



BCParks

Fixed Roof Accommodation Development Guidelines



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The Purpose of the Guidelines

The Province of British Columbia recognizes the important contribution that the BC Parks system makes towards a strong and sustainable tourism industry. It also understands how environmental stewardship and outdoor recreation have been entrenched as a BC cultural trademark. British Columbia's provincial protected area system is now a major source of economic activity for the province. With this in mind, the Spirit of 2010 Tourism Strategy <http://www.ecdev.gov.bc.ca/ProgramsAndServices/Tourism/SUMMIT.pdf>

released by the provincial government provides guidance on how the provincial protected areas system can contribute to the sustainable, and socially and culturally sensitive, development of the province's tourism industry.

Within the four primary outcomes identified in the provincial tourism strategy, it is clear that new and enhanced tourism products and infrastructure are required, and that the private sector is expected to take the lead on product development. Amendments to the Park Act in November 2003 provided clarity regarding what was permissible in a park. New fixed roof accommodations (or expansions) that are consistent with, and complementary to, the provincial recreational values of a provincial park are supported. The government has also stated that any new fixed roof accommodations development will respect the park's conservation and wilderness objectives and the management zoning where it has been established through public input.

In response to this direction, the BC Parks Fixed Roof Accommodations Strategy was prepared with a view to receive new and enhanced fixed roof accommodations developments in the provincial protected area system. This guideline document responds to one of the key objectives of the policy:

"To ...ensure ecologically sensitive operations that support park values."

THE PURPOSE of these Development Guidelines is to assist a proponent in understanding some of the important considerations to be addressed and key principles or guidelines that will allow for a sustainable development. BC Parks staff will also use these guidelines to help evaluate proposals and test suitability, public acceptance and potential impact on the park. The guidelines are offered as a start and framework within which to plan and prepare a proposal. BC Parks' goal is to achieve green innovative and sustainable facilities when planning to develop or expand fixed roof accommodation in the provincial protected area system. The questions and suggestions are expected to trigger thought towards achieving an excellent product for the park, the proponent, the visitor and the residents of BC.

Remember that BC Parks will provide proponents with more details, policies and procedures for developing or procuring fixed roof accommodations in the provincial protected area system, but the following will give preliminary direction in establishing an ecologically sensitive fixed roof accommodation facility.

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Description of Fixed Roof Accommodation Types & Park Zones

It is understood that there will be various types of developments proposed in keeping with market demand, entrepreneurial ideas and existing facilities in the provincial protected areas system. They will range from a fixed roof accommodation development composed of a number of permanent structures offering a broad range of amenities and attractions, to small structures primarily meant for backcountry use with limited facilities or services.

These guidelines largely address the mid range Fixed Roof Accommodation developments; they do not address directly the “gateway resorts” or the smaller structures such as yurts or emergency shelters.

The schedule below provides an indication, and definitions, of roofed accommodation by facility type currently developed within or near provincial protected areas. Maps indicating locations of identified facilities are available.

Roofed accommodation definitions ²



Lodge Generally a single building facility, may include sleeping cabins, not necessarily developed to current ecolodge standards. Generally a permanent structure accommodating kitchen/dining, bathrooms, bedrooms and the full range of normal amenities for clients. Accommodation usually ranges up to 80 beds. BC Parks’ policy allows for up to 100 beds; more than 100 on a case by case basis. *Note:* generator building, waste disposal and staff accommodation may be in additional structure.



Ecolodge A relatively new term used to describe a type of facility that incorporates the values of conservation and cultural stewardship into the operation, management. Special attention is paid to environmental sustainability in the design and construction, including the choice of construction materials and the use of new technologies for the management of energy, water and waste systems. Most ecolodges are very simple, low impact buildings. However others are more complex and make use of new technologies for the energy and waste systems. Ecolodges are generally located in natural areas. Accommodation usually ranges up to about 30 people.



Cabin/hut/yurt

Generally small structures that may have cooking facilities, water and septic. Cabins/huts are generally located in the backcountry. Yurts are round, semi-permanent, self-supporting, canvas-covered structures, mounted on a wooden deck. This range of accommodation can sleep from 4–30.



Shelter

A small building, primarily for emergency use, with no facilities or services. Historically, these structures were built by outdoor groups and guide outfitters. May be open style such as an Adirondack shelter. Accommodation/sleeping for a small number of people; 4–10 is common.

² Facility definitions were compiled based on internet research.

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Description of Fixed Roof Accommodation Types & Park Zones, *continued*

BC Parks has also developed a Zoning Matrix (page 4) which segments the protected area land base according to the degree of naturalness, type of tourism outdoor experience opportunities, environmental sensitivity, method of transport, intensity of use and scale of facilities. The purpose of this matrix is to provide general guidance on the type of fixed roof accommodation that might be considered in a particular park zone. It also provides some high level information on means of access, impacts, and recreation opportunities associated with each option.

Frontcountry locations are assumed to have large volumes of tourists in a naturally scenic area which may have a human altered environment.

The guidelines have been developed to generally apply to all provincial protected area locations and zones, but it is implied that BC Parks staff will review proposals relative to the sensitivity of the provincial protected area's natural environment and apply the guidelines accordingly. Similarly, certain elements of the guidelines may be given more weight depending upon the type of fixed roof accommodation being proposed or whether it is a new development or upgrading of an existing facility.

Proponents must ensure that they are familiar with the Management Plans and zoning issues or values associated with the particular provincial protected area and proposed fixed roof accommodation development site.

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Description of Fixed roof accommodation Types & Park Zones, *continued*

Table 2. Fixed Roofed Accommodation Zoning Matrix (Combining Wilderness Tourism Association's and BC Parks' current systems)

	Frontcountry Large volumes of tourists in a naturally scenic area which may have human altered environment	Midcountry High quality natural environment, not always wilderness	Backcountry High quality wilderness experience, Pristine environment	
BC Parks Current Zoning system (Special Feature Zone n/a, 1.58%)	Intensive Recreation 1.8%	Natural Recreation 17.5%	Wilderness Recreation 70.0%	Wilderness Conservation 9.2%
Objective	To provide for a variety of readily accessible outdoor recreation	To protect scenic values and provide for backcountry outdoor recreation	To provide a remote, undisturbed, natural landscape and to provide backcountry recreation in a pristine environment	To protect a remote, undisturbed landscape and provide unassisted backcountry recreation opportunities
Use level	High	Medium	Low	Very Low
Examples of zoning	Mount Robson Park visitor centre and campground area	Core area. Cathedral Park	Quanchus Mountains, Tweedsmuir Park	Garibaldi Park Nature Conservancy Area
Size of zone	Usually less than 2000ha	Small to large	Large	Large
Means of access	All weather road	Trail/water/air, may use rough 4x4 road access	Aircraft and non-mechanized and non-motorized land access	Non-mechanized and non-motorized
Impacts on natural environment	Human presence noted through high facility development and land impact	Human presence moderate/ facility blends in with area	Human presence low/ facility presence blends with area	Human presence low
Recreation Opportunities/ Facilities	A wide range of recreation opportunities; may be intensively developed for user convenience	Primary, non-motorized use; can include a wide range of non-road associated recreational uses including snow-mobiling, aircraft access, heli-hiking/ skiing, trails, accommodation buildings, docks	Backpacking, nature appreciation, fishing, hunting; minimal development can be provided for convenience/ safety	Backpacking, nature appreciation, canoeing, etc.

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Considering New or Upgraded Fixed Roof Accommodations

BC Parks will consider proposals for new or upgraded/enhanced fixed roof accommodations in the BC Protected Area system. This guideline package applies to both considerations, but again, certain elements may be given more weight depending on the degree of potential alteration of the park or site in question.

With respect to new fixed roof accommodations, BC Parks will apply the elements of the guideline package when considering a proposal. In some cases, a Management Plan or other studies and directives may support a fixed roof accommodation development of a particular type, and/or identify and endorse a potential building site. This should not preclude adherence to sound planning and development of a quality product in a provincial protected area.

With respect to alterations to existing fixed roof accommodations, it is appreciated that an upgrade could entail extensive work, sometimes greater than the original development. In such cases, BC Parks may want to apply all or most elements of the Guideline package, realizing that impacts on the park or the lands adjacent to the existing fixed roof accommodation could be significant.



Siting criteria will be just as important for expansions as it is for a new fixed roof accommodation. Even if the “footprint” of a fixed roof accommodation does not change dramatically, anticipated additional visitation or supporting infrastructure and access will need to be evaluated.

In some cases, proponents may wish to pursue minor alterations or upgrades to an existing facility. Although a new site may not be required, there will be opportunities to make substantial improvements and meet the many sustainability objectives contained within the Guideline package. Examples include achieving energy efficiencies, operational upgrades, environmentally sensitive upgrades and updated but economic architectural design.



Above: New post and beam lodge
Photo: BC Parks, Kootenay Region

Left: New log cabin
Photo: BC Parks, Okanagan Region

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BC Parks Impact Assessment Process (An Overview)

Proponents should be aware that one of the initial tools used by BC Parks to assist them in making the best decisions respecting fixed roof accommodation developments is the BC Parks Impact Assessment Process. This process is used to:

- identify impacts on protected area values that may be associated with an “action” such as a proposed fixed roof accommodation development;
- evaluate the significance of those impacts;
- determine mitigation measures;
- assist with making decisions on whether or not an action should proceed.

BC Parks may apply three levels in the process:

Level 1: Preliminary Screen

Level 2: Detailed Screen

Level 3: Full Impact Assessment

A Users Guide for the BC Parks Impact Assessment Process can be found in the BC Parks web site at: http://www.env.gov.bc.ca/bcparks/conservation/cons_mgmt.html. This guide provides the process and instructions for completion of the three levels of assessment. The procedures will assist in determining if proposed fixed roof accommodation development can be approved based on the results of the “Preliminary Screen”, and, if necessary, the “Detailed Screen”, or if a “Full Impact Assessment” Report is required before a decision can be made.

The following provides an overview of the three levels in the process.

Level 1: Preliminary Screen

The Preliminary Screen identifies key issues and concerns regarding the proposed fixed roof accommodation development. It is a quick and efficient determination on whether the proposed fixed roof accommodation development can be approved, rejected or if further evaluation is needed. It is completed by BC Parks based on information provided by the proponent in the Fixed Roof Accommodation Application, using immediately available data and professional expertise.

Level 2: Detailed Screen

The Detailed Screen, to be completed by the proponent, is a more thorough analysis of specific impacts and their significance. Once a proponent is selected through an appropriate competitive process, the successful proponent will undertake the Detailed Screen assessment with BC Parks providing review and decision.

Level 3: Full Impact Assessment Report

The Full Impact Assessment Report is to be prepared where it has been determined that the potential effects of the proposed fixed roof accommodation development are unknown, or that significant adverse effects are anticipated. If required, the proponent will prepare a comprehensive Full Impact Assessment Report that evaluates the nature and scope of individual impacts, combined action specific impacts, and regional cumulative effects associated with the proposed fixed roof accommodation development at the time that the detailed Fixed roof accommodation Design is submitted for review.

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Related Provincial/Local Policies & Regulations

In planning and designing a fixed roof accommodation facility, a detailed review of various related provincial or local government policies and regulations should be considered. Besides the Province's policy directions with regard to development in the provincial protected area system and resource areas (crown lands), there may also be policy direction and regulations that fall under the jurisdiction of a municipality or in most cases, a Regional District. Proponents should be aware of the applicable jurisdictions at both the provincial and local government levels. Remember that in

Local (Municipal and Regional District)

Local governments, including municipalities and regional districts in BC prepare Official Community Plans and implement Zoning Bylaws to control growth and land development. They are often also the main purveyors of water and along with the Province, will regulate sewage disposal. Check with them to determine if components of your project will be affected by their policies, bylaws and regulations.

Provincial (BC Parks)

Park Design Guidelines and Data:

The guidelines address the process of designing and planning visitor facilities in park environments. These guidelines identify design criteria and sustainability, ensuring minimal facility development and compliance with the BC Parks brand. Two goals are to effectively have facilities blend with, or complement natural park landscapes and conserve or restore park environment through appropriate park design. Access the Park Design Guidelines and Data manual at the BC Parks web site at: http://www.env.gov.bc.ca/bcparks/recreation/rec_mgmt.html.

some instances the impact of the proposal may also fall outside of a park (ie with roads, utilities, parking, etc.). Approvals may need to be obtained from various government agencies depending on the location and type of development being proposed. Besides the regional BC Parks office, the Regional District office may also need to be contacted to determine development process and approval agencies that may have jurisdiction in the area. The following are some key policies and regulations to consider:

Park Facility Standards:

The park facility standards provide direction in the planning, design and development areas and allows the incorporation of the standard details in engineering and design drawings and specifications to meet specific project requirements. BC Parks facility standard principles are committed to: providing superior experiences in a natural environment while providing an optimum level of use; minimizing disturbance to the natural environment whenever possible; minimizing risk to the visitor; making efficient and effective use of its financial resources and consideration of the physical limitations of its visitors including the disabled, the elderly, and children in the design of its facilities. Access the Park Facility Standards manual at the BC Parks web site at: http://www.env.gov.bc.ca/bcparks/info/park_facility_operator/manuals_information.html.

