edges.
- o Parking areas should be landscaped and screened, but sufficiently visible to provide security to residents and vehicles.
- o Distinct, visible visitor parking areas should be provided near the entry to the development.
- o Site design should provide for emergency vehicles, moving vans and service vehicles, and should locate this use to minimize noise impacts on residents and adjacent uses.

# Signage and Lighting

Signage and lighting shall meet the following guidelines:

- o The size, siting and style of signage shall not be obtrusive or present a cluttered image.
- o Entry signs shall be placed at or below eye level and shall be integrated with landscaping or other features.

o Site lighting of all developments should be designed so that it avoids "light-spill" upon adjoining low density residential lands.

# Central Recycling Areas

New developments are encouraged to provide their residents with Central Recycling Areas suitable for the disposal of a variety of materials.

# 14.6 Gibsons Landing Development Permit Area No. 5

Development Permit Area Guidelines for the Harbour Area are within Section 5.2 Gibsons Harbour Area Plan (Part E of this document).

# 14.7 Light Industrial / Service Commercial Development Permit Area No. 6

# **Purpose**

The Light Industrial/Service Commercial Development Permit Area is designated under Section 919(1)(f) Local Government Act for the form and character of commercial, industrial or multi-family residential development.

#### Area

The main objective is to encourage a high standard of site design, building form and landscaping to improve the appearance of this important business district. The Light Industrial/Service Commercial Development Permit Area is shown as Development Permit Area No. 6 on Schedule D.

# **Justification**

Thisarea is the only existing industrial area in Gibsons. Council would like to improve the image of the area, its relationship to surrounding uses, and work toward creating a more attractive service / industrial area.

Although some uses have provided limited landscaping, interesting building design and indoor storage areas, others have not, resulting in a visually uncoordinated image. The image of the area also needs to be improved because it is visible from Payne Road, adjacent commercial uses on Gibsons Way and the future Medium Density Multiple Family Area on Park Road. Improved landscaping and design is needed to better integrate with adjacent uses.

#### **Guidelines**

Development Permits issued in this area should be in accordance with the guidelines set out below:

#### **Building Forms and Character**

The following guidelines respecting building form and character shall apply:

- o Monolithic structures and long expanses of straight walls facing the roadway should be avoided.
- o Walls facing roadways should incorporate elements that add variety and vertical definition such as windows, entrances, and sloped roofs.
- o Larger buildings should be designed in a way that creates the impression of smaller blocks.
- o Buildings should generally be finished in painted metal, wood, or textured concrete rather than just leaving untreated flat concrete blocks as the final building finish.
- o Buildings and structures should be permanent in nature, and should not appear to be temporary structures or trailers.

#### Screening and Landscaping

The following guidelines respecting screening and landscaping shall apply:

- o The site should be provided with a landscaped strip composed of grass, earth berms, shrubs, trees, other vegetation, or a combination of these in the following areas:
- o along the property edge next to roadways;
- o between parking areas, roadways and buildings;
- o between different parking areas; and
- o between buildings and parking areas.
- o The landscaping should consist of a mix of coniferous and deciduous vegetation, with low plantings and taller tree species at intervals. Large areas of bark mulch, gravel or other similar materials are not suitable.
- o Support service facilities and structures such as loading bays, refuse containers and storage areas, should be located and screened with walls, fencing, hedging, planting, other screening materials or a combination of these materials to minimize visibility from public areas.
- o Outdoor and rooftop service installations, including mechanical, electrical and other service equipment, should be enclosed in a screening structure that relates to the building design.

#### Signs

The following guidelines respecting signs shall apply:

- o All signs should be architecturally coordinated with the overall design of buildings and landscaping. Multi-unit buildings should have unit signs of compatible size, arrangement and character.
- o Fascia type signs (on building surfaces) are encouraged.
- o Changeable copy signs are not supported, except where clearly required due to the nature of the business activity.

#### **Transitions**

The following guidelines respecting transitions shall apply:

- o Transitions between the Light Industrial/Service Commercial area and adjacent residential properties should ensure privacy and avoid the impacts of noise, glare and shadows.
- o Commercial buildings should be sited to afford maximum privacy to adjacent residential and rural properties.
- o Effective transitions should be provided by a combination of the following methods:
- o Fencing, combined with dense naturalized shrubbery or hedges;
- o Landscaped earth berms;
- o Dense shrubbery or hedges capable of impeding sound travel through to adjacent properties; and
- o Trees that can grow to sufficient height to screen the commercial use from a 3 storey multiple family dwelling.

#### **Parking**

The following guidelines respecting parking shall apply:

- Parking areas in excess of 10 spaces should be broken into smaller groups, divided by landscaping.
- o Access to parking areas should be landscaped and sited, wherever possible on secondary roads.

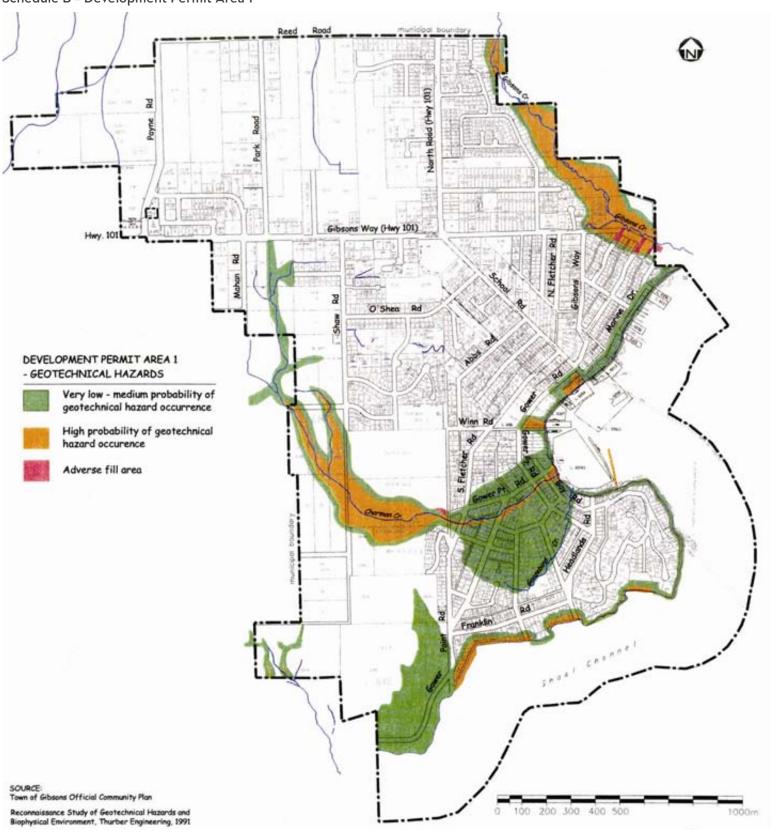
# 14.8 Temporary Use Permits

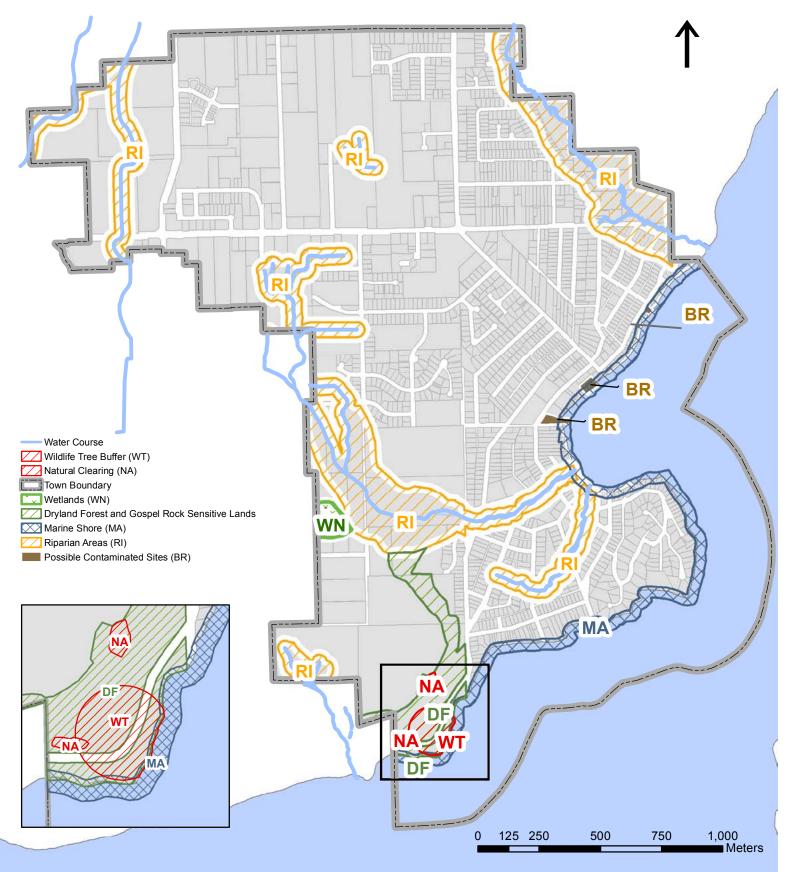
The Town of Gibsons will consider the issuance of a Temporary Use Permit in accordance with the provisions of Section 921 of the Local Government Act. All applications seeking approval of a Temporary Use Permit will obtain a supporting resolution of Council. Each approved permit will contain specific guidelines and/or conditions of the use of the land and a termination date of the permit. As a condition of issuing the permit, Council may require applicants or owners to post a security bond.

An existing permit can be renewed by application once, up to an additional three years for a total of six years. Renewal is again subject to a second supporting resolution from Council.

All areas within the Town of Gibsons boundaries are designated Temporary Use Permit Areas.

Schedule B - Development Permit Area 1



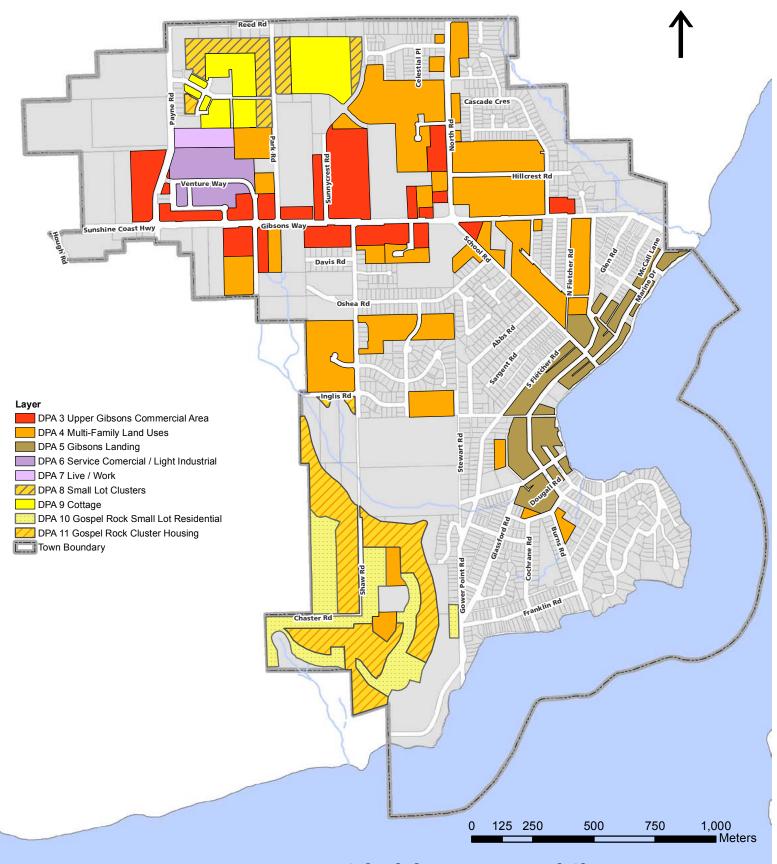


Disclaimer:
This information has been compiled by the Town of
Gibsons using data derived from a number of sources with varying levels of
accuracy. The Town disclaims all responsibility for the accuracy of this information.

Note: This map forms part of and is integral to the Official Community Plan. See Section 14 of the OCP for full Development Permit Area Guidelines.

Schedule C - Environmentally Sensitive Development Permit Areas (DPA No. 2)

File No.: STD0029 Date: July 2012



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Note: This map forms part of and is integral to the Official Community Plan. See Section 14 of the OCP and Parts D, E, and F for full Development Permit Area Guidelines.

# Schedule D - Form and Character **Development Permit Areas**

File No.: STD0019 Date: October 2012



# PART D UPPER GIBSONS NEIGHBOURHOOD PLAN

# 1.0 INTRODUCTION

The Town of Gibsons engaged Urban Systems Ltd. to develop an engineering servicing plan and implementation strategy to support the land use plan and objectives set out in A Framework Plan for the Upper Gibsons Neighbourhood (hereafter referenced as the Framework Plan). The Framework Plan was prepared by The UBC Small Towns Initiative in collaboration with the Planning Committee, Town Staff and Council, property owners, and community members. The Framework Plan, submitted in June 2005, provides background information on the plan area, identifies housing, open space, transportation, stormwater, and pedestrian circulation objectives, and proposes a land use concept plan for the Upper Gibsons Neighbourhood Plan Area. The boundaries of the Plan Area in the context of the Town are shown in Figure 1.1 – Location Plan.

As mentioned in the Town's Official Community Plan (OCP), a neighbourhood concept plan must be completed prior to any development within the Upper Gibsons Neighbourhood Plan Area. The neighbourhood plan must be consistent with the objectives and polices of the Town's OCP, and should contain details on land use types, servicing (water, sewer, stormwater), and road layout. The intent is to amend the OCP to include the Upper Gibsons Neighbourhood Plan once it is completed.

As part of the development of the Upper Gibsons Neighbourhood Plan, Urban Systems was asked to develop strategic engineering strategies for the following:

- o stormwater management
- o low impact development techniques (a.k.a. Best Management Practices)
- o utilities (gas, hydro, and telecommunications)
- o roads and transportation
- o sanitary and water services

While the primary purpose of the task was to develop an engineering servicing plan, and not to revise the land use plan, minor modifications to the land use plan were necessary in light of the engineering analysis. All modifications to the land use plan were made in consultation with Town Staff and Council to ensure that the final plan presented in this document remains true to the Framework Plan's objectives and principles.

In addition to the engineering servicing components, this document also includes a section on phasing and implementation to assist with the Upper Gibsons Neighbourhood area developing in a logical and workable manner. A set of "development guidelines" has also been included to provide the Town, developers, and the community with general guidelines for the construction of municipal and private systems, and for the overall form and character of development.

As this engineering and servicing plan is based directly on objectives outlined in the Framework Plan, relevant information from the Framework Plan has been incorporated into this document for ease of reference and completeness. Sections 2 to 7 have been extracted directly from the Framework Plan to provide a more complete historic perspective of this study. As well, objectives with respect to servicing has been extracted from the Framework Plan and restated directly into the beginning of relevant sections of this report. The information extracted from the Framework Plan have been identified in italics and enclosed with a text box. All applicable policies and pertinent technical discussion contained in the Framework Plan have also been incorporated (though not copied directly) into this document's discussion and/or development guidelines. The reader may wish to refer to the original Framework Plan document directly for further information.

# 1.1 Planning Process

In March 2004, the Town of Gibsons issued a Request for Proposals to complete the Upper Gibsons Neighbourhood Plan in accordance with the Town's Official Community Plan and additional direction specific to the Plan Area. The Neighbourhood Plan Area is approximately 46 hectares (114 acres) in-fill site located between the northern border of the Town and the Upper Gibsons commercial area. The majority of land in the Neighbourhood Plan Area was removed from the Agricultural Land Reserve in September 2002. It is currently held in large rural lots within a 5 to 10 minute walk of the Upper Gibsons commercial area.

The primary objective of the Upper Gibsons Neighbourhood Plan is to ensure a sustainable neighbourhood plan is developed in conjunction with the Town and its residents prior to any subdivision or development of the subject lands. A sustainable neighbourhood is described by the Town of Gibsons OCP as a neighbourhood that has been planned and developed in such a way that the fiscal, social and environmental activities that take place within it are capable of being sustained far into the future. An important Secondary Objective is that the plan devised for the neighbourhood fit the existing form and character of the Town and surrounding environment.

The Town of Gibsons hired the UBC Small Town Initiatives consulting group on May 18, 2004 to complete the Upper Gibsons Neighbourhood Plan. The UBC Small Town Initiative is an applied research group within the Centre for Landscape Research of the University of British Columbia. Small Town Initiatives strives to create design schemes that enhance the existing form and character of a community while facilitating appropriate and sustainable economic development. This is based on the observation that many small towns in BC are being threatened by conventional forms of development, in particular, development that commits them to robust and expensive infrastructures calling for wide streets, curbs, gutters and storm sewers; in other words, forms of development that are often not in character with the community and which the community can not afford in the long run.

The consultants completed research and background work over the summer of 2004 and on September 17, 2004, Council appointed the Upper Gibsons Neighbourhood Plan Select Committee. The Select Committee was comprised of representatives of various interest groups in the Town including: Seniors; the Business Community; Neighbourhood Associations; Youth; property owners from the Plan Area; School District; Members of Council; and Town Staff.

In late September early October of 2004 Small Town Initiatives held a week-long intensive public process. During this week the consulting team rented a house and lived in the community and held three Select Committee meetings and three open houses. As the week progressed, the consultants developed a number of concepts for the Plan Area and at an Open House held Saturday October 2nd, 2004. Small Town Initiatives presented the preferred option for the Plan Area.

In November the Small Town Initiative submitted the first draft of the Plan but Town Staff had grave concerns with the lack of analysis and information provided in the Plan. Over the next six months Small Town Initiatives submitted three more drafts of the Plan none of which met the requirements of the original request for proposal. As Small Town Initiative were unable to provide the detailed servicing and implementation details required in the Neighbourhood Plan, they were requested to finalize the preferred concept plan and the Town hired Urban Systems to complete the engineering and servicing detail for the concept plan. Small Town Initiative submitted "A Framework Plan for the Upper Gibsons Neighbourhood" in June 2005.

In April 2005, the Town of Gibsons approached Urban Systems to build on the Framework Plan and develop appropriate engineering servicing and phasing strategies. Urban Systems was formally retained by the Town on May 10, 2005. In order to complete the necessary engineering analysis, further definition to the unit and population yields were required. Using the Land Use Plan and recommended densities in the Framework Plan, Urban Systems recomputed anticipated yields. At the same time, the Town of Gibsons had concern with respect to Large Lot Cluster designation identified in the Framework Plan, and as such, redefined it to Single Lot Residential with a private open space buffer along its boundary with Payne Road and Reed Road. Also, the Town requested the addition of a live/work designation which has been added in the south west corner of the Plan. These changes have been reflected in Figure 8.1 – Land Use Plan, and used throughout the engineering analysis.

Once the land use issues had been reconciled, engineering analysis was initiated. The initial focus was to review background information, collect necessary data, assess opportunities and constraints, and relate these aspects to the goals and objectives of the Framework Plan. A presentation summarizing these elements for Town staff, Council and Committee took place on August 23, 2005.

Transportation and Stormwater Management are by far the most complex of the engineering services for this area, and therefore required further development and consideration. A second meeting with staff, Council and Committee was held on October 3, 2005 to discuss these two specific elements. Urban Systems received feedback with respect to the options supported and requested to be included in the Draft Report. Local representatives from the Ministry of Transportation were actively communicated with through the development of the strategies and attended presentation sessions.

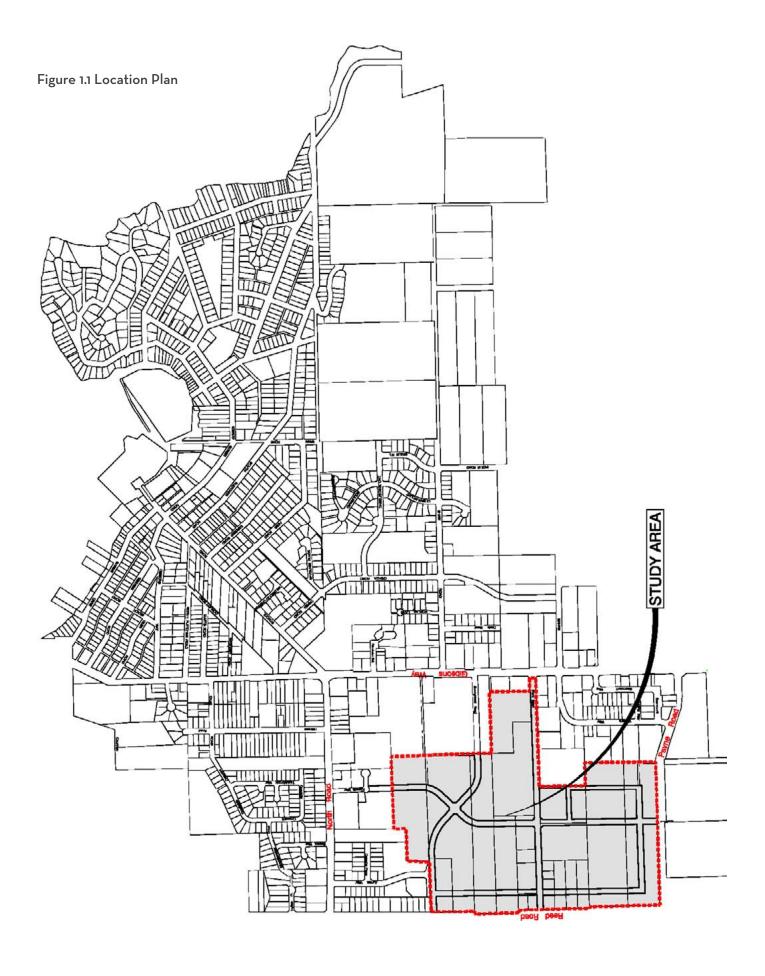
Based on the feedback received in the October 3, 2005 meeting, draft engineering servicing, phasing and implementation were completed, resulting in the submission of the Draft Report, dated November 23, 2005. This Draft document presented a number of servicing options for consideration. A summary presentation of the Draft Report was provided to staff, Council and Committee in a third session held on December 7, 2005.

In January, 2006, the Town provided Urban Systems with itemized commentary on their review of the Draft Report, which was used in the formulation of a Final Draft Report.

On May 9, 2006 the Town of Gibsons held an Open House at the Gibsons Legion to present the Final Draft of the Upper Gibsons Neighbourhood Plan. About 100 people attended the four hour open house and 47 questionnaires were filled out by the public. The majority of the comments and concerns both at the meeting and in the questionnaires revolved around the proposed traffic patterns proposed in the Plan. From that response, the Town chose to amend the Plan by removing specific solutions to the Shaw Road / Sunnycrest Road intersections. This item requires further study.

On August 23, 2006 Council approved further refinements to the land use configuration of the Upper Gibsons Neighbourhood Plan. The changes included: permitting duplex uses within the Single Lot designation; refining the commercial designation to permit high-density residential development in conjunction with commercial uses; providing lane access to lots fronting Payne and Reed Roads; and modifying the land use pattern abutting the Sunnycrest Road/Road C intersection to ensure commercial uses front the road.

This Final Report presents only the preferred servicing options, as accepted by the Town of Gibsons and other stakeholders. Should the reader wish to review all options considered, they should refer to the Draft Report and the original Framework Plan.



## 2.0 UPPER GIBSONS NEIGHBOURHOOD - FRAMEWORK PLAN

In March 2004, the Town of Gibsons issued a Request for Proposals to complete the Upper Gibsons Neighbourhood Plan in accordance with the municipal Official Community Plan and additional direction specific to the Plan Area. The Neighbourhood Plan Area is a 46 hectares (114 acres) in-fill site located between the northern border of the Town and the Upper Gibsons commercial area. The majority of land in the Neighbourhood Plan Area was removed from the Agricultural Land Reserve in September 2002. It is currently held in large rural lots within a 5- to 10 minute walk of the Upper Gibsons commercial area. The Town of Gibsons is concerned that this Neighbourhood Plan Area is developed in a sustainable manner using the principles of smart growth.

The primary objective of the Upper Gibsons Neighbourhood Plan is to formulate a neighbourhood plan in conjunction with the Town and its residents prior to any subdivision or development of the subject lands and that, to as great an extent as is possible, this plan should follow sustainable land use concepts. A sustainable neighbourhood is described by the Town of Gibsons OCP as a neighbourhood that has been planned and developed in such a way that the fiscal, social and environmental activities that take place within it are capable of being sustained far into the future. An important secondary objective is that the plan devised for the neighbourhood fit the existing form and character of the Town and surrounding environment.

# 3.0 GOALS AND ELEMENTS OF THE OFFICIAL COMMUNITY PLAN

According to the Town of Gibsons OCP, the municipal goals for the Neighbourhood Plan are as follows:

- o Encourage efficient use, conservation and alternative forms of energy use;
- o Encourage a compact mix of land uses;
- o Minimize auto dependency;
- o Encourage the development of a focal point for community interaction through public spaces and retail stores;
- o Incorporate community garden sites;
- o Provide housing that is accessible to a cross-section of society and adaptable to the changing demographics and lifestyles of the Town;
- o Reduce the Town's costs of accommodating growth;
- o Provide protected natural areas and a variety of connected open spaces; and
- o Ensure the Neighbourhood Plan addresses the form and character of the surrounding community.

The required elements of the Neighbourhood Plan consist of the following issues, again as stated in the Town of Gibsons OCP:

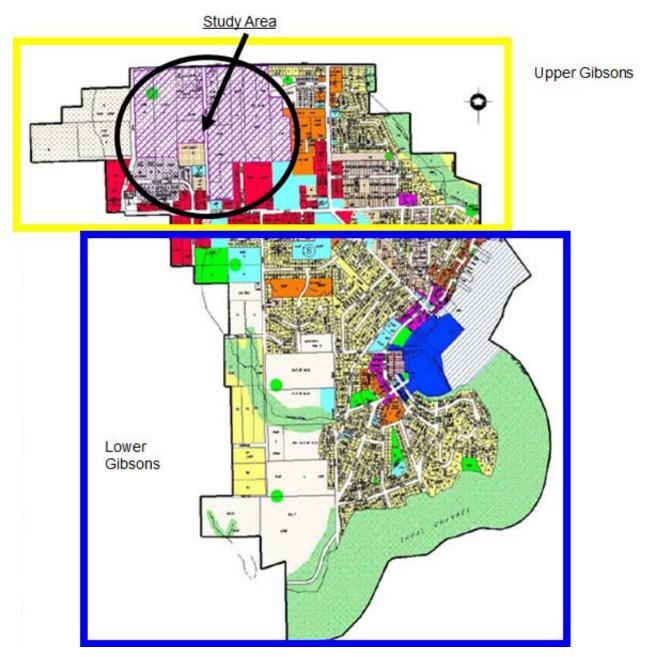
- Current area characteristics, including slope and environmentally sensitive areas (vegetation, wildlife, watershed characteristics);
- o Land use types including housing densities and general patterns of subdivision;
- o Location and possible size of proposed local commercial uses;
- o Transportation links to external areas, internal links including vehicle traffic, bicycles and pedestrian movement as well as transit links;
- o Traffic impact and transportation demand management analysis to assess traffic patterns and trip reduction strategies;
- o Schools, if needed, and suggested sites;
- o Neighbourhood amenities such as community gardens, trails and centers;
- o Sewer, water and drainage services;
- o Gas, power and other utility routing;
- Stormwater drainage analysis to ensure adequate stormwater disposal and maintenance of the natural character of watercourses in the area;
- o Proposed open space characteristics, park requirement, acquisition and development;
- o Phasing of development;
- o Building and landscaping design guidelines; and
- o Process for soliciting general community input during preparation of the Neighbourhood Plan.

### 4.0 PROJECT BACKGROUND

The Town of Gibsons is a thriving community that serves as the southern gateway to the Sunshine Coast. The town is accessed from the south via a forty minute ferry ride from West Vancouver's Horseshoe Bay and covers an area of approximately 4.2 square kilometres. Although the town has a population of approximately 4,000, it provides services to about 10,000 people along the coast. Historically, forestry and fishing formed the town's economic backbone, but more recently, tourism and retirement are emerging as growth sectors with a large percentage of the work force in the service sector. Also, the affordable housing costs and attractive small town lifestyle in Gibsons have led to increases in the number of younger families who have made the choice to live in the community and commute to Vancouver for work.

The Town of Gibsons has two main commercial areas: "Upper Gibsons" which has a number of shopping malls, restaurants and services located along Highway 101, and "Lower Gibsons" (or Gibsons Landing) which, at its heart, is a quaint fishing village that surrounds the bustling fishing wharf and Gibsons Harbour.

Figure 4.1 The Study Area in Upper Gibsons



### 4.1 The Agricultural Land Reserve Issue

Until recently most of the Upper Gibsons Neighbourhood Plan study area was largely in the Agricultural Land Reserve. In 2002 the BC Land Reserve Commission approved an application sponsored by a consortium of land owners to remove the area from the Reserve. The application included a land use plan demonstrating how these lands could be converted into a residential subdivision. While the objective of this plan was not entirely consistent with the community planning objectives, it did set forth some excellent background information on the site as well as a possible development layout. The following excerpts describe the ownership arrangements and land uses involved:

### **BACKGROUND**

In the Town of Gibsons, in an area known as Upper Gibsons, there are twenty parcels of land currently in the Land Reserve that are abutted by urban development. These parcels of land are owned by fifteen separate individuals that have had ownership of the land for up to 50 years. Historically, the properties have never been used for agricultural purposes and, for the most part, are covered with scrub and trees and brush. ... Of special note are the parcels that range in size from 0.268 acres up to 16 acres in area; of the twenty parcels, twelve are under 2 acres in size. It is noted that five of the owners within the study area, with parcel sizes under 2 acres, have chosen not to participate in the exclusion application for various reasons.

### "Description and Use of Properties"

... of the twenty registered parcels, twelve are occupied by single family homes and the balance are vacant and have never been utilized for agricultural purposes. ... the eastern boundary of the subject lands are abutted by a single family residential subdivision, two multiple family developments, a Kiwanis Care Home, and seniors housing. To the south the land uses include a commercial shopping centre (Sunnycrest Mall), recreational lands (Brother Park, Field of Dreams), a high school (Elphinstone Secondary), as well as multiple family and industrial. To the west the land use is rural agricultural with the land being open pasture. To the north the land is within the Regional District and it is predominantly rural single family and not within the Land Reserve.

Therefore, on three sides of the subject lands the uses are all urban and this application represents lands that will not impact neighbouring ALR lands (G. D. Hamilton Associates Consulting Ltd, Town of Gibsons ALR Exclusion Application Part 8 – Proposal and Reasons for Application, April 2001)

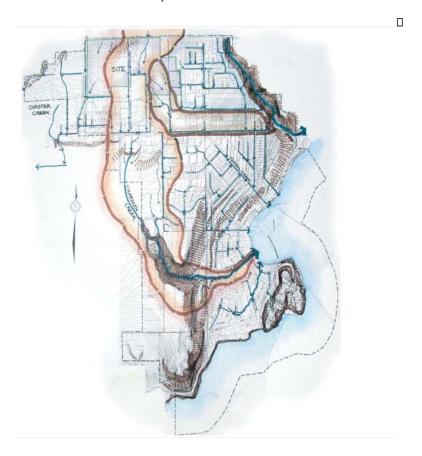
# 5.0 ENVIRONMENTAL CONDITIONS AND EVALUATION

Like most infill sites, this site has been subject to various uses over the years. It has been logged several times though not uniformly over the whole area. Moreover, beyond a few residential parcels and roads, there is not much to distinguish the site landscape. It has no prominent topographic features, streams valleys are conspicuously absent, and the forest cover is uneven in age and size and compositionally unremarkable. The land is fairly flat (less than 5 percent slope) over most of the 114 acres. Only along the northern fringe of the site, where the ground reaches inclines up to 10 percent, is slope a noticeable topographic element. Soils range from sandy/gravelly at the surface to clayey/silty (marine deposits and glacial till) at depths of 0.5 to 1.0 metre or so and, while well suited to forestry, provide limited agricultural potential owing mainly to poor drainage.

### 5.1 Settlement, Landform, and Drainage Context

Settlement began on the lower terrace along the water front, and as the community grew, it advanced upslope onto the upper section of the terrace. Over the past several decades, most development has taken place on the upper terrace. Linkage between the upper and lower sections of Gibsons has become a major and persistent problem for the community. Among the linkage problems is the flow of runoff from Upper Gibsons, across the bluff, to lower Gibsons and the waterfront. Of particular concern is stormwater loading of streams and drainage infrastructure related to development in Upper Gibsons, including the project site and surrounding area (Figure 5.1).

Figure 5.1 Upper and Lower Gibsons are separated by a steep bluff. Drainage from Upper Gibsons is partitioned into three watersheds: Chaster, Charman and Gibsons



### 5.2 Watersheds of Upper Gibsons

A large part of the stormwater run-off in the Town of Gibsons moves within one of three distinct watersheds: Chaster in the west, Charman through the center of the Town, and Gibsons Creek along the eastern boundary. This is important not only from an environmental standpoint, but from a community impact standpoint because these watersheds carry water down the bluff and into the residential lands on the lower terrace.

### 5.3 Charman Watershed and its Drainage Problems

Roughly half of the planning site is in the Charman watershed. This watershed begins on the lower slopes of Elphinstone Mountain and drains onto the relatively flat ground between Reed Road and Gibsons Way. Water moves very slowly across this area, saturating the surface layer of soil over much of the year. Percolation into the subsoil is retarded owing to the dense, clayey nature of the material found at depths of one metre and deeper. Therefore, water tends to form a broad, slow-moving sheet that eventually makes its way through the landscape and into various constructed ditches leading into storm sewers that empty into stream channels which in turn carry it over the bluff and into Lower Gibsons. Added to this water, both in terms of volume and rate of delivery, is the stormwater released from commercial, institutional, residential, and transportation facilities along Gibsons Way and connecting streets (Figure 5.2). According to a study conducted in 1998, Charman Creek at that time was subject to peak flow rates approximately 50 percent higher than pre-development peak flow rates (Urban Systems, 1998)

Figure 5.2

Drainage in the study area. Runoff is routed first into ditches around mid-site. They in turn are linked to storm sewers, which carry runoff to streams.



Thus it appears that Charman Creek is exceeding its capacity as a stable channel and aquatic habitat to conduct the load of run-off delivered to it by storm drains and natural means. The stream is undergoing degradation and any additional loading could have very serious consequences for channel, habitat, and land use conditions downstream. It is for this reason that the municipality has legislated a bylaw directing that all future site development must largely match pre-development stormwater run-off rates.

### **5.4** Implications for Stormwater Management

In light of the lack of effective infiltration opportunities over most of the study area

and the existing limitations of all three watersheds to handle larger and more frequent peak flows, it is vitally important that the development of the Upper Gibsons Neighbourhood include an effective stormwater management plan. The plan must minimize and slow any post-development stormwater flows while creating opportunities to retain and dispose of as much water as possible on the site. This necessitates a land use design scheme that produces and releases less stormwater at slower rates than is the case with conventional development and its curb, gutter, and storm sewer infrastructure. Without adequate stormwater management and given land use build out cited in the OCP. "... future development can be expected to more than double the peak flow rates in Charman Creek from their pre-development levels..." (Urban Systems, 1998).

### **5.5 Other Environmental Considerations**

Consistent with the site's undistinguished landscape character, there are no concerns within the study area with areas of special environmental sensitivity. There is no evidence that the site supports ecosystems that set it apart from other lands on the fringe of Upper Gibsons, nor is there evidence suggesting that the site is part of important regional animal corridors or regionally unique ecosystem. Further, there are no known water wells, unconfined aquifers, significant surface deposits, or vegetation of particular merit. Currently most of the study area is covered in second and third growth woodland comprised mainly of red alder, fir, and maple, which serve as habitat for songbirds, deer, raccoons and other macro fauna typical of the urban fringe.

# 6.0 THE CONCEPT FOR THE UPPER GIBSONS NEIGHBOURHOOD AREA PLAN

In Section 16 of the OCP Appendix to Bylaw 655-09, entitled "Neighbourhood Plan Area", the Town of Gibsons provides a set of guidelines for the Upper Gibsons Neighbourhood Plan. These guidelines call for a plan that clearly departs from the concepts embraced by conventional subdivision development. The direction articulated calls for an alternative approach to residential neighbourhood design loosely described as "smart growth", which in general terms encourages conservation of water, energy, and land, and facilitates design schemes that promote walking and social interactions and allows for a wide cross-section of occupants in terms of age, roles, and occupations. These, broadly speaking, are the goals of the Upper Gibsons Neighbourhood Plan.

### 6.1 Neighbourhood Planning Goals

The planning process leading to the Upper Gibsons Neighbourhood Plan drew direction from these guidelines as well as from a variety of sources including local residents, property owners, and community officials. This input was integrated with small town planning and design concepts to establish a set of goals, which helped guide the planning process. Thirteen goals were articulated as follows:

- o Create a neighbourhood that engenders a sense of place and the qualities of a small community or village;
- o Create significant open space with ready access to local residents;
- o Ensure access to the remainder of Upper Gibsons and its services;
- o Preserve landmarks and recreational opportunities;
- o Enhance biodiversity and create wildlife corridors;
- o Manage watersheds, taking into consideration runoff rates, stormwater flows, local flooding, and water quality;
- o Exercise source control of stormwater utilizing green infrastructure principles wherever possible;
- o Provide for a fire protection system that includes Fire Smart building and landscape design, adequate water supply sources, and fire fighting facilities;
- o Provide space for public educational opportunities through park facilities, display areas, and signage on environment;
- o Create pedestrian trails and linkages among and between residential areas, open spaces, and commercial, recreational and other services;
- O Design a road system that is direct, hierarchical, and designed at appropriate scales with appropriate engineering and public serviceability;
- o Acknowledge that the existing commercial businesses along Gibsons Way are easily accessible to the study area by all means of transportation and as such provide all the commercial services required by the Upper Gibsons Neighbourhood; and
- o Build a community image centered not around new commercial development within the neighbourhood, but around parklands, recreation fields, a recreation centre, and a pleasing, functional landscape.

work Plan for the Upper
Gibsons Neighbourhood"
report prepared for the Town
of Gibsons by the UBC Small
Towns Initiative in June 2005.

### 7.0 PROPOSED LAND USE PROGRAM

The initial concept of the land use program focused overwhelmingly on residential housing with pedestrian linkage to services in the Gibsons Way corridor. The housing program called for a diversity of residential designs that would satisfy the need to accommodate a cross-section of society, that is, various age groups, income levels, and occupations. This core element of the program remained intact throughout the deliberations leading to a final design scheme or framework plan for the Upper Gibsons Neighbourhood. The housing program consists of four residential designs: single lots, small lot clusters, cottages, townhouses, and apartments (in conjunction with commercial uses). Each of these is described in Section 8 of this report.

Owing to a 3.5-acre land donation from one of the Upper Gibsons property owners (which carried a public use only proviso), it was necessary to add some sort of public service centre to the program. Initially, this was conceived as a multipurpose community building or set of buildings with various public spaces at ground level and apartments on the second and third floors. However, community officials reconsidered this concept and opted instead for a parcel of ground designated herein as "government plaza" sans apartments or definitions of other possible uses.

In the mean time, the community introduced a new element to the land use program, a regional recreation centre. Originally slated for a site south of Gibsons Way, at the eleventh hour a decision was made to locate it within the Upper Gibsons Neighbourhood. In addition, the community elected to include commercial development in the program with the proviso that it not be located within the main residential areas. The program now included four more or less urban elements: a government plaza, a major recreation centre, a commercial block, and residential apartments. In order to service the land uses described above, the program also called for an expanded and improved vehicular circulation system. This entailed two program elements: first, reorganization of the highly confused traffic conditions along Gibsons Way, and second, an internal circulation system of roads to service the site itself.

Other program elements included park and open space, a provision for community gardens, a pedestrian circulation system, a stormwater system, and utility systems for water supply, sanitary sewage, and power. To satisfy the expressed need for neighbourhood common space centered around parkland and pedestrian circulation and the desire to utilize green infrastructure concepts in stormwater management, it was necessary not only to include open space as a major program element, but to define it in such a way that it would accommodate multiple uses. This required thinking in terms of open space as a network of green corridors linking housing clusters into a common system that would accommodate parkland, pedestrian pathways, plant and animal habitat, and a stormwater management system. The remaining utility systems (water, sanitary sewers, and power) will be located in road and street rights-ofway. Playing fields for team sports were considered as part of open space acreage but not part of the open space network because such facilities already exist at three locations within the Upper Gibsons Neighbourhood Area.

### 8.0 LAND USE

### Land Use Objectives

- o Promote smart growth principles with all types of development.
- o Promote a variety of housing types and forms including housing attainable to people of various ages, occupations, and lifestyles.
- o Promote neighbourhood design schemes that impart a sense of community to the area.
- Encourage low impact residential development that combines open space, parks, habitat, and pedestrian circulation into a working whole.
- o Promote a walkable and bikeable community at all scales of development.
- o Provide buildable land for more than 500 residential units.
- o Provide access to commercial, recreational, governmental, and educational services.
- o Provide a vehicular circulation system that facilitates traffic flow and improves safety for both vehicles and pedestrians.
- o Provide a pedestrian circulation system that utilizes both open space and streets and links residential areas to commercial, institutional, and recreational services.
- o Provide a scheme for managing storm water that reduces peak discharges to local streams without relying on conventional structural controls.
- o Promote high quality building design, energy conservation, and integration of building and landscape design concepts.
- o Encourage creative and cost effective solutions to residential design that utilize performance concepts in development.
- o Promote an approach to the planning, design and development of the Upper Gibsons Neighbourhood Area Plan that utilizes a comprehensive planning area framework.

As mentioned in Section 1, the land use plan developed by the UBC Small Towns Initiative required minor modifications to suit engineering requirements. However, the revised land use plan remains consistent with the objectives contained within the Framework Plan (see above). It should be emphasized that the boundaries of the land use designations and green corridors shown in Figure 8.1 are not meant to be exact. Because the proposed boundaries are only approximations, developers will have the flexibility to develop their properties in the most efficient way possible, while still meeting the overall objectives of the Framework Plan.

The revised land use plan incorporates the following changes, all of which were made upon the direction of Town Staff and Council:

In order to increase density, the Large Lot Cluster residential land use has been replaced with the Single Lot residential land use, which permits one and two-family residences. The Single Lot land use borders Payne and Reed Roads and is accessed by a rear lane.

The depth of the private open space buffer along Reed Road has been decreased to 10 metres from 14 metres.

A private open space buffer with a 10 metre depth has been added along Payne Road.

The commercial designation has been refined to encourage commercial development fronting the street with high-density residential development above commercial uses or behind commercial uses.

The commercial and townhouse designations south of the round-about (Sunnycrest Road/Road C intersection) has been reoriented such that a portion of the commercial lands is shifted north to front the traffic circle, and the equivalent area of townhouse is shifted south and east to front the school playing field and Road C.

The drainage, wildlife, and pedestrian corridor on the east side of the Plan Area was shifted east of the round-about to enable the institutional designation to front the round-about and to provide a buffer between the newly located commercial and townhouse designations.

The major road network has been modified to improve circulation, access, and safety. These modifications have resulted in minor changes to adjacent land uses. Due to these changes, the local road network has not yet been redefined. While a benefit to ensure coordination between properties, definition to the local system does not impact this servicing strategy report.

The density for apartments (as part of the Commercial/Residential Mix designation) has been increased from 16 upa to 30-56 upa to accommodate anticipated future demand.

The land use plan includes a variety of residential land uses, park and green spaces, civic spaces, and a commercial area (see Figure 8.1). As summarized in Table 8.1, residential uses account for 60.6 percent of the plan area, service uses account for 8.2 percent, green space for 27.2 percent, and roads and streets for the remaining 11.4 percent.

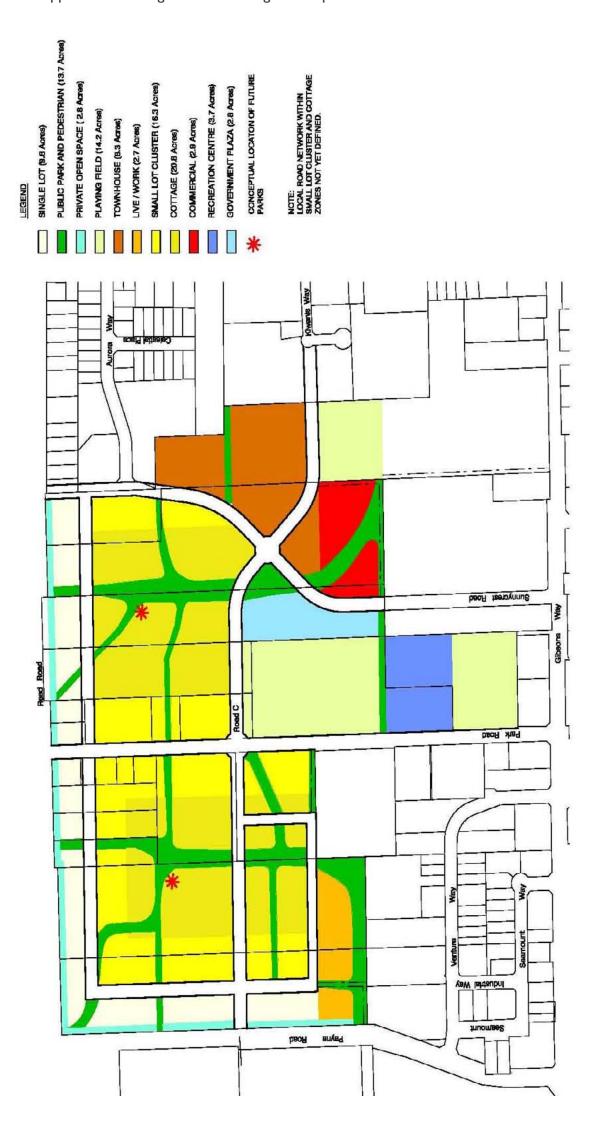
Table 8.1 Upper Gibsons Neighbourhood Plan - Land Use Distribution1

	Area		
Land Use	(acres)	% of Site	Notes
Housing	60.6	53.2%	
Single Lot	9.6	8.4%	
Small Lot Cluster	19	16.7%	
Cottage	21	18.4%	
Townhouse	8.3	7.3%	
Live-Work	2.7	2.4%	
Apartment	0	0.0%	Included in Commercial/Residential Mix
Service	9.4	8.2%	
Government Plaza	2.8	2.5%	
Recreation Centre	3.7	3.2%	
Commercial/Residential Mix	2.9	2.5%	
Green Space	31	27.2%	
Public Park and Pedestrian	14	12.3%	Public land excluding fields.
Private Open Space	2.8	2.5%	Covenanted open space.
Playing Fields	14.2	12.5%	Three existing fields.
Community Gardens	0	0.0%	Included in public park land.
Roads and Streets <sup>2</sup>	13	11.4%	
Stormwater	0	0.0%	Located in road rights-of-way.
Power	0	0.0%	Located in road rights-of-way.
Total	114	100%	

<sup>1</sup> This table is an updated version of Table 1: Land Use Program Summary of the Framework Plan.

<sup>2</sup> Local roads have not been included in this calculation. The definition of the local road network will be completed as part of the implementation strategy.

Figure 8.1 Upper Gibsons Neighbourhood Design Concept



### 8.1 Housing

### **Housing Objectives**

- o Provide a range of housing types to meet the needs of a diverse small-town market.
- o Provide an alternative to traditional subdivision housing while responding to the market need for more conventional housing.
- o Encourage design themes and scales reminiscent of small-town character.
- o Promote clustering of residential units within and among lots.
- o Provide a reasonable range of flexibility to developers in terms of house styles, sizes, and motifs.
- o Provide attractive small-town architecture, landscape design, and environmental settings.
- o Provide energy-efficient buildings not only in forms of materials and heating and cooling systems, but in terms of building design, orientation, and landscaping.
- o Provide pedestrian linkage to parks, schools, and other services.
- o Promote site and building designs that respect seasonally wet site conditions.
- o Provide adequate on-site space to exercise stormwater source control options.
- o Provide lot and neighbourhood designs free of barriers to fire protection.

The land use plan contains six types of residential land uses:

- o **Single Lot:** The single lot land use designation allows one single-family or two-family dwelling unit on 800.0m2 (8608 ft2) lot. The typical lot depth will be 40m to 50m. Single Lots border and shall front onto Payne and Reed Roads, with provisions for an open space buffer as indicated on Figure 8.1. These lots will be accessed by a rear lane to encourage the back of the houses to face the view and maximize solar gain.
- o **Small-lot Cluster:** Small-lot clusters are 0.25 acre lots that are intended to accommodate up to four dwelling units. The primary dwelling unit should relate to the street as though it were part of a conventional single-family neighbourhood. Additional units should be clustered on the lot to attain the maximum density. Examples of desired secondary units are studio flats, a carriage house over a garage, and granny suites. See Figure 8.2.
- o **Cottage:** Cottages are small lots (typically 45 by 80 feet) that are intended to provide affordable housing options for seniors, young families, and empty nesters. A typical unit would be 1,000 to 1,400 square feet. Cottage uses are in close proximity to the major open space corridors which creates the opportunity for the creation of community gardens on park margins. See Figure 8.3.
- o **Townhouse:** Townhouse units are intended to range from 1,200 to 2,400 square feet, and to be situated on lots with typical dimensions of 30 by 60 feet. Townhouses are designed as zero-lot line clusters with an average density of 20 units per acre. All clusters should be designed to provide for pedestrian access and safe vehicular access and parking. See Figure 8.4.
- o **Live/Work:** The live/work designation is intended to allow small business units to incorporate living quarters for proprietors. It is strongly recommended that building design comply with green architectural standards.
- O Commercial/Residential Mix: This designation is intended to have a mix of commercial and residential uses. The commercial use must be located along the street frontage and the residential must be located above the first floor of commercial or in behind the commercial use. This ensures that the commercial fronts the street but provides flexibility for residential development to be either stand alone off the street frontage or over top of the commercial use along the street front. The residential portion of this mixed use designation permits a similar density as the "Multi-FamilyResidential 3 High Density" designation in the OCP which permits apartment and condominiums greater than 3 storeys with a density range between 60-110 units per hectare (assuming 20% of lot area is required for roads and parks, this translates into 75-138 units per net hectare or 30–56 units per net acre). It is strongly recommended that building design comply with green architectural standards.

Basements are not to be permitted for houses, garages, or any other buildings on residential properties and foundations must provide barriers to creeping damp.

Figure 8.2 A Design Model for a Small-Lot (0.25 acre) Cluster Featuring 4 Units



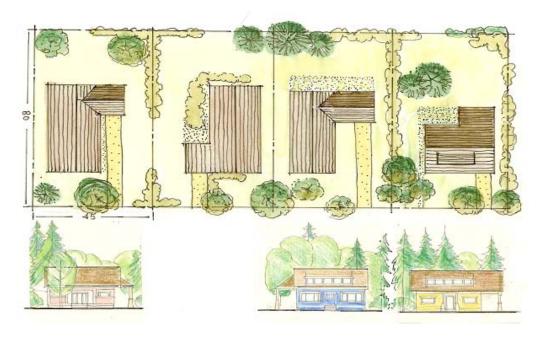
Single Lot Cluster Concept - 1



Source: Framework Plan

Figure 8.3A Site Design Model for Several Cottage Lots

(Lots measure 45 x 80 feet and cover 3600 square feet)



Source: Framework Plan

Figure 8.4 A Site Design Model for Townhouse Development Complex

# Townhouse Concept | Seminare | Properties |

(This development calls for 30 percent on-site open space)

Source: Framework Plan

Table 8.2 shows the recommended densities and minimum on-site open space requirements for each residential land use. The densities are net densities, meaning these are densities that account for land required for public open space and roads.

Open space is defined as any land that is not covered by impervious materials. The land use plan also calls for the preservation of at least 30% tree cover on each lot if possible.

Table 8.2 Recommended Housing Density and Percentage of On-Site Open Space\*

	Net Density (units/net acre)	Minimum On-Site Open Space
Single Lot	8	75%
Townhouse	20	30%
Live-Work	8	45%
Small Lot Cluster	4 to 16	60%
Cottage	12	45%
Commercial/Resi-	30 to 56	30%
dential Mix		

<sup>\*</sup>This table is based on information contained in the Framework Plan.

As shown in Table 8.3, the proposed land use plan is expected to accommodate a maximum of 915 dwelling units (assuming that the maximum number of dwelling units is built on the small lot clusters). With an occupancy rate of 2.18 persons per dwelling unit, the Upper Gibsons Neighbourhood Plan Area could accommodate 1,995 residents.

Table 8.3 Upper Gibsons Neighbourhood Plan - Population Estimate1

	Net Densit (units/net acre)	Area Net of y Major Roads and PublicPark Space (acres)	Area Net of Al Roads and Pub licPark Space2 ( net acres)	)-	ts Popu	lation3
Single Lo <sup>t</sup> 4	8	12.3	12.3	98	214	
Townhouse	20	8.3	7.5	150	327	
Live-Work <sup>4</sup>	8	2.8	2.5	20	44	
Small Lot Cluster	16	19	17.1	274	597	
Cottage	12	21	18.9	227	495	
Commercial/Residential Mix	56	2.9	2.6	146	318	
Tota	al n	/a 66.	3 6	0.9	915	1,995

<sup>1.</sup>Based on the revised major road network

### 8.2 Open Space

### **Open Space Objectives**

- 0 Provide a network of open space that links together residential development and links residential land use to recreation, commercial, community/government, and educational services.
- Provide an open-space design scheme modeled after natural drainage network and tied to Chaster and Charman Creek drainage.
- Provide an open-space design that will accommodate park land, pedestrian trails, and stormwater managemen't facilities.
- Provide area for community gardens at selected locations within the open space system.
- Provide a limited amount of private open space at appropriate locations in the system. 0
- To as great an extent as possible, preserve existing tree cover and animal habitat in the design and development of open space.
- Diversify and enrich plant and animal habitat as a part of park and stormwater management design.
- Encourage multiple activities including walking, jogging, nature watching, picnicking, meetings and educational functions.
- Provide easy access to open space from bordering residential lots, service facilities, recreational fields, schools and streets.

The land use plan also provides for open space within the Upper Gibsons Neighbourhood Plan Area. The objectives stated above have been incorporated into the land use plan, as well as the engineering servicing plan.

The Private Open Space designation can be described as a privately covenanted open space or buffer along Payne and Reed Roads. The intent of this area it to provide a buffer between the higher density development of the Upper Gibsons Neighbourhood Plan Area and the ALR lands to the west and rural properties to the north. The Open Space Buffer is intended to be a treed area. Where

<sup>2.</sup> To accommodate the local road network, the areas for Townhouse, Live-Work, Small Lot Cluster, Cottage, and Apartment uses have been scaled back by 10%. The area designated for Single Lot uses is served by a lane shown on the plan; therefore, this designation does not need to accommodate a local road network and does not need to be scaled back.

<sup>3.</sup>Assumes 2.18 persons per dwelling unit as per 2001 Census data. Single Lot and Live/Work area totals include private open space area that runs along Payne and Reed Roads.

tree cover does not exist, trees must be planted. Drainages must be maintained along the roadways and contained within municipal right-of-ways or easements.

Figure 8.1 shows the conceptual location of future parks. Section 5: Parks and Outdoor Recreation of the Official Community Plan sets out Council's objectives and policies with respect to parks.

While specific locations for community gardens have not yet been identified, Council supports the following policy:

Community gardens must be accessible to the Multi-Family housing in the Upper Gibsons Neighbourhood Plan area or in adjacent neighbourhoods.

### 9.0 TRANSPORTATION

### **Transportation Objectives**

- o Provide a network of roads and streets that is functional and safe for both cars and bicycles.
- o Provide a transportation system that offers internal linkage among residential parcels as well as linkage between residential and service type land uses.
- Provide a system of roads and streets designed according to green infrastructure principles.
- Provide a transportation system in which roads and streets are designed at scales appropriate to their use.
- o Encourage energy conservation by discouraging short-distance automobile trips.
- o Provide safe, inviting, efficient, and understandable pedestrian and bicycle circulation systems.
- o Provide for safer and more efficient traffic circulation along Gibsons Way.
- o Improve traffic flow and safety related to Sunnycrest Mall.

### Pedestrian Circulation Objectives

- o Provide an attractive, safe, and practical means of foot travel.
- o Provide an alternative to short-trip automobile travel.
- o Provide linkage among residential areas as well as residential access to services.
- o Provide a means of fostering social interaction among residents as a way of building community identity and a sense of place.
- o Provide a facility for a variety of physical activities for a cross section of society, including physically challenged individuals.

The Transportation Review and Recommendations have been developed based on the Land Use Plan projections introduced in Section 1, as well as known issues that exist beyond the limits of the Plan Area.

### 9.1 Study Objectives

The objectives of the Transportation component of this study were as follows:

- o Establish the background roadway conditions adjacent to the Upper Gibsons Neighbourhood for the 20-year planning horizon by applying a growth factor to the existing intersection volumes and summarizing the planned/required future roadway and intersection upgrades.
- o Review the impacts on the adjacent roadway network that will result from additional development generated traffic and required off-site road network upgrades.
- o Provide recommendations for on-site transportation servicing including roadway classification, cross-sections, and bicycle facilities.
- Prepare preliminary cost estimates for the proposed transportation servicing components within the Upper Gibsons Neighbourhood development area.

The Town of Gibsons' current Official Community Plan (OCP) specifies that transportation facilities within the Upper Gibsons Neighbourhood shall strive to minimize auto dependency through the promotion of cycling and pedestrian facilities. In developing a transportation servicing plan specific to this neighbourhood, the aim of promoting alternative modes of transportation while addressing internal vehicle circulation and external access was maintained.