Provincial (BC Parks), continued on P. 8

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Related Provincial/Local Policies & Regulations, *continued*

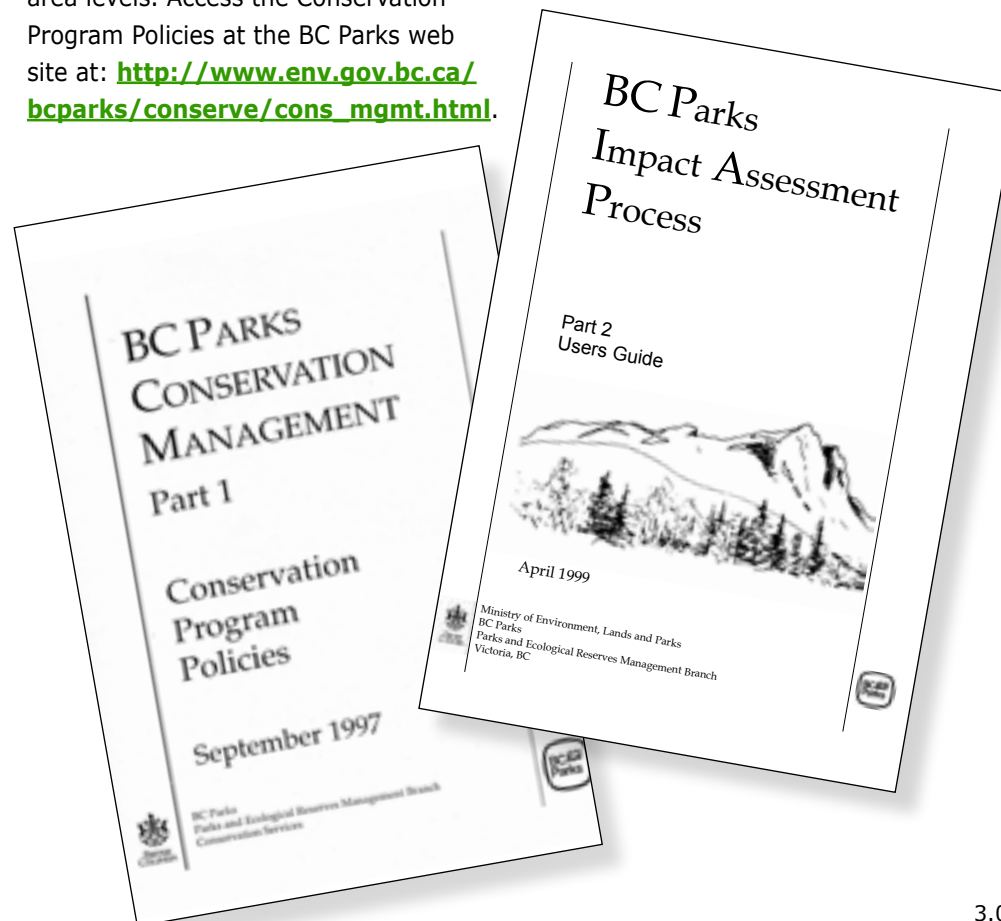
Provincial (BC Parks), *continued*

Conservation Program Policies:

The conservation program policies direct the day-to-day and long-term actions under which BC Parks manages natural and cultural values within the British Columbia's park and protected areas system. The policies ensure provincial consistent standards are followed to guide conservation management effort at the provincial, regional and protected area levels. Access the Conservation Program Policies at the BC Parks web site at: http://www.env.gov.bc.ca/bcparks/conserves/cons_mgmt.html.

BC Parks Impact Assessment Process:

The BC Parks impact assessment process applies to all impact assessment in parks and protected areas and includes environmental, social and economic impact. Access the BC Parks Impact Assessment Process at the BC Parks web site at: http://www.env.gov.bc.ca/bcparks/conserves/cons_mgmt.html.



Provincial (Other)

Other jurisdictions that may impose applicable policy and regulation will be the Ministry of Health and the Ministry of Environment regarding sewage disposal. Ensure that all necessary submission requirements under the various Acts and Regulations have been addressed. For example, if the **Health Act** applies, consider the Sewage System Regulations, and if the **Waste Management Act** applies, the Municipal Sewage Regulations should be referenced. BC Parks staff may also identify other agencies and respective legislation to address environmental impact regulations when the various levels of Impact Assessment are being carried out.

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Introduction - Principles and Standards

BC Parks fixed roofed accommodation development guidelines best serve proponents through the implementation of green technology and alternative technology standards. New and existing fixed roof accommodation must identify opportunities to integrate appropriate technology into new construction, enhancements and operating procedures. An example of a method to help maintain successful standards is through management principles; a number of principles that may assist proponents are identified below.

Principles and Standards topics include:

- Facility Management Principles 11
- Incorporating Certification Standards 13

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Facility Management Principles

STRATEGY	DESCRIPTION
Ecotourism Policy, Performance and Framework	Operators make a public commitment to uphold the principles of sustainability and put in place management systems to ensure their performance.
Natural Area Focus	Activities and operations provide a direct personal experience of nature.
Interpretation and Education	Operations provide opportunities to experience nature and culture in ways that lead to a greater understanding, appreciation and enjoyment. <ul style="list-style-type: none"> Facilities provide visitors with the opportunity to receive quality interpretive services. Adequate planning of interpretation is undertaken so that accurate information is effectively communicated. Service staff in contact with customers are competent to provide accurate information on the natural values, cultural heritage and conservation issues of the sites visited, and guides can provide quality interpretive experiences.
Ecologically Compatible Buildings and Infrastructure	Operations are developed appropriately on the basis of ecological sustainability and an understanding of the potential environmental impacts. Operations will <ul style="list-style-type: none"> Construct and operate green buildings, Use green infrastructure and technologies, including energy, water, waste and transportation.
Ecologically Sustainable Practice	Operations employ ecologically sustainable practices to ensure that its activities do not degrade the environment. The ecotourism operator has identified the environmental risks that its activities may cause, and has consequently prepared and implemented relevant management actions, including <ul style="list-style-type: none"> Prevent pollution at the source, Minimize energy and water consumption, and Implement green procurement practices.
Contribution to Conservation	Operation shall provide a tangible contribution to conservation.
Benefiting Local Communities	Operation shall provide ongoing contributions to the local community.
Cultural Respect and Sensitivity	Operation in both its development and operation phases must be respectful of, and sensitive to, local cultures. To ensure cultural values are treated appropriately, there is a need to consult with local people so that their legitimate aspirations are met and to allow presentation of authentic cultural values.
Customer Satisfaction	Operations meet or exceed customer's expectations.
Responsible Marketing	Marketing provides accurate and responsible information about the product that leads to realistic expectations.
Minimal Impact Codes of Conduct	Operations have minimal impacts on the natural, social and cultural environment, and are undertaken in accordance with a defined code of practice.

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Incorporating Certification Standards

1. Have you considered using existing national and or international certification standards in the design, construction and operation of your fixed roof accommodation?
2. BC Parks supports certification standards like:
 - a. LEED: Leadership in Energy and Environmental Design - incorporates a direct focus on efficient and effective green building design and operation;
 - b. R-2000 federal program is delivered throughout the Canadian Home Builders Association - a leading energy rating and evaluation tool designed to give builder flexibility in the selection of construction techniques, building products, mechanical equipment, lighting and appliances;
 - c. Built Green is a British Columbia voluntary program used by builders to achieve significant improvements in environmental performance - uses a rating system of points to achieve a bronze, silver or gold certificate. However, only gold level achieves significant improvement in environmental performance.
3. Using certification standards that incorporate green building design has been shown to reduce operating cost and increase park user acceptance.



www.greenglobes.com

4. Have you considered using an architect that is accredited in green building design and operation?
5. BC Parks also supports owners having their day-to-day operations certified for meeting environmental best practices, e.g., the Audubon Green Leaf Hotels Program.



www.greenbuildingsbc.com



LEED
GREEN BUILDING RATING SYSTEM

www.cagbc.org



Audubon Green Leaf™ Eco-Rating Program For Hotels

www.greenhotelsonline.com

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Introduction - Site Selection

The success of a fixed roof accommodation can pivot on the initial process of choosing a site and how it will be placed on the particular site. Careful evaluation, in some instances, may indicate that the site is not appropriate for development (or expansion) at all. It is understood that the proponent will be looking at several factors to justify an investment, but careful attention must be paid to the natural and biophysical limits while offering the visitor the opportunity to experience and enjoy the natural environment within the park setting. The selected site should support the fixed roof accommodation and its positioning for the visitor market. A properly conducted site evaluation will assist the proponent to achieve business plan objectives and also address the conservation values and principles of the provincial protected area system.



Above:
Assiniboine Alpine Lodge

Right:
*Bonaparte Park,
Rainbow Chain Fishing Lodge*

Site Selection Guidelines topics include:

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Site Selection for Fixed Roof Accommodation Development

1. Select a site whereby the development of the fixed roof accommodation itself will be **well integrated** with the natural attractions that enticed you to consider the area in the first place.
2. Address the question of the “purpose of the fixed roof accommodation” or **theme and market** that you are trying to target.
3. Consider the most appropriate **location** based on a comparative analysis of alternative sites.
4. Conduct your scoping exercise with as many **positive and negative** factors in mind.
5. Learn about the **values** of the particular provincial protected area to assist in creating a proposal that is sensitive to the area.
6. Understand that the project will entail the **integration** of land use, human circulation, existing structures (if any), new facilities and utilities in the natural and human environment. Therefore, site selection and planning for the fixed roof accommodation must safeguard the **sustainability** and conservation of the area’s natural assets, cultural heritage, and improve where possible on impacts that may already be present on the site.
7. Have you developed a framework or **vision** for your fixed roof accommodation?
8. Does your fixed roof accommodation development plan address **existing infrastructure** and incorporate expansion into your vision for development?
9. Does your vision for development of infrastructure seamlessly guide **decision making**?
10. Does your vision protect the **character** of the park and recognize its cultural heritage?
11. Does your vision incorporate the principles of sustainability to ensure the park values are **protected**?

Choosing the Site: Key Criteria and Values to be Protected



Above: Kokanee Glacier Cabin

In siting a fixed roof accommodation, the proponent must determine the best location to construct a new fixed roof accommodation or expand an existing fixed roof accommodation. The proponent will undertake initial fixed roof accommodation siting assessment evaluations, at one or more specific sites, for a specific site location in the protected area as having good fixed roof accommodation development potential. The site assessment criteria will identify and measure potential impacts, issues and constraints associated for each specific site location.

Proponents should become familiar with site location assessment criteria used by other agencies for other fixed roof accommodation developments in British Columbia. The site assessment evaluation criteria used for the Kokanee Glacier Cabin is presented as a BC Parks **example**.

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EXAMPLE of a Site Assessment Evaluation

This evaluation is divided into two parts:

Mandatory Criteria, where the answer **must** be a 'yes' otherwise the potential fixed roof accommodation site is rejected from the list

Evaluation Criteria, where a score will be assigned to assist in ranking the potential fixed roof accommodation sites.

This evaluation is to be conducted using existing knowledge at the time of the evaluation. More detailed site assessments will be conducted later on selected potential fixed roof accommodation sites.

Name of Potential Fixed roof accommodation Site:

Assessment Date:

Mandatory Criteria All questions must be 'Yes' to continue with the assessment.

CRITERIA	YES/NO	COMMENT
Does it comply with acts, regulations and BC Parks policies?		
If there is a land use plan for the area, is it consistent with the land use plan?		
Is it consistent with management plan direction and zoning? <ul style="list-style-type: none"> • Is it consistent in the Master Plan, Management Plan, Management Direction Statement, or Purpose Statement and Zoning Plan; • Is it suitable to the intent of the management plan, if not specifically mentioned in the plan; • Is it consistent with zoning for the area or is it within one step to the appropriate zoning as per the Fixed Roof Accommodation Policy. 		
Is it consistent with the Fixed Roof Accommodation Policy Roofed Accommodation Zoning Matrix (Table 2, Page 4, BC Parks Fixed Roof Accommodation Policy)?		
Decision: Continue with the assessment?		

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EXAMPLE of a Site Assessment Evaluation, *continued*

Evaluation Criteria The higher the score, the higher the priority for more detailed site assessment.

GUIDE TO ASSIGNING SCORE

- 0** Either the criterion is of concern, or there is no information about the criterion.
- 2** The criterion is of concern, but can probably be managed/mitigated relatively easily.
- 4** The criterion is not a concern.

CRITERIA	ASSESSMENT RATIONALE/COMMENTS	SCORE
Is this a new opportunity or an upgrade/expansion to an existing opportunity? Note: If upgrade/expansion score 2 or 4.		
Are there locations for similar opportunities outside the protected area that could be considered instead? Check with Ministry of Tourism, Sport and the Arts to see if there are any applications. Note: If yes, score 0.		
Are there known potential major social impacts (positive or negative), i.e., existing users? Note: If yes and negative, score 0 or 2.		
Are there known potential major environmental impacts (positive or negative) to the protected area, i.e., species/habitats at risk? Note: If yes and negative, score 0 or 2.		
Are there known potential major impacts (positive or negative) associated to areas near the proposed site, i.e., other facilities, areas of visitor use, unique landscape features? If there are other developments in the park, would an additional facility result in unacceptable cumulative impacts? Note: If yes and negative, score 0 or 2		
What is the area of impact? Is the area an already impacted site? Is the area previously untouched? Note: If already impacted, score 2 or 4.		
Will there be high operational/servicing costs? (i.e., if no water available at site, will need long air transport to site). Note: If yes, score 4.		
Is there a well-defined footprint area for the site or is it a large undefined area? Note: If well-defined area, score 2 or 4.		
Will new access(es) be required, i.e., road, air, water, trail (foot, horse)? Note: If yes, score 0 or 2.		
What season(s) could be provided by the opportunity? Note: If 4-season, score 4.		
Is there known community or other stakeholder support? Note: If yes, score 2 or 4.		
Is there known First Nations support? Note: If yes, score 2 or 4.		
Is there known demand for the opportunity? Does it compliment existing tourism initiatives? Note: If yes, score 2 or 4.		
Total Score		

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EXAMPLE of a Site Assessment Evaluation, *continued*

Table 1: Criteria and Weights for Evaluating Locations (Kokanee Glacier Site Assessment Criteria)

EVALUATION CRITERIA	WEIGHT		
A) Safety from Avalanche	if evidence exists of previous or potential slide activity, then site is ruled out		
B) Proximity to Drinking Water (building will have a water supply line)	>100m=0	50-100m=1	,50m=2
C) Proximity to Hydroelectric Source	800m=0	300-800m=2	,300m=4
D) Potential as a Building Site (flat plateau with side slopes preferred)	low=0	moderate=2	good=4
E) View/Scenery (important for aesthetics and safety)	little view=0	good=2	excellent=4
F) Gray Water Disposal Potential	difficult=0	moderate=2	good=4
G) Proximity to Skiing (ski to hut, access to good slopes nearby)	low=0	moderate=1	good=2
H) Openness of Site and Adjacent Trails (important for reducing potential of bear encounters)	closed forest or obscuring landforms=0	open forest=2	very few trees or obstructions=4
I) Sunlight	shady=0	some sun=2	sunny=4
J) Degree of Previous Site Impact	no impact=0	moderate=1	heavy=2
K) Level of Resistance to Site Impact	low=0	moderate=1	high=2
L) Helicopter Access (for landing and long-lining)	>200m=0	50-200m=1	<50=2
M) Distance from Campground	<50m or >400m=0	50-150=1	150-400=2
N) Visibility from Campground	visible=0	partially visible=1	not visible=2
O) Proximity to Small Terrain Traps (<100m is unacceptable)	100-200m=0	200-300m=2	>300m=4

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EXAMPLE of a Site Assessment Evaluation, *continued*

Table 2: Decision-Aiding Matrix (Kokanee Glacier Site Assessment Criteria)

An evaluation of each site, based on the criteria and weights in Table 1 (page 16).

CRITERIA	SITE							
	#1	#2	#3	#4	#5	#6	#7	#8
A) Safety from Avalanche (Y or N)	yes	yes	yes	yes	yes	yes	yes	yes
B) Proximity to Drinking Water (2)	0	0	2	0	0	0	0	2
C) Proximity to Potential Hydroelectric Source (4)	2	2	4	4	4	4	2	4
D) Potential as a Building Site (4)	2	2	4	2	4	4	0	4
E) View/Scenery (4)	0	0	2	4	4	2	2	2
F) Gray Water Disposal Potential (4)	0	2	4	2	4	2	4	3
G) Proximity to Skiing (2)	2	2	2	1	1	1	1	1
H) Openness of Site and Adjacent Trails (4)	2	0	2	4	2	2	2	2
I) Sunlight (4)	0	0	2	2	2	2	2	3
J) Degree of Previous Site Impacts (2)	2	1	1	1	1	1	1	0
K) Level of Resistance to Site Impact (2)	1	1	1	1	1	0 ²	2	1
L) Helicopter Access (2)	1	1	1	1	1	2	2	2
M) Distance from Campground (2)	1	1	2	0	0	0	0	0
N) Visibility from Campground (2)	2	2	1	0	0	0	1	1
O) Proximity to Small Terrain Traps (4)	0	0	0	2	2	2	0	2?
Total Points out of 42	15	14	28	19	26	22	19	27

¹ Requires verification from a qualified avalanche technician.

² This site has other ecological concerns including a wildlife tree, proximity to wet meadow and proximity to existing snow monitoring course

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Making the Experience

1. Remember that the fixed roof accommodation itself is secondary to the **outdoor experience** to be enjoyed by your clients. Think about what will be the primary motivator and attraction of the park setting and plan the fixed roof accommodation development accordingly.
2. The fixed roof accommodation's comfort and amenities should reflect the outdoor experience. Have you thought about the primary outdoor **recreational activities** to be undertaken in the vicinity of the fixed roof accommodation?
3. Have you considered the prevailing **weather and climate** conditions in the vicinity of the proposed fixed roof accommodation site? Have you considered how important elements such as sun, wind, shade and shadow or snow load will influence the design and placement of the fixed roof accommodation, amenity areas and any secondary buildings?
4. Will the fixed roof accommodation address only one season use, or all four seasons? BC Park's strategy promotes **all season use** whenever possible.
5. Have you considered the **interaction between different types of users** and mixing of experiences,



Above: Heli-hiking may appeal to older clients.

i.e., high end/high amenity vs rustic? Can your fixed roof accommodation balance park user interest and access with client driven amenities and services?

6. **Aesthetics** of the area will be important siting criteria, but the fit with the **natural environment** is paramount.
7. Have you considered offering interpretation services for clients to enhance the enjoyment of, and education about, the natural environment? Can your accommodation support interpretation presentations and offer packaged interpretation tours for a variety of user types? Interpretation is important for educating clients to protect park values.



Top: Many wildlife viewing opportunities exist in parks.



Above: All season use of fixed roof accommodations.

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Economic Viability

1. Have you considered **accessibility to market** via roads, trails, air or water depending on location?
2. Will roadway and or trail **access improvements** need to be made? What is the distance? Difficulty of terrain? Ability to gain all approvals to make the improvements?
3. What is the **cost of development** at the more remote location versus a more accessible location?
4. Have you considered building with **future expansion** plans in mind? What are the added costs of designing and constructing the facility with a view to expanding in say 5, 10, 20 years?
5. Will the **added cost** of a high level of technology in operations and services (due to location) make the project uneconomic and consequently not viable?



6. Does your business plan show how this site in particular allows for a **viable business** opportunity?
7. Does the fixed roof accommodation proposal **make sense** to the tourism development industry? For example, how does it compare to other current operations in British Columbia or in other jurisdictions?



Above: Have you considered future expansion when initially building facility?

Left: Will the high cost of flying in construction materials make the project uneconomic?

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Access

1. Ensure that the proposed fixed roof accommodation development considers the most appropriate **means of access** with the least impact.
2. Have you considered all **existing roads** and trail systems so that new access corridors may not have to be built?
3. Ensure only a **single access route** is required to reduce impact.
4. Minimize new road construction; the primary focus of BC Parks is to entertain **no new road construction** and or limit it to short distances.
5. Determine where upgraded roads or trails will have the **least impact** but still gain practical access into the site.



Above: Air access may be limited to specific dates and times.

Right: Have you considered using existing roads for access?



6. **Air access** into midcountry sites must primarily consider Park **conservation values** along with the experience outcomes for the Park visitors.
7. Air access in some cases may only be permitted for servicing fixed roof accommodations and not for regular visitor travel. Air access may also be limited to **specific operational windows** related to travel routes, frequency of trips, dates and time.
8. Have you determined **feasibility** of supplying ground transport by shuttle bus to minimize traffic congestion and vehicle parking requirements.
9. **Access by water** on lakes and rivers must consider conservation values and environmental impact concerns.
10. Have you determined where **docking facilities** can be built that will not compromise the aesthetic value of the water body or the fixed roof accommodation experience?



Above: Access by water on back-country lakes must consider conservation values.

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Site Clearing & Disturbances

1. In siting the fixed roof accommodation and associated buildings/facilities, have you considered **land that has already been disturbed** (e.g. former campgrounds, parking lots, gravel pits, old building sites, etc.)?
2. Think about how **materials from site clearing** and preparation can be used in fixed roof accommodation design and construction. This may apply to timbers, stone, soil and water features such as ponds.
3. Every effort should be made to maintain, restore and enhance the **natural ecosystem**. This is a critical element to be considered at the design stage.
4. Does your site plan **minimize the footprint** of the initial structures as well as anticipate any possible future expansion.
5. Have you considered potential for **native plant regeneration** where disturbance around the fixed roof accommodation may occur? Familiarize yourself with regeneration indicators.
6. Ensure that proposed development reflects the importance and protection of the **site's hydrology**, be it a river, lake, stream, marshes or reservoir. Have you established an appropriate setback to avoid any environmental impacts? Familiarize yourself with government policy and regulations.
7. If a road or access trail is required, does your plan incorporate designs for minimum width and routing to **avoid impacts** on a sensitive area or the destination itself?



Above: Road construction using minimum width and routing to avoid impacts



Above: Protect streams during construction



Left: Restoring natural ecosystem after construction

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Placement & Orientation

1. Think of every fixed roof accommodation proposed as an “ecolodge” that is planned around **natural features** rather than imposing a typical resort design solution.
2. Have you considered reducing the number of buildings to a single design which reduces the footprint, but yet contains all the services required?
3. **Spacing of buildings** will allow for wildlife movement, plant growth and integration with the existing site.
4. **Orientation** of the building(s) is very important to the success of the fixed roof accommodation, operation and visitor experience. Have you considered sun exposure, shade, views, wind and airflow, both for summer and winter conditions? For example, solar collection systems should be oriented to allow maximum access to sunlight.



5. **Views and vistas** must be balanced with avoidance of disturbance to the site. Siting of structures should not require cutting of trees or disturbing other natural features to gain prominent views.
6. Have you taken care not to dramatically **modify** a shoreline or coastline? Be careful to impose **adequate set back** of buildings from the shoreline or coastline to enhance natural features and reduce visual impacts of facilities. Consult Federal, Provincial and Local Governments in respects to regulations.



Above right: Cluster buildings to reduce footprint of individual structures.

Above left: Orient fixed roof accommodation to maximize sun exposure and views

Left: Allow for wildlife movement

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Planning for Wildfire

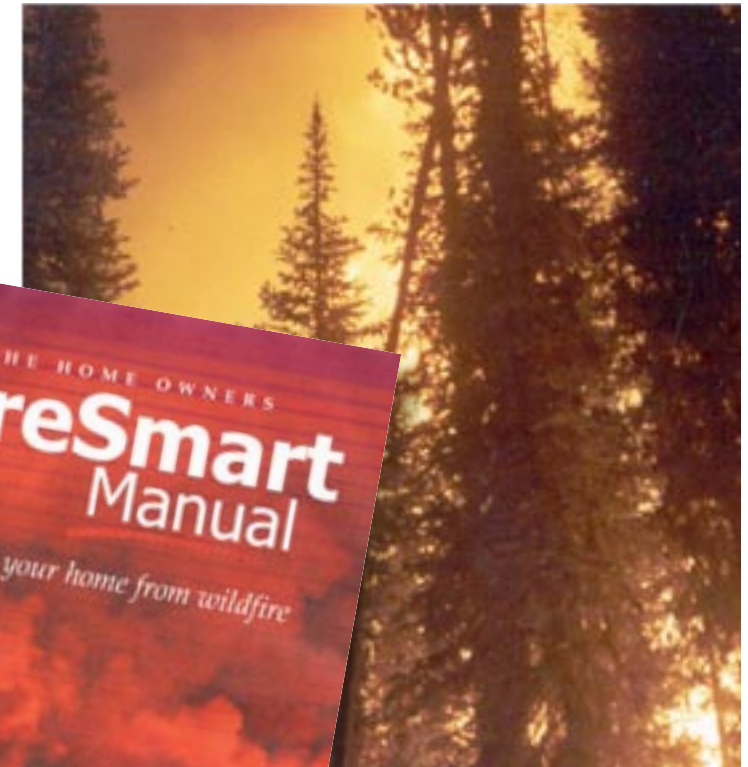
1. Plan the siting of structures with the **potential** of wildfires in mind.
2. Are you familiar with Ministry of Forests and Range Wildfire **Guidelines** and Fire Smart Program? Consult Ministry of Forests and Range web site at <http://www.for.gov.bc.ca/protect/>
3. Consider **specialist input** from professional staff in the Ministry of Environment and Ministry of Forests and Range regarding both location siting and site clearing.
4. Consider using exterior materials **resistant** to the possible effects of wildfire.
5. Consult with BC parks staff regarding **fire response plans** that may be available for the protected area.
6. Determine **evacuation response plans** for staff and clients in response to potential wildfires.



Above: Consider the potential of wildfires when siting buildings.

Right: Ministry of Forests and Range Fire Smart Program

Far right: Wildfire



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Maximizing All Season Use

1. Does your fixed roof accommodation site support a **variety** of seasonal activities (products) to maximize all season use?
2. Design of fixed roof accommodation accommodates all season **use and enjoyment** by clients.
3. Have you considered **enhancements** to fixed roof accommodation facilities to attract and accommodate new client markets, i.e. business meetings.
4. What **economic measures** can be adjusted to maximize off season use.



Above: Lodge enhancements such as a new swimming pool to attract new markets
Photo: Manning Park Resort

Above right: Winter skiing
Lower right: Summer hiking

5. Have you considered how to **market and promote** to maximize opportunities for all season use?
6. Studies indicates a **higher degree of success** is associated with all season use facilities.



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Staff Requirements

1. Have you considered **how to house staff** to minimize disturbance to clients?
2. Design the fixed roof accommodation to accommodate staffing requirements **separate** from client accommodations. Have you considered the effect of housing staff in separate facilities?
3. Will staff be housed in **individual or shared** accommodation?
4. Design the fixed roof accommodation with rational and economic **use of space** for staff accommodation.
5. Determine the role accommodations can play in **hiring and retaining** seasonal and full-time staff.
6. Will staff be able to **use and enjoy** the services and provisions of the fixed roof accommodation which guests use?



Above right: Separate staff accommodation building

Right: Interior of staff room



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Private & Public Facilities

1. Have you considered the **effect** your fixed roof accommodation will have on existing public and private facilities?
2. Does your fixed roof accommodation **complement** existing public and private facilities?
3. Will your fixed roof accommodation clients use the existing public and private facilities to **enhance** the enjoyment of their stay?
4. What **fixed roof accommodation services** will you offer which will complement the existing public and private facilities?
5. Does your fixed roof accommodation support being **active and involved** in the greater sustainable community to enhance and support existing public and private facilities such as recreations centers, local attractions, protected areas, etc.?



Above: Fixed roof accommodations can support existing community services.

Right: Park visitors are encouraged to use fixed roof accommodation facilities and services.

Photo: Manning Park Resort

6. Have you considered the effect of **blending and incorporating** fixed roof accommodation facilities with the existing facilities and recreational opportunities in the protected area?
7. Does your fixed roof accommodation permit and or encourage regular park visitors to **use and participate** in fixed roof accommodation services and facilities?



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It is implicit that the operation of a fixed roof accommodation and the attendant visitor needs will warrant appropriate services and utilities. Such services and utilities include water, waste water treatment and disposal, power, heating/cooling and solid waste management. BC Parks understands these needs but recognizes that services can be provided with minimal impact on the environment. Furthermore, new systems and technology will allow for wise management, improved economies and efficiencies and less invasion on the environment and natural values. Many fixed roof accommodation operators around the world are profiling their ecological performance in services and utilities to increase their awareness within the market place.