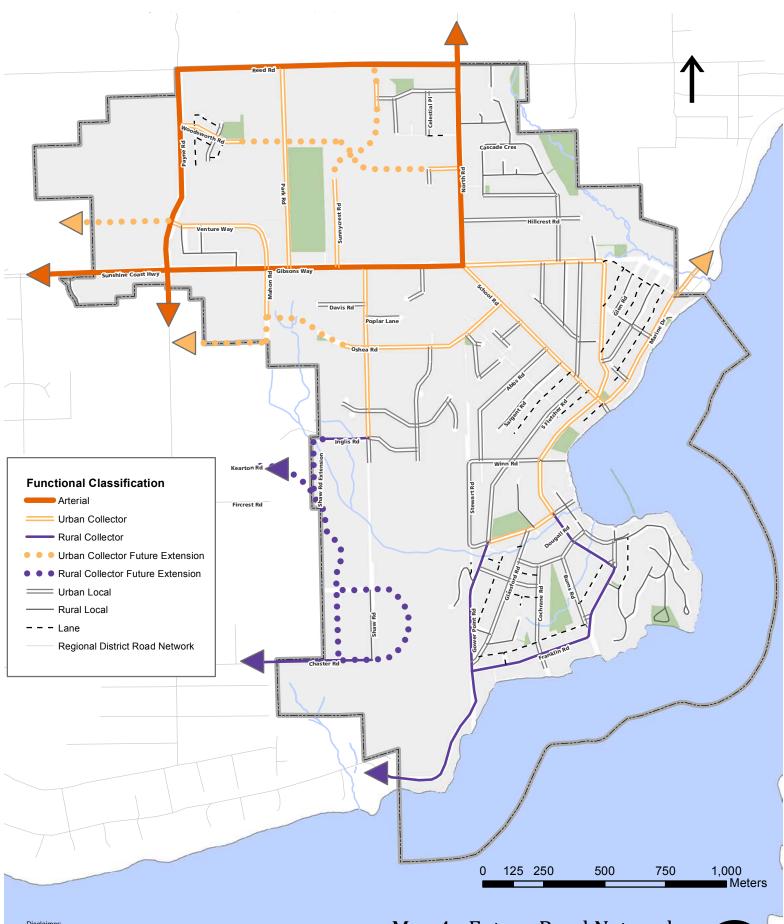
### 9.2 Background Conditions

The Background Conditions establish existing and forecast traffic conditions within the Study Area assuming that no additional development (i.e. the Upper Gibsons Neighbourhood) is implemented. Although realistically the development will most likely proceed, by reviewing the Background Conditions, a benchmark can be achieved whereby incremental roadway upgrade needs specific to the future development can be identified.

The Background Conditions were evaluated for two study horizons: Existing (assumed to be 2005) and Forecast (assumed to be 2025 and represents a 20-year full build-out of the study area). The existing road network, intersection laning and traffic control are outlined in this section along with an evaluation of the existing and forecast road network performance. A list of upgrades required, independent on future development in the Study Area, are summarized.

### 9.2.1 Road Network and Traffic Control

The major road network components both adjacent to and surrounding the site are described as follows. The Major Road Network Plan for the Town of Gibsons has been provided in Figure 9.1 (Map 4) for reference.



Disclaimer:
This information has been compiled by the Town of Gibsons using data derived from a number of sources with varying levels of accuracy. The Town disclaims all responsibility for the accuracy of this information.

Future extensions are conceptual only and require detailed review to confirm feasibility and actual location(s).

### Map 4 - Future Road Network

File No.: STD0027 Date: April 2012



### Highway 101 (North Road & Gibsons Way)

The study area is bounded on both the south and east sides by Highway 101 (Gibsons Way in the south and North Road in the east). Acting as a Provincial Highway, Highway 101 provides regional access along the Sunshine Coast. To the east of the site, it continues to the Ferry Terminal, and to the west it continues towards the District of Sechelt. Through the Town of Gibsons, Highway 101 serves several roles, ranging from the broad provincial and regional movement of vehicles, goods and services on the coast through to acting as a major arterial roadway for the Town.

North Road has a two-lane urban cross-section with a posted speed limit of 50 km/hr. Gibsons Way between North Road and Payne Road is generally comprised of a 4-lane cross-section and is characterized by significant commercial, residential, and institutional activities. Although plans are in place for a possible future Highway 'Bypass' (via Payne Road discussed below), the details have not been finalized, nor is the time frame known. It is anticipated that significant development of the Plan Area will occur before the bypass comes to fruition. As such, it has been assumed to not be a factor within the planning horizon for this study.



### Reed Road and Payne Road

These two roadways form the remaining north and west boundaries of the study area, and are currently classified as Major Arterial roadways in the road network plan. However, activity and traffic volumes on these two roadways are generally low under current and foreseeable time frames. This is based on the understanding that the highway bypass will not likely be implemented within the 20 year horizon considered in this study. Reed Road provides access to low density residential development only, and is a rural two-lane roadway (see photo). Payne Road provides access to light industrial and commercial uses (including Gibsons Park Plaza, a retail facility located on the northwest corner of the Payne and Gibsons Way intersection), with higher activity as it approaches Gibsons Way in the south. Payne Road also has a two-lane cross-section.



Reed Road (Eastbound Towards North Road)

### Park Road

Park Road is an existing roadway that bisects the Upper Gibsons Neighbourhood between Gibsons Way in the south, and Reed Road in the north. It is currently classified as a Minor Arterial roadway, and has a two-lane rural cross-section with intermittent curb and gutter on the southern portion of the roadway (as it approaches Gibsons Way).



Park Road (Northbound Towards Reed Road)

### Sunnycrest Road

Sunnycrest Road, which currently provides access to the Sunnycrest Mall and other commercial properties off of Gibsons Way, is designated as a Minor Arterial road in the road network plan for the Town. Sunnycrest Road extends from Gibsons Way in the south, with the potential for future extension to Reed Road in the north.

### **Shaw Road**

Shaw Road extends from a signalized intersection at Gibsons Way and the Sunnycrest Mall access to south of Gibsons Way. It is classified as a Minor Arterial and has a two-lane cross-section.

### Venture Way & Mahon Road

Venture Way is classified as a Collector roadway and currently serves light industrial uses in the southwest corner of the study area. At a signalized intersection on Gibsons Way, Venture Road changes to Mahon Road, which is a Minor Arterial running north-south. A future extension of Mahon Road is planned as shown in the Major Roadway Network Plan, to connect with Shaw Road. The timing of this future extension is unknown at this point, and is currently subject to actions by the Sunshine Coast Regional District.

North-south roads outside the study area which continue to the Gibsons landing area are School Road, Shaw Road, Mahon Road and Pratt Road. The full road classification network within the study area is discussed in subsequent sections.

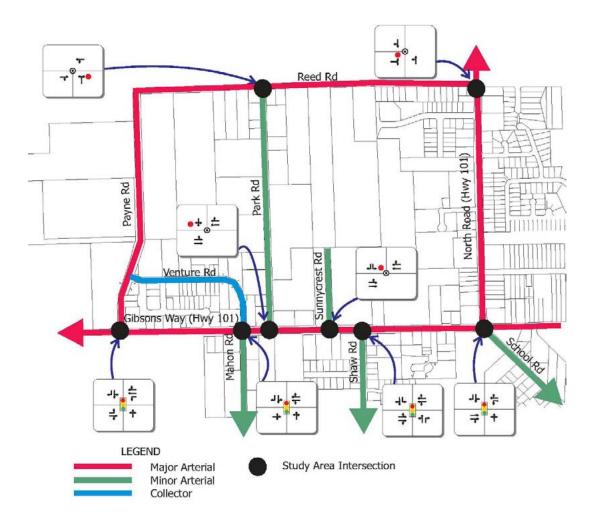
There are several key intersections within the Study Area that were considered in detail as part of the Transportation Review. These include the following:

- o Gibsons Way & Payne Road (traffic signal control)
- o Gibsons Way & Venture Way/Mahon Road (traffic signal control)
- o Gibsons Way & Park Road (stop control)
- o Gibsons Way & Sunnycrest Road (stop control)
- o Gibsons Way & Shaw Road/Sunnycrest Mall Access (traffic signal control)
- o Gibsons Way & North Road/School Road (traffic signal control)
- o Reed Road & North Road (stop control)

### o Reed Road & Park Road (stop control)

The existing lane configurations and traffic control at each of the study intersections, along with the existing road network within the study area are illustrated in Figure 9.2.

Figure 9.2 Existing Road Network and Traffic Controls



### 9.2.2 Background Traffic Volumes

The existing peak hour traffic volumes at the study intersections were established for each of the study intersections considered. The 'worst case conditions' (i.e. the highest traffic volumes experienced within the Study Area) were assumed to fall on a Friday afternoon during the summer. This is a result of the high amount of tourist activity in the summer months, particularly along Gibsons Way, which peaks on a Friday afternoon. The afternoon peak hour was chosen due to the high amount of commercial activity along Gibsons Way (for the type of land uses along Gibsons Way, the PM peak hour typically represents the highest traffic volumes and therefore the worst case conditions).

A traffic count program was undertaken in March 2005 where turning movement volumes were captured at the majority of the study intersections. An additional set of counts was also undertaken in July 2005 to provide a sense of peak summer fluctuations. Although the counts were undertaken mid-week, using a week's worth of recently downloaded count data from Gibsons Way & Venture Way / Mahon

Road, the typical increase in volumes within the Study Area for a Friday was determined. The raw traffic count volumes were then factored up to account for daily and seasonal peak variations. Of note, the turning movement volumes at the intersection of North Road & Reed Road were inferred using data collected at North Road & Gibsons Way and Reed Road & Park Road. The remaining intersections were counted directly.

Figure 9.3 illustrates the peak existing turning movement volumes at the major intersections within the Study Area.

The forecast background traffic volumes (assuming no additional development in the Study Area) were also established for the 20-year planning horizon, by applying a growth factor to the previously determined existing conditions. Initially, three methodologies for determining a realistic growth factor were considered, as described below.

Highway 101 (North Road & Gibsons Way) Historical Growth – The Ministry of Transportation has two permanent count stations on Highway 101 in the vicinity of Gibsons Way & North Road (15-063 15-046). However, the most recent count at both of these stations was recorded in 2000, with a total of three years of recorded historical data only. The historical growth rate between 1996 and 2000 was found to be minimal (less than 1% per annum). It should be noted that due to minimal available data, this methodology was not deemed to be sufficient in determining an overall future growth rate for the Study Area.

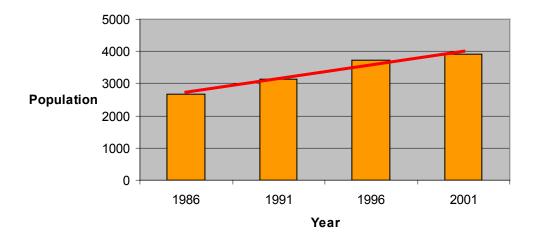
Reed Rd Road (Hwy 101) Park Rd Payne Rd North Sunnycrest Rd **-**3℃ ± Å Venture Rd A = Gibsons Way (Hwy 101) Rd Shaw ‡ å 44 11-46 40 **LEGEND** Study Area Road Network

Figure 9.3 Existing Background Traffic Volumes (PM Peak)

Study Area Intersections

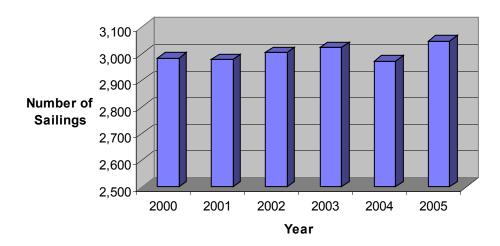
Local Population Growth – According to census data, the population of the Town of Gibsons has been growing on average at slightly more than 2% per year. This is illustrated in Figure 9.4. Population is an important variable in determining future vehicle growth. For analysis purposes it is often a safe assumption that traffic growth will reflect population growth within an area. Using this methodology, it was assumed that vehicle growth in the Town of Gibsons, excluding development in the Upper Gibsons Neighbourhood, would increase at a rate of 2% per year. This estimate is conservative because of the limited developable land.

Figure 9.4 Town of Gibsons Historical Population Growth



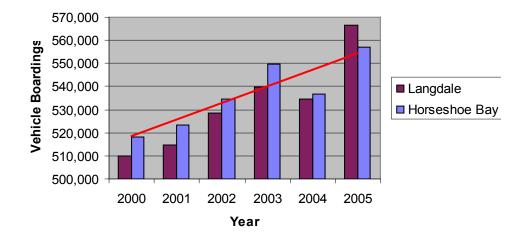
Ferry Traffic Growth – Significant traffic volume along Highway 101, and, consequently, through the Study Area results from surges of traffic from the Langdale Ferry Terminal. Ferry traffic is important to consider as it generates a high volume in a 15 minute period – often dictating when the PM peak hour occurs. Data provided by BC Ferries indicates that the number of ferry sailings has not significantly changed over the past 6 years. Figure 9.5 illustrates the number of sailings per fiscal year (April to March). The highest number of sailings occurred in 2005 at 3,050 and the least in 2004 with 2,973.

Figure 9.5 Sailings from Horseshoe Bay to Langdale Ferry



The number of vehicles boarding the ferry at each terminal gives a better perception of historical growth in order to estimate future increases in boardings. Annual increases in the number of boardings over the past 5 years have averaged 1.3%. When the current growth trend is projected to 2025, the annual increase of ferry traffic is 1.36%. Figure 9.6 illustrates the number of vehicle boardings on the Langdale ferry and a linear interpolation of the values.

Figure 9.6 Annual Vehicle Boardings per Direction



As a result of the above described methodologies, it is most likely that a realistic future traffic growth rate will fall somewhere between 1.3% and 2.0% (assuming that ferry traffic and overall local population continue to increase over the next 20 years). In order to remain conservative in traffic growth projections, a 2% annual growth rate was therefore assumed. This growth rate was applied to all existing turning movement data to establish the future (+20 year) traffic conditions within the Study Area.

Figure 9.7 provides a summary of the future traffic volumes. It should be noted that these volumes do not include any additional traffic that may result from the development of the Upper Gibsons Neighbourhood.

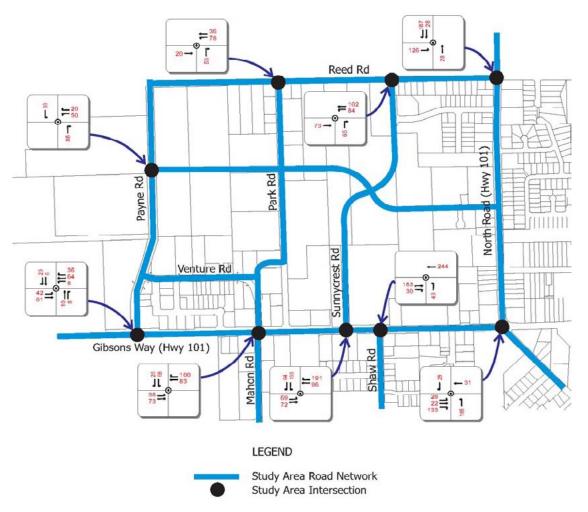


Figure 9.7 Forecast (+20 year) Background Traffic Volumes (PM Peak)

### 9.2.3 Background Road Network Performance

Performance assessments were undertaken at each of the study intersections in order to establish a baseline benchmark to use as a comparison against the predicted traffic conditions with the development of the Upper Gibsons Neighbourhood. These were undertaken for both the existing and future background conditions.

The methodology employed for the evaluations was based on the Highway Capacity Manual (2000) with is an accepted industry standard. This methodology utilizes delay to determine appropriate Levels of Service (LOS) for various intersection movements, to establish the appropriate performance benchmarks. Generally, intersection performance (from a capacity perspective) is ranked according to how long drivers are forced to wait to be able to undertake their desired movement. These benchmarks are stratified into various LOS as outlined in Table 9.1 for unsignalized and signalized intersections. While acceptable to varying degrees, all conditions LOS A through F are deemed acceptable.

Table 9.1 Intersection Level of Service Criteria

Level of Service	Average Total Delay (seconds per vehicle)			
(LOS)	Unsignalized	Signalized		
A	≤ 10	≤ 10		
В	10-15	10-20		
С	15-25	20-35		
D	25-35	35-55		
E	35-50	55-80		
F	> 50	> 80		

In addition to the LOS (and delay) criteria, the intersection performance is also measured in terms of the vehicle queue length, and the volume to capacity ratio (v/c), which is the demand for the movement divided by the theoretical capacity of the movement (desire a value of less than 1.0).

The existing and 20-year forecast road network was initially evaluated assuming the road network configuration previously described (i.e. no future upgrades), to identify any deficiencies that may arise under background growth conditions. The software used for this analysis was Synchro v6.0 which is an industry accepted tool. Existing signal timings\ plans were obtained from the Ministry of Transportation for the signalized intersections on Gibsons Way, which were used as input to the model in an attempt to accurately re-create actual traffic conditions.

Figures 9.8 and 9.9 show the performance results at each of the study intersections for the existing and forecast background conditions, and Table 9.2 provides a summary of the overall Level of Service for both the existing and future base conditions. As can be seen, based on LOS alone, all study intersections are currently operating well within acceptable performance limits. However, by the forecast 20-year planning horizon, several capacity driven issues will arise, including the following:

Gibsons Way and Payne Road – Significant delays and movement failures are expected for both the northbound and southbound movements along Payne Road. In addition, queues in excess of 200 metres are expected along Gibsons Way at this intersection. It is recommended to improve the performance of the Payne Road movements by providing designated left turn bays in both the northbound and southbound directions. In doing so, the green time allocated to the highway movements can be increased, eliminating the excessive queuing on Gibsons Way. With this improvement in place, the operation of the intersection will improve to a LOS C.

Gibsons Way and Park Road – It is clear from the analysis results that the lifespan of the operation of the unsignalized Park Road approach is limited, and with any future traffic growth it will quickly begin to experience unacceptable delays (LOS F). However, due to it's proximity to the existing signalized intersection of Gibsons Way and Venture Way/Mahon Road (approximately 100 metres), the implementation of traffic signal control at Park Road to mitigate the future failure of the Park Road approach is infeasible and not a viable improvement option to the Ministry of Transportation. It is recommended to close the access to Park Road from Gibsons Way via a cul-de-sac and provide a new link between Park Road and Venture Way to redirect traffic to the existing traffic signal control at Gibsons Way & Venture Way. A right-of-way is not currently available and will need to be secured. As The intersection of Gibsons Way and Venture Way will continue to operate at a LOS B up to and including the 20-year planning horizon with this increase in traffic loading.

Reed Road and North Road – The Reed Road approach to this intersection will begin to be problematic by the forecast horizon (LOS E) as a result of the relatively high demand for the eastbound to northbound left turn movement. However, operationally speaking, the intersection will not experience any failures, and no improvements are recommended within the 20-year time frame.

Reed Rd North Road (Hwy 101) Payne Rd Sunnycrest Rd •1r ±4 Venture Rd A = Gibsons Way (Hwy 101) Mahon Rd Shaw Rd 46 1 + ± 6 ↑ + ± 6 4- + A + A-+ 1r **LEGEND** Study Area Road Network

Figure 9.8 Existing Background Road Network Performance (PM Peak)

Study Area Intersection

Level of Service

B-

Figure 9.9 Forecast (+20 year) Background Road Network Performance (PM Peak)

\*No Improvements

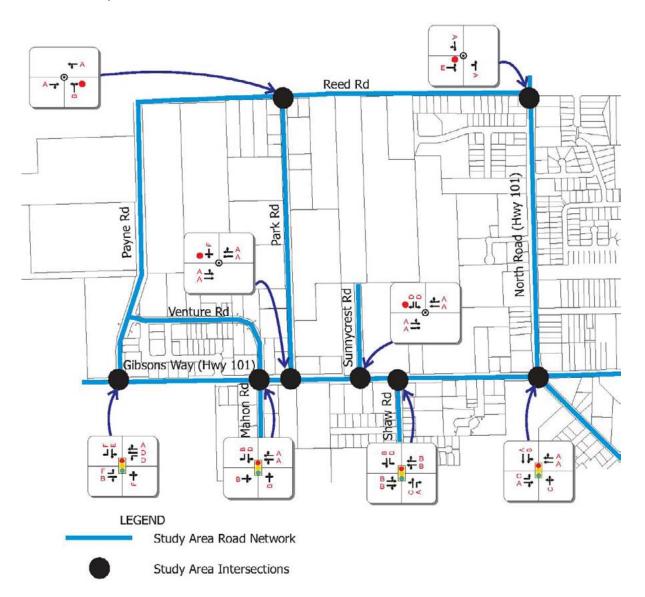


Table 9.2 Summary of Intersection Performance for Base Conditions

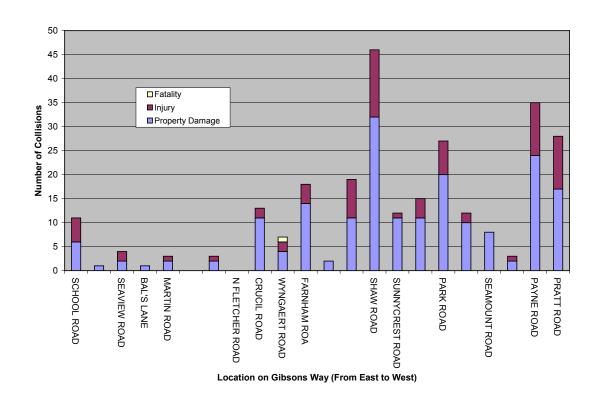
Intersection	Existing Condi- tions (Year 2005)	Forecast Conditions (without improvements)  (Year 2025)
Gibsons Way & Payne Road	С	Е
Gibsons Way & Venture Way/Mahon Road	A	В
Gibsons Way & Park Road	C (Park Rd)	F (Park Rd)
	A (Gibsons Way)	A (Gibsons Way)
Gibsons Way & Sunnycrest Road	C (Sunnycrest)	D (Sunnycrest)
	A (Gibsons Way)	A (Gibsons Way)
Gibsons Way & Shaw Road/ Mall Access	В	В
Gibsons Way & North Road/School Road	Α	В
Reed Road & North Road	C (Reed Rd)	E (Reed Rd)
	A (North Rd)	A (North Rd)
Reed Road & Park Road	A (Park Rd)	B (Park Rd)
	A ( Reed Rd)	A ( Reed Rd)

### 9.2.4 Historical Safety Review

Functional and safety concerns along the Gibsons Way corridor have existed for several years. In addition to the capacity review previously described, a review of historical collision data was undertaken along Gibsons Way in order to identify safety deficiencies that need to be addressed as part of the background condition assessment. Historical collision data was acquired through the Ministry of Transportations HAS database for Gibsons Way between School Road in the east and Payne Road in the west for the five year period between 2000 and 2004. It should be noted that the HAS database uses police collision reports and therefore does not include some minor collisions that the police do not attend to. A corridor-wide safety analysis was performed, as well as a further investigation into particular intersections that were above or near the provincial averages for collision rates and severity.

Figure 9.10 shows the number of collisions that have occurred over the past 5 years on Highway 101 through the Study Area. Key locations where a higher number of occurrences have been recorded include the intersections of Gibsons Way and Shaw Road as well as Gibsons Way and Payne Road. These locations are discussed in more detail below.

Figure 9.10 Historical Collision Summary for Gibsons Way (2000-2004)



The number of collisions in relation to the volume of traffic using the roadway is used to compare against a provincial average for a similar cross-section and highway classification. The provincial collision rate average for a rural highway like that of Highway 101 through Gibsons is 1.7 collisions/million kilometres.

A summary of typical safety performance indicators for the Gibsons Way corridor between School Road and Payne Road is provided in Table 9.3. It shows that the historical collision rate along this segment of Highway 101 exceeds both the Provincial average and critical collision rate for a highway with similar characteristics. This is most likely a result of high collision frequencies at several key intersections as well as decreased safety performance caused by multiple uncontrolled access points along the corridor. It is recommended that additional access points onto Gibsons Way be minimized.

Table 9.3 Safety Performance Indicators for Gibsons Way (2000-2004)

	Gibsons Way Corridor	Provincial Aver-	
	(School Road to Payne Road)	age	
Number of Collisions	240	n/a	
	(174 PDO, 65 INJ, 1 FAT)		
Frequency (collisions/year)	48 collisions/year	n/a	
Collision Rate	5.06	2.1	
[accidents / million entering vehicles]		2.6 Critical Rate	
Severity Index	3.85	6.24	
		7.82 Severity Threshold	

A further review of safety performance indicators of the Shaw Road and Payne Road intersections was undertaken as summarized in Table 9.4. As shown, both intersections show historical collision rates that exceed the Provincial average for a typical urban highway intersection. Through both field observation and a review of the historical data, the following are noted:

Gibsons Way and Shaw Road – This intersection experiences a large amount of activity due to the mall access on the northern leg. There are currently no left turn provisions from Gibsons Way in either direction, resulting in the increased potential for rear-end collisions. The mall access is far from ideal, with access directly into the parking area and limited storage for outbound vehicles. This unconventional north leg of the intersection is confusing and unsafe. This intersection has been reviewed in detail in the following reports:

Gibsons Way / Shaw Road Intersection Review (Urban Systems Ltd, 2004)

Traffic Operations and Safety Review of the Gibsons Way (Hwy 101) Intersections at Shaw Road and Sunnycrest Road (Hamilton Associates for ICBC, 2003)

Both reports provide a discussion on the existing conditions at the Gibsons Way and Shaw Road intersection as well as potential safety mitigation strategies. Refer to these reports for further discussion.

Gibsons Way and Payne Road – The intersection at Payne Road has a steep vertical crest for northbound vehicles. This causes poor sightlines for southbound left-turning vehicles when attempting to cross opposing traffic. As well, westbound vehicles on Hwy 101 have a small merging area after the intersection before the curb lane ends. It is recommended that the lane configuration on Payne Road be altered to provide designated northbound and southbound left turn lanes.

Table 9.4 Safety Performance Indicators for Gibsons Way (2000-2004)

	Gibsons Way and Shaw Road	Gibsons Way and Payne Road	Provincial Average
Number of Collisions	179	137	n/a
	(134 PDO, 44 INJ, 1	(98 PDO, 39 INJ, 0	
	FAT)	FAT)	
Frequency (collisions/year)	36 collisions/year	27 collisions/year	n/a
Collision Rate	6.21	4.17	0.40
[accidents / million entering			0.61 Critical Rate
vehicles]			
Severity Index	3.77	3.56	5.07
			7.61 Severity
			Threshold

### 9.2.5 Summary of Recommended Upgrades for Background Conditions

As discussed, several roadway improvements are recommended in order to address both capacity and safety related concerns over the 20-year forecast horizon. It should be noted that these improvements are identified as a result of background traffic growth only, and do not include any works that may be required to accommodate future traffic as a result of development of the Upper Gibsons Neighbourhood. These improvements are recommended regardless of future development in the Plan area.

The recommended roadway upgrades for background conditions (referred to as the 'Base Improvements'), required regardless of developing the Plan area, include the following:

- o New northbound and southbound left turn storage lanes on Payne Road at Gibsons Way
- o Closure of Park Road at Gibsons Way
- o A new roadway connection between Park Road and Venture Way

Even without the specific development of the Upper Gibsons Neighbourhood, background growth projections suggest that improvements to the Shaw Road and Sunnycrest Road intersections will be required. The predominant challenge is that signalization at both locations will not be permitted given their close proximity. As part of the solution, future modifications to the mall property are recommended to transfer additional traffic to Sunnycrest Road, while limiting it directly to Gibsons Way.

Solid attempts were made within the scope of this Plan to identify a coordinated solution between the Shaw Road and Sunnycrest Road intersections. However, through the review process for this Plan, insufficient consensus was obtained from stakeholders and the public to document a solution herein.

### 9.3 Development Generated Traffic

The additional traffic that is predicted to be generated by development of the Upper Gibsons Neighbourhood was quantified and assigned to the adjacent roadway network. For this exercise, land use data as provided through the planning component of this review were used. In all cases, full build out of all properties has been considered in order to provide an understanding of the 'worst case scenario'.

### 9.3.1 Development Trip Generation

The Upper Gibsons Neighbourhood will be comprised of residential, commercial, and recreational land uses. Forecast development trips were generated for each land use individually as summarized in Table 9.5. The trip generation rates used for this calculation were extracted from the Institute of Transportation Engineers Trip Generation Manual and the BC Ministry of Highway Trip Generation Manual for the PM peak.

As shown, the residential component of the development is expected to produce a total of 645 peak hour trips. For the commercial property, it was assumed that the building would use the maximum lot coverage of 60% (Town of Gibsons Zoning Bylaw No. 555). The building would have 75,000 square feet of gross, ground-retail area; excluding the apartments on the upper floors. A general community commercial vehicle trip generation rate was used due to the lack of known retail uses. The recreation center was assumed to have a 300 seat arena and 9,400 square foot multi-purpose facility. A major event at the facility that would attract a large amount of trips was not included as part of the analysis as it does not represent typical peak conditions. Refer to the Community Centre Site Evaluation report for the Town of Gibsons (December 2004) for further details as to trip generation for the recreational component of the development.

The overall Plan Area development is expected to generate in the order of 1250 total trips in the afternoon peak.

Table 9.5\* Residential Trip Generation

Land Use	Area [acres]	Rate [units/ acre]	Total Units	Rate [veh/ hr]	% In/Out	Total Trips	Trips Inbound	Trips Outbound
Residential								
Single Family	12.4	4	50	1.02	64/36	51	33	18
Small Lot Cluster	14.7	16	235	1.02	64/36	240	153	87
Cottage	18.7	12	225	1.02	64/36	230	147	83
Townhouse	7.5	20	150	0.52	64/36	78	50	28
Live/Work	2.4	8	19	1.02	64/36	20	12	8
Apartments	2.6	30	78	0.33	63/37	26	16	10
Total Residential						645	411	234
Commercial	7!	5,000 ft² GLA	A	6.78 per 1000 ft <sup>2</sup>	50/50	516	258	258
Recreational (Community Centre)	300 Seat Arena 9,400 ft² multi-purpose facility		n/a	50/50	93	46	46	
TOTAL DEVELOPMENT TRIPS 1254 715 539  This table was prepared prior to the land use changes approved by Council on August 22, 2006 and were based on the provious population								

\*This table was prepared prior to the land use changes approved by Council on August 23, 3006 and were based on the previous population projection of 1,649 for the Plan area. As described in Table 8.3, the revised total population is estimated at 1,995 at maximum build out. Recognizing that the majority of the population change is associated with the lowest traffic generators, this revised population does not change the proposed transportation network recommendations. As such, traffic analysis has not been modified to reflect the revised population.

# 9.3.2 Trip Distribution & Assignment

Given limited available background documentation relating to community trip origin-destination behaviour, or a Regional travel forecast upon which to derive travel patterns with more certainty, some broad assumptions relating to trip routing were made. The trip distribution assumptions at the foundation of this analysis work are provided in Table 9.6. The 'Origin/Destination' refers to the location that trips are coming from and going to. For example, of all outbound trips from the Study Area, it was assumed that 35% were destined for locations off of Highway 101 north of the site. The same percentage (35%) of inbound trips to the Study Area are expected to originate from Highway 101 north of the site. With the intent for Sunnycrest Road to form a primary north—south transportation link, it was assumed that Aurora Way and Kiwanis Way would be discouraged as high volume traffic 'through' routes for access between the development and North Road.

Due to the mix of residential and commercial land uses, it was assumed that approximately 10% of the commercial generated trips would be internal to the site (i.e. assumed to stay within the internal neighbourhood and not use the external network roads). In addition, it was also assumed that 30% of the commercial generated trips would be pass-by trips, which are trips generated from motorists already passing by on the adjacent road network who access the site as an intermediate stop on the way to another destination. The trip may not necessarily be "generated" by the land use under study, and thus, there is not a new trip added to the system. The turning movements at the intersection into the site, however, still have the total amount of trips generated. In assigning the commercial traffic to the adjacent road network (i.e. Gibsons Way), the existing turning movement split at the Gibsons Way and Sunnycrest Road intersection was applied. From there, the trips were assumed to distribute as per Table 9.6.

Table 9.6 Network Trip Distribution

Origin/Destination	Percent Distribution
Highway 101 (North of the Study Area)	35%
Highway 101 (West of the Study Area)	20%
School Road (South of Gibsons Way)	30%
Payne Road (South of Gibsons Way)	5%
Shaw Road (South of Gibsons Way)	5%
Gibsons Way (East of School Road)	5%
TOTAL	100%

Figure 9.11 provides a summary of the PM peak hour development generated traffic volumes for all land uses. The internal roadway network assumed for the assignment of the development trips is detailed later in this report.

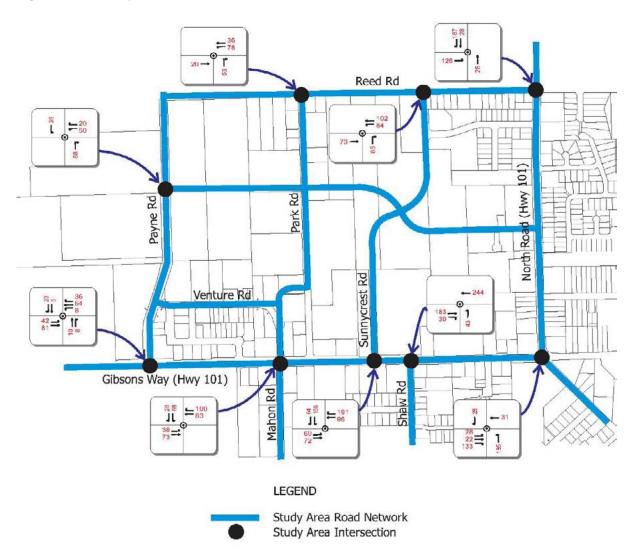


Figure 9.11 Development Generated Traffic Volumes (PM Peak)

### 9.4 Combined Conditions

The Combined Conditions describe the scenario where the proposed Upper Gibsons Neighbourhood is developed and development generated traffic volumes are superimposed on the background traffic volumes as previously described. A detailed review of the Combined Conditions was undertaken in order to provide an understanding of the incremental road network requirements triggered by the proposed development.

### 9.4.1 Road Network and Traffic Control

The road network and traffic controls that were assumed to be in place for the Combined Conditions analysis scenario include the existing configuration as outlined in Figure 9.12 with the recommended upgrades for background conditions (referred to as 'Base Improvements'), summarized as follows:

- o New northbound and southbound left turn storage lanes on Payne Road at Gibsons Way
- o Closure of Park Road at Gibsons Way

o A new roadway connection between Park Road and Venture Way

### 9.4.2 Combined Traffic Volumes

The combined traffic volumes were established by superimposing the development generated traffic volumes onto the background traffic volumes. The combined traffic volumes for the 20-year forecast horizon are provided in Figure 9.12.

71 Reed Rd 器点 に に 50 270 11 101) (Hwy B Payne Rd Park Roa North Sunnycrest Rd N € 1062 N 124 N 111 860 1220 1220 Venture Rd 111 111 627 Gibsons Way (Hwy 101) 8 Shaw Ara Ara Mahon SE JL 111 226 **LEGEND** Study Area Road Network Study Area Intersection

Figure 9.12 Forecast (+20 year) Combined Traffic Volumes (PM Peak)

### 9.4.3 Combined Road Network Performance

The road network was re-evaluated for the future (+20 years) combined traffic conditions assuming the base improvements only (i.e. the upgrades recommended as a result of background traffic growth only), and the results were compared to the forecast background conditions to determine what effects the additional development traffic will have on the surrounding roadway network. The resulting performance results are summarized in the second column of Table 9.7. Note that these results reflect full build-out of the Study Area. As shown, several problematic locations have been identified, and are discussed in more detail as follows:

Gibsons Way and Venture Way / Mahon Road – Due to the recommended closure of Park Road at Gibsons Way, the traffic loading on this intersection is expected to increase as a result of the shift of traffic via a new Park Road – Venture Way connection. As a result, it is expected that the operation of the Gibsons Way and Venture Way / Mahon Road intersection will decline. Although the overall intersec-

tion LOS is E, there are several localized movement failures that will need to be addressed including the southbound movements from Venture Way (as a result of the shared through/left turn lane), and the eastbound movements on Gibsons Way (as a result of the single shared left/through/right turn lane). It is recommended that the southbound Venture Way approach be reconfigured to provide a designated left turn lane with a shared through/right turn lane, and the eastbound Gibsons Way approach be widened to two lanes (shared left/through, and through/right). With these improvements, the performance of this intersection can be improved to a LOS B as shown in Table 9.7.

Gibsons Way and Sunnycrest Road / Shaw Road – The traffic demand at Sunnycrest Road will also increase significantly as a result of the commercial development along this roadway, and it's importance as the main north-south connector for the neighbourhood. As a result, the southbound left turn movement from Sunnycrest Road onto Gibsons Way is expected to experience a notable failure by full build-out of the Study Area. Because there is no viable alternate route for this movement with the defined land use plan, and the traffic volumes through this intersection are significant, traffic signal control is required. However, if this improvement is to be viable, under the current configuration, traffic signal control cannot be maintained at the Gibsons Way and Shaw Road intersection due to the close proximity of the two intersections (approximately 100 metres).

Table 9.7 Level of Service Summary of Future Conditions

Study Intersection	Forecast Background	Forecast Combined	Forecast Combined
Study Intersection	(With Base Improvements)	(With Base Improvements)	(With Proposed Upgrades)
Gibsons Way and Payne Road	С	С	С
Gibsons Way and Venture Way/ Mahon	В	E	В
Road			
Gibsons Way and Park Road	n/a	n/a	n/a
Gibsons Way and Sunnycrest Road	D (Sunnycrest)	F (Sunnycrest)	С
	A (Gibsons Way)	A (Gibsons Way)	
Gibsons Way and Shaw Road / Mall	В	С	n/a
Access			
Gibsons Way and North Road/School	В	С	D
Road			
Reed Road and North Road	E (Reed Rd)	F (Reed Rd)	В
	A (North Rd)	A (North Rd)	
Reed Road and Park Road	B (Park Rd)	B (Park Rd)	B (Park Rd)
	A ( Reed Rd)	A ( Reed Rd)	A ( Reed Rd)

A small amount of development may proceed in the Plan area before signalization of Sunnycrest Road is required, however the level of service at this intersection will decline over time as development progresses. The timing of the signalization will be demand driven, and when necessary to meet MOT standards. The demand for signalization will need to be reviewed for each development application until such time that the signal is warranted and implemented.

Through the development of this Plan, a number of options were considered to address the challenges between the Sunnycrest Road and Shaw Road intersections. Options reviewed included the removal of the signal at Shaw Road, combined with limiting traffic movement at that intersection and serving pedestrians across Gibsons Way at Sunnycrest Road. Recognizing the need to facilitate Shaw Road traffic in all directions, consideration was also given to better utilizing O'Shea Road – both east bound and west bound with a potential link to Mahon Road. Another option considered was long term acquisition of property to realign Shaw Road to meet with Sunnycrest Road; combining the two existing tee intersections into a single four way intersection. All options have appreciable challenges.

As previously discussed, solid attempts were made within the scope of this study to identify a coordinated solution between the Shaw Road and Sunnycrest Road intersections. However, through the review process for this Plan, insufficient consensus was obtained from stakeholders and the public to document a solution herein. As such, further study is required. Further assessing the

options available extend beyond the scope of this Upper Gibsons Neighbourhood Plan and, therefore, will need to be evaluated as a separate initiative(s) associated with the development process. Such initiatives should also consider the future demands from Gospel Rock and other potential transportation linkages to the Sunshine Coast Regional District or municipal boundary extensions.

Gibsons Way and School Road – The northbound approach to this intersection (along School Road) is currently a single shared left/through/right turn lane. Long queues (greater than 100m) are expected to develop on this approach as a result of this lane configuration and expected increased traffic loading from the development of the Study Area. It is recommended to widen this approach to provide a designated northbound left turn storage lane and a shared through/right turn lane from the School Road approach. As shown in Table 9.7, the performance of this intersection is expected to decrease to a LOS D with the proposed upgrades in place. This is a result of diverted trips from the Shaw Road intersection (in the absence of an alternate connection between Shaw Road and Gibsons Way). However, even with this overall decline in intersection performance, all movements are expected to operate within acceptable limits.

**Reed Road and North Road** – The high demand for the eastbound left turn from Reed Road to northbound on Highway 101 will result in a notable failure of this movement. The implementation of traffic signal control at the Reed Road & North Road intersection is recommended.

The performance of the 'Road C' (label on figures) access to Payne Road and the Sunnycrest Road access to Reed Road were also evaluated for the forecast combined conditions. It was found that both of these intersections will operate well within acceptable performance limits up to full build-out of the Upper Gibsons Neighbourhood.

The impacts that the proposed development will have on the Kiwanis Way intersection with North Road are expected to be minimal, as motorists will choose to use either the signalized intersection of Reed Road and North Road or Gibsons Way and Sunnycrest instead of attempting to make a difficult left turn movement out of Kiwanis Way. A connection to Kiwanis Way is recommended from a network perspective, however no improvements to the intersection with North Road are required.

In order to discourage the use of Aurora Way for short-cutting while maintaining the community connectivity within this area, it is recommended that Aurora Way receive some form of traffic calming, pending local consultation, to discourage short-cutting and speeding.

The forecast combined road network performance summary is provided in Figure 9.13 for the case where all recommended upgrades are implemented. As can be seen, with the 'Base Improvements' and 'Proposed Additional Upgrades', all study intersection perform at or above LOS E, which is considered an acceptable condition. This figure also shows schematically the recommended lane configurations and traffic control.

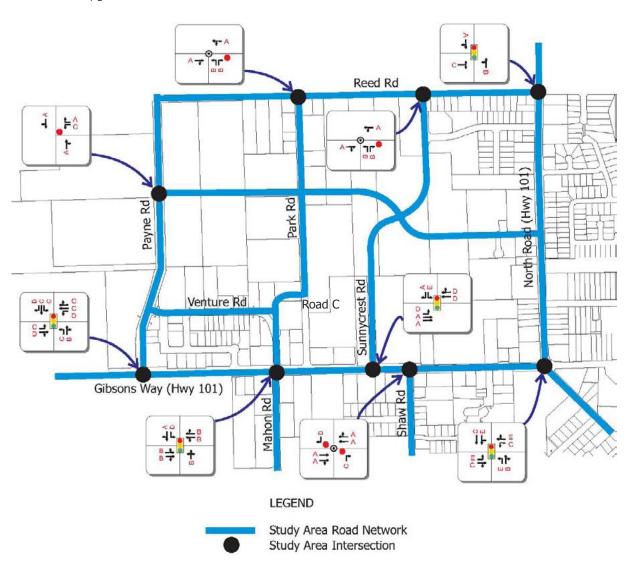
# 9.4.4 Summary of Recommended Upgrades for Combined Conditions

In addition to the recommended upgrades for the background conditions only, the following additional upgrades are recommended in order to accommodate the traffic generated by full build-out of the Upper Gibsons Neighbourhood. It should be noted that these improvements are triggered through the development of the Study Area and are directly attributable to the proposed development.

- o Gibsons Way and Venture Road / Mahon Road Laning Upgrades Reconfigure the Venture Way approach to provide a designated left turn lane with a shared through/right turn lane, and widen the eastbound Gibsons Way approach be to two lanes (shared left/through, and through/right). The Ministry of Transportation has already made a commitment as part of their 2006 program to widen and improve turning movements on Gibsons Way between Payne Road and Venture Way / Mahon Road. These improvements are consistent with the recommendations for the UGNP, but are not included in the capital works required by the UGNP.
- o New traffic signal control at Gibsons Way and Sunnycrest Road (with a new eastbound left-turn lane off of Gibsons Way). Further study is required in order to coordinate this intersection upgrade with the Shaw Road intersection. Refer to the above section for further discussion.
- o Gibsons Way and School Road / North Road Laning Upgrades Widen the northbound School Road approach to provide a designated northbound left turn storage lane and a shared through/right turn lane.

Figure 9.13 Forecast (+20 year) Combined Road Network Performance (PM Peak)

\*With Noted Upgrades



- o New traffic signal control at the Reed Road & North Road intersection.
- o Traffic calming on Aurora Way.

# 9.5 Internal Roadway Network

The internal roadway previously recommended in the Framework Plan was revised to reflect operational and safety improvements identified through the Transportation Review. In particular, the following changes have been recommended:

The first recommended change of note involves the three previously proposed accesses onto Payne Road from the development (Road C, Road D, Road E). These site access points were reviewed in order to provide more technical guidance as to which accesses were required from a traffic capacity standpoint, as well as from a roadway functionality perspective, and it was found that all three accesses are not required. In addition, while not anticipated in the foreseeable future, in light of the potential for a future Gibsons Way Bypass along

Payne Road, it is recommended that new accesses to and from Payne Road be minimized as much as possible, for both operational and safety reasons. As such, it is recommended that Roads C, D and E be consolidated into a single access point onto Payne Road, referred to from here on as Road 'C'.

The original Framework Plan shows a number of single lots planned that will front onto both Payne and Reed Roads. Again, additional access onto either of these roadways is not desirable for reasons relating to a potential future Gibsons Way Bypass, as well as community interconnectivity. It is recommended that the internal road network be reconfigured such that access to all properties within the development is possible from within the site.

With the recommended closure of Park Road at Gibsons Way, Sunnycrest Road will act as the main north-south collector for the site (discussed in more detail below). It is recommended that Sunnycrest Road become a continuous roadway between Gibsons Way and Reed Road.

Road 'C' will act as the main east-west collector through the site, and a continuous link from Payne Road to North Road is recommended in order to maintain flow through the site, and eliminate unnecessary intersections. It is recommended that 'Road C' be a continuous roadway between Payne Road and North Road, connecting it with the existing Kiwanis Way. However, the function of the portion between Sunnycrest and North Road will be lower than the portion from Payne to Sunnycrest.

The details of the local road system can not be developed without a subdivision layout, which extends beyond the scope of this Plan. There is flexibility in how the local road networks connect with the major system, provided typical design standards are applied. The Town will develop the local road network as a separate initiative. It is recommended that the layout of the local road network consider efficient subdivision and coordination between adjacent properties. It is assumed that at all local roadway intersections with collector roads, the local roadway would be stop controlled with free flow along the collector roadway.

The traffic control requirements for the internal roadway network were also considered. At both the intersections of Park Road and Road C and Sunnycrest Road and Road C, roundabouts are suggested. These will help to provide continuous traffic flow along the collector roadways, act to control traffic speeds, as well as provide additional landscaping and beautification opportunities. Roundabouts should be designed to accommodate transport and transit vehicles, as well as pedestrians and cyclists. A right of way diameter of 40 meters should be planned for the roundabouts.

Following the completion of the Framework Plan, concerns and comments raised by the Town resulted in changes to the proposed primary internal roadway network, as shown schematically in Figure 9.14.

### 9.5.1 Internal Road Network Classification

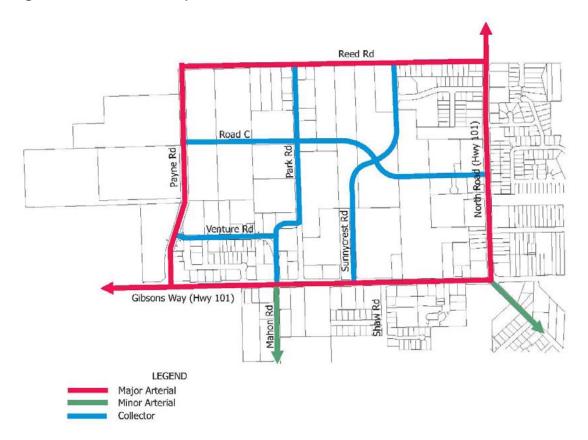
The internal roadway network for the Study Area has been divided into three roadway classifications, which are generally consistent with classifications designated in the current Town of Gibsons Road Network Plan. While terminology has been chosen to maintain consistency, the corresponding cross-sections have been customized to meet the unique needs of the Plan Area. While every attempt has been made to remain consistent with the original Framework Plan, some changes are recommended to address functional, safety, and long term maintenance issues. The proposed road classes are described as follows:

Collector Roads – Collector Roads provide two functions – mobility within an area as well as access to adjacent properties. Within the Upper Gibsons Neighbourhood, it is intended that the collector roads serve as the primary route for traffic traveling into and out of the Study Area, rather than traffic using local streets for this purpose.

Local Roads – The function of local roadways is to provide access to adjacent properties. In the case of the Upper Gibsons Neighbourhood, local roadways will serve primarily residential uses, although commercial, institutional or industrial land uses can also be served by local roads. Local streets are not intended to accommodate through traffic traveling through a neighbourhood. Traffic movement on local streets is incidental, and primarily involves travel to and from a collector or an arterial road.

Lanes – The function of the lane is solely for the purpose of providing access to properties fronting Payne Road and Reed Road, as well as access for municipal services.

Figure 9.14 Internal Roadway Network



Note: Road alignments are shown conceptually and do not indicate right-of-ways.

The collector roads within the Upper Gibsons Neighbourhood are identified on Figure 9.14 and include Park Road, Road 'C'/Kiwanis Way, and Sunnycrest Road. All other roadways within the Upper Gibsons Neighbourhood not designated as collector, are assumed to operate as local roads.

It should be noted that although the existing portions of Sunnycrest Road and Park Road have been designated as 'Minor Arterial' roadways in the Town of Gibsons Road Network Plan, due to the type of land use being served, and relatively low level of traffic demand expected on these two roadways, it is recommended that the classification of these two roadways be downgraded to collector status. In addition, the classification of Kiwanis Way has been upgraded from a local roadway to collector, to provide the continuity of the collector 'Road C' to North Road. The classification of the remaining external roadways is not expected to change.

### 9.5.2 Recommended Road Cross-Sections

For the designated roadway classifications described, cross-section details have been proposed. These have also been developed in an attempt to remain as consistent as possible with the initial road cross sections provided in the Framework Plan. Some key influences to note in the development of these cross sections include the following:

It was desired to maintain biofiltration stormwater swales. A default 3.0m wide swale was assumed for all roadway types.

There is interest in maintaining minimal roadway cross-sections. Wherever possible, and maintaining adequate safety and operation of the roadway, cross-section component widths have been minimized.

Consistent with the objectives of providing a high focus on alternate mode transportation (i.e. bicycle, pedestrian, public transit) for the Upper Gibsons Neighbourhood Plan, the cross-sections were developed to safely accommodate all uses. However, local roads are not designed to accommodate public transit vehicles.

Also, as part of the 'sustainable development' approach attributed to the Upper Gibsons Neighbourhood, parking on collector roadways has been minimized wherever possible, and the option to provide landscaped parking 'pockets' has been considered.

Table 9.8 summarizes the recommended cross sectional elements for each class of road. Corresponding graphics are shown in Figures 9.15 to 9.18. These cross-sections have been customized specifically for use in the Upper Gibsons Neighbourhood.

The collector roads have been divided into two types – Sunnycrest Road and other Neighbourhood Roads. Due to the commercial activity, associated higher traffic volumes and level of road network function, a cross-section specific to Sunnycrest Road has been developed. Sunnycrest Road is characterized by a landscaped centre median, and no parking provisions. It is envisioned that direct property access will not be permitted to this portion of Sunnycrest Road. Developments should either back on, or gain access from the internal road network.

For the southern portion of Sunnycrest Road (between Gibsons Way and 'Road C'), where the commercial activity and higher traffic volumes are expected, a typical 4.3m wide shared bike/travel lane is recommended. Further north (between 'Road C' and Reed Road), where traffic volumes are lower, a narrower 4.0m wide shared bike/travel lane is acceptable. Also, recognizing that a portion of this roadway is already built to future standards, and with the need for left-turn bays, it is expected that the centre medium will be eliminated between Gibsons Way and Road C.

Table 9.8 Internal Roadway Cross-Section Details

	Collector (Sunnycrest) On-Road Bicycle Provision	Collector (Neighbour- hood Roads) On-Road Bicycle Provision	Local Parking Pockets (One Side Only)	Lane
Right-of-Way	24m	20m	16m	6m
Travel Lanes	2	2	2	2
Median	3.0m landscaped	n/a	n/a	n/a
	median in new portion			
	north of the existing			
	mall			
Width of Travel Lanes	4.3/4.0m	4.0m	3.0m	3.0m <sup>2</sup>
Design Speed	50 km/hr	50 km/hr	30 km/hr	20 km/hr
Curb Type	Barrier	Rollover	Rollover	None
On-Street Parking	No	Parking Pockets	Parking Pockets	None
		(one side)	(one side)	
Pedestrians	1.5m Sidewalk	1.5m Sidewalk	1.5m Sidewalk (one	None
	(both sides)	(both sides)	side)	
Cyclists	Wide Shared	Wide Shared	Shared Roadway	None
	Lane	Lane		
Driveway Access	Limited <sup>1</sup>	Yes	Yes	Yes

Note:All curbing will be designed with appropriately spaced cuts, conduits or letdowns to facilitate drainage into the biofiltration swale. See Section 6 – Stormwater for further discussion.

1Access permitted in high density zones, but not intended for single-family residential properties, which are to be accessed from the local road network.

2Full width of lane will accommodate vehicle loading, thereby providing two 3.0m wide lanes, however paved portion shall be limited as shown in Figure 9.18 with reinforced shoulders to permit two-way travel.

Figure 9.15 Internal Roadway Cross-Sections - Local Roadway

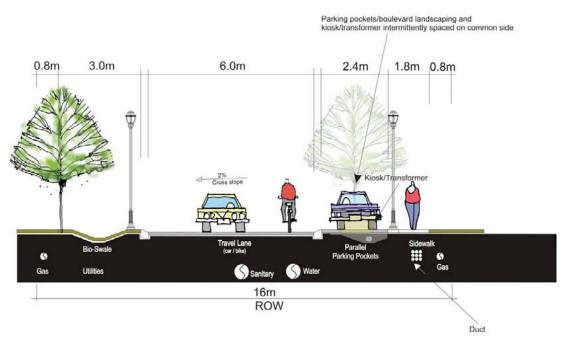


Figure 9.16 Internal Roadway Cross-Sections - Collector (Neighbourhood Roads) Option

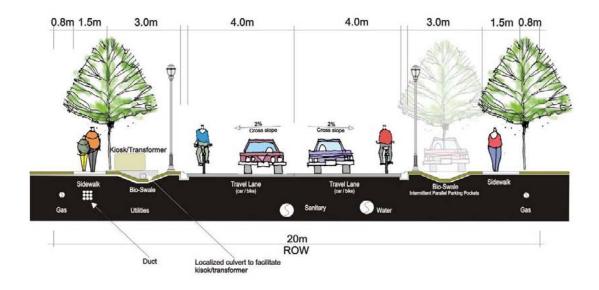


Figure 9.17 Internal Roadway Cross-Sections - Collector (Sunnycrest Road) Options

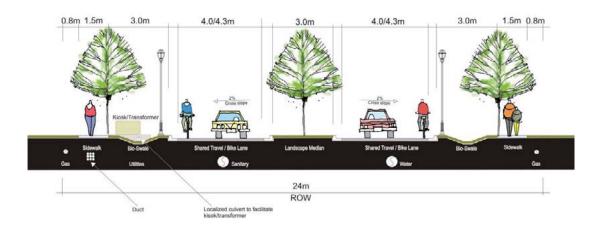
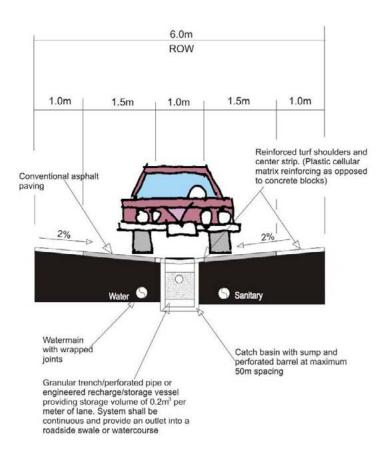


Figure 9.18 Internal Roadway Cross-Sections - Lane



The remaining collector roads (Park Road and 'Road C') have been designated as neighbourhood collectors, and instead of a land-scaped median, provide intermittent parking pockets on one side of the road. Due to lower traffic volumes expected on these two roadways, 4.0m shared bike/travel lanes are acceptable.

As discussed, the classification of the existing portions of Park Road, Sunnycrest Road, and Kiwanis Way will change. As such, the following existing roadway upgrades will be required:

Upgrade Park Road Cross-Section to Collector Standard (approximately 700 metres) – The recommended cross-section can be accommodated in the existing 20 metre right-of-way. No property acquisition will be required. In the southern limit of Park Road, a portion is already built to an urban standard. Provided that minimum standards are being met, it is not necessary to reconstruct sections of the road unnecessarily. At the Town's discretion, the opportunity exists to make best use of existing infrastructure.

Upgrade Kiwanis Way Cross-Section to Collector Standard (approximately 100 metres) – The existing right-of-way on Kiwanis Way is 15.0m. Depending on the cross-section option chosen for this link, a maximum 2.5m additional right-of-way will need to be acquired to achieve a full collector standard. This roadway connection to Road C, however, is not essential and does not need to be upgraded immediately, allowing for the upgrade to be completed when there is redevelopment on the street or when it is required from the new development. Until such time, the existing right-of-way can be made to work in the interim. The need for this connection will be triggered with the proposed multi-family development on this street is implemented.

Complete west half of Sunnycrest Road to Collector Standard (approximately 200 metres) – The existing right-of-way for the southern portion of Sunnycrest Road is 20.0 metres wide. Through elimination of the centre landscaped median through this section, this existing right-of-way is sufficient, otherwise approximately 2.4m of additional right-of-way will be required. Given that the east half of the existing road was recently constructed, the remainder of the road will need to be customized to suit.

### 9.5.3 Alternate Mode Provisions

As shown in the cross-section details, pedestrian and cyclist facilities will be provided on all internal roadways through either shared or designated facilities. The Town of Gibsons Trail and Bicycle Network Master Plan (2001) indicates on-street bicycle facilities along Gibsons Way, North Road, School Road, Payne Road, Mahon Road and Shaw Road, which will provide continuity of the proposed bicycle facilities onto the surrounding roadway network. The accommodation of cyclists across Gibsons Way and North Road to access the existing cycling network should be considered in the implementation and/or upgrading of the internal Upper Gibsons Neighbourhood road network. This may include designated bicycle lanes through the intersections, marked approaches to the intersections for cyclists, and pushbuttons or detectors for cyclists to activate the signals. The proposed cycling facilities are shown schematically in Figure 9.19.