Regardless of whether the facility is in a frontcountry, midcountry or backcountry landscape, sustainable ecological practices are paramount in protecting water, air and soil. BC Parks encourages high standards to minimize impact on the very park values that attract visitors to the protected area. Proponents should therefore pay careful attention to how they will continue to raise the bar of environmental performance and set standards that will encourage other developers to improve their environmental performance.



Above: Energy saving wash formula
Photo: Manning Park Resort

Services & Utilities Guidelines topics include:

• Conservation Ethics	20
• Technical Consultants	30
• Site Servicing	31
• Water Management & Conservation	32
• Waste Management & Conservation	33
• Emergency Back-up Systems	34
• Blended Services & Utilities	35
• Alternative Energy	36



Above: Composting toilet

Left: On-site sewage treatment plant

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Conservation Ethics

1. Services and utilities **should not dominate** the landscape and need to be blended in wherever possible. Impacts on the environment where possible must be minimized.
2. Water conservation and management should be clearly **demonstrated** to visitors. Have you considered how you will address water quality, quantity and reuse or recycling?
3. Remember that the further off the power grid your facilities are located, the more the **conservation ethic** will play a role.
4. Does your plan suggest all the ways of developing and operating a **sustainable** fixed roof accommodation and associated servicing system?



Above: Solar energy used when off the power grid

Right: Utilities such as a water tank should be screened.

Photos: Secret Sea Retreat



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Technical Consultants

- Have you selected **knowledgeable** consultants or technical expertise to design on-site and operating systems for:
 - Water
 - Wastewater/sewage
 - Drainage
 - Communication utilities
 - Solar Power
 - Micro-hydro, Electrical power
 - Recycling
 - Emergency utilities
- Have you consulted suppliers or **qualified technical expertise** for examples of modern energy and water-conservation devices?
- Consider using expertise from the **nearby community** that is familiar with local conditions and applications.



Above: Consultant undertaking fish survey

Left: Consultant recording plant species

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Site Servicing

- Does the site area have natural surface water or ground **water sources** that can supply the users and operations?
- How and where will **wastewater** be treated and disposed of on-site? If septic fields are required, is there sufficient and suitable land available in close enough proximity?
- Can **micro hydro or reservoirs** be constructed, in or near, the development site?
- Has **testing** been undertaken on the potable water supply, which includes surface and ground water sources?
- Have you considered how **grey water** could be used on the site? Potable water for irrigation purposes should be avoided wherever water supply is a concern.
- Can power from the grid be serviced **underground** to fixed roof accommodation from tie in location?
- Placement of the fixed roof accommodation and associated facilities must **reflect topography** to ensure stormwater management. Avoid grading unless enhancement of a natural system is contemplated. For example, diverting runoff into existing natural swales may benefit plant life and reduce drainage velocity and erosion.
- Have you considered how to **treat potable water**?
- Can more than one utility be serviced through a **common access point**, i.e. a ditch or roadway?



Above: Compact micro hydro generator



Above: Service line buried to blend into natural setting.



Left: Burying service lines

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Water Management & Conservation

1. Does your plan include a **professional opinion of the water sources** for your fixed roof accommodation site? This should entail a careful evaluation of all water needs including drinking, washing, waste treatment and irrigation, if required.
2. Remember that smaller streams/water bodies are more **sensitive to impacts** than larger, more resilient water sources such as large lakes and rivers or the ocean.
3. Have you sought **alternative, sustainable means of acquiring water**, as well as means to reduce consumption?
4. Have you considered using examples of **water conservation devices** such as low-flush toilets and urinals, tap aerators, low-flow showerheads and drip irrigation systems that may use grey water? There are many more examples; seek qualified engineering and technical expertise.



5. There are several means of **reusing** both grey wastewater (shower and sinks) and black wastewater (dishwashers, washing machines). Have you considered installing such applications in your fixed roof accommodation?



Above: Rain water collection system used as alternative water source
Photo: Secret Sea Resort

Left: Water survey

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Waste Management & Conservation

- Has the fixed roof accommodation concept considered all means and every aspect of waste management and treatment in order to **avoid any harm** to the surrounding natural environment?
- Have you considered **cost and ease of operation** to maintain treatment systems?
- Will **"low technology"** applications work at your chosen site?
- If discharge to water bodies is required, can the receiving river or other marine environment **absorb the wastewater** after appropriate filtration or other treatment?
- Have you ensured **consultation** with and received necessary approvals from Provincial Public Health or Environment officials? Check which Provincial Government Ministry has authority for your area and type of development.
- Pit latrines or portable toilets should only be considered during the construction phase of the project. Used in very **limited** cases, pit latrines may be appropriate for use in very remote locations.
- Consider the use of **dry (composting) toilets** as a sustainable waste disposal system where water supply is a concern and where proper maintenance can be ensured.
- The best means to address solid waste is to initially minimize waste by rejecting unnecessary purchasing and packaging. Where possible **reuse and recycle** waste on site.
 - is not accessible to wildlife, and
 - is located far from water sources.
- Where collection for recycling or reuse is not possible, outdoor facilities may be required. Ensure that the location for outdoor waste disposal:
 - is not accessible to wildlife, and
 - is located far from water sources.
- Avoid smells being carried to wildlife or guests.
- If on site storage of garbage is being contemplated, consider the requirement to ensure bear proof containers are used meeting BC Parks facility standards.



Above: Reuse and recycle waste
Photo: RLC Enterprize

Left: Mechanics of composting toilet

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Emergency Back-up Systems

1. Have you identified what emergency standby back-up systems are **economically viable** for the facility design requirements?
2. What measures will be used to accommodate back up systems in the event of **utility failures** to ensure delivery of high client satisfaction?
3. How will fixed roof accommodation design incorporate emergency standby back-up systems for utilities to **avoid visual impacts**?
4. Have the all the **impacts** of the emergency standby back up systems for utilities been incorporated into the original framework for fixed roof accommodation development and design.



Above: Diesel generator provides back-up power.

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Blended Services & Utilities

1. Services and utilities should blend and fit the landscape but not dominate, so that users are introduced to the fixed roof accommodation and its **healthy natural environment** which is void of visual services and utilities.
2. Have you considered orientation of services and utilities where they are **removed from visitor view**, i.e. underground hydro, phone, parking, etc.
3. How will operational services be **incorporated into the landscape**, i.e. parking for staff and visitors, service delivery access, garbage and recycling services etc.
4. Does your development plan incorporate an attractive landscape view **from the customer's perspective** upon accessing the fixed roof accommodation services.
5. Have you considered **blending services and utilities** into the main fixed roof accommodation structure or an alternate structure which blends with the fixed roof accommodation design.



Above: Screened garbage services

Above right: Fire suppression equipment hidden from view

Photos above: Manning Park Resort

Lower right: Utilities incorporated within the lodge structure



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Alternative Energy

- Fixed roof accommodations may be powered in various ways. Have you considered **alternative and low impact** energy sources? Examples include:
 - Solar
 - Micro hydro
 - Wind
 - Geothermal
 - Hybrid systems
 - Low energy lighting
- Ensure design of the fixed roof accommodation **takes advantage** of the sun and the elements, and protects against them.
- Consider use of **solar water heaters**.
- BC contains many locations of hot springs to produce geothermal heat. Where possible, consider **geothermal energy** as a heat source.



- Have you investigated **hydroelectric generating** capability in a nearby stream or river? Special permission may be required, but micro hydro may be considered.
- If using gas, diesel, propane or natural gas generators, ensure **quiet operation**.
- Have you thought about introducing **low-energy lighting**?



Above: Solar energy used to heat water.
Photo: Secret Sea Resort

Left: This resort swimming pool is heated by geothermal energy.
Photo: Manning Park Resort

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Introduction - Access

Access, be it by road, trail, water or air, will have a direct impact on the visitor experience and character of the fixed roof accommodation. It also determines who will be able to visit the fixed roof accommodation and the time of year or seasonal use of the facilities. Although it is recognized that frontcountry facilities will have more direct access by roads and vehicular traffic, every opportunity should be taken to minimize impacts on the site area by roadway and parking lot construction. Visitor's park experience directly increase if vehicle, vessel and aircraft access is limited or controlled in its frequency. Roads, trails, landing pads, parking lots, and docks or other associated infrastructure should be carefully integrated to avoid detracting from the natural setting and the visitor experience.

With developments that are proposed for more remote locations, the landscape and wilderness experience should be protected. Avoidance of entry roads, parked cars and service vehicles, in or near pristine locations are important considerations. Similarly, air access should be carefully evaluated in relation to wildlife habitat, noise and site disturbance. Controlling the frequency of access opportunities to fixed roof accommodation site will provide a more positive client experience.



Access Guidelines topics include:

• Road Impacts	38
• Road Design	39
• Trail Development	40
• Air & Boat Access	41
• Winter Access	42
• Access Maintenance	43



Above: Access by trail

Left: Aircraft access

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Road Impacts

1. Be aware that introducing a road into a pristine wilderness destination will change the visitor experience forever. New roads will only be considered where there is no alternative as they are a **major impact** on protected areas.
2. Vehicular access should be **carefully scrutinized** in the overall business plan in relationship to construction, maintenance and seasonal use.
3. Determine how a road will **complement or expand** recreational opportunities.
4. Try to **avoid** roads that will allow vehicular access directly to the fixed roof accommodation, unless it is in a frontcountry location.
5. **Minimize** any widening of an existing road.
6. **Avoid or minimize** retaining walls where possible.
7. Consider the “**zoning**” of the park to establish its character relative to access.
8. Long access roads into backcountry locations will be discouraged especially when **significant impacts** on the natural and pristine environment is anticipated.
9. Does your plan **avoid visibility** of roadways from the fixed roof accommodation and surrounding wilderness landscape to be enjoyed by visitors?
10. If a new road is proposed, does it service **other park interests** or needs?



Above: Avoid retaining walls where possible.

Right: Minimize road width.



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Road Design

1. Use **existing roads** wherever possible unless new roads can be more sensitively located. Can the old road be remove and restoration and native re-vegetation occur?
2. **Parking off-site** can help minimize impacts. Can a shuttle service be used from a more distant parking lot?
3. Consult with your engineers regarding **design criteria** for roads to minimize access road width while maintaining safety standards.
4. **Length** of the access road to the fixed roof accommodation should compare economics and visual impacts or environmental degradation.
5. **Cuts and fills** should be avoided or at least minimized wherever possible.
6. **Retaining walls** should be avoided where possible. Minimize height and step of walls where they are required.
7. **Year round access** must consider general terrain, snow clearing, erosion by rainwater and maintenance issues.
8. **Common rights-of-way** for utility and roads are encouraged wherever appropriate.
9. Use the **BC Parks design guidelines and facility standards** to understand park design principles and applications.
10. Use the **BC Parks Park design guidelines** located in the Recreation Management part of the Recreation section of the BC Parks web site at http://www.env.gov.bc.ca/bcparks/recreation/rec_mgmt.html.



Above: Cuts and fills should be minimized when constructing roads.



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Trail Development

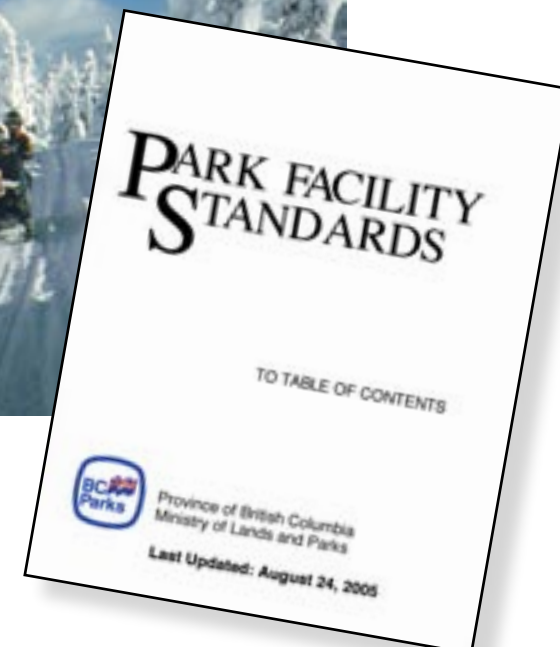
1. Priority should be given to use **existing trail networks**.
2. **Minimize disturbance** of trail development on habitat, natural setting and streams.
3. Trail maintenance inside and outside of the fixed roof accommodation operating area should be a **key element** of your proposal.
4. ATV/snowmobile trails will require **special attention** in routing, design standards and maintenance.
5. Horse trails: **maintenance and impact** on trails should be carefully considered.
6. Interpretive trails can add to the diversity of the visitor experience, but **interpretive programs** must be sensitive to the natural environment.



Above: Trails need to be maintained to a high standard.

Above right: Park management plan may allow limited snowmobile use.

7. Include **erosion control** measures where required through design and proper materials
8. Consult **BC Parks trail standards** located in Information for Park Facility Operators part of the Information Centre Section of the BC Parks web site http://www.env.gov.bc.ca/bcparks/info/park_facility_operator/manuals_information.html.



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Air & Boat Access

1. If **access by air** (helicopter or float plane) is contemplated, think about landing sites, noise implications, disturbance to wildlife, etc.
2. **Flight restrictions** may apply to frequency, scheduling and routing in order to reduce impacts on park values, other commercial operations and in respect to other park visitors activities.
3. Have you thought about how air access can be **balanced** with other forms of access?
4. Floats, docks and breakwaters must be **sensitively integrated** with the water environment.



5. **Water access only sites:** will power motors be allowed or will electric-powered boats suffice?
6. **Restricted times of access** for services and maintenance may be required. Have you thought about the implications in your business plan?
7. Some park zones will **not permit motorized access**. Have you checked the zoning plan for the protected area?