The development of off-street pedestrian trails (i.e. 'Greenbelt Corridors') within the neighbourhood for recreational and commuting uses represents one of the key opportunities that exist in Upper Gibsons. There are many areas where attractive trails could be developed to connect developments and to encourage walking through the site. Although not implemented specifically for bicycle use, the use of bicycles on these corridors will not be discouraged. As such, they should be designed to accommodate all users and should conform to the minimum 3.0m width for off-road multi-use pathways. These pathways shall apply to all public park and pedestrian corridors. The alignments of these corridors are for general guidance only and are expected to be refined by developers through the development application process.

Figure 9.19 Proposed Cycling Facilities



Note: See Figures 9.15 through to 9.18 for road cross sections and further details on accommodating cyclists. Road alignments are shown conceptually and do not indicate right-of-ways.

Specific consideration needs to be given to how the pathways interface with the road network, key transit nodes and to the surrounding community. No specific crossing facilities are required for local roads, however marked crossings are recommended for Collector Roads. Figure 9.20 – Proposed Multi-Use Pathway Crossings provides a schematic layout of both the pathway system and the recommended marked pedestrian crossings. Details for the mid-block specific crossing type is provided in Figure 9.21.

Recd Rd

Wenture Rd

Venture Rd

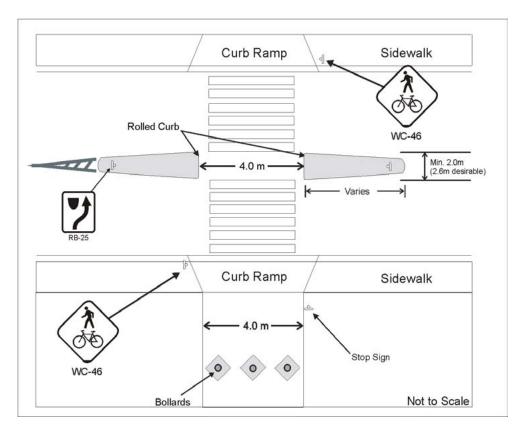
Venture Rd

Wenture R

Figure 9.20 Proposed Multi-Purpose Pathway Crossings

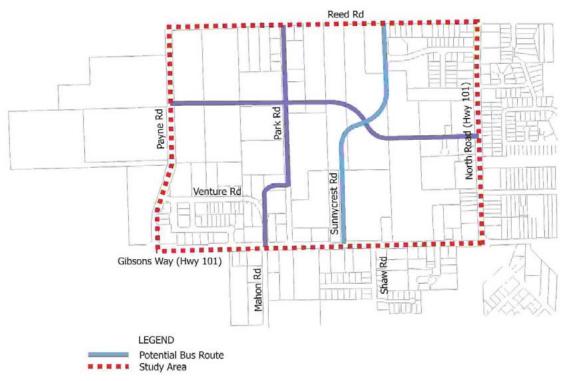
Note: Road alignments are shown conceptually and do not indicate right-of-ways.

Figure 9.21 Mid-Block Specific Crossing Type



Finally, public transit access through the neighbourhood should be considered as the Upper Gibsons Neighbourhood develops. However, specific transit routes have not been identified as part of this review as they are dependant on demand and overall network routes established by BC Transit. However, the cross-sections have been developed to accommodate transit vehicles on all Collector roads. As such, the potential transit network is shown in Figure 9.22.

Figure 9.22 Roads Designed for Transit



Note: Road alignments are shown conceptually and do not indicate right-of-ways

### 9.6 Recommendations

Through a review of existing and forecast (+20 years) traffic conditions on the key roadway network surrounding the site, a set of recommended roadway upgrades and provisions was established for both the Background Conditions (no Upper Gibsons Neighbourhood development), and the Combined Conditions (with the Upper Gibsons Neighbourhood development). These are summarized in Table 9.9, and shown schematically in Figure 9.23. It should be noted that because a definitive solution to the Shaw Road intersection could not obtain stakeholder consensus within the scope of this Plan, it remains an outstanding item requiring further investigation, either separate, or as part of the development process. As such, the details and costs of a solution can not be defined herein.

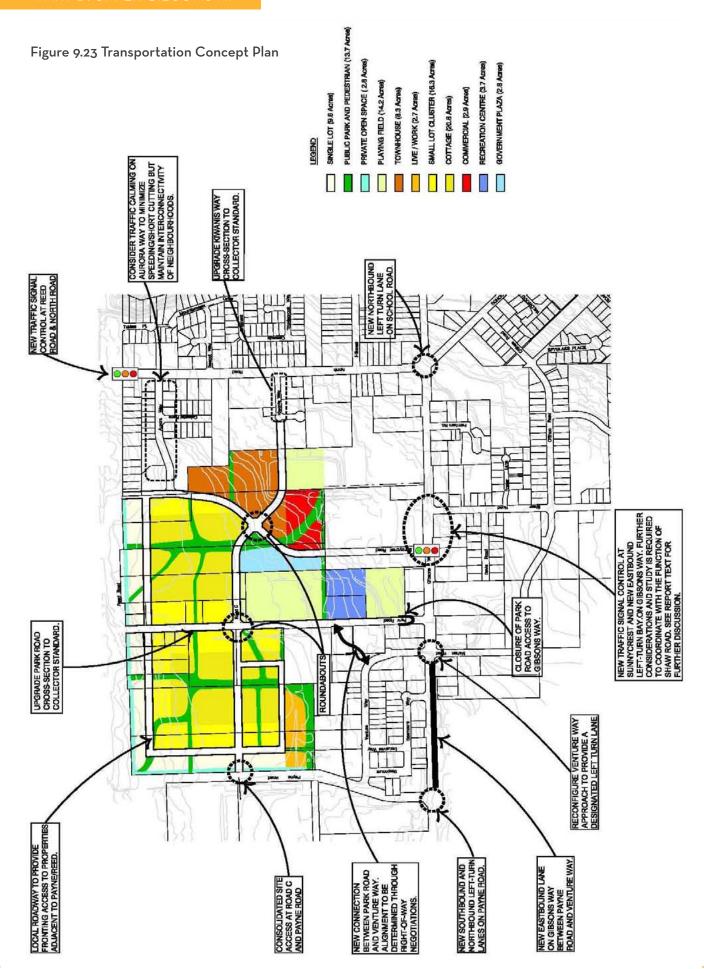
Also summarized in Table 9.9 are preliminary cost estimates for each of the recommended upgrades. These estimates have been prepared as 'Class D' only and based on 2005 prices. The cost estimates have been provided for a general capital planning purposes and should be revisited and refined once functional design and/or detailed design is completed for the improvements.

A preliminary review of implementation timing associated with each of the roadway upgrades has also been summarized in Table 9.9. This has been completed in general terms only, and in isolation of other servicing needs. The reader shall refer to Section 15 – Phasing and Implementation for further discussion.

Table 9.9 Recommended Roadway Upgrades

Recommended Upgrade	Estimated Cost	Implementation Timing
Background Conditions		
(Required by 20-Year Horizon Independent of Development – M	lav Be Triggered	Earlier By UGNP Development)
Payne Road & Gibsons Way	n/a	Commitment by MOT in 2006 program
New Northbound and Southbound Left Turn Lanes on Payne Road (30m)		
Park Road & Gibsons Way	\$85,000	20-Year Horizon or Opening Day of Development
•	\$65,000	20 real monzon of opening bay of bevelopment
Closure of Park Road at Gibsons Way  New Collector Roadway Connection	\$540,000	With Closure of Park Road at Gibsons Way
•	φ5+0,000	With Closure of Fark Road at Glosoffs Way
Park Road to Venture Way (200m)  Combined Conditions		
(Triggered By UGNP Development Only)	- /-	Constitution II MOT : 200C annual
Gibsons Way	n/a	Commitment by MOT in 2006 program
New Eastbound Lane from Payne Road to Mahon (400m)	¢10.000	-
Venture Way at Gibsons Way	\$10,000	
Reconfigure Venture Road Provide Left Turn Lane	1	
Sunnycrest Road & Gibsons Way	\$150,000	On demand once development reaches a level
New Traffic Signal Control		required by MOT
Sunnycrest Road & Gibsons Way	\$180,000	With Implementation of Traffic Signal Control at
New Eastbound Left Turn Lane on Gibsons Way (100m)		Sunnycrest Road
School Road / North Road & Gibsons Way	\$90,000	With Implementation of Traffic Signal Control at
New Northbound Left Turn Lane on School Road (100m)		Sunnycrest Road
Reed Road & North Road	\$150,000	Development of NW and/or NE Quadrants
New Traffic Signal Control		
Kiwanis Way	\$280,000	Road C Construction
Upgrade to Collector Standard (200m)		
Sunnycrest Road	\$230,000	
Upgrade to Collector Standard (200m)		
Aurora Way	\$20,000	Completion of Sunnycrest Road Extension
Traffic Calming (Speed Humps)		
Recommended On-Site Works		
(Required For UGNP Development)		
Park Road	\$1,245,000	Opening Day of Development
	Ţ_,Z 13,000	
Upgrade to Collector Standard (700m) Sunnycrest Road	\$1,760,000	As Development Requires
	φ±, / 00,000	As Development requires
Construct Extension to Collector Standard (600m)	¢2.700.000	As Development Province
'Road C'	\$2,700,000	As Development Requires
Construct Roadway to Collector Standard (1000m)	4000	Lucia S. L. G.
Sunnycrest Road & 'Road C'	\$200,000	With Roadway Construction
Roundabout Construction		
Park Road & 'Road C'	\$200,000	With Roadway Construction
Roundabout Construction		ails on costs. Road costs also include drainage and

Note: Costs do not include land acquisition. Refer to Appendices for further details on costs. Road costs also include drainage and lighting.



# 10.0 SANITARY

The Town of Gibsons sanitary sewer system can be divided into two distinct collection systems. One system drains by gravity to the sewage treatment plant while the other drains to a pump station in lower Gibsons where it is pumped up to the treatment plant. The Upper Gibsons Neighbourhood Area is primarily contained within the gravity fed system, but also has lands to the east that enter into the area fed to the pumped system.

The most recent sewer master plan was completed in 1991 by Dayton & Knight Ltd. The planning horizon for that report was established at 10,000 people for the collection system. In 1996 Urban Systems was involved in the design and construction of the Mahon Road sanitary sewer which serves as the primary trunk servicing the Upper Gibsons Neighbourhood area.

Given that the estimated build-out is only marginally higher than current Official Community Plan densities it is estimated that sufficient downstream capacity exists to support this development.

Design criteria used for the analyses were obtained from the current Town of Gibsons Subdivision and Development Bylaw. While they may be slightly conservative with the successful implementation of water conservation measures, this approach does not have an influence on the required infrastructure sizing. Table 10.1 summarizes the values:

Table 10.1 Design Criteria Values

Design Flow (Residential)	410 L/cap/day
Design Flow (Commercial)	22,500 L/day/ha
Peaking Factor	4 (1000 < population < 3000)
Inflow and Infiltration	0.10 L/s/ha

Based on the projected land uses as described in Figure 8.1 – Land Use, the total build out sewage demands for this neighbourhood are summarized below:

Table 10.2 Total Build Out Sewage Demands

	West Catchment	Center Catchment	East Catchment
Average Dry Weather Flow	2.58 L/s	3.43 L/s	4.40 L/s
Peak Dry Weather Flow	10.33 L/s	13.72 L/s	17.60 L/s
Peak Wet Weather Flow	11.27 L/s	14.79 L/s	18.30 L/s

Details for all sanitary calculations can be found in the Appendices.

# 10.1 Existing System

The existing Mahon Road trunk sewer flows down Mahon Road from Gibsons Way to Shaw Road via O'Shea Road, where it continues down Shaw Road and then to the Sewage Treatment Plant. There is adequate capacity within this trunk sewer to service the entire Upper Gibsons Neighbourhood.

Other connection points considered for the development area include:

### Park Road and Gibsons Way

The sanitary sewer flows down a right-of-way (ROW) to Davis Road, and eventually down to the pump station in lower Gibsons. With a history of problems, the Town has expressed concerns with the existing capacity of the 150mm sanitary sewer on Davis Road, and as such, was considered to have inadequate capacity to convey any additional flow from the new development area.

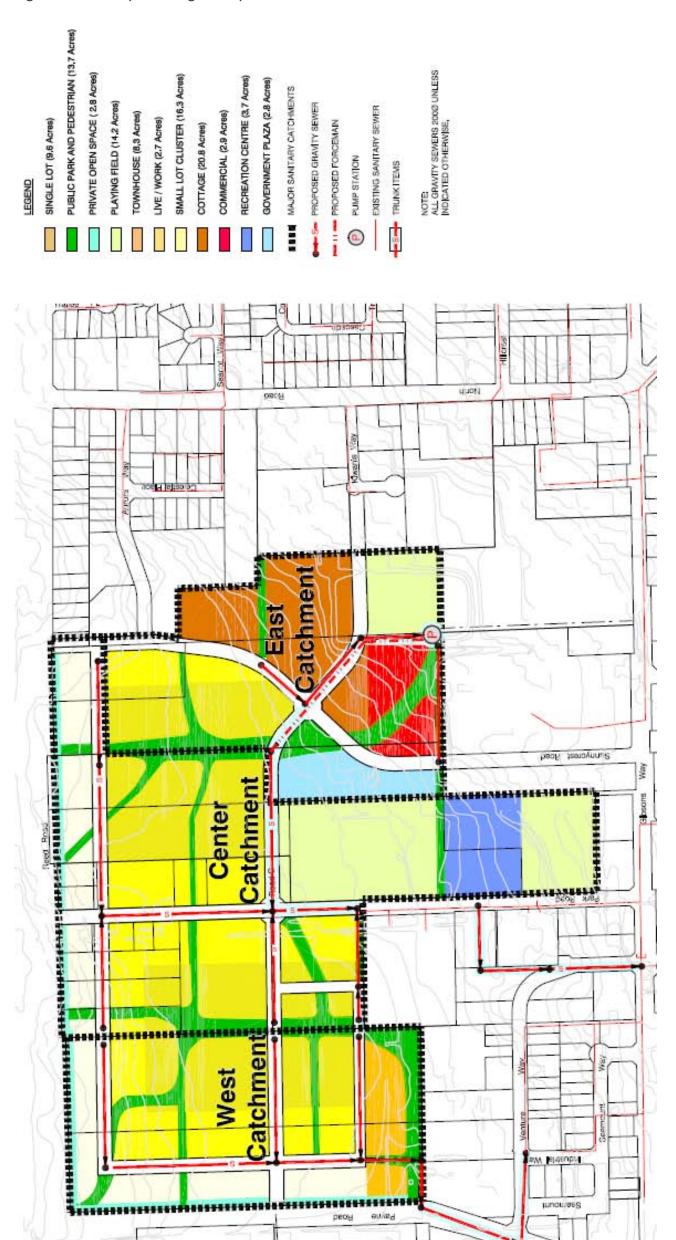
## Kiwanis Way and North Road

An option for the East Catchment would involve a tie into the existing 200mm sanitary sewer on North Road at Kiwanis Way. While it is suspected that adequate capacity exists in the existing sewer system, this cannot be confirmed without undertaking background flow monitoring and consideration for capacity of the existing pump station.

### 10.2 Catchments

As shown in Figures 10.1, the development area is divided into three (3) major catchments, which are referred to as West, Center, and East catchments. The existing topography of the development area slopes from north to south and is relatively flat from west to east.

Figure 10.1 Sanitary Servicing Concept



### 10.2.1 West Catchment

The West Catchment is bounded by Payne Road to the west and the topographic high also represented by the open space corridor. The peak wet weather flow generated from this sub-catchment is estimated at 11 L/s.

The topography of this catchment runs from the north to the southwest, therefore, the best collection point is at the southwest corner of the catchment. Flows are then routed through a common ROW to be shared with the required storm sewers to Payne Road.

The proposed sanitary sewer will be routed down Payne Road to Venture Way, at which point the sanitary system is tied into the existing 200mm diameter sewer on Venture Way at Industrial Way. This existing sewer eventually connects into the existing 300mm trunk on Mahon Road at Gibsons Way and is estimated to have sufficient capacity to service this additional development.

### 10.2.2 Center Catchment

The Center Catchment is essentially bounded by the two primary open space corridors. The peak flow generated from this sub-catchment is 15 L/s.

The topography of this sub-catchment permits gravity flow to Park Road, which runs central to the catchment. There is opportunity to utilize the upper portion of the existing 200mm sewer. However, due to downstream capacity limitations an interceptor sewer is required to divert flows to Mahon Road.

Given that a new road link is proposed from Park Road to Venture Way, it is most efficient that the new sanitary sewer follow this same alignment, however, an alternate servicing alignment may also be defined. If a roadway corridor is not secured, it is recommended that an independent utility right-of-way be sought for the sole purposes of the sanitary sewer.

### 10.2.3 East Catchment

The peak flow generated from this sub-catchment is 18 L/s. This catchment naturally drains to a low point at the southeast corner of the proposed commercial property.

In order to service this catchment entirely by gravity, a new sewer line would need to be constructed east to North Road or south to Gibsons Way. Given the right-of-way requirements, the impact on existing properties, and construction costs, this was not considered further in the investigation.

Even if a gravity connection was created to North Road or Gibsons Way, sewerage would flow to the existing pump station at the southern limit of the Town, then having to be pumped back up to the sewage treatment plant. As such, pumping can not be avoided.

All sewage from a proposed communal pump station is routed to the Center catchment sewer, which then ties into the existing trunk sewer on Mahon Road.

All proposed gravity sanitary sewers will be 200mm diameter, in accordance with minimum standards.

# 10.3 Phasing

Given that minimal infrastructure exists to the Plan Area, off site sanitary extensions are required before appreciable development can occur. Phasing is discussed in further detail in Section 15.0 of this report.

#### **10.4 Costs**

Off-site construction costs for each catchment are summarized below:

Table 10.3 Off-Site Construction Costs

West Catchment	\$ 220,000
Center Catchment	\$ 230,000
East Catchment	\$ 650,000

Outlined below are works included for each of the above listed costs. Please refer to Figure 10.1.

### 10.4.1 West Catchment

Off-site works required to service the West catchment include a 200mm sewer on Payne Road from the southwest corner of the West catchment down to Venture, and down Venture, where the sewer ties into the existing 200mm sewer on Venture Way.

### 10.4.2 Center Catchment

Off-site works required to service the Center catchment include a 200mm sewer from the existing 200mm sewer on Park Road to the 300mm trunk sewer on Mahon Road at Gibsons Way.

### 10.4.3 East Catchment

Critical and off-site works required to service the East catchment include a pump station in the commercial zone, 100mm force main, and 200mm sewer located within the Center catchment. This 200mm sewer is required to convey flows from the pump station through the Center catchment and to the existing 200mm sewer on Park Road. All off-site works required for the Center catchment will also be required to convey the flows to the existing 300mm trunk on Mahon Road at Gibsons Way and service the East catchment. Therefore the costs required to service the East and Central catchments total \$ 880,000, all of which are trunk items.

All costs include 35% Contingency, 10% Engineering, and 7% GST. All costs include any required restoration costs; however, do not include any ROW acquisition costs. Detailed cost estimates can be found in Appendices. Other sanitary works costs associated with road works can also be found in Appendices.

# 11.0 WATER SUPPLY

The Upper Gibsons Neighbourhood area is located in Pressure Zone 3 of the Town of Gibsons. A Water Supply Strategic Plan for the Town of Gibsons was completed by Delcan in April, 2005. In addition, Urban Systems completed a water modelling study and report earlier in 2003. Delcan has confirmed, as per the water modelling report, that there is insufficient fire storage and conveyance capabilities within the water zones in Gibsons. A new 1500m3 Zone 3 reservoir and a 300mm distribution main are required to service this development area. Delcan has also identified a Zone 2 reservoir in the Plan Area to improve fire flow for other areas external to the Plan Area. The Plan Area development will need to secure necessary rights-of-ways for both the reservoir and associated access road.

As outlined in Section 8.0, the build out population for this area is estimated at 1,995. This represents a 6.6% increase in build out population previously analyzed for the water model report. This minor increase will only have a negligible impact on the amount of storage required, and will have no impact on offsite water main sizing improvements.

The following design criteria were used for water demand calculations:

Table 11.1 Design Criteria Values

Average Day Demand	425 L/cap/day
Maximum Day Demand	850 L/cap/day
Peak Hour Demand	1700 L/cap/day

While these values are slightly less than the current Town of Gibsons design criteria, they are consistent with those criteria used in both the Urban Systems 2003 report and the Delcan 2005 report. These values may be conservative with the successful implementation of water conservation measures, but still felt realistic for design purposes. Demands for the Upper Gibsons Neighbourhood area are listed below.

Table 11.2 Demand

Average Day Demand	11.7 L/s	1,011,000 L/day
Maximum Day Demand	23.4 L/s	2,022,000 L/day
Peak Hour Demand	46.8 L/s	4,044,000 L/day

From a fire flow perspective, the following fire flow demands are consistent with previous planning reports:

Table 11.3 Fire Flow Demands

Single Family Residential	60 L/s
Multi-Family Residential	120 L/s
Commercial	120 L/s

Based on the above parameters, the proposed water distribution system is shown in Figure 11.1 – Water servicing Concept. All local watermains not shown will be 150 ø diameter, provided that no dead end mains are created; all mains shall loop.

Watermain sizes are governed by fire flow demands, therefore are not affected by the application of water conservation measures. However, water conservation measures will reduce the purchase of bulk water form the Sunshine Coast Regional District (SCRD) and meet the "sustainability" objective of the Plan. As such, water conservation measures should be applied by all developments, as outlined in Section 14.0 – Development Guidelines.

# 11.1 Phasing

There is limited opportunity to phase off-site improvements for the water system. As outlined in the Water Model report, the fire flow conveyance to this area is currently limited to 60 L/s. Reservoir storage is currently limited to supply a fire flow of 114 L/s for 2 hours. This is below current requirements for commercial fire flow in Zone 3. Therefore, it may be possible to allow limited Single Family (SF) development in advance of construction of the Zone 3 reservoir and supply main, with the understanding that this development will further reduce fire storage in Zone 3.

Any further development will require offsite improvement including a new Zone 3 reservoir and supply main. Further discussion on phasing is provided in Section 15.0.

### 11.2 Costs

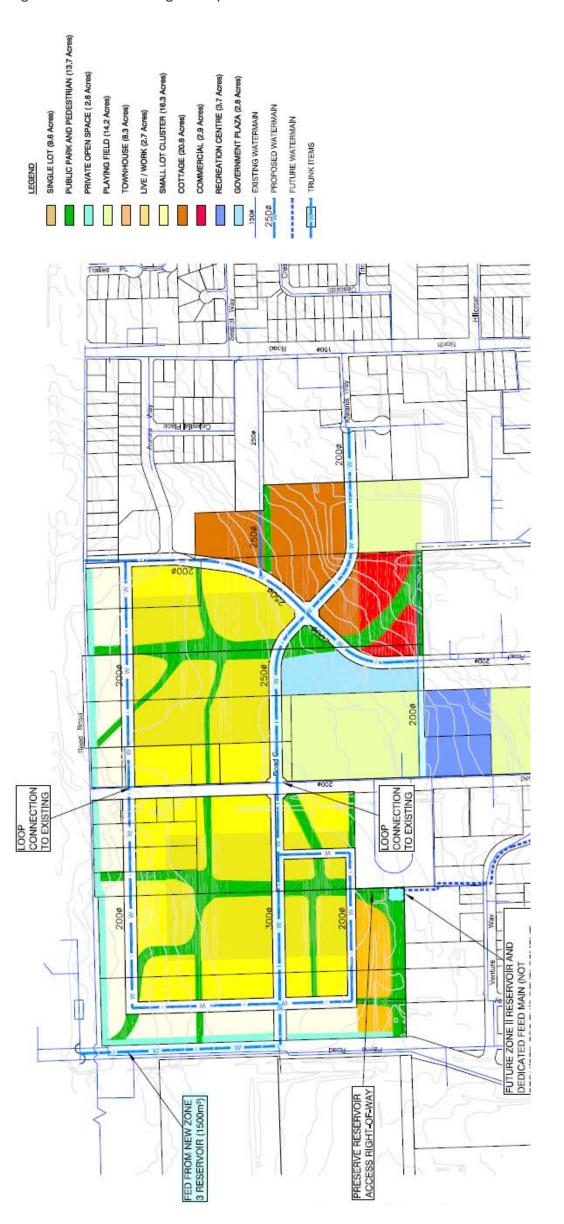
#### Table 11.4 Waterworks Construction Costs

Critical Waterworks	\$ 2,230,000
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Critical waterworks costs include a new 1500m3 reservoir, 300mm trunk from the reservoir to Park Road and a 250mm trunk from Park Road to North Road. Refer to Figure 11.1. Further definition of the trunk system and associated costs are provided in Section 15.0 – Phasing and Implementation.

Costs include 35% Contingency, 10% Engineering, and 7% GST. Costs do not include any restoration costs, as all works assumed to occur in conjunction with new road works. Costs also do not include any required ROW acquisitions. Detailed cost estimates can be found in Appendices. Other waterworks costs associated with road works can also be found in Appendices.

Figure 11.1 Water Servicing Concept



# 12.0 STORMWATER

### **Stormwater Objectives**

- o Promote the design of a stormwater management program that relies mainly on two green infrastructure strategies: (1) source control, and (2) open space
- Promote the design of a stormwater system that follows the open space system and enhances its landscape through the addition of water features, and park and habitat opportunities.
- Promote the design of a stormwater system that minimizes stormwater loading on local streams and releases water to Chaster, Charman and possibly Gibsons Creek or directly to the ocean at a regulated rate adjusted to the natural flow regimes of these streams.
- o Promote a cost-effective stormwater system that minimizes flooding in developed areas.
- o Provide information to developers and homeowners on the principles and processes of a green stormwater system in order to establish a knowledge base leading to realistic expectations about the system's purpose and performance.

The Framework Plan envisioned a long-term sustainable residential neighbourhood of which stormwater management is a crucial component. It clearly identified the sensitive stormwater context of the Plan Area by recognizing that Chaster, Charman and Gibsons Creeks have already been subject to the detrimental effects of development. It recognized that traditional drainage engineering would not be suitable to achieve that vision.

In order to achieve the vision, a principle objective of this and the Framework Plan was to retain some natural character of the Plan Area while at the same time facilitating development. As such, it developed the broad objectives listed above. This section builds on these objectives by providing further detail on they will be achieved.

The Framework Plan outlined three principle mitigation strategies; source control, surface storage, and underground storage. It is felt that source control best management practices (BMPs) and surface storage are the most suitable given the constraints of the area, and that large scale underground storage is economically challenging. In addition to the strategies identified by the Framework Plan, the application of a high flow diversion was also introduced.

The current land use of the Plan Area is predominantly undeveloped with small pockets of rural residential housing, and two large recreational playing fields. The area has been divided into three main portions – an East, Central, and West catchment. These catchments direct drainage into Chaster, Charman and Gibsons Creeks, respectively. Additionally, drainage from the SCRD, north of Reed Road, flows through the East catchment.

The strategies discussed in this Plan are based on analysis and experience obtained from the Charman Creek calibration project performed previously by Urban Systems for the Town of Gibsons. From this previous study, unit flowrates are predicted.

# 12.1 Overall Management Strategy

The overall management strategy needs to meet two goals; to mimic the natural characteristics of the Plan Area to the greatest extent possible, and to protect properties from the damaging effects of erosion and flooding. In order to meet these goals, BMPs and a combination of detention pond storage and/or a piped diversion need to be implemented.

# 12.1.1 Source Control Best Management Practices (BMPs)

BMPs are practices which mimic some of the processes within a natural watershed. They promote infiltration, provide retention storage, and slow runoff as it travels over surfaces. Runoff that is infiltrated and retained in the ground is also critical for maximizing dry weather base flows.

BMPs should be widely distributed throughout the Plan Area. They are not represented by one particular single feature. The distribution of different types of BMPs allows them to better mimic a natural watershed. It is known that the study area is dominated by an organic layer 0.5 to 0.75 m thick overlying dense impermeable silts and clays. As such, BMPs must be shallow and widely distributed.

The following is a brief list of BMPs that are appropriate for the Plan Area:

- o Retention of natural topsoil and vegetation
- o Biofiltration Swales open channel conveyance system fortified with organic topsoil and landscape treatment
- o Planter Boxes large-scale landscaped boxes which receive and control roof drainage. Most commonly applied on high density developments
- o Porous pavements asphalt or concrete surfaces that can pass water through to a reservoir layer for infiltration
- o Disconnected roof leaders building roof leaders that discharge to a pervious surface where runoff can infiltrate
- o Rain Gardens landscaping features which feature modest amounts of surface storage and plantings that promote evapotranspiration

Such BMPs are mandatory to meet the environmental objectives of this Plan. Further details on the application of these BMPs are provided in Section 14.0 – Development Guidelines.

A main feature of the entire Plan Area will be roadside biofiltration swales for local drainages. The biofiltration swales will provide conveyance, water quality treatment, a modicum of attenuation, and promote infiltration.

It should be noted that not all BMPs are suitable for every site. There is not a "one size fits all" solution. Each site should be evaluated on a case-by-case basis for suitability. In some instances, a BMP may function extremely well while in others it may not. However, it can be expected that over the total Plan Area in the order of half of the annual rainfall will be managed by BMPs.

#### 12.1.2 Stormwater Detention

Stormwater detention is a traditional method of mitigating development flows in downstream watercourses. Detention ponds store excess runoff, and release it at a predetermined rate into the receiving waters. While peak flows are attenuated, the watercourse is held at a moderate flow level for longer than pre-development conditions; banks may be wetter for longer periods of time which may still create some elevated levels of risk, as it is not possible to predict all storms or how our environment will change over time. Applying significant conservation in the design to eliminate risk will be cost prohibitive. With that said, detention ponds are still widely accepted and may be appropriate in some application for the Upper Gibsons Plan Area, although they have not been identified as part of the core stormwater management strategy for the Plan area.

The Framework Plan envisioned that a cascading system of detention storage and channels be integrated into the extensive park and open space system. In its current state, the west portion of the Plan Area (west of Park Road) is void of surface channel conveyance. In addition, the spine of the proposed open space network is located along the topographic high. Also, competing objectives are to maximize retention of natural vegetation with the open space corridors and best mimic the natural system. For these reasons, engineering a cascading system of detention storage and open channels into the open space network was deemed impractical and inappropriate. As such, using road side biofiltration swales combined with a high flow diversion system is considered to be the most appropriate approach for the west portion. Specific stormwater detention facilities will be required within the Plan area if the high flow diversion is not in place.

For the east portion of the Plan Area (east of Park Road), appreciable drainage enters the spine of the open space corridor via a culvert beneath Reed Road. While this system is known to dry up during dry summer months, some level of flow is available through much of the year. Historically, a defined channel existed from Reed Road through to Gibsons Way, however activities on private property have eliminated a large portion of the earlier channel, creating marsh-like conditions dispersed over a significant area, approximately from Sunnycrest Road to the school property. A well defined watercourse re-appears immediately north of the existing shopping mall.

The proposed open space corridor is significantly narrower than the predicted "marsh-like" zone, however the true extent of this zone can not be determined without subsurface investigations to map the flow of water. Given the historic watercourse prior to property disruption, it is proposed that a conveyance channel be reconstructed through the spine of this east open space corridor. This channel shall not simply be a "ditch", but be designed to reflect a natural watercourse with riparian vegetation. While a conveyance channel is appropriate, providing appreciable stormwater detention is still not felt practical. For reasons discussed previously, other branches of the open space network will not include specific stormwater conveyance. Development zones will be serviced by road-side biofiltration swales draining to a high flow diversion system, as discussed in following sub-sections.

### 12.1.3 Stormwater Diversion

A diversion functions as an overflow route for flows that can damage the receiving watercourse and is an alternative to stormwater detention. Baseflow will continue to contribute to the respective creeks. Flows above this level will be directed into the diversion pipe. With this approach, summer flows and winter base flows will remain largely within the creek. The successful application of BMPs within the development area is critical to help ensure base flows are minimally impacted by development. A properly designed diversion protects the watercourse from damaging high flows by providing a route outside of the natural watercourse. As such, the environmental objectives of the Framework Plan are not compromised by the diversion approach.

Additional benefits of a diversion are that they do not require additional land area, assuming they are constructed within public ROWs, require minimal maintenance, and provide improved long-term performance certainty. They are becoming more widely accepted in other communities.

## 12.2 Preferred Stormwater Servicing Approach

Through the options review as part of the Draft Report process, and consideration for drainage issues both within and outside of the Upper Gibsons Plan Area, it was determined that a high flow diversion was the best overall approach to managing high stormwater flows in Upper Gibsons. The preferred stormwater servicing strategy is shown in Figure 12.1 and has been devised to service significant lands beyond the limits of the Upper Gibsons Neighbourhood Plan area.

To accommodate flows from the Sunshine Coast Regional District (SCRD), re-construction of a watercourse through the east open space corridor is required. This watercourse is for the purpose of conveying flows mainly from the SCRD at their existing levels. It is not the intent for the Town of Gibsons to accommodate increased future flows beyond its boundary. It is assumed and expected that the SCRD will manage additional flows which may be generated in the future, if and when development occurs. Dialogue with the SCRD should take place in order for them to recognize this need, and for appropriate action to be taken on their part.

In addition, several segments of storm sewer on Payne Road require upgrade. With a recent redirection of Payne Road drainage to resolve flooding on private property, this sewer is now considered under capacity.

The strategy also includes an upgrade and extension of the storm sewer on North Road, which will service the existing development west of North Road from Gibsons Way to Reed Road. It will direct flows away from Gibsons Creek to the School Road storms sewer. The diversion of this additional area will relieve the steep outfalls to Gibsons Creek and consequently Gibsons Creek itself from potential damage which has already been acknowledged. Upgrading of the School Road storm sewer and outfall is required before the connection from North Road can be permitted.

With exception to those shown in Figure 12.1, the intent is to not extend specific storm sewers within the Plan area. In general, the internal drainage system will consist of roadside swales and off-road channels where required, however isolated use of piping will be required for driveway and road crossings, as well as for trunk diversion routes, and where topographic barriers need to be overcome. The location of swales within the roadway were shown previously in Figures 9.15 through 9.17. General guidelines are provided in Section 14.0 – Development Guidelines, but the details will need to be identified through the development design process.

## 12.3 Design Flows and Infrastructure Sizing

The servicing concept herein is not based on an exhaustive review of record drawings, topographic survey, or site reconnaissance. In addition, development densities, catchment boundaries, and the application of best management practices may ultimately change from what is assumed herein. Infrastructure sizing shown in Figure 12.1 – Stormwater Servicing Concept is preliminary and will need to be verified through the detailed design process.

Preliminary design flows have been developed based on the findings of a flow monitoring and model calibration program undertaken by Urban Systems as a separate initiative for the Charman Creek watershed. The analysis of that program was completed and reported to the Town in a letter report dated March 30, 2005. It was concluded that the efficiency of the existing drainage collection system is not as efficient as it could be. As such, flow response was lower than previously predicted prior to the monitoring process. From this past work, unit flow rates were estimated as follows for the urban portion of the watershed:

Table 12.1 Average Estimated Design Flow Rates (Existing Development)

	1:2 year	1:5 year	1:10 year	1:100 year
Predevelopment Rate	2 L/s/ha	5 L/s/ha	n/a	n/a
Urban Flow Rate	9 L/s/ha	13 L/s/ha	16 L/s/ha	22 L/s/ha

The above table is based on the average density for the upper Charman Creek basin.

With today's engineering standards and specification, the collection efficiency of new urban drainage systems would be expected to result in higher peak flows than previously measured unless best management practices are applied. It is expected that design flow rates will be locally managed to a large extent with the aggressive and successful application of Best Management Practices, as described in this document. Where done so, the design unit flow rates are estimated as follows.

Table 12.2 Estimated Design Flow Rates (With Best Management Practices)

Urban Flow Rates	1:2 year	1:5 year	1:10 year	1:100 year
SF and Cluster Res.	2 L/s/ha	5 L/s/ha	7 L/s/ha	13 L/s/ha
High Density	14 L/s/ha	16 L/s/ha	19 L/s/ha	28 L/s/ha

High density includes commercial, institutional, live/work.

For preliminary sizing of infrastructure in this document, an average 1:100 year unit flow rate of 20 L/s/ha has been applied. Further consideration to the specific land use distribution and final base flow values should be taken into consideration by the engineer during detailed design to verify design flows and pipe sizes. In addition, if Best Management Practices are not being fully integrated into proposed developments, the impact of this shall be accounted for in the design.

Given the form and function of the proposed stormwater system, all proposed components (swales, culverts, channels and storm sewers) should be sized to accommodate the 1:100 year flows.

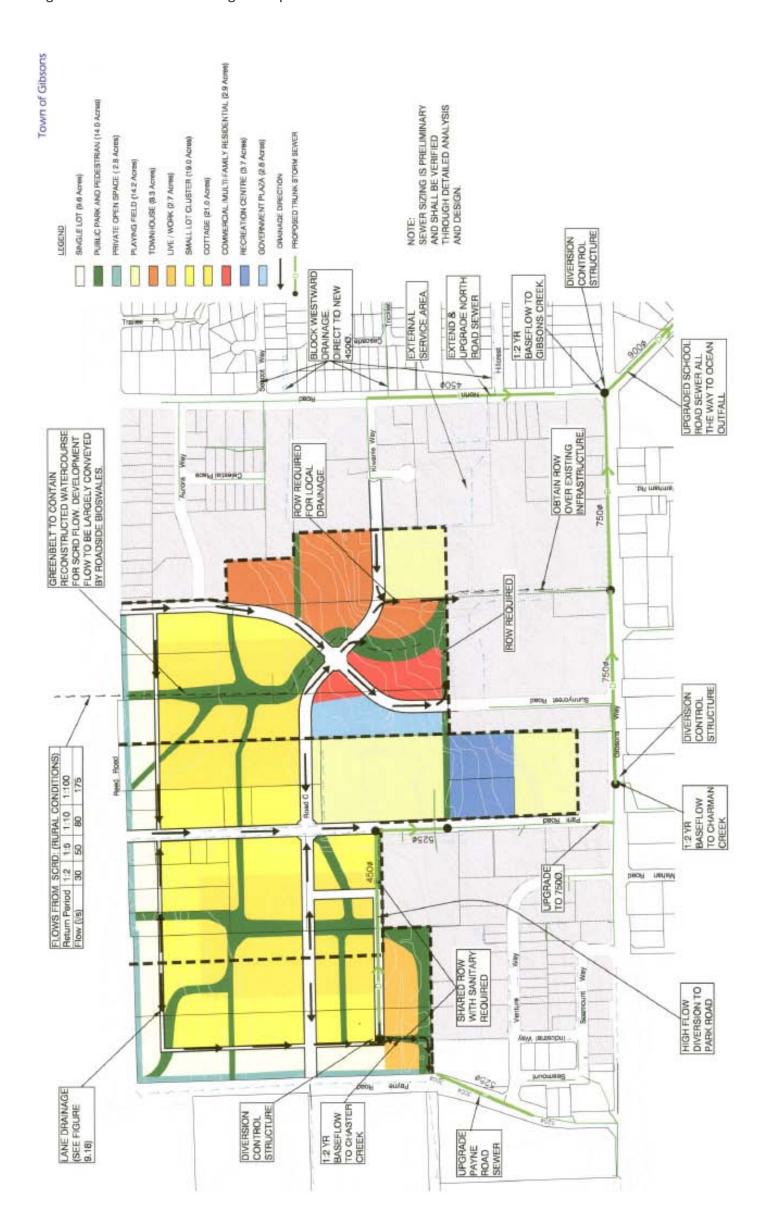
It is intended that the proposed trunk diversion only convey significant flows beyond the 1:2 year level. Base flows will need to be maintained to Chaster, Charman and Gibsons Creek's. Ideally, these base flows will be reduced to 1:2 year pre-development levels, however, extensive development of the past may make this difficult to achieve. At a maximum, base flows should not exceed 50% of the existing 1:2 year level. Excess flows are intended to be directed into the proposed diversion. The portion of the diversion on Gibsons Way and School Road will form the spine of the system and will require a more rigorous review during the design process with respect to hydraulic performance, the catchment and land uses being serviced, and the base flows maintained to the creeks. Given the high velocities, sizing of the School Road sewer should be conservative.

The design flow for the proposed channel which is to be reconstructed in the east greenbelt corridor is estimated to be 175 L/s at Reed Road. The further accumulation of flow along the channels length will depend on the amount and location of development drainage directed into it. Sizing of the channel will need to be identified with the more detailed layout of the local drainage systems.

### 12.4 Cost Estimates

For the purpose of evaluating options and capital planning, we have prepared Class D cost estimates for the preferred strategy. Class D estimates include a 35% contingency, 10% engineering services and 7% GST. The costs do not include ROW land acquisitions and/or any utility re-locations. Details of the cost estimate can be found in the Appendices.

Figure 12.1 Stormwater Servicing Concept



#### Table 12.3 Trunk Stormwater Works

Trunk Stormwater Works	\$ 3,609,000
Hulk Stolliwater Works	\$ 3,009,000

The costs noted in Table 13.3 are for all trunk storm sewers within the Plan area, and off-site trunk works, as shown in Figure 12.3. The costs associated with internal drainage swales and culverts are included in the road costs. The cost to reestablish the channel from Reed Road are considered developer costs, since this is an historic watercourse previously impacted by property owner(s).

## 12.5 Phasing

Only a very small amount of development (in the order of 2 hectares per catchment) may be initiated prior to the diversion system being in place. The implementation of the diversion will be required shortly thereafter. At a minimum, the connection to the Gibsons Way sewer, and further connection to the School Road sewer, is required. The existing sewers on Gibsons Way and School Road have a modest level of surplus capacity to accept additional development, but once their capacity is reached, upgrading of these existing sewers is required. In addition, there are known structural deficiencies in the existing School Road storm sewer that should be addressed before the connection to Gibsons Way is made. The extent of these deficiencies require further investigation to assess whether short term point repairs are cost effective, or whether full commitment to the ultimate upgrade should be made up front. Section 15.0 provides further discussion on phasing and implementation.

# 13.0 UTILITIES

Utility companies were contacted to confirm if servicing of the Upper Gibsons development area could be achieved with the existing infrastructure or if extensive construction was required. The following summarizes the responses of the utility companies.

### 13.1 Terasen Gas

Terasen Gas has confirmed that they have existing distribution pressure gas mains at or near the development area to meet future development requirements.

## 13.2 BC Hydro

BC Hydro has confirmed that they have sufficient infrastructure either in place or planned for the area if development is phased over a minimum period of 2-5 years.

### **13.3 Telus**

Telus has confirmed that this development can be serviced with the existing infrastructure. Fibre optic lines (high-speed internet) are also available in the area.

### 13.4 Coast Cable

Coast Cable has confirmed that this development can be serviced with the existing infrastructure.

All utilities do require some extension from external locations to the Plan Area. As such, 612 months of lead time is recommended to allow for sufficient planning and design by the respective utility company.

# 14.0 DEVELOPMENT GUIDELINES

The information contained in this section is to outline the acceptable guidelines for development and does not constitute the design specifications. It is the responsibility of the developer to retain appropriate professionals to prepare designs that satisfy the Plan objectives and guidelines.

The photos contained in the section are intended to convey a general description of sample works that are appropriate to the Upper Gibsons Neighbourhood Plan, and the guidelines noted below. The photos are not intended to convey design specifications.

Unless noted herein, all works shall be in accordance with the Town of Gibsons' current Bylaws and related criteria. All landscaped features, including biofiltration swales, shall also be in accordance with the Town's Landscape Policy.

These guidelines have been organized into three main categories:

- o Municipal Systems
- o Private Systems
- o Form and Character

Each set of guidelines is described below.

# 14.1 Municipal Systems

# 14.1.1 Signs

As part of the public education, developers will post signs throughout the plan area to mark watershed boundaries and to provide interpretive information on the design, function, and management objectives of the stormwater/open space system.

# 14.1.2 Vegetation

If land that is designated for green space has been previously cleared, this land must be replanted with native trees and shrubs to provide a continuous buffer against adjacent private properties.

#### 14.1.3 Road Side Swales

The principal strategy for municipal stormwater conveyance is to utilize road side biofiltration swales, and off-line channels. Culverts shall be used, where required, to cross roads and driveways. Storm sewers may be used, as approved by the Town, where open channels can not be practically applied due to constraining topography or depth. All conveyance systems servicing more than one property shall be protected by a registered right-of-way in the name of the Town of Gibsons.

- o Roadside biofiltration swales are to be located between the roadway and pedestrian sidewalk, where required.
- o Minimum base width of 0.5 meters.
- o Maximum side slope of 3:1.
- o Minimum depth from top of slope to invert of 0.25 m (0.55 m where driveway culverts required).
- o Maximum depth from top of slope to invert of 0.75 m.
- Minimum hydraulic profile grade is 1.0%. If less, lawn drains and an underdrain shall be provided to prevent extended period of stagnant water.
- o Maximum hydraulic profile grade is 5%. If greater, check dams, or similar structures, are required to create a step pool configuration.
- o Accepted surface treatment (to BCLNA standards):

- a. Sod, reinforced where profile grade exceeds 5%.
- b. Min. 450 mm thick organic topsoil and landscape plantings, with an ornamental landscape stone invert (not side slopes) to provide erosion control where profile grade exceeds 1.5%. Landscaped planting shall provide variety of low maintenance species, with consideration for maintaining sight lines for vehicles entering and exiting the roadway, as well as bark mulch top dressing to assist with weed control and moisture retention.
- Minimum 250 mm diameter culverts required at driveway crossings.
- o Acceptable driveway culvert material shall include ductile iron, galvanized CSP, steel, DR PVC, and concrete.
- o Minimum 300 mm diameter culverts required crossing roadways. Minimum 300 mm cover, provided that pipe classification appropriately selected for H20 loading.
- o Acceptable roadway culvert material shall include DR PVC, or concrete.
- o Headwalls are required at all road crossing, while 3:1 fill slopes with tapered culverts and rock treatment at ends of the pipe are permitted for driveway culverts. Pipe ends shall be trimmed flush with surrounding bank and not protrude.

# 14.1.4 Roads, Roadway Sidewalks and Open Space Pedestrian Trails

- o Traveled roadway surfaces are to be conventional asphalt.
- o Provided that drainage from adjacent lots is accommodated, the roadway crown may be located at a road edge to reduce the need for drainage on both sides of the roadway (Local roads only).
- Dedicated road side parking pockets are to be provided at a rate of 1 stall per 5 single family units. No parking will be provided on Sunnycrest Road.
- o Acceptable curbs:
  - a. Concrete roll over with drainage letdowns at max 10 m spacing (Local and Neighbourhood Collector roads only).
  - b. Concrete barrier with drainage breaks at maximum 10 m spacing (Sunnycrest Road).
  - c. Concrete flush mount (Local roads only). Flush mount curbs must be combined with a well defined biofiltration swale abutted directly to the curb, or else a reinforced earth shoulder shall be provided.
- o Roadway sidewalks and multi-use pathways, acceptable materials:
  - a. Porous asphalt
  - b. Porous concrete
  - c. Reinforced clear crush gravel (Off street paths, and private sidewalks only).
  - d. Unit pavers / blocks with joints and foundation to provide drainage.
  - e. All porous structures shall be designed with a filter layer and reservoir layer and accommodate lateral drainage.
- o Driveway entrances within limits of road right-of-way:
  - a. The portion of driveway entrances from the road edge / curb line to the near edge of the separated sidewalk (if no sidewalk, to the property line), shall be conventional asphalt.
- o Road right-of-ways (see cross sections in Section 9.0 Transportation).
- o Lanes:
  - a. Provide conventional asphalt paving strips with reinforced sod shoulders and centre strip.
  - b. Sod reinforcing shall be sufficient for vehicle H2O loading, but shall exclude concrete paver blocks; Plastic cellular matrix is preferred because of reduced heat absorption.
  - c. The lane is to be graded for positive drainage into the centre strip.
  - d. A perforated pipe/storage system, complete with drainage inlets, is required to manage stormwater runoff. Sufficient storage capacity shall be provided to contain the mean annual rainfall volume from the paved strips; or 0.2m3 per lineal metre of lane.

- e. The subsurface drainage system shall be shallow, continuous and daylight to a surface channel, swale or trunk storm sewer.
- f. All storm inlets shall have perforated sumps and trash hoods to allow recharge to be maximized, as well as to trap sediments and debris.
- g. The stormwater system may consist of perforated sewers and gravel surround, or similar engineered recharge/conveyance systems acceptable to the Town Engineer. All design should accept H2O loading and provide access for maintenance/flushing.
- h. Storm inlets should be provided at a maximum of 50m spacing.

#### o Roundabouts:

- a. Are to be configured for a single lane, but also accommodate both transit and transport vehicles.
- b. Preferred that the centre landscaped island be depressed graded and designed as a biofilter to receive and treat local road drainage. It is therefore desired that the cross fall of the roundabout slope inwards with facilitation for drainage into the centre bioswale. A positive drainage connection via a pipe is required from the centre bioswale to the downstream conveyance system. Detail design shall give careful consideration to the crossfall transition from the roundabout to the adjoining streets and meet relevant Ministry of Transportation design standards. If an inward sloping crossfall can not be achieved, consideration can be given to using catchbasins and shallow piping to redirect road drainage into the centre bioswale.
- c. The center bioswale shall include a comprehensive landscape plan; sod and hard surfaces are not permitted.

#### 14.1.5 Transit

o All collector roads shall be designed to accommodate transit service. During design, consultation with the local transit authority is required to confirm transit routing and bus stop locations.

# 14.1.6 Cycling Facilities

- o Cyclists are to be accommodated on roadways, as discussed in Section 10.0. No specific off-road cycling routes are required, however use of off-street corridors will not be discouraged. Refer to the road design cross section templates in Section 9.0 for further information on design for each road classification.
- Design of internal cycling facilities are to coordinate with the external routes identified in the Towns Trail and Cycle Network Master Plan.

# 14.1.7 Pedestrian Facilities

- o Marked pedestrian crossings are required at all roundabouts, collector and arterial intersections.
- o Consideration for additional pedestrian facilities should be given at high use facilities, such as schools, public facilities, parks, and intersections with off-road open space trails.
- o All crossings are to be provided in accordance with the "Pedestrian Crossing Manual for British Columbia", MOT.

# 14.1.8 Lighting

- o Street lighting shall be in accordance with the current subdivision and development bylaw, with the following additions to achieve a "dark sky" policy:
  - a. Lighting systems, both private and public, shall be designed to minimize obtrusive (spill light, glare and sky glow).
  - b. Spill light, also known as trespass light, is luminance falling beyond the area that is being lighted. For roadways, the limits of the right-of-way shall represent the boundary for spill light. For pathways, the limits of the path shall represent the boundary for spill light.
  - c. The desired maximum spill light luminance level is 8.0 lux between 6 am and 10 pm, and 3.0 lux between 10 pm and 6 am, provided that the lighting provisions within the roadway are not compromised.

- d. Methods to mitigate obtrusive light include such things as adjusting light height, wattage, cutoff or full-cutoff optics, and external shielding.
- e. All lighting systems are to be designed by a qualified engineer. Design submissions to the Town shall include luminance calculations and distribution diagrams.

#### 14.1.9 Utilities

o Telecommunications systems shall include, or provide for, fibre optics.

# 14.1.10 Open Space Pedestrian Trails

- o Minimum 3.0 meter width
- o Compacted, crushed gravel surface

# **14.2 Private Systems**

# 14.2.1 Private Open Space

- o The Private Open Space designation can be described as a privately covenanted open space or buffer along Payne and Reed Roads. The intent of this area it to provide a buffer between the higher density development of the Upper Gibsons Neighbourhood Plan Area and the ALR lands to the west and rural properties to the north.
- o The Open Space Buffer is intended to be a treed area. Where tree cover does not exist, trees must be planted. Drainages must be maintained along the roadways and contained within municipal right-of-ways or easements.

# 14.2.2 Vegetation and Topsoil

- o Retention of natural vegetation and topsoil is strongly encouraged. Where the developer can demonstrate that this is not achievable or practical, all disturbed landscaped areas shall be restored with a layer of topsoil no less than the preconstruction thickness, or a minimum of 0.5 m.
- o Prior to land clearing, a tree survey is to be conducted by the developer to inventory the size and type of all trees 300 mm in diameter and larger. Such inventory and a tree retention plan is to be submitted to the Town as part of the development application.
- o Retain all trees 300 mm or larger in calliper, otherwise provide compensation planting at a rate of 2:1 with trees minimum 50 mm in calliper of an approved species.
- o In re-vegetation areas, low water demand trees, shrubs, and garden beds are encouraged over sod.
- O As part of the development application design drawing set, a geotechnical report, prepared by a registered professional, shall be provided to the Town indicating the pre-development thickness of topsoil and the elevation of the underlying confining layer across the site. The results of this investigation are to be incorporated into the proposed lot grading and site restoration design, demonstrating that the minimum topsoil thickness is being provided in the design.

# 14.2.3 Stormwater Management and Drainage

- o Building foundations must be chosen and designed such that they do not require a subsurface connection to the municipal system. They must be designed for on-site drainage, or day-lighting into the fronting municipal surface conveyance system.
- o No subsurface habitable floor space (MBE) is permitted.
- o Roof leaders / downspouts shall drain to ground surface on-site. No direct piping is permitted to the municipal drainage system.
- o Lot grading shall ensure drainage away from the building and towards the municipal drainage system, or adjacent greenbelts. Where required, side / rear yard swales shall be provided to prevent cross lot drainage.

o Where on-site stormwater detention is required, both surface and sub-surface techniques may be used. The provision of stormwater detention does not reduce the requirement for Best Management Practices (BMP). Runoff must first be treated / managed by BMP techniques prior to entering the detention facility.

#### 14.2.4 Water Conservation Measures

- o All properties shall include a water meter installed in a meter box at the property line complete with a backflow prevention device. Meters are to be touch pad readable, with option for remote reading.
- Installation of rain barrels to harvest roof runoff for the purposes or landscape watering is strongly encouraged.
- o Ultra low flush toilets 6 L/flush will be mandated as a minimum. Dual flush Australian Code fixtures will be strongly encouraged.
- o Low flow taps and showerheads are to be provided as follows:
  - a. Shower heads 9.5 L/minute
  - b. Lavatory faucets 3.8 L/minute
  - c. Kitchen faucets 8.4 L/minute
- o Waterless urinals are to be used in all public washrooms.
- o Water cooled mechanical/refrigeration equipment requiring continuous feed will not be permitted.
- o Garburators are not permitted.

# 14.2.5 Single Family Residential / Cluster Residential

- o Driveways:
  - a. Acceptable surface materials:
  - b. porous asphalt
  - c. porous concrete
  - d. reinforced or non reinforced gravel
  - e. unit pavers / blocks with joints and foundation to provide drainage
  - f. All porous surfaces shall be designed to provide lateral drainage
- Within the limits of the road right-of-way, the maximum permissible driveway width is 4.5 m. With the limits of private property, the maximum permissible driveway width is 6 m.

# 14.2.6 All Land Uses Other Than Single Family Residential / Cluster Residential

- o Parking lot acceptable surface materials:
  - a. conventional asphalt is permitted if incorporated with biofiltration facilities
  - b. porous asphalt
  - c. unit pavers / blocks with joints and foundation to provide drainage
  - d. combinations of the above may also be used
- o Roof drainage shall discharge to a planter box incorporated into the perimeter of the building, or to an on site biofiltration facility.
- o The volume of growing / filter medium provided in biofiltration facilities or planter boxes shall be 0.75 m3 for every 10 m2 of impervious surface.

Sub-surface piping may be used within the limits of the private site, provided it is capable of day-lighting, with positive drainage, into the adjacent municipal system. In addition, all piped flow must be treated with a biofilter or planter box prior to leaving the site.

# SAMPLE BEST MANAGEMENT PRACTICE PHOTOS



Road side swale - landscaped



Road side swale - newly grassed



Road side swale - grassed



Road side swale



Biofiltration / Detention Facility



Planter Box for roof leader discharge



Biofiltration facility in parking lot



Biofiltration facility for roof leader discharge



Driveway culvert for road side swale



Biofiltration facility for parking lot



Biofiltration facility in parking lot



Combination of unit pavers and conventional asphalt in parking lot



Biofiltration facility in parking lot



Biofiltration swale for parking lot



Curb break in barrier curb



Porous asphalt



Stormwater pond with wetland bottom



Stormwater pond

# 14.3 FORM AND CHARACTER GUIDELINES

These form and character guidelines are broad in nature and are intended to provide general design direction only. These guidelines can be used as the basis from which to explore alternative building designs and layouts as well as an evaluation tool for Town staff and Council. Where appropriate, certain provisions contained in this section have been included as Development Permit Area guidelines. Appendices includes the Development Permit Area guidelines.

#### 14.3.1 Character

- o Development should promote a variety of housing types to encourage affordable housing for seniors, young families, and empty nesters.
- o Development should promote a small town character by encouraging architecture, landscape design and environmental settings that respect the surrounding context. The use of local materials, and natural colours and materials such as timber and stone are desired.
- o To achieve harmonious integration with surroundings, development should be sensitive to the scale, mass, and form of adjacent buildings.
- o Dwelling units should be arranged on site to facilitate social interaction and to build a sense of community. This can be accomplished by ensuring various building entrances face each other and/or open on to open spaces common to all units.
- o Secondary dwelling units (provided they are permitted in the Town of Gibsons Zoning Bylaw) should complement the scale, mass, built form and character of the primary dwelling unit.

# 14.3.2 **Density**

Developers should to adhere to the maximum densities identified in the following table:

Table 14.1 Maximum Densities Permitted

Housing Type	Net Density (units per acre)
Townhouse	201
Cottage	12¹
Small Lot Cluster	4 to 16 <sup>1</sup>
Single Lot	82
Live/Work	81
Apartments	30 to 56 <sup>2</sup>

- 1 As stated in A Framework Plan for the Upper Gibsons Neighbourhood.
- 2 As agreed upon by the Town of Gibsons.