Above: Access by kayak

Left: Access by air

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Winter Access

1. Have you considered facility and road construction standards which allow **safe winter access**.
2. Have you considered **equipment and maintenance requirements** to support winter access opportunities.
3. How will your facility design support **winter access considerations** for vehicles and equipment.
4. Will you develop **alternative transportation access** opportunities during the winter to access your fixed roof accommodation, i.e., snowmobile, snow cat, skis, helicopter, etc.?



Above left: Alternate forms of winter access can be used.

Above: Winter access can be expensive to maintain.

Lower left: Main access roads need to be kept opened in winter.

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Access Maintenance

1. Have you established an **annual preventative facility maintenance program** for all access facilities and support services?
2. Have you thought about undertaking **strategic facility condition assessments** to identify access maintenance and capital replacement?




3. Ensure **annual access maintenance costs** are budgeted for to industry standards of 1–3 percent of facility value.
4. Ensure access standards are maintained through an **effective maintenance program** to increase customer satisfaction and reduce liability.



Above right: Annual maintenance of fixed roof accommodation access

Above left: Condition assessment and photo inventory of access road

Lower right: Annual preventative maintenance reporting

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BC Parks stresses that the architectural design of a fixed roof accommodation is critical if the hospitality/resort industry is to be extended successfully into sensitive and protected areas such as parks. A park fixed roof accommodation should be based on a blend of proven technology and materials, along with modern concepts and appropriate technology. Design must be based on specific market analysis outlining target clientele for your fixed roof accommodation. It will be very important to have a thorough knowledge of the kinds of activities the visitors will be undertaking, purchasing power and their expectations.

In recent years, besides designing fixed roof accommodations in the context of good aesthetics, conservation, building technology, materials and construction, energy conservation and efficiency has also become paramount in helping harmonize the development with the natural setting. A section of guidelines has therefore been devoted to this practice, but BC Parks also encourages proponents to familiarize themselves with certification programs like LEED (Leadership in Energy and Environmental Design) and the Green Buildings Program to further enhance the sustainability of developments in our parks.

Right: Facility design should harmonize with the natural setting.
Photo: Manning Park Resort

Facility Design & Construction Guidelines topics include:

• Functional Design & Aesthetic Value	45
• Park Architectural Character	46
• Relating the Facility to the Natural Environment	47
• Materials & Finishes	48
• Invasive Species	49
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Functional Design & Aesthetic Value

1. Although form must follow function in design, efforts must be made to **incorporate "seamless" architecture** that respects the natural area.
2. Architecture should respect the location of the fixed roof accommodation. Does your architect/designer **understand the landscape** within which the project is sited?
3. Ensure architectural expression is not overpowering local landscape and conveys sense of place (**communion with nature**).
4. Design the fixed roof accommodation with **rational and economic** use of space.



Above: Remote, rustic cabin
Right: Full-service lodge



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Park Architectural Character

1. Have you considered how your fixed roof accommodation will **complement** the BC Parks brand?
2. Familiarize yourself with the **roots and history** of BC Parks fixed roof accommodation developments and associated architectural character. Have you visited other projects in the BC Parks system in order to assist with design theme, materials and overall character?
3. Are you aware of the **BC Parks Facilities Standards Manual** that prescribes design for various outdoor furnishings throughout the park system? This document will give you more insight to the BC Parks character.



4. Have you considered how your **signage and fixed roof accommodation "branding"** will complement or be compatible with the BC Parks character?
5. Ensure that you are familiar with any **policy direction** in the Management Plan for the particular park. Are there policies that may dictate form and character of buildings, signs, parking lots, utility buildings or special features?



Above: Carving has tie to historic park lodges.
Photo: Manning Park Resort

Above inset top: Extensive use of wood in cabin dining area

Above inset lower: Stair detail in cabin

Left: Signage complements character of park.
Photo: Manning Park Resort

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Relating the Facility to the Natural Environment

1. Design with **form and character** that reflects the natural environment, terrain, vegetation and any special features in the area.
2. Design buildings so that architectural form does not stand out above trees or surrounding rock formations. Remember that **low structures** not only address aesthetic considerations, but also protect against intense weather conditions.
3. Use cues from the **local landscape** for materials, building forms and siting of the building.
4. Anticipate any possible **future expansion** and plan carefully to avoid leaving things to improvisation.
5. Have you thought about how the buildings will **relate to or integrate with** slopes, water bodies and streams, geological formations, trees and vegetation?
6. Does your landscape plan **reflect the patterns** of the existing natural landscape?



Above: Architectural form does not stand out.

Left: Anticipate future expansion of fixed roof accommodation complex.

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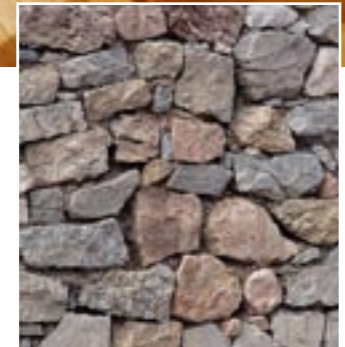
Materials & Finishes

1. Do the interior and exterior finishes **harmonize** with surrounding landscape?
2. **Wood and stone** should be generously but effectively used in the form and character of the fixed roof accommodation, associated building and other structures on the site.
3. The colour pallets must **enhance or blend in** with local landscape, not overpower and dominate the natural setting.
4. **Maintenance, repair and operations** should be considered when you choose your fixed roof accommodation materials and finishes for both interior and exteriors.
5. Environmental conditions, weather, snow loads, ice, and winds will help dictate **design for comfort and safety**.



Above: Use of natural materials to create lodge atmosphere

Above right: Use of wood enhances architecture of fixed roof accommodation.



Above inset: Stone reflects surrounding landscape

Left inset: First Nations design element

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Invasive Species

1. Have you considered how you would maintain the **integrity of the natural landscape** surrounding the fixed roof accommodation site?
2. How would you **monitor for invasive species** and implement control methods to ensure protection of the natural landscape?
3. Does your landscaping plan **maintain native habitat** thereby reducing the potential for invasive species.
4. What are your measures to **control invasive species**?
5. Do **restoration plans** include measures to control invasive species?
6. How will you control invasive species **during the development phase** from site disturbance, new materials (soil) and equipment?



Above: Toadflax

Above left: Scotch broom

Lower left: Knapweed

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Sustainable Construction

1. Ensure that the construction phase of the development has **minimal impact** on the natural environment. Where possible, minimize the construction footprint and thereby reducing site restoration costs.
2. Take extra care to **avoid causing disturbances** to the area's flora and fauna, erosion of the site and roads, water pollution, etc.
3. Have you thought about where building materials will be stored? **Take extra care** not to encroach on water bodies, sensitive plant life or other protected areas.
4. Will temporary roads, storage areas or parking for construction equipment be able to naturally regenerate? Otherwise any areas affected by construction should be **restored and revegetated**.
5. Determine where a lining system may be applied to help **manage release** of construction wastewater and mud. Other erosion control devices such as temporary silt fences may be required throughout the construction period.
6. Have you determined the **limits of construction** on the site?
7. Avoid machinery wherever possible. If heavy machinery is required, choose **low impact equipment** operated by trained people that will leave as little trace as possible on the land. Horse logging and material transportation has been used very successfully in many park settings.



Above: Use of low impact construction equipment

Left: Avoid disturbance to streams.

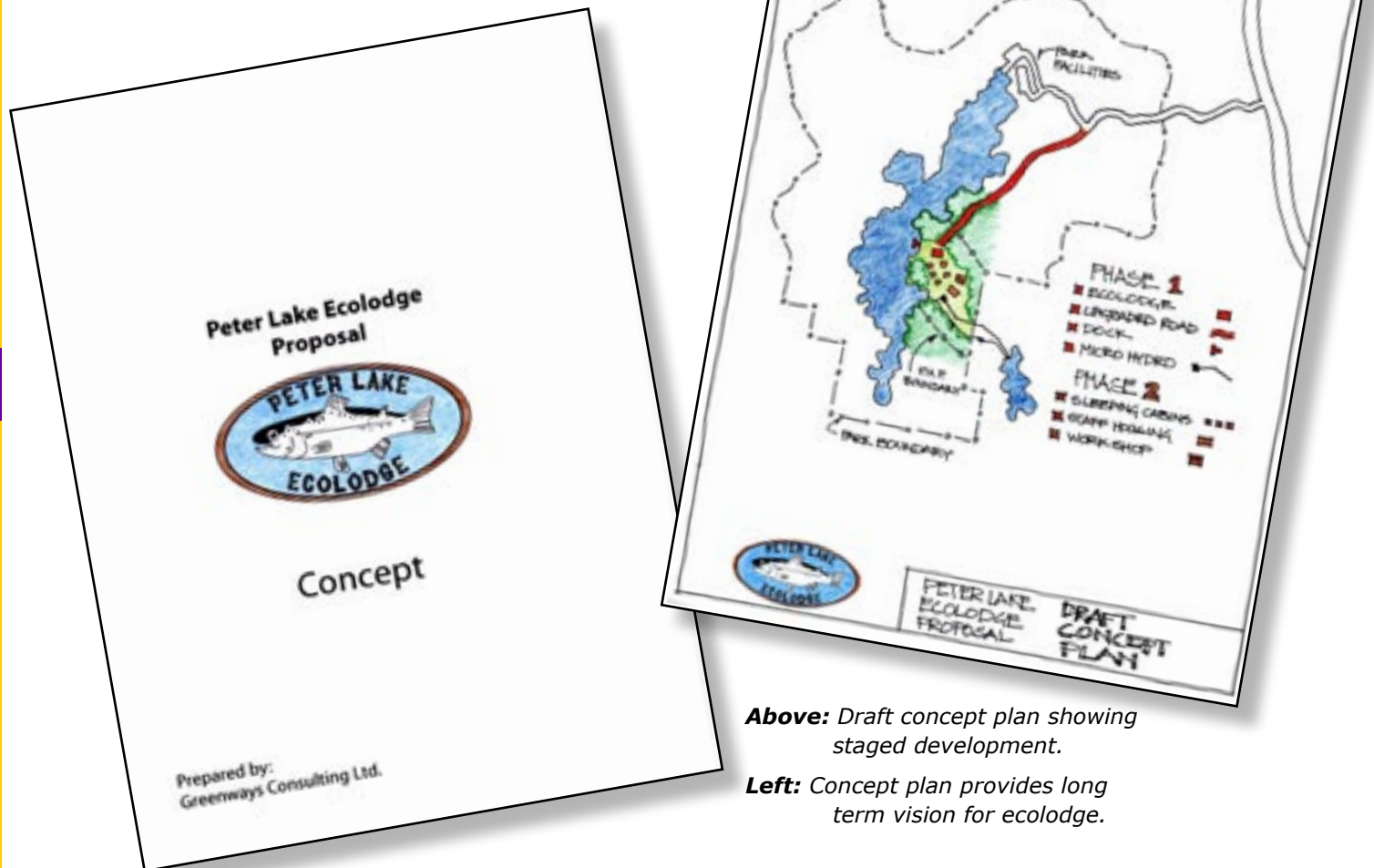
Photo: Saanich Parks

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Define Long Term Development Plans

1. Ensure design of the fixed roof accommodation is undertaken using a development plan to **accommodate long term vision** with theme or brand value.
2. Does the long term development plan clearly define the fixed roof accommodation as having a **theme or brand value** to its facility design and long term vision?
3. Does the long term plan address the results you want for your **fixed roof accommodation design and vision**?
4. Have you defined **limits to visitor accommodation** and use related to overnight users and day visitors?
5. Ensure a **defined permit area** will accommodate your long term development plans as no development is permitted outside the defined BC Parks permit area.



Above: Draft concept plan showing staged development.

Left: Concept plan provides long term vision for ecolodge.

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Introduction - Landscaping

Proper site planning and design can lead to a closer harmony between fixed roof accommodations and their setting and can certainly help to lessen environmental impact. Landscapes will inevitably be transformed with the introduction of a new or expanded fixed roof accommodation, but sensitivity to how the natural environment can be integrated with human activity is critical to good landscape design.

Frontcountry fixed roof accommodation developments are likely to see the most human activity and consequently more pressures to transform the landscape. This should not preclude maintaining the natural landscape with good design and replanting, minimizing disturbance of trees and wildlife habitat and other conservation practices. This may include the introduction of draught tolerant plant materials, use of native plants and water conservation techniques. More remote locations would warrant even greater sensitivity to altering the landscape and wilderness experience. Landscaping plans must capture the sense of place so that the visitor does not feel that there is intrusion taking place, otherwise the feeling of wilderness will be lost.



Landscaping Guideline topics include:

• Natural Landscape	53
• Water Conservation	54
• Eco-Choice Materials	55
• Site Storage	56
• Lighting Design	57
• Other Design Principles	58
• Fire Smart Development	59



Above: Grasses need minimum irrigation.

Left: Wooden fence for visitor safety

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Natural Landscape

1. Have you considered how you can maintain the **integrity of the natural landscape** surrounding the fixed roof accommodation site? This should include minimizing disturbance of trees and plants, soil, rocks and general terrain.
2. Does the landscape plan only use **native vegetation** for new planting that may be needed as a result of disturbance during construction?
3. Does your landscape plan **eliminate time-consuming maintenance** such as lawns that may require watering?
4. Have you avoided using any plants with form and color from **outside the area**?
5. Have you consulted with the local BC Parks staff or local fire authority on **planting design to avoid wildfire threats** at or near the fixed roof accommodation?
6. Does the sustainable landscape plan strive to maintain **native habitat** for all local fauna?
7. Have the **local culture, history and people** of the area been considered, and how this may influence landscape design.
8. Have you taken into account the area's **biodiversity**, and any specific ecosystems, in the development of the landscape plan?

9. Have you reviewed the Park's **Management Plan** or related documents that may suggest design style for landscape?
10. Have you taken into account using native vegetation from your development site through **transplanting or collecting** cuttings or seeds.