Developers are encouraged to build multiple dwelling units on each lot in the Small Lot Cluster designation. In addition to the principle dwelling, a variety of housing options, such as secondary suites, studio flats, carriage houses over garages, and granny suites could be included on each Small Lot Cluster lot.

For the Small Lot Cluster designation, the primary residence should be sited to allow for the future development of additional dwelling units such that a density of 16 upa could be achieved over the long term.

#### 14.3.3 Lot Size

Developers should create lot sizes in accordance with the following table:

Table 14.2 Desired Lot Sizes

Housing Type	Typical Lot Size
Cottage	45 ft by 80 ft <sup>1</sup>
Small Lot Cluster	800.0m <sup>2</sup> (8608 ft <sup>2</sup> )
Single Lot	0.25 acre <sup>2</sup>
Townhouse	30 ft by 60 ft (zero lot line) 1

<sup>1</sup> As stated in A Framework Plan for the Upper Gibsons Neighbourhood.

# 14.3.4 Open Space

A minimum percentage of the lot area should be preserved as open space in accordance with the following table. Open space is defined as land that is not covered by impervious material such as roofs and concrete drives.

Private open space along Reed and Payne Roads will be permanently covenanted to remain as private open space.

All open space lands, water features, and related facilities shall be the property of the Town of Gibsons.

Also refer to Section 14.2.1 regarding Private Open Space.

Table 14.3 Open Space Requirements1

Housing Type	Minimum On-Site Open Space
Townhouse	30%
Cottage	45%
Small Lot Cluster	60%
Single Lot	75%
Live/Work	45%
Apartments	30%

<sup>1</sup> As stated in A Framework Plan for the Upper Gibsons Neighbourhood.

# 14.3.5 Vegetation and Tree Cover

- Buildings and roadways should be sited to retain existing trees, vegetation, and other important natural features to reinforce a "green" image and provide a natural and visual amenity.
- o Developers are encouraged to retain a minimum 30% tree cover on each lot where possible.
- o Street and yard trees are encouraged wherever possible and should be appropriately sourced to ensure design consistency and regularly spaced to provide adequate shade in summer and solar gain in winter. Species shall be selected that are non-intrusive and damaging to adjacent pavements and underground servicing.

#### 14.3.6 Streetscape

- o The principal dwelling should be oriented to the street and should be designed to encourage natural surveillance of the street.
- o Street setbacks for principal dwellings should be shallow and related to social parameters such as porch/sidewalk conversation distance.

<sup>2</sup> As agreed upon by the Town of Gibsons.

- o A walking path providing direct access to the principal dwelling unit should be clearly visible from the street.
- o The use of solid fencing or continuous buffers of vegetation fronting the primary dwelling unit should be discouraged.
- o The use of porches or balconies that front onto the street should be encouraged.
- o The use of a variety of building materials and colours should be encouraged to promote visual variety.

# 14.3.7 Parking, Driveways, and Access

- o All lots must have direct access to the larger pedestrian circulation system via park corridors, pathways, and/or sidewalks.
- o All lots must be designed for safe fire access.
- o Cul-de-sacs will not be permitted.
- o All residential lots must provide for on-site automobile parking.
- o Where there are multiple dwelling units on a single lot, all dwelling units shall access the site via a shared driveway.
- o Parking pads and garages should be located to the rear or side of the primary dwelling unit wherever possible.
- o Landscaping should be provided for garages and parking pads that are visible from the street.

# 14.3.8 Energy Efficiency

Buildings should be oriented to maximize solar exposure while minimizing shadow impacts on adjacent buildings and common areas.

Development will be encouraged to make use of green infrastructure such as green building materials, thermal insulation, and green roofs, where possible.

Buildings will encourage high efficiency and low demand appliances.

All residential structures will be built to suitable energy standards.

# 15.0 PHASING AND IMPLEMENTATION

As discussed in previous sections, significant off-site and internal trunk works are required to facilitate development of the Plan area. Needs, routing and priorities are different for each service, therefore the challenge is to develop an overall program that knits all servicing into a comprehensive and efficient program.

The financial strategy will have a significant bearing on how development advances, and on the roles the Town and developers will play. The first question to consider is the affordability of development. Can the costs of servicing be supported by the market? For the most part, this Plan Area is currently unserviced. As such, a significant portion of the servicing costs are considered base costs, and are to a large extent not highly governed by development densities. If servicing costs are deemed unbearable for the market, costs efficiencies may be gained by increasing development densities. However, this decision will divert from the community vision established in the Framework Plan and would need to be considered sensitively by Council.

This Plan provides an opportunity to address a number of system deficiencies that currently exist; therefore, the strategic servicing strategies developed in this report do not view the Plan Area in isolation from the external areas. With exception to perhaps the sanitary system, all servicing has some level of beneficiaries external to the Plan Area. As such, the financial strategy must consider cost sharing and revenue sources both directly attributed to development, as well as from a specified area, or the community as a whole. Development Cost Charges, Latecomer Agreements, Specified Area Charges, Capital Funds, Utility Fees, and the like, are all mechanisms that may be considered in formulating the overall financial strategy. The preparation of a comprehensive financial strategy extends far beyond the scope of this Plan, and is a separate initiative being undertaken by the Town.

To assist with the further development of the financial plan and implementation strategy, the following subsections will introduce the overall costs of development and discuss phasing options.

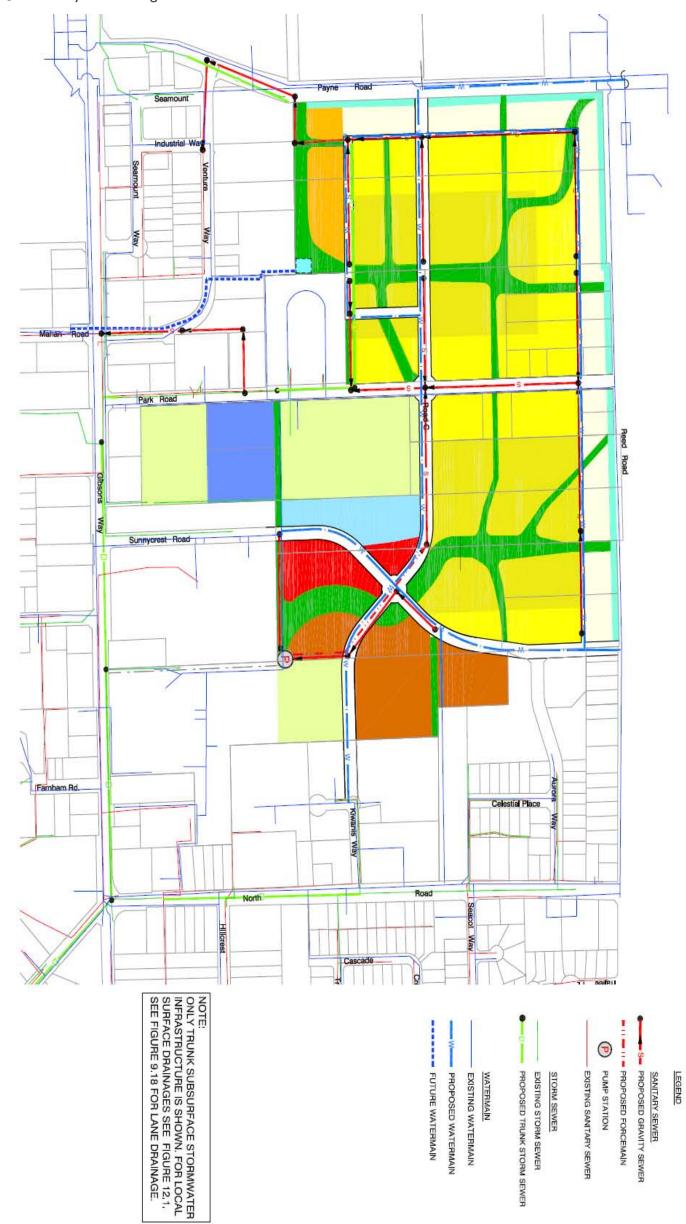
# 15.1 Trunk Servicing System

A summary of the proposed servicing infrastructure is shown in Figure 15.1. Servicing components are divided into two categories; either trunk or local. Trunk components are those considered critical to servicing a large number of properties, items which require specific alignments to ensure continuity throughout the Plan Area, and those items not readily implemented by a single or small group of developers. The extent of trunk items is unique to each service, as previously highlighted in Sections 8 through 12. However, from a financial and implementation perspective, each service cannot be viewed in isolation, as coordination of works will be required.

As such, when viewed in a collective and comprehensive manner, the recommended combined trunk system is shown in Figure 15.2. It is generally required that the Community (Town of Gibsons) play a role in the implementation of the trunk works, as it may be beyond the means of the development community. The capital cost and time frame for cost recovery often play a role in defining the trunk system. These decisions may be refined as part of the financial strategy.

All components not considered "trunk" are considered "local" components. They are generally the responsibility of developers at the time of subdivision, both in design and financing. If the works benefit other developers, Latecomer Agreements are used as a cost recovery mechanism. Local works are generally not considered in the overall financial strategy.

Figure 15.1 Summary of Servicing Infrastructure



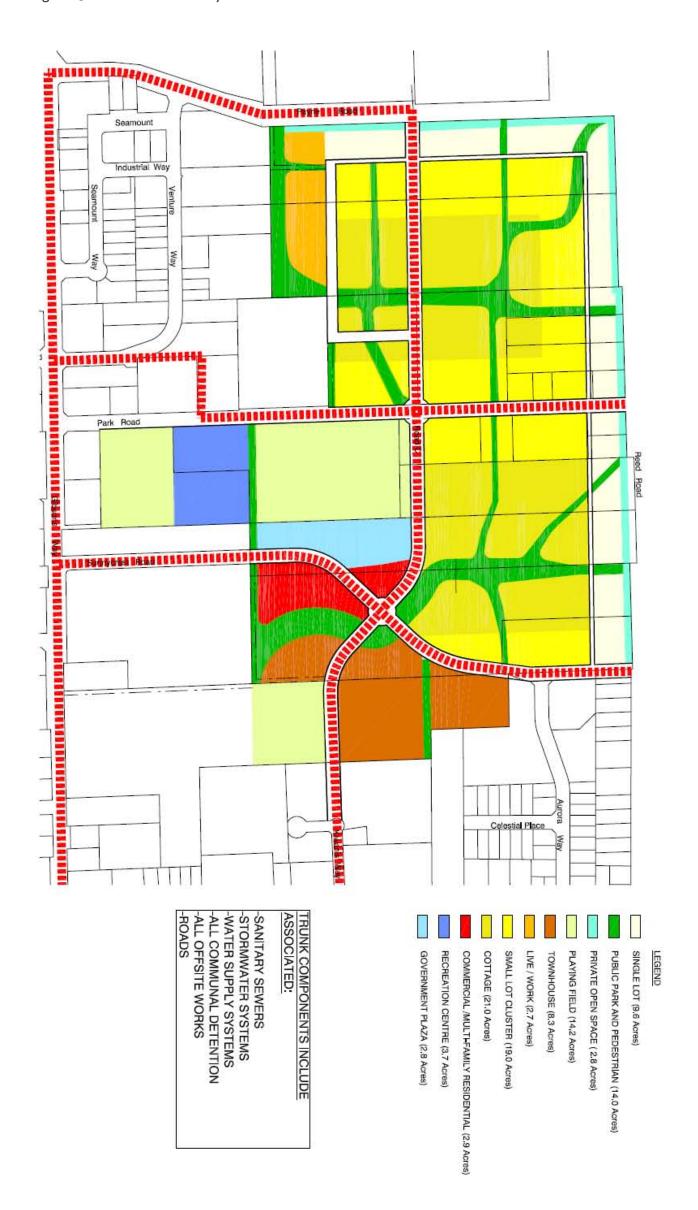
The road network is the primary service that defines the combined trunk system. In some cases, the servicing and utilities within these roads may not be considered trunk items if viewed in isolation, however it is impractical to finance and implement works in isolation. As such, all servicing associated with the trunk roads is inherently considered part of the trunk system. Based on the trunk system defined in Figure 15.1, the total estimated trunk servicing costs are as follows. The sanitary and water costs are higher than those listed in their respective previous sections, because some local system components have now been included to effectively coordinate with roads and stormwater improvements. For example, if a local watermain is required within a trunk road, up front funding will be required for that local watermain, even if it is not a trunk watermain component.

Table 15.1 Combined Trunk Servicing Costs

Service	Total Estimated Cost
Roads (excluding off-road paths)	\$ 7,860,000
Stormwater Management	\$ 3,609,000
Sanitary Sewers	\$ 1,705,000
Water	\$ 2,627,000
Total	\$ 15,801,000

The above costs assume efficient coordination between all utilities such that associated costs, such as surface restoration, are not duplicated. Costs exclude Land, Hydro, Gas, Cable and Telecommunications costs, but include 35% contingencies, 10% engineering, and 7% GST. Costs are Class D and based on 2005 unit prices. Further details of the cost estimates are provided in Appendices.

Figure 15.2 Combined Trunk Systems



# 15.2 Phasing

Works described in previous sections represent those required at build-out of the Plan Area. Not all works are required to facilitate the start of development. There are, however, some offsite items which should be provided within a short time frame in order to address current problems and deficiencies. If such works are not in place, initiating development will increase risk and exacerbate the problem. Such items are primarily attributed to the roads system, and include the following:

- o New northbound and southbound left turn storage lanes on Payne Road at Gibsons Way
- o Closure of Park Road at Gibsons Way
- o A new roadway connection between Park Road and Venture Way
- New water reservoir and watermain feed

To a large extent, servicing will extend from the south, northward. As such, development phasing should begin within the southern half of the Plan Area. However, two phasing options have been prepared.

The first option has development starting in the south-east quadrant, referred to as the Core Option because it represents the high density and community based land uses. This option is shown in Figure 15.3. The second option is shown in Figure 15.4 and is referred to as the Peripheral Option.

# 15.2.1 Core Option

The Core area has the highest revenue generation potential, but also has the highest infrastructure demand and creates the highest potential impact on existing services. Very limited surplus capacity exists in current infrastructure. It may be possible to permit a very small number of properties to advance prior to trunk systems being implemented, but in order to facilitate an appreciable portion on the first phase, a significant number of works should be in place, as highlighted in Figure 15.3. The costs associated with this initial phase are as follows and represent all costs associated with phase build out.

Figure 15.3 Phasing - Core Option

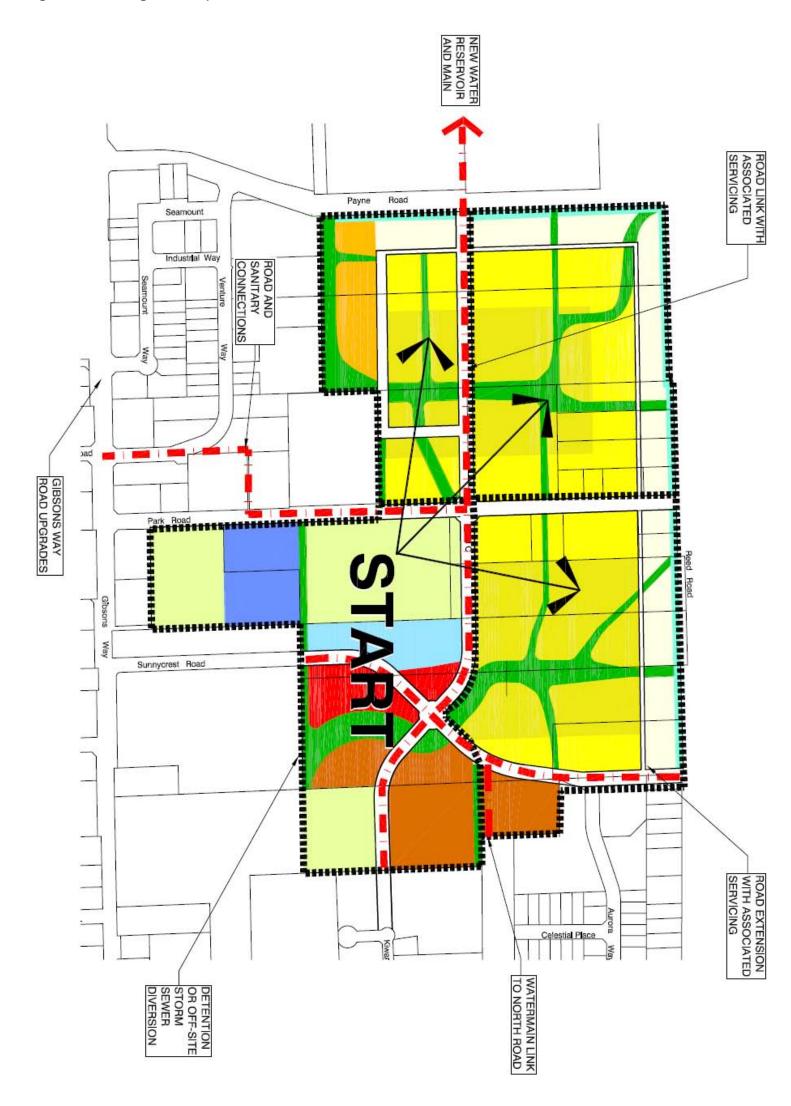


Table 15.2 Phasing - Core Option Trunk Servicing Costs

Service	Total Estimated Cost
Roads (excl. MOT committed work and	\$ 6,719,000
off-road paths)	
Stormwater Management	\$ 1,400,000
Sanitary Sewers	\$ 1,058,000
Water	\$ 2,426,000
Total	\$ 11,603,000

Costs exclude Land, Hydro, Gas, Cable and Telecommunications costs, but include 35% contingencies, 10% engineering, and 7% GST. Further details of the cost estimates are provided in Appendices.

While this initial phase requires the greatest capital outlay, it provides sufficient infrastructure that provides significant flexibility for future phasing. One the core area is started and associated trunk systems are in place, development may proceed readily to all other quadrants without significant challenge.

# 15.2.2 Peripheral Option

An alternative phasing approach is to initiate development in the southwest quadrant. This option requires significantly less trunk infrastructure and capital outlay, however also provides significantly lower revenue generation then the core option because of the comparatively low development densities.

For this option, commitment to an interim communal stormwater detention pond in the west sub-catchment may be required, as implementing a high flow diversion to service this area as a first phase would likely be cost prohibitive.

The costs associated with this as the initial phase are as follows, and represent costs associated with phase build out.

Figure 15.4 Phasing - Peripheral Option

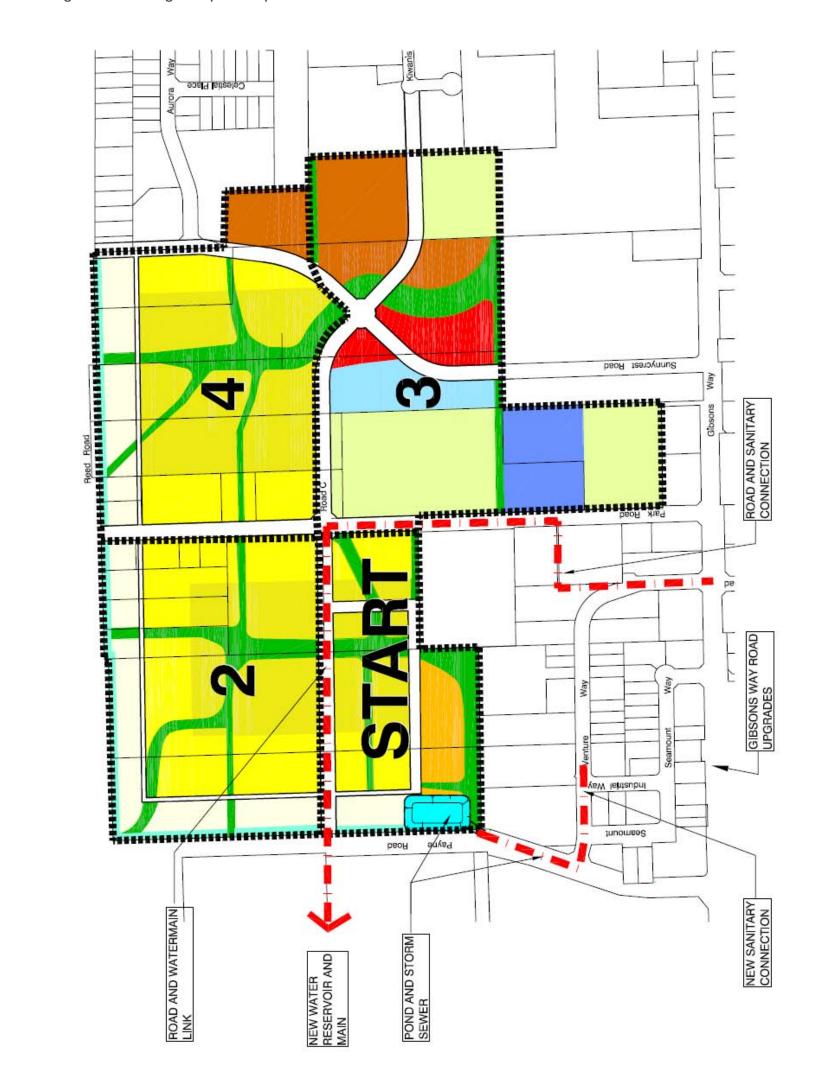


Table 15.3 Phasing - Peripheral Option, Trunk Servicing Costs

Service	Total Estimated Cost
Roads (exc. MOT committed work and	\$ 2,703,000
off-road paths)	
Stormwater Management	\$ 485,000
Sanitary Sewers	\$ 650,000
Water	\$ 1,870,000
Total	\$ 5,708,000

Costs exclude Land, Hydro, Gas, Cable and Telecommunications costs, but include 35% contingencies, 10% engineering, and 7% GST. Further details of the cost estimates are provided in Appendices.

Both of the above phasing options are feasible. The decision on which option should be selected will be largely governed by market demand, developer commitment, and available funding. In addition to giving both of these options further consideration through the preparation of the financial strategy, input and feedback from the development community may also provide assistance.

As previously mentioned, the opportunity does exist for a small amount of development to proceed without extensive trunk infrastructure. However, this decision depends largely on which specific parcel(s) is proposed. The ability for the proponent to proceed without the inclusion of trunk works will be subject to that proponent undertaking a servicing impact review as part of their development application. Using existing infrastructure as the base condition, the applicant must demonstrate how the proposed development will be serviced and what impact will result to existing infrastructure. Approval will be subject to the Town's acceptance of the servicing and impact condition.

Traffic and fire flow supply are two particular aspects which have known challenges and deficiencies under current conditions. To some extent, any further development can be expected to diminish the level of service. The ability for development to proceed without trunk improvements will lie heavily with the Town's tolerance to an interim reduction in performance, as well as the potential risks and liabilities associated with this reduction. Again, such decisions can not be made within the context of this report, and must undergo a critical review for the specific development site being proposed.

If an initial developer comes forward with an application, but without a commitment to implement trunk improvements and enter into a cost recovery agreement, the proponent should be required to undertake independent traffic impact and stormwater management assessments. They should also be asked to demonstrate how the proposed building will satisfy fire protection standards based on the current available fire flows. Should approval then be granted by the Town, financial contributions towards the trunk infrastructure are still required. The form and amount of these contributions will need to be determined by the financial strategy.

# 15.3 Implementation

This Plan has introduced a number of new items for which the Town does not currently have governing mechanisms, or mechanisms that will now become out-of-date. Items of significance include:

- o New zoning designations
- o Customized roads standards
- o Best Management Practices and associated building criteria
- o Landscape policies and standards
- o Tree cutting and landscape preservation
- o Dark sky street lighting policies
- Financial demands

Guiding the implementation of the Upper Gibsons Neighbourhood and Strategic Servicing Plan will require further actions to be taken following the completion of this document. Some are more critical than others. Those that involve land use and financial agreements are deemed critical and include the following:

- o OCP amendment
- o Update of Zoning Bylaw
- o Completion of financial strategy and up-date of Development Cost Charge (DCC) bylaw, and Parks acquisition strategy.

It is preferred for the Town to have all governing documents in place prior to development proceeding, however this is not always practical without stalling growth. While some challenges may arise, there is added flexibility for the Town to permit development to proceed without revisions to all existing criteria and policy documents. Combined with the adoption of this Plan, a sound financial strategy, and careful consideration at the rezoning stage can minimize implementation problems until such time that all governing documents are in place. Flexibility and strong communication with the development community will also be required.

Other less critical documents include:

- o Subdivision and Development Bylaw update
- o Building bylaw criteria
- o Tree cutting and landscape policies
- o Finalize local road network (less critical if core area selected as first phase)

#### 15.3.1 Action Plan

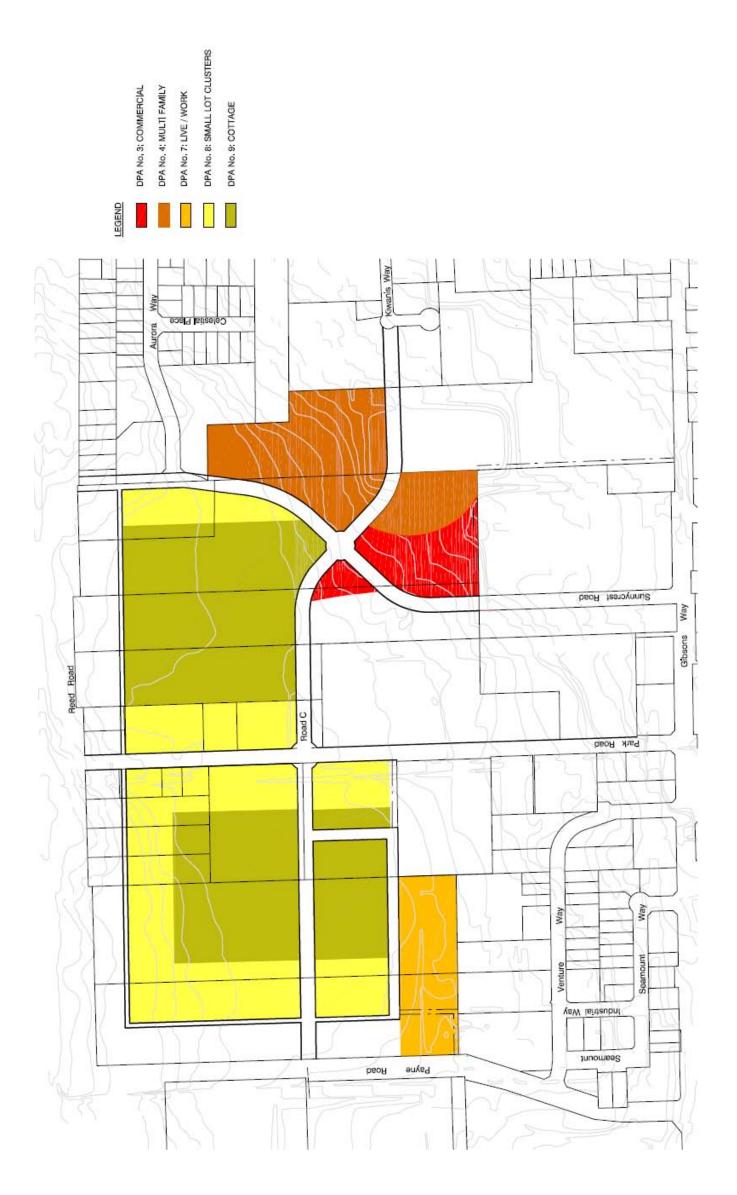
The question still remains as to whether the Land Use Plan as proposed will be economically achievable. Both the Town and development community has expressed some concerns with respect to implementation costs. As such, prior to proceeding with the formal adoption of this Plan, and subsequent amendments to the OCP and zoning bylaws, it is suggested that the Town initiate a preliminary financial strategy to identify whether the servicing costs can be supported by the development market. It will also identify various revenue streams and better define the Towns role in implementing the Plan. Finalization and adoption of the land use plan may commence once the economic viability has been confirmed.

With consideration for utilizing available surplus capacity in the School Road storm sewer as an interim measure, it is recommended that the Town complete a flow monitoring and condition assessment program in the Gibsons Way / School Road system to better quantify the existing flow regimes, confirm available capacities and deficiencies in the existing system. It is recommended that this assessment be undertaken through 2006/2007 in order to understand wet weather flows.

The proposed road link from Park Road to Venture Way is viewed as a significant component to the transportation network and to improve traffic conditions at Gibsons Way. Finalizing the servicing strategy is contingent on securing this right-of-way. As such, it is strongly recommended that the Town continue to negotiate an agreement with the pertinent property owners.

Lastly, with the requirement of a traffic signal at Gibsons Way and Sunnycrest Road, a strategy for its coordination with Shaw Road needs further study. This requires consideration for factors south of Gibsons Way which are currently not well defined. In particular is the Gospel Rock Neighbourhood Plan, which is currently underway, as well as further consideration to potential road linkages into the SCRD or municipal boundary expansion.

# 16.0 UPPER GIBSONS DEVELOPMENT PERMIT AREAS



This Section defines Development Permit Areas (DPAs) for Live/Work, Cottage residential, and Small Lot Cluster residential land use types designated within the Upper Gibsons Neighbourhood Plan Area. These development guidelines are based directly on the *Framework Plan*.

In accordance with the *Local Government Act*, these development guidelines pertain only to the form and character of development. As such, several provisions contained in Section 15: Development Guidelines have not been included in these DPAs. Those provisions of Section 15 that have not been included as DPA guidelines should be incorporated into other regulatory bylaws (e.g., Zoning Bylaw, Subdivision and Development Servicing Bylaw, Tree Preservation Bylaw, Soil Deposition and Removal Bylaw, etc.).

Since the DPA guidelines are based on the Framework Plan, they do not include provisions regarding architectural details. The Live/ Work DPA is particularly broad-based, as the Framework Plan provides little direction on the preferred form and character of this type of land use. To effectively regulate development, the Town may, at a later date, wish to include additional and more detailed guidelines for each of the DPAs.

It should be noted that the Local Government Act does not allow a municipality to impose guidelines that relate to particulars of the landscaping or exterior design and finish of multi-family developments. Therefore, it is unclear whether the Town can impose guidelines regarding colours and building materials for Live/Work development under DPA No. 7.

It is recommended that the Town consult their legal counsel prior to adopting the guidelines under DPAs 7, 8, and 9.

As it is the Town's intent to include those areas of the Upper Gibsons Neighbourhood Plan Area designated for commercial use as DPA No. 3 and apartment and townhouse use as part of DPA No. 4 of the Town's current OCP. Figure C.1 includes DPAs No. 3 and 4. It is recommended that the Town review its existing DPA guidelines for these uses prior to expanding the DP areas.

# 16.1 Upper Gibsons Live/Work DPA No. 7

## **Purpose**

The Upper Gibsons Live/Work Development Permit Area is designated under Section 919.1(1)(f) of the *Local Government Act* for the purpose of establishing objectives for the form and character of commercial, industrial or multi-family residential development.

#### Area

The Upper Gibsons Live/Work Development Permit Area is shown as Development Permit Area No. 7 on Figure C.1.

#### Justification

The Upper Gibsons Neighbourhood Plan Area consists of a variety of land uses, including various residential forms, a commercial node, civic facilities, and an interconnected system of parkland and open spaces. One of the objectives of the Upper Gibsons Neighbourhood Plan is to encourage housing that is accessible to a cross-section of society, and is adaptable to the changing demographics and lifestyles of the Town's residents. The Live/Work land use designation is an innovative land use concept that incorporates housing quarters with small business units.

The objective of this designation is to ensure that Live/Work development respects the existing form and character of the Town, is compatible with adjacent land uses, and provides residents with high-quality housing in combination with commercial space.

#### Guidelines

Development permits issued in DPA No. 7 shall be in accordance with the following guidelines:

- o Development should promote a small town character by encouraging architecture, landscape design and environmental settings that respect the surrounding context.
- o To achieve harmonious integration with surroundings, development should be sensitive to the scale, mass, and form of adjacent buildings.
- o Local and natural building materials such as timber and stone should be used. The use of natural colours is also encouraged.
- o The use of a variety of building materials and colours should be used to promote visual variety.
- o Street setbacks for principal dwellings should be shallow and related to social parameters such as porch/sidewalk conversation distance.
- Buildings should be oriented to maximize solar exposure while minimizing shadow impacts on adjacent buildings and common areas.

Development should make use of green infrastructure such as green building materials, thermal insulation, and green roofs, where possible.

# Screening and Landscaping

The following guidelines respecting screening and landscaping shall apply:

- o Buildings and roadways should be sited to retain existing trees, vegetation, and other important natural features to reinforce a "green" image and provide a natural and visual amenity.
- o If land that is designated for green space has been previously cleared, this land should be replanted with native trees and shrubs to provide a continuous buffer against adjacent properties.
- o A minimum 30% tree cover on each lot should be retained where possible.
- o Street and yard trees are encouraged wherever possible and should be appropriately sourced to ensure design consistency and regularly spaced to provide adequate shade in summer and solar gain in winter. Species should be selected that are non-intrusive and damaging to adjacent pavements and underground servicing.

- o The use of solid fencing or continuous buffers of vegetation fronting the primary dwelling unit should be avoided.
- o Landscaping should be provided for garages and parking pads that are visible from the street.

# Parking and Access

- o The following guidelines respecting parking and access shall apply:
- o A walking path providing direct access to the building should be clearly visible from the street.
- o All lots should have direct access to the larger pedestrian circulation system via park corridors, pathways, and/or sidewalks.
- o All lots should be designed for safe fire access.
- o The use of cul-de-sacs should be avoided.

Parking pads and garages should be located to the rear or side of the building wherever possible.

# 16.2 Upper Gibsons Small Lot Cluster Residential DPA No. 8

## **Purpose**

The Upper Gibsons Small Lot Cluster Residential Development Permit Area is designated under Section 919.1(1)(e) of the Local Government Act for the purpose of establishing objectives for the form and character of intensive residential development.

# Area

The Upper Gibsons Cottage Residential Development Permit Area is shown as Development Permit Area No. 8 on Figure C.1 of the Upper Gibsons Neighbourhood and Strategic Servicing Plan.

#### Justification

The Upper Gibsons Neighbourhood Plan Area consists of a compact mix of land uses, including various residential forms, a commercial node, civic facilities, and an interconnected system of parkland and open spaces. One of the objectives of the Upper Gibsons Neighbourhood Plan is to encourage housing that is accessible to a cross-section of society, and is adaptable to the changing demographics and lifestyles of the Town's residents. Small lot cluster housing is an innovative form of residential development that provides residents with a variety of housing options on one lot.

The objectives of this DPA designation are to:

- o ensure that this type of cluster development respects the existing form and character of the Town;
- o create an area having a form that is dynamic, incorporating various development types, and complementary, having a sense of consistency and identity despite the potential for variety;
- provide for high quality, liveable forms; and provide residents with high quality affordable housing options.

#### Guidelines

Development permit applications considered in this Development Permit Area shall demonstrate the degree to which an application is in accordance with the following guidelines:

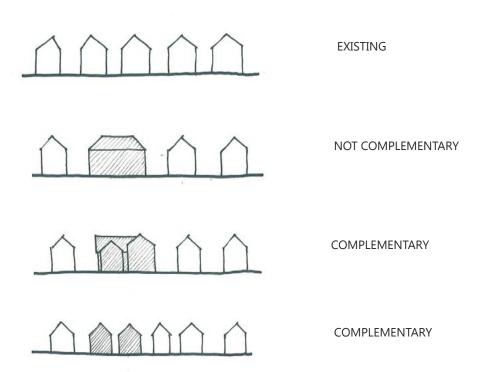
#### General Form and Character

- o Development should promote a small town character by encouraging architecture, landscape design and environmental settings that respect the surrounding context.
- o Local and natural building materials such as timber and stone should be used.
- o The use of natural colours is encouraged, and the use of a variety of complementary colours as accents is also encouraged to promote visual interest.
- o Vary materials and/or colours to distinguish individual dwelling units in the development.
- Multiple dwelling units should be built on each lot. These may take the form of principal dwellings with additional dwelling units such as secondary suites, granny flats, and carriage houses; duplexes, triplexes, or fourplexes; or some combination of these forms.
- The primary residence should be sited to allow for the future development of additional dwelling units such that a density of 16 units per acre could be achieved over the long term. The proponent must submit a conceptual plan showing how multiple dwelling units (up to 16 units per acre) could be accommodated on each lot. The conceptual plan should show future servicing and access plans.
- o Development should provide a variety of housing types and sizes to address the needs of seniors, young families, and empty nesters.
- o Reflect an environmentally-friendly ("green") image through the design and exterior features of the development. This image may be achieved in such ways as:

- a. buildings and roadways sited to retain existing trees, vegetation, and other important natural features
- b. incorporation of visible "green" landscaping features such as rain gardens and infiltration trenches
- c. incorporation of visible "green" building features and materials such as skylights, rain barrels, local wood and stone, green walls and roofs, rain gardens, solar panels, recycled exterior materials, exterior elements for window shading

# **Building Massing and Street Rhythm**

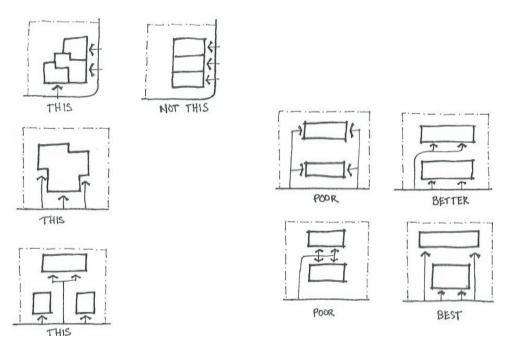
- To achieve harmonious integration with surroundings, development should be sensitive to the scale, mass, and form of adjacent buildings.
- o Avoid long continuous façade frontage and respect the rhythm of the existing streetscape
- o Developments should create an incremental rhythm complementary to nearby residential areas by visually breaking massing of larger buildings into smaller individual components to express strong unit identity and to relate to the characteristic frontage of buildings in the area, as shown at left.
- o Secondary dwelling units should complement the scale, mass, built form and character of the principal dwelling unit.
- o Buildings containing more than 4 units should generally be avoided, taking the form of two or more separate buildings where more than 4 units are proposed
- o Use separations, transitions, changes in plan and the inclusion of elements such as bay windows, dormers, porches and cross gables to help mitigate the visual quality of long buildings
- o Roof pitches at least 6 in 12 are encouraged
- Vary the exterior design of buildings facing a street or lane from those of similar buildings across the street and on adjacent properties, so that front elevation designs have significant variations in the disposition and articulation of design features.
   Mirroring nearby front elevation design alone is not an adequate variation.



Incremental rhythm along the street

# Relationship to the Street

- Street setbacks for principal dwellings should be shallow enough to provide for building/sidewalk conversation
- The principal dwelling should be oriented to the street and should be designed to encourage natural surveillance of the street; on corner lots, orientation should be towards both streets.
- A covered porch or veranda at the street entrance of the unit is encouraged; where possible, raise the floor level of the main floor above grade at the front of the unit, providing greater surveillance and more traditional character
- For developments having units located to the rear of the property, such as coach houses, the approach to those units from the street should be as obvious and direct as possible
- Provide a clearly identifiable door onto the street and public open spaces.



Orientation and Visual Access to Units

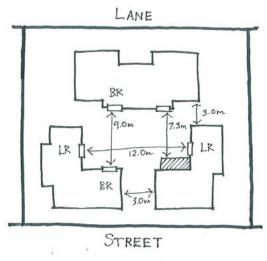
# Relationship to the Lane

- o Provide a clearly identifiable door on the lane for dwelling units adjacent to the lane at the rear of the parcel.
- A "transparent" interface between the lot and the lane is encouraged, and may be achieved through a balcony or windows overlooking the lane, a porch next to the lane, or other similar means.
- o Areas of the lot adjacent the lane that are not required for access to parking should be landscaped. The inclusion of trees in these areas is encouraged where practical.
- o Consider the use of low (less than 1.2 m) fencing and screening along the lane, to encourage interaction between the lane and nearby semi-private open space.

#### Relationship Between Buildings

o Provide a clear distinction between private and public open space.

- o Dwelling units should be arranged on site to facilitate social interaction, build a sense of community, and create neighbour-to-neighbour surveillance. This can be accomplished as shown at left, by:
  - a. ensuring various building entrances face each other and/or open on to open spaces common to all units;
  - b. providing for surveillance of open spaces common to all units from active living areas within each unit; and/or
  - c. providing patios, porches, or verandas adjacent common areas.
- o Minimize the potential for overlook to neighbouring windows and private spaces
- o Minimum building separations between units on the same site are preferred, as follows and as shown at left:
  - 1. between side walls of buildings containing a small amount of window area: 3 m
  - 2. between portions of walls containing windows into active living spaces such as living and dining rooms and kitchens: 12 m
  - 3. between portions of walls containing windows into other habitable rooms: 9 m
  - 4. preferred distances in cases (2) and (3) are reduced to 7.3 m to portions of walls containing non-habitable space.



**Building Separations** 

#### **Solar Orientation**

- o Building orientation and massing should ensure that a majority of primary living spaces receive direct sunlight for the daylight hours at equinox
- o Buildings should be positioned and scaled to minimize the impact of shadows on adjacent developed properties and on other units planned within the site; where an adjacent property has not been developed, the impact of shadows should be assessed against a typical development given anticipated zoning on that property
- o Where possible, units should be designed with primary window openings facing south and west or east
- o Where possible, buildings should not be located in positions that will result in substantial shading of the private open space of adjacent units

#### Other

- o Carefully provide for areas for garbage and recycling collection and storage, taking into account visual screening and security from animal scavengers
- o Provide a yard or roof terrace for each unit for usable private open space, in a highly accessible location. Failing this, a large balcony for each unit should be provided. This open space should be screened to provide privacy from neighbours.
- o Provide a variety of views, ensuring that distant and close-up views of outdoor spaces are provided wherever possible.

## Parking and Access

- o A driveway ramp having a slope greater than 5% should have a 3 m flat surface before it cuts the roadway in order to improve sightlines
- o A walking path providing direct access to the principal dwelling unit should be clearly visible from the street.
- o All lots should have direct access to the larger pedestrian circulation system via park corridors, pathways, and/or sidewalks.
- o All buildings should be sited to provide for safe fire access to all units from the front of the lot.
- o Where there are multiple dwelling units on a single lot, all parking spaces should access the site via a shared driveway and/or directly from a public lane.
- o Parking pads and garages should be located to the rear or side of the dwelling unit(s) wherever possible, and always where there is access from a rear lane.
- o Vehicular access from the street is strongly discouraged unless a property is not served by a lane or is subject to prohibitively steep grades

#### Screening and Landscaping

- o Retain the existing natural landscape to the extent possible, especially where it can function as a buffer between adjacent properties. Where areas that have been designated for natural landscaping in the required Landscape Plan have been cleared, this land should be replanted with native trees and shrubs.
- o Retain a minimum 30% tree cover on each lot where possible.
- o Street and yard trees are encouraged wherever possible, and should be appropriately sourced and spaced to ensure consistency between building features, yard landscaping, and street trees and street furniture. Species should be selected that are non-intrusive and minimize damage to adjacent pavements and underground servicing.
- o Plant deciduous trees and shrubs to shade buildings in summer but allow for solar gain in the winter.
- o Avoid the use of solid fencing or continuous buffers of vegetation higher than 1.0 m fronting the primary dwelling unit.
- o Provide a landscape screen for garages and parking pads that are visible from the street.
- o Consider providing dedicated areas and small shared facilities for children, particularly in developments comprising more than 4 units. Where provided, these should be visible from active living areas in housing units.

# 16.3 Upper Gibsons Cottage Residential DPA No. 9

## **Purpose**

The Upper Gibsons Cottage Residential Development Permit Area is designated under Section 919.1(1)(e) of the Local Government Act for the purpose of establishing objectives for the form and character of intensive residential development.

#### Area

The Upper Gibsons Cottage Residential Development Permit Area is shown as Development Permit Area No. 9 on Figure C.1 of the Upper Gibsons Neighbourhood and Strategic Servicing Plan.

# **Justification**

The Upper Gibsons Neighbourhood Plan Area consists of a compact mix of land uses, including various residential forms, a commercial node, civic facilities, and an interconnected system of parkland and open spaces. One of the objectives of the Upper Gibsons Neighbourhood Plan is to encourage housing that is accessible to a cross-section of society, and is adaptable to the changing demographics and lifestyles of the Town's residents. Cottage Residential development (a form of small lot development) in the Upper Gibsons Neighbourhood Plan Area is intended to provide the community with an attainable market housing option.

The objectives of this DPA designation are to ensure that Cottage Residential development in the Upper Gibsons Neighbourhood Plan Area:

- o respects the existing form and character of the Town; and
- o provides residents with high quality affordable housing options.

#### Guidelines

Development permits issued in this Development Permit Area shall consider the degree to which an application is in accordance with the following guidelines:

#### General Form and Character

Development should promote a small town character by encouraging architecture, landscape design and environmental settings that respect the surrounding context.

- Local and natural building materials such as timber and stone should be used,
- The use of natural colours is encouraged, and the use of a variety of complementary colours as accents is also encouraged to promote visual interest.
- Reflect an environmentally-friendly ("green") image through the design and exterior features of the development. This image may be achieved in such ways as:
  - o buildings and roadways sited to retain existing trees, vegetation, and other important natural features;
  - o incorporation of visible "green" landscaping features such as rain gardens and infiltration trenches; and
  - o incorporation of visible "green" building features and materials such as skylights, rain barrels, local wood and stone, green walls and roofs, rain gardens, solar panels, recycled exterior materials, exterior elements for window shading.

#### **Building Massing and Street Rhythm**

o To achieve harmonious integration with surroundings, development should be sensitive to the scale, mass, and form of adjacent buildings.

- o Secondary dwelling units should complement the scale, mass, built form and character of the principal dwelling unit.
- o Roof pitches at least 6 in 12 are encouraged.
- o Vary the exterior design of buildings facing a street or lane from those of similar buildings adjacent and nearby, so that front elevation designs have significant variations in the disposition and articulation of design features. Mirroring nearby front elevation design alone is not an adequate variation.

#### Relationship to the Street

- o Street setbacks for principal dwellings should be shallow enough to provide for building/sidewalk conversation
- o Orient the principal dwelling to the street and to encourage natural surveillance of the street.
- o Orient duplexes on a corner lot towards both streets
- o Incorporate a covered porch or veranda to the street entrance of the unit; where possible, raise the floor level of the main floor above grade at the front of the unit, providing greater surveillance and more traditional character
- o For developments having units located to the rear of the property, such as coach houses, ensure that the approach to those units from the street is as obvious and direct as possible.

#### Solar Orientation

- o The design should consider the effects of climate and solar orientation to maximize energy efficiency and solar access
- o Buildings should be oriented to maximize solar exposure while minimizing shadow impacts on adjacent buildings and common areas.
- o Building orientation and massing should ensure that a majority of primary living spaces receive direct sunlight for the daylight hours at equinox

# Parking and Access

- o A walking path providing direct access to the principal dwelling unit should be clearly visible from the street.
- o All lots should have direct access to the larger pedestrian circulation system via park corridors, pathways, and/or sidewalks.
- o All buildings should be sited to provide for safe fire access to all units on site from the front of the lot.
- o The use of cul-de-sacs should be avoided.
- o Parking pads and garages should be located to the rear or side of the primary dwelling unit wherever possible.
- o Vehicular access from the street is strongly discouraged unless a property is not served by a lane or is subject to prohibitively steep grades

# Screening and Landscaping

- o Retain the existing natural landscape to the extent possible, especially where it can function as a buffer between adjacent properties. Where areas that have been designated for natural landscaping in the required Landscape Plan have been cleared, this land should be replanted with native trees and shrubs.
- o Retain a minimum 30% tree cover on each lot where possible.
- Street and yard trees are encouraged wherever possible, and should be appropriately sourced and spaced to ensure consistency between building features, yard landscaping, and street trees and street furniture. Species should be selected that are non-intrusive and minimize damage to adjacent pavements and underground servicing.
- o Plant deciduous trees and shrubs to shade buildings in summer but allow for solar gain in the winter.
- o Avoid the use of solid fencing or continuous buffers of vegetation higher than 1.2 m in front of the primary dwelling unit.
- o Provide a landscape screen for garages and parking pads that are visible from the street.
- o Landscape the space between the fence and the lane, to create a rhythm of green spaces along the lane.

# PART E HARBOUR AREA PLAN

MARCH 2012

### **PROJECT TEAM**

Matrix Architecture and Planning Inc. (Paul Lebofsky, Consultant)

G.P. Rollo and Associates Land Economists

Pottinger Gaherty Environmental Consultants (Susan Wilkins)

Town of Gibsons (Michael Epp, Municipal Planner)

MVH Urban Planning & Design

Calum Srigley

Don Wuori Landscape Studio

Dr. Alison Shaw

## CONTRIBUTIONS AND CREDITS

This document draws on work produced as part of previous Harbour Area studies, including the Gibsons Harbour Master Plan, prepared by CIVITAS Urban Design and Planning, 2001 and "Fresh Eyes on Gibsons," produced by UBC Urban Studio, Fall 2000. Though the Harbour Area Plan was realized through many much appreciated contributions by many individuals over many years, the Town wishes to thank the following individuals for their involvement:

Best Coast Initiatives (Michael McLaughlin, Economic Development Coordinator)

Contributed existing conditions and suggested policy directions for economic development in the Landing

Sunshine Coast Museum and Archive Society

Provided text and images in Section 1.3

C-Change, Coastal Climate Adaptation Strategies (Nathan Vadeboncoeur)

Contributed Existing Climatic Conditions Text and Policy Suggestions for Climate Adaptation

Jennifer Mauel, Summer Intern

Conducted land use survey and land classification study of the Gibsons Harbour Area

Jeff Paleczny, Town of Gibsons Development Services Coordinator

Selected Photographs



## **EXECUTIVE SUMMARY**

The scenic beauty of Gibsons' Harbour Area has both attracted development interest and captured the imagination of the community, which has come together frequently to envision ways to enliven and enhance the Harbour. The many ideas in this Plan have been cultivating in the minds of the community for some time. Aspirations and wishes for the Harbour have ranged from a pedestrian ferry service going from the Government Wharf to the Sea Bus terminal in downtown Vancouver, to a hotel convention centre, to new facilities for a working waterfront, to new parks and natural areas. Ideas have been visionary (a transit system linking the water to Upper Gibsons) and they have been pragmatic (discussing revenue potential for the Town). Every study of the Harbour to date has recognized the tremendous significance of the area to the Town's image and livelihood, and has endeavored to find ways to develop and enhance the area while retaining the existing scale and character that make the Harbour desirable to residents and visitors.

We hope that this Harbour Area Plan captures both the visionary spirit of the community and at the same time puts forth a practical and realistic vision that provides direction for the development and improvement of the Harbour over the next 10 - 20 years. Through this plan the Town envisions a sustainable and vibrant Harbour Area by pursuing the following five goals:

- 1. Preserve the scale and character of the Harbour Area.
- 2. Make the waterfront fully accessible, physically and visually, retaining the sense of proximity to nature.
- 3. Ensure environmentally responsible and sustainable planning and development.
- 4. Support and enhance social and cultural activity in the Harbour Area.
- 5. Ensure the economic viability of the Harbour Area, recognizing the unique role the Harbour plays in the local economy and the economic history of the area.

## 1.0 INTRODUCTION

#### 1.1 Plan Purpose and Context

Across British Columbia coastal towns are being confronted with new challenges: changes in fishing and resource based industries, aging populations, and growing environmental impacts are but a few of the emerging trends that demand pro-active responses. The Gibsons Harbour Area Plan is intended to spur and guide healthy development while addressing these trends to ensure the long-term stability and prosperity of the Town. The plan seeks to balance vision with viability to identify opportunities for investment and improvement to preserve and enhance the character and appeal of the area as it grows over time.

The planning area extends from the Town boundaries to the north, south past Camelia Way and runs the length of the harbour, including two to three blocks of upland area (see "Figure 1.1 Harbour Plan Study Area"). The planning study area includes the Gibsons Landing and Heritage Hills neighbourhoods.

Gibsons Landing has tremendous potential to become a more vibrant and successful centre with a specialized role in the community. The waterfront setting, active harbour front, and mix of small businesses are distinct characteristics and assets for future

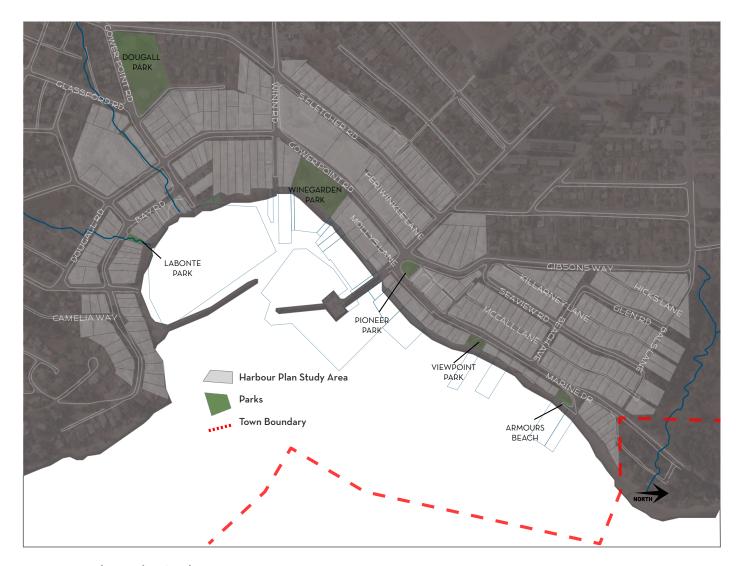


Figure 1.1 Harbour Plan Study Area

development. However, the historic development pattern with small, steep lots presents a considerable challenge for new development. Providing for development and services while still retaining the Harbour Area's ambience is a major focus of the Plan, but one that will require considerable design effort to implement.

#### 1.2 Planning Process and Public Engagement

The Harbour Area Plan was initiated by the Town of Gibsons in 2009 to address development pressures by establishing a vision for the Harbour Area. The planning process builds on previous studies for the area, including the 2001 Harbour Area Master Plan, and was conducted in two phases: the first phase identified issues and established the overall direction and themes; the second phase was intended to address the form and mix of development in the Harbour Area while ensuring that the proposed development is sustainable and economically viable. As part of the public engagement process, the Town commissioned a digital model of the Harbour Area, which is being used to visualize the scale and grain of development in the Harbour and to develop detailed design guidelines for new development.



Figure 1.2 3-D Model of the Harbour Area

#### Phase I

An open house was held on 24 September 2009 and included table discussions using the PARK approach: participants identified elements to (P)reseve, (A)dd, (R)emove and (K)eep out. Following this initial meeting, a three day intensive charette was held 28 - 29 of October 2009 and attended by 49 residents and stakeholders who identified many of the issues of importance in the Harbour Area. An open house event summarizing the results of the charette was held 7 December 2009 and was attended by 82 residents and other stakeholders.





#### Phase II

G.P. Rollo and Associates Land Economists were retained to assess whether the proposed land use designations in the plan would result in viable development opportunities. The "Residual Land Value Analysis" produced during this stage of the study informed the densities and development patterns recommended in this plan. A public information session held 23 February 2011 was attended by 81 people who provided comments which were recorded and incorporated into the planning process.

An online discussion forum, "Open Harbour," was launched in June 2011 to facilitate ongoing discussion and generate new ideas for the Harbour Area.

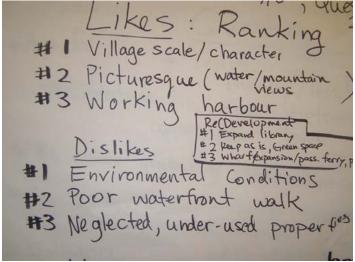




Figure 1.3 Intensive Design Charette and Visioning Sessions

#### 1.3 History of the Area

#### First Nations History

The landing area has always been a site of strategic importance. The Squamish First Nation ('Skwxwú7mesh' in the Squamish language) settled the area to the north of Gibsons Landing as a seasonal fishing village, Chek-welp. The Chek-welp villagers also used the Gibsons Landing area as a lookout for providing advance notice of invaders visible through the West Howe Sound gap. Outbreaks of small pox led to the eventual abandonment of the Chek-welp village in the early 1900s.

#### Pioneer Spirit: Early Settlers

While European explorers and fir traders visited the area in the 1800s, the first European settler to the Gibsons area, almost one hundred years after initial exploration, was George Gibson, an exBritish naval officer. In 1886 George Gibson built his homestead and began encouraging other settlers to come and live around him and form a community. Within two years, Gibson had built

a two-storey house, planted 100 fruit trees and cultivated four acres of his land, enough to ship his produce to Vancouver to sell and enticed other early pre-emptors including the Soames, Winegarden and Glassford families.

## A Working Harbour: Logging and Fishing Industries

The landing was dependent on water transportation and contact with the mainland was maintained by tug-boats. In 1891 the Union Steamship Company began to call at the dock in Gibson's Landing, making the area more accessible from the mainland.

The mainstay of employment for the early pioneers was related to logging and producing shakes or shingles. Fishing was another means of earning a living. Gillnetters were thick in the Rivers Inlet area, and almost every Vancouver fish company had a subsidiary camp in Gibsons Harbour. When fishing or logging was not pro-





Logging with oxen on the Chek-welp Reserve between Gibsons Landing and Granthams Landing

A view of the fishing fleet anchored in Gibsons harbor waiting for the area opening. Taken from the Bluff looking across the harbor to the wharf, circa 1930. A Union Steamship Co. vessel approaches the wharf.

ductive, residents practiced subsistence agriculture to make ends meet. "Stump farming" as it was locally known, required the blasting out of tree stumps in order to create an appropriate landscape to farm.

As the population grew between 1910 and 1930, shops and services such as a bakery, a delivery service, a post office and drug store sprung up in the landing.