Above: Native plants used on parking lot border
Photo: Parks Canada



Right: Ferns and arbutus trees replanted on disturbed site
Photo: Saanich Parks



Left: Low maintenance planting
Photo: Manning Park Resort

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1. Have you incorporated a **water re-use system** into your irrigation plan? This may include captured rain water, recycled gray water, or treated effluent.
2. If irrigation is required for temporary restoration of previously disturbed areas, consider **low volume irrigation** systems.
3. Where appropriate, **drought tolerant** plant material could be used, especially if native to the area.
4. Restoration projects should consider the use of **ultraviolet-tolerant irrigation components** laid on the surface of the soil and removed when native plants have become established.

5. Avoid formal lawns. In their place, have you considered native or **drought tolerant** turf species or beds planted with shrubs, groundcovers, and perennials?



Above: Drought tolerant landscape plants

Far left: Rain water storage tank used to support irrigation
Photo: Secret Sea Retreat

Near left: Low volume irrigation system



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Eco-Choice Materials

1. Incorporate **biological resources** that generate fertility on the site instead of expensive, toxic and non-renewable chemical fertilizers.
2. Have you considered **all natural materials** for use in landscaping? This may include wood and rocks for fences, walls, bridges, signs posts, sculptures, plant borders, etc.
3. **Permeable paved surfaces** that allow percolation of precipitation while providing better wear than unpaved surfaces are appropriate in many cases. This could include recycled aggregate, open pavers, stone walkways, etc.



Above: Rock used in landscaping and building foundation
Photo: Manning Park Resort

Left: Use of permeable paved surface for parking lot
Photo: Saanich Parks

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Site Storage

1. Site storage requirements should be **incorporated** into your fixed roof accommodation design and landscaping plan to ensure park resources and values are protected.
2. **Effective landscaping and screening** will ensure visitors impressions and visual experience will not be negatively impacted by poorly designed site storage areas.
3. Pre-plan your construction activity to **minimize resource degradation**.
4. Confirm **distance requirements** for setbacks from streams, lakes and other water features.
5. Storage areas should be **delineated** and those sensitive areas where disturbance may be a concern should be fenced off and signed, noting that no construction material, vehicles or other activity be allowed to disturb these areas.



6. Use **existing disturbed areas** for storing construction materials or equipment during the construction phase of project.
7. Have you planned to install **bear proof containers** for on site refuse disposal?



Above: Landscaping used to screen services
Photo: Saanich Parks

Left: Storage area fenced off and partially hidden

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Lighting Design

1. Use **unobtrusive** landscape lights if any lighting is required.
2. **Limit night lighting** to the minimum necessary for safety.
3. Have you considered using low voltage lighting with **solar panels**?
4. Light fixtures should remain **close to the ground**, avoiding glare from eye level fixtures.



5. Lighting should be **directed to ground level** to avoid light pollution.
6. Consider installing **motion lights** in less traveled locations.



Above: Lighting directed to ground level to avoid light pollution

Photo: Parks Canada

Above left: Night lighting for visitor safety

Lower left: Unobtrusive landscape lights

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Other Design Principles

1. **Choose your site carefully** so that retaining walls or fencing will be minimal or not required.
2. **Avoid** high or long expansive walls and fencing.
3. **Integrate** unavoidable retaining walls into the site/slope, using local stone when possible.
4. Fencing should only be considered as required to ensure **visitor orientation and safety**.
5. Site fences **away from visitors' quarters** and the fixed roof accommodation wherever possible.
6. Have you considered **natural fences** (trees, shrubs, etc) that respect the natural environment, instead of the more structural and manufactured, unsightly metal, plastic, or other types of fixtures.
7. Provide for **wildlife movement** through areas being considered for fences.



Above: Fencing that reflects the natural environment

Above right: Fencing for visitor safety and orientation
Photo: Secret Sea Retreat



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Fire Smart Development

1. Ensure that site selection considers the **periodic natural cycle of fire** within the landscape.
2. Have you considered how modern **fire resistant materials** can be incorporated into the building to help achieve enhanced fire protection?
3. Have you considered incorporating **effective landscaping design** to reduce fire activity next to facilities?
4. Have you considered incorporating **roof top sprinkler systems** to aid in protection from active fire activity?
5. Use **building code requirements** to ensure fixed roof accommodation buildings are well constructed and operated to enhance public safety from smoke and fire, i.e. smoke alarms, emergency exits, etc.

Above right: Pond water available for fire protection
Right: Sprinklers on building to aid in protection from fire

Photos: Secret Sea Retreat



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Introduction - Energy Conservation & Efficiency

Energy conservation and efficiencies have become issues in fixed roof accommodation developments around the world for various reasons. The main concerns have been cost, availability in more remote areas and especially the need to reduce impacts on the source and natural environment. Since fixed roof accommodations can be powered in various ways, the proponent should thoroughly investigate energy saving programs, equipment and applications before submitting proposals. Energy conservation also goes beyond simply the choice of technology; it implies measuring use and consumption, enhancing operational efficiencies, training staff and building structures that can achieve highest standards in "green building" design and environmental stewardship.



Above: Solar panels and sky lights used to light building

Right: Separate solar panel array

Energy Conservation & Efficiency Guidelines topics include:

• Energy Conservation & Savings	61
• Measuring Energy Use & Consumption	62
• Enhancing Energy Conservation	63
• Certification Programs	64



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Energy Conservation & Savings

1. Ensure that architectural design has considered how to **maximize energy saving** programs.
2. Consider the use of **energy saving equipment**.
3. Have you considered how **passive design techniques** like building orientation and materials, passive solar, window placement and many others will add to the value of the building?
4. Have you considered **alternative energy** sources?
5. Have you considered how **modern materials** can be incorporated into the building to help achieve good energy conservation values?



Above: Switch to super-efficient compact fluorescent bulbs.

Left: Use energy saving equipment.

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Measuring Energy Use & Consumption

1. Have you considered how **energy use monitoring** can be achieved in your project?
2. What measures will you use to **reduce fossil fuels, emissions, etc** and still be able to enhance the guest experience?
3. Have you considered how to **boost building performance** while saving energy?
4. Are you able to **monitor all energy performance**, including use of electricity, propane, natural gas, fuel oil, gasoline and diesel?



Above: Gauges to measure output from micro hydro generator

Left: Solar energy output is measured and monitored
Photo: Secret Sea Retreat

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Enhancing Energy Conservation

- Have you explored the various means of achieving or enhancing operational efficiencies to save energy? Some of these include, but are not limited to:
 - **lighting retrofits**, just by exchanging old incandescent bulbs with super-efficient compact florescent bulbs
 - **energy management** in food services
 - energy management controls
 - **air conditioning** controls
 - **linen** reuse/reduction
 - **transportation performance** (reduction in fuel consumption and associated emissions)
 - use of **geothermal water** sources.



- How will you **conserve water** in your facility operations? Think about how you can apply conservation principles in landscape irrigation, laundry systems, public toilets/urinals, employee bathrooms, kitchens/faucets and other applications.



Above: Fuel efficient service vehicle

Above Left: Energy-saving laundry system

Photos: Manning Park Resort

For more energy efficiency ideas, visit www.bchydro.com

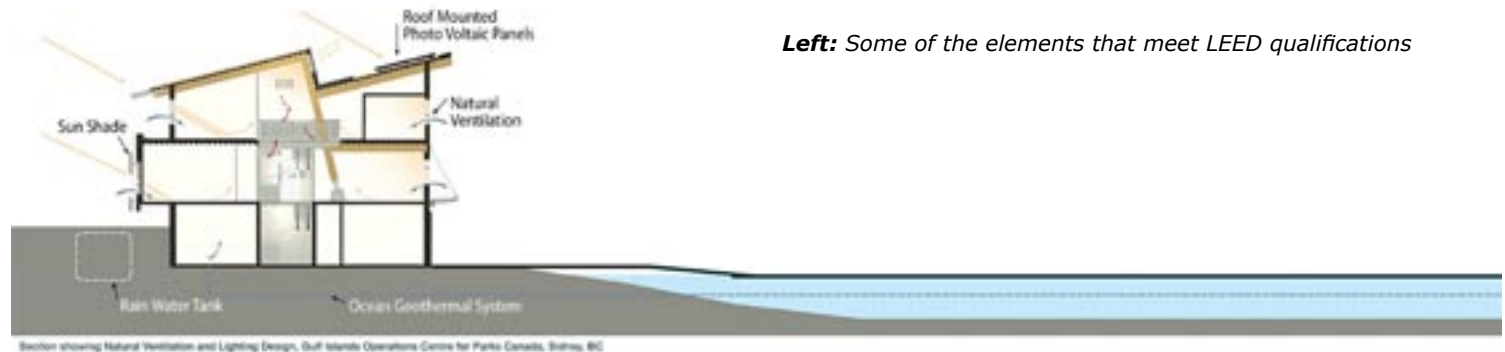
BC hydro
POWER SMART

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1. Certification programs benchmark new building construction or reconstruction of existing facilities, to ensure environmental performance standards and industry best practices are utilized and appropriate.
2. Have you considered adopting existing certification programs available in British Columbia?
 - a. LEED for Homes
 - b. The R2000 Program
 - c. Built Green
3. LEED stands for Leadership in Energy and Environmental Design. LEED provides a rigorous & comprehensive rating tool to assess the performance of small and medium sized roofed accommodations.

4. R-2000 Program is used by builders to achieve leading energy conservation targets through the use of appropriate construction techniques, products, equipment, lighting and appliances.
5. Built Green is a British Columbia voluntary program used by builders to achieve significant improvements in environmental performance.
6. Building certification is important to BC Parks because it provides a logical framework to achieve evaluation, ratings and targets for achieving significant improvement in environmental performance. There are other certification programs beyond the three above, which merit review and comment. The three identified merit close review and consideration for roofed accommodation in BC Parks.



Left: Some of the elements that meet LEED qualifications

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A sustainable fixed roof accommodation development in a park setting goes beyond constructing a fine building in a pristine environment. The ways and means of fixed roof accommodation operations are critical to the success for sensitive integration into a natural environment. This must all be done without compromising the visitor experience and in fact while enhancing conservation objectives and ethics. It also includes ongoing education for the park users, marketing and staff training to ensure that every component of the facility is benefiting the ultimate goal of a sustainable operation.



Operational Guidelines topics include:

• Stewardship of Park Values	66
• Operational Applications	67
• Visitor Education & Awareness	68
• Conservation & Education Roles	69
• Visitor Safety & Communication	70
• Marketing & Branding	71
• User Impacts	72
• Staff Training & Recruitment	73
• Community Participation	74



Above: Sustainable fixed roof accommodation development

Left: Manning Park Resort brochure

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Stewardship of Park Values

Consider applying “green” or ecological initiatives with respect to the following:

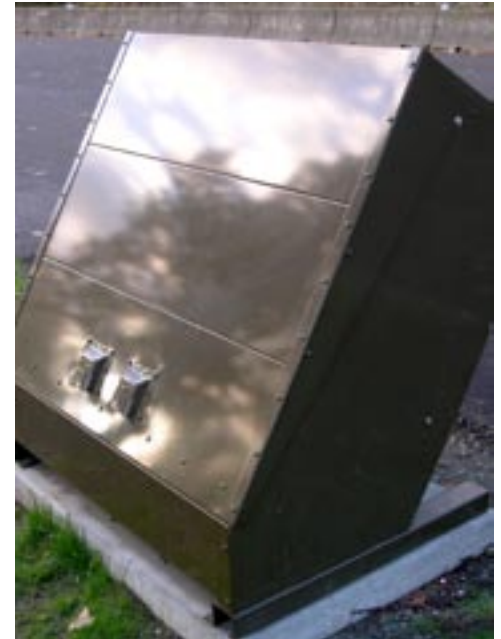
- **use of water** in the fixed roof accommodation, in waste treatment, landscape irrigation and in site design.
- design of the landscape/site to help **integrate** the development with regard to native plants, wildlife habitat, integrated pest management, light pollution.
- addressing the “waste stream” with regard to **recycling** facilities for staff and visitors, composting, construction waste, how to **reuse** topsoil, and **vegetation watercourse protection**.
- use of **building materials** such as building reuse, recycled materials, local materials, durable and low maintenance materials.
- clean energy **transportation**.
- **alternative energy** uses and sources.
- **human health and comfort** considering such matters as air pollution emissions, use of mineral and glass fibres in the fixed roof accommodation, air intakes and ventilation or filtration, cleaning and daylighting.



Above: Recycling facility
Photo: RLC Enterprize



Above: Native planting
Photo: Parks Canada



Above: Bear proof garbage container

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Operational Applications

Think about how you will run your operation so that it is energy efficient, environmentally friendly and respects the Protected Area values with regard to various fixed roof accommodation components:

- **The Kitchen:** food waste reduction, less packaging, water use, etc.
- **The Bathroom:** toilet paper, towels, toilets and urinals with low volume water flows.
- **The Laundry Service:** Linen reuse programs, water reuse.
- **Rooms and Cabins:** efficient heating, lighting and air conditioning and proper design and construction, including use of recycled carpet materials.

- **Recreation:** trail development, use of electric motors, contained facilities avoiding impact on water bodies and natural areas.
- **Services:** conservation of source water; waste water treatment; and solid waste disposal or recycling including oil, solvents, batteries, etc.
- **Staff Accommodations:** achieving efficiencies in location, design, and operations if staff accommodation is on site.
- **Equipment Compounds:** safe and efficient operation to reduce noise, pollution and any negative impacts on visitors, natural environment and the fixed roof accommodation in general.



Above: Trail development

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Visitor Education & Awareness

1. What type of **interpretive programs** will you introduce for the guests? Consider walking tours, talks, illustrative materials, videos and CDs, and signage?
2. How will you **promote conservation** and educate guests about Protected Area values, safety and recreational enjoyment?



Above: Signs provide information on park features.

Right: Walking tours may provide opportunities for park conservation messages.