Later Development

Until after World War II, Gibsons and area remained a small rural community based on logging, fishing and a limited amount of agriculture. Better roads and ferry connections spurred development in the 1950s: at this point, growth became much more rapid. Much of the more recent development in Gibsons has occurred in "Upper Gibsons", where flat land allowed expansion and adequate parking compared to the old business area around the wharf at

the waterfront. This trend in development continued, and today most commercial activity is located in Upper Gibsons while the waterfront has become increasingly oriented towards tourism and cultural activities.





The Gibsons Landing post office at the corner of School Road and Gower Point Road, circa 1962, just before move to new location at corner of Winn Road. The businesses on the north side of Gower Point Road, just west of the main intersection. The Heron Cafe, Florest and Gifts, Gibsons Landing Professional Building, Hunter Gallery, Granny's Sweets, N.D. P. Bookstore.

#### 1.4 Relationship to Smart Plan

Town of Gibsons' Official Community Plan, "Smart Plan," adopted in 2005, included a number of objectives and policies pertaining to the Gibsons Landing area. These objectives, in turn, were related to the Smart Plan's Smart Growth framework, which seeks to address economic, social and environmental goals.

The Smart Plan recognized the unique function of the Gibsons Landing area and seeks to maintain the "small-town atmosphere," while addressing the challenges of providing diverse housing and creating economic opportunities.

Policies presented in the Smart Plan, including the protection of the marine shoreline, creating new pedestrian and cycling linkages, protecting views, encouraging an active mix of uses, and enhancing streams and habitat, were incorporated into this Harbour Area Plan, which forms part of the Official Community Plan. The Harbour Area Plan refines and provides a greater level of detail to guide the development of the Harbour Area.

# 1.5 Relationship to Other Planning Processes

The Harbour Area has been the subject of a number of studies over the past few decades (see "Figure 1.8 Previous Studies of the Harbour Area" below).

A Revitalization Concept Plan was developed in 1995 by the Gibsons Landing Merchants Association in conjunction with the provincial Revitalization Program and the Town of Gibsons. This detailed plan provided guidance on design standards, parking, traffic circulation and other issues related to maintaining and developing the unique character of the Gibsons Landing area. In 2000/2001 a Harbour Master Plan was prepared, which proposed a direction for the future development of land and water uses. The Harbour Master Plan suggested more public land uses, and encouraged a floating market, restaurants/pubs and additional pleasure craft moorage.

This document draws on the context provided in these past studies and integrates with the recommendations in the following more recent plans, studies and reports pertaining to the Harbour Area:

- o 2006 Gibsons Landing Parking Study
- o 2006 Mini-bus Shuttle Service Feasibility Study
- o 2010 Parks Master Plan (not yet formally adopted)
- o 2007 Coriolis Consulting Report: Approvals Process for Three Major Development Proposals in Gibsons

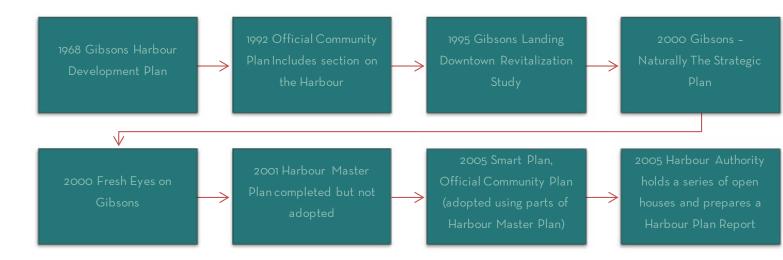


Figure 1.8 Previous Studies of the Harbour Area

### 2.0 THEMES AND VISION

Throughout the public involvement process and study of the Harbour Area of the past several years, a number of common themes or issues have consistently arisen and are presented in Section 2.1 below.

#### 2.1 Themes

#### Village Scale & Character

Embraced as a precious aspect of life in Gibsons, the Harbour Area has been variously described as "quaint", "historic", "small scale", and "a quaint seaside village". The area is characterized by its waterfront adjacency, harbour views, physical permeability (frequent spaces between and amongst built areas), visual permeability (the ability to see through to the water and other vistas), low building heights – especially adjacent to pedestrian pathways, small scale commercial establishments, materials, architectural form, and the nature of the streetscape.

#### Accessible Waterfront

Along with Village scale and character, this issue consistently ranks as the highest area of concern for residents. The waterfront is both a community and public asset that forms a backdrop to life in the Harbour Area.

#### **Environmental Sensitivity**

Every community has a responsibility to foster environmentally sensitive and sustainable planning and development. Gibsons, and the Harbour Area in particular, is no exception. As a coastal community, the Harbour Area is custodian to the adjacent marine environment and the upland features that contribute to its well-being. In addition, the coastline will be particularly susceptible to the impact of climate change. Renowned for the quality of its water, the area's aquifer is an important asset that requires special consideration.

#### Proximity to Nature

Many of the Town's residents chose to live in Gibsons because of the Town's and surrounding area's spectacular natural beauty. The community is mindful of the need to protect these environmental assets.

#### Social Activity

Both residents and visitors to the Harbour Area enjoy a high degree of social activity supported by the "walkability" of the area and facilities such as the museum, library, waterfront walk, public wharf and parks.

#### Heritage / The Working Harbour

Some marine service activities and a significant remnant of the commercial fishing fleet remain in the Harbour. While these are unlikely to return to their prominent place in the economic life of the town, the working harbour remains as an important part of the community's collective identity.

#### **Views**

Views of the harbour and landforms beyond are key to the character of the Harbour Area. The topography of the area lends itself well to the capturing of these views from a variety of vantage points.

#### **Economic Viability**

The degree to which the social, cultural, and environmental goals of the community may be met through renewal and enhancement depends critically on the economic viability of development in the Harbour Area.

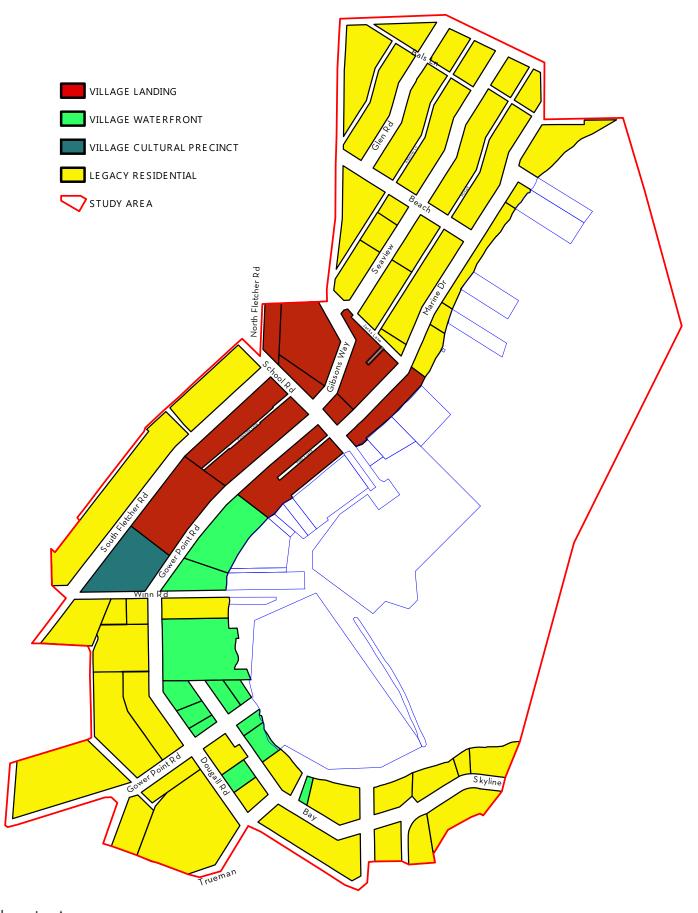


Figure 2.1 Character Areas

#### 2.2 Character Areas

Based on current and potential land use, scale and character, the Harbour Area was divided into four Character Areas, as shown in the map in "Figure 2.1 Concept Areas". The darker coloured areas within each of these indicates locations that were specifically examined as key prototypes within each Character Area.



**Cultural Precinct:** Currently contains the Library, Musem and Archives and is earmarked in the plan for expansion and enhancement of cultural / institutional uses.



**Village Landing:** The commercial core and heart of the Harbour Area.



**Legacy Residential:** an array of varied housing types which has been developed organically over time, and offers potential for infill.



**Village Waterfront:** is an essential adjunct to the Landing, and contains major components of public waterfront open space and marine activities.

#### 2.3 Vision Statement

Facilitate balanced development that ensures the ongoing attractiveness and the social, cultural, economic and environmental vitality of the Harbour Area, recognizing the unique and crucial role it plays in the life and economy of Gibsons.

# 3.0 EXISTING AND EMERGING CONDITIONS

The following section provides a snapshot of relevant facts and trends impacting the Harbour Area, in the areas of land use, environment, economy, urban design, transportation and circulation, and infrastructure. Trends in the use of community facilities and demographic changes are covered in Section 1.0 of the 2005 Smart Plan. These current conditions aid in the identification of opportunities and constraints which are responded to through the goals, objectives and policies outlined in this document.

#### 3.1 Land Use

The Harbour area is characterized by a mix of land uses and building types, including approximately 70 commercial establishments in 11,500 sq.m. of floor area1, 10 marine businesses, 107 Single Family residences, 93 Multi-Family residential units, eight parks, a range of civic and institutional uses including Town Hall, a Library, Museum, Post Office, Museum and Day Care, and approximately 17 undeveloped lots.

There are several heritage buildings located within the planning area, including the Inglis House, built in the first decades of the 20th century, which was central to both the early history of Gibsons and has national significance: at this location Inglis and Woodsworth discussed the ideas that resulted in the manifesto for the CCF party, which Woodsworth founded in 1932.

Land ownership is concentrated with several parties, with the Town of Gibsons owning and controlling significant holdings, including the Marina Lands, Holland Lands, Winegarden Park and a number of smaller parks in the area. The Gibsons Landing Harbour Authority, manages and operates the Government Wharf. Directors of the Harbour Authority are appointed by the Town with a mandate to provide moorage and services to commercial fishing.

Though residential activities are predominant in the planning area (see "Figure 3.1 Current Activities in the Harbour Area, by Percentage of Land Area (2011)"), residential densities for the area are relatively low— with approximately 200 residential units within the 57 acre planning area, neighbourhood density in the area is 3.5 units / acre. Neighbourhood densities of 4.5 are typical for mixeduse neighbourhoods and a typical single family neighbourhood has a density of up to 5 units per acre2.

The construction of the Wharfinger Building at the Government Wharf in 2000 and the redevelopment of Winegarden Park were the last significant land use changes in the area. A study conducted in 2011 by G.P. Rollo and Associates examined the economics

of developing within the Landing Area and found that the land costs are too high and the densities permitted under the Smart Plan too low to attract development, particularly for townhouse sites.

5.75% of the land in the study area is bare (does not contain structures). Though no statistics are available on historical commercial vacancy rates and business turnover, the number of currently vacant shop fronts in the landing suggests that vacancy rates are high. While many of the commercial uses in the Landing area are oriented towards tourism, a survey of the Landing merchants conducted in 2011 suggests that many merchants' businesses depend on support from the local market3. Vacancy rates could be partially attributable to the provision of an unsustainable amount of commercial gross leasable floor area relative to residential densities.

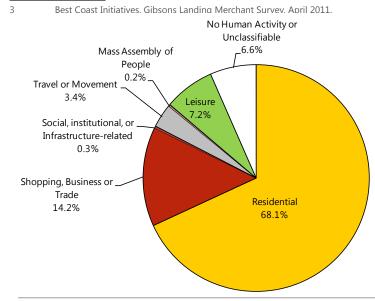


Figure 3.1 Current Activities in the Harbour Area, by Percentage of Land Area (2011)

<sup>1</sup> Gibsons Economic Development Partnership Report, 9 June 1999

<sup>2</sup> Berke, Godschalk, et. al. Urban Land Use Planning, 2006.

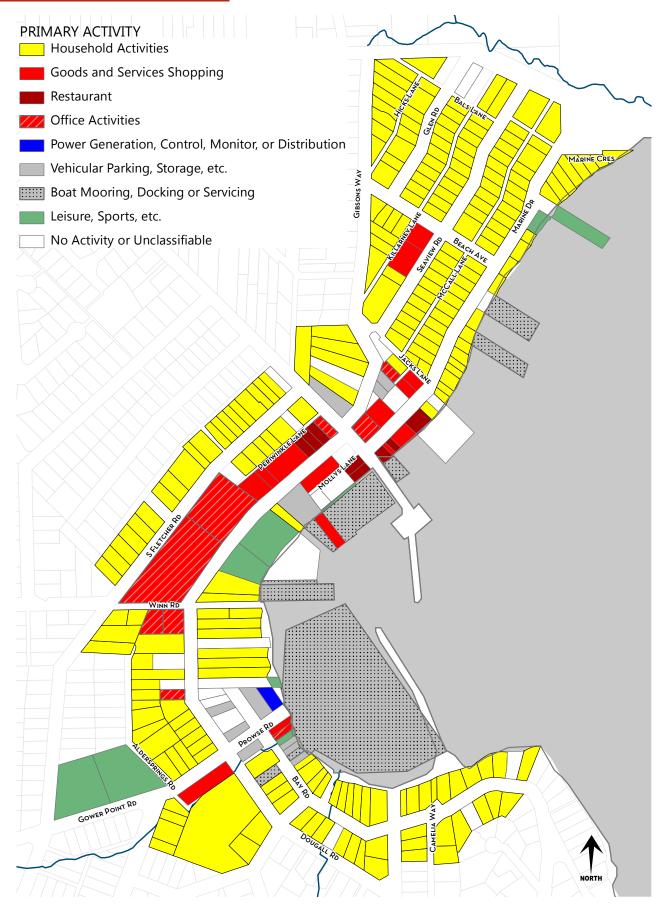


Figure 3.2 Current Land Use Activity in the Harbour Area (July 2011)

#### Marine Uses

The marine environment is an integral part of the Town of Gibsons municipal limits. The municipal boundary extends some 305 metres (1000 feet) seaward from the high tide mark. The Town of Gibsons has a Public Recreation Lease on the majority (not including Government Wharf) of the foreshore (101.7 ha) of Gibsons Harbour and a major portion of Shoal Channel granted in 1976. Within this overall lease, numerous sub-leases have been issued by the province for commercial marine uses.

Land along the Gibsons waterfront consists largely of residential use, except within the Gibsons Landing or harbour area. Gibsons Harbour is extensively developed inside the current breakwaters, with the two most prominent uses being the Government Wharf and Gibsons Marina. Other commercial uses include Smitty's Marina, Hyak Marine, and a marine pub at the foot of School Road. The harbour has played an historic commercial role, providing a home port for the commercial fishing fleet, and as a marine service centre for businesses serving the nearby islands (Keats, Gambier and other coastal locations). The economic role of the harbour is covered in "3.3 Economy".

#### 3.2 Environment

Gibsons Landing is endowed with many natural assets. As a coastal community, the ocean and its aquatic life are defining natural features. Sedges, grasses, and shrubs are present along the waterfront and beach area. Distinctive hillside topography and vegetation surround the Landing area and define the character of the Town. A number of streams, including Goosebird Creek and Charman Creek, lead down through the Gibsons Landing area.

#### Water

Two principal water courses flow through the study area: Charman Creek and Goosebird Creek. Gibsons Creek is immediately north of the study area. A number of tributaries, ditches and other watercourses can be found throughout the low lying areas within the study area, some carrying water intermittently, or seasonally. Conditions along these creeks vary but both are heavily impacted by urbanization. Some areas along these streams have been remediated with secondary growth of riparian vegetation and a natural stream bed, whereas other parts are culverted or channelized without vegetation cover. Combined, these streams provide a drainage channel for overland flow for a large portion of Gibsons.

The Gibsons Aquifer extends beneath the Harbour Area, north to the base of Mt. Elphinstone and supplies excellent quality drinking water to two thirds of the Town's residents. A thin layer of glacial till (Vashon Till) caps the aquifer in the Harbour Area, protecting the water supply from salt water intrusion4. Protecting the Gibsons Aquifer from over-use, contamination and salt-water intrusion are high priorities. Stormwater runoff, sewer outfalls, heavy use of the marine area by boaters, and low water exchange rates have raised concerns about the water quality in the Harbour. The Town is currently mapping the Gibsons Aquifer to identify its extent and monitor its capacity and recharge rates. The most significant discharge for the aquifer is the Harbour Area in the

4 Interim Report , Aquifer Mapping Study. Town of Gibsons. Waterline Resources, June 2010.

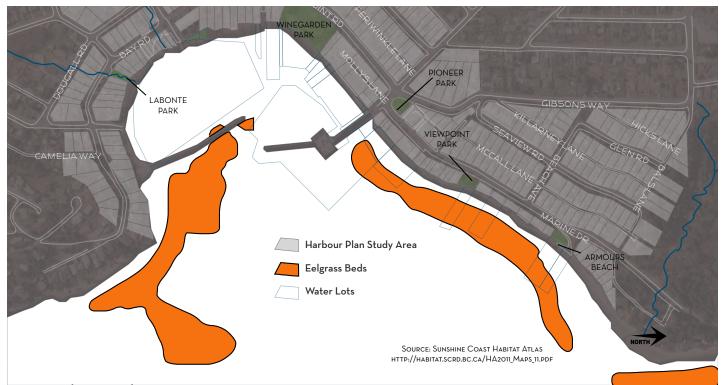


Figure 3.3 Eelgrass Bed Locations



Figure 3.5 Goosebird Creek

vicinity of Winegarden Park. A preliminary report on the condition of the Gibsons Aquifer indicates that the aquifer is very shallow in Gibsons Landing; caution should be taken when reviewing any development requiring pilings or significant excavation, both on land and within the floor of the harbour itself.

#### **Brownfields / Contaminated Sites**

In urban areas, soils and groundwater can become contaminated with various metals, hydrocarbons and other contaminants. Brownfields are sites of former commercial or industrial use which are underutilized and that may or may not be contaminated. The province has an incentive program for the use of brownfields, including guidance for municipalities5. The assessment and clean up of these areas is governed by the BC Waste Management Act, Contaminated Soils Regulation. The onus is on proponents for any new development or property transfers to retain an environmental consultant to assess and plan remediation for a site.

#### Habitat

Both Charman Creek and Goosebird Creek corridors provide aquatic, wildlife and riparian habitat. Eelgrass provides very valuable marine habitat for juvenile fish and other species, and is likely the most important natural asset in the Harbour area. The health of the marine eelgrass (zostera) present in some areas of the Harbour has been a concern. Through an agreement between the Gibsons Landing Harbour Authority (GLHA) and the federal

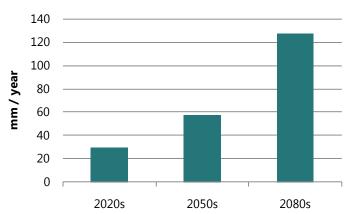


Figure 3.4 Projected Precipitation Change in South Coast Region (data from Canadian Climate Change Scenarios Network).

Department of Fisheries and Oceans (DFO), the Gibsons Landing Environmental Management Plan (GLEMP) outlines best management practices for protection of the environmental health of the harbour.

In addition to providing habitat area for a wide array of aquatic species, the upland areas are home to both terrestrial and marine species of birds. These include the presence of Great Blue Heron, a blue listed species known to be in decline. A Heron Rookery has been documented north of the marina on the waterfront property between Winn Road and Gibsons Marina. Other species at risk may be present in the Harbour area (including the alligator lizard) and the species at risk databases should be reviewed before any new development is approved.6

#### Climate Change

Climate change presents a challenge to Canadian communities by altering traditional climate patterns such as temperature and precipitation. For coastal communities such as Gibsons, sea level rise is also a major concern. Climate modelers have developed regional climate models in order to provide locally specific data. Gibsons is located in what is described in Canadian models as the "B.C. South Coast" or "West Vancouver" region. Over the past several decades, temperatures here have been slowly increasing and this trend is expected to continue. The average annual temperature is expected to increase by approximately 1.6 C through the 2020s, 2.5 C in the 2050s and 3.9 C by the 2080s. This increase will

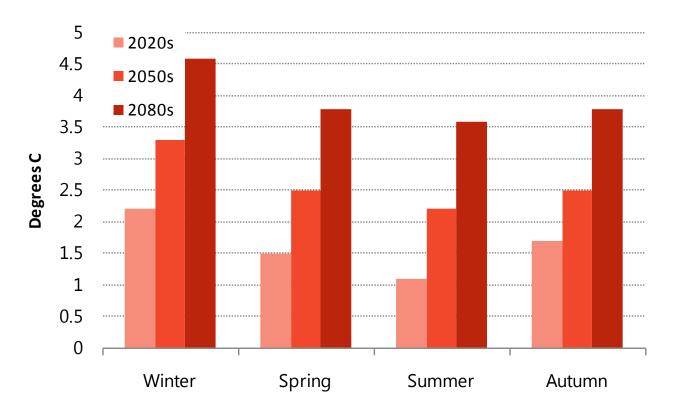


Figure 3.6 Projected Weighted Mean Temperature Change for the BC Coast and West Vancouver Regions in Degrees C by Season (data from PCIC Regional Analysis Tool).

be most marked in the winter, suggesting that heating costs and ice-related accidents may be reduced. However, this trend also suggests that less precipitation may be able to be stored as snow resulting in increased winter runoff.

As temperatures rise, the range of many species will move northwards, introducing new competitors to local ecosystems and new diseases that may put both humans and the environment at risk.

Annual precipitation is also expected to increase (see "Figure 3.4 Projected Precipitation Change in South Coast Region (data from Canadian Climate Change Scenarios Network)"). These changes are expected to be mild by the 2020s but become much more severe by the end of the 21st century. Increased precipitation, especially in the form of rain, can increase runoff, decreasing local soil nutrients, diminishing slope stability and increasing erosion.

As global sea levels rise due to a combination of factors such as glacial melt and thermal expansion of the oceans, coastal communities will be at increased risk of flooding. Floods may occur as a result of mean sea level change or as the result of

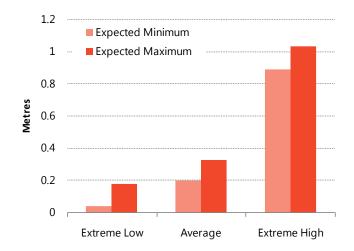


Figure 3.7 Projected Range of Sea Level
Rise (metres) for Vancouver region by the
Year 2100 (data from Bornhold, 2008).

increased wave height and strength during storm events. These storms undermine infrastructure by moving shoals further inland, increasing sediment transport rates, and increasing wave attack on shorelines. Storms can also affect local ecosystem productivity by altering nutrient cycle dynamics. The impacts of sea level rise are context dependent and will vary relative to the ecological and social vulnerabilities of particular communities. In Gibsons, sea level rise poses risks primarily to shoreline property owners, the Harbour Area, the sewer line and the Gibsons Aquifer.

Climate change is likely to precipitate an increase in frequency and intensity of storm surges, or offshore rises of water associated with a low pressure weather systems. In Gibsons, this may affect services, such as the sewer line along the foreshore, seawalls and present and future seaside walkways.

#### 3.3 Economy

Gibsons Harbour and Landing make the Town of Gibsons distinct and serve a unique economic function which adds diversity to the economy: almost every economic activity in the harbour depends on services that can only be provided via the Landing. Economic activities in the harbour and Landing are inextricably linked and are built primarily on the marine and tourism industries. The harbour and Landing are the principle tourism draw in Gibsons.

#### **Economic Activities in the Landing**

A 2010 survey revealed that tourism contributes 30% of store revenues, with nearly half of stores reporting 50% or more of their revenue drawn from tourism related activities. Comparatively, stores in Upper Gibsons report tourism spending represents 10% of revenues, with no stores reporting more than 25%.

The Landing is the location where most of Gibsons' major events are held. These events are sources of revenue for Landing merchants and the organizations that organize the events.

Nonetheless, tourism to the Landing is under-exploited. The harbour and Landing are picturesque and unique, but the assemblage of shopping and activities is insufficient to attract and retain visitors. Marine and motor tourism meet at the Landing. Growth in either affects the other and both contribute to congestion in the harbour and the Landing.

In addition to tourism activity, the Landing houses an array of services to residents of Gibsons and the Sunshine Coast and businesses in the Landing depend on local shopping for 70% of their revenues. Most of the Landing's stores are family-run businesses, which has social and economic benefits. Few merchants own their

building, but more than half of the retail space is locally owned. This pattern of resident shopkeepers and resident building owners makes the Landing a cornerstone of the local economy.

The Landing is also a centre for professional services including accounting, law, real estate sales and a variety of consulting and information technology firms.

#### Economic Activities in the Harbour: Moorage

There are approximately 360 resident (local) and 100 non-resident pleasure craft moored in the harbour year round. Annual revenue from permanent pleasure craft moorage is approximately \$570,000 per year, and moorage fees and purchases made by vessel owners are new dollars brought into the local economy.

The Small Craft Harbour and Gibsons Marina berth transient vessels visiting over-night and for stop-overs. Transient vessel owners are an important source of tourism spending, adding approximately \$800,000 to the Landing economy annually. There are not enough berths in the harbour to accommodate the marine tourism market and a significant amount of revenue is lost to the local economy as a result.

Approximately 20 fishing vessels moor in the Small Craft Harbour. Other commercial craft moored in the harbour include water taxis, tour boats and rental and training craft. These vessels take up little space, but they are active.

Demand for berths far exceeds the harbour's capacity. The Gibsons Landing Harbour Authority (GLHA) has a plan to expand by 100 berths, but lacks the capital to construct. Other locations for expansion have been suggested, but all are more capital intensive than expanding the Small Craft Harbour. Currently, the likelihood of obtaining the necessary funds is low and expanded moorage at other proposed locations would require very high private sector investment and extensions of the shoreline or new roads and does not seem a likely scenario. Adding 100 berths would provide additional funds for the operational and maintenance of the Small Craft Harbour. Expansion would also have implications in terms of vehicle traffic and parking.

# Economic Activities in the Harbour: Commercial Fishing

The commercial fishing fleet employs approximately 60 persons seasonally and spends an estimated \$500,000 annually on marine services. The fishing fleet has shrunk over the past decades and expansion seems unlikely.

## Economic Activities in the Harbour: Marine Services

There are limited marine services supplied in the harbour and therefore revenue from regular vessel maintenance is largely lost to the local economy, because the harbour does not have a marine services facility with a haul-out capability. Resident craft typically travel long distances for their routine maintenance needs. A conservative estimate of annual lost spending on maintenance for all permanent pleasure craft is \$500,000.

In 2010, Best Coast Initiatives (BCI) surveyed 28 Small Craft Harbours and private marinas in order to assess the demand and supply of vessel berths and routine vessel maintenance services in the Georgia Strait region. The analysis determined that there is a shortage of both. Thousands of vessels do not have berths. Vessels travel long distances to obtain services and waiting times for services are getting longer. The existing marine services industry serving Gibsons Harbour will remain vigorous and would expand if harbour capacity is increased.

Currently, there are no marine congestion issues and future marine congestion is unlikely, even with the expansion of the small craft harbour.

## Economic Activities in the Harbour: Commercial Services

Commercial services contribute to a working harbour, to tourism appeal and are high value additions to the economy. Existing services include water taxis, tours, sail and motor boat rentals and training, cargo transport, fuel sales and retail sales. We include sailing clubs and paddling clubs in commercial operations because they have economic benefits.

The Small Craft Harbour is a hub of commercial services and a logical place for additional services, especially those used by tourists. Consideration should be given to the impact on the fishing fleet of busy tourism activity. Gibsons Marina is the preferred location for sailing and paddling clubs and the likely place for their expansion. Armours Beach has potential to become more active as a club and training facility.

The sole fuel facility in the harbour is at Hyak Marine. Across the Georgia Strait region, marine fuelling facilities are becoming fewer, which could mean more activity at the Hyak depot and increased activity in Gibsons Harbour.

# Economic Activities in the Harbour: Marine Transport

Cargo transport is an essential service of the Small Craft Harbour and the Small Craft Harbour is a primary cargo transfer facility for residents of Keats and Gambier Islands. The only boat launch facility is located at Gibsons Marina. Some barge cargo is unloaded at that location.

#### Economic Activities in the Harbour: Marine Tourism

The potential for growth in marine tourism is great. Powell River Economic Development estimates that 16,000 pleasure craft tour the Sunshine Coast each season. Currently, the total capacity of Gibsons Harbour is limited to about 25 and vessels are occasionally turned away.

This influx of spending is what is needed to support commercial development at the harbour-landing interface. It gives rationale to improving amenities such as the seawall walk and avenues between the seawall and the streets above. Marine tourism does not generate a need for parking space. Marine tourism may be hampered in the future by large increases in the cost of diesel fuel; however, rising fuel costs might increase regional, short cruises, which would somewhat compensate for an overall decline. Cautious assessment of the future market for transient pleasure craft moorage should be made prior to investment in expanded facilities. In the short term, establishing mooring buoys has a low capital cost that is recoverable from moorage fees and would provide new facilities for visiting boaters.

#### New Commercial and Residential

Investment in new commercial space depends on an increased customer base via higher tourism volumes, increased population in the Harbour Area and increased Sunshine Coast resident shopping. Increased marine and motor tourism will be important drivers of commercial expansion and viability. An additional source of commercial occupancy that is not dependent on those factors is professional services.

#### 3.4 Circulation

Transportation to, from and within the Gibsons Landing area is heavily reliant on the private automobile, with some degree of traffic congestion occurring near the commercial node along Marine Drive throughout the summer peak season. Vehicle traffic in the Landing, and the lack of viable transportation alternatives,

have led to a number of concerns including the availability and adequacy of parking and pedestrian safety.

#### **Parking**

Historical development of the area prior to the introduction of the automobile or bylaw regulations has resulted in many existing uses that have no parking at all. Despite this, a 2007 study indicates that there is adequate parking capacity within the Landing Area in 236 on-street spaces and 80 spaces in public parking lots. The 2007 study raised several on-going parking issues: road blockages due to loading activity; low parking fines that do not act as deterrents and inadequate signage have all combined to result in a parking management issue7.

#### **Bicycle Facilities**

The bicycle network within the Landing Area is poorly developed: there are currently no designated bicycle routes, signage, lanes, or other facilities. The lack of bike racks, lockers, and signage are identified in Gibsons Landing Parking Study, 2007.

Significant road improvements have been designed for Gower Point Road from Winn Road, east to Prowse Road. These improvements will provide grade-separated bicycle lanes and a sidewalk separated from the cycle lane by boulevard wherever possible. Narrow vehicle lanes will provide physical incentive for slower traffic speeds. The completion of this improvement will introduce the first segment of cycling infrastructure, in the form of a grade-separated bicycle way that will form a piece of an eventual continuous coastal route from Langdale through to Elphinstone and beyond.

#### **Transit**

Gibsons Landing is currently served by BC Transit. 48 buses per day are routed through the area and take passengers to Langdale or Sechelt. A 2007 study found that 26% of trips originating in Gibsons Landing are destined for Upper Gibsons8. An implementation study has indicated that a Community Shuttle, linking Gibsons Landing and Upper Gibsons, could recover operating costs through fare revenues. A Transportation Survey Report completed in 2007 indicated that 51% of Gibsons respondents would be interested in a car share arrangement9.

#### 7 Gibsons Landing Parking Study, 2007

#### **Pedestrian Circulation**

The combined activity from residents living in the Landing, tourists, and vehicle traffic has created pedestrian conflicts and safety issues in the Landing. A 1995 Study called the Gower Point Road / Marine Drive intersection ('Five Corners') "a dangerous situation, especially for pedestrians."

A continuous sea walk along the water's edge between Armours Beach Park to the north and the proposed Breakwater Park to the south has been developed in segments over time and the Town has made a policy of acquiring this right-of-way for pedestrian access as development applications come forward.

#### 3.5 Infrastructure

Some of the critical infrastructure in the Harbour Area is nearing its replacement age. The Prowse Road Pump Station, which lifts sewage up to the Sewage Treatment Plant on Stewart Road, has reached its safe capacity and is at the end of its life expectancy. The station will need to be completely rebuilt and upsized; funding opportunities for this work are being actively investigated. The shoreline trunk sewer, a main sewer line that runs parallel to the shoreline in Gibsons Landing requires a detailed assessment to determine its condition.

Safety improvements are proposed at Five Corners, including the possible closure or restriction of turning movements at the School Road leg. In addition, it is planned to convert the existing 3-way stop for the main intersection into a more traditional 4-way stop. Narrowing of Marine Drive is proposed at the existing crosswalk at Pioneer Park.

Marine Drive within Gibsons is proposed to have a reduced speed limit of 30km/h, and this lower speed limit has also been contemplated for all of Gibsons Landing. The Sunshine Coast Regional Transportation Plan is proposing to downgrade Marine Drive from the BC Ferry Terminal to Gibsons from arterial to collector status while supporting improvements that emphasize pedestrian and cyclist use.

An upgraded storm drainage system down School Road is planned with the outfall to be constructed under the Molly's Lane stairs which are budgeted for replacement in 2011.

Various watermains will require upgrading or replacement in Gibsons Landing. The Town conducts an annual replacement program for its aging watermains in both Upper Gibsons and Gibsons Landing and will upsize identified mains where the opportunity

<sup>8</sup> Gibsons Transit Feasibility Study, 2007.

<sup>9</sup> Corbett, D. Sunshine Coast Transportation Survey. April 2007.

exists. Development may also trigger upgrades in order to provide adequate water for fire and domestic supply.

#### 3.6 Urban Design

There are many definitions of "urban design". Most of them are similar to the following, from the Planning Department of the City of Aukland, New Zealand:

"Urban design is the multi-disciplinary skill of designing and arranging all the physical elements that make up cities to create harmonious, vibrant and successful places for people."

#### **Built Form**

From an urban design perspective, the Harbour Area is in transition, somewhere in the middle of a rural-urban continuum. What is referred to as the Village Scale and Character of the Harbour Area, variously described as "quaint", "historic", "small scale", ... is to some degree a reflection of this condition. As evidenced in "Figure 3.8 Figure Ground Image Showing Building Footprints in Black", the Harbour Area is sparsely built, setbacks are inconsistent, and, in general, the Area lacks the organization and efficient use of land that characterizes an urban environment. A significant urban design challenge is to retain the essential village scale and character while moving closer to urbanity, accepting and embracing the growth necessary for an economically viable, sustainable and vibrant community.

#### Grain and Physical and Visual Permeability

A fine grained urban environment is one which is both physically and visually permeable. It implies a rich network of opportunities for pedestrian movement and many opportunities for views or glimpses through and between buildings. The Harbour Area appears to have such a grain. In fact, this grain and permeability is a function of a "pre-urban" condition, and is mostly visual since real opportunities for enhanced physical permeability are limited by ownership patterns. It is possible to retain and enhance the characteristics of fine grain in a more urban, or village, setting and this is another facet of the urban design challenge.

#### Scale

While to some degree the scale of the Area is a function of its "pre-urban" grain, other factors contribute to scale:

- building heights are low mostly one and two storeys with some fairly recent exceptions at the four storey wood frame maximum10;
- o site coverage is low;
- o retail frontages are small;
- street level transparency in the commercial part of the Area is good.

#### Siting (Orientation, Axis, Landmarks)

The topography of the area supports building orientation that allows for good sunlight exposure and capturing of distant views (often of the harbour and land forms beyond). The street pattern, in response to topography and shoreline offers opportunities to create visual foci, or special architectural events at the ends of visual axes to create landmarks for physical and visual orientation and enhanced visual interest.

#### Materials, Massing, Colour, Architectural Form

The great variety of materials, massing, colour and architectural style in the Area provides variety on one level, but lacks a coherence that could enhance the Area's brand.

Since adoption of guidelines in the 2005 Smart Plan, recent development – e.g. Gower Gardens, or The Landing, have begun to provide that coherence.

# Streetscape (Street Furniture, Street Lighting, Paving, Scale, Planting)

In the Village Landing, as a result of past Downtown Revitalization projects the streetscape is of a reasonably high quality. Elsewhere in the Harbour Area, streetscape enhancements are needed. The scale of the road that results from angled or perpendicular parking is inefficient and detracts from the desired small scale village character.



### 4.0 GOALS AND OBJECTIVES

Major themes discussed in Section 2 of the Harbour Area Plan and in the existing and emerging conditions in the Harbour Area (Section 3), give rise to a corresponding set of goals for planning and development of the Harbour Area which respond to these challenges. The five goals below follow the principles outlined in the 2005 Smart Plan, which seek to created balanced development which furthers the social, cultural, economic and environmental aspects of sustainability.

#### **GOAL 1**

## RETAIN THE SCALE AND CHARACTER OF THE HARBOUR AREA

Objective 1.1 Ensure new development is compatible in scale with existing development in the Harbour Area.

Objective 1.2 Ensure new development evokes a west-coast, seaside village feel.

Objective 1.3 Maintain a pedestrian focus through street-oriented buildings developed to a high quality design standard.

#### **GOAL 2**

# MAKE THE WATERFRONT FULLY ACCESSIBLE, PHYSICALLY AND VISUALLY, RETAINING THE SENSE OF PROXIMITY TO NATURE

Objective 2.1 Complete and enhance the Town's pedestrian and cycling network, creating a bicycle and pedestrian friendly Harbour Area.

Objective 2.2 Ensure that the waterfront is physically and continuously accessible to the public along its entire length.

Objective 2.3 Upgrade and improve the existing park system and waterfront walkway.

Objective 2.4 Create and protect public and private views through to the water.

#### GOAL 3

# ENSURE ENVIRONMENTALLY RESPONSIBLE AND SUSTAINABLE PLANNING AND DEVELOPMENT

Objective 3.1 Protect the Gibsons Aquifer and water quality in the Harbour Area.

Objective 3.2 Implement climate adaptation strategies which account for the short and long term effects of climate change.

Objective 3.3 Support ecologically sensitive development, adding an environmental restoration and enhancement component to new development, where appropriate.

Objective 3.4 Take a "no-net-loss" or "net gain" approach to existing habitat and ecological function.

Objective 3.5 Assess the impacts to water quality of all new development.

#### **GOAL 4**

# SUPPORT AND ENHANCE SOCIAL AND CULTURAL ACTIVITY IN THE HARBOUR AREA

Objective 4.1 Plan for a mix of housing types to accommodate social diversity in the Harbour Area.

Objective 4.2 Upgrade and add to existing cultural facilities (library, museum, etc.) in the Harbour Area and encourage an increase in the number of amenities and sites of interest.

Objective 4.3 Improve connections to and from the Harbour Area, particularly connections via transit and other alternative transportation options.

Objective 4.4 Design for a range of ages, creating accommodating, accessible and desirable spaces for children, families, and seniors.

#### **GOAL 5**

#### ENSURE THE ECONOMIC VIABILITY OF THE HARBOUR AREA, RECOGNIZING THE UNIQUE ROLE THE HARBOUR PLAYS IN THE LOCAL ECONOMY AND THE ECONOMIC HISTORY OF THE AREA.

Objective 5.1 Plan for increased parking and traffic and allow for an acceptable impact from these activities.

Objective 5.2 Facilitate growth to accommodate additional population in the Harbour Area.

Objective 5.3 Expand the capacity of the marine harbour for transient boaters, resident boaters, and commercial vessels.

Objective 5.4 Support the development of tourist accommodation and meeting facilities in the Harbour Area.

Objective 5.5 Support increased, year-round commercial and tourist activity in the Harbour Area.

Objective 5.6 Retain and enhance working harbour activities and maintain a diversity of commercial activity in the Harbour Area, while taking steps to mitigate possible impacts on the natural environment and residential areas.

Objective 5.7 Maintain and improve existing infrastructure, expanding its capacity to accommodate growth.

## **5.0 PLAN POLICIES**

The goals and objectives outlined in the previous Chapter will be implemented incrementally through both public and private actions guided by the policies presented below. These policies include land use designations controlling density and the locations where specific uses will be permitted, the desired character of new development, environmental policies, and policies to guide future investment in transportation and infrastructure. Other policies concerning more general areas of concern are outlined in the 2005 Smart Plan.

#### 5.1 Land Use Plan

Land use decision making for the Harbour Map will be guided by the map shown in "Figure 5.2 Harbour Area Land Use Plan". Land Use Designations for this area are defined in the Smart Plan (Part B, Section 4.0, pg 18 - 19). With the exception of the following designations, which are unique to this area:

#### Marine

Areas designated 'Marine' were established to permit a range of marine-related, environmentally benign uses that relate to the historical idea of the "working harbour" including such uses as:

o boat repair; boat sales; ship chandlery; boat charter; marina auxiliary uses; and boat building.

#### Mixed Marine

Areas designated 'Mixed Marine' were established to permit low density multi-family residential development as defined elsewhere in the Smart Plan, either singly or in combination with compatible marine uses as defined in Marine land use.

#### Multi-Family Residential Special Character

Areas designated 'Multi-Family Residential Special Character" were established to permit single family and multiple family residential in a single family form, with typical floor space ratios of 0.5-0.75.

#### Residential / Tourist Accommodation

Areas designated "Residential / Tourist Accommodation" were established to permit high density multi-family residential development as defined elsewhere in the Smart Plan, or Tourist Accommodation such as a hotel or inn together with meeting and/or food and beverage facilities customarily associated with such uses, or some combination of these uses.

Land Use Designation	Area (Square	Metres) Area (Acres)	Percentage of Area
Single Family Residential	28,679	7.1	8%
Low Density Infill 1	69,166	17.1	19%
Multi-Family Residential Special Character	20,826	5.1	6%
Low Density Multi-Family Residential 1	31,944	7.9	9%
Medium Density Multi-Family Residential 2	10,448	2.6	3%
Public / Community Uses	9,908	2.4	3%
Mixed Use Residential / Commercial	31,941	7.9	9%
High Density Multi-Family Residential 3	5,872	1.5	2%
Park and Recreation	22,391	5.5	6%
Commercial Harbour	106,534	26.3	29%
Residential / Tourist Accommodation	23,555	5.8	6%
Marine	3,132	0.8	1%
	TOTAL	364,396	90

Figure 5.1 Harbour Area Land Use Plan By Total Area and Percentage



Figure 5.2 Harbour Area Neighbourhood Design Concept

#### Low Density Infill 1

To permit single-family, small lot single-family, two-family housing, and laneway housing or some combination of these with a maximum density of 20 - 25 units per hectare (typical floor space ratio of 0.6).

#### **Build** out

The proposed land use frame work results in more than 900 residential units within the Harbour Area study boundaries at full buildout, assuming average unit sizes of 140 sq. m. for units in multiple unit development (shown in "Figure 5.3 Potential Future Development of the Harbour Area" below). This represents a possible 700 unit increase over existing development in 2011 and a net increase of 135 units over the buildout anticipated under the land use regulations for the area depicted in the 2005 Smart Plan.

#### Commercial Harbour

Within the Commercial Harbour designation a wide range of marine uses are supported. These include both visitor-oriented activities such as marinas and associated upland uses, boat sales, charters and marine fuel sales, as well as marine industrial/transportation uses such as public boat moorage, commercial fishing moorage, boat building and repairs, marine ways, water taxis, float plane docks and tug/barge operations. Due to the nature of marine activities, some noise and visual impacts will be an inevitable part of the Commercial Harbour uses. The Marine Recreation designation encompasses the shoreline area north of the government dock and out to the harbour entrance light. This area is considered to be a secondary marine use area where limited or seasonal marine uses may take place in the future. Due to the more shallow water depths, lack of sufficient upland for parking or buildings and impacts on adjacent residential uses, this area is not considered suitable for general commercial marine use. The Commercial Harbour includes the water area between the breakwaters where most commercial marine activities now take place.

#### **Policies**

- Rezoning applications must be consistent with the land uses and densities indicated in "Figure 5.2 Harbour Area Land Use Plan".
- Development proposals requiring rezoning shall be required to comply with the Town's Affordable Housing and Community Amenity Policy and the Town will negotiate specific community amenities that developers will be required to provide to the

- Town on a case by case basis in accordance with the terms of the Affordable Housing and Community Amenity Policy.
- Acquire and secure land in public ownership for a waterfront linear park between Winegarden Park and the Marina Lands, in the location generally indicated on the Land Use Plan Map.
- Land required for public access to the water will be acquired as redevelopment occurs.
- Support the long-term development of the northern portion of the Holland Lands (where the School District Building is currently located), for a range of commercial and residential uses.
- Support a mix of uses along and on the water's edge. including a fish market, restaurants, and floating markets, along with 'working harbour' uses and marine businesses.
- Limit the extent of retail and service commercial development in Gibsons Landing to Gower Point Road and Marine Drive, designated as 'Mixed-Use Residential / Commercial' on the Land Use Plan to ensure pedestrian accessibility and enjoyment and to create a concentrated shopping core.
- Support an integrated mix of commercial and multi-family housing in the Mixed Use -Residential/ Commercial designation, in accordance with the following provisions:
  - a. other than as may be required for access and / or egress for the residential component of any building, ground floor use is to be exclusively commercial.
  - b. multi-family housing may consist of apartments or townhomes integrated with the commercial use, and may be located above or below the commercial use depending on the site location;
  - c. no overall density for mixed commercial and residential use is established due to the diversity of lot sizes and situations. However, it should be noted that many smaller properties will require consolidation in order to meet bylaw standards for parking, access, etc.
- Provide for a combination of housing units, including single-family and two-family homes, townhouses, and apartments in the Gibsons Landing area to support a viable and lively village heart and to accommodate the needs of different age groups.
- Encourage densification through infill development in the areas designated as Low Density Infill through



Figure 5.3 Existing Development in the Harbour Area (2011)



Figure 5.4 Potential Future Development of the Harbour Area

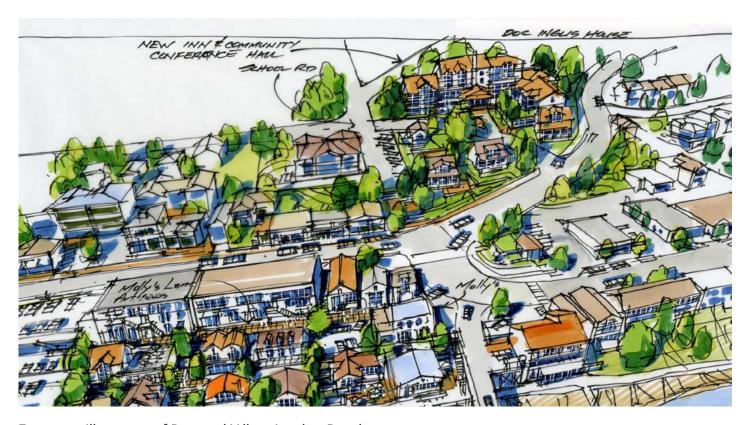


Figure 5.5 Illustration of Potential Village Landing Development

further exploration of appropriate mechanisms for introducing accessory dwelling units (carriage/coach housing) which are compatible in scale, form and character with surrounding development.

- In conjunction with a larger harbour, consider allowing the use of float homes and other live aboard vessels for permanent residences in the harbour area. This is subject to appropriate regulations to prevent adverse environmental impacts which may include the use of holding tanks and pump out stations. This may also require a study to understand the impacts, and amendments to the Zoning Bylaw.
- Development will respect Crime Prevention Through Environmental Design principles (CPTED), by clearly delineating public and private space, maximizing ability to view public spaces, and providing appropriate lighting.

# 5.2 Development Permit Area No. 5 Guidelines (DPA No. 5)

#### **Application and Intent**

The form and character of Multi-Family Residential and Commercial development within the Harbour Area shall be subject to the guidelines contained in this section for the purpose of fostering design that retains, reinforces and enhances the character of the Harbour Area while providing for improvements and change.

#### Area

Development Permits are required for all commercial and multifamily developments within the Harbour Area as shown in "Figure 2.1 Concept Areas" to ensure that future uses are developed to a form, scale and character that enhances the intimate feeling of a small waterfront town.

The Harbour Area is comprised of four Character Areas:

- o Village Landing;
- Village Waterfront;
- o Village Cultural Precinct;
- o and Legacy Residential.

The following guidelines are divided into those that pertain to the Harbour Area in general— "Area—wide Design Guidelines", and those that pertain specifically to the Village Landing Character Area— "Village Landing Design Guidelines".

#### DPA No. 5 Harbour Area-wide Design Guidelines

#### **Building Scale and Massing**

The character of the Harbour Area is largely dependent on its scale.

The term scale refers to a proportional relationship. In urban design, the scale of built form is its relationship in terms of size (height and bulk), and intensity to its surroundings. A building's scale is contextual in nature and is a key factor in determining how well it blends with its context.

Human scale can be defined as the proportional relationship of the physical environment (buildings, landscape, open space) to human dimensions. Pedestrian-scale design focuses on making environments that are comfortable and pleasant for, and give precedence to, the pedestrian.

Wikipedia defines "village" as "a clustered human settlement larger than a hamlet, with a population ranging from a few hundred to a few thousand (sometimes tens of thousands), and smaller than a town". In modern parlance, a village sometimes exists within the context of a larger town or city (West Village in New York City), and this is the relationship between the Harbour Area and the larger Town of Gibsons of which it is a part. A village is characterized by a set of social conditions and relationships, and by a notion of "village scale" which is usually, and this is certainly the case with the Harbour Area, both human and pedestrian - oriented in nature.

Height, setbacks and massing of buildings should be guided by the Building Heights and Setbacks regulations set out in the Town of Gibsons Zoning Bylaw. Notwithstanding these regulations, or any guidelines or policies in this document pertaining to height, setback or massing, consideration may be given on an individual project basis to variances through an examination of a proposed development's effect on scale, permeability (visual and physically for pedestrians), view protection and enhancement, sun/shadow impact, and on village context and character. Note that, as stated in the Zoning Bylaw, Section 808 of Part 8 of the bylaw – "View Protection" takes precedence.

- All built form in the Harbour Area, particularly where it fronts on the "Village Walk" or "Harbour Walk" as delineated in the "Harbour Area - Pedestrian Network Map" shall be human in scale, and pedestrian-oriented.
- Facades facing these pedestrian routes shall be no more than two storeys in height, or, where a height of greater than two storeys is allowed, shall step back a minimum of 3 m (10 ft.) above the second floor.
- Building massing should be low near the waterfront, 'stepping back' from the water.
- Varied roof heights, and roofs at various heights, are encouraged to provide variety in roofscape and skyline.
- Building scale and massing shall be designed in consideration of impacts on views from uphill properties.

#### Terracing

The physical orientation of the bay and the surrounding hillside of Harbour Area creates the an opportunity for terraced building forms. Buildings in the Harbour Area shall be designed to follow the natural site contours. Where retaining walls are required, they should become important features of the design with the use of

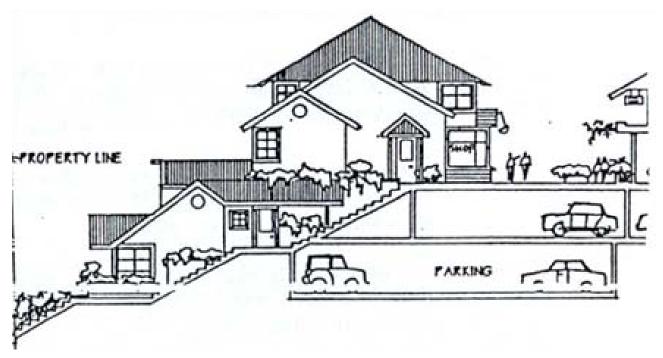


Figure 5.6 Terracing

stone, brick and treated timber to create features such as walkways, steps and viewing areas.

#### Roofs

- Sloped roofs are encouraged. Large areas of flat roof, except where they are green roofs or are used for private or communal open space, are discouraged.
- Roof forms should be articulated with dormers, skylights and other architectural features, provided such features do not obstruct uphill views. A continuous, unbroken ridge line should be avoided, particularly on larger buildings.
- Wherever possible, roofs should be oriented so that ridge lines are perpendicular to slopes so as to reduce view impacts on uphill properties.
- All air conditioning, ventilating or other roof top mechanical equipment should be carefully concealed or screened.

#### **Roofing Materials**

Sloped roofs should be clad in wood shingles.
 Composite wood products with the appearance of traditional wood shakes may be considered as an alternative to wood shingles. Asphalt shingles or metal roofing may be used on minor or non-feature

- roofs depending upon extent, colour and visibility.
- Metal roofing may be used on buildings which are greater than two storeys in heights provided that large areas of such roofs are not subject to overview from nearby buildings at higher elevations.

#### Fire Retardant Treated Wood

 Any development using wood shingles or shake products as an exterior cladding or roofing material shall have its surface-burning characteristics, such as flame spread, rate of fuel contribution, and density of smoke developed, reduced by impregnation with fire retardant chemicals.

#### View Protection

 From the Village Walk (see Harbour Area Plan / Pedestrian Circulation), between Prowse Road and Armours Beach, an unobstructed view corridor 3.0 metres wide should be provided at every 30 metres to allow open views of the ocean.

#### Streetscape

 In the Village Landing, Village Waterfront, and Village Cultural Precinct Areas, select appropriate streetscape elements – street furniture (benches,



Figure 5.7 Sketch of Desired Form and Character in the Village Landing Area

- trash receptacles, etc.) paving, lighting and plant material to reinforce character and sense of place.
- In the Village Landing, Waterfront and Cultural Precinct, provide welcoming street furniture such as benches, planter boxes, hanging baskets, ornamental lighting, etc.
- Marine articles such as boat masts and elements of the working clock should be incorporated as street furniture (bollards, planters, etc.).
- The incorporation of beach elements such as driftwood into street furniture is encouraged (see "Figure 5.7 Driftwood Street Furniture"), provided the furniture is low maintenance.
- Stone retaining walls are encouraged.

#### **Planting**

Mature trees are rare and valuable signposts of

- history. Where such trees exist, every effort should be made to retain them when re-development occurs.
- Planters with seasonal flowers to provide colour are encouraged.

#### Lighting

- Indirect, low-level lighting of building facades, pedestrian routes and signage is encouraged.
- Lighting should be designed so that it avoids "light spill" into residential areas.
- Use of marine light fixtures, building mounted, incorporated into railings or balustrades, or free standing, is encouraged ("Figure 5.9 Marine Light Fixtures").
- Building lighting should be used to supplement street

lighting wherever possible.

#### Transitions – Fencing and Landscaping

- Transitions between the waterfront walkway and adjoining the properties should emphasize landscape elements.
- Fencing should not exceed a height of 1.2 metres and should be supplemented with plant material.
- Landscape should consist primarily of local indigenous species. Large areas of non-vegetative materials such as gravel, bark, mulch, etc. are prohibited.
- To preserve view corridors, new plantings should consist of landscaping which, when mature, will not exceed the height of the buildings on site.
- Outdoor storage areas, mechanical equipment, waste containers, parking areas shall be screened.
- Planted trellises should be incorporated into screens wherever possible.

#### **Parking**

- Surface parking is discouraged, but, where no other feasible option is available, it should be internal to each development and screened from view by a combination of attractive walls, fencing, hedging, planting, other screening materials or a combination of these materials.
- Off-street parking areas and access roads should have adequate pedestrian scaled lighting.

#### **Building Height and Setbacks**

 Building heights and setbacks are required to ensure protection of public and private views and adequate

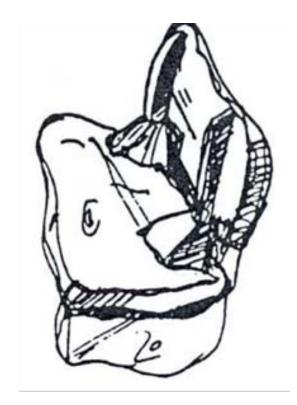


Figure 5.8 Street Furniture Which Reinforces Sense

access to daylight and sunlight.

## DPA No. 5 Village Landing Design Guidelines

#### Waterfront Links

 Pedestrian links are encouraged between the waterfront and street edges of properties that front on both.

#### **Building Scale and Massing**

The scale of shop-fronts should convey a sense of small proprietorship with its prospect of personal service. Variety of form provides visual interest and the promise of a variety of experience.

- Encourage varied building forms that reflect the historical development pattern of small scale individual shops and businesses.
- Street and waterfront elevations should be articulated so as to allow small building sections to stand out.

#### Frontage

 Commercial frontage shall be divided into small-scale, individually expressed shop-fronts with a preferred frontage (Commercial Retail Unit / CRU) width of no more than 6m (20 ft.), and a maximum width of 12 m (40 ft.).

#### Street Level Use / Transparency

The nature of street fronting uses, and their visual accessibility and attractiveness, will contribute to a positive experience for pedestrians in the Village Landing.

- Service commercial uses, such as banks, which typically offer limited transparency to the street and provide little pedestrian interest at grade, should be discouraged except at the extremities of the Village Landing commercial area.
- Shop entry doors should be no more than 12 m (40 ft.) apart.
- Each shop should be individually expressed in the design of shop fronts. Continuous or highly repetitive forms across multiple CRUs are discouraged.
- Shop fronts should be highly transparent. As much as is practical of the frontage for each shop should be transparent and constructed of glass or similar

material (see "Figure 5.12 Transparency in Shop Front Facades").

#### **Weather Protection**

 Provide continuous weather protection for pedestrians in the Village Landing through the use of awnings, arcades, canopies and covered walkways.

#### Architectural Features— Windows

- All windows should be surrounded with wood frames.
   Wood window and door frames are preferred at the ground floor. Aluminum or vinyl windows framed in wood are acceptable above the first storey.
- Multi-light windows are encouraged. In any case, at the ground floor, no single glass panel should be more than 40 square feet without an intervening window mullion.
- Projected bay showcase windows are encouraged.
- Where code restrictions allow, provide windows in



Figure 5.9 Marine Light Fixtures



Figure 5.10 Cupola Roof

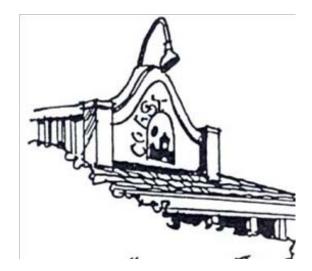


Figure 5.11 Ornamental Pediment

side walls that are visible from the street.

### **Roofs and Canopies**

- Cupola roofs, especially at corner locations, are encouraged (see "Figure 5.10 Cupola Roof").
- Wood shingled canopies are encouraged. Care should be taken selecting size and mounting height to ensure that the space beneath them will not be too dark, discouraging pedestrian activity.
- Ornamental pediments, which may contain signage, are encouraged ("Figure 5.11 Ornamental Pediment").