3. Will you **provide awareness** of the area's history, culture and unique natural environment? What is special about the surroundings of your fixed roof accommodation? About the Protected Area?
4. How will the fixed roof accommodation greet and serve **day use visitors** or other park visitors passing through the protected area?
5. Does the fixed roof accommodation itself help tell the story of **why** the protected area exists where the fixed roof accommodation is established?
6. Will your interpretive program include how the Protected Area is **evolving**, i.e. fires, climate change, pest control, wildlife inventories, fisheries, and tourist visitation?



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Conservation & Education Roles

1. Does the fixed roof accommodation educate visitors on the protected area's **conservation values** and how the fixed roof accommodation has a stewardship role to fulfill?
2. Does the fixed roof accommodation create awareness and educate their visitors on the conservation measures the fixed roof accommodation has incorporated to **protect the protected area's environment**?
3. Have you considered **offering benefits** to customers who use less consumptive resources during their stay?



Above: As part of their stewardship role, facility staff upgrade bridge on park trail.

Left: Encourage non-mechanized forms of recreation.

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Visitor Safety & Communication

1. Does the fixed roof accommodation operate as a **steward** for the protected area, ensuring visitors become educated to the recreational opportunities and related safety messages?
2. Provide effective communication with customers to ensure their recreational experience is **positive and safe**.
3. Train fixed roof accommodation staff effectively to ensure customer messaging is **consistent, effective and welcoming**.
4. How will the fixed roof accommodation entertain inquires from **non-guests** wanting to use fixed roof accommodation facilities and services?



Above: Staff to provide consistent, effective and welcoming messaging
Photo: Manning Park Resort

Above right: An effective safety program can prevent visitor accidents.
Lower right: Winter safety messages needed.



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Marketing & Branding

1. Will your marketing program send the **right message** to prospective guests of your fixed roof accommodation? Think about where you will advertise your fixed roof accommodation, the Protected Area amenities, environmental standards, and benefits to guests.
2. How will you **position** your fixed roof accommodation? Will it be promoted as a retreat, recreational paradise, pristine setting, fishing and boating destination or an educational/learning opportunity?
3. Will you use a particular "**brand**" to help promote the fixed roof accommodation experience? Every attempt should be made to relate it to the Protected Area environment, natural setting and a conscious appreciation of making the setting the cornerstone of the visit.

Branding examples include:

- (Name of fixed roof accommodation), Home of the(animal, bird, forest, mountain, etc)
- Carvings and art work in the fixed roof accommodation that help profile the Protected Area
- Activities/Recreation that are well know to the Protected Area
- Interpretive Materials/Learning/Education opportunities
- Menus/Cuisine and dining opportunities
- Sustainable Environment Messaging, including "Green Building"; Wildlife Protection Programs; Lake Restoration; Waste Reduction Programs.



Above: Manning Park Resort brochure

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User Impacts

1. Does the fixed roof accommodation act as a **steward** for the protected area, ensuring fixed roof accommodation operation policies and visitor activities protect and conserve the protected area's natural and cultural values?
2. Have you consider implementing visitor use policies which are **park friendly**, protecting the environment?
3. Integrate fixed roof accommodation policies and visitor activities ensuring **impacts are minimal** and well within acceptable limits designated by BC Parks.

Right: Avoid overuse of park facilities.

Below: Encourage conservation of park resources by clients.



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Staff Training & Recruitment

1. Recruit and train your staff carefully to ensure they become **well educated and effective stewards** for the protected area.
2. Is there the opportunity to **recruit local First Nations individuals** for staff positions?
3. Think about **allowing staff to experience and participate** in the recreational opportunities of the fixed roof accommodation and protected area. Staff will be able to reflect on their experience and offer first hand knowledge which will benefit visitors.
4. Does your Business Plan include training for your employees regarding how to be "**environmental stewards**"?
5. Have you considered developing a "new employee" orientation program to focus on all aspects of **caring for the park environment**?
6. How will you communicate with your staff regarding **on-going issues** about operations?
7. Does your Business Plan address how you will recruit employees/staff that **share and implement** the resort's operations and environmental ethic, while being true to its corporate identity?



Above: Well trained and motivated staff
Photo: Manning Park Resort



Above right: Staff trained to be stewards
for protected areas



Lower right: Web used to recruit staff
Photo: Manning Park Resort

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Community Participation

1. When possible, consider **local community recruitment** for staffing opportunities.
2. Hiring local community members for staffing position creates a **positive and direct interaction** with the local community and helps promote the facility opportunity.
3. How will the fixed roof accommodation interact and participate with **local First Nations communities?**
4. How will the fixed roof accommodation operations **involve** the local community?
5. Consider using **local merchants** where possible to purchase supplies and materials to create a positive relationship with the community.
6. Will you promote local merchants and their services to your customers to develop a **positive community relationship**.



Above: Community services supported by fixed roof accommodation operations

Above right: Local produce used in fixed roof accommodation restaurant

Lower right: Hire local workers for fixed roof accommodation construction.



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For More Information...

Eco-Design

EcoDesign Resource Society

www.vcn.bc.ca/edrs/index.html

Vancouver-based not-for-profit organization that promotes environmentally responsible design, planning and development practices.

Ecological Design Institute

www.ecodesign.org/edi/

Multidisciplinary group that takes ecology as the basis for design.

EcoDesign Foundation

www.edf.edu.au/

Australian non-profit group promoting ecologically responsible design.

Sustainable Development

United Nations Division for Sustainable Development

www.un.org/esa/sustdev/

International Institute for Sustainable Development

www.iisd.org/

Sustainable Development Information

www.sdinfo.gc.ca/main_e.cfm

The Government of Canada's gateway to sustainable development information.

Tourism, Ec lodges & Ecotourism

Spirit of 2010 Tourism Strategy

www.ecdev.gov.bc.ca/ProgramsAndServices/Tourism/SUMMIT.pdf

Contribution of provincial protected areas system to provincial tourism industry.

The Nature Conservancy

nature.org/aboutus/travel/ecotourism/about/

Provides an overview of ecotourism and introduces its ecotourism program.

The International Ecotourism Society

www.ecotourism.org

Contains a directory of member ecotourism and ecolodge operators.

EcoClub International

www.ecoclub.com/

International ecotourism cooperative.

BC Lodging and Campgrounds Association

www.bclca.com

Aboriginal Tourism British Columbia

www.atbc.bc.ca

BC Wilderness Tour Association

www.wilderness-tourism.bc.ca

Alpine Club of Canada

www.alpineclubofcanada.ca/index.html

Canada Trails

www.canadatrails.ca/lodging/ldgbc.html

Lists backcountry huts and lodges in BC

Website categories:

- *Eco-Design, Sustainable Development, Tourism, Ec lodges & Ecotourism, Visitor Impact* 74
- *Architectural Design & Construction* 75
- *Building Certification, Standards and Best Practises* 75-76
- *Ecological Performance* 76
- *Energy Conservation* 76
- *Road & Subdivision Design* 76
- *Site Selection, Planning & Design* 76-77
- *Water Sources & Management* 77
- *Government Agencies & Regulatory Information* 77
- *Professional & Technical Associations* 78

Visitor Impact

United States National Park Service

www.nps.gov/pwro/rtca/tourism.htm#attributing

Article on assessing the economic impact of tourist destinations.

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Architectural Design & Construction

Canada Green Building Council

www.cagbc.org

Promotes green building design and administers LEED Canada.

US Green Building Council

www.usgbc.org

Promotes green building design; administers LEED US.

Whole Building Design Guide

www.wbdg.org

Provides guidelines on creating high-performance buildings through integrated design.

Green Building

www.greenbuilding.ca

Portal for information on green building design.

Green Roofs

www.greenroofs.com

Information portal for the green roofs industry.

Roofscapes Inc.

www.roofmeadow.com

Provider of green roofs in North America.

Advanced Buildings

www.advancedbuildings.org

Technologies and practices to improve the energy and resource efficiency of commercial and multi-unit residential buildings.

BC Parks Standards

www.env.gov.bc.ca/bcparks/info/park_facility_operator/manuals_information.html

Important BC Park standards are BC Parks Facility Standards, Park Design Guidelines and Impact Assessment Process.

Energy Design Resources

www.energydesignresources.com

Resource for information on energy efficient design practices.

Oikos

www.oikos.com

Source for green building materials.

Certified Wood

www.certifiedwood.org

Forest Certification Resource Centre

Building Certification, Standards and Best Practises

Green Buildings Initiative

www.thegbi.org/home

Promotes practical green building approaches to energy efficient and environmentally sustainable building practices commonly referred to as a "green building".

BuiltGreen Program

www.builtgreenalberta.com/home.htm

Administers LEED™ certification program standards based on five sets of energy and environmental measures.

LEED™ Green Building Rating System

www.cagbc.org

Administers LEED™ certification program standards based on five sets of energy and environmental measures.

R-2000 Program

<http://oee.nrcan.gc.ca>

Certification program for environmentally responsible buildings.

Green Buildings BC Program

www.hpo.bc.ca/research/index.htm

BC Government program incorporating green building practices into new and retrofitted provincially owned buildings.

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BREEAM/GreenLeaf

<http://nolog.gbcaus.org/greenstar/page.asp?id=112>

The Building Research Establishment Environmental Assessment Method (BREEAM) program allows for assessment of the environmental performance of buildings.

Green Globes Environmental Assessment for Buildings

<http://www2.energyefficiency.org/>

An assessment tools used to integrate green principles into new or existing buildings.

Greater Vancouver Regional District Buildsmart

www.gvrd.bc.ca/buildsmart/

A web site based on resource offering tools and technical support to the building industry on sustainable design and building practices.

BC Environment Develop With Care

ftp://ftp.env.gov.bc.ca/pub/outgoing/For_BMP_PDF/

Ministry of Environment drafted Environmental Best Management Practices for Urban and Rural Land Development in British Columbia

US EPA Comprehensive Procurement Guidelines

www.epa.gov/cpg/about.htm

Procurement guidelines and information to promote environmental recovery and waste reduction.

GreenSPEC

www.buildinggreen.com/menus/

Information on green building products.

Green Globe 21

www.greenglobe21.com/certification_WhatIs.aspx

Australia document providing a good framework for managing tourism infrastructure.

Ecological Performance

Building Materials Reuse Association

www.ubma.org

An educational organization that facilitates building deconstruction and reuse/recycling of recovered building materials.

Energy Conservation

BC Hydro

www.bchydro.com/business/

Energy conservation information and cost assistance programs

Terasen Gas

www.terasengas.com

Gas utility site with energy conservation information

Road & Subdivision Design

Transportation Association of Canada Geometric Design Manual

www.tac-atc.ca/english/projectsandpublications/bookstore.cfm

Land and Water BC Guidelines to Alpine Ski Area Development in BC

www.lwbc.bc.ca/02land/tenuring/skiing/guidelines.pdf

Site Selection, Planning & Design

Sustainable Landscape Designs

www.sustainable-landscape.com/home.html

Provides sustainable landscape design services to residential and commercial clients.

US National Park Service Guiding Principles of Sustainable Design

www.nps.gov/dsc/dsgncnstr/gpsd/

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BC Ministry of Environment

Integrated Pest Management Program

www.env.gov.bc.ca/epd/epdpa/ipmp/index.html

Paving Without Asphalt or Concrete

www.buildinggreen.com/products/road_oyl.cfm

Article describing paving alternatives to asphalt or concrete.

Garry Oak Ecosystem Recovery Team – Guidelines For The Collection and Use of Native Plants

www.goert.ca/docs/NativePlantGuidelines_Feb-17-04.pdf

Water Sources & Management

Urban Water Demand Management

www.waterdsm.org

Water demand site management

American Water Works Association - WaterWiser

www.awwa.org/waterwiser

Water conservation education and reference site

Canada Mortgage and Housing Corporation water conservation site

www.cmhc-schl.gc.ca/en/inpr/su/waco/index.cfm

Environment Canada

www.ec.gc.ca/water/en/manage/effic/e_weff.htm

Water conservation site

National Environmental Services Centre

www.nesc.wvu.edu/ndwc/ndwc_conservation.htm

Water conservation in small community systems

Bricor Water and Energy Technology

www.bricor.com/tech.htm

Low flow shower heads

Caroma Industries

www.caroma.com.au/products/index.html

Low flow dual flush toilets

Falcon Waterfree Technologies

www.falconwaterfree.com

Waterless Urinals

Government Agencies & Regulatory Information

Environment Canada

www.ec.gc.ca/envhome.html

Fisheries & Oceans Canada – Pacific Region

www.pac.dfo-mpo.gc.ca/pages/default_e.htm

BC Ministry of Environment

<http://gov.bc.ca/env>

BC Ministry of Environment Guidelines for Developing a Liquid Waste Management Plan

www.env.gov.bc.ca/epd/epdpa/mpp/ms_guidelines.htm

National Research Council Canada

www.nrc-cnrc.gc.ca/main_e.html

United States Environmental Protection Agency

www.epa.gov

BC Parks Impact Assessment Process

www.env.gov.bc.ca/bcparks/conserves/cons_mgmt.htm

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Professional & Technical Associations