### Materials and Colours

- Wood cladding, in the form of channeled or lap siding, wood shingles or shakes, or board and batten is mandatory at the first storey up to the canopy or cornice line and is encouraged elsewhere. Flush finish tongue and groove siding and diagonal applications are discouraged.
- Stucco may be used above the first storey or, on the first storey, in applications not visible from the front or, in the case of corner lots, flanking streets.
- Brick or exposed concrete should be avoided except in minor applications near grade (e.g. at the base of

a wall).

- All doors, trim, fascias etc., at the ground floor should be wood.
- Vinyl siding or trim is to be avoided.
- Exposed wood posts and/or beams are encouraged.
- Building colours should be selected from a palette of warm earth tones or muted blues and greens
- Banners and flags to provide bright accent colour are encouraged.

### Signage

- Provide signage in harmony with the character of building facades.
- The size, style and siting of signage should be scaled and oriented to the pedestrian.
- All signs should be architecturally coordinated with the overall design, architectural features and finishes of the building.

### Material and Lighting

 Timber and metal are the preferred materials for signs. Individual carved and/or hand painted wood



Figure 5.12 Transparency in Shop Front Facades

- signs are encouraged.
- Backlit or self-illuminated signs are to be avoided except that neon tube signage will be considered in shop windows.

### Mounting

- Signage, mounted, painted or carved directly on buildings or incorporated into pediments is encouraged.
- Free-hanging signs should be hung from wood canopies or by means of ornamental brackets.
- Signage may be incorporated into canopies.



Figure 5.13 Molly's Reach Signage



Figure 5.14 Banners

### Molly's Reach

The "Molly's Reach – Welcome Back" sign occupies a special place in the Village Landing. It is located directly on axis as one enters the Town from the ferry terminal at Langdale. It provides a powerful visual focus whose message would be resonant even without its having been associated with the television series for which it was created.

 Any alterations on the site on which this sign is located should retain it or replace it with an identical sign.

### 5.3 Environmental Building

Many Gibsons residents were early adopters of environmentally responsible design, installing solar panels, solar hot water collectors, rain barrels and other low impact technologies many years before these technologies entered into the mainstream. It was not surprising, then, that a host of environmental issues came to the forefront in the community discussions that led to the creation of this plan. The policies outlined below are intended to ensure that Gibsons' future built environment keeps with this spirit of innovation and continues to demonstrate leadership in environmental design, building technologies, energy conservation and energy production.

### **Policies**

- All new development (rezoning or development permit applications) should be required to demonstrate a sustainable or low impact development approach, using one of several existing systems, such as but not limited to LEED™ and Built Green. The main categories for consideration include: sustainable sites, water efficiency, energy efficiency, reuse and recycling of materials and resources, indoor air quality. Certification is not required, but documentation of "equivalency" will be expected to accompany all submissions.
- Develop a sustainability checklist specific to the Harbour Area.
- Renewable energy production should be explored in all major new developments in the Harbour Area, including district energy systems using ground or ocean sourced geo-exchange heating and cooling, tidal energy, wind energy, solar energy or other lowcarbon energy production.
- Encourage the development of car co-ops, supporting reductions in parking requirements where shared vehicles are provided.
- Promote the cleanup and redevelopment of brownfield sites within the Harbour area and pursue grants and funding for this purpose, including Provincial assistance available through the Provincial Brownfield Redevelopment Strategy (2008)
- Stormwater management and sediment and erosion control plans will be provided with all new developments, and will incorporate site planning measures or technologies to control surface run-off.
- For sites within the aquifer area, require development proponents to engage a hydrogeologist to prepare and substantiate strategies for the aquifer protection throughout all stages of development.

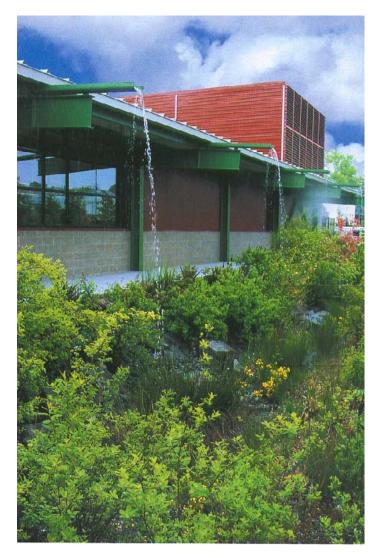


Figure 5.15 Environmental Best Management Practices, Such as on-site Stormwater Retention and Bio-filtration

### 5.4 Climate Change

As the global climate changes communities will be faced with new environmental conditions. These will create both challenges and opportunities. The Town can play a central role in managing how local environmental changes will affect residents of Gibsons and in continuing to further our understanding of how these changes will impact the Harbour Area.

### Precipitation

Increased average annual precipitation and more severe rainfall events associated with climate change can lead to reduced slope stability, erosion, and water management (e.g. basement flooding, runoff) issues for residents living on or near the bottom of steep slopes. This presents several challenges. First, it is important to note that localized water retention may exacerbate reductions in slope stability. Furthermore, diversion of runoff to creeks has the potential to damage ecosystems that support salmon, especially in the dry season when flow rate is typically low and a sudden burst of water may have a higher potential for erosion and ecological disruption. This may result in both ecological and legal challenges for the Town due to its potential impact on salmon-bearing streams.

Channeling runoff directly to the ocean may be the best option. However, this approach risks creating an increased potential for nutrient and pollution load in the harbour area. The impact of potential sources of runoff contamination on near-shore ecosystems, including eelgrass beds, should be considered in feasibility assessments of this option. Constructing a bioswale (landscape elements designed to remove pollution and silt from runoff water) may help mitigate this impact by limiting contamination release into the harbour. However, storing water near an aguifer recharge zone, as in the case of a possible bioswale in the Landing, may present water quality challenges. The suitability of a bioswale may be evaluated in part through the use of a hydrology-planning tool. It is recommended that the Town develop new guidelines and regulations for managing projected increases in runoff on and near slopes for new buildings renovations and new developments. While the suggestions presented here describe potential options, further investigation is needed to determine the suitability of such approaches to runoff management.

### Sea Level Rise and Storm Surge

Sea level rise may present a threat to structures and aquifers at very low elevations near the ocean due to the potential for salt-

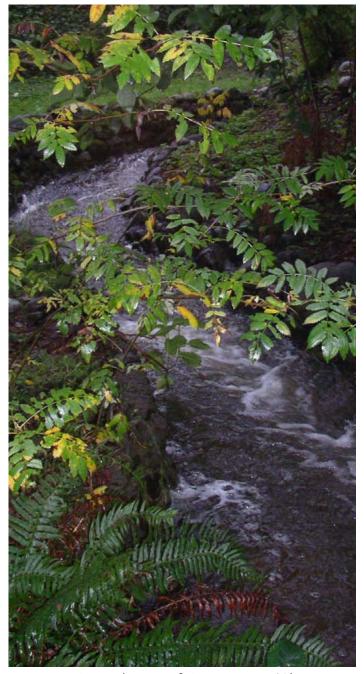


Figure 5.16 Naturalization of Watercourses (Charman Creek)

water intrusion as well as increased wave power and inland range. Sea level is expected to rise by 0.82 m to 1 m in the mainland southern Straight of Georgia area by the year 2100. The British Columbia Ministry of Environment recommends that communities prepare for a possible sea level rise of 2 m by the year 2200. Threats presented by sea level rise may be mitigated through strategies that follow the principles of avoiding, protecting, accommodating, and managing retreat. The following introduction summarizes the Ministry's recommendations, guidelines and best practices for adapting to sea level change. In Lower Gibsons these strategies may be implemented by avoiding development of structures with up to 100-year lifespans at or below 1 m above current king tide levels, and avoiding the construction of 100-year lifespan structures at or below 2 m above present-day king tide levels in or after the year 2100. Following the guidelines of the BC Ministry of Environment, structures build near the water in the Straight of Georgia should be set back 15 m from the natural boundary (or 7.5 m from the natural boundary when protected from erosion by protective work designed by a professional engineer). Setbacks on bluffs should be equal to 3 times the height of the bluff as measured from the toe, unless development is supported by a report prepared by a suitable professional. Structures higher than but near the 1 m and 2 m above sea level limits should be protected by a structure such as a sea wall. It is important to note that defenses such as sea walls may lead to higher wave related currents, erosion, and increased wave power leading to an undermining of the structure. For this reason such structures are safest when constructed as storm surge barriers behind existing structures such as the breakwaters of the Gibsons harbour area. Accommodation for sea level rise may be incorporated into planning by, for example, designing parks whose landscape is designed to accommodate higher water levels. Last, managed retreat via the strategic withdrawal of potentially affected structures below the 1 m and 2 m levels can reduce the exposure of human lives and infrastructure to ocean-related hazards.

Data on sea level rise may be obtained from a variety of sources (e.g. the Canadian Climate Change Scenarios Network) and this may be incorporated with potential runoff management plans into a hydrological model for the Town. The potential for infrastructure damage may also be evaluated using major storm scenarios.

#### Relocation of Vulnerable Infrastructure

It is recommended that the Town defer decisions regarding climate change impacts on drinking water and infrastructure until more data have been collected and an impacts model has been produced.

### Warming Climate

As the climate warms the range of many species will shift northward and to higher elevations. For example, the Coastal Western Hemlock Zone is projected to shift upwards in elevation by 134 m, 224 m, and 317 m by the year 2025, 2055 and 2085, respectively. This ecological zone contains species such as Western Red Cedar that are vital to the forest industry on the Sunshine Coast. As elevation increases the range of this species is predicted to expand. This may invigorate the forestry industry, however, potential benefits may be attenuated by accessibility issues associated with hemlock stocks at higher elevations.

An increased presence of invasive species associated with warming may have adverse affects on local ecosystems. Invasives cost the Canadian economy approximately \$7.5 billion in damages each year, not counting 'intangible' (non-economic) impacts on ecosystems. The introduction of alien species will also increase the risk of disease and parasitization while increasing competition. Monitoring the health of local flora and fauna while being attentive to invasive species can assist in maintaining local ecological health and may also assist in the prediction of forestry jobs in the community and their associated economic effects.

### **Policies**

- Conduct a vulnerability assessment that includes a locally specific climate model, examining the potential costs and impacts of climate change and extreme weather events on the community's infrastructure, working to ensure infrastructure is capable of withstanding a 200 year storm event.
- Explore the relocation of existing services vulnerable to extreme weather events.
- Explore the need to upgrade the breakwater to provide protection against storm surge and sea-level rise of up to 2m.
- Using best management practices incorporate green infrastructure that can also serve as public park space along the foreshore.
- New development in close proximity to the water's edge will be required to consider future hydrological conditions in the overall design, incorporating strategies to reduce the impact of sea level rise. Consideration should be given to the recommendations and guidelines of the British Columbia Ministry of Environment.
- Mitigate urban heat island effect and create amenable micro-climates by encouraging features such as

- reflective white roofs, shade trees, green roofs, water features, and extensive vegetation in new development, where appropriate.
- Site all infrastructure, including bioswales and runoff outlets, above predicted sea levels (at least 2 m above 2010 king tide line).
- Monitor impacts of sedimentation, erosion, and nutrient / pollutant load on the Harbour Area and develop strategies to ensure the Harbour remains at depths suitable for vessels and that ecological conditions are maintained.

### 5.5 Natural Environment

There are four main elements needed to achieve the overall goal of environmental protection of the natural assets of the Harbour area: identification, assessment, approvals guidance and mitigation/enhancement options.

### Identification

A study by Thurber Engineering (1991) of the entire Town identified environmentally sensitive areas, which were then assigned a Development Permit Area or Greenbelt designation. A detailed inventory of environmentally sensitive areas in the Harbour area should be maintained by the Town and updated regularly. There are several provincial databases that can be used as the basis for this inventory, but a finer detail of mapping is required to protect smaller natural elements, as are typically found in an urban area. By maintaining a publicly available inventory, decisions can be made both by private individuals and Town representatives that routinely consider the environment when making decisions. Environmental information provided by development applications can be used to update the Harbour Area inventory. As is contemplated in the Smart Plan (2005), a tree inventory and tree protection bylaw can be used to complement the environmental inventory. Any routine monitoring (ie - water quality) should be added to the inventory, as it provides a valuable baseline for assessing impacts of proposed actions. The province maintains a registry of sites with contamination, and remediation of them as the opportunities arise will lead to gradual improvement of soil and groundwater quality.

### Assessment

To achieve the greatest protection of the environment, all decisions, whether new development or ongoing maintenance and operations, public or private, should be required to assess the potential impact of their proposed actions. There are prescriptive methods for assessment of some elements (ie – the Riparian Area Regulations for stream setbacks), but the general method of impact assessment should be required for all actions. By requiring some identification of potential impacts, the onus is on the proponent to propose measures for avoidance or mitigation of impacts.

Potential developers are directed to consult guidance documents which describe best management practices and techniques for avoidance and mitigation, including:

- Develop with care: Environmental Guidelines for Urban and Rural Land Development in BC;
- Best management Practices for Amphibians and Reptiles in Urban and Rural Environments in BC;

- Riparian Areas Regulation Assessment Methods; Stream Stewardship: A Guide for Planners and Developers;
- Access Near Aquatic Areas: A Guide to Sensitive Planning, Design and Management

### **Approvals**

The Town's main tools for environmental protection include the designated Environmental Development Permit Areas and existing Tree Protection Bylaw.

### Mitigation/Enhancement

Many of the guidance documents listed above provide best management practices and mitigation measures. The Town could develop and maintain a list of standard best management practices that are required with all developments (ie-oil/water separators for all parking areas). While the onus should be on the proponent of a given project to propose an appropriate mitigation, then Town could be proactive and maintain a list of potential enhancement projects. Local environmental and stream keeper groups typically have suggestions for potential projects.

### **Policies**

- The Town will maintain a publicly accessible and periodically updated inventory of sensitive environmental features identified in the Harbour Area.
- Require environmental impact studies in all rezonings in the Harbour Area.
- Maintain and enhance the natural shoreline and aquatic zone through planting, by avoiding 'hard' infrastructure in the foreshore, and by creating wetlands and marsh areas for habitat and to protect shorelines against erosion from currents, fetches and wakes.
- Formulate and implement a revegetation and enhancement plan for streams within the Harbour Area including streambank stabilization to reduce erosion and sediment flow to the harbour, daylighting culverted streams, removing obstructions, and creating new habitat and spawning areas.
- Protect existing natural assets and habitat areas such as the known Heron Rookery north of the Marina



Figure 5.17 Eelgrass (source Mayne Island Conservancy Society)

- Lands, and the eelgrass (zostera) areas which function as nursery grounds for many species.
- Clearly mark Eel Grass areas with physical signage, maps in locations along the Harbour walk, and by providing downloadable documents and GPS coordinates.
- Explore measures to improve the quality of water in the Harbour (such as increasing tidal flushing by opening booms at Armours Beach in the winter, monitoring live-aboards to ensure they are selfcontained, and improving spill-control response at all marina sites).
- Install Oil-Water Separators, for the removal of floatable petroleum-based contaminants from small areas of concentrated activity (e.g. gas stations and parking lots).
- Increase environmental education and signage focused on the foreshore area, including installing

yellow fish markers on curbside storm drains, which indicate that drains empty into nearby creeks and foreshore areas that likely contain fish habitat.



Figure 5.18 Concept Sketch of Waterfront Walkway (View Towards Hyak Marine Site)

### 5.6 Pedestrian and Bicycle Circulation

Bike routes should not require cyclists to make detours which add significantly to the distance or difficulty of getting from A to B. In the Gibsons Landing context, bicycle routes that require avoidable hill-climbing will not be used. It is therefore recommended that Marine Drive / Molly's Lane/ Winegarden / Linear Park along Hyak be designated as a bike route. Desired future bicycle and pedestrian routes are shown on "Figure 5.19 Pedestrian Circulation Plan" and on "Figure 5.20 Bicycle Circulation Plan". Town-wide bicycle routes are shown on the "Bicycle and Trails Master Plan" included elsewhere in the Official Community Plan.

### **Pedestrian Circulation Policies**

- Through the development process, acquire pedestrian routes as Town Right-of-Ways as shown on the Pedestrian Circulation Plan Map.
- For pedestrians, provide an extensive pedestrian pathway system designed to filter throughout the Landing area. This will provide options for pedestrian movement both across the length of the Landing area and from the upper residential areas down to the waterfront creating linkages to civic and park spaces and related developments, such as the

proposed cultural precinct on Holland Lands.

- Future improvements to all roads shall be designed to accommodate a range of transportation modes, prioritizing travel on foot, bicycles, scooters and transit vehicles, while allowing for automobile circulation.
- Provide a continuous disabled-friendly footpath following the shoreline from the south-eastern breakwater (Breakwater Park) in the south to Armour's Swimming Beach in the north. Use a variety of treatments along the Harbour front walkway to

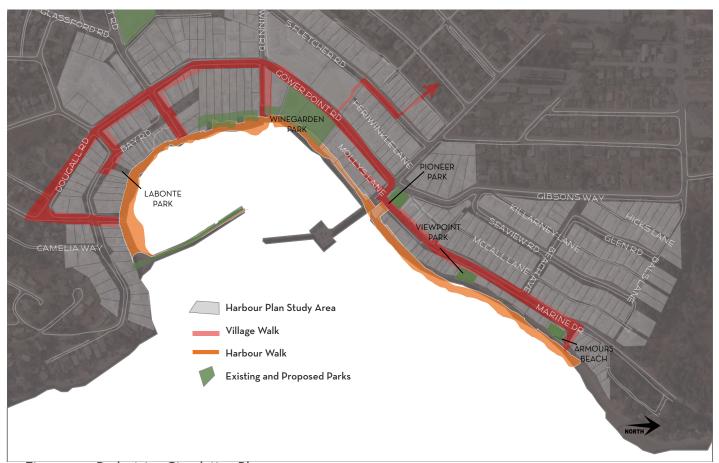


Figure 5.19 Pedestrian Circulation Plan

create a natural feel and extend the walkway onto elevated boardwalks, where feasible.

- Provide sidewalks on both sides of Gower Point Road
   / Marine Drive from Dougall Road in the south to
   Town's boundary in the north. From Dougall Road to
   Jack's Lane, where possible these should be at least
   two metres wide. Varying cross-section width, with
   setbacks alongside newer buildings could provide
   variety and interest.
- Provide sidewalks on both sides of South Fletcher Road (School Road to Winn Road).
- Improve accessibility by providing disabled-friendly ramps at key intersections and trails, including "five corners".
- Provide lane access midway between School Road and Winn Road from Winegarden Park and Gower Point Road (Harbour Steps) to link with the walking path leading up to Upper Gibsons (on the 500 block of South Fletcher).
- At key intersections and mid block where pedestrian

routes cross arterials/collectors, consider terminating parking lane and providing corner bulges or roadway narrowing for clearly visible, raised or textured, pedestrian crossings.

- To ensure continuous public access to the waterfront, no new licenses for private wharfs will be issued between Gibsons Marina and the southern boundary of the Town and between Grammas Pub and the northern boundary of the Town.
- Site development should create and enhance public pedestrian linkages between major roads and the shoreline; and both the shoreline edge and the streetscape along Gower Point Road/Marine Drive should be considered as the focal points of any development.
- Create a series of 'nodes' focused on water uses that add interest and variety to the waterfront. These 'nodes' include:
  - a. Armour's swimming beach;
  - b. future moorage and potential marina for

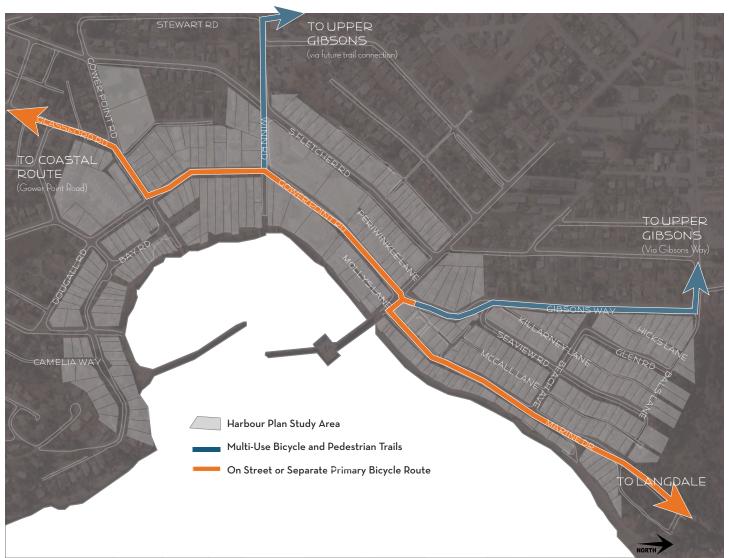


Figure 5.20 Bicycle Circulation Plan

#### transient boaters;

- c. Government Wharf with existing community facilities as well as the terminus of the future public transit linkage from Gibsons Landing to Upper Gibsons;
- d. floating markets (including day moorage slips in a central harbour location);
- e. floating maritime museum and restaurant;
- f. Hyak Marine;
- g. Marina; and
- h. extended harbour-front walkway to southern breakwater and gazebo.
- Create a pedestrian, market plaza at the foot of

- School Road, which could also incorporate parking.
- Enhance connections from the Landing to provide safe routes to schools.

### **Bicycle Circulation Policies**

- Through the development process, acquire bicycle routes as shown on the Bicycle Circulation Plan Map.
- Actively support the development of a safe, continuous bicycle route from the Langdale Ferry Terminal to the Harbour Area.
- Budget for improved cycling facilities as indicated on the Bicycle Circulation Plan Map and, where possible, provide for separated bicycle lanes. As an interim measure, install signage and maps indicating the safest and least steep routes for cyclists.

### 5.7 Vehicle Circulation and Parking

### Vehicle Circulation Policies

- Explore funding options for the creation of a Community Shuttle Bus linking Upper Gibsons to the Harbour Area, facilitating the balanced growth and differentiation of business types between the two areas.
- Develop strategies to discourage vehicle traffic from short cutting through residential areas on local roads.
- Ensure that all approaches to the Downtown area are sign posted at 30 km/h.
- Explore the closure of School Road, disallowing through traffic from School Road south into the "five corners" intersection.
- Implement traffic calming (or pedestrian-favouring)
  measures in the downtown area to keep traffic
  speeds low and minimise negative impacts from
  moving traffic, especially between "five corners" and
  the northern Town boundary.
- Narrow cross-sections of minor roads approaching an intersection with a more important road, or use other visual cues, such as gateways, pillars, arches or banners, to indicate entrances to neighbourhoods.

### **Parking Policies**

- Install clear signage directing visitors to public parking areas (on street and in lots and parkades).
- Retain and expand on-street parking to provide buffers between moving traffic and pedestrians on sidewalks.
- Encourage high turnover for on-street parking spaces to facilitate commercial activity and reserve off-street spaces for longer term parking.
- Prepare a parking plan that considers:
  - a. sufficient off-street parking for residential properties;
  - b. provision of off-street parking for users of Winegarden Park and other public open spaces; and
  - c. a reasonable amount of parking in the Marina area so as to avoid spillover into residential areas.

### 5.8 Economic and Cultural Initiatives

Design and development of the Harbour should enhance appeal for visitors and residents by enabling an experience of the waterfront and intimately connecting it with commercial operations.

The commercial area of Gibsons Landing is heavily dependent on pedestrian activity in order to ensure the viability of both existing and future commercial development. While the commercial land use policies in Lower Gibsons continue to support visitor - related businesses, the emphasis in the Plan supports those uses which will serve the local (year round) population, as well as visitors. It is important that both residential and commercial uses are introduced in a manner which will enhance the image of Gibsons Landing, and in locations where the potential conflict of such higher densities with surrounding areas will be minimized. The Plan envisions a vibrant and varied economy in the Landing and a range of activities and public spaces that make the area appealing, safe and exciting for children and adults of all ages.

### **Policies**

- Create and implement a "Gibsons Landing Enhancement Strategy" focused on low cost investments aimed at making the Landing a more welcoming and appealing destination for residents and visitors.
- Actively encourage the initiation of a Harbour to Harbour, Gibsons Landing to Vancouver, passenger ferry.
- Explore the use of targeted incentives to encourage innovative development including DCC reductions, property tax holidays, reduced parking requirements and other means.
- Work with Harbour user groups and Harbour
   Authority to pursue funding and develop a long term
   financial plan aimed at expanding marina capacity for
   the purpose of accommodating additional pleasure
   craft and commercial vessels.
- Install mooring buoys in the harbour (possibly northeast of the Government Wharf) to accommodate additional transient vessels.
- Mitigate the impacts of additional moorage in the location north of Government Wharf, through regulations and signage at the marina prohibiting refuelling, pumping out of bilges, engines idling for long periods of time, and informing boaters that a public swimming beach is nearby.
- Evaluate future expansion of the Harbour for potential to interfere with the operation of the fishing fleet.
- Increase tourist accommodation within walking distance of the Harbour area.
- Fund and coordinate improvements to Molly's Lane to increase its appeal as a pedestrian-oriented

- destination shopping area (see "Figure 5.22 Concept Sketch of Molly's Lane").
- Maintain reduced moorage fees for Commercial Fishing Fleet offered by the Small Craft Harbour as an incentive to remain.
- Encourage cultural and institutional uses to act as vital anchors to the day-to-day activities of the area and to establish the Landing as a "village centre";
- Encourage a mix of day-to-day retailers
- Encourage 'festival' retail in the Gibsons Landing area in consultation with the Harbour Authority by locating a floating market / restaurant along the waterfront beside the Government Wharf where seafood, fresh produce and other food and craft items would be sold. Merchants would be encouraged to vend from boats adapted for such purposes reflecting the 'festival nature' of the market.
- Provide for the day-to-day needs of residents of all ages in the Landing by encouraging a broad base of shops, restaurants and services (e.g. green grocers, meat/fish, canned goods and specialty foods, drugstores and convenience); specialty retailers (durable, semi-durable and apparel); and service commercial activities.
- Retain a mix of uses serving both commercial and recreation activities in the harbour to guard against the harbour becoming dominated by uses catering to seasonal tourism.
- Support small scale on- shore fuel facilities associated with marina use. Floating fuel barges are not permitted within the Town's recreational foreshore



Figure 5.21 View South Down Molly's Lane (2011)



Figure 5.22 Concept Sketch of Molly's Lane

lease boundary.

#### Cultural Facilities and Amenities

- Ensure that households with small children have nearby, convenient play and park spaces, shopping and educational resources. Low and medium density residential areas should be near shopping, parks, recreational areas, and educational programs.
- Ground-oriented townhouse development should feature shared courtyards as well as private yard spaces suitable for a family living environment, including children.
- Child play facilities in waterfront park spaces should be considered in future recreation planning.
- Acquire a right of way, through amenity contribution, density bonusing, or purchase of land along the waterfront, a minimum of 15 metres in width, for a linear waterfront park joining the current park adjacent to Gibsons Marina to Winegarden Park.
- Increase public space and amenities in the area designated as the "Village Cultural Precinct" on the Harbour Area- Sub Areas Plan ("Figure 2.1 Character Areas"), This will complement the existing public facilities by creating a cultural precinct possibly utilizing roofs as public terraces.
- Encourage cultural, recreation and festival events within the Cultural Precinct, Dougall and Winegarden Parks, encourage the varied use of public space and streets for year round community markets, performances, and other activities and support existing festivals and cultural activities.
- Improve Winegarden Park's design such that it functions as a festival park supporting an array of events and activities.
- Support the rental of powerboats, sailboats, sailboards, canoes, kayaks and other recreational equipment in the Commercial Harbour area.
- Relocate the Maritime Museum, if possible, to a
   waterfront or water site to increase its visibility,
   strengthen its relationship to marine activities, and
   combine this use with a restaurant or café to aid in
   promoting self-sufficiency in its operations.
- Retain and integrate heritage buildings, such as Doc Inglis house, into the village. Through redevelopment, such heritage features can be protected yet integrated with adjacent development. Adaptive reuse of heritage buildings should be considered and designed consistent and complimentary to the

heritage character.

- Support a local arts centre, arts school, or local arts association, exhibition and sales, and public education facility.
- Support the development of Armours Beach as a destination 'hub' providing services and recreational activities that add to the appeal of the waterfront.
- Recognize the area to the south end of the breakwater as a public swimming beach.
- Support the expansion of a visitor information centre that provides easy access and parking.

### 5.9 Development Management

- Development will be coordinated with investment in infrastructure to meet future municipal servicing needs.
- Development approvals will be subject to ongoing monitoring of the capacity of the aquifer, which may include developers providing additional monitoring points via new or existing wells.

## 6.0 IMPLEMENTATION AND MONITORING

The Town will develop an implementation strategy including short term, medium term and long term actions to further the goals and objectives outlined in the Harbour Area Plan. The implementation strategy will allocate budget to selected projects, assign responsibilities to Town departments, include time frames for capital improvements, and contain benchmarks and milestones for measuring success.

Council will monitor the progress of the Harbour Area Plan by requesting staff to prepare a report card every two years that would assess the Harbour Area from the perspective of a number of sustainability factors, assess progress towards the goals and objectives outlined in the Harbour Area Plan and include benchmarks and milestones.

The Harbour Area Plan will be reviewed and updated approximately every five years.

Figure 6.1 Possible Implementation and Monitoring Framework

Designation				Description	Status	Priority Year	Responsibility	Estimated Completion
Goal	Objective	Policy	Action					
1	1.1	Loren Ipsum Loren Ipsum Loren Ipsum Loren Ipsum Loren Ipsum	Loren Ipsum Loren Ipsum Loren Ipsum Loren Ipsum Loren Ipsum	Loren Ipsum Loren Ipsum Loren Ipsum Loren Ipsum Loren Ipsum	Loren Ipsum	2	013 Department	2014

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# PART F GOSPEL ROCK NEIGHBOURHOOD PLAN

### **CONTRIBUTIONS AND CREDITS**

This document draws on work produced by the Gospel Rock Refinement Committee, the Gospel Rock Select Committee and the reports and studies prepared during these processes by Michael Rosen, Planning Consultant, and HB Planning Group.



### 1.0 INTRODUCTION AND BACKGROUND

### 1.1 General Description of Area

This document presents a plan for the area known as the Gospel Rock / Shaw Road Neighbourhood described in the Town of Gibsons Official Community Plan (OCP). The OCP was previously amended to include the waterfront area south of Gower Point Road within the Gospel Rock Neighbourhood Plan area.

The location of the Plan area within the context of the overall Town boundaries and the specific boundaries of the Plan area are illustrated in ""Figure 1.1 Gospel Rock Neighbourhood Plan Area Boundaries". The area covers approximately 140 acres and has fragmented property ownership held in 14 different titles.

### 1.2 Context of Official Community Plan

The Town's Official Community Plan provides an essential context for the planning and development of the Gospel Rock / Shaw Road Neighbourhood. The neighbourhood is identified as a Neighbourhood Plan Area on Schedule A – Land Use Plan, and Section 7.6 of the OCP contemplates that the Gospel Rock area will be considered for future residential development in the longer term.

The OCP recognizes both the environmental and recreational attributes of the area as well as the development interests of the private property owners. Policy statements in the OCP speak to the potential acquisition of park land by way of the Town utilizing its tools as well as community interest groups seeking ways to raise funds.

There are a number of policies within the OCP that speak directly to the Gospel Rock Neighbourhood Plan, briefly described as follows:

- incorporate energy efficiency, Smart Growth, and sustainability principles in the Plan;
- address land use, building design, transportation, and servicing matters in the Plan;
- consider including a hotel / retreat destination and arts and cultural centre / park in the Plan area;
- support park land acquisition by way of the Town utilizing its own statutory tools as well as providing assistance to community interest groups seeking ways to raise funds; and,
- designate all multi-family and commercial

development as Development Permit Areas.

Portions of the Gospel Rock Neighbourhood are situated within Development Permit Area No. 1 (Geotechnical Hazard) and Development Permit Area No. 2 (Environmentally Sensitive). This signals that these issues need to be addressed both in the planning of the neighbourhood and the development of the lands.

### 1.3 Purpose and Goals of the Neighbourhood Plan

The purpose of the Gospel Rock Neighbourhood Plan (Plan) is to manage the growth and development of the neighbourhood by defining and designating land uses for the area as well as describing policies, standards and guidelines to protect the natural environment, allow for the provision of affordable housing, and control the form and quality of development within both the public and private realms. Given the modest growth rate that Gibsons is expected to experience of the next 20 years and given the other growth areas in the Town (Upper Gibsons and the Harbour Area), the build out period of the Gospel Rock neighbourhood is anticipated to be in the 25 - 50 year range.

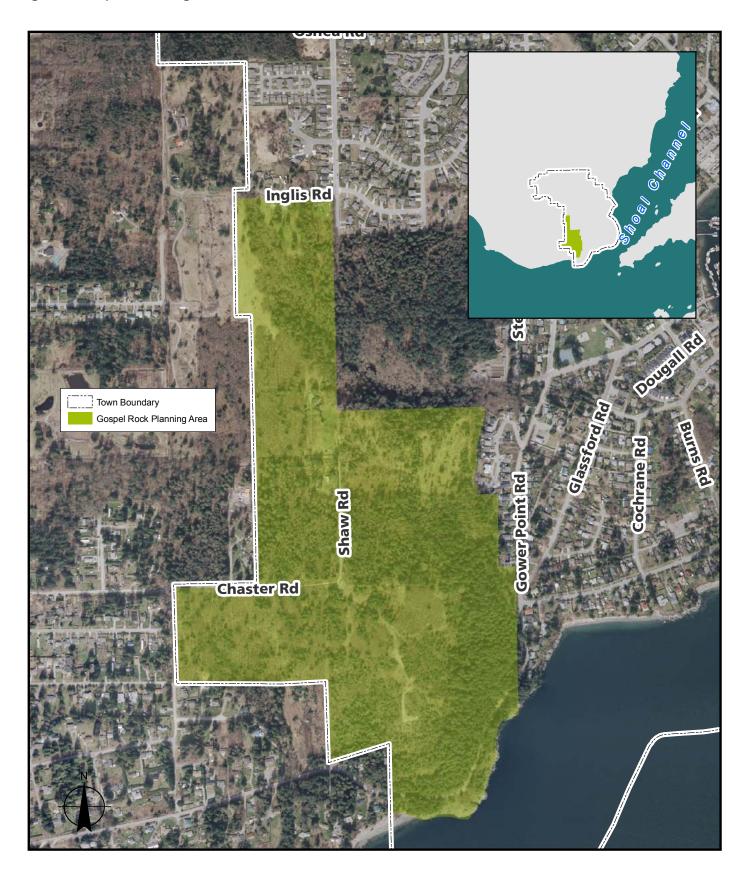
### 1.4 Overview of Planning Process

In November 2005, The Town of Gibsons began the Gospel Rock Neighbourhood Plan process. The Town was committed to a highly engaging, participatory process that would lead to a Plan based on the principles of smart growth and sustainability. The Plan must be well supported, technically robust and balance the needs of different stakeholders including landowners, residents of Gibsons and Elphinstone, the Town and other government agencies.

The Council appointed a community-based Gospel Rock Select Committee to work with a consulting team in preparing the Plan. Several concept plans were developed and evaluated. In 2008, the Town asked the community by way of a survey to express their preference for either one of two concept plans (Plans A and B prepared by the consulting firm Holland Barrs). Based upon the results, Town Council decided not to proceed with either option.

In 2009, the Council appointed the Gospel Rock Refinement Working Committee consisting of three members of Council, the Town's Planner, a planner representing the major property owners in the area, and a planning consultant representing the Town. The Committee's mandate was to recommend a revised land use

Figure 1.1 Gospel Rock Neighbourhood Plan Area Boundaries



concept to Council as the basis for the Gospel Rock Neighbour-hood Plan. Taking input from the landowners in the Plan area, participating stakeholders, and adjacent residents and supported by technical advice, the Committee provided its recommendations to Council in December 2010. These recommendations formed the basis for Council discussions throughout 2011 which resulted in a draft of Gospel Rock Neighbourhood Plan put forward for public consideration and comment.

Figure 1.2 Workshop Sessions



### 2.0 PLANNING GOALS AND PRINCIPLES

### 2.1 Planning Goals

Drawing from community input and previous studies, nine major goals have been identified which indicate the Plan's broad direction.

### **GOAL 1**

PROTECT AND ENHANCE NATURAL ECOLOGICAL SYSTEMS AND BIODIVERSITY IN AND AROUND THE GOSPEL ROCK LANDS

### **GOAL 2**

ENSURE LOW-IMPACT DEVELOPMENT THAT USES RESOURCES EFFICIENTLY AND HARMONIZES WITH NATURAL ENVIRONMENTAL SYSTEMS

### GOAL 3

REDUCE FOSSIL FUEL ENERGY CONSUMPTION AND IMPACTS ON AIR QUALITY AND CLIMATE CHANGE

### GOAL 4

CONTRIBUTE TO LOCAL COMMUNITY ECONOMIC VITALITY

### **GOAL 5**

ENSURE MUNICIPAL FISCAL VIABILITY AND COST RECOVERY

### GOAL 6

BUILD ECONOMIC VALUE FOR ALL LANDOWNERS AND ENSURE FAIRNESS AND BALANCE

### GOAL 7

**BUILD A VIBRANT AND HEALTHY COMMUNITY** 

### GOAL 8

RESPECT AND ENHANCE THE UNIQUE CULTURE AND SENSE OF COMMUNITY IN GIBSONS AND ELPHINSTONE

### GOAL 9

CREATE AN INCLUSIVE AND DIVERSE COMMUNITY

### 2.2 Planning Principles

The planning principles are more specific than the broad-based goals and provide direction for land use policy and ultimate Council decision making.

- Create a neighbourhood with a complimentary mix of land uses
- Provide a land use pattern that respects the character of the adjacent neighbourhoods
- Provide a diversity of housing types and tenures for all ages, incomes, and household compositions
- Provide private and public amenities that benefit the new residents of Gospel Rock and also the broader community
- Promote pedestrian mobility, bicycling and transit use by organizing the neighbourhood on an integral pattern of streets and public pathways
- Provide a pedestrian network that is accessible to everyone
- Promote environmental sustainability and ensure environmentally sensitive areas are incorporated into the trail network and open space
- Provide a quality public realm through the use of pedestrian-friendly streetscapes, walkways and public

### gathering spaces

- Implement a green building strategy that will assist in reducing the environmental impacts of new development on the local environment
- Create a neighbourhood that is environmentally, socially and economically sustainable
- Recognize that the waterfront land on the south side of Gower Point Road has significant potential for community/park use
- Provide linkages to trails and roads to the Town and the Sunshine Coast Regional District (SCRD) that are complementary to the SCRD's plans and are predicated on environmental considerations

# 3.0 NEIGHBOURHOOD LAND USE PLAN AND POLICY FRAMEWORK

### 3.1 Major Land Use Issues

During the course of the Plan preparation process, a number of major issues surfaced that significantly influenced the direction of the Plan.

### Use of the Waterfront Land

Approximately 4.1 acres (1.65 ha) of land consisting of 1552 feet (473.3 metres) of shoreline lying south of Gower Point Road is situated within the Plan area. Community groups such as the Friends of Gospel Rock Society and the Sunshine Coast Conservation Association as well as general community sentiment have expressed the view that the waterfront land should be preserved in its natural state due to its environmental attributes and should be dedicated to the Town as public land. On the other hand, the land is privately held and successive owners have expressed an interest in developing a portion of the waterfront land and a willingness to transfer ownership of the remaining portion to the Town as park.

A report regarding the environmental sensitivity of the waterfront land was completed by Mr. Paul Van Poppelen and was received by the Town in April 2010 and subsequently peer reviewed by Whitehead Environmental Consultants Ltd.

Though these reports concluded that portions of the waterfront lands were of lesser environmental significance, considering the perspectives from the various stakeholders and public input, it was recognized that housing development is not a desired use on these lands

### Traffic Flow and Access

Due to its location within the Town on a rock promontory, the Gospel Rock area is currently not serviced with a well developed road system. The only current access to the area is off of Chaster Road that lies outside of the Town's jurisdiction within the adjacent Elphinstone rural area. Should the Gospel Rock area be developed at the densities anticipated within the Town's Official Community Plan, improved road access will be required.

A variety of road options to accommodate improved road access

were examined. The options were considered within the context of a number of factors including impacts upon existing neighbour-hoods, topographic and environmental constraints, and development phasing and sequencing. Providing a major access by extending Shaw Road southward would require a major crossing of the Charman Creek Ravine. Extending Bayview Heights Road as a major access road westward and up the hill would impose upon the existing neighbourhood and would be extremely intrusive both visually and environmentally.

It became clear that there was no one option that would meet all the interests from all the various stakeholders and therefore the Neighbourhood Plan would need to provide for a balanced solution incorporating both a short term and long term approach for managing traffic flow generated by the Gospel Rock neighbourhood.

### **Environmental Considerations and Open Space**

Although portions of the Gospel Rock area have been altered over the years, the area still has a number of environmental features that need to be respected in the planning of a new neighbourhood as identified on "Figure 3.1 Gospel Rock Environmentally Sensitive Areas". The Charman Creek Ravine, some small wetlands dotting the northern portion of the area, the dry land forest along the eastern escarpment, and the shoreline foreshore are all environmentally sensitive areas that have been identified in Paul van Poppelen's report entitled "Gospel Rock Neighbourhood Plan Area: Ecosystem and Wildlife Area Use Classification" dated October 2009. All these features provide important habitat for wildlife in the area. The Neighbourhood Plan policy framework needs to speak to protecting these areas and minimizing the impact that development would have on them.

Although held privately, the general public has historically enjoyed use of the Gospel Rock area, both "Little Africa" and the "Cross Rock" in the upper bench, and the Gospel Rock viewpoint south of Gower Point Road. Given the importance of these particular areas to the community, it was determined that it would be critical for these areas to be identified as public use areas within the Neighbourhood Plan with the consent of the respective landowners.

Figure 3.1 Gospel Rock Environmentally Sensitive Areas

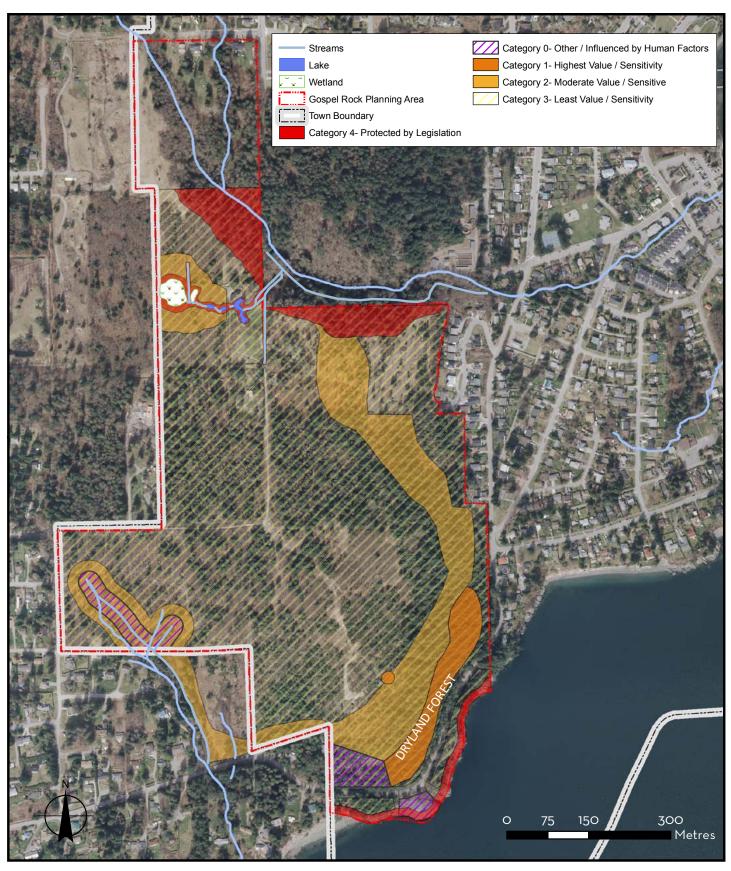
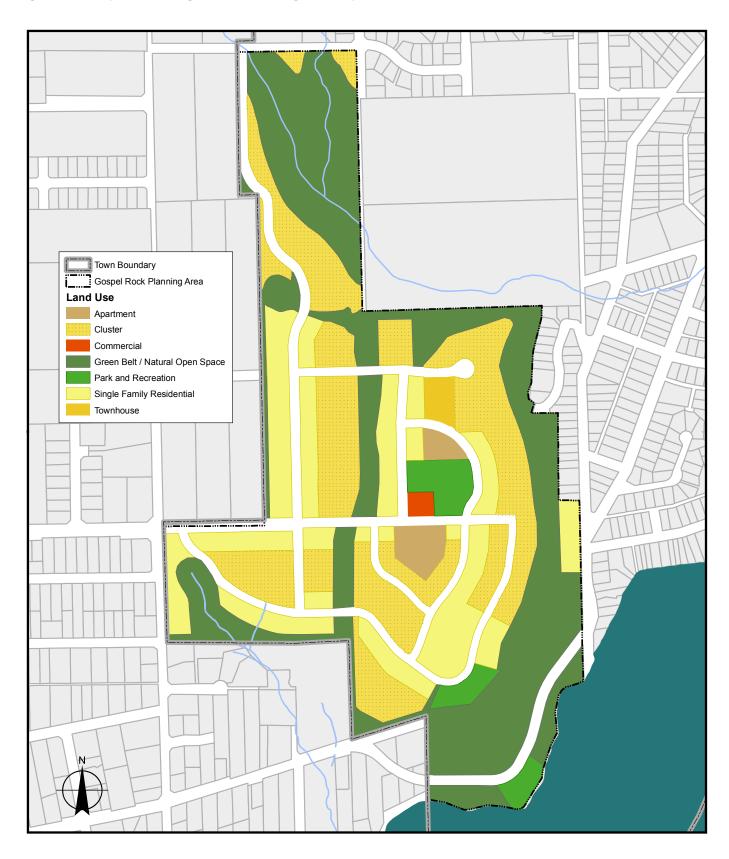
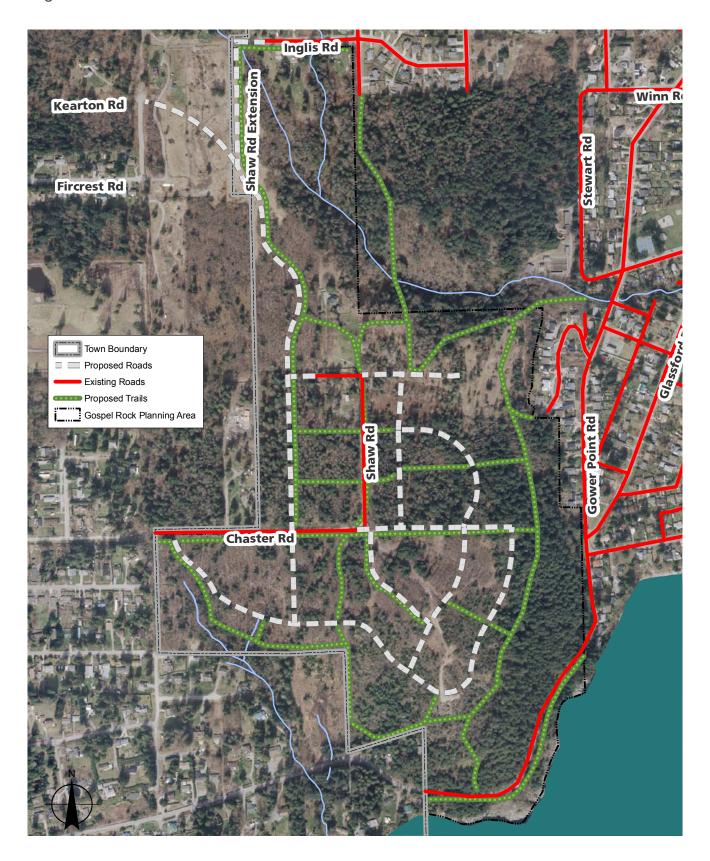


Figure 3.2 Gospel Rock Neighbourhood Design Concept



The Neighbourhood Design is conceptual: future development is to be generally consistent with the Neighbourhood Design, though exact locations of roadways, parks, greenspaces, etc. are subject to further detailed study and negotiation at the appropriate juncture. See Land Use Policies in Section 3.4.

Figure 3.3 Circulation



Future circulation is conceptual: the exact locations of roadways and trails, are subject to further detailed study and negotiation at the appropriate juncture. See relevant Policies in Section 3.5.1 and 3.4.4.

### 3.2 Land Use Plan Map

Applying the planning goals and principles and in considering the various issues, a Land Use Plan was generated and is shown in Figure 3, the highlights of which are as follows:

- Designation of the Charman Creek riparian area as greenbelt;
- Designation of two north-south wildlife corridors;
- Protection of the dry land forest and geotechnically challenged steep slopes on the east side of the area;
- Accommodation of both north-south and east-west trail networks:
- Designation of viewpoint parks in "Little Africa" and at Gospel Rock;
- Provision of landscaped buffers and increased lot depth along the ALR / non-ALR boundary on the west side of the plan area;
- Designation of a small centralized commercial / community gathering point along with an active park;
- Provision for a mix of housing types ranging from larger single family lots along the south and west perimeters, smaller single family lots in the interior, and cluster housing, townhouses, and apartments.
- Provision of sustainable servicing standards (reduced road widths, rain gardens, etc.) and energy sources (geothermal);
- No major road access connections to Bayview Heights Road or to Gower Point Road; and,
- Development of a new north south road linking the Gospel Rock area with Shaw Road (north) via Inglis Road.

### 3.3 Land Use Statistics

The boundaries of the Land Use Plan are not meant to be exact and may be modified, without requiring an OCP amendment, when specific rezoning applications are submitted to Council for consideration. Changes to the boundaries must be consistent with the goals, principles, and policies of this Plan.

The following chart provides some basic statistics for the Land Use Plan, recognizing that all the figures are approximate.



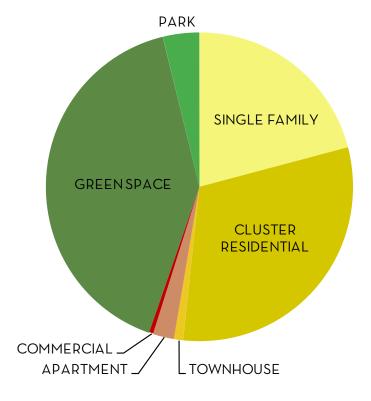


Figure 3.5 Land Use, Buildout and Density Summary Statistics

	AREA IN ACRES	AREA IN HECTARES	PERCENTAGE OF PLANNING AREA1	MAXIMUM RESI- DENTIAL BUILD- OUT / YIELD	DENSITY (UNITS PER ACRE)
Parks and Open Space					
Parks	4.9	2.0	3.8	n/a	n/a
Greenbelt / Natural Open Space	53.9	21.8	41.9	n/a	n/a
<b>Total Parks and Open Space</b>	58.8	23.8	45.7	n/a	n/a
Residential Land Uses					
Single Family w/ Secondary Suites	26.9	10.9	20.9	327	11.8
Cluster	38.5	15.6	29.9	692	18
Townhouse	1.2	0.5	1.0	20	16.2
Apartment	2.8	1.2	2.2	57	20.2
<b>Total Residential</b>	69.4	28.2	54.0	1096	15.8 (net)
Roads	19.8	8.0	13.3	n/a	n/a
Commercial	0.6	0.2	0.5	7 inc. in apar	n/a
TOTAL	149	60.2	100	1103	7.4 (gross)

<sup>&</sup>lt;sup>1</sup> Gross Planning Area Based 148.7 acres

<sup>&</sup>lt;sub>2</sub> The mix of housing units and the net average density in fits in favourably with suggested Smart Growth average densities of 10.5 units per acre with 25 percent open space.







Figure 3.7 Townhome Concept Image

### 3.4 Land Use Policies

The following policies will be used by Council in making decisions regarding land use and development matters.

### 3.4.1 Residential Land Use Policies

- o To achieve a diverse neighbourhood, a variety of housing choices will be provided with the various housing forms and densities to be developed generally consistent with the locations identified on Land Use Plan.
- The highest density residential development shall be concentrated within and around the neighbourhood's community focal point which consists of a small commercial / community gathering area and a active park / open space in the central portion of the neighbourhood
- o Land designated Single Family shall be used for single family lots with lot sizes not greater than 4,000 square feet in accordance with the guidelines within Gospel Rock Small Lot Development Permit Area No. 10, except along the perimeter of the neighbourhood adjacent to the acreage lots in Elphinstone within the Agriculture Land Reserve, in which case the minimum lot size shall be 8,600 square feet.
- o Land designated Cluster Housing may accommodate up to a maximum of 16 units per acre consisting of any combination of single family dwellings, row houses, granny flats, coach houses and secondary suites, the intent of which is to provide alternative housing opportunities, in particular affordable rental housing, and to maintain the single-family character of the neighbourhood. Cluster housing shall be developed in accordance

- with the guidelines within Gospel Rock Cluster Housing Development Permit Area No. 11.
- Land designated Townhouse shall be developed to a maximum net density of 16 units per acre and in accordance with the guidelines within Multi Family Development Permit Area No. 4.
- Land designated Apartment shall be developed to a maximum net density of 36 units per acre and in accordance with the guidelines within Multi Family Development Permit Area No. 4.
- Appropriate development densities will be reviewed in five years with consideration given to the aquifer capacity, road access, infrastructure maintenance costs and the financial plan.



Figure 3.8 Neighbourhood Focal Point Concept Image

### 3.4.2 Commercial Land Use Policies

- o To enhance the walkability and livability of the neighbourhood, a small commercial area in the range of up to 5,000 square feet serving the needs of the neighbourhood will serve as a focal point and gathering space for the neighbourhood, at a location generally consistent with the Land Use Plan Map.
- The commercial floor space may be accommodated within a mixed use building with residential units placed above the commercial space.
- o Commercial development shall be subject to development permit area guidelines that will be established in conjunction with the rezoning of the commercial site. The guidelines will be similar to the ones established for Upper Gibsons area Development Permit Area No. 3.

### 3.4.3 Institutional Land Use Policies

- o To create a diverse neighbourhood, institutional land uses such as places of worship, community facilities, educational facilities, and similar types of uses shall be accommodated within any of the land use designations within the Gospel Rock neighbourhood, subject to rezoning.
- o The development of a new church on the site, stand alone or in combination with a residential component, shall be considered as an appropriate neighbourhood use subject to rezoning.
- o In accordance with Section 6.2 of the Official Community Plan, land will not be reserved for a new elementary school site within the Gospel Rock neighbourhood given the expected reduction in school enrollment within the School District.



Figure 3.9 "Cross Rock" Proposed Park Area

#### 3.4.4 Park and Trail Policies

- o As development of the neighbourhood evolves, the Town will secure parks and open space in locations generally consistent with the Park and Greenbelt/Natural Open Space designations on the Land Use Plan Map.
- o Land required for public access and designated as Park on the Land Use Plan shall be acquired by the Town as park land as a condition of either rezoning or subdivision approval. Of particular importance is the Little Africa / Cross Rock area on the high side of Gower Point Road and the Gospel Rock viewpoint area on the low side of Gower Point Road.
- o The actual boundaries of the park dedication areas will be determined based upon site specific survey, the intent being that the configuration of the parks will be based upon maximizing park values and limiting intrusion from adjacent non-park uses.
- Regarding the land below Gower Point Road, the area around Gospel Rock shall be dedicated as Park and the surrounding area shall be designated as Greenbelt / Natural Open Space as indicated on the Land Use Map.
- o To reinforce the function of the neighbourhood's central community gathering point, land will be reserved for a neighbourhood park to accommodate the recreational

- needs of the residents of the neighbourhood.
- o The neighbourhood shall be serviced with a comprehensive trail network, which is shown on the Circulation Map. The trail network is intended to connect the various residential areas with the community gathering points and park areas as well as provide linkages with the adjacent areas.

### 3.4.5 Open Space and Environmental Policies

- Land designated Greenbelt / Natural Open Space on the Land Use Plan Map shall not be developed due to its environmental sensitivity, its function as a vegetated buffer and its aesthetic value. The Charman Creek ravine and its riparian area, the dryland forest on the east flank of neighbourhood, two north south greenbelts / wildlife corridors and a small wetland in the northern portion of the neighbourhood are designated Greenbelt / Natural Open Space on the Land Use Plan Map and shall be protected through the administration of applicable federal and provincial legislation and the Town's development permit mechanism.
- Should a development be proposed on a parcel of land which is partially designated Greenbelt / Natural Open Space, the Town will require that the proponent submit detailed environmental impact studies conducted by

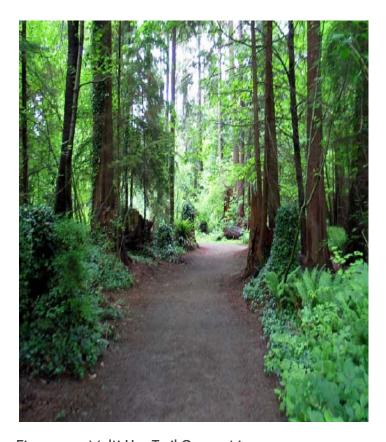


Figure 3.10 Multi-Use Trail Concept image

- qualified environmental professionals to rationalize the boundaries of the development area and the measures that will be undertaken to mitigate any impacts.
- o When development proposals are being considered for specific parcels, the Town will decide whether the protection of areas designated Greenbelt / Natural Open Space shall be achieved by either acquiring the land in public ownership or by requiring that conservation restrictive covenants be registered and the land remain in private ownership.
- o The two north south greenbelt / wildlife corridors designated Greenbelt / Natural Open Space shall remain free of development but may be traversed by trails and minor access roads / driveways where deemed necessary by the Town. A minimum 50 metre wide greenbelt measured on the horizontal along the easterly flank of the neighbourhood shall be maintained, but that the width of the greenbelt may be reduced to not less than 30 meters on the horizontal based upon detailed site-specific study by a qualified environmental professional acceptable to the Town at the time a rezoning or subdivision application is being considered. The study should

- rationalize the boundaries of the development area and the measures that will be undertake to mitigate any impacts on the greenbelt. A second north south Greenbelt is envisioned in the centre of the plan area, connecting the Charman Creek Ravine to the dryland forest to the south
- Proponents for development proposals for land identified as Environmentally Sensitive and within Development Permit Area No. 2 shall be required to obtain a Development Permit.

### 3.4.6 Agricultural, Wildland Fire, and Archaeological Impact Policies

- O To minimize the impact of development and the Shaw Road extension on the rural properties within the Agriculture Land Reserve immediately adjacent to Town's municipal boundaries on the west side of the neighbourhood, proponents will be required to provide buffers acceptable to the Town and the Agricultural Land Commission. These buffers may take the form of increased building setbacks, planting of vegetation screens, erection of fences, or other similar techniques.
- o The preparation of a Wildland Fire Interface Protection Plan will be required for all major developments. The Plan shall address forest fire protection measures such as: non-combustible roofing and siding material, green spaces and landscape vegetation, perimeter protection buffers, evacuation routes and water supplies. At the time of rezoning or subdivision, restrictive covenants will establish specific requirements for building within Wildland Interface areas and will be implemented during the subdivision and/or building permit approval process.
- The preparation of an archaeological impact assessment may be required as a condition of development approvals.

### 3.4.7 Hazard Land Policies

- o The Town shall encourage new development to be located outside of the 200 year floodplain for any creek traversing the neighbourhood. In cases where development is located within the floodplain, flood protection measures shall be required.
- o Although geotechnical issues were taken into account in the identification of the development areas on the Land Use Plan Map, during subsequent rezoning, subdivision and/or building permit approval processes, detailed technical studies will be required for lands that may be subject to soil instability, rock fall, debris flows, etc., particularly along the east flank and the Charman Creek ravine.



Figure 3.11 Low Impact road design, concept image

#### 3.5 Infrastructure Policies

The following policies will be utilized by Council in making decisions regarding infrastructure matters.

#### 3.5.1 Transportation Use Policies

- o The southern extension of Shaw Road via Inglis Road shall function as the primary access for the Gospel Rock neighbourhood.
- o Given that the Shaw Road extension requires the cooperation of a number of property owners for both the dedication of land to accommodate the road and its construction, as an interim measure Chaster Road will function as the primary access into the neighbourhood until the Shaw / Inglis Road extension is achieved. A cap of 250 units has been established as the maximum amount of development that can take place within the neighbourhood that would utilize the Chaster Road access without the Shaw / Inglis Road extension being in place.
- Bayview Heights Road is not a preferred access option for upland development.
- o All roads shall be designed and constructed in a manner that encompasses sustainability principles as reflected in the Town's road standards.
- Development specific traffic impact studies may be required as the neighbourhood builds out and to track traffic patterns relative to the primary access routes.
- o The Gospel Rock neighbourhood shall be designed to accommodate alternative modes of transportation

including transit buses, bicycles, scooters and walking by creating a compact neighbourhood that contains a mix of uses and housing densities, and provides different choices for people to move around their neighbourhood. As well, consideration shall be given to accommodating multi-purpose use of off-road trails where conditions are appropriate.

#### 3.5.2 Municipal Service Policies

- The developers within the Gospel Rock neighbourhood shall be required to extend and / or upgrade the Town's water supply, sewage disposal, and drainage systems to municipal standards, the extent of which will be determined in conjunction with a development application.
- o Given that a significant investment in infrastructure will be required at the inception phases of the neighbourhood, the Town will consider utilizing latecomer agreements and phased development agreements to facilitate the servicing of the neighbourhood.
- o In considering specific development proposals and required stormwater works, Council will determine if and when a Master Stormwater Management Plan will be required in order to examine stormwater impacts within the context of the overall neighbourhood.
- Development approvals may be subject to ongoing monitoring of the capacity of the aquifer, which may include a requirement that developers provide additional monitoring points via new or existing wells.

#### 3.5.3 District Energy Policies

o The feasibility of the installation of a district energy system for the Gospel Rock neighbourhood will be explored.

#### 3.6 Cultural Policies

Evaluate and recognize the physical and cultural heritage value of the area by incorporating plaques, art works or other elements in developments or as the opportunity arises.

#### 3.7 Development Permit Areas

The form and character of multi family residential development shall be subject to the guidelines within Multi Family Development Permit Area 4.

The form and character of commercial development shall be subject to a new development permit area that shall be created when a site is rezoned for commercial uses.

The form and character of small lot residential development shall be subject to the guidelines in Development Permit Area 10 attached as Section 5.

The form and character of cluster housing residential development shall be subject to the guidelines in Development Permit Area 11 attached as Section 6.

Development of land that is identified as Environmentally Sensitive on Development Permit Area No. 2 shall be subject to the applicable development permit guidelines.

Development of land that is identified as a Geotechnical Hazard on Development Permit Area No. 1 shall be subject to the applicable development permit guidelines.

#### 3.8 Community Amenities

Development proposals requiring rezoning shall be required to comply with the Town's Affordable Housing and Community Amenity Policy.

Specific community amenities that developers will be required to provide to the Town will be negotiated on a case by case basis in accordance with the terms of the Affordable Housing and Community Amenity Policy.

## 4.0 IMPLEMENTATION AND MONITORING

#### Zoning Bylaw

Council will consider amendments to the Zoning Bylaw in accordance with the policy framework outlined in this Plan.

#### Liaison

Council will maintain liaison with the community, local neighbourhood, and key stakeholders as the Gospel Rock neighbourhood grows and evolves.

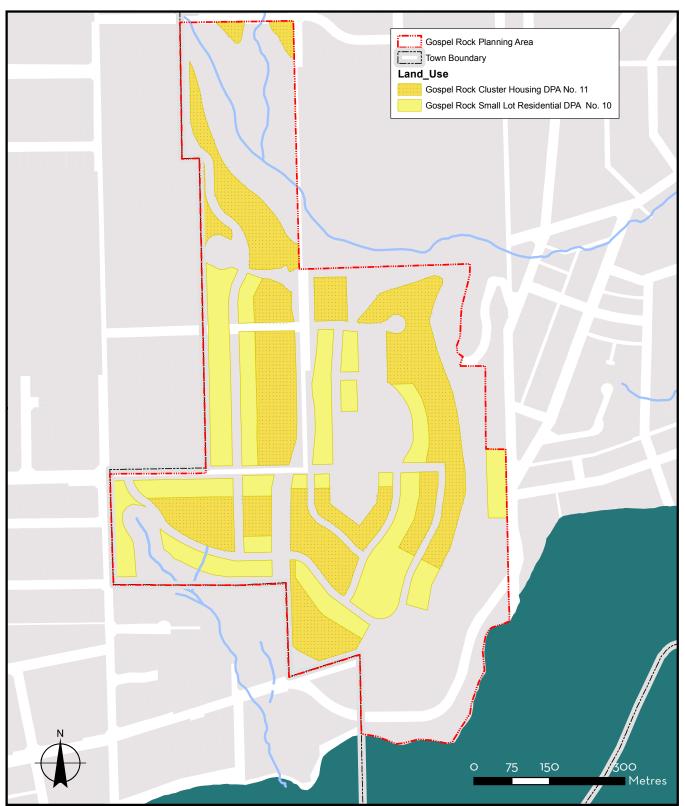
#### Benchmarking

Council will monitor the progress of the Neighbourhood Plan by requesting staff to prepare a report card every five years that would assess the neighbourhood from a the perspective of a number of sustainability factors.

#### Update

The Neighbourhood Plan will be reviewed and updated approximately every five years.

Figure 5.1 Development Permit Aareas No. 10 and No. 11 Map



## 5.0 GOSPEL ROCK SMALL LOT DPA NO. 10

#### Purpose

The Gospel Rock Small Lot Development Permit Area is designated under Section 919.1(1)(e) of the Local Government Act for the purpose of establishing objectives for the form and character of intensive residential development.

#### Area

The Gospel Rock Small Lot Development Permit Area is shown as Development Permit Area No. 10 on Figure 5.1 of the Gospel Rock Neighbourhood Plan.

#### Justification

The Gospel Rock Neighbourhood Plan provides for a compact mix of land uses, including various residential forms, a commercial node, civic facilities, and an interconnected system of parkland and open spaces. One of the objectives of the Gospel Rock Neighbourhood Plan is to encourage housing that is accessible to a cross-section of society, and is adaptable to the changing demographics and lifestyles of the Town's residents. Cottage Residential development (a form of small lot development) in the Gospel Rock Neighbourhood Plan Area is intended to provide the community with an attainable market housing option.

The objectives of this DPA designation are to ensure that Cottage Residential development in the Gospel Rock Neighbourhood Plan Area:

- o respects the existing form and character of the Town; and
- o provides residents with high quality affordable housing options.

#### Guidelines

Development permits issued in this Development Permit Area shall consider the degree to which an application is in accordance with the following guidelines:

#### General Form and Character

Development should promote a small town character by encouraging architecture, landscape design and environmental settings that respect the surrounding context.

Local and natural building materials such as timber and stone

should be used.

The use of natural colours is encouraged, and the use of a variety of complementary colours as accents is also encouraged to promote visual interest.

Reflect an environmentally-friendly ("green") image through the design and exterior features of the development. This image may be achieved in such ways as:

- buildings and roadways sited to retain existing trees, vegetation, and other important natural features;
- o incorporation of visible "green" landscaping features such as rain gardens and infiltration trenches; and
- incorporation of visible "green" building features and materials such as skylights, rain barrels, local wood and stone, green walls and roofs, rain gardens, solar panels, recycled exterior materials, exterior elements for window shading.

#### Building Massing and Street Rhythm

To achieve harmonious integration with surroundings, development should be sensitive to the scale, mass, and form of adjacent buildings.

Secondary dwelling units should complement the scale, mass, built form and character of the principal dwelling unit.

Roof pitches at least 6 in 12 are encouraged.

Vary the exterior design of buildings facing a street or lane from those of similar buildings adjacent and nearby, so that front elevation designs have significant variations in the disposition and articulation of design features. Mirroring nearby front elevation design alone is not an adequate variation.

#### Relationship to the Street

Street setbacks for principal dwellings should be shallow enough to provide for building/sidewalk conversation.

Orient the principal dwelling to the street and to encourage natural surveillance of the street.

Orient duplexes on a corner lot towards both streets.

Incorporate a covered porch or veranda to the street entrance of the unit; where possible, raise the floor level of the main floor above grade at the front of the unit, providing greater surveillance and more traditional character.

For developments having units located to the rear of the property, such as coach houses, ensure that the approach to those units from the street is as obvious and direct as possible.

#### Solar Orientation

The design should consider the effects of climate and solar orientation to maximize energy efficiency and solar access.

Buildings should be oriented to maximize solar exposure while minimizing shadow impacts on adjacent buildings and common areas.

Building orientation and massing should ensure that a majority of primary living spaces receive direct sunlight for the daylight hours at equinox.

#### Parking and Access

A walking path providing direct access to the principal dwelling unit should be clearly visible from the street.

All lots should have direct access to the larger pedestrian circulation system via park corridors, pathways, and/or sidewalks.

All buildings should be sited to provide for safe fire access to all units on site from the front of the lot.

The use of cul-de-sacs should be avoided.

Parking pads and garages should be located to the rear or side of the primary dwelling unit wherever possible.

Vehicular access from the street is strongly discouraged unless a property is not served by a lane or is subject to prohibitively steep grades.

#### Screening and Landscaping

Retain the existing natural landscape to the extent possible, especially where it can function as a buffer between adjacent properties. Where areas that have been designated for natural landscaping in the required Landscape Plan have been cleared, this land should be replanted with native trees and shrubs.

Retain a minimum 30% tree cover on each lot where possible.

Street and yard trees are encouraged wherever possible, and

should be appropriately sourced and spaced to ensure consistency between building features, yard landscaping, and street trees and street furniture. Species should be selected that are non-intrusive and minimize damage to adjacent pavements and underground servicing.

Plant deciduous trees and shrubs to shade buildings in summer but allow for solar gain in the winter.

Avoid the use of solid fencing or continuous buffers of vegetation higher than 1.2 m in front of the primary dwelling unit.

Provide a landscape screen for garages and parking pads that are visible from the street.

Landscape the space between the fence and the lane, to create a rhythm of green spaces along the lane.

# 6.0 GOSPEL ROCK CLUSTER HOUSING DPA NO. 11

#### **Purpose**

The Gospel Rock Cluster Housing Development Permit Area is designated under Section 919.1(1)(e) of the Local Government Act for the purpose of establishing objectives for the form and character of intensive residential development.

#### Area

The Gospel Rock Cluster Housing Development Permit Area is shown as Development Permit Area No. 11 on Figure 5.1 of the Gospel Rock Neighbourhood Plan.

#### Justification

The Gospel Rock Neighbourhood Plan provides for a compact mix of land uses, including various residential forms, a commercial node, civic facilities, and an interconnected system of parkland and open spaces. One of the objectives of the Gospel Rock Neighbourhood Plan is to encourage housing that is accessible to a cross-section of society, and is adaptable to the changing demographics and lifestyles of the Town's residents. Small lot cluster housing is an innovative form of residential development that provides residents with a variety of housing options on one lot.

The objectives of this DPA designation are to:

- ensure that this type of cluster development respects the existing form and character of the Town;
- create an area having a form that is dynamic, incorporating various development types, and complementary, having a sense of consistency and identity despite the potential for variety;
- o provide for high quality, liveable forms; and
- o provide residents with high quality affordable housing options.

#### Guidelines

Development permit applications considered in this Development Permit Area shall demonstrate the degree to which an application is in accordance with the following guidelines:

#### General Form and Character

Development should promote a small town character by encour-

aging architecture, landscape design and environmental settings that respect the surrounding context.

Local and natural building materials such as timber and stone should be used.

The use of natural colours is encouraged, and the use of a variety of complementary colours as accents is also encouraged to promote visual interest.

Vary materials and/or colours to distinguish individual dwelling units in the development.

Multiple dwelling units should be built on each lot. These may take the form of principal dwellings with additional dwelling units such as secondary suites, granny flats, and carriage houses; duplexes, triplexes, or fourplexes; or some combination of these forms.

The primary residence should be sited to allow for the future development of additional dwelling units such that a density of 16 units per acre could be achieved over the long term. The proponent must submit a conceptual plan showing how multiple dwelling units (up to 16 units per acre) could be accommodated on each lot. The conceptual plan should show future servicing and access plans.

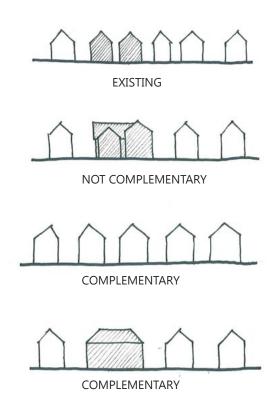
Development should provide a variety of housing types and sizes to address the needs of seniors, young families, and empty nesters

Reflect an environmentally-friendly ("green") image through the design and exterior features of the development. This image may be achieved in such ways as:

- o buildings and roadways sited to retain existing trees, vegetation, and other important natural features
- o incorporation of visible "green" landscaping features such as rain gardens and infiltration trenches
- incorporation of visible "green" building features and materials such as skylights, rain barrels, local wood and stone, green walls and roofs, rain gardens, solar panels, recycled exterior materials, exterior elements for window shading

#### **Building Massing and Street Rhythm**

To achieve harmonious integration with surroundings, development should be sensitive to the scale, mass, and form of adjacent



INCREMENTAL RHYTHM ALONG THE STREET

buildings.

Avoid long continuous façade frontage and respect the rhythm of the existing streetscape.

Developments should create an incremental rhythm complementary to nearby residential areas by visually breaking massing of larger buildings into smaller individual components to express strong unit identity and to relate to the characteristic frontage of buildings in the area, as shown at left.

Secondary dwelling units should complement the scale, mass, built form and character of the principal dwelling unit.

Buildings containing more than 4 units should generally be avoided, taking the form of two or more separate buildings where more than 4 units are proposed.

Use separations, transitions, changes in plan and the inclusion of elements such as bay windows, dormers, porches and cross gables to help mitigate the visual quality of long buildings.

Roof pitches at least 6 in 12 are encouraged.

Vary the exterior design of buildings facing a street or lane from those of similar buildings across the street and on adjacent properties, so that front elevation designs have significant variations in the disposition and articulation of design features. Mirroring nearby front elevation design alone is not an adequate variation.

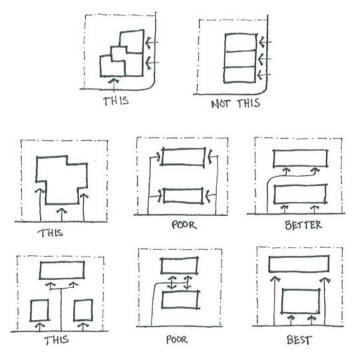
#### Relationship to the Street

Street setbacks for principal dwellings should be shallow enough to provide for building/sidewalk conversation.

The principal dwelling should be oriented to the street and should be designed to encourage natural surveillance of the street; on corner lots, orientation should be towards both streets.

A covered porch or veranda at the street entrance of the unit is encouraged; where possible, raise the floor level of the main floor above grade at the front of the unit, providing greater surveillance and more traditional character.

For developments having units located to the rear of the property, such as coach houses, the approach to those units from the street should be as obvious and direct as possible.



ORIENTATION AND VISUAL

Provide a clearly identifiable door onto the street and public open spaces.

#### Relationship to the Lane

Provide a clearly identifiable door on the lane for dwelling units adjacent to the lane at the rear of the parcel.

A "transparent" interface between the lot and the lane is encouraged, and may be achieved through a balcony or windows overlooking the lane, a porch next to the lane, or other similar means.

Areas of the lot adjacent to the lane that are not required for access to parking should be landscaped. The inclusion of trees in these areas is encouraged where practical.

Consider the use of low (less than 1.2 m) fencing and screening along the lane, to encourage interaction between the lane and nearby semi-private open space.

#### Relationship Between Buildings

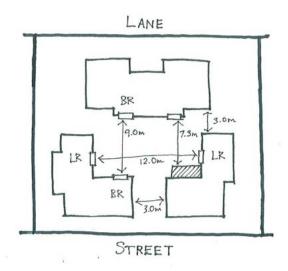
Provide a clear distinction between private and public open space.

Dwelling units should be arranged on site to facilitate social interaction, build a sense of community, and create neighbour-to-neighbour surveillance. This can be accomplished as shown at left, by: ensuring various building entrances face each other and/or open on to open spaces common to all units; providing for surveillance of open spaces common to all units from active living areas within each unit; and/or providing patios, porches, or verandas adjacent common areas.

Minimize the potential for overlook to neighbouring windows and private spaces.

Minimum building separations between units on the same site are preferred, as follows and as shown at left:

- between side walls of buildings containing a small amount of window area: 3 m;
- between portions of walls containing windows into active living spaces such as living and dining rooms and kitchens: 12 m;
- between portions of walls containing windows into other habitable rooms: 9 m;
- o preferred distances in cases (2) and (3) are reduced to 7.3 m to portions of walls containing non-habitable space.



**BUILDING SEPARATIONS** 

#### Solar Orientation

Building orientation and massing should ensure that a majority of primary living spaces receive direct sunlight for the daylight hours at equinox

Buildings should be positioned and scaled to minimize the impact of shadows on adjacent developed properties and on other units planned within the site; where an adjacent property has not been developed, the impact of shadows should be assessed against a typical development given anticipated zoning on that property

Where possible, units should be designed with primary window openings facing south and west or east

Where possible, buildings should not be located in positions that will result in substantial shading of the private open space of adjacent units

#### Other

Carefully provide for areas for garbage and recycling collection and storage, taking into account visual screening and security from animal scavengers

Provide a yard or roof terrace for each unit for usable private open space, in a highly accessible location. Failing this, a large balcony for each unit should be provided. This open space should be screened to provide privacy from neighbours.

Provide a variety of views, ensuring that distant and close-up views of outdoor spaces are provided wherever possible.

#### Parking and Access

A driveway ramp having a slope greater than 5% should have a 3 m flat surface before it cuts the roadway in order to improve sightlines.

A walking path providing direct access to the principal dwelling unit should be clearly visible from the street.

All lots should have direct access to the larger pedestrian circulation system via park corridors, pathways, and/or sidewalks.

All buildings should be sited to provide for safe fire access to all units from the front of the lot.

Where there are multiple dwelling units on a single lot, all parking spaces should access the site via a shared driveway and/or directly from a public lane.

Parking pads and garages should be located to the rear or side of the dwelling unit(s) wherever possible, and always where there is access from a rear lane.

Vehicular access from the street is strongly discouraged unless a property is not served by a lane or is subject to prohibitively steep grades.

#### Screening and Landscaping

Retain the existing natural landscape to the extent possible, especially where it can function as a buffer between adjacent properties. Where areas that have been designated for natural landscaping in the required Landscape Plan have been cleared, this land should be replanted with native trees and shrubs.

Retain a minimum 30% tree cover on each lot where possible.

Street and yard trees are encouraged wherever possible, and should be appropriately sourced and spaced to ensure consistency between building features, yard landscaping, and street trees and street furniture. Species should be selected that are non-intrusive and minimize damage to adjacent pavements and underground servicing.

Plant deciduous trees and shrubs to shade buildings in summer

but allow for solar gain in the winter.

Avoid the use of solid fencing or continuous buffers of vegetation higher than 1.0 m fronting the primary dwelling unit.

Provide a landscape screen for garages and parking pads that are visible from the street.

Consider providing dedicated areas and small shared facilities for children, particularly in developments comprising more than 4 units. Where provided, these should be visible from active living areas in housing units.

# APPENDICES

## **APPENDIX I - SUMMARY OF ISSUES**

#### The Natural Environment

Issues that were identified during the OCP planning process that related to the natural environment included the following:

#### **Environmental Protection**

- o need stewardship programs to promote "individual or private" ownership of environment
- o manage hazardous trees
- o do not build on Gospel Rock
- o keep as much green space as possible
- o deal with contaminated sites
- o need incentives to protect natural resources
- o ban pesticide use
- o encourage the retention of trees

#### Water & Drainage

- respect local watersheds when planning development
- preservation and restoration of natural drainage is required (e.g. Franklin Road)
- o need an overarching policy on drainage
- recognize and respect artesian wells; do not know how much water remains or current water sources

#### Streamside Setbacks

- o restrict construction adjacent to fish bearing streams
- o need to restore problem areas along creeks
- o control construction along Goosebird Creek
- o re-establish green connection of Charman Creek to the harbour
- o open up creek where it is underground and link with WinegardenPark

#### Air Quality

- should require all new wood stoves to be high efficiency and encourage conversion of older stoves and fireplaces to cleaner burning units
- o need a burning ban

#### Parks & Outdoor Recreation

Issues that were identified during the OCP planning process that related to parks and recreation included the following:

#### **Regional Parks**

- o establish Gospel Rock as a large open green space
- develop a strategy to support fundraising to purchase land and create a regional park at Gospel Rock
- o keep WinegardenPark as open as possible
- o classify parks and their use: regional, community, neighbourhood, trails, ESA's

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#### Community & Neighbourhood Parks

- provide parks within walking distance of neighbourhoods
- o preserve existing neighbourhood parks
- o keep park space public, not private
- o infill areas should become park space
- the O'Shea, Oceanfront &Davis Road areas need more parks
- o need more pocket parks
- promote "guerrilla" gardening within neighbourhoods
- encourage community gardens; Town could provide park land, benches, and bulbs, and the community could maintain them
- community groups could maintain trails and pocket gardens
- o distinguish between passive and active parks

#### **Trails**

- o improve bike routes
- need a long-term cycling vision that deal with the hills
- o provide a bike trail network
- separate walkers and cyclists, but allow them to share the same area
- o designate trails for non-recreational walking
- o provide trails to shopping areas
- o protect green space and views
- o trails should connect to bus stops
- o design for wheelchair access, shopping carts, strollers, etc.
- o ensure no counter slopes at intersections
- o connect trails between neighbourhoods (e.g. Spyglass Road)
- o re-designate the road right-of-way strip along Gibsons Creek, at the of Gibsons Way, to park or ESA (e.g. Gibsons Creek to Howe Sound)
- o provide rest stops, places to have a coffee, socialize, etc. along the trail network

#### Community & Social Issues

Issues that were identified during the OCP planning process that related to community and social issues included the following:

# Sports, Recreational & Community Facilities

- negotiate for a community/recreation centre; build joint use facilities (multi-purpose)
- o need a bigger pool
- o need more playing fields
- put the Recreation Centre at the IGA mall; think of creative uses for this space
- o put the Recreation Centre north of Sunnycrest and next to high school
- o need an ice rink
- o a community centre is needed
- o improve existing facilities (e.g. pool & arena) rather than build new ones
- o find things for youth to do

#### **Arts and Culture**

- o develop a school or arts centre on Gospel Rock
- o capitalize on the arts & cultural life in Gibsons
- o support arts & culture as an economic driver

#### Quality of life

- o support young families
- o focus on quality of life rather than just economic development; livelihoods are more important than just money
- community poster areas are needed at mail boxes, bus stops, etc.
- o provide better senior & medical care facilities
- o historic sites such as the Marina House, Inglis Place should have special designation
- o need a quality trades school

#### Residential

Issues that were identified during the OCP planning process that related to residential development included the following:

#### Former ALR Lands

- o area is good for multi-family housing
- encourage higher density residential around Sunnycrest and the High School
- create a gateway to new ALR lands neighbourhood
- o need a neighbourhood plan
- o do not develop former ALR lands
- would like to see this area used for light farming, and businesses, as well as some mixed housing
- support mixed uses (residential-commercial mix), with greenspace
- o ensure pedestrian orientation
- buffer industrial from residential further north with mixed use buildings
- need traffic management within new neighbourhood
- o give it a theme to identify the area
- need a mix of housing types with green spaces and trails
- incorporate new technologies of permeable surfaces
- o improve the drainage into Gibsons Creek
- o need affordable housing

#### **Housing Densities**

- o provide only single-family housing
- there is not a market for apartments or townhouses
- do not increase single-family housing densities; no to apartments or townhouses in single-family dwelling neighbourhoods

#### Housing Densities (continued)

- reduce the need for the automobile by providing higher density housing
- o increase density in Lower Gibsons, but on hillside
- high density is only a short-term fix; will become ghettoized
- o encourage high density (4 to 5 storeys) with green space; maximize views
- consider secondary suites before increasing densities

#### Form and Character

- o clean up lots that are unsightly
- o no more gated communities
- o create small, beautiful communities
- keep housing low in profile (no more than 3 or 4 stories)
- o no more urban sprawl
- o do not emphasize apartments in any single area
- o provide small homes; no monster homes
- o do not alter existing neighbourhoods
- do not ruin the small town atmosphere with apartments
- o no vinyl siding or acrylic stucco exteriors
- o use Smart Growth principles

#### Infill

- ensure that green space is protected if infill is to occur
- o infill areas should become park space
- o ensure infill is in character with neighbourhood

#### **Secondary Suites**

- legalize and upgrade secondary suites; bring them up to code; recognize safety issues, sanitary & noise conditions
- legalizing suites may be too high in cost to make them affordable; look for incentives for homeowners to upgrade their secondary suites
- o legalize granny suites; need to change zoning
- granny suites may block views if built over a garage
- ensure property owners pay appropriate taxes for secondary suites
- provide reasonable standards & adequate parking provisions
- prohibit secondary suites; they add more cars and noise to neighbourhoods; spoil the ambience of existing neighbourhoods
- encourage secondary suites; they act as a source of affordable housing & provides income to struggling homeowners
- o permit secondary suites, subject to consultation & agreement with neighbourhoods
- o important to legalize but make sure they are regulated
- o require homeowners to be on-site or live nearby
- consider secondary suites before increasing densities

#### Short-term Rentals

- short term rentals take away business from local hotels & bed & breakfast operators; build an attractive, waterfront hotel rather than allowing short-term rentals
- short term rentals disrupt existing neighbourhoods
- ensure that the homeowner or a caretaker is onsite; owner must be nearby

#### **Upper Gibsons**

#### Short-term Rentals (continued)

- ensure that the homeowner or a caretaker is onsite; owner must be nearby
- short term rentals will assist the local economy through tourism and homeowners upgrading their homes
- quality of life must not be affected; enforce noise bylaw
- o limit the number of people in a short term rental house
- o list short-term renters with the Town and RCMP
- a licensing system would work and permit should be withheld if neighbours complain
- short-term rentals have been going on for years;
   allow it with conditions
- o only allow short term rentals in new neighbourhoods
- property owners of short term rentals should pay commercial taxes; install water meters
- o there needs to be additional conditions such as parking and firm guidelines to renters

#### Affordable & Alternative Housing

- keep housing affordable by providing medium density housing
- o build more co-op housing
- o encourage alternative forms of housing
- o need a variety of housing types (single-family, townhouses, apartments, co-op housing, etc.)
- promote eco-development through the use of sustainable building materials
- o increase the amount of low-cost housing
- o increase funding for low income housing; work with non-profit agencies
- o encourage live-work studios for artists & home businesses
- o need flexible housing near community areas (adjust zoning)
- encourage mixed uses (residential over commercial) development

#### Land Use

- o need a decent hotel/motel
- adding small sidewalk cafes will dilute efforts in Gibsons Landing
- o support concept of Wood Innovation Centre in Highways Yard
- o consider mix of uses east of North Road along Gibsons Way
- o a more residential mix is needed for Upper Gib-

#### Form and Character

- o retain small town character
- o use Smart Growth principles
- join the existing "big box" retail with sidewalk type stores/cafes
- o revitalization is a waste of money
- continue wide boulevard with sidewalk on north side
- smaller retail is better; encourage smaller businesses
- o no more big box retail
- o improve aesthetics (e.g. flowers, landscaping, sidewalks)
- o get rid of overhead wiring
- o need sign guidelines; minimize fluorescent signs

#### Form and Character (continued)

- o ensure "big box" follow design guidelines
- o need a more unified look
- o screen the dumpsters & garbage trucks
- o insist on an aesthetic design rather than a "franchise design"
- o improve the visual appearance of the Highway
- o add a department store or cultural centre
- o resist "strip mall" type development
- o revitalize IGA Mall

#### **Pedestrian and Cycling Corridors**

- o make it more wheelchair accessible
- o make it more pedestrian friendly
- o needs more controlled pedestrian crossings
- o more sidewalks and bike paths east of North Road along Gibsons Way (use large right-of-way)
- o more benches are required

#### Rural and Agricultural Lands

o do not take any more land out of the ALR

#### **Gibsons Landing**

Issues that were identified during the OCP planning process that related to Gibsons Landing included the following:

#### Holland Park Municipal Lands

- o improve area such as the landscaping; it needs to be better utilized
- bring pedestrian life back; make it an exciting place for cultural events; act as a showcase for crafts and festivals
- o redevelop for residential purposes
- provide retail at lower end and residential at higher end
- o leave HollandPark and library, as is
- sell HollandPark& use the money to create parks in other areas
- o use it for seniors housing & greenspace
- o use it for an arts centre & cultural events; maintain as focus for arts centre, public market, green space, public gardens
- o needs public washrooms
- o the area is an eyesore; landscaping improvements are needed
- create a vibrant area of living, artisan and commercial space
- move library and municipal offices to Upper Gibsons
- o build a convention centre on the site
- o increase public amenities with new commercial space (e.g. benches, water fountain, etc.)
- any development should be in keeping with the overall "seacoast village" theme

#### Land Use

- should be for cafes & small stores; pedestrian oriented retail
- o mixed use o.k., but not just retail
- o need a waterfront boutique hotel
- o encourage commercial development on laneway adjacent to Molly's Reach
- senior's care home will not provide "eyes on the street" or activity
- more intensity than existing, but not as intensive as harbour front plan
- o need clarification of the "Special Commercial Study Area" in terms of its meaning
- encourage residents to live in Gibsons Landing in order to sustain businesses and activities
- promote a mixed use, active harbour front; encourage recreational use of the water

#### Form and Character

- o retain small town character
- o use Smart Growth principles
- o make it more wheelchair/pedestrian friendly
- o create more business & atmosphere
- o promote a village concept
- establish view corridors, scenic vistas; greenspace is important
- o reinforce "west coast" maritime theme
- o ensure development is terraced
- o should be an area that is a destination, pedestrian friendly and have appropriate parking
- o encourage public art

#### Pedestrian and Cycling Corridors

- o need traffic calming measures
- o create a transportation loop
- o more benches

#### Marine and Shoreline Use

- o need a 24-hour passenger service to Vancouver
- o improve the waterfront
- would like to see a seawall to walk on; support for harbour walkway, piers over the water; must have continuous water front walkway
- o need services to boaters, canoe rentals, restaurants on the waterfront

#### Marine and Shoreline Use (continued)

- o float homes are acceptable with proper sewerage disposal
- storage of hazardous materials in the harbour is a concern
- o floats needed for seasonal tie up
- o need land connection to provide walking access to the Town
- extend breakwater to improve flushing of harbour and provide additional marina space
- build moveable bridges over obstacles along the Seawall from Bay Road to ArmoursBeach (like White Rock)

#### **Economic Development**

Issues that were identified during the OCP planning process that related to economic development included the following:

#### **Tourism**

- o promote tourism through the private sector only
- o support arts & culture as an economic driver
- o do not build a big hotel; need a hostel instead
- o review the need for cruise ships

#### Commercial & Industrial Development

- o encourage commercial development along North Road
- o do not over commercialize Gibsons
- o downtown revitalization has not worked
- o need to improve local economy
- o no big box retail
- o encourage more home-based businesses
- o require landscaping in industrial areas

#### **Transportation**

Issues that were identified during the OCP planning process that related to transportation included the following:

#### Roads

- o establish road standards
- o minimize noise & traffic volumes
- o concerned about traffic volume on Gibsons Way with new development
- need a 2nd road to connect Upper & Lower Gibsons (e.g. extend Venture Way)
- o parking is an issue in Upper Gibsons
- o need traffic coordination
- o change configuration of Gibsons Way (use the large ROW for public amenities)
- o use rear lanes for parking; should be maintained in unpaved natural condition
- transportation planning needs to focus on walking rather than cars
- o need a 4-way stop at Winn and Fletcher

#### **Transit**

- o improve transit services
- o need more buses and bus shelters
- o provide a shuttle bus service between Upper and Lower Gibsons
- o enclose and cover bus shelters
- o need an alternative to get to Gower Point

#### **Bike & Pedestrian Routes**

- o improve bike routes
- need a long-term cycling vision that deal with the hills
- Gower Point Road dangerous for cyclists and pedestrians
- o give walkways same priority as streets for traffic
- o need traffic light at Mahon, at least for pedestrian crossing
- connect South Fletcher Road to Gibsons Way, creating a piazza/plaza at the end of School Road at Gower Point Road, maintaining laneway access

#### Marine Traffic

- o need a 24-hour passenger service to Vancouver
- o provide a ferry service to KeatsIsland

#### Servicing

Issues that were identified during the OCP planning process that related to municipal servicing included the following:

#### Water

- o replace the water system; it needs upgrading
- o preserve well water
- water needs must meet the needs of new development
- o supply water to all of Gibsons
- o public water tap is always running; waste of water
- identify source, amount and supply of well water; identify watersheds, remediation of creeks and watershed
- comprehensive study on water is needed; establish a public water board

#### Sanitary Sewer

- use by-products of sewage plant for energy & compost
- sewer system needs immediate attention and upgrading before any new development can be considered
- no more growth until the sewage treatment plant is upgraded

#### Storm Drainage

- respect local watersheds when planning development
- o use permeable walkways & driveways

#### Storm Drainage (continued)

- o need a master drainage plan
- use storm water outflow as a potential visitor attraction feature
- o encourage on-site drainage
- o no off-site drainage in new neighbourhoods; use ponding, permeable surfaces, narrow streets

#### **Alternative Development Standards**

- o need to look at alternatives to sewer, water & transportation
- o developers should pay for infrastructure
- o use permeable walkways & driveways
- need some innovation such as grey water piping, cycle paths, greenspaces, alternative energy, cluster housing
- o minimize paving
- o make Gibsons more wheelchair accessible
- o consider alternate sewage treatment that does not have to hook up to existing facilities

#### Other Utilities

- o put overhead wiring underground
- o accommodate conduit for underground wiring every time roads are dug up

## APPENDIX II - RESULTS OF QUESTIONNAIRES AND LIST OF OCP MEETINGS

January 3, 2003



As part of the Official Community Plan update, the Town of Gibsons is attempting to obtain opinions and ideas from Town residents. We value your input and by answering this questionnaire, you will help guide the future of Gibsons. The results will be used to help develop a new Official Community Plan for the Town.

1. A number of issues have consistently been raised by residents in past consultation with the community. Please rate how important the following issues are to you (circle your response):

	Not Important		Very	
				Important
	1	2	4	5
Preserve environmentally sensitive areas and protect natural resources, such as streams and trees	0%	2%	13%	75%
Enhance outdoor recreational opportunities through the implementation of bike routes and pedestrian trail development	3%	7%	20%	53%
Provide opportunities for more senior's housing and care facilities	2%	2%	39%	36%
Support home based businesses	10%	9%	32%	21%
Encourage the use of alternative infrastructure design (e.g. roads, sewer, drainage) in order to reduce cost and environmental impact	3%	2%	22%	54%
Promote tourism in order to foster economic development	7%	12%	25%	27%
Improve local public transportation services	2%	10%	27%	32%
Enhance the arts and cultural life in Gibsons	4%	17%	23%	24%

2. The Town of Gibsons has grown considerably over the past several years, (almost 800 new residents over the past 10 years) and it will likely continue to grow. However, given the Town's limited land base, utility servicing limitations and road access, there is very little room for new housing. Where do you think new housing should occur? (see map on back page of questionnaire/comment sheet)
You may check more than

74% North Road/Park Road area (former ALR land)

one box.

37% Shaw Rd. South/Gospel Rock (north of Charman Creek)

23% Shaw Rd. South/Gospel Rock (south of Charman Creek)

64% Infill of vacant lots within existing neighbourhoods

Increase in housing densities within existing single family neighbourhoods (e.g. duplexes, townhouses, apartments)

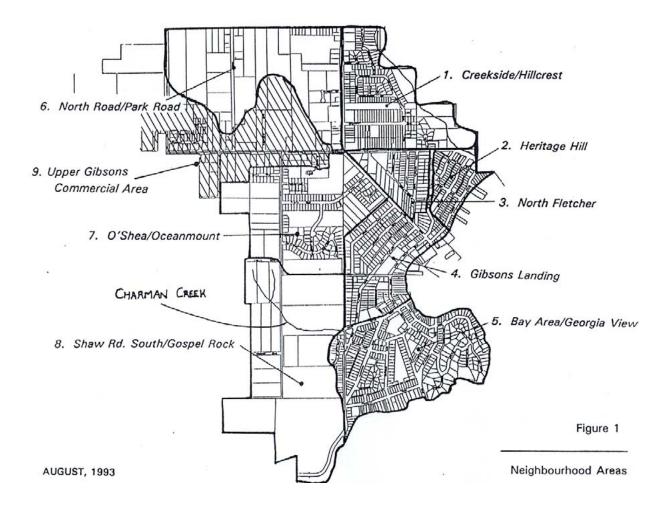
- 3. Recently, 34 hectares of land in Upper Gibsons were removed from the Agricultural Land Reserve and will be designated as a "Neighbourhood Plan Area", which will prevent piece-meal development, requiring that a comprehensive plan be prepared prior to any development. The area is intended to become a complete community, adding some commercial, light industrial, and recreational space to Gibsons along with potentially 300 to 800 new homes. The number of homes will largely depend upon housing form. In your opinion, what type of housing mix would you prefer to see on these lands?
  - 25% Low density housing: Single-family dwellings only (adding about 300 new homes)
  - 60% Medium density housing: A mix of single-family dwellings and townhouses (adding about 500 more homes)
  - High density housing: Some single-family dwellings, with a greater emphasis on townhouses and apartments (adding about 800 more homes)
- 4. Over the years a number of studies have been conducted on Gibsons Landing and various visions for the future use of HollandPark have emerged. (HollandPark is the open space area on which the Municipal Offices, library etc. are located). Each of the future uses proposed have their merit, given surrounding land uses and the goals of the community. What future use, if any, for the HollandPark area do you support?
  - 44% LeaveHollandPark as it is, an open space with existing public facilities
  - Increase public spaces and amenities on HollandPark, including, for example, space for a civic plaza, an area to host cultural events, and/or provide for artisans workspace/showcase (museums)
  - 5% Utilize the site for higher density, multi-family housing
  - 11% Create a mixed use development with residential townhousing and commercial office, retail type space
  - 10% Utilize the site to provide housing targeted to seniors, including independent living and assisted care facilities
- 5. Upper Gibsons is emerging as a commercial area serving the needs of local residents and the surrounding region. It has good auto-oriented access and available parking. However historical development has created a poor and somewhat disjointed appearance. In the past, residents have identified improving the image of Upper Gibsons as an important issue. What do you think is needed in Upper Gibsons?
  - 9% Additional commercial uses automobile oriented retail (e.g. "big box" style with ample parking)
  - 64% Transition to pedestrian oriented retail (e.g. sidewalk cafes, small stores)
  - 44% Greater emphasis on a commercial / residential mix
- 6. Through past studies and community consultation, the issue of the lack of affordable housing in Gibsons for low-income individuals and families has been raised. In many communities, one solution to increasing the availability of affordable housing has been to "legalize" secondary suites. (Secondary suites can be defined as separate and self-contained living quarters with their own meal preparation and sanitary facilities, located within a single-family dwelling.) While secondary suites are known to exist in Gibsons, the municipality does not officially recognize them. The advantage to recognizing secondary suites is the ability to ensure the suites meet Building Code regulations. What is your opinion on secondary suites in Gibsons?
  - 6% Secondary suites should not be permitted.
  - 51% Secondary suites should be legalized subject to conditions like the provision of additional parking.

#### APPENDICES

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- 31% Secondary suites should be permitted only in certain neighbourhoods, following consultation with residents.
- 26% Secondary suites should be permitted in all single-family homes in Gibsons.
- 7. There has been an increasing demand for short-term rental housing in the Gibsons area. Short-term rental housing can be defined as housing that is used for commercial purposes, and may include vacationers or out-of-town film crews that rent a house for less than 30 days. The owner of the house tends to reside elsewhere. Although this adds to the tourism economy, it has disrupted existing neighbourhoods. What is your opinion on short-term rental housing?
  - 17% Short-term rental housing should not be permitted
  - 28% Short-term rental housing should be allowed, subject to proper zoning
  - 4% Short-term rental housing should only be allowed in <u>new</u> neighbourhoods, subject to proper zoning
  - 60% Short-term rental housing should be allowed through a permit system, subject to consultation with neighbouring residents.

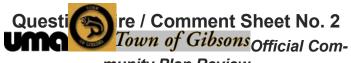
The map below indicates the neighbourhood areas as outlined in the 1993 OCP. Question #2 makes several references to some of the neighbourhoods and this map should be used as a guide only.



Additional comments?

Please return this questionnaire / comment sheet at the Open House on November 30<sup>th</sup> or to the Town of Gibsons Municipal Office at 474 South Fletcher Road no later than December 13, 2002

Thank you for your participation in the process towards a new Official community plan



#### munity Plan Review

Public Open House No. 2, April 23, 2003

The Town's OCP Select Committee invites you to voice your input on key policy statements proposed in the draft OCP. Please indicate your opinion with respect to the following policy statements.

Policy No.	Policy Initiative	Agree	Disagree	No Opin-
4.0	The Natural Environment			
4.1.7	Following an appropriate public involvement program, consider the establishment of a Tree Protection Bylaw. Trees that may be protected include trees that provide critical habitat or erosion control or are deemed to be significant for historical purposes. Council may also consider a Tree Protection Bylaw that regulates tree cutting and removal, for the purposes of protecting view corridors.	55 77%	11 15%	5 7%
4.4.2	Complete and extend the seawalk from the breakwater at the bluff to the northern boundary of the Town past Armour's beach without interruption, including the breakwater itself.	71 100%	-	-
5.0	Parks and Outdoor Recreation			
5.1.1	Concentrate the development and programming of both community and neighbourhood parks in areas designated as Park & Recreation on Schedule A.	39 55%	7 10%	25 35%
5.1.12	Consider preparing a Development Cost Charge Bylaw for the acquisition and development of parkland. This will help to ensure that the Town meets the overall parkland standard and that the development of parkland is properly financed.	37 52%	18 25%	16 23%
5.2.3	Set land aside for a future community park in the lower Shaw Road/Chaster Road area	50 70%	8 11%	13 18%
5.4.2	Establish a primary network of trails and cycle paths as outlined in Map 3 linking open space areas and providing linkage throughout the community.	56 79%	10 14%	5 7%
6.0	Community & Social Issues			
6.1.3.	Determine the feasibility of creating a multi-purpose recreation facility, either as a municipal facility, or as a joint facility with regional or private enterprise support. A multi-sue design philosophy, rather than single purpose, is strongly encouraged. Such as facility may include meeting room, fitness centre, and/or activity area for people o all ages and abilities.	52 73%	12 17%	7 10%
6.1.4	Strongly encourage the concept of locating a multi-purpose facility on municipally owned lands on Shaw Road, known as the Christensen Lands.	30 42%	18 25%	23 33%

Policy No.	Policy Initiative	Agree	Disagree	No Opin-
6.3.2	Give consideration to creating or promoting a seasonal, or temporary cultural district. This would effectively concentrate artisans and other local entrepreneurs to create a critical mass of activity in an area. Such a cultural district shall be encouraged to locate within the Gibsons Landing area, or along the waterfront.	52 73%	9 13%	10 14%
6.4.2	Encourage the maintenance of an inventory of historic sites including buildings, plantings and structures within the Town.	58 82%	6 8%	7
7.0	Residential	0270	0,0	1070
7.2	Single Family Housing			
7.2.1	Retain as Single Family Residential areas shown on Schedule A for single-family detached homes and accessory buildings. Also, where appropriate and implemented through zoning, semi-public uses such as places of worship, daycare facilities, and community meetings halls may be considered.	49 69%	6 8%	16 23%
7.2.3	Consider permitting secondary suites within the Single Family Residential designation. This shall be subject to consultation with the surrounding neighbourhood required for homes that have a secondary suite.	38 53%	21 30%	12 17%
7.3	Low Density Infill			
7.3.1	Encourage infill housing development to occur in areas designated as Low Density Infill on Schedule A. Residential development may include a small lot single-family house, or a two-family dwelling unit (duplex), with accessory buildings.	47 66%	15 21%	9 13%
7.4	Multi-Family Housing			
7.4.1	Support multi-family housing in areas designated as Multiple Family Residential on Schedule A, which may be accompanied by accessory buildings.	50 70%	7	14 20%
7.4.4	Direct the following types of special needs housing to a Multi-Family Residential designation:	70% 57 80%	6 8%	8 11%
	<ul> <li>group homes;</li> <li>extended care facilities;</li> <li>retirement homes providing intermediate or extended care services;</li> <li>community or congregate care housing;</li> <li>seniors and special needs housing</li> </ul>			
7.6	Future Neighbourhoods (Gospel Rock)			
7.6.1	Support a Neighbourhood Plan (for the Gospel Rock area) which may include the concept of a hotel/retreat destination combined with limited residential development, an arts and cultural centre and a regional park in the Gospel Rock area. Trails, viewpoints, and open space shall link the major activities. This shall be further defined through a planning process that would outline detailed land uses for Gospel Rock in consultation with property owners, residents and the Town.	47 66%	16 23%	11%

Policy No.	Policy Initiative	Agree	Disagree	No Opin
8.1.4	Support the redevelopment of existing commercially-zoned properties within	57	5	9
	the North Road and Gibsons Way areas to multi-family housing, but consider supporting limited types of commercial uses which provide small-scale shops or services clearly of benefit to the surrounding residential neighbourhood.	80%	7%	13%
8.2.2	Limit new commercial development to be no more than 2500m <sup>2</sup> (26,910 ft <sup>2</sup> ) of gross floor area per business.	37	14	20
	gross noor area per business.	52%	20%	28%
8.3.2	Support a transition from heavy industrial use in the current zoned industrial area toward fully enclosed service, light industrial, and large-site retail opera-	53 75%	5 7%	13 18%
	tions, including offices associated with these businesses.			
9.0	Gibsons Landing			
9.1.3	Maintain the small-scale built form of the village by limiting storefronts and	59	7	5
	building widths, where possible, to provide pedestrian interest. Although commercial buildings should be no higher than 2 storeys, residential buildings should be no higher than 4 storeys.	83%	10%	7%
9.4.3	Increase public spaces and amenities on the Town property bordered by South	48	12	11
	Fletcher Road, Winn Road and Gower Point Road (known as "Holland Park"), including space for a civic plaza, an area to host cultural events, and/or provide for artisans workspace/showcase.	68%	17%	15%
9.4.10	Create public access along GibsonsHarbour through the establishment of a	63	5	3
	continuous seawalk. Pedestrian connections through private sites should be encouraged and achieved over time through the development permit process or through taxation incentives.	89%	7%	4%
9.5.7	Consider allowing the use of float homes and other live aboard vessels for per-	32	34	5
	manent residences in the harbour area. This may require a study to understand the impacts, and amendments to the Zoning Bylaw.	45%	48%	7%
10.0	Economic Development			
10.1.1	Support home based businesses provided that the business does not detract	59	7	5
	from the existing residential character of the area, create undue noise or be unsightly, and are clearly incidental in size and use to the dwelling unit, and meet all appropriate regulations. This may be further controlled through the zoning bylaw.	83%	10%	7%
11.0	Transportation			
11.1.5	Simplify the Gower Point, Marine Drive, Gibsons Way intersection by closing	37	17	17
	School Road between Gower Point Road and the lane behind to automobile traffic. Limit access to shuttle buses, trams, and pedestrians.	52%	24%	24%
11.1.12	In consultation with the local community, introduce traffic calming measures to	46	7	18
	discourage traffic from taking shortcuts through certain neighbourhoods such as the Beach Road/Seaview Road area.	65%	10%	25%
11.2.3	Encourage a tram or shuttle bus service as an appropriate transit service to connect Upper Gibsons and the Lower Gibsons waterfront.	46	17	8
12.1		65%	24%	11%

Policy No.	Policy Initiative	Agree	Disagree	No Opin-
12.1.1	Require the land owner or developer in any development to provide the follow-	53	5	13
	ing minimum level of services:	75%	7%	18%
	connection to the municipal water supply system			
	connection to the municipal sanitary sewage collection and treatment system			
	paved roadways			
	curbs and gutters			
	sidewalks (as required)			
	bicycle paths (as required)			
	underground wiring			
	street lighting			



#### OFFICIAL COMMUNITY PLAN REVIEW

# NOVEMBER 13, 2003 OPEN HOUSE QUESTIONNAIRE NO. 3

		N/O – No Opinion		
		YES	NO	N/O
1.	Should the Town acquire more natural greenspace in Gibsons through:			
	a. Increased dedicated park taxes?	31%	52%	17%
	b. Development Cost Charges for new subdivision and developments?	65%	25%	10%
	c. Higher density residential development (e.g. apartments/townhouses)?	51%	37%	12%
2.	Would float homes, assuming strict environmental regulations, be an enhancement to GibsonsHarbour?	49%	43%	8%
3.	Should the 40 acres of Town land between Stewart and Shaw Roads be changed			
	from the existing single family residential designation to the Public/Community	50%	32%	18%
	Use designation?			
4.	Should the Town be actively involved in developing affordable housing in Gibsons?	41%	48%	11%
5.	Should we allow secondary suites be permitted in single- family homes with the			
	following conditions:			
	a. With the owner living in the single family home?	78%	11%	11%
	b. With the provision of adequate parking?	79%	15%	6%
	c. With additional garbage, sewer and water rates?	74%	19%	7%
6.	Should Bed & Breakfasts in the community pay more for services?	60%	29%	11%
7.	Should the Town be designating land in Gibsons Landing for a hotel?	48%	36%	16%
8.	Should the Town be designating land in Gibsons Landing for a small conference centre?	52%	34%	14%



# NOVEMBER 13, 2003 OPEN HOUSE QUESTIONNAIRE NO. 3

		N/O – No Opinion		nion
		YES	YES	YES
9.	Should the size of new commercial development in Gibsons be limited to 2500m <sup>2</sup>	60%	33%	7%
	(27,000 ft²) which is the approximate size of the London Drugs/Super Valu stores?	00%		
10.	Should School Road be closed below South Fletcher and South Fletcher be ex-			
	tended to Gibsons Way thereby making the five corners intersection: safer; creat-	66%	24%	10%
	ing additional parking space; and a town square?			
11.	Should the Town meter water use as part of a water conservation program?	47%	45%	8%
12.	Should the Town be providing a "fee for service" curbside recycling program?	43%	44%	13%

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Please return to <u>Chris Marshall, Director of Planning</u>
By Friday, November 28, 2003

#### **Summary of Public Consultation for OCP Review**

#### **OCP Review Select Committee Meetings**

- 1. September 17, 2002 Intro, discuss key issues (Consultants)
- 2. October 16, 2002 Presented Background Paper (Consultants)
- 3. November 7, 2002 Reviewed Draft Questionnaire, web site and Draft Newsletter
- 4. November 12, 2002 Review of Existing OCP
- 5. November 18, 2002 Review of Existing OCP
- 6. December 12, 2002 Review Existing OCP
- 7. January 9, 2003 Review Existing OCP
- 8. January 13, 2003 Review Existing OCP
- 9. January 20, 2003 Review Existing OCP
- 10. January 27, 2003 Review Existing OCP
- 11. February 3, 2003 Review Existing OCP
- 12. February 10, 2003 Review Existing OCP
- 13. February 17, 2003 Review Existing OCP
- 14. February 24, 2003 Review Existing OCP
- 15. February 26, 2003 Draft of OCP Presented (consultants)
- 16. March 18, 2003 Reviewed and commented on first Draft
- 17. March 31, 2003 Reviewed Draft Questionnaire and Draft Newsletter
- 18. June 18, 2003 Reviewed Results of the Questionnaire (Consultants)
- 19. September 17, 2003 Reviewed proposed changes to First Draft (Consultants)
- 20. October 29, 2003 Review Newsletter, Questionnaire and Open House format.
- 21. January 21, 2004 Review Final Changes to Second Draft

#### **Newsletters**

Spring 2003 – Distributed to every mailbox in Gibsons

Fall 2003 – Distributed to every mailbox in Gibsons

#### Questionnaires

- 1. Fall 2002 Distributed to every mail box in Gibsons and at Open House 160 returned in person and via email
- 2. Spring, 2003 Distributed to every household in Gibsons and Open House and tradeshow 80 returned
- 3. Fall 2003 Distributed to every household in Gibsons November 7, 2003 and at Open House November 13, 2003.

#### Workshop

1. November 30, 2002 – Broke the Committee into four groups and had them brain storm on key issues (Harbour, Upper Gibsons, Housing

#### **Open Houses**

- 1. November 30, 2002 Introduced OCP Review Process get input on key issues. Distributed questionnaire.
- 2. April 23, 2003 Reviewed first draft of the OCP and distributed questionnaire
- 3. Trade Show April 26, 27 presented First Draft of OCP on boards and distributed questionnaire.
- 4. November 13, 2003 Review Second Draft

#### Meeting with the SCRD Senior Staff

1. June 18, 2003 - met with SCRD Senior staff to discuss first draft of OCP

#### **Harbour Authority**

1. November 28, 2003 - met with Gerry Harris representative for the Harbour Authority

#### Website for OCP Review

- 1. Background studies and reports
- 2. Minutes and Agendas of all meeting, Workshops and Open Houses

- 3. Newsletters
- 4. Questionnaires and results
- 5. Existing OCP
- 6. Drafts of OCP Review
- 7. Contact info
- 8. List of Committee members

#### Reference Binders in Library and Town Hall

- 1. Background studies and reports
- 2. Minutes and Agendas of all meeting, workshops and Open Houses
- 3. Newsletters
- 4. Questionnaires and results
- 5. Existing OCP
- 6. Drafts of OCP Review
- 7. Contact info
- 8. List of Committee members

#### **Presentations to Interest Groups of First Draft**

- 1. June 2, 2003 Seniors at Harmony Hall
- 2. June 26, 2003 Gibsons Landing Business Association
- 3. July 17, 2003 Bay Area Residents Association and Heritage Hills Resident Association
- 4. July 22, 2003 Council
- 5. September 18, 2003 Rotarians

### **APPENDIX III - WORK CITED**

Charman Creek Master Drainage Plan, Urban, 1998

Drainage - DCC Update - Final Draft Report, Urban, 2001

Fresh Eyes on Gibsons, UBC Urban Studio, October 2000

Gibsons - Naturally - Final Report: The Strategic Plan

GibsonsHarbour Master Plan: Study Report, CIVITAS Urban Design & Planning Inc. January 2001

The Smart Growth Toolkit, Smart Growth BC, 2001

Town of Gibsons – Downtown Revitalization, Don Vaughan, Design Guidelines

Town of Gibsons Road Network Plan Study, R.F. Binnie & Associates Ltd., March 1996

Town of Gibsons, Official Community Plan, Bylaw No. 655, 1993

Trail & Cycle Network Master Plan, Summary Report, Gloghesy & Doak, March 2001

Village of Gibsons Drainage Study, Dayton& Knight, 1981

Gibsons Landing Environmental Management Program (GLEMP), Gibsons Landing Harbour Authority, (report undated) circa 2003

# APPENDIX IV - RIPARIAN AREA REGULATIONS

#### PROVINCE OF BRITISH COLUMBIA

### ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No. -

837

, Approved and Ordered

JUL 27 2004

APPENDIX 1V
RIPARIAN AREA REGULATIONS

v 120 v V

Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that, effective March 31, 2005,

- 1 the Streamside Protection Regulation, B.C. Reg. 10/2001, is repealed, and
- 2 the attached Riparian Areas Regulation is made.