Association of Professional Engineers
and Geoscientists of BC

www.apeg.bc.ca

Planning Institute of British Columbia

www.pibc.bc.ca

BC Society of Landscape Architects

www.bcsla.org

Association of BC Forest Professionals

www.rpf-bc.org

Association of Professional Biologists of British
Columbia

www.apbbc.bc.ca

BC Water and Waste Association

www.bcwwa.org

BC Ground Water Association

www.bcgwa.org

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Cvr Provincial map: BCP Kokanee Glacier Cabin: BCP Northern Rocky Mountains, Blue Lake Camp: BCP Bonaparte Park, Rainbow Chain Fishing lodge: BCP Moose, photo location?: BCP Mount Assiniboine Park, Naiset Cabin: BCP	p19 Chopper: BCP, new Thompson River Region. Future expansion: BCP, Stuart Walsh.	p34 Screened garbage, Sire suppression equipment: MPR. Utilities: BCP, new Kootenay Region.	p52 Native plants: Parks Canada. Ferns: SP. Low maintenance: MPR.
p2 Lodge: Manning Park Lodge: MPR. Ecolodge: Kokanee Glacier Cabin: BCP. Cabin/hut/yurt: Bugaboo Park, Cain Hut: BCP. Shelter, Garibaldi Park, Russet Hut: BCP.	p20 Air access, Existing roads, Water access: BCP.	p35 Solar energy: SSR. Geothermal energy: MPR.	p53 Rain water storage: SSR. Drought-tolerant, Irrigation: XXXX?
p5 New post and beam lodge, Kokanee Glacier: BCP. New log cabin, Silver Star Park: BCP.	p21 Road construction: BCP, new Okanagan Region. Protect streams, Restoring: Saanich Parks.	p36 Trail, Aircraft: BCP.	p54 Rock: MPR. Permeable paved: SP.
p12 Alpine lodge: BCP, Karen Wipond. Fishing lodge: BCP, Stuart Walsh.	p22 Orient fixed roof accommodation, Cluster buildings, Wildlife: BCP, Stuart Walsh.	p37 2 roads images: XXXX?	p55 Landscaping: SP. Storage area: XXXX?
p13 Kokanee Glacier Cabin: BCP.	p23 Wildfires: BCP, new Okanagan region.	p38 Cuts and fills: BCP, new Okanagan Region.	p56 Lighting to ground level: PC. Night lighting, Unobtrusive landscape lights: XXXX?
p18 Heli-hiking: BCP, new Kootenay Region. Wildlife viewing, All season use: BCP.	p24 Fixed roof accommodation enhancements: MPR. Skiing, Hiking: BCP.	p39 Trails, Snowmobile: BCP.	p57 Fencing for safety: SSR. Fencing that reflects: XXXX?
	p25 Dining room: MPR. Staff building and room: BCP.	p40 Boat, Air: BCP.	p58 Pond water, Sprinklers: SSR. Fire resistant material: LMAL, PC.
	p26 Community services: BCP, DPM. Park visitors: MPR.	p41 Winter access (3 images): BCP, new Okanagan Region.	p59 Solar panels and skylights: BCP. Separate solar: BCP, DPM.
	p27 Wash formula: MPR. Toilet: BCP, new Vancouver Island Region. Sewage: BCP, new Kootenay Region.	p42 Grader: BCP, new Prince George Region. Condition assessment: BCP, DPM.	p60 Modern building materials: LMAL, PC. Super efficient, Energy saving: BCP, DPM.
	p28 Solar energy, Screen: SSR.	p43 Lodge: MPR.	p61 Gauges: BCP, new Kootenay Region. Solar energy: SSR.
	p29 Fish survey, Plant species: BCP, Doug Biffard.	p44 Cabin, Lodge: BCP, Stuart Walsh.	p62 Fuel efficient vehicle, Energy saving laundry: MPR
	p30 Micro hydro, Service Line: BCP, new Kootenay Region.	p45 Carving, Signage: MPR. Wood, Stair detail: BCP, new Kootenay Region.	p63 LEED elements elevation, LEED building: LMAL, PC
	p31 Rain water: SSR. Water survey: BCP, Doug Biffard.	p46 Aerial of lodge: BCP, Karen Wipond. scenic of lodge: BCP, Stuart Walsh.	
	p32 Reuse/recycle: RLC Enterprize. Composting toilet: BCP, new Vancouver Island Region.	p47 Use of materials, First Nations design: BCP, Stuart Walsh, DPM.	
	p33 Diesel Generator: BCP, Seaford Jack.	p48 Toadflax, Knapweed: BCP, new Okanagan Region. Broom: BCP, DPM.	
		p49 Low impact: BCP, new Kootenay Region. Avoid disturbance: SP.	
		p50 Concept plan, Draft plan: BCP, DCM.	
		p51 Grasses: BCP, DPM. Fence: BCP.	

MPR: Manning Park Resort
BCP: BC Parks
BCPIB: BC Parks Image Bank
LMAL: Larry McFarland Architects Ltd
PC: Parks Canada
SP: Saanich Parks
SSR: Secret Sea Resort

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- p64 Sustainable lodge: BCP,
Stuart Walsh. Brochure: MPR.
- p65 Recycling: RLC Enterprize.
Native planting: PC. Bear
proof: BCP, DPM.
- p66 Trail development: BCPIB.
- p67 Walking tours, Signs: BCP,
DPM.
- p68 Sea kayakers: BCPIB. Repair
bridge: BCP, new Okanagan
Region.
- p69 Staff welcoming: MPR. Safety
program: BCPIB. Winter
safety: XXXX?
- p70 Brochures: MPR.
- p71 Crowd on trail: BCP, new
Okanagan Region. Flyfisher:
BCP, Doug Biffard.
- p72 Staff at counter, Web
recruitment: MPR. Staff
training: XXXX?
- p73 Community services, Local
Produce: BCP, DPM. Local
workers: BCP, new Kootenay
Region.

MPR: Manning Park
Resort

BCP: BC Parks

BCPIB: BC Parks Image
Bank

LMAL: Larry McFarland
Architects Ltd

PC: Parks Canada

SP: Saanich Parks

SSR: Secret Sea Resort

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Glossary

Backcountry: the areas of the park that are not accessible by private vehicle.

Barrier free: a building, facilities, and a path of travel can be approached, entered, and used by persons with physical or sensory disabilities, including those in a wheelchair.

Brand: a class of goods and/or services identified by name as the product of a single firm or manufacturer. BC Parks is a brand in that identical products and services are delivered throughout the protected areas system. Examples: campground design, signage, trail design, buildings design, permitted recreational opportunities, etc.

Cabin/Hut/Yurt: Generally small structures that may have cooking facilities, water and septic. Cabins/huts are generally located in the backcountry. Yurts are round, semi-permanent, self-supporting, canvas-covered structures mounted on a wooden deck. This range of accommodation can sleep from 4-30.

Climate change: changes in climate that are attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability over comparable time periods.

Day use facility: a facility that is only available during the day and does not provide overnight accommodation or services.

Detailed project design: a detailed comprehensive development and operation plan that expands upon the proposal to respond to issues as identified by government, and includes design and development details and operation services, measures and contingencies with respect to business continuity, park visitors, environmental impact management and mitigation.

Ecolodge: a relatively new term used to describe a type of facility that incorporates the values of conservation and

cultural stewardship into the operation, management. Special attention is paid to environmental sustainability in the design and construction, including the choice of construction materials and the use of new technologies for the management of energy, water and waste systems. Most ecolodges are very simple, low impact buildings. However others are more complex and make use of new technologies for the energy and waste systems. Ecolodges are generally located in natural areas. Accommodation usually ranges up to about 30 people

Ecological integrity: a continuum of characteristics, such as ecosystem health, stability, sustainability, and biodiversity, that is retained across a landscape by maintaining its structural and functional components in perpetuity.

Ecosystem: a complete system of living organisms interacting with the soil, land, water, and nutrients that make up their environment. An ecosystem is the home of living things, including humans. An ecosystem can be any size—a log, pond, field, forest, or the earth's biosphere—but it always functions as a whole unit. Ecosystems are commonly described according to the major type of vegetation—for example, old-growth forest or grassland ecosystem.

Ecotourist: an individual who travels to relatively undisturbed or uncontaminated natural areas to study and enjoy the natural and cultural values.

Fire suppression: reducing the size and frequency of fires in an area, either through firefighting efforts or fire prevention measures.

Fixed roof accommodation guidelines: the comprehensive document, the Fixed Roof accommodation Development Guidelines, prepared by the Ministry which provides guidance for applicants and existing permittees interested

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or involved in development and management of sustainable accommodation facilities in parks and protected areas.

The guidelines provide vision and direction to ensure accommodation facilities, as a priority, preserve ecological integrity and complement the BC Parks' high standards for parks.

Fixed roof accommodation service: any style or kind of fixed roof accommodation and related services and functions and includes a cabin, hut, yurt, lodge and any other shelter type with a maximum accommodation up to 100 beds; greater than 100 in extraordinary circumstances.

Footprint: the total area of ground that is beneath a building.

Frontcountry: the portions of the park that are accessible by car.

Gateway Community/Gateway Resorts: communities/resorts near parks, through which tourists travel to reach their park destinations. These communities range from primary tourist resorts, such as Silver Star (Silver Star Park) and Mount Washington (Strathcona Park), with a range of accommodation from private use to rental property, condominiums and hotels: to resort communities such as Whistler (Garibaldi Park); and small communities such as Clearwater (Wells Gray Park) with a varied economic base of which tourism is an important component.

Green procurement: the acquisition of products and services with a lesser or reduced effect on human health and the environment (when compared with competing products or services that serve the same purpose)—e.g., the purchase of recycled paper rather than virgin paper. A green product is one that is less harmful than the next best alternative.

Guest capacity: the number of guests that fill all the available units at an accommodation facility at any one time.

Impact: a change in the environment that may have been the result of human actions.

Impact assessment: the process of identifying impacts on protected area values that may be associated with actions; evaluating the significance of those impacts and determining and implementing mitigating measures. BC Parks Impact Assessment process is an approved policy/procedures for undertaking impact assessments in protected areas.

Improvements: actions taken to make something better in quality, standard and value.

Invasive species: plants, animals, and micro-organisms that colonise and take over the habitats of native species. Most invasive species are also alien (non-native) to the area and can become dominant because the natural controls (e.g., predators, disease) that kept their populations in check in their native environment do not occur in their new location.

Landscaping: the modification and enhancement of a site through the use of any or all of the following elements:
a) soft landscaping consisting of vegetation such as trees, shrubs, hedges, grass and ground cover,
b) hard landscaping consisting of non-vegetative materials such as brick, stone, concrete, tile, and wood, excluding monolithic concrete and asphalt, and c) architectural elements consisting of wing walls, sculpture and the like. It may include sidewalks, pathways and amenity areas.

LEED™: the LEED (Leadership in Energy and Environment Design) Green Building Rating System™ is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

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Lodge: Generally a single building facility, may include sleeping cabins, not necessarily developed to current ecolodge standards. Generally a permanent structure accommodating kitchen/dining, bathrooms, bedrooms and the full range of normal amenities for clients. Accommodation usually ranges up to 80 beds. BC Parks' policy allows for up to 100 beds; more than 100 on a case by case basis. *Note:* generator building, waste disposal and staff accommodation may be in additional structures.

Ministry: the Ministry of Environment.

Mitigation: measures taken to prevent or reduce the severity of negative effects likely to be caused by a particular activity.

Monitoring: repeated measurement and observation to determine change in one or more variables recorded at specified intervals over a predetermined period of time.

Natural landscape: native grasses, plants and trees as may naturally exist in the Community without on-going maintenance.

Park: a park established by or under the *Park Act* or the *Protected Areas of British Columbia Act*.

Park use permit: a license, issued under the *Park Act*, authorizing an activity or a course of behaviour or conduct, for the occupancy, use, development, exploitation or extraction of a natural resource on, or in, a park.

Permit area: the defined area of a park in which the authorized activities of a permittee are confined under the terms of a park use permit.

Planning document: a Ministry document that guides how the subject park is, or will be, managed. The Ministry uses one of three documents, depending on the complexity of the management issues and risks affecting the park.

a) Purpose Statements are intended to expeditiously identify key known management issues and responses and establish a zoning plan until such time as management plan is warranted;

b) Management Direction Statements are more extensive plans that provide a long-term vision and strategic direction respecting priority issues and management objectives and strategies, a zoning plan and the identification of activities that are appropriate in the zones. Management actions are informed by targeted consultations with stakeholders.

c) Management plans are comprehensive plans founded on substantial research and public consultation that provide a long-term vision and explicit direction regarding priority issues and management objectives and strategies, a zoning plan and the identification of activities that are appropriate in the zones.

Proponent: a party responsible for preparing and submitting a proposal in response to a request for proposal or request for expressions of interest.

Protected area: for the purpose of this document, includes lands designated under the *Park Act* and *Environmental Land Use Act*.

Request for expressions of interest (RFEI): a tool that can be used to confirm which proponents are interested in competing for a project. An RFEI can also be used to pre-qualify potential and interested proponents, who will then be invited to respond to a request for proposal.

Resort: a number of permanent structures that collectively offer kitchen/dining, bathrooms, bedrooms/cabins and the full range of amenities for clients. Facilities may include attractions such as pool, tennis courts, golf course. Designed to provide a self contained experience.

Fixed Roof Accommodation Development Guidelines

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Glossary

Screening: the total or partial concealment of a building, structure or activity by a fence, wall, berm or soft landscaping.

Shelter: A small building, primarily for emergency use, with no facilities or services. Historically, these structures were built by outdoor groups and guide outfitters. May be open style such as an Adirondack shelter. Accommodation/ sleeping for a small number of people; 4–10 is common.

Staff accommodation: a single or attached building consisting of one or more dwelling units operated for the sole purpose of housing employee staff for business operations located within the Park and may contain private or semi-private sleeping units with washing and sanitary facilities and common social and kitchen-cafeteria areas.

Upgrade: an action taken to improve the physical condition of a facility to meet a higher standard.

Utilities: any one or more of the following:

- a) systems for the distribution of gas, whether artificial or natural, electricity, telephone and cable television;
- b) facilities for the storage, transmission, treatment, distribution or supply of water;

- c) facilities for the collection, treatment, movement or disposal of sanitary sewage; and
- d) storm sewer drainage facilities.

Visitor services: activities which provide the visitor with

- a) information on activities/attractions within the Park, and
- b) information which helps the visitor understand and appreciate the Park and its heritage resource.

Wildlife: any wild organism including wild mammals, birds, reptiles, amphibians, fishes, invertebrates, plants, fungi, algae, and bacteria.

Wildlife corridor: a travel corridor for wildlife. Wildlife corridors from very wide, natural corridors for large mammals, to 'sky corridors' that offer a safe flight path between feeding and resting places for birds, to smaller man-made corridors (such as urban trails or culverts under roads) that provide safe passage for smaller creatures. These corridors also provide year-round habitat for less mobile species.

Xeriscaping: a landscaping approach using plant species that tolerate very low water conditions.