Minister of Water, Land and Air Protection

Presiding Member of the Executive Council

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section:-

Fish Protection Act, S.B.C. 1997, c. 21, ss. 12, 13 (1) and 37 (2)

Other (specify):-

oic 34/200

Rosus 740/2004/8

June 9, 2004

### RIPARIAN AREAS REGULATION

### **Definitions and interpretation**

- 1 (1) In this regulation:
  - "Act" means the Fish Protection Act;
  - "active floodplain" means an area of land that supports floodplain plant species and is
    - (a) adjacent to a stream that may be subject to temporary, frequent or seasonal inundation, or
    - (b) within a boundary that is indicated by the visible high water mark;
  - "assessment methods" means the methods set out in the Schedule;
  - "assessment report" means a report prepared in accordance with the assessment methods to assess the potential impact of a proposed development in a riparian assessment area and which is certified for the purposes of this regulation by a qualified environmental professional;
  - "development" means any of the following associated with or resulting from the local government regulation or approval of residential, commercial or industrial activities or ancillary activities to the extent that they are subject to local government powers under Part 26 of the Local Government Act:
    - (a) removal, alteration, disruption or destruction of vegetation;
    - (b) disturbance of soils;
    - (c) construction or erection of buildings and structures;
    - (d) creation of nonstructural impervious or semi-impervious surfaces;
    - (e) flood protection works;
    - (f) construction of roads, trails, docks, wharves and bridges;
    - (g) provision and maintenance of sewer and water services;
    - (h) development of drainage systems;
    - (i) development of utility corridors;
    - (j) subdivision as defined in section 872 of the Local Government Act;
  - "development proposal" means any development that is proposed in a riparian assessment area that is within or partly within the boundaries of an area administered by a local government;
  - "fish" means all life stages of
    - (a) salmonids,
    - (b) game fish, and
    - (c) regionally significant fish;
  - "floodplain plant species" means plant species that are typical of an area of inundated or saturated soil conditions and that are distinct from plant species on freely drained adjacent upland sites;
  - "high water mark" means the visible high water mark of a stream where the presence and action of the water are so common and usual, and so long continued

in all ordinary years, as to mark on the soil of the bed of the stream a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself, and includes the active floodplain;

- "ministry" means the Ministry of Water, Land and Air Protection;
- "natural features, functions and conditions" include but are not limited to the following:
  - (a) large organic debris that falls into the stream or streamside area, including logs, snags and root wads;
  - (b) areas for channel migration, including active floodplains;
  - (c) side channels, intermittent streams, seasonally wetted contiguous areas and floodplains;
  - (d) the multicanopied forest and ground cover adjacent to streams that
    - (i) moderates water temperatures,
    - (ii) provides a source of food, nutrients and organic matter to streams,
    - (iii) establishes root matrices that stabilize soils and stream banks, thereby minimizing erosion, and
    - (iv) buffers streams from sedimentation and pollution in surface runoff;
  - (e) a natural source of stream bed substrates;
  - (f) permeable surfaces that permit infiltration to moderate water volume, timing and velocity and maintain sustained water flows in streams, especially during low flow periods.
- "permanent structure" means any building or structure that was lawfully constructed, placed or erected on a secure and long lasting foundation on land in accordance with any local government bylaw or approval condition in effect at the time of construction, placement or erection;
- "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if
  - (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
  - (b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
  - (c) the individual is acting within that individual's area of expertise;
- "ravine" means a narrow, steep-sided valley that is commonly eroded by running water and has a slope grade greater than 3:1;
- "riparian area" means a streamside protection and enhancement area;
- "riparian assessment area" means
  - (a) for a stream, the 30 meter strip on both sides of the stream, measured from the high water mark,
  - (b) for a ravine less than 60 meters wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 meters beyond the top of the ravine bank, and

(c) for a ravine 60 meters wide or greater, a strip on both sides of the stream measured from the high water mark to a point that is 10 meters beyond the top of the ravine bank;

"stream" includes any of the following that provides fish habitat:

- (a) a watercourse, whether it usually contains water or not;
- (b) a pond, lake, river, creek or brook;
- (c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph (a) or (b);

### "streamside protection and enhancement area" means an area

- (a) adjacent to a stream that links aquatic to terrestrial ecosystems and includes both existing and potential riparian vegetation and existing and potential adjacent upland vegetation that exerts an influence on the stream, and
- (b) the size of which is determined according to this regulation on the basis of an assessment report provided by a qualified environmental professional in respect of a development proposal;
- "top of the ravine bank" means the first significant break in a ravine slope where the break occurs such that the grade beyond the break is flatter than 3:1 for a minimum distance of 15 meters measured perpendicularly from the break, and the break does not include a bench within the ravine that could be developed;
- "wetland" means land that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, fens, estuaries and similar areas that are not part of the active floodplain of a stream.
- (2) For the purposes of the definition of "streamside protection and enhancement area," vegetation must be considered to be "potential" if there is a reasonable ability for regeneration either with assistance through enhancement or naturally, but an area covered by a permanent structure must be considered to be incapable of supporting potential vegetation.

### Purposes of this regulation

- 2 The purposes of this regulation are
  - (a) to establish directives to protect riparian areas from development so that the areas can provide natural features, functions and conditions that support fish life processes, and
  - (b) to facilitate an intergovernmental cooperation agreement between the ministry, Fisheries and Oceans Canada and the Union of British Columbia Municipalities including the ability for individual intergovernmental cooperation agreements with local governments for any of the following:
    - (i) the implementation of this regulation;
    - (ii) the confirmation of regionally significant fish by the Ministry of Water, Land and Air Protection;
    - (iii) providing, sharing or confirming information on fish habitat conditions;

- (iv) describing roles and responsibilities with reference to applicable and appropriate use of authority and program mandates;
- (v) dispute resolution;
- (vi) a compliance strategy, including education, training, monitoring, reporting, enforcement and auditing.

### Application

- 3 (1) This regulation applies to the exercise of local government powers by local governments under Part 26 of the Local Government Act in those local government areas to which this regulation applies.
  - (2) This regulation does not apply to a development permit or development variance permit issued only for the purpose of enabling reconstruction or repair of a permanent structure described in section 911 (8) of the Local Government Act if the structure remains on its existing foundation.

### Assessment reports required before development

- 4 (1) In respect of development proposals related wholly or partially to riparian assessment areas within the jurisdiction of a local government, a local government must not approve or allow development to proceed in those riparian assessment areas unless the development proceeds in accordance with subsection (2) or (3).
  - (2) A local government may allow development to proceed if
    - (a) a qualified environmental professional carries out an assessment and certifies in the assessment report for that proposal that he or she is qualified to carry out the assessment, that the assessment methods have been followed, and provides their professional opinion that
      - (i) if the development is implemented as proposed there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area, or
      - (ii) if the streamside protection and enhancement areas identified in the report are protected from the development and the measures identified in the report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area, and
    - (b) the local government is notified by the ministry that Fisheries and Oceans Canada and the ministry have been
      - (i) notified of the development proposal, and
      - (ii) provided with a copy of an assessment report prepared by a qualified environmental professional that
        - (A) certifies that he or she is qualified to carry out the assessment,
        - (B) certifies that the assessment methods have been followed, and
        - (C) provides a professional opinion, that meets the requirements of subsection (2) (a) (i) or (ii), as to the potential impact of the

development on the natural features, functions and conditions that support fish life processes in the riparian assessment area.

(3) A local government may allow development to proceed if the Minister of Fisheries and Oceans or a regulation under the Fisheries Act (Canada) authorizes the harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area that would result from the implementation of the development proposal.

### Development of strategies for monitoring, enforcement and education

- 5 The local government must cooperate in developing strategies with the ministry and Fisheries and Oceans Canada
  - (a) for obtaining certificates by qualified environmental professionals that the conditions set out in assessment reports have been properly implemented,
  - (b) for monitoring and enforcement to ensure that assessment reports have been properly prepared in accordance with the assessment methods and properly implemented, and
  - (c) for public education with respect to the protection of riparian areas.

### Use of local government powers for protection and enhancement of areas

6 When exercising its powers with respect to development, a local government must protect its riparian areas in accordance with this regulation.

### Preparation of assessment report by qualified environmental professional

- 7 An assessment report for the purposes of this regulation must employ the assessment methods set out in the Schedule and must report on all of the following:
  - (a) the width of the streamside protection and enhancement area which must be protected, and
  - (b) the measures necessary to protect the integrity of the streamside protection and enhancement area.

### Transitional

- In this section, "former regulation" means the Streamside Protection Regulation, B.C. Reg 10/2001.
  - (2) If, before this regulation came into force, a local government had established streamside protection and enhancement areas in accordance with the former regulation, the local government is deemed to have met the requirements of this regulation in respect of those areas.
  - (3) Despite section 6 (5) of the former regulation, an amendment of a streamside protection and enhancement area referred to in subsection (2) of this section must be in accordance with this regulation.

# **APPENDIX V - UGNP SERVICING ANALYSIS**

### **Stormwater**

Figure A.1 Stormwater Preliminary Analysis



### Stormwater System Preliminary Analysis

Town of Gibsons Upper Gibbsons Neighbourhood Plan 1300.0081.01 March 8, 2006 K. McCreary

Design Flow Calculation Information	Flow Rate/Area	Post Develop Area	Pre Develop Area
Average 100 year design flow	20.0 l/s/ha	A CONTROL PROPERTY OF STREET	
50% of 2 year urban design flow	4.5 l/s/ha		
Catchment 1 (drains to Node A)		8.2 ha	N/A
Catchment 2 (drains to Node B)		17.0 ha	N/A
Catchment 3 (drains to Node C)		17.2 ha	N/A
Catchment 4 (drains to Node D)		22.6 ha	N/A
Catchment 5 (drains to Node E)	( )	12.3 ha	N/A
Catchment 6 (drains to Node F)	12 3	12.2 ha	N/A
Chaster Creek Catchment		N/A	9.7 ha
Charman Creek Catchment		N/A	42.4 ha
Gibsons Creek Catchment		N/A	38.4 ha

Flow Capacity Information	Diameter "D"	Slope "S"	Mannings "n"
Pipe Section 1	450 mm	0.005	0.011
Pipe Section 2	525 mm	0.018	0.011
Pipe Section 3	750 mm	0.018	0.011
Pipe Section 4	750 mm	0.018	0.011
Pipe Section 5	450 mm	0.037	0.011
Pipe Section 6	900 mm	0.078	0.011

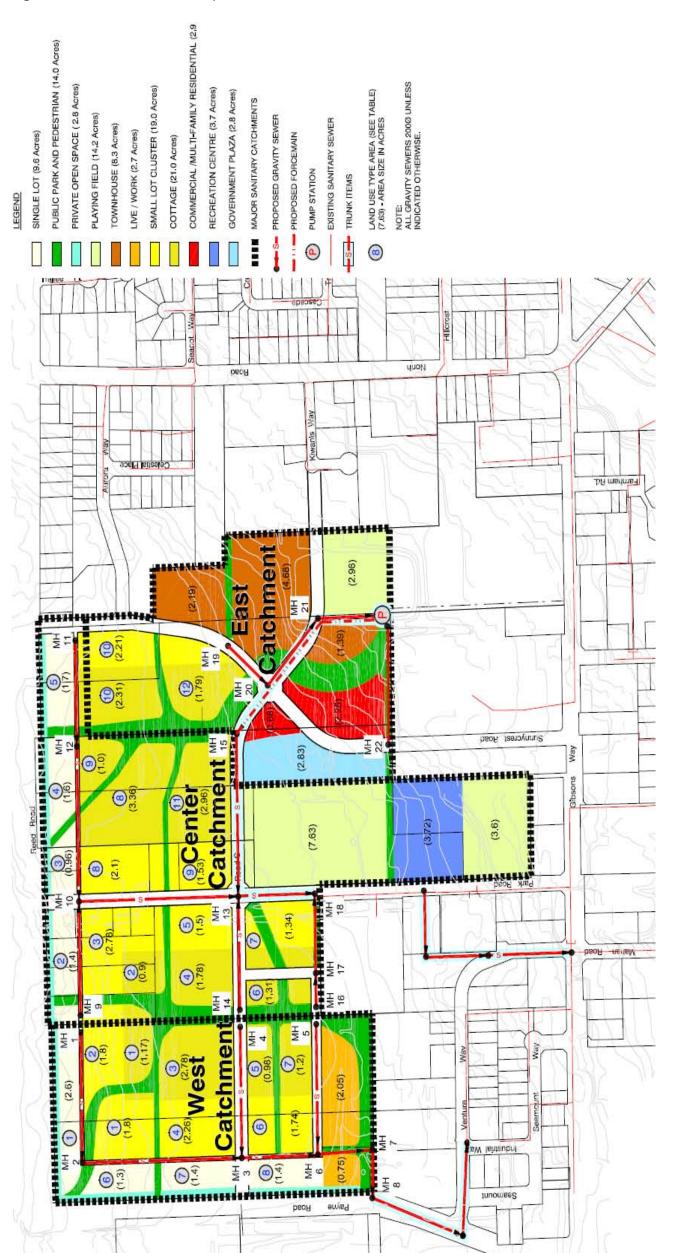
Flow Capacity Given by Mannings Equation Q= 0.3116/n\*(D/1000)^(8/3)\*S^(1/2)

	50% of 2 year urban design flow (baseflow)	Preliminary 100 year design flow	Final 100 year design flow with baseflows removed	Flow Capacity
Node A @ Pipe Section 1 Entrance	44 l/s	164 l/s	120 1/5	238 l/s
Node B @ Pipe Section 2 Entrance	V	504 l/s	460 l/s	682 l/s
Node C @ Pipe Secton 3 Entrance	191 l/s	848 l/s	614 l/s	1765 l/s
Node D @ Pipe Section 4 Entrance	0 - 200 D W. 1	1300 l/s	1066 Vs	1765 l/s
Node E @ Pipe Section 5 Entrance		246 l/s	246 l/s	648 Vs
Node F @ Pipe Section 6 Entrance	173 l/s	1790 l/s	1383 Vs	5974 l/s

The values noted in this table are preliminary estimates for infrastructure planning and shall be verified through the detailed engineering process.

Sanitary

Figure A.2 Land Use and Sanitary Demand



(ha)																												0.40		0.49								0.88	- <b>w</b>	(ha)	
Area (ha)																												1250		CILITO										Area (ha)	
Res								24										20000	55																			79		Res	
Area (ha)								0.57										1	0.70																			1.27	Q	Area (ha)	
Res															25								0.54	28	1000	99												150		Res	
Area (ha)															0.73								200000000000000000000000000000000000000	0.47	W. 1967	1.13												2.33	0	Area (ha)	
Res						23	24							25			7.1																					175		Res	
Area (ha)						0.53	0.57							0.73			16.0																					2.74	В	Area (ha)	
Residents	-																																					45	#3 	Res	
	105																																					1.05	A	Area (ha)	
																																							21		
otal Flow (L/s)	160	0.52	0.36	0.59	0.63	0.48	0.52	0.52	1.72	3.68	1.09	0.25	69.0	1.15	1.15	1.77	1,44	0.95	1.11	0.85	1.34	0.97	1.41	150	0.44	1.35	0.87	0.48	0.64	0.58	1.64	0.49	1.13	1.44	0.87	4.78	1.40	40.8			
Infiltration Flow Total Flow (L/s)	0 11	90.0	0.04	90.0	0.07	90.0	90.0	90.0	60.0	0.19	90.0	0.03	0.08	20.0	0.07	0.11	60.0	90.0	20.0	0.05	80.0	90.0	60.0	90'0	0.04	0.11	0.07	0.04	90.0	90.0	0.14	0.04	60.0	0.12	0.07	60.0	0.03	2.7			
ADWF Infl	0.86	0.46	0.32	0.53	95'0	0.43	0.46	0.46	1.63	3.49	1.04	0.22	0.61	1.07	1.07	1.66	1.35	0.89	1.04	0.80	1.25	0.91	1.32	0.52	0.40	1.24	0.80	0.44	0.59	0.54	1.50	0.45	1.03	1.32	0.80	4.69	1.38	38.1			
Peaking Factor	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4				
Residents	45	24	17	28	30	23	24	24	98	184	55	12	32	21	22	87	71	47	55	42	99	48	69	28	21	65	42	23	31	28	79	24	54	70	42	247	73	2009			
14	-							_				2	- 52											_											4	eg.		_			

410 L/c/d 0.1 L/s/ha 2.18 People/Residence 4.00 1000 - 3000 people Unit Demand Infiltration

Peaking factor

 Areas have been scaled back by 10% to accommodate for local roads which have not yet been determined. Single Lot areas are not included as they are served by the major road network. Notes: 8 units/acre
20 units/acre
8 units/acre
16 units/acre
12 units/acre Single Lot SL
Townhouse TH
Live/Work LW
Small Lot Cluster SmL
Cottage CO
Commercial COM ٧

Commercial	COM	5	56 units / acre				Peaking	ADWF	Infiltration Flow Total Flow	Total Flow			_			1	
AREA TYPE	AREA	Acres	Acres <sup>1</sup> (-10%)	Hectares	Units	Residents	Factor	(I/s)	(L/s)	(L/s)	Res	Area (ha)	Res A	Area (ha)	Res	Area (ha)	Res
	1	2.60		1.05	21	45	4	98.0	0.11	16.0							
	2	1.40		75.0	11	24	4	0.46	90.0	0.52						0.57	24
	3	96.0		0.39	80	17	4	0.32	0.04	0.36							
ū	4	1.60		0.65	13	28	4	0.53	90.0	0.59							
3	5	1.70		69.0	14	30	4	95.0	20.0	0.63							
	9	1.30		0.53	10	23	4	0.43	0.05	0.48							
	7	1.40		0.57	7	24	4	0.46	90.0	0.52							
	8	1.40		0.57	11	24	4	0.46	0.06	0.52							
		2.19	1.97	68.0	39	98	4	1.63	60.0	1.72							
H	7	4.68	4.21	1.89	84	184	4	3.49	0.19	3.68							
	3	1.39	1.25	0.56	25	55	4	1.04	0.06	1.09			7				
WI	1	0.75	0.68	0.30	5	12	4	0.22	0.03	0.25		0.30	12				
LW	2	2.05	1.85	0.83	15	32	4	0.61	80.0	69.0		0.83	32				
	·	1.80	1.62	0.73	26	25	4	1.07	20:0	1.15		7					
	2	1.80	1.62	0.73	26	25	4	1.07	20.0	1.15							
	က	2.78	2.50	1.13	40	87	4	1.66	0.11	1.77							
	4	2.26	2.03	0.91	33	71	4	1.35	60.0	1.44							
Sm	5	1.50	1.35	0.61	22	47	4	0.89	90.0	96.0							
SIIIL	9	1.74	1.57	0.70	25	99	4	1.04	0.07	1.11							
	7	1.34	121	0.54	19	42	4	0.80	0.05	0.85							
	8	2.10	1.89	0.85	30	99	4	1.25	80.0	1.34							
	6	1.53	1.38	0.62	22	48	4	0.91	90.0	26.0							
	10	2.21	1.99	68.0	32	69	4	1.32	0.09	1.41							
	-	1.17	1.05	0.47	13	28	4	0.52	90.0	15.0							
	2	0.90	0.81	0.36	10	21	4	0.40	0.04	0.44							
	3	2.78	2.50	1.13	30	65	4	1.24	0.11	1.35							
	4	1.78	1.60	0.72	19	42	4	0.80	70.0	0.87	707						
	5	0.98	0.88	0.40	1	23	4	0.44	0.04	0.48	23						
9	9	131	1.18	0.53	14	31	4	0.59	0.05	0.64							
3	7	1.20	1.08	0.49	13	28	4	0.54	90.0	0.58	28						
	80	3.36	3.02	1.36	36	62	4	1.50	0.14	1.64							
	6	1.00	0.90	0.40	11	24	4	0.45	0.04	0.49							
	10	2.31	2.08	0.93	25	54	4	1.03	60.0	1.13							
	11	2.96	2.66	1.20	32	70	4	1.32	0.12	1.44							
	12	1.79	1.61	0.72	19	42	4	0.80	0.07	0.87							
MOD	-	2.25	2.03	0.91	113	247	4	4.69	60.0	4.78							
	2	99.0	0.59	0.27	33	73	4	1.38	0.03	1.40							
TOTAL		66.93	13	27.09	921	5000		38.1	2.7	40.8	51	1.13	44	0.00	0	0.57	24
		0.302020	Ĩ.					COLUMN TO THE CO				-14		9	<del>o</del>	Ŧ	5

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410 L/c/d 0.1 L/s/ha 2.18 People/Residence 4.00 1000 - 3000 people Unit Demand Infiltration Peaking factor

 Areas have been scaled back by 10% to accommodate for local roads which have not yet been determined. Single Lot areas are not included as they are served by the major road network. 8 units / acre
20 units / acre
8 units / acre
16 units / acre
12 units / acre
56 units / acre Single Lot
Townhouse
Live/Work
Small Lot Cluster S
Cottage
Commercial

i de	Area (ha)	22. 92.																												0.53									0.53
( <del>2</del>	Res /																				42																		42
-	Area (ha)	à																		70000	0.54																		0.54 N
<u></u>	Res A																														-	79	24		20				172
	Area (ha)	ri Ti																														1.36	0.40		1.20				2.96 M
-	Res Are																											42											42
-	Area (ha)	Q O											_															0.72											0.72 L
-	Res Area																87		47		Owner.	99	48		37.575	21													270
-																	1.13		0.61		0.000	0.85	0.62		200000	0.36	Ų.												3.57 K
10	Area (ha)			17	28																																		45
_	Res														_																								_
Total Flow	(S/I)	16.0	0.52	0.36	0.59	0.63	0.48	0.52	0.52	1.72	3.68	1.09	0.25	69.0	1.15	1.15	1.77	1.44	0.95	1.11	0.85	1.34	16.0	1.41	15.0	0.44	1.35	0.87	0.48	0.64	0.58	1.64	0.49	1.13	1.44	0.87	4.78	1.40	40.8
Infiltration Flow Total Flow	(L/s)	0.11	90.0	0.04	90.0	0.07	0.05	90.0	90.0	60.0	0.19	90.0	0.03	80.0	20.0	0.07	0.11	60.0	90.0	0.07	0.05	0.08	90.0	0.09	0.05	0.04	0.11	0.07	0.04	90.0	0.05	0.14	0.04	60.0	0.12	0.07	60.0	0.03	2.7
ADWF In		98.0	0.46	0.32	0.53	0.56	0.43	0.46	0.46	1.63	3.49	1.04	0.22	0.61	1.07	1.07	1.66	1.35	0.89	1.04	0.80	1.25	0.91	1.32	0.52	0.40	1.24	0.80	0.44	0.59	0.54	1.50	0.45	1.03	1.32	0.80	4.69	1.38	38.1
Peaking	Factor	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	7	4	4	4	4	4	4	4	4	4	4	4	4	4	
	Residents	45	24	17	28	30	23	24	24	98	184	55	12	32	25	25	87	7.1	47	55	42	99	48	69	28	21	99	42	23	31	28	6/	24	54	70	42	247	73	2009
	Units	21	7	8	13	14	10	1	11	39	84	25	5	15	26	26	40	33	22	25	19	30	22	32	13	10	30	19	1	14	13	36	=	25	32	19	113	33	921
	Hectares	1.05	0.57	0.39	0.65	69.0	0.53	0.57	0.57	0.89	1.89	0.56	0.30	0.83	0.73	0.73	1.13	0.91	0.61	0.70	0.54	0.85	0.62	0.89	0.47	0.36	1.13	0.72	0.40	0.53	0.49	1.36	0.40	0.93	1.20	0.72	0.91	0.27	27.09
	Acres <sup>1</sup> (- 10%)									1.97	4.21	1.25	89.0	1.85	1.62	1.62	2.50	2.03	1.35	1.57	121	1.89	1.38	1.99	1.05	0.81	2.50	1.60	0.88	1.18	1.08	3.02	06.0	2.08	2.66	1.61	2.03	0.59	
	Acres	2.60	1.40	96.0	1.60	1.70	1.30	1.40	1.40	2.19	4.68	1.39	0.75	2.05	1.80	1.80	2.78	2.26	1.50	1.74	1.34	2.10	1.53	2.21	1.17	0.90	2.78	1.78	0.98	1.31	1.20	3.36	1.00	2.31	2.96	1.79	2.25	99.0	66.93
	AREA	1	7	3	4	5	9	1	80	1	7	က	1	7	-	7	3	4	2	9	1	80	6	10	1	2	3	4	5	9	1	8	6	10	1	12	1	7	
	AREA TYPE				3	3					I		133	LW					Cml	SIIIIC										5	3					4.5	COM		TOTAL

0.53

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172

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270

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Values in blue used in sanitary calculation sheet

Area (ha)

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Area (ha) 0.54

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Res Area (ha)

Area (ha)

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Area (ha)

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		Inches wheel	Injustration Operation					pallycold 1 and cc	callende	CANO	ITADV OF	CANITADY CEMED CALCUL ATIONS	II ATIONIC										ĺ
		Unit Demand	and					410 L	410 L/berson/day	3	per Gibsor	Upper Gibsons Neighborhood Plan	ood Plan			Upper Gibsons Neighborhood Plan	Neighborh	ood Plan					
		Infiltration Manning's	Infiltration Manning's Coefficient (n)					0.10 L/s/ha 0.013	s/ha	j		ò			Client USL Job	Town of Gibsons 1300.0081.02	IIS						
			L		0					Peak Dn	ak Dry Weather Flow	WO		Infiltrat	г	4	Pumped	<u>a.</u>	PWWF		Sanitary Design	Sign	
CONTROL PROGRAMME			Find		Developable	Constimars	Fed By	Fed By	Residential	Comm/Inst. Flow	WO	Total	al.			Population	Area	Flow			4	Pipe Capacity (I/s)	ty (I/s)
Catchment	Location	Node	Node	Contributing Areas	Service Area (ha)	Serviced	(Pumped)	Nodes (Gravity)	Acc. Popl'n	Acc. Area (ha)	Acc. / Popľn P	Acc. Peak Popl'n Factor	k or Flow (Vs)	Accum.	Flow (Vs)		(ha)	(NS)	A (//s)	Assumed Grade Pip	Pipe Size 100% Full	0 000	80% Full
	A	-	2	(SL1)	1.05	45	1000			ं	-	-	۰	-	0.11	100			99		200 2:	9000	18.55
	8	2	က	(SL6,7) (SmL1,4)	2.74	175		-	220		0	220 4.00	0 4.18	3.79	0.38				4.55	0.50%	200 23		18.55
	U	4	3	(CO1,3) (SmL2)	2.33	150			150		0	150 4.00	0 2.85	2.33	0.23			: 14	3.08	0.50%	200 23	23.19	18.55
Wost	Q	3	9	(SL8) (SmL6)	1.27	79	300, 34	2,4	449	(0)	0	449 4.00	0 8.52	7.39	0.74	<del>(3)</del> X	505 50	203	9.26	0.50%	200 23	23.19	18.55
1634	ш	2	9	(CO5.7)	0.88	51			51		0	51 4.00	0.97	0.88	0.09				1.06	0.50%	200 23	23.19	18.55
	ļ	ď	7	10,144.0	173	44		200	EAA		c	EAA A 00	40.33	0 40	000				44.37	O 500%	6 15	22 40	10 EE
	. 0	7	- &	(2), (42)	2		0 0	25	544		0		2	-			0	21 12	1	0.50%			18.55
	2000																- 6				- 1		
	H	6	10	(SL2)	0.57	24		3.00	24		0	24 4.00	0.46	19.0	90'0			36	0.51	%05.0	200 23	23.19	18.55
	100	+	12	(315)	69.0	30	100		30	V	0	30 4 00	348	0.69	0.07			34		0.50%	10	15	18.55
	7	12	10	(SL3,4)	1.04	45	606	H	75	(In)	0	75 4.00	0 1.42	1.73		305	300	((3)	1.60	0.50%	200 23	23.19	18.55
	¥	10	13	(CO2) (SmL3,5,8,9)	3.57	270		9,12	369	9000	0	369 4.00	0 7.00	5.87	0.59	3	Selection	97.3	7.59	0.50%	200 23	23.19	18.55
	4	14	13	(CO4)	0.72	42			42		0	42 4.00	0.80	0.72	0.07				78.0	0.50%	200 23	23.19	18.55
Center	Σ	15	13	(CO8 9.11)	2.96	172		3233	172	2002	0	172 4 00	3.26	2.96	030	5.55	(60)	2-22	3.56	0.50%	200 23	23 19	18 55
	1000																		$\perp$				
	z	13	18	(SmL7)	0.54	42		14,15	625		0	625 4.00	0 11.86	10.09	1.01				12.87	0.50%	200 23	23.19	18.55
	0	16	17	(900)	0.53	31	5	2.0	31		0		- 5	0.53	0.05			8	0.64	0.50%	- 5	23.19	18.55
	۵	17	18					16	31	200	0	31 4.00	0.59	0.53				13/51	0.64	0.50%	200 23	200	18.55
	σ	18		(RC1)				13,17	929		29	723 4.00	13.72	10.62	1.06		0 1		14.79	0.50%	200 23	23.19	18.55
			-					1,000					-										
	æ	19		CO10,12) (SmL10) (TH1,2,3)	5.90	490			490		0			5.90						0.50%			18.55
	s	8	21					18	490		0	490 4.00	0.30	2.90	0.59		C.F.		9.89	0.50%	200 23	23.19	18.55
i	F	21	S					20	490		0	490 4.00	0 8.30	5.90	0.59				68.6	0.50%	200 23	23.19	18.55
Edst	n	22	S	(GP1) (COM1,2)	1.18	320			320		117	437 4.00	0 8.29	1.18	0.12				8.41	0.50%	200 23	23.19	18.55
	>	ć					\$ E	24.22	040		447	700	47.60	200	0.74				40.30	7007		22.40	40.55
	>	2						77,17	010	2		1	2							0.00.0	7007		10.33
		Total			27.10	2,010			2,010		H								44.36			$\ $	

	Inc	<b>Justrial</b> Co	ndustrial Commercial					22,500	22,500 L/day/ha	S	SANITARY SEWER CALCULATIONS	SEWER C.	<b>ALCULATI</b>	SNO	3								
	5	Unit Demand	p					411	L/person/day		Ä	Recreation Center	enter										
	Inf	nfiltration Manning's C	Infiltration Manning's Coefficient (n)	0				0.10	0.10 L/s/ha 0.013						<								
	30				Crosso					Peak	Peak Dry Weather Flow	r Flow			Infiltration Flow	-low	Pumped	pa	PWWF	i di	Sanit	Sanitary Design	
di d	9	-	L		Developed				Residential	Comm/Inst. Flow	t. Flow		Total			Pop	Population Area	a Flow	w			Pipe C	Pipe Capacity (I/s)
H	Location	Node	Node	Con. Areas	Service Area	Serviced	(Pumped)	Nodes (Gravity)			Equiv. Acc.	Acc	Peak	ď	Accum.					Assumed	P		80%
	35	- 92	3.		(na)			- 25		Acc. Popľn Acc. Area (ha)	Popl'n	Popl'n	Factor FI	Flow (I/s) Area (ha) Flow (I/s)	ea (ha) Fl	(s/I) wo	(ha)	(1/5	(1/s)	Grade	Grade Pipe Size 100% Full	100% Full	
		30.33	3077	(RC1)	1.50			524		1.5		r)	4.00	1.56	1.50	0.15	- T			71 0.50%	150	10.77	8.62
				(RC1)	1.5				(d		29	29	4.00	1.27	1.50	0.15			#	.42 1.00%	150	15.23	12.18
	T	otal	1													17		17	1			10	

NOTE: Numbers in red are entered manually

	Water Dem	Demand Criteria	
Demand	Flov	W	Multiplier
ADD	425	DC/d	-
DOM	820	D/c/d	2
PHD	1700	ΠCld	4

	s	-1200	100	
4			(S/I) (JHd	1.32
D/C/d		Water	(S/T) QQW	99.0
1700			ADD (Us)	0.33
PHD			Residents	19

Water

Figure A.3 Land Use and Water Demand



Upper Gibsons Neighborhood Plan Water Demand Generation

2.18 people / residence

	Water Dem:	and Criteri	a
Demand	FI	ow	Multiplier
ADD	425	L/c/d	1
MDD	850	L/c/d	2
PHD	1700	L/c/d	4

COM/GP/RC	,, 00111(0,	1	8 people / acre	<ul> <li>equivalent</li> </ul>				Water	
AREA TYPE	AREA	Acres	Acres <sup>1</sup> (- 10%)	Hectares	Units	Equivalent Residents	ADD (L/s)	MDD (L/s)	PHD (L/s)
	1 1	2.60		1.05	21	45	0.22	0.45	0.89
	2	1.40		0.57	11	24	0.12	0.24	0.48
	3	0.96		0.39	8	17	0.08	0.16	0.33
SL	4	1.60		0.65	13	28	0.14	0.27	0.55
	5	1.70		0.69	14	30	0.15	0.29	0.58
	6	1.30		0.53	10	23	0.11	0.22	0.45
	7	1.40		0.57	11	24	0.12	0.24	0.48
	8	1.40		0.57	11	24	0.12	0.24	0.48
	1	2.19	1.97	0.89	44	95	0.47	0.94	1.88
TH	2	4.68	4.21	1.89	94	204	1.00	2.01	4.01
	3	1.39	1.25	0.56	28	61	0.30	0.60	1.19
LW	1 1	0.75	0.68	0.30	6	13	0.06	0.13	0.26
	2	2.05	1.85	0.83	16	36	0.18	0.35	0.70
	1	1.80	1.62	0.73	29	63	0.31	0.62	1.24
	2	1.80	1.62	0.73	29	63	0.31	0.62	1.24
	3	2.78	2.50	1.13	44	97	0.48	0.95	1.91
	4	2.26	2.03	0.91	36	79	0.39	0.78	1.55
SmL	5	1.50	1.35	0.61	24	52	0.26	0.51	1.03
Jiii	6	1.74	1.57	0.70	28	61	0.30	0.60	1.19
	7	1.34	1.21	0.54	21	47	0.23	0.48	0.92
	8	2.10	1.89	0.85	34	73	0.36	0.72	1.44
	9	1.53	1.38	0.62	24	53	0.26	0.53	1.05
	10	2.21	1.99	0.89	35	77	0.38	0.76	1.52
	1 1	1.17	1.05	0.47	14	31	0.15	0.30	0.60
	2	0.90	0.81	0.36	11	24	0.12	0.23	0.46
	3	2.78	2.50	1.13	33	73	0.36	0.72	1.43
	4	1.78	1.60	0.72	21	47	0.23	0.46	0.92
	5	0.98	0.88	0.40	12	26	0.13	0.25	0.50
co	6	1.31	1.18	0.53	16	34	0.17	0.34	0.67
CO	7	1.20	1.08	0.49	14	31	0.15	0.31	0.62
	8	3.36	3.02	1.36	40	88	0.43	0.86	1.73
	9	1.00	0.90	0.40	12	26	0.13	0.26	0.51
	10	2.31	2.08	0.93	28	60	0.30	0.59	1,19
	11	2.96	2.66	1.20	36	77	0.38	0.76	1.52
	12	1.79	1.61	0.72	21	47	0.23	0.46	0.92
0011	1	2.25	2.03	0.91	126	275	1.35	2.70	5.40
COM(a)	2	0.66	0.59	0.27	37	81	0.40	0.79	1.59
COM	1	2.97		1.20		53	0.26	0.53	1.05
GP	1	2.83	1	1.15		51	0.25	0.50	1.00
RC	1	3.72		1.51		67	0.33	0.66	1.32
OTAL		76.45	1	30.94	1013	2379	11.7	23.4	46.8

### Notes:

Areas have been scaled back by 10% to accommodate for local roads which have not yet been determined. Single Lot areas are not included as they are served by the major road network.

# APPENDIX VII CONSTRUCTION COST ESTIMATES

Town of Gibsons

Upper Gibsons Neighbourhood Plan Summary of Phasing Costs 1300.0081.01 March 2006

Phasing - Peripheral Option		Estimated Costs			
Roads	8.1	2380m 4550			
Misc. Payne Road and Gibsons Way Improvements as per Section 9 of Plan	\$	295,000			
Link from Park Road to Venture Way	\$	540,000			
Park Road Round-a-bout	\$	200,000			
Upgrade Park Road from Road C to new Link	\$	534,000			
Road C (Payne to Park)	\$	1,134,000			
Water		2004-0200			
Reservoir and offsite main	\$	1,657,000			
Road C watermain (Payne to Park)	\$	213,000			
Sanitary					
Road C Sanitary (Payne to Park)	\$	200,000			
Park Road Sanitary (Road C to Venture Way)	\$	230,000			
Payne Road Sanitary (Road C to Venture Way)	\$	220,000			
Stormwater	0	5 (5-00 KM v s			
Stormwater Pond and Payne Road storm sewer	\$	485,000			
Total Estimate Phase Trunk Costs	\$	5,708,000			

Phasing - Core Option	Est	Estimated Costs				
Roads						
Misc. Payne Road and Gibsons Way Improvements as per Section 9 of Plan	\$	555,000				
Link from Park Road to Venture Way	\$	540,000				
Upgrade Park Road from Road C to new Link	\$	534,000				
Road C (Payne to Kiwanis)	\$	2,700,000				
Sunnycrest and Park Round-a-bouts	\$	400,000				
Sunnycrest extension (existing to Reed)	\$	1,760,000				
Upgrade existing Sunnycrest Road (west half)	\$	230,000				
Water						
Reservoir and offsite main	\$	1,657,000				
Road C watermain (Payne to North Road)	\$	440,000				
Sunnycrest watermain (Road C to Reed)	\$	114,000				
Road C watermain (Sunnycrest to Kiwanis)	\$	120,000				
Sunnycrest watermain (Road C to existing)	\$	95,000				
Sanitary	- C					
Sanitary pump station and forcemain	\$	418,000				
Road C Sanitary (Payne to Park)	\$	200,000				
Park Road Sanitary (Road C to Venture Way)	\$	230,000				
Roac C Sanitary (Park to pump station)	\$	210,000				
Stormwater	18					
Stormwater Diversion and minimal School Road upgrades	\$	1,400,000				
Total Estimate Phase Trunk Costs	\$	11,603,000				

# UPPER GIBSONS NEIGHBOURHOOD PLAN TRUNK WATER WORKS COST ESTIMATE - Preliminary

File: 1300.0081.01 P.1

Item	Description	Unit	Quantity	Unit Price	Total
1 Water	rworks				
1.01 1500n	n <sup>3</sup> reservoir	LS	1	\$600,000.00	\$600,000.00
1.02 300mm	m PVC Trunk (Reservoir to Payne)	m	1500	\$325.00	\$487,500.00
1.03 300mi	m PVC Trunk (Payne to Park)	m	430	\$325.00	\$139,750.00
1.04 250mi	m PVC Trunk (Park to North)	m	550	\$275.00	\$151,250.00
1.05 250mr	m PVC Loop (Park to Sunnycrest)	m	200	\$275.00	\$55,000.00
Subto	otal Waterworks				\$1,433,500.00
SUBT	OTAL				\$1,433,500.00
CONT	INGENCY (35%)				\$501,800.00
ENGI	NEERING (10%)				\$143,400.00
GST (	7%)				\$145,600.00
TOTA	L				\$2,230,000.00

### Notes:

- Any works within plan area assumed to occur in conjunction with road works, therefore, restoration not included
- Costs do not include any required ROW acquisitions

### UPPER GIBSONS NEIGHBOURHOOD PLAN TRUNK SANITARY WORKS COST ESTIMATE - Preliminary West Sub-Catchment

File: 1300.0081.01 P.2 Description Item Unit Quantity **Unit Price** Total

1 Sanitary Works (Payne / Venture)				
1.01 200mm PVC SAN	m	275	\$300.00	\$82,500.00
1.02 1050mm Sewer Manhole	ea.	2	\$4,000.00	\$8,000.00
1.03 1050mm Overbuilt Sewer Manhole	ea.	1	\$6,000.00	\$6,000.00
Subtotal Sanitary Works				\$96,500.00
2 Other Works				
2.01 Asphalt removals	m <sup>2</sup>	550	\$10.00	\$5,500.00
2.02 300mm subbase gravel	m <sup>2</sup>	550	\$12.00	\$6,600.00
2.03 150mm base gravel	m <sup>2</sup>	550	\$8.00	\$4,400.00
2.04 75mm asphalt	m <sup>2</sup>	550	\$25.00	\$13,750.00
2.05 Traffic Control	LS	1	\$10,000.00	\$10,000.00
Subtotal Other Works				\$40,250.00
SUBTOTAL				\$136,750.00
CONTINGENCY (35%)				\$47,900.00
ENGINEERING (10%)				\$13,700.00
GST (7%)				\$13,900.00

\$220,000.00

TOTAL

- Notes:
   Restoration based on 2m wide trench - Overbuilt manholes include tie-in work
  - Costs do not include any required ROW acquisitions

### UPPER GIBSONS NEIGHBOURHOOD PLAN TRUNK SANITARY WORKS COST ESTIMATE - Preliminary Center Sub-Catchment

File: 1300 0081 01 P 3

				Fi	le: 1300.0081.01
ltem	Description	Unit	Quantity	Unit Price	Total
1 Sanita	ry Works (Park / Venture)				
1.01 200mm	PVC SAN	m	335	\$300.00	\$100,500.00
1.02 1050m	ım Sewer Manhole	ea.	2	\$4,000.00	\$8,000.00
1.03 1050m	m Overbuilt Sewer Manhole	ea.	2	\$6,000.00	\$12,000.00
Subto	tal Sanitary Works				\$120,500.00
2 Other	Works				
2.01 Aspha	lt removals	m <sup>2</sup>	300	\$10.00	\$3,000.00
2.02 300mm	n subbase gravel	m <sup>2</sup>	300	\$12.00	\$3,600.00
2.03 150mm	n base gravel	m <sup>2</sup>	300	\$8.00	\$2,400.00
2.04 75mm	asphalt	m <sup>2</sup>	300	\$25.00	\$7,500.00
2.05 Traffic	Control	LS	1	\$10,000.00	\$10,000.00
Subto	tal Other Works				\$26,500.00
SUBT	OTAL				\$147,000.00
CONT	INGENCY (35%)				\$51,500.00
ENGIN	IEERING (10%)				\$14,700.00
GST (	7%)				\$15,000.00
TOTA	L				\$230,000.00

- Notes:
   Restoration based on 2m wide trench - Overbuilt manholes include tie-in work
  - Costs do not include any required ROW acquisitions

# UPPER GIBSONS NEIGHBOURHOOD PLAN TRUNK SANITARY WORKS COST ESTIMATE - Preliminary East Sub-Catchment

File: 1300.0081.01 P.4

tem	Description	Unit	Quantity	Unit Price	Total
1 Sanita	ary Works				
1.01 200mr	n PVC SAN	m	415	\$300.00	\$124,500.00
1.02 1050m	nm Sewer Manhole	ea.	2	\$4,000.00	\$8,000.00
1.03 1050m	nm Overbuilt Sewer Manhole	ea.	1	\$6,000.00	\$6,000.00
1.04 Pump	Station	LS	1	\$200,000.00	\$200,000.00
1.05 100mr	n Force Main	m	300	\$250.00	\$75,000.00
Subto	tal Sanitary Works				\$413,500.00
SUBT	OTAL				\$413,500.00
CONT	INGENCY (35%)				\$144,800.00
ENGIN	NEERING (10%)				\$41,400.00
GST (	7%)				\$42,000.00
Cente	r sub-catchment off-site works	required			\$230,000.00
TOTA	L				\$880,000.00

### Notes:

- Any works within plan area assumed to occur in conjunction with road works, therefore, restoration not included
- Restoration based on 2m wide trench
- Overbuilt manholes include tie-in work
- Costs do not include any required ROW acquisitions

### UPPER GIBSONS NEIGHBOURHOOD PLAN ADDITIONAL SANITARY WORKS ASSOCIATED WITH ROADS - PRELIMINARY

				F	ile: 1300.0081.01
ltem	Description	Unit	Quantity	Unit Price	Total
ROAD C					
	ry Works (Payne to Park)				
200mm	n PVC SAN	m	380	\$300.00	\$114,000.00
1050m	m Sewer Manhole	ea.	4	\$4,000.00	\$16,000.00
Subtot	tal Sanitary Works				\$130,000.00
52% C	ontingency and Engineering, GST				\$67,600.00
Sanita	ry Works (Payne to Park)				\$197,600.00
UNNYCRES	ST ry Works (Reed to Road C)				
	PVC SAN	m	550	\$300.00	\$165,000.00
100000000000000000000000000000000000000	m Sewer Manhole	ea.	4	\$4,000.00	\$16,000.00
		000		41,000.00	4.0,000.00
Subtot	tal Sanitary Works				\$181,000.00
52% C	ontingency and Engineering, GST				\$94,120.00
Sanita	ry Works (Reed to Road C)				\$275,120.00
Sanita	ry Works (Road C to exist.)				
	PVC SAN	m	250	\$300.00	\$75,000.00
1050m	m Sewer Manhole	ea.	3	\$4,000.00	\$12,000.00
Subto	tal Sanitary Works				\$87,000.00
52% C	ontingency and Engineering, GST				\$45,240.00
Sanita	ry Works (Road C to exist.)				\$132,240.00

## UPPER GIBSONS NEIGHBOURHOOD PLAN ADDITIONAL WATER WORKS ASSOCIATED WITH ROADS - PRELIMINARY

File: 1300.0081.01 P.6 Description Unit Quantity **Unit Price** Total Item ROAD C Water Works (Sunnycrest to North) 200mm PVC 450 \$275.00 \$123,750.00 Subtotal Water Works \$123,750.00 52% Contingency and Engineering, GST \$64,350.00 Water Works (Sunnycrest to North) \$188,100.00 SUNNYCREST Water Works (Reed to Road C) 200mm PVC 300 \$250.00 \$75,000.00 Subtotal Water Works \$75,000.00 52% Contingency and Engineering, GST \$39,000.00 Water Works (Reed to Road C) \$114,000.00 Water Works (Road C to exist.) 200mm PVC \$250.00 250 \$62,500.00 Subtotal Water Works \$62,500.00 52% Contingency and Engineering, GST \$32,500.00 Water Works (Road C to exist.) \$95,000.00

### UPPER GIBSONS NEIGHBOURHOOD PLAN STORMWATER COST ESTIMATE - Preliminary

ttem	Description	Unit	Quantity	Unit Price	Total
Prefe	erred Option		15		
6.01	Upgrade to 525mm dia. Payne Rd.	m	168	\$500	\$84,000
6.02	Trunk diversion 450mm dia. In ROW	m	380	\$475	\$180,500
6.03	Upgrade Park Rd. storm 600mm dla.	m	110	\$760	\$83,600
6.04	Upgrade to 750 mm dia. Glosons Way and Park Rd.	m	22	\$680	\$14,960
6.05	Diversion trunk. Gibsons Way 750mm dia	m	320	\$810	\$259,200
6.06	Extend existing Gibsons Way 750mm dia	m	320	\$810	\$259,200
6.07	Upgrade and extend North Rd storm sewer 450 mm dia.	m	360	\$475	\$171,000
6.08	Rebuild School Rd. storm sewer to outfall 900mm dia	m	840	\$1,100	\$924,000
6.09	New ocean outfall	LS	1	\$250,000	\$250,000
6.10	Diversion Structures	ea	3	\$15,000	\$45,000
	Sub-Total Preferred Option		77		\$2,271,460
	Contingency (35%)				\$795,011
	Engineering (10%)				\$306,647
	GST (7%)				\$236,118
	Total Estimate				\$3,609,236

Town of Gibsons 1300.0081.02 October 2006

### UPPER GIBSONS NEIGHBOURHOOD PLAN - TRANSPORTATION UPGRADES

Upgrade Sunnycrest to Collector Standard - Half road (200m)

ITEM	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	А	MOUNT (\$)
SECTION	N 02111 - Clearing and Grubbing					
2111.1	Strip and remove existing asphalt	sq.m.	1000	\$ 5.00	\$	5,000.00
SECTION	02224 - Roadway Excavation, Embankment and Compaction					
2224.1	Common excavation, off-site disposal (assume 300 mm depth)	cu. m.	600	\$ 15.00	S	9,000.00
2224.3	Subgrade Preparation	sq. m.	2000	\$ 1.50	\$	3,000.00
SECTION	N 02233 - Granular Base					
2233.1	Granular base, 200mm thick	sq. m.	1200	\$ 10.00	\$	12,000.00
SECTION	N 02512 - Hot-Mix Asphalt Concrete Paving					
2512.1	Hot-Mix Ashphalt Paving, 100mm	sq. m.	1200	\$ 12.00	\$	14,400.00
Section (	02523 - Concrete Walks, Curbs & Gutters					
2523.1	Porous Asphalt Sidewalk (1.5m)	I.m.	200	\$ 100.00	S	20,000.00
2523.2	Barrier Curb	I.m.	200	\$ 85.00	\$	17,000.00
SECTION	1 02580 - Painted Pavement Markings	2				
2580.1	Line Painting and Signs	L.S.	1	\$ 2,500.00	\$	2,500.00
SECTION	02921 - Topsoil and Finish Grading		0:			
2921.1	Site restoration including topsoil and seeding	I.m.	200	\$ 15.00	S	3,000.00
SPECIAL	CONSIDERATIONS					
01	Landscaping	I.m.	200	\$ 20.00	S	4,000.00
,2	Streetlighting (\$5000 per light at 20m spacing)	I.m.	200	\$ 250.00	\$	50,000.00
	SUBTOTAL	•			\$	139,900.00
	ENGINEERING (10%)				S	13,990.00
	CONTINGENCY (35%)				s	53,861.50
	SUBTOTAL				s	207,751.50
	GST (7%)				S	14,542.61
	TOTAL				\$	222,294.11

Town of Gibsons

1300.0081.02 October 2006

### UPPER GIBSONS NEIGHBOURHOOD PLAN - TRANSPORTATION UPGRADES

Sunnycrest Road Extension (Collector - 600m)

ITEM	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT	PRICE	,	AMOUNT (\$)
SECTION	02111 - Clearing and Grubbing						
2111.1	Removal and Disposal of Vegetation and Trees	m2	12000	\$	5.00	S	60,000.00
SECTION	02224 - Roadway Excavation, Embankment and Compaction						
2224.1	Common excavation, off-site disposal	cu. m.	7350	\$	15.00	\$	110,250.00
2224.3	Subgrade Preparation	sq. m.	12000	\$	1.50	\$	18,000.00
SECTION	02233 - Granular Base		3				
2233.1	Granular base, 150mm thick	sq. m.	6600	\$	8.00	S	52,800.00
SECTION	02234 - Granular Subbase and Pit Run Fill						
2234.1	Granular Subbase, 300 mm thick	sq. m.	4800	\$	15.00	S	72,000.00
	Pit Run Fill - 200 mm thick	sq. m.	4800	\$	8.00	\$	38,400.00
SECTION	02512 - Hot-Mix Asphalt Concrete Paving						
2512.1	Hot-Mix Ashphalt Paving, 100mm	sq. m.	4800	\$	30.00	\$	144,000.00
Section (	02523 - Concrete Walks, Curbs & Gutters		· 0				
2523.1	Porous Asphalt Sidewalk (1.5m)	l.m.	1200	\$	100.00	S	120,000.00
2523.2	Barrier Curb	l.m.	2400	\$	85.00	\$	204,000.00
SECTION	02580 - Painted Pavement Markings						
2580.1	Line Painting and Signs	L.S.	1	\$ 5	,000.00	\$	5,000.00
SECTION	02921 - Topsoil and Finish Grading						
2921.1	Site restoration including topsoil and seeding	l.m.	600	\$	15.00	\$	9,000.00
SPECIAL	CONSIDERATIONS						
.1	Center Median Landscaping	sq.m.	1800	\$	10.00	S	18,000.00
.2	Streetlighting (\$5000 per light at 20m spacing)	l.m.	600	\$	250.00	S	150,000.00
.3	Landscaped Biofiltration Swales (moderate landscaping)	sq.m.	3600	\$	30.00	\$	108,000.00
	SUBTOTAL			_		s	1,109,450.00
8	ENGINEERING (10%)				-	S	110,945.00
	CONTINGENCY (35%)					S	427,138.25
	SUBTOTAL					S	1,647,533.25
	GST (7%)					S	115,327.33
	TOTAL					S	1,762,860.58

Town of Gibsons 1300.0081.02 October 2006

### UPPER GIBSONS NEIGHBOURHOOD PLAN - TRANSPORTATION UPGRADES

Upgrade Park Road to Collector Standard (700m)

ITEM	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UN	IT PRICE	. ,	AMOUNT (\$)
SECTION	02111 - Clearing and Grubbing						
2111.1	Removal and Disposal of Vegetation and Trees (assume 2.5 meter both sides)	sq.m.	2800	\$	5.00	S	14,000.00
SECTION	02550 - Asphalt Removal						
2550.1	Sawcut, remove and dispose of asphalt (assume half of roadway)	sq. m.	2100	\$	8.00	\$	16,800.00
SECTION	02224 - Roadway Excavation, Embankment and Compaction						
2224.1	Common excavation, off-site disposal (assume half of road to 300 mm)	cu. m.	630	\$	15.00	S	9,450.00
2225.1	Common excavation, off-site disposal (boulevards to 300 mm depth)	cu. m.	2300	\$	15.00	\$	34,500.00
2224.3	Subgrade Preparation	sq. m.	9800	\$	1.50	\$	14,700.00
SECTION	02233 - Granular Base						
2233.1	Granular base, 150mm thick (assume half of road plus curbs)	sq. m.	3500	\$	8.00	\$	28,000.00
SECTION	02234 - Granular Subbase						
2234.1	Granular Subbase, 300 mm thick (assume half of road plus curbs)	sq. m.	3500	\$	15.00	S	52,500.00
SECTION	02512 - Hot-Mix Asphalt Concrete Paving		5 c-				
2512.1	Hot-Mix Ashphalt Paving, 50mm base course	sq. m.	2100	\$	8.00	5	16,800.00
2512.2	Hot-Mix Ashphalt Paving, 50mm surface course	sq. m.	4900	\$	8.00	S	39,200.00
2512.3	50 mm thick milling	sq. m.	2800	\$	5.00	S	14,000.00
Section 0	2523 - Concrete Walks, Curbs & Gutters			5			
2523.1	Porous Asphalt Sidewalk (1.5m)	I,m.	1400	\$	100.00	\$	140,000.00
2523.2	Rollover Curb	l.m.	1400	\$	65.00	\$	91,000.00
SECTION	02580 - Painted Pavement Markings						\$\frac{1}{2}
2580.1	Line Painting and Signs	L.S.	1	\$	5,000.00	\$	5,000.00
SECTION	02921 - Topsoil and Finish Grading						Ī
2921.1	Site restoration including topsoil and seeding	l.m.	700	\$	10.00	\$	7,000.00
SPECIAL	CONSIDERATIONS						
.2	Streetlighting (\$5000 per light at 20m spacing)	l.m.	700	\$	250.00	S	175,000.00
.3	Swales	sq.m.	4200	\$	30,00	\$	126,000.00
	SUBTOTAL		L	<u> </u>		\$	783,950.00
	ENGINEERING (10%)					S	78,395.00
1	CONTINGENCY (35%)					S	301,820.75
	SUBTOTAL					\$	1,164,165.75
	GST (7%)					\$	81,491.60
	TOTAL					S	1,245,657.35

Town of Gibsons

1300.0081.02 October 2006

### UPPER GIBSONS NEIGHBOURHOOD PLAN - TRANSPORTATION UPGRADES

New 'Road C' Construction (Collector - 1000m)

ITEM	DESCRIPTION  1 02111 - Clearing and Grubbing	UNIT OF MEASURE	QUANTITY	UNIT PRICE		AMOUNT (\$)	
SECTION							
2111.1	Removal and Disposal of Vegetation and Trees	m2	18,000	\$	5.00	\$	90,000.00
SECTION	02224 - Roadway Excavation, Embankment and Compaction						
2224.1	Common excavation, off-site disposal	cu. m.	11000	\$	15.00	S	165,000.00
2224.3	Subgrade Preparation	sq. m.	18000	\$	1.50	\$	27,000.00
SECTION	02233 - Granular Base						
2233.1	Granular base, 150mm thick	sq. m.	9500	\$	8.00	\$	76,000.00
SECTION	02234 - Granular Subbase and Pit Run Fill						
2234.1	Granular Subbase, 300 mm thick	sq. m.	9500	\$	15.00	\$	142,500.00
	Pit Run Fill, 200 mm thick	sq. m.	9500	\$	8.00	\$	76,000.00
SECTION	l 02512 - Hot-Mix Asphalt Concrete Paving						
2512.1	Hot-Mix Ashphalt Paving, 100mm	sq. m.	9500	\$	30.00	\$	285,000.00
Section (	12523 - Concrete Walks, Curbs & Gutters						
2523.1	Porous Asphalt Sidewalk (1.5m)	l.m.	1500	\$	100.00	S	150,000.00
2523.2	Rollover Curb	l.m.	4000	\$	65.00	\$	260,000.00
SECTION	02580 - Painted Pavement Markings						
2580.1	Line Painting and Signs	L.S.	1	\$ 10,000.00		S	10,000.00
SECTION	02921 - Topsoil and Finish Grading						
2921.1	Site restoration including topsoil and seeding (excluding swales)	l.m.	1500	\$	10.00	\$	15,000.00
SPECIAL	CONSIDERATIONS	Ì					
0.1	Streetlighting (\$5000 per light at 20m spacing)	l.m.	1000	\$	250.00	S	250,000.00
0.2	Landscaped Biofiltration Swales (moderate landscaping)	sq. m.	6000	\$	30.00	\$	180,000.00
	SUBTOTAL			_		\$	1,726,500.00
8	ENGINEERING (10%)					\$	172,650.00
	CONTINGENCY (35%)					s	664,702.50
	SUBTOTAL					S	2,563,852.50
	GST (7%)					s	179,469.68
	TOTAL					5	2,743,322.